

| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA                                                           |         |       |   |    |    |   |       |     |    |       |            |                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------------------------------------|---------|-------|---|----|----|---|-------|-----|----|-------|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                      |         | LEVER |   |    |    |   |       |     |    |       |            |                                                                                                                                                                                                   |
| TUBE                                                                                                                 | SECTION | A     | B | C  | D  | E | W     | X   | Y  | Z     | FIL. CONT. | COMMENT                                                                                                                                                                                           |
| Information from Coletronics Service Inc MRC 2-25-70, 6-1-70, 4-1-74; 7-15-74; 2-15-75; 2-1-78; G-140 Adapter (761); |         |       |   |    |    |   |       |     |    |       |            |                                                                                                                                                                                                   |
| 1AD2                                                                                                                 |         | 4     | 1 | 0  | 28 | 2 | *     | --- | 12 | ---   | 1 - 3      | *Key at 2. Throw levers 4 - 5 - 7 - 8 - 9 to "W"; May show short on 4 - 5 - 7 - 8 - 9                                                                                                             |
| 1AU2                                                                                                                 |         | 7     | 4 | 0  | 23 | 2 | 1     | --- | 9  | ---   | 4 - 5      | Must show short on 1 - 9                                                                                                                                                                          |
| 1AY2                                                                                                                 |         | 7     | 1 | 0  | 15 | 2 | ---   | --- | 11 | ---   | *          | Depress button 1 only for Fil Cont. Insert leads into pins 1 & 6 of 9-pin socket.                                                                                                                 |
| 1BC2                                                                                                                 |         | 7     | 5 | 0  | 18 | 2 | 2 - 8 | --- | 11 | ---   | 4 - 5      | Must show short on 1 - 6 - 9                                                                                                                                                                      |
| 1BG2                                                                                                                 |         | 5     | 1 | 0  | 30 | 2 | ---   | --- | 11 | 2     | 1 - 2      | Insert bottom leads into pins 1 & 2 of 9-pin socket. Cap goes to top lead.                                                                                                                        |
| 1BK2                                                                                                                 | *       | 7     | 2 | 0  | 17 | 2 | 5 - 8 | --- | 11 | ---   | #          | *CAUTION - Levers 5 - 8 must be thrown in position "W" before inserting tube and remain in position "W" throughout all tests, including short tests; # 1 - 2 - 4 - 6 - 9; May show short on 3 - 7 |
| 1BQ2                                                                                                                 | *       |       |   |    |    |   |       |     |    |       |            | * CAUTION - Levers 5 - 8 must be thrown to position "W" before inserting tube and remain so during all tests                                                                                      |
| 1BQ2                                                                                                                 |         | 7     | 2 | 0  | 17 | 2 | 5 - 8 | --- | 11 | ---   | *          | Fil Cont - Must show short on 1 - 2 - 4 - 6 - 9                                                                                                                                                   |
| 1BX2                                                                                                                 | *       | 7     | 2 | 0  | 16 | 2 | 5 - 8 | --- | 11 | ---   | #          | *CAUTION: Levers 5 - 8 must be thrown to position "W" before inserting tube and remain in position "W" throughout all tests, including short tests; #1 - 2 - 4 - 6 - 9; May show short on 2 - 7   |
| 1BY2                                                                                                                 |         | 4     | 1 | 0  | 18 | 2 | *     | --- | 11 | ---   | 1 - 3      | Key at 2; *2 - 4 - 5 - 6 - 7 - 8; Good tube reads above 40; No short test                                                                                                                         |
| 1C2                                                                                                                  |         | 1     | 7 | 50 | 31 | 2 | ---   | 6   | 2  | 3 - 4 | 1 - 7      |                                                                                                                                                                                                   |
| 1C2                                                                                                                  |         | 1     | 7 | 36 | 10 | 2 | ---   | 5   | 3  | 4     | 1 - 7      |                                                                                                                                                                                                   |
| 1D13                                                                                                                 |         | 3     | 1 | 0  | 27 | 2 | 2 - 5 | --- | 6  | ---   | 1 - 7      | Must show short on 2 - 5 - 6                                                                                                                                                                      |
| 1DG3                                                                                                                 |         | 4     | 8 | 0  | 26 | 2 | *     | --- | 11 | ---   | #          | *2 - 4 - 5 - 6; #3 - 4 - 5 - 6 - 8; No short test                                                                                                                                                 |
| 1DK1                                                                                                                 |         | 5     | 1 | 0  | 30 | 1 | ---   | --- | 11 | ---   | 1 - 2      | Insert two base leads into pins 1 and 2 of 9 pin miniature socket. Cap goes to top lead                                                                                                           |
| 1DK29                                                                                                                |         | 5     | 1 | 0  | 30 | 2 | ---   | --- | 11 | ---   | 1 - 2      | Insert 2 base leads into pins 1 & 2 of 9-pin socket. Cap goes to top lead.                                                                                                                        |
| 1F1                                                                                                                  |         | 5     | 7 | 6  | 37 | 2 | ---   | 3   | 2  | 6     | 1 - 5 - 7  |                                                                                                                                                                                                   |
| 1F2                                                                                                                  |         | 1     | 7 | 27 | 29 | 2 | 5     | 3   | 2  | 6     | 1 - 5 - 7  |                                                                                                                                                                                                   |
| 1F3                                                                                                                  |         | 1     | 7 | 32 | 22 | 2 | 5     | 3   | 2  | 6     | 1 - 5 - 7  |                                                                                                                                                                                                   |
| 1FD1                                                                                                                 | Pentode | 4     | 7 | 17 | 41 | 2 | ---   | 4   | 5  | 6     | 1 - 7      |                                                                                                                                                                                                   |
| 1FD1                                                                                                                 | Diode   | 3     | 7 | 0  | 28 | 2 | ---   | --- | 3  | ---   | 1 - 7      |                                                                                                                                                                                                   |
| 1FD9                                                                                                                 | Pentode | 1     | 1 | 26 | 35 | 2 | ---   | 4   | 5  | 6     | 1 - 7      |                                                                                                                                                                                                   |

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|------------------------------------------------------------|---------|-------|---|----|----|---|-------|-----|----|-------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                            |         | LEVER |   |    |    |   |       |     |    |       |               |                                                                                                                                                                                                 |
| TUBE                                                       | SECTION | A     | B | C  | D  | E | W     | X   | Y  | Z     | FIL.<br>CONT. | COMMENT                                                                                                                                                                                         |
| 1FD9                                                       | Diode   | 3     | 1 | 0  | 29 | 2 | ---   | --- | 3  | ---   | 1 - 7         |                                                                                                                                                                                                 |
| 1H35                                                       |         | 5     | 7 | 27 | 40 | 2 | ---   | 6   | 2  | 3 - 4 | 1 - 7         |                                                                                                                                                                                                 |
| 1H35                                                       |         | 5     | 7 | 13 | 19 | 2 | ---   | --- | 3  | 4     | 1 - 7         |                                                                                                                                                                                                 |
| 1K3                                                        |         | 4     | 2 | 0  | 20 | 2 | 8     | --- | 11 | ---   | 2 - 7         | May show short on 1 - 3 - 5; Black grid cap goes to top of tube                                                                                                                                 |
| 1P1                                                        |         | 1     | 5 | 30 | 10 | 2 | ---   | 3   | 2  | 6     | 1 - 5 - 7     |                                                                                                                                                                                                 |
| 1P10                                                       |         | 1     | 5 | 27 | 14 | 2 | 6     | 4   | 2  | 3     | 1 - 5 - 7     |                                                                                                                                                                                                 |
| 1P11                                                       |         | 1     | 5 | 30 | 10 | 2 | ---   | 3   | 2  | 6     | 1 - 5 - 7     |                                                                                                                                                                                                 |
| 1RK23                                                      | *       | 7     | 2 | 0  | 14 | 2 | 5 - 8 | --- | 11 | ---   | #             | *CAUTION: Levers 5 - 8 must be thrown to position "W" before inserting tube and remain in position "W" throughout all tests, including short tests; #1 - 2 - 4 - 6 - 9; May show short on 3 - 7 |
| 1RK41                                                      | *       | 7     | 2 | 0  | 17 | 2 | 5 - 8 | --- | 11 | ---   | #             | *CAUTION: Levers 5 - 8 must be thrown to position "W" before inserting tube and remain in position "W" throughout all tests, including short tests; #1 - 2 - 4 - 6 - 9; May show short on 2 - 7 |
| 1S5                                                        | Pent    | 1     | 7 | 8  | 39 | 4 | ---   | 4   | 5  | 6     | 1 - 7         |                                                                                                                                                                                                 |
| 1S5                                                        | Diode   | 3     | 7 | 0  | 30 | 2 | ---   | --- | 3  | ---   | 1 - 7         |                                                                                                                                                                                                 |
| 2AH2                                                       | *       |       |   |    |    |   |       |     |    |       |               | * CAUTION - Lever 5 must be thrown to position "W" before inserting tube and must remain in "W" position throughout all tests including short tests.                                            |
| 2AH2                                                       |         | 6     | 1 | 0  | 17 | 4 | 5     | --- | 12 | ---   | 1 - 3         | Key at 2. Red grid cap goes to top of tube. May show short on 1 - 3 - 4 - 7 - 8 - 9                                                                                                             |
| 2AS2                                                       |         | 7     | 4 | 0  | 15 | 4 | ---   | --- | 11 | ---   | 4 - 6         | Key at 5. Cap goes to top of tube. May show short on 1 - 7.                                                                                                                                     |
| 2AV2                                                       |         | 7     | 4 | 0  | 24 | 3 | *     | --- | 9  | ---   | 4 - 5         | * Levers 1 - 2 - 3 - 6 - 7 - 8 must be thrown to "W". May show short on 1 - 2 - 3 - 6 - 7 - 8 - 9                                                                                               |
| 2AZ2                                                       | *       |       |   |    |    |   |       |     |    |       |               | * CAUTION - Levers 4 - 5 - 6 - 8 - 9 must be thrown to position "W" before inserting tube and must remain in "W" position throughout all tests.                                                 |
| 2AZ2                                                       |         | 7     | 1 | 0  | 13 | 3 | *     | --- | 11 | ---   | 1 - 2         |                                                                                                                                                                                                 |
| 2BA2                                                       |         | 7     | 4 | 0  | 10 | 3 | 1     | --- | 9  | ---   | 4 - 5         |                                                                                                                                                                                                 |
| 2BJ2                                                       | *       |       |   |    |    |   |       |     |    |       |               | * CAUTION - Levers 2 - 8 must be thrown to position "W" before inserting tube and must remain in position "W" throughout all tests including short tests.                                       |

| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |          |       |   |    |    |    |       |     |    |     |            |                                                                                                                                                           |
|------------------------------------------------------------|----------|-------|---|----|----|----|-------|-----|----|-----|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                            |          | LEVER |   |    |    |    |       |     |    |     |            |                                                                                                                                                           |
| TUBE                                                       | SECTION  | A     | B | C  | D  | E  | W     | X   | Y  | Z   | FIL. CONT. | COMMENT                                                                                                                                                   |
| 2BJ2                                                       |          | 7     | 5 | 0  | 14 | 3  | 2 - 8 | --- | 11 | --- | 4 - 5      | Must show short on 1 - 4 - 5 - 6 - 9                                                                                                                      |
| 2BU2                                                       |          | 7     | 4 | 0  | 13 | 4  | 1 - 7 | --- | 11 | --- | 4          | Key at 5; Must show short on 1 - 6 - 7                                                                                                                    |
| 2C50                                                       | Triode-1 | 1     | 7 | 21 | 9  | 10 | ---   | --- | 2  | 1   | 7 - 8      |                                                                                                                                                           |
| 2C50                                                       | Triode-2 | 1     | 7 | 21 | 9  | 10 | ---   | --- | 5  | 4   | 7 - 8      |                                                                                                                                                           |
| 2CN3                                                       |          | 7     | 2 | 0  | 11 | 3  | ---   | --- | 11 | --- | 2 - 7      | May show short on 3 - 5                                                                                                                                   |
| 2CW4                                                       | *        | 5     | 4 | 9  | 10 | 3  | ---   | --- | 1  | 2   | 4 - 5      | *Use G-140 Adapter; Connect red grid cap to G-140 plug                                                                                                    |
| 2DL4                                                       |          | 5     | 4 | 8  | 9  | 3  | *     | --- | 8  | 9   | 4 - 5      | *1 - 3 - 6 - 7; Must show short on 1 - 3 - 6 - 7                                                                                                          |
| 2DS4                                                       |          | 5     | 4 | 12 | 10 | 2  | ---   | --- | 1  | 2   | 4 - 5      |                                                                                                                                                           |
| 2DV4                                                       |          | 5     | 3 | 6  | 8  | 3  | 1 - 4 | --- | 2  | 6   | 3 - 5      | Must show short on 1 - 2 - 4 - 6                                                                                                                          |
| 2DZ4                                                       |          | 2     | 3 | 19 | 10 | 4  | 1 - 2 | --- | 7  | 6   | 3 - 4      | Must show short on 1 - 2 - 6 - 7                                                                                                                          |
| 2EG4                                                       |          | 5     | 4 | 5  | 16 | 2  | ---   | --- | 1  | 2   | 4 - 5      |                                                                                                                                                           |
| 2GU5                                                       |          | 4     | 3 | 5  | 10 | 4  | 2     | 6   | 5  | 1   | 3 - 4      | Must show short on 2 - 7; Cathode short test<br>Depress 2 - 7 together                                                                                    |
| 2GW5                                                       |          | 5     | 3 | 6  | 8  | 4  | 2     | --- | 1  | 6   | 3 - 4      | Must show short on 2 - 6                                                                                                                                  |
| 2HA5                                                       |          | 1     | 3 | 13 | 10 | 2  | 2     | --- | 5  | 1   | 3 - 4      | Must show short on 2 - 7; Cathode short test<br>Depress 2 - 7 together                                                                                    |
| 2HK5                                                       |          | 1     | 3 | 14 | 10 | 3  | 2     | --- | 5  | 1   | 3 - 4      | Must show short on 2 - 7; Cathode short test<br>Depress 2 - 7 together                                                                                    |
| 2HM5                                                       |          | 5     | 3 | 7  | 10 | 4  | 2     | --- | 5  | 1   | 3 - 4      | Must show short on 2 - 7; Cathode short test<br>Depress 2 - 7 together                                                                                    |
| 2HQ5                                                       |          | 1     | 3 | 10 | 8  | 4  | 2     | --- | 5  | 1   | 3 - 4      | Must show short on 2 - 7; Cathode short test<br>Depress 2 - 7 together                                                                                    |
| 2HR8                                                       |          | 4     | 4 | 7  | 20 | 4  | ---   | 1   | 6  | 9   | 4 - 5      | May show short on 2 - 7                                                                                                                                   |
| 3AF3                                                       |          | 3     | 4 | 0  | 15 | 6  | 2     | --- | 9  | --- | 4 - 5      | May show short on 2 - 9                                                                                                                                   |
| 3AJ8                                                       | Amp      | 1     | 4 | 14 | 31 | 5  | ---   | 1   | 6  | 2   | 4 - 5      |                                                                                                                                                           |
| 3AJ8                                                       | Osc      | 1     | 4 | 25 | 10 | 5  | ---   | --- | 1  | 2   | 4 - 5      |                                                                                                                                                           |
| 3AJ8                                                       | Triode   | 1     | 4 | 25 | 13 | 5  | ---   | --- | 8  | 9   | 4 - 5      |                                                                                                                                                           |
| 3AT2                                                       |          | 4     | 5 | 0  | 6  | 4  | 1     | --- | 12 | --- | 5 - 7      | Key at 6. Must show short on 2 - 8; Red grid cap goes to top of tube                                                                                      |
| 3AW2                                                       |          | 7     | 5 | 0  | 11 | 5  | ---   | --- | 11 | -   | 4 - 6      | Key at 5. Cap goes to top of tube. May show short on 1 - 7.                                                                                               |
| 3AW3                                                       |          | 4     | 2 | 0  | 7  | 5  | ---   | --- | 11 | --- | *          | *Fil Cont - Depress 2, then 3 - 7 - 8 together; May show short on 3 - 7 - 8                                                                               |
| 3BH2                                                       | *        |       |   |    |    |    |       |     |    |     |            | * CAUTION - Levers 2 - 8 must be thrown to position "W" before inserting tube and must remain in position "W" throughout all tests including short tests. |
| 3BH2                                                       | *        | 7     | 4 | 0  | 17 | 4  | 2 - 8 | --- | 11 | --- | 4 - 5      | * Must use magnoval adapter; Must show short on 1 - 9                                                                                                     |

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|------------------------------------------------------------|---------|-------|---|----|----|---|-------|-----|----|-----|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                            |         | LEVER |   |    |    |   |       |     |    |     |               |                                                                                                                                                                                     |
| TUBE                                                       | SECTION | A     | B | C  | D  | E | W     | X   | Y  | Z   | FIL.<br>CONT. | COMMENT                                                                                                                                                                             |
| 3BL2                                                       |         | 7     | 4 | 0  | 15 | 5 | ---   | --- | 11 | --- | 4 - 6         | Key at 5. Cap goes to top of tube. May show short on 1 - 7.                                                                                                                         |
| 3BM2                                                       |         | 7     | 4 | 0  | 8  | 5 | ---   | --- | 11 | --- | 4 - 6         | Key at 5. Must show short on 1 - 7.                                                                                                                                                 |
| 3BN2                                                       |         | 4     | 5 | 0  | 6  | 4 | 1     | --- | 12 | --- | 5 - 7         | Key at 6. Must show short on 2 - 8; Red cap goes to top of tube                                                                                                                     |
| 3BS2                                                       |         | 7     | 4 | 0  | 10 | 5 | ---   | --- | 11 | --- | 4 - 6         | Key at 5. May show short on 1 - 7; Cap goes to top of tube                                                                                                                          |
| 3BT2                                                       |         | 7     | 4 | 0  | 14 | 5 | 1 - 7 | --- | 11 | --- | 4             | Key at 5. Must show short on 1 - 6 - 7                                                                                                                                              |
| 3BW2                                                       |         | 7     | 4 | 0  | 14 | 5 | 1 - 7 | --- | 11 | --- | 4             | Key at 5; No short test                                                                                                                                                             |
| 3CA3                                                       |         | 7     | 2 | 0  | 19 | 5 | ---   | --- | 11 | 2   | 2 - 7         |                                                                                                                                                                                     |
| 3CN3                                                       |         | 7     | 2 | 0  | 11 | 5 | ---   | --- | 11 | --- | 2 - 7         | May show short on 3 - 5                                                                                                                                                             |
| 3CU3                                                       |         | 7     | 2 | 0  | 10 | 5 | ---   | --- | 11 | 2   | 2 - 7 - 8     |                                                                                                                                                                                     |
| 3CV3                                                       | *       | 7     | 2 | 0  | 17 | 5 | 5 - 8 | --- | 11 | --- | 2 - 7         | *CAUTION; Levers 5 - 8 must be thrown to position "W" before inserting tube and remain in position "W" throughout all tests, including short tests; May show short on 1 - 2 - 3 - 7 |
| 3CX3                                                       |         | 7     | 3 | 0  | 13 | 5 | ---   | --- | 11 | --- | 3 - 4 - 6     |                                                                                                                                                                                     |
| 3CY3                                                       |         | 7     | 2 | 0  | 15 | 5 | ---   | --- | 11 | --- | *             | * Fil Cont - Must show short on 1 - 2 - 3 - 5 - 7                                                                                                                                   |
| 3CZ3                                                       |         | 4     | 2 | 0  | 7  | 5 | ---   | --- | 11 | --- | *             | * Fil Cont - Depress 2, then 2 - 7 - 8 together; May show short on 2 - 7 - 8                                                                                                        |
| 3DA3                                                       |         | 1     | 3 | 0  | 23 | 5 | *     | --- | 11 | --- | #             | *3 - 4 - 5 - 6 - 8; #1 - 2 - 4 - 5 - 6 - 7                                                                                                                                          |
| 3DB3                                                       |         | 7     | 2 | 0  | 23 | 5 | ---   | --- | 11 | --- | 7             | Must show short on 1 - 2 - 3 - 5 - 7                                                                                                                                                |
| 3DC3                                                       |         | 7     | 2 | 0  | 12 | 5 | ---   | --- | 11 | --- | *             | * Fil Cont - Must show short on 1 - 2 - 3 - 5 - 7                                                                                                                                   |
| 3DF3                                                       |         | 1     | 8 | 0  | 25 | 5 | *     | --- | 11 | --- | #             | *2 - 4 - 5 - 6; #2 - 3 - 4 - 6 - 8; No short test                                                                                                                                   |
| 3DH3                                                       |         | 1     | 3 | 0  | 25 | 5 | 5     | --- | 11 | --- | *             | *3 - 4 - 6 - 8                                                                                                                                                                      |
| 3DJ3                                                       |         | 7     | 2 | 0  | 21 | 5 | ---   | --- | 11 | --- | #             | # Fil Cont - Must show short on 1 - 2 - 3 - 5 - 7                                                                                                                                   |
| 3DR3                                                       |         | 4     | 3 | 0  | 6  | 5 | 5     | --- | 11 | --- | *             | *2 - 3 - 6 - 8                                                                                                                                                                      |
| 3DS3                                                       |         | 3     | 3 | 0  | 35 | 5 | 5     | *   | 11 | --- | 2 - 6 - 8     | *1 - 4 - 7; Good tube reads above 40                                                                                                                                                |
| 3DZ4                                                       |         | 2     | 3 | 19 | 10 | 5 | 1 - 2 | --- | 7  | 6   | 3 - 4         | Must show short on 1 - 2 - 6 - 7                                                                                                                                                    |
| 3DZ11                                                      |         | 7     | 4 | 15 | 23 | 6 | ---   | 7   | 6  | 2   | 4 - 5         |                                                                                                                                                                                     |
| 3GK6                                                       |         | 1     | 4 | 21 | 10 | 5 | ---   | 8   | 7  | 2   | 4 - 5         | Must show short on 3 - 9                                                                                                                                                            |
| 3GU5                                                       |         | 4     | 3 | 5  | 10 | 5 | 2     | 6   | 5  | 1   | 3 - 4         | Must show short on 2 - 7; Cathode short test                                                                                                                                        |
| 3GW5                                                       |         | 5     | 3 | 7  | 8  | 5 | 2     | --- | 1  | 6   | 3 - 4         | Depress 2 - 7 together                                                                                                                                                              |
| 3HA5                                                       |         | 1     | 3 | 13 | 10 | 4 | 2     | --- | 5  | 1   | 3 - 4         | Must show short on 2 - 7; Cathode short test                                                                                                                                        |
|                                                            |         |       |   |    |    |   |       |     |    |     |               | Depress 2 - 7 together                                                                                                                                                              |

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|------------------------------------------------------------|---------|-------|---|----|----|---|-----------|-----|----|-------|---------------|-----------------------------------------------------------------------------------------------------------|
|                                                            |         | LEVER |   |    |    |   |           |     |    |       |               |                                                                                                           |
| TUBE                                                       | SECTION | A     | B | C  | D  | E | W         | X   | Y  | Z     | FIL.<br>CONT. | COMMENT                                                                                                   |
| 3HE7                                                       | Diode   | 3     | 1 | 0  | 15 | 5 | ---       | --- | 2  | ---   | 1 - 11        | CAUTION - Throw lever No. 4 to "W" before inserting tube                                                  |
| 3HE7                                                       | Pent    | 5     | 6 | 0  | 5  | 5 | 4         | 5   | 11 | 3     | 6 - 8         | Key at 7                                                                                                  |
| 3HF5                                                       |         | 1     | 3 | 0  | 4  | 5 | 2         | 7   | 12 | 9     | 3 - 5         | Key at 4. Use red grid cap. Must show short on 1 - 2 - 7 - 8; Cathode short test - Depress 2 - 7 together |
| 3HK5                                                       |         | 1     | 3 | 14 | 10 | 4 | 2         | --- | 5  | 1     | 3 - 4         | Must show short on 2 - 7; Cathode short test Depress 2 - 7 together                                       |
| 3HM5                                                       |         | 2     | 3 | 25 | 14 | 4 | 2         | --- | 5  | 1     | 3 - 4         | Must show short on 2 - 7; Cathode short test Depress 2 - 7 together                                       |
| 3HM6                                                       |         | 5     | 4 | 0  | 16 | 5 | ---       | 8   | 7  | 2     | 4 - 5         | Must show short on 1 - 3; Cathode short test Depress 1 - 3 together                                       |
| 3HQ5                                                       |         | 1     | 3 | 10 | 8  | 5 | 2         | --- | 5  | 1     | 3 - 4         | Must show short on 2 - 7; Cathode short test Depress 2 - 7 together                                       |
| 3HS8                                                       | Pent-1  | 4     | 4 | 6  | 30 | 5 | ---       | 2   | 8  | 7     | 4 - 5         |                                                                                                           |
| 3HS8                                                       | Pent-2  | 4     | 4 | 6  | 30 | 5 | ---       | 2   | 3  | 7     | 4 - 5         |                                                                                                           |
| 3HT6                                                       |         | 4     | 4 | 4  | 10 | 5 | 3         | 8   | 7  | 2     | 4 - 5         | Must show short on 1 - 3; Cathode short test Depress 1 - 3 together                                       |
| 3JC6                                                       |         | 1     | 4 | 5  | 24 | 5 | 3         | 8   | 7  | 2     | 4 - 5         | Must show short on 1 - 3; Cathode short test Depress 1 - 3 together                                       |
| 3JD6                                                       |         | 1     | 4 | 5  | 20 | 5 | 3         | 8   | 7  | 2     | 4 - 5         | Must show short on 1 - 3; Cathode short test Depress 1 - 3 together                                       |
| 3KF8                                                       | Pent-1  | 4     | 4 | 5  | 30 | 5 | ---       | 2   | 8  | 7     | 4 - 5         |                                                                                                           |
| 3KF8                                                       | Pent-2  | 4     | 4 | 5  | 30 | 5 | ---       | 2   | 3  | 7     | 4 - 5         |                                                                                                           |
| 3KT6                                                       |         | 5     | 4 | 0  | 20 | 5 | ---       | 8   | 7  | 2     | 4 - 5         | Must show short on 1 - 3; Cathode short test Depress 1 - 3 together                                       |
| 3MR24                                                      |         | 1     | 3 | 15 | 17 | 5 | ---       | --- | 6  | 5     | 3 - 4         |                                                                                                           |
| 3MP26                                                      |         | 1     | 3 | 10 | 10 | 5 | ---       | 6   | 5  | 1     | 3 - 4         |                                                                                                           |
| 3MV7                                                       |         | 1     | 3 | 8  | 19 | 5 | ---       | --- | 6  | 5     | 3 - 4         |                                                                                                           |
| 4AB8                                                       | Triode  | 1     | 4 | 14 | 18 | 6 | ---       | --- | 1  | 2     | 4 - 5         |                                                                                                           |
| 4AB8                                                       | Pent    | 1     | 4 | 14 | 17 | 6 | ---       | 8   | 6  | 9     | 4 - 5         |                                                                                                           |
| 4AF4                                                       |         | 2     | 3 | 24 | 11 | 6 | 1 - 2     | --- | 7  | 6     | 3 - 4         |                                                                                                           |
| 4BL8                                                       | Triode  | 1     | 4 | 14 | 10 | 6 | ---       | --- | 1  | 9     | 4 - 5         |                                                                                                           |
| 4BL8                                                       | Pent    | 1     | 4 | 23 | 16 | 6 | ---       | 3   | 6  | 2     | 4 - 5         |                                                                                                           |
| 4DL4                                                       |         | 5     | 4 | 6  | 11 | 5 | 1 - 3 - 6 | --- | 8  | 7 - 9 | 4 - 5         | Must show short on 1 - 3 - 6 - 7 - 9                                                                      |
| 4ER5                                                       |         | 5     | 3 | 5  | 15 | 5 | ---       | --- | 5  | 2     | 3 - 4         | Must show short on 1 - 7                                                                                  |
| 4GJ7                                                       | Triode  | 5     | 4 | 7  | 8  | 5 | ---       | --- | 8  | 9     | 4 - 5         | Must show short on 1 - 3; Cathode short test Depress 1 - 3 together                                       |
| 4GJ7                                                       | Pent    | 1     | 4 | 0  | 38 | 5 | ---       | 7   | 6  | 2     | 4 - 5         |                                                                                                           |

| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |          |       |   |    |    |    |     |     |   |   |               |                                                                                                                              |
|------------------------------------------------------------|----------|-------|---|----|----|----|-----|-----|---|---|---------------|------------------------------------------------------------------------------------------------------------------------------|
|                                                            |          | LEVER |   |    |    |    |     |     |   |   |               |                                                                                                                              |
| TUBE                                                       | SECTION  | A     | B | C  | D  | E  | W   | X   | Y | Z | FIL.<br>CONT. | COMMENT                                                                                                                      |
| 4GK5                                                       |          | 1     | 3 | 11 | 10 | 5z | --- | --- | 5 | 2 | 3 - 4         | Set switch "E" to #6 if there is no 5z position;<br>Must show short on 1 - 7; Cathode short test<br>Depress 1 - 7 together   |
| 4GS7                                                       | Triode   | 5     | 4 | 7  | 10 | 6  | --- | --- | 2 | 1 | 4 - 5         |                                                                                                                              |
| 4GS7                                                       | Pentode  | 5     | 4 | 0  | 21 | 6  | --- | 7   | 6 | 9 | 4 - 5         |                                                                                                                              |
| 4GW5                                                       |          | 5     | 3 | 7  | 8  | 5z | 2   | --- | 1 | 6 | 3 - 4         | Set switch "E" to #6 if there is no 5z position;<br>Must show short on 2 - 6                                                 |
| 4GX6                                                       |          | 1     | 3 | 10 | 36 | 6  | --- | 6   | 5 | 1 | 3 - 4         |                                                                                                                              |
| 4GX7                                                       | Triode   | 5     | 4 | 9  | 8  | 5z | --- | --- | 8 | 9 | 4 - 5         | Must show short on 1 - 3; Cathode short test<br>Depress 1 - 3 together; Set switch "E" to #6<br>if there is no 5z position   |
| 4GX7                                                       | Pent     | 4     | 4 | 5  | 7  | 5z | --- | 7   | 6 | 2 | 4 - 5         |                                                                                                                              |
| 4GZ5                                                       |          | 1     | 3 | 20 | 10 | 5z | 2   | 6   | 7 | 5 | 3 - 4         | Set switch "E" to #6 if there is no 5z position;<br>Must show short on 2 - 5                                                 |
| 4HA5                                                       |          | 1     | 3 | 13 | 10 | 5  | 2   | --- | 5 | 1 | 3 - 4         | Must show short on 2 - 7; Cathode short test<br>Depress 2 - 7 together                                                       |
| 4HA7                                                       | Triode-1 | 1     | 2 | 35 | 10 | 5z | --- | --- | 5 | 1 | 2 - 4         | Key at 3; Set switch "E" to #6 if there is no<br>5z position                                                                 |
| 4HA7                                                       | Triode-2 | 2     | 4 | 36 | 10 | 5z | --- | --- | 2 | 1 | 4 - 6         |                                                                                                                              |
| 4HC7                                                       | Triode-1 | 2     | 1 | 26 | 14 | 5z | --- | --- | 7 | 9 | 1 - 12        | Key at 0; Set switch "E" to #6 if there is no<br>5z position; Use red grid cap                                               |
| 4HC7                                                       | Triode-2 | 2     | 7 | 34 | 10 | 5z | --- | --- | 8 | 4 | 5 - 7         |                                                                                                                              |
| 4HG8                                                       | Triode   | 1     | 4 | 5  | 10 | 6  | --- | --- | 7 | 6 | 4 - 5         | May show short on 1 - 3; Cathode short test -<br>Depress 1 - 3 together                                                      |
| 4HG8                                                       | Pentode  | 1     | 4 | 7  | 25 | 6  | --- | 9   | 8 | 2 | 4 - 5         |                                                                                                                              |
| 4HK5                                                       |          | 1     | 3 | 14 | 10 | 5z | 2   | --- | 5 | 1 | 3 - 4         | Set switch "E" to #6 if there is no 5z position;<br>Cathode short test - Depress 2 - 7 together;<br>Must show short on 2 - 7 |
| 4HM5                                                       |          | 2     | 3 | 25 | 14 | 5  | 2   | --- | 5 | 1 | 3 - 4         | Must show short on 2 - 7; Cathode short test<br>Depress 2 - 7 together                                                       |
| 4HM6                                                       |          | 5     | 4 | 0  | 16 | 5z | --- | 8   | 7 | 2 | 4 - 5         | Set switch "E" to #6 if there is no 5z position;<br>Must show short on 1 - 3; Cathode short test<br>Depress 1 - 3 together   |
| 4HQ5                                                       |          | 1     | 3 | 10 | 8  | 6  | 2   | --- | 5 | 1 | 3 - 4         | Must show short on 2 - 7; Cathode short test<br>Depress 2 - 7 together                                                       |
| 4HR8                                                       |          | 4     | 4 | 7  | 20 | 5z | --- | 1   | 6 | 9 | 4 - 5         | Set switch "E" to #6 if there is no 5z position;<br>Must show short on 2 - 7                                                 |
| 4HS8                                                       | Pent-1   | 4     | 4 | 6  | 30 | 5z | --- | 2   | 8 | 7 | 4 - 5         | Set switch "E" to 6 if there is no 5z position                                                                               |
| 4HS8                                                       | Pent-2   | 4     | 4 | 6  | 30 | 5z | --- | 2   | 3 | 7 | 4 - 5         |                                                                                                                              |

| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |          |       |   |    |    |    |       |     |   |     |               |                                                                                                                            |
|------------------------------------------------------------|----------|-------|---|----|----|----|-------|-----|---|-----|---------------|----------------------------------------------------------------------------------------------------------------------------|
|                                                            |          | LEVER |   |    |    |    |       |     |   |     |               |                                                                                                                            |
| TUBE                                                       | SECTION  | A     | B | C  | D  | E  | W     | X   | Y | Z   | FIL.<br>CONT. | COMMENT                                                                                                                    |
| 4HT6                                                       |          | 4     | 4 | 4  | 10 | 5z | 3     | 8   | 7 | 2   | 4 - 5         | Set switch "E" to #6 if there is no 5z position;<br>Must show short on 1 - 3; Cathode short test<br>Depress 1 - 3 together |
| 4JC6                                                       |          | 1     | 4 | 5  | 24 | 6  | 3     | 8   | 7 | 2   | 4 - 5         | Must show short on 1 - 3; Cathode short test<br>Depress 1 - 3 together                                                     |
| 4JD6                                                       |          | 1     | 4 | 5  | 20 | 6  | 3     | 8   | 7 | 2   | 4 - 5         | Must show short on 1 - 3; Cathode short test<br>Depress 1 - 3 together                                                     |
| 4JH6                                                       |          | 4     | 3 | 7  | 10 | 6  | ---   | 6   | 5 | 1   | 3 - 4         |                                                                                                                            |
| 4JK6                                                       |          | 1     | 3 | 9  | 16 | 5  | ---   | 6   | 5 | 1   | 3 - 4         |                                                                                                                            |
| 4JL6                                                       |          | 1     | 3 | 2  | 17 | 5  | ---   | 6   | 5 | 1   | 3 - 4         |                                                                                                                            |
| 4JW8                                                       | Triode   | 5     | 4 | 10 | 15 | 6  | ---   | --- | ? | 9   | 4 - 5         |                                                                                                                            |
| 4JW8                                                       | Pentode  | 4     | 4 | 7  | 11 | 6  | ---   | 3   | 6 | 2   | 4 - 5         |                                                                                                                            |
| 4KE8                                                       | Triode   | 2     | 4 | 32 | 10 | 6  | ---   | --- | 1 | 9   | 4 - 5         |                                                                                                                            |
| 4KE8                                                       | Pent     | 4     | 4 | 5  | 10 | 6  | ---   | 3   | 6 | 2   | 4 - 5         |                                                                                                                            |
| 4KF8                                                       | Pent-1   | 4     | 4 | 5  | 30 | 6  | ---   | 2   | 8 | 7   | 4 - 5         |                                                                                                                            |
| 4KF8                                                       | Pent-2   | 4     | 4 | 5  | 30 | 6  | ---   | 2   | 3 | 7   | 4 - 5         |                                                                                                                            |
| 4KN8                                                       | Triode-1 | 1     | 4 | 5  | 9  | 6  | ---   | --- | 6 | 7   | 4 - 5         |                                                                                                                            |
| 4KN8                                                       | Triode-2 | 1     | 4 | 5  | 9  | 6  | ---   | --- | 1 | 2   | 4 - 5         |                                                                                                                            |
| 4KT6                                                       |          | 5     | 4 | 0  | 20 | 6  | ---   | 8   | 7 | 2   | 4 - 5         | Must show short on 1 - 3; Cathode short test<br>Depress 1 - 3 together                                                     |
| 4LJ8                                                       | Triode   | 5     | 4 | 8  | 12 | 6  | ---   | --- | 2 | 1   | 4 - 5         | Must show short on 3 - 8; Cathode short test<br>Depress 3 - 8 together                                                     |
| 4LJ8                                                       | Pentode  | 5     | 4 | 0  | 26 | 6  | ---   | 7   | 6 | 9   | 4 - 5         |                                                                                                                            |
| 4LU6                                                       |          | 3     | 3 | 5  | 29 | 5  | ---   | 6   | 5 | 1   | 4             |                                                                                                                            |
| 4MK8                                                       | Pent-1   | 4     | 4 | 10 | 26 | 6  | ---   | 2   | 8 | 7   | 4 - 5         |                                                                                                                            |
| 4MK8                                                       | Pent-2   | 4     | 4 | 10 | 26 | 6  | ---   | 2   | 3 | 7   | 4 - 5         |                                                                                                                            |
| 4MP12                                                      |          | 1     | 3 | 8  | 18 | 6  | ---   | 6   | 5 | 1   | 3 - 4         |                                                                                                                            |
| 4MP26                                                      |          | 1     | 3 | 10 | 10 | 5  | ---   | 6   | 5 | 1   | 3 - 4         |                                                                                                                            |
| 4RHH2                                                      | Triode   | 1     | 4 | 15 | 11 | 6  | ---   | --- | 6 | 7   | 4 - 5         |                                                                                                                            |
| 4RHH2                                                      | Triode   | 1     | 4 | 15 | 11 | 6  | ---   | --- | 1 | 2   | 4 - 5         |                                                                                                                            |
| 4RHH8                                                      | Triode-1 | 1     | 4 | 5  | 9  | 6  | ---   | --- | 6 | 7   | 4 - 5         |                                                                                                                            |
| 4RHH8                                                      | Triode-2 | 1     | 4 | 5  | 9  | 6  | ---   | --- | 1 | 2   | 4 - 5         |                                                                                                                            |
| 4RHH15                                                     | Triode-2 | 3     | 4 | 8  | 23 | 5  | ---   | --- | 1 | 2   | 5             |                                                                                                                            |
| 4RHH15                                                     | Triode-1 | 3     | 4 | 8  | 23 | 5  | ---   | --- | 6 | 7   | 5             |                                                                                                                            |
| 5AF4                                                       |          | 2     | 3 | 24 | 11 | 6  | 1 - 2 | --- | 7 | 6   | 3 - 4         | Must show short on 1 - 2 - 6 - 7                                                                                           |
| 5AF11                                                      | Pentode  | 4     | 8 | 2  | 10 | 6  | ---   | 4   | 9 | 5   | 6 - 8         | Key at 7; Use red grid cap                                                                                                 |
| 5AF11                                                      | Triode-1 | 4     | 1 | 2  | 10 | 6  | ---   | --- | 6 | 5   | 1 - 3         | Key at 2                                                                                                                   |
| 5AF11                                                      | Triode-2 | 4     | 1 | 2  | 10 | 6  | ---   | --- | 8 | 6   | 1 - 12        | Key at 0                                                                                                                   |
| 5AQ4                                                       | Diode-1  | 2     | 2 | 0  | 2  | 6  | ---   | --- | 4 | --- | 2 - 8         |                                                                                                                            |
| 5AQ4                                                       | Diode-2  | 2     | 2 | 0  | 2  | 6  | ---   | --- | 6 | --- | 2 - 8         |                                                                                                                            |
| 5B8                                                        | Pentode  | 4     | 4 | 25 | 28 | 6  | ---   | 1   | 9 | 6   | 4 - 5         |                                                                                                                            |

| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |          |       |   |    |    |   |       |     |       |     |               |                                                                                                                                                       |
|------------------------------------------------------------|----------|-------|---|----|----|---|-------|-----|-------|-----|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                            |          | LEVER |   |    |    |   |       |     |       |     |               |                                                                                                                                                       |
| TUBE                                                       | SECTION  | A     | B | C  | D  | E | W     | X   | Y     | Z   | FIL.<br>CONT. | COMMENT                                                                                                                                               |
| 5B8                                                        | Triode   | 1     | 4 | 10 | 12 | 6 | ---   | --- | 3     | 2   | 4 - 5         |                                                                                                                                                       |
| 5BC3                                                       | Diode-1  | 3     | 1 | 0  | 19 | 6 | 2 - 8 | --- | 9     | --- | 1 - 2 - 3     | Must show short on 5 - 6 - 8 - 9                                                                                                                      |
| 5BC3                                                       | Diode-2  | 3     | 1 | 0  | 19 | 6 | 2 - 5 | --- | 6     | --- | 1 - 2 - 3     |                                                                                                                                                       |
| 5CL8                                                       | Triode   | 1     | 4 | 22 | 10 | 6 | ---   | --- | 2     | 1   | 4 - 5         |                                                                                                                                                       |
| 5CL8                                                       | Tetrode  | 4     | 4 | 9  | 10 | 6 | ---   | 7   | 6     | 9   | 4 - 5         |                                                                                                                                                       |
| 5CR8                                                       | Triode   | 1     | 4 | 10 | 12 | 6 | ---   | --- | 1     | 9   | 4 - 5         |                                                                                                                                                       |
| 5CR8                                                       | Pentode  | 4     | 4 | 7  | 8  | 6 | ---   | 7   | 6     | 2   | 4 - 5         |                                                                                                                                                       |
| 5DG4                                                       | Plate-1  | 1     | 1 | 0  | 4  | 6 | ---   | --- | 7     | --- | 1 - 3         |                                                                                                                                                       |
| 5DG4                                                       | Plate-2  | 1     | 1 | 0  | 4  | 6 | ---   | --- | 5     | --- | 1 - 3         |                                                                                                                                                       |
| 5DJ4                                                       | *        |       |   |    |    |   |       |     |       |     |               | * CAUTION: Lever #2 must be thrown to "W" position before inserting tube and must remain in "W" position throughout all tests, including short tests. |
| 5DJ4                                                       | Plate-1  | 3     | 1 | 0  | 17 | 6 | 2     | --- | 3 - 4 | --- | 1 - 7 - 8     | Must show short on 3 - 4 - 5 - 6                                                                                                                      |
| 5DJ4                                                       | Plate-2  | 3     | 1 | 0  | 17 | 6 | 2     | --- | 5 - 6 | --- | 1 - 7 - 8     |                                                                                                                                                       |
| 5EW6                                                       |          | 1     | 3 | 19 | 21 | 6 | ---   | 6   | 5     | 1   | 3 - 4         |                                                                                                                                                       |
| 5GJ7                                                       | Triode   | 5     | 4 | 7  | 8  | 6 | ---   | --- | 8     | 9   | 4 - 5         | Must show short on 1 - 3; Cathode short test                                                                                                          |
| 5GJ7                                                       | Pentode  | 1     | 4 | 0  | 38 | 6 | ---   | 7   | 6     | 9   | 4 - 5         | Depress 1 - 3 together                                                                                                                                |
| 5GS7                                                       | Triode   | 5     | 4 | 7  | 10 | 6 | ---   | --- | 2     | 1   | 4 - 5         | Must show short on 3 - 8; Cathode short test                                                                                                          |
| 5GS7                                                       | Pentode  | 5     | 4 | 0  | 21 | 6 | ---   | 7   | 6     | 9   | 4 - 5         | Depress 3 - 8 together                                                                                                                                |
| 5GX6                                                       |          | 1     | 3 | 10 | 36 | 5 | ---   | 6   | 5     | 1   | 3 - 4         |                                                                                                                                                       |
| 5GX7                                                       | Triode   | 5     | 4 | 9  | 8  | 6 | ---   | --- | 8     | 9   | 4 - 5         | Must show short on 1 - 3; Cathode short test                                                                                                          |
| 5GX7                                                       | Pentode  | 4     | 4 | 5  | 7  | 6 | ---   | 7   | 6     | 2   | 4 - 5         | Depress 1 - 3 together                                                                                                                                |
| 5HA7                                                       | Triode-1 | 1     | 2 | 35 | 10 | 6 | ---   | --- | 5     | 1   | 2 - 4         | Key at 3                                                                                                                                              |
| 5HA7                                                       | Triode-2 | 2     | 4 | 36 | 10 | 6 | ---   | --- | 2     | 1   | 2 - 4         | Key at 5                                                                                                                                              |
| 5HB7                                                       | Triode   | 1     | 4 | 25 | 10 | 6 | 1     | --- | 8     | 9   | 4 - 5         | Must show short on 1 - 3; Cathode short test                                                                                                          |
| 5HB7                                                       | Pentode  | 4     | 4 | 9  | 10 | 6 | 1     | 7   | 6     | 2   | 4 - 5         | Depress 1 - 3 together                                                                                                                                |
| 5HC7                                                       | Triode-1 | 2     | 1 | 26 | 14 | 6 | ---   | --- | 7     | 9   | 1 - 12        | Key at 0; Use red grid cap                                                                                                                            |
| 5HC7                                                       | Triode-2 | 2     | 7 | 34 | 10 | 6 | ---   | --- | 8     | 4   | 5 - 7         | Key at 6                                                                                                                                              |
| 5HG8                                                       | Triode   | 1     | 4 | 5  | 10 | 6 | ---   | --- | 7     | 6   | 4 - 5         | May show short on 1 - 3; Cathode short test -                                                                                                         |
| 5HG8                                                       | Pentode  | 1     | 4 | 7  | 25 | 6 | ---   | 9   | 8     | 2   | 4 - 5         | Depress 1 - 3 together                                                                                                                                |
| 5HZ6                                                       |          | 4     | 3 | 15 | 15 | 6 | ---   | 6   | 5     | 1   | 3 - 4         |                                                                                                                                                       |
| 5JK6                                                       |          | 1     | 3 | 9  | 16 | 6 | ---   | 6   | 5     | 1   | 3 - 4         |                                                                                                                                                       |
| 5JL6                                                       |          | 1     | 3 | 2  | 17 | 6 | ---   | 6   | 5     | 1   | 3 - 4         |                                                                                                                                                       |
| 5JW8                                                       | Triode   | 5     | 4 | 10 | 15 | 6 | ---   | --- | 1     | 9   | 4 - 5         |                                                                                                                                                       |
| 5JW8                                                       | Pentode  | 4     | 4 | 7  | 11 | 6 | ---   | 3   | 6     | 2   | 4 - 5         |                                                                                                                                                       |
| 5KD6                                                       | Triode   | 1     | 4 | 25 | 10 | 6 | ---   | --- | 1     | 9   | 4 - 5         |                                                                                                                                                       |



| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |          |       |   |    |    |   |     |     |     |     |               |                                                                        |
|------------------------------------------------------------|----------|-------|---|----|----|---|-----|-----|-----|-----|---------------|------------------------------------------------------------------------|
|                                                            |          | LEVER |   |    |    |   |     |     |     |     |               |                                                                        |
| TUBE                                                       | SECTION  | A     | B | C  | D  | E | W   | X   | Y   | Z   | FIL.<br>CONT. | COMMENT                                                                |
| 5KD6                                                       | Pentode  | 1     | 4 | 18 | 25 | 6 | --- | 3   | 6   | 2   | 4 - 5         |                                                                        |
| 5KE8                                                       | Triode   | 2     | 4 | 32 | 10 | 6 | --- | --- | 1   | 9   | 4 - 5         |                                                                        |
| 5KE8                                                       | Pentode  | 4     | 4 | 5  | 10 | 6 | --- | 3   | 6   | 2   | 4 - 5         |                                                                        |
| 5KZ8                                                       | Triode   | 3     | 4 | 15 | 18 | 6 | --- | --- | 1   | 9   | 4 - 5         |                                                                        |
| 5KZ8                                                       | Pentode  | 4     | 4 | 9  | 10 | 6 | --- | 7   | 6   | 2   | 4 - 5         |                                                                        |
| 5LJ8                                                       | Triode   | 5     | 4 | 8  | 12 | 6 | --- | --- | 2   | 1   | 4 - 5         | Must show short on 3 - 8; Cathode short test<br>Depress 3 - 8 together |
| 5LJ8                                                       | Pentode  | 5     | 4 | 0  | 26 | 6 | --- | 7   | 6   | 9   | 4 - 5         |                                                                        |
| 5MB8                                                       | Triode   | 5     | 4 | 10 | 12 | 6 | --- | --- | 2   | 1   | 4 - 5         |                                                                        |
| 5MB8                                                       | Pentode  | 4     | 4 | 5  | 7  | 6 | --- | 7   | 6   | 9   | 4 - 5         |                                                                        |
| 5MF8                                                       | Pentode  | 2     | 7 | 5  | 17 | 6 | 1   | 3   | 12  | 2   | 7 - 9         | Key at 8; Must show short on 1 - 2                                     |
| 5MF8                                                       | Triode   | 2     | 4 | 8  | 30 | 6 | --- | --- | 7   | 2   | 7 - 9         | Key at 5; Use red grid cap                                             |
| 5MHH3                                                      | Triode   | 1     | 3 | 16 | 13 | 6 | --- | --- | 2   | 5   | 3 - 4         |                                                                        |
| 5MHH3                                                      | Triode   | 1     | 3 | 16 | 13 | 6 | --- | --- | 1   | 6   | 3 - 4         |                                                                        |
| 5MK9                                                       |          | 2     | 3 | 0  | 4  | 6 | --- | --- | 5   | --- | 3 - 4         |                                                                        |
| 5MQ8                                                       | Triode   | 1     | 4 | 17 | 15 | 6 | --- | --- | 1   | 9   | 5             |                                                                        |
| 5MQ8                                                       | Pentode  | 1     | 4 | 17 | 21 | 6 | --- | 3   | 6   | 2   | 5             |                                                                        |
| 5P29                                                       |          | 1     | 2 | 13 | 10 | 6 | --- | 4   | 11  | 5   | 2 - 7         |                                                                        |
| 5RDDH1                                                     | Diode-1  | 3     | 4 | 0  | 20 | 5 | --- | --- | 1   | --- | 5             |                                                                        |
| 5RDDH1                                                     | Diode-2  | 3     | 4 | 0  | 20 | 5 | --- | --- | 6   | --- | 5             |                                                                        |
| 5RDDH1                                                     | Triode   | 3     | 4 | 16 | 25 | 5 | --- | --- | 7   | 8   | 5             |                                                                        |
| 5RHP1                                                      | Triode   | 1     | 4 | 14 | 10 | 7 | --- | --- | 1   | 9   | 4 - 5         |                                                                        |
| 5RHP1                                                      | Pentode  | 1     | 4 | 23 | 16 | 7 | --- | 3   | 6   | 2   | 4 - 5         |                                                                        |
| 5RHR1                                                      | Triode   | 1     | 4 | 11 | 13 | 6 | --- | --- | 1   | 9   | 4 - 5         |                                                                        |
| 5RHR1                                                      | Pentode  | 1     | 4 | 30 | 17 | 6 | --- | 3   | 6   | 2   | 4 - 5         |                                                                        |
| 5RK16                                                      | Plate-1  | 5     | 5 | 0  | 5  | 6 | --- | --- | 1   | --- | 4 - 5         |                                                                        |
| 5RK16                                                      | Plate-2  | 5     | 5 | 0  | 5  | 6 | --- | --- | 8   | --- | 4 - 5         |                                                                        |
| 5U9                                                        | Triode   | 5     | 5 | 9  | 10 | 6 | --- | --- | 9   | 11  | 5 - 6         |                                                                        |
| 5U9                                                        | Pentode  | 5     | 5 | 0  | 21 | 6 | --- | 8   | 7   | 3   | 5 - 6         |                                                                        |
| 5V9                                                        | Triode   | 5     | 5 | 8  | 10 | 6 | --- | --- | 11  | 8   | 5 - 6         |                                                                        |
| 5V9                                                        | Pentode  | 5     | 5 | 5  | 21 | 6 | --- | 4   | 7   | 3   | 5 - 6         |                                                                        |
| 5X9                                                        | Triode   | 5     | 5 | 10 | 14 | 6 | --- | --- | 9   | 11  | 5 - 6         |                                                                        |
| 5X9                                                        | Pentode  | 2     | 5 | 0  | 39 | 6 | --- | 8   | 7   | 3   | 5 - 6         |                                                                        |
| 6AC9                                                       | Diode    | 3     | 1 | 0  | 15 | 1 | 7   | --- | --- | 2   | 1 - 11        | Key at 0; May show short on 3                                          |
| 6AC9                                                       | Pentode  | 4     | 6 | 7  | 8  | 7 | --- | 4   | 5   | 3   | 1 - 11        | Key at 7                                                               |
| 6AC10                                                      | Triode-1 | 1     | 4 | 14 | 19 | 7 | --- | --- | 2   | 1   | 4 - 6         | Key at 5                                                               |
| 6AC10                                                      | Triode-2 | 1     | 1 | 14 | 19 | 7 | --- | --- | 5   | 7   | 4 - 6         | Key at 0                                                               |
| 6AC10                                                      | Triode-3 | 1     | 2 | 14 | 19 | 7 | --- | --- | 5   | 1   | 4 - 6         | Key at 3                                                               |
| 6AD10                                                      | Pent-1   | 5     | 1 | 5  | 23 | 7 | --- | 6   | 7   | 3   | 1 - 11        | Key at 0                                                               |
| 6AD10                                                      | Pent-2   | 5     | 7 | 5  | 7  | 7 | --- | 3   | 4   | 1   | 1 - 11        | Key at 6                                                               |
| 6AF9                                                       | Pent-1   | 1     | 5 | 7  | 11 | 7 | --- | 9   | 11  | 8   | 5 - 6         | May show short on 2                                                    |
| 6AF9                                                       | Pent-2   | 1     | 5 | 15 | 16 | 7 | --- | 3   | 4   | 1   | 5 - 6         |                                                                        |

| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |          |       |   |    |    |    |     |     |   |     |               |                                    |
|------------------------------------------------------------|----------|-------|---|----|----|----|-----|-----|---|-----|---------------|------------------------------------|
|                                                            |          | LEVER |   |    |    |    |     |     |   |     |               |                                    |
| TUBE                                                       | SECTION  | A     | B | C  | D  | E  | W   | X   | Y | Z   | FIL.<br>CONT. | COMMENT                            |
| 6AF11                                                      | Triode-1 | 2     | 1 | 19 | 21 | 7  | --- | --- | 8 | 6   | 1 - 12        | Key at 0; Use red grid cap         |
| 6AF11                                                      | Triode-2 | 2     | 1 | 19 | 23 | 7  | --- | --- | 4 | 3   | 1 - 12        |                                    |
| 6AF11                                                      | Pentode  | 2     | 6 | 5  | 21 | 7  | --- | 2   | 7 | 3   | 4 - 6         | Key at 5                           |
| 6AG9                                                       |          | 5     | 1 | 10 | 14 | 7  | --- | --- | 7 | 5   | 1 - 11        | Key at 0                           |
| 6AG9                                                       |          | 1     | 5 | 8  | 13 | 7  | --- | 3   | 8 | 4   | 1 - 11        | Key at 6                           |
| 6AG11                                                      | Triode-1 | 2     | 9 | 16 | 23 | 7  | --- | --- | 2 | 3   | 7 - 9         | Key at 8                           |
| 6AG11                                                      | Diode-1  | 3     | 9 | 0  | 16 | 7  | --- | --- | 5 | --- | 7 - 9         | Key at 8                           |
| 6AG11                                                      | Triode-2 | 2     | 3 | 16 | 23 | 7  | --- | --- | 8 | 7   | 1 - 3         | Key at 2                           |
| 6AG11                                                      | Diode-2  | 3     | 3 | 0  | 16 | 7  | --- | --- | 5 | --- | 1 - 3         | Key at 2                           |
| 6AG12                                                      |          | 1     | 7 | 0  | 28 | 11 | --- | 6   | 8 | 7   | 1 - 9         |                                    |
| 6AH9                                                       | Triode   | 1     | 1 | 8  | 13 | 7  | --- | --- | 3 | 2   | 1 - 11        | Key at 0; Will show short on 5 - 6 |
| 6AH9                                                       | Pentode  | 1     | 6 | 5  | 12 | 7  | --- | 2   | 5 | 11  | 1 - 11        | Key at 7                           |
| 6AJ9                                                       | Triode   | 5     | 5 | 8  | 10 | 7  | --- | --- | 9 | 11  | 5 - 6         |                                    |
| 6AJ9                                                       | Pentode  | 5     | 5 | 5  | 30 | 7  | --- | 8   | 7 | 3   | 5 - 6         |                                    |
| 6AK9                                                       | Pentode  | 2     | 7 | 31 | 14 | 7  | --- | --- | 6 | 5   | 9             | Key at 8                           |
| 6AK9                                                       | Triode-1 | 2     | 7 | 27 | 13 | 7  | --- | --- | 4 | 3   | 9             |                                    |
| 6AK9                                                       | Triode-2 | 2     | 1 | 31 | 13 | 7  | --- | --- | 2 | 3   | 11            | Key at 0                           |
| 6AK10                                                      | Triode-2 | 2     | 1 | 5  | 35 | 7  | --- | --- | 5 | 7   | 11            | Key at 0                           |
| 6AK10                                                      | Triode-3 | 2     | 5 | 5  | 34 | 7  | --- | --- | 8 | 4   | 7             | Key at 6                           |
| 6AK10                                                      | Triode-1 | 2     | 7 | 5  | 32 | 7  | --- | --- | 5 | 4   | 9             | Key at 8                           |
| 6AL9                                                       | Triode   | 2     | 1 | 14 | 30 | 7  | --- | --- | 9 | 7   | 1 - 3         | Key at 2                           |
| 6AL9                                                       | Pentode  | 2     | 6 | 10 | 15 | 7  | --- | 2   | 7 | 3   | 4 - 6         | Key at 5                           |
| 6AL11                                                      | Pent-1   | 4     | 1 | 17 | 10 | 7  | --- | 9   | 8 | 5   | 1 - 3         | Key at 2; Use red grid cap         |
| 6AL11                                                      | Pent-2   | 4     | 5 | 2  | 10 | 7  | --- | 3   | 4 | 1   | 5 - 7         | Key at 6                           |
| 6AM5                                                       |          | 1     | 3 | 31 | 10 | 7  | --- | 7   | 5 | 1   | 3 - 4         |                                    |
| 6AN6                                                       | Diode-1  | 3     | 1 | 0  | 19 | 7  | --- | --- | 2 | --- | 1 - 7         |                                    |
| 6AN6                                                       | Diode-2  | 3     | 1 | 0  | 19 | 7  | --- | --- | 3 | --- | 1 - 7         |                                    |
| 6AN6                                                       | Diode-3  | 3     | 1 | 0  | 19 | 7  | --- | --- | 4 | --- | 1 - 7         |                                    |
| 6AN6                                                       | Diode-4  | 3     | 1 | 0  | 19 | 7  | --- | --- | 5 | --- | 1 - 7         |                                    |
| 6AQ4                                                       |          | 4     | 3 | 5  | 5  | 7  | 1   | --- | 7 | 6   | 3 - 4         |                                    |
| 6AQ8                                                       | Triode-1 | 1     | 4 | 25 | 11 | 7  | --- | --- | 6 | 7   | 4 - 5         |                                    |
| 6AQ8                                                       | Triode-2 | 1     | 4 | 25 | 11 | 7  | --- | --- | 1 | 2   | 4 - 5         |                                    |
| 6AR8                                                       | Pent-1   | 4     | 4 | 6  | 22 | 7  | --- | 3   | 9 | 6   | 4 - 5         |                                    |
| 6AR8                                                       | Pent-2   | 4     | 4 | 6  | 22 | 7  | --- | 3   | 8 | 6   | 4 - 5         |                                    |
| 6AR11                                                      | Pent-2   | 1     | 3 | 7  | 30 | 7  | --- | 5   | 4 | 7   | 1 - 3         | Key at 2                           |
| 6AR11                                                      | Pent-1   | 1     | 9 | 7  | 30 | 7  | --- | 4   | 3 | 5   | 7 - 9         | Key at 8                           |
| 6AS11                                                      | Triode-1 | 2     | 1 | 20 | 20 | 7  | --- | --- | 8 | 6   | 1 - 12        | Key at 0; Use red grid cap         |
| 6AS11                                                      | Triode-2 | 2     | 1 | 20 | 20 | 7  | --- | --- | 4 | 3   | 1 - 12        |                                    |
| 6AS11                                                      | Pentode  | 2     | 6 | 15 | 14 | 7  | --- | 2   | 7 | 3   | 4 - 6         | Key at 5                           |
| 6AT7N                                                      | Triode-1 | 1     | 4 | 26 | 13 | 7  | --- | --- | 6 | 7   | 4 - 5         |                                    |
| 6AT7N                                                      | Triode-2 | 1     | 4 | 26 | 13 | 7  | --- | --- | 1 | 2   | 4 - 5         |                                    |
| 6AV11                                                      | Triode-1 | 1     | 6 | 15 | 15 | 7  | --- | --- | 2 | 1   | 4 - 6         | Key at 5                           |

| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |          |       |   |    |    |   |       |     |    |     |               |                                                                                                                                       |
|------------------------------------------------------------|----------|-------|---|----|----|---|-------|-----|----|-----|---------------|---------------------------------------------------------------------------------------------------------------------------------------|
|                                                            |          | LEVER |   |    |    |   |       |     |    |     |               |                                                                                                                                       |
| TUBE                                                       | SECTION  | A     | B | C  | D  | E | W     | X   | Y  | Z   | FIL.<br>CONT. | COMMENT                                                                                                                               |
| 6AV11                                                      | Triode-3 | 1     | 6 | 15 | 15 | 7 | ---   | --- | 7  | 3   | 4 - 6         |                                                                                                                                       |
| 6AV11                                                      | Triode-2 | 1     | 3 | 15 | 15 | 7 | ---   | --- | 7  | 9   | 1 - 3         | Key at 2                                                                                                                              |
| 6AX3                                                       | *        | 1     | 4 | 0  | 4  | 7 | 2     | --- | 9  | --- | 4 - 6         | *Use G-140 adapter; Connect red grid cap to G-140 plug; Key at 5; Must show short on 2 - 9; Plate short test - Depress 2 - 9 together |
| 6AX8                                                       | Triode   | 1     | 4 | 28 | 8  | 7 | ---   | --- | 1  | 9   | 4 - 5         |                                                                                                                                       |
| 6AX8                                                       | Pentode  | 1     | 4 | 14 | 29 | 7 | ---   | 3   | 6  | 2   | 4 - 5         |                                                                                                                                       |
| 6AY3                                                       |          | 1     | 4 | 0  | 4  | 7 | 2     | --- | 7  | --- | 4 - 5         | Must show short on 2 - 7                                                                                                              |
| 6AY11                                                      | Diode-2  | 3     | 1 | 0  | 17 | 7 | ---   | --- | 3  | --- | 1 - 12        | Key at 0; Use red grid cap                                                                                                            |
| 6AY11                                                      | Triode-2 | 4     | 1 | 13 | 9  | 7 | ---   | --- | 6  | 5   | 1 - 12        |                                                                                                                                       |
| 6AY11                                                      | Triode-1 | 4     | 1 | 13 | 9  | 7 | ---   | --- | 7  | 8   | 1 - 12        |                                                                                                                                       |
| 6AY11                                                      | Diode-1  | 3     | 3 | 0  | 17 | 7 | ---   | --- | 1  | --- | 3 - 5         | Key at 4                                                                                                                              |
| 6B10                                                       | Triode-1 | 1     | 1 | 28 | 10 | 7 | ---   | --- | 6  | 5   | 1 - 11        | Key at 0                                                                                                                              |
| 6B10                                                       | Triode-2 | 1     | 1 | 28 | 10 | 7 | ---   | --- | 4  | 3   | 1 - 11        |                                                                                                                                       |
| 6B10                                                       | Diode-1  | 3     | 7 | 0  | 16 | 7 | ---   | --- | 3  | --- | 1 - 11        | Key at 6                                                                                                                              |
| 6B10                                                       | Diode-2  | 3     | 7 | 0  | 16 | 7 | ---   | --- | 1  | --- | 1 - 11        |                                                                                                                                       |
| 6B32                                                       | Diode-1  | 3     | 3 | 0  | 17 | 7 | ---   | --- | 7  | --- | 3 - 4         |                                                                                                                                       |
| 6B32                                                       | Diode-2  | 3     | 3 | 0  | 17 | 7 | ---   | --- | 2  | --- | 3 - 4         |                                                                                                                                       |
| 6BA3                                                       |          | 3     | 4 | 0  | 16 | 7 | 7     | --- | 2  | --- | 4 - 5         | May show short on 2 - 7                                                                                                               |
| 6BA11                                                      | Pent-1   | 4     | 3 | 27 | 20 | 7 | ---   | 7   | 6  | 8   | 3 - 5         | Key at 4; Use red grid cap                                                                                                            |
| 6BA11                                                      | Pent-2   | 4     | 1 | 21 | 26 | 7 | ---   | 3   | 6  | 4   | 1 - 12        | Key at 0                                                                                                                              |
| 6BA11                                                      | Triode   | 3     | 7 | 16 | 17 | 7 | ---   | --- | 6  | 4   | 7 - 9         | Key at 8                                                                                                                              |
| 6BB14                                                      | *        | 5     | 4 | 0  | 5  | 7 | 2 - 7 | 6   | 11 | 1   | 4 - 5         | * Must use magnoval adapter; Must show short on 1 - 2 - 3 - 6 - 7 - 8; Cap goes to top of tube                                        |
| 6BD11                                                      | Triode-2 | 4     | 1 | 2  | 10 | 7 | ---   | --- | 4  | 3   | 1 - 12        | Key at 0; Use red grid cap                                                                                                            |
| 6BD11                                                      | Triode-1 | 4     | 1 | 2  | 10 | 7 | ---   | --- | 8  | 6   | 1 - 12        |                                                                                                                                       |
| 6BD11                                                      | Pentode  | 4     | 4 | 3  | 10 | 7 | ---   | 2   | 7  | 3   | 4 - 6         | Key at 5                                                                                                                              |
| 6BE3                                                       |          | 3     | 1 | 0  | 16 | 7 | 12    | --- | 6  | --- | 1 - 3         | Key at 2; Must show short on 6 - 12; Use red grid cap                                                                                 |
| 6BE7                                                       |          | 5     | 4 | 10 | 32 | 7 | ---   | 1   | 6  | 7   | 4 - 5         | Must show short on 3 - 8                                                                                                              |
| 6BF8                                                       | Diode-1  | 3     | 4 | 0  | 16 | 7 | ---   | --- | 9  | --- | 4 - 5         |                                                                                                                                       |
| 6BF8                                                       | Diode-2  | 3     | 4 | 0  | 16 | 7 | ---   | --- | 8  | --- | 4 - 5         |                                                                                                                                       |
| 6BF8                                                       | Diode-3  | 3     | 4 | 0  | 16 | 7 | ---   | --- | 7  | --- | 4 - 5         |                                                                                                                                       |
| 6BF8                                                       | Diode-4  | 3     | 4 | 0  | 16 | 7 | ---   | --- | 3  | --- | 4 - 5         |                                                                                                                                       |
| 6BF8                                                       | Diode-5  | 3     | 4 | 0  | 16 | 7 | ---   | --- | 2  | --- | 4 - 5         |                                                                                                                                       |
| 6BF8                                                       | Diode-6  | 3     | 4 | 0  | 16 | 7 | ---   | --- | 1  | --- | 4 - 5         |                                                                                                                                       |
| 6BF11                                                      | Sect-1   | 4     | 1 | 23 | 15 | 7 | ---   | 6   | 7  | 3   | 1 - 12        | Key at 0; Use red grid cap                                                                                                            |
| 6BF11                                                      | Sect-2   | 1     | 7 | 7  | 10 | 7 | ---   | 5   | 6  | 3   | 7 - 9         | Key at 8                                                                                                                              |
| 6BH11                                                      | Triode-1 | 5     | 1 | 10 | 11 | 7 | ---   | --- | 3  | 4   | 1 - 11        | Key at 0                                                                                                                              |
| 6BH11                                                      | Triode-2 | 5     | 1 | 10 | 11 | 7 | ---   | --- | 7  | 6   | 1 - 11        |                                                                                                                                       |

| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |           |       |   |    |    |   |     |     |    |     |            |                                                                  |
|------------------------------------------------------------|-----------|-------|---|----|----|---|-----|-----|----|-----|------------|------------------------------------------------------------------|
|                                                            |           | LEVER |   |    |    |   |     |     |    |     |            |                                                                  |
| TUBE                                                       | SECTION   | A     | B | C  | D  | E | W   | X   | Y  | Z   | FIL. CONT. | COMMENT                                                          |
| 6BH11                                                      | Pentode   | 4     | 6 | 8  | 8  | 7 | --- | 3   | 4  | 2   | 1 - 11     | Key at 7                                                         |
| 6BJ3                                                       |           | 3     | 1 | 0  | 16 | 7 | --- | --- | 4  | --- | 1 - 12     | Key at 0; Use red grid cap                                       |
| 6BK4                                                       |           | 4     | 2 | 15 | 50 | 7 | --- | --- | 11 | 5   | 2 - 7      | May show short on 1 - 3 - 4 - 6 - 8; OK past 1/3 scale           |
| 6BK8                                                       |           | 5     | 4 | 0  | 28 | 7 | --- | 1   | 6  | 9   | 4 - 5      | May show short on 2 - 7                                          |
| 6BK11                                                      | Triode-1  | 1     | 6 | 20 | 23 | 7 | --- | --- | 2  | 1   | 4 - 6      | Key at 5                                                         |
| 6BK11                                                      | Triode-3  | 1     | 6 | 20 | 23 | 7 | --- | --- | 7  | 3   | 4 - 6      |                                                                  |
| 6BK11                                                      | Triode-2  | 1     | 3 | 20 | 23 | 7 | --- | --- | 7  | 9   | 1 - 3      | Key at 2                                                         |
| 6BN11                                                      | Pent-1    | 5     | 6 | 0  | 28 | 7 | --- | 3   | 5  | 1   | 6 - 8      | Key at 7                                                         |
| 6BN11                                                      | Pent-2    | 5     | 1 | 0  | 28 | 7 | --- | 6   | 7  | 5   | 6 - 8      |                                                                  |
| 6BR3                                                       |           | 3     | 4 | 0  | 15 | 7 | 2   | --- | 9  | --- | 4 - 5      | May show short on 2 - 9                                          |
| 6BR7                                                       | Triode    | 1     | 9 | 16 | 17 | 5 | --- | --- | 1  | 2   | 4 - 5 - 9  |                                                                  |
| 6BR7                                                       | Diode-1   | 3     | 9 | 0  | 18 | 5 | --- | --- | 7  | --- | 4 - 5 - 9  |                                                                  |
| 6BR7                                                       | Diode-2   | 3     | 9 | 0  | 18 | 5 | --- | --- | 6  | --- | 4 - 5 - 9  |                                                                  |
| 6BS3                                                       |           | 3     | 4 | 0  | 15 | 7 | 7   | --- | 2  | --- | 4 - 5      | Must show short on 2 - 7                                         |
| 6BT6                                                       | Triode    | 1     | 3 | 12 | 29 | 7 | --- | --- | 7  | 1   | 3 - 4      |                                                                  |
| 6BT6                                                       | Diode-1   | 3     | 3 | 0  | 25 | 7 | --- | --- | 5  | --- | 3 - 4      |                                                                  |
| 6BT6                                                       | Diode-2   | 3     | 3 | 0  | 25 | 7 | --- | --- | 6  | --- | 3 - 4      |                                                                  |
| 6BV11                                                      | Pent-1    | 4     | 6 | 9  | 15 | 7 | --- | 3   | 4  | 1   | 6 - 8      | Key at 7                                                         |
| 6BV11                                                      | Pent-2    | 4     | 1 | 9  | 15 | 7 | --- | 6   | 5  | 8   | 6 - 8      | Key at 2                                                         |
| 6BW3                                                       |           | 3     | 1 | 0  | 15 | 7 | --- | --- | 4  | --- | 1 - 11     | Key at 0                                                         |
| 6BW6                                                       |           | 1     | 4 | 7  | 20 | 7 | 1   | 8   | 7  | 2   | 4 - 5      | Must show short on 1 - 2                                         |
| 6BW11                                                      | Pent-1    | 4     | 6 | 0  | 17 | 7 | --- | 3   | 2  | 5   | 6 - 8      | Key at 7                                                         |
| 6BW11                                                      | Pent-2    | 4     | 1 | 0  | 22 | 7 | --- | 6   | 7  | 5   | 6 - 8      | Key at 2                                                         |
| 6BX4                                                       |           | 2     | 3 | 0  | 3  | 7 | --- | --- | 1  | --- | 3 - 4      |                                                                  |
| 6BX4                                                       |           | 2     | 3 | 0  | 3  | 7 | --- | --- | 6  | --- | 3 - 4      |                                                                  |
| 6BY8                                                       | Pentode   | 1     | 4 | 20 | 19 | 7 | --- | 8   | 7  | 1   | 4 - 5      |                                                                  |
| 6BY8                                                       | Diode     | 3     | 4 | 0  | 16 | 7 | --- | --- | 6  | --- | 4 - 5      |                                                                  |
| 6BY11                                                      | Pent-1    | 4     | 1 | 5  | 23 | 7 | --- | 6   | 7  | 3   | 1 - 12     | Key at 0; Use red grid cap                                       |
| 6BY11                                                      | Pent-2    | 1     | 7 | 5  | 7  | 7 | --- | 5   | 6  | 3   | 7 - 9      | Key at 8                                                         |
| 6BZ3                                                       |           | 3     | 1 | 0  | 15 | 7 | --- | --- | 4  | --- | 1 - 11     | Key at 0                                                         |
| 6C9                                                        | Tetrode-1 | 4     | 4 | 5  | 7  | 7 | --- | 8   | 9  | 7   | 4 - 5      |                                                                  |
| 6C9                                                        | Tetrode-2 | 3     | 4 | 9  | 23 | 7 | --- | 2   | 3  | 1   | 4 - 5      |                                                                  |
| 6C10 *                                                     | Triode-2  | 1     | 1 | 32 | 10 | 7 | --- | --- | 5  | 7   | 1 - 12     | *Use G-140 adapter; Connect red grid cap to G-140 plug; Key at 0 |
| 6C10 *                                                     | Triode-1  | 1     | 6 | 32 | 10 | 7 | --- | --- | 2  | 1   | 1 - 12     | *Use G-140 adapter; Connect red grid cap to G-140 plug; Key at 5 |
| 6C10 *                                                     | Triode-3  | 1     | 6 | 32 | 10 | 7 | --- | --- | 7  | 3   | 1 - 12     | *Use G-140 adapter; Connect red grid cap to G-140 plug; Key at 5 |
| 6C16                                                       | Triode    | 1     | 4 | 14 | 10 | 7 | --- | --- | 1  | 9   | 4 - 5      |                                                                  |
| 6C16                                                       | Pentode   | 1     | 4 | 23 | 16 | 7 | --- | 3   | 6  | 2   | 4 - 5      |                                                                  |

| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |          |       |   |    |    |   |           |     |    |     |               |                                                                                                       |
|------------------------------------------------------------|----------|-------|---|----|----|---|-----------|-----|----|-----|---------------|-------------------------------------------------------------------------------------------------------|
|                                                            |          | LEVER |   |    |    |   |           |     |    |     |               |                                                                                                       |
| TUBE                                                       | SECTION  | A     | B | C  | D  | E | W         | X   | Y  | Z   | FIL.<br>CONT. | COMMENT                                                                                               |
| 6C18                                                       | Triode   | 5     | 4 | 7  | 10 | 7 | ---       | --- | 1  | 9   | 4 - 5         | Must show short on 6 - 8; Cathode short test                                                          |
| 6C18                                                       | Pentode  | 5     | 4 | 0  | 22 | 7 | ---       | 2   | 3  | 7   | 4 - 5         | Depress 6 - 8 together                                                                                |
| 6CA11                                                      | Triode-1 | 3     | 1 | 8  | 26 | 7 | ---       | --- | 2  | 3   | 11            | Key at 0; May show short on 7                                                                         |
| 6CA11                                                      | Triode-2 | 3     | 1 | 8  | 24 | 7 | ---       | --- | 4  | 6   | 11            |                                                                                                       |
| 6CA11                                                      | Pentode  | 3     | 7 | 3  | 23 | 7 | ---       | 5   | 6  | 3   | 9             | Key at 8                                                                                              |
| 6CC31                                                      | Triode-1 | 1     | 3 | 16 | 13 | 7 | ---       | --- | 2  | 5   | 3 - 4         |                                                                                                       |
| 6CC31                                                      | Triode-2 | 1     | 3 | 16 | 13 | 7 | ---       | --- | 1  | 6   | 3 - 4         |                                                                                                       |
| 6CC42                                                      | Triode-1 | 1     | 1 | 27 | 10 | 7 | ---       | --- | 6  | 7   | 1 - 9         |                                                                                                       |
| 6CC42                                                      | Triode-2 | 1     | 1 | 27 | 10 | 7 | ---       | --- | 4  | 3   | 1 - 9         |                                                                                                       |
| 6CC43                                                      | Triode-1 | 1     | 4 | 25 | 11 | 7 | ---       | --- | 6  | 7   | 4 - 5         |                                                                                                       |
| 6CC43                                                      | Triode-2 | 1     | 4 | 25 | 11 | 7 | ---       | --- | 1  | 2   | 4 - 5         |                                                                                                       |
| 6CD3                                                       |          | 5     | 1 | 0  | 5  | 7 | ---       | --- | 4  | --- | 1 - 11        | Key at 0                                                                                              |
| 6CE3                                                       |          | 5     | 1 | 0  | 5  | 7 | ---       | --- | 4  | --- | 1 - 11        | Key at 0                                                                                              |
| 6CF8                                                       |          | 1     | 4 | 17 | 30 | 7 | ---       | 1   | 6  | 9   | 4 - 5         | May show short on 2 - 7                                                                               |
| 6CG3                                                       |          | 5     | 1 | 0  | 5  | 7 | ---       | --- | 4  | --- | 1 - 11        | Key at 0                                                                                              |
| 6CG8                                                       | Triode   | 1     | 4 | 18 | 12 | 7 | ---       | --- | 2  | 1   | 4 - 5         | Must show short on 3 - 8; Cathode short test                                                          |
| 6CG8                                                       | Pentode  | 1     | 4 | 25 | 28 | 7 | ---       | 7   | 6  | 9   | 4 - 5         | Depress 3 - 8 together                                                                                |
| 6CH3                                                       |          | 1     | 4 | 0  | 4  | 7 | 2         | --- | 7  | --- | 4 - 5         | Must show short on 2 - 7                                                                              |
| 6CH40                                                      |          | 1     | 4 | 14 | 31 | 7 | ---       | 1   | 6  | 2   | 4 - 5         |                                                                                                       |
| 6CH40                                                      |          | 1     | 4 | 25 | 10 | 7 | ---       | --- | 1  | 2   | 4 - 5         |                                                                                                       |
| 6CH40                                                      |          | 1     | 4 | 25 | 13 | 7 | ---       | --- | 8  | 9   | 4 - 5         |                                                                                                       |
| 6CJ3                                                       |          | 3     | 4 | 0  | 16 | 7 | 7         | --- | 2  | --- | 4 - 5         | Must show short on 2 - 7                                                                              |
| 6CJ6                                                       |          | 5     | 4 | 5  | 6  | 7 | 7         | 8   | 11 | 2   | 4 - 5         | Must show short on 1 - 6 - 7 - 8 - 9                                                                  |
| 6CK3                                                       |          | 1     | 4 | 0  | 4  | 7 | 2         | --- | 7  | --- | 4 - 5         | Must show short on 2 - 7                                                                              |
| 6CK6                                                       |          | 5     | 4 | 7  | 9  | 7 | ---       | 1   | 7  | 2   | 4 - 5         |                                                                                                       |
| 6CL3                                                       |          | 3     | 4 | 0  | 16 | 7 | 2         | --- | 7  | --- | 4 - 5         | Must show short on 2 - 7                                                                              |
| 6CL8                                                       | Triode   | 1     | 4 | 22 | 10 | 7 | ---       | --- | 2  | 1   | 4 - 5         |                                                                                                       |
| 6CL8                                                       | Tetrode  | 4     | 4 | 9  | 10 | 7 | ---       | 7   | 6  | 9   | 4 - 5         |                                                                                                       |
| 6CM3                                                       |          | 3     | 4 | 0  | 17 | 7 | 2         | --- | 7  | --- | 4 - 5         | Must show short on 2 - 7                                                                              |
| 6CM4                                                       |          | 1     | 4 | 10 | 9  | 7 | 6 - 8 - 9 | --- | 1  | 2   | 4 - 5         | Must show short on 1 - 2 - 3 - 6 - 7 - 8 - 9;<br>Cathode short test - Depress 3 - 7 together          |
| 6CM5                                                       |          | 2     | 2 | 1  | 7  | 7 | 1         | 4   | 12 | 5   | 2 - 7         | Must show short on 1 - 3 - 4 - 8; Use red grid<br>cap; Cathode short test - Depress 3 - 8<br>together |
| 6CR8                                                       | Triode   | 1     | 4 | 10 | 12 | 7 | ---       | --- | 1  | 9   | 4 - 5         |                                                                                                       |
| 6CR8                                                       | Pentode  | 4     | 4 | 7  | 8  | 7 | ---       | 7   | 6  | 2   | 4 - 5         |                                                                                                       |
| 6CT3                                                       |          | 3     | 4 | 0  | 17 | 7 | 2         | --- | 6  | --- | 4 - 5         | Must show short on 2 - 6                                                                              |
| 6CW4                                                       | *        | 5     | 4 | 9  | 10 | 7 | ---       | --- | 1  | 2   | 4 - 5         | *Use G-140 adapter; Connect red grid cap to<br>G-140 plug                                             |

| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |          |       |   |     |    |   |       |     |       |     |               |                                                                                                                      |
|------------------------------------------------------------|----------|-------|---|-----|----|---|-------|-----|-------|-----|---------------|----------------------------------------------------------------------------------------------------------------------|
|                                                            |          | LEVER |   |     |    |   |       |     |       |     |               |                                                                                                                      |
| TUBE                                                       | SECTION  | A     | B | C   | D  | E | W     | X   | Y     | Z   | FIL.<br>CONT. | COMMENT                                                                                                              |
| 6D1                                                        |          | 1     | 3 | 15  | 26 | 7 | 1     | --- | 5     | 6   | 3 - 4         | Must show short on 1 - 5                                                                                             |
| 6D10 *                                                     | Triode-2 | 1     | 1 | 30  | 10 | 7 | ---   | --- | 5     | 7   | 1 - 12        | *Use G-140 adapter; Connect red grid cap to G-140 plug; Key at 0                                                     |
| 6D10 *                                                     | Triode-1 | 1     | 6 | 30  | 10 | 7 | ---   | --- | 2     | 1   | 1 - 12        | *Use G-140 adapter; Connect red grid cap to G-140 plug; Key at 5                                                     |
| 6D10 *                                                     | Triode-3 | 1     | 6 | 30  | 10 | 7 | ---   | --- | 7     | 3   | 1 - 12        | *Use G-140 adapter; Connect red grid cap to G-140 plug; Key at 5                                                     |
| 6DE6                                                       |          | 1     | 3 | 12  | 26 | 7 | ---   | 6   | 5     | 1   | 3 - 4         |                                                                                                                      |
| 6DE7                                                       | Triode-1 | 1     | 4 | 21  | 15 | 7 | ---   | --- | 6     | 7   | 4 - 5         | Must show short on 2 - 3                                                                                             |
| 6DE7                                                       | Triode-2 | 2     | 4 | 7   | 8  | 7 | 2     | --- | 1     | 3   | 4 - 5         |                                                                                                                      |
| 6DK3                                                       |          | 3     | 4 | 0   | 20 | 7 | 3 - 9 | --- | 2 - 7 | --- | 4 - 5         |                                                                                                                      |
| 6DL3                                                       |          | 3     | 4 | 0   | 17 | 7 | *     | --- | 7     | --- | 4 - 5         | * 2 - 3 - 6 - 8 - 9                                                                                                  |
| 6DL4                                                       |          | 5     | 4 | 8   | 9  | 7 | ---   | --- | 8     | 9   | 4 - 5         | Must show short on 1 - 3 - 6 - 7 - 9                                                                                 |
| 6DM4                                                       |          | 1     | 7 | --- | 4  | 7 | ---   | --- | 5     | --- | 7 - 8         |                                                                                                                      |
| 6DN3                                                       |          | 3     | 5 | 0   | 16 | 7 | 2     | --- | 7     | --- | 4 - 5         | Must show short on 2 - 7                                                                                             |
| 6DQ3                                                       | *        | 5     | 1 | 0   | 6  | 7 | ---   | --- | 4     | --- | 1 - 11        | * Key at 0                                                                                                           |
| 6DQ4                                                       |          | 3     | 7 | 0   | 15 | 7 | ---   | --- | 5     | --- | 7 - 8         |                                                                                                                      |
| 6DQ6                                                       |          | 1     | 2 | 0   | 4  | 7 | ---   | 4   | 11    | 5   | 2 - 7         |                                                                                                                      |
| 6DR4                                                       |          | 1     | 3 | 15  | 26 | 7 | 1     | --- | 5     | 6   | 3 - 4         | Must show short on 1 - 5                                                                                             |
| 6DR7                                                       | Triode-1 | 1     | 4 | 20  | 25 | 7 | ---   | --- | 6     | 7   | 4 - 5         | Must show short on 2 - 3                                                                                             |
| 6DR7                                                       | Triode-2 | 2     | 4 | 21  | 5  | 7 | 2     | --- | 1     | 3   | 4 - 5         |                                                                                                                      |
| 6DS4                                                       |          | 5     | 4 | 12  | 10 | 7 | ---   | --- | 1     | 2   | 4 - 5         |                                                                                                                      |
| 6DS5                                                       |          | 1     | 3 | 13  | 14 | 7 | 1     | 6   | 5     | 7   | 3 - 4         | Must show short on 1 - 7; Grid short test - Depress 1 - 7 together                                                   |
| 6DT3                                                       | *        | 3     | 1 | 0   | 19 | 7 | ---   | --- | 4     | --- | 11            | Key at 0                                                                                                             |
| 6DT4                                                       |          | 1     | 7 | 0   | 4  | 7 | 1     | --- | 5     | --- | 7 - 8         | Must show short on 1 - 5                                                                                             |
| 6DU3                                                       | *        | 5     | 1 | 0   | 6  | 7 | ---   | --- | 4     | --- | 1 - 11        | * Key at 0                                                                                                           |
| 6DV4                                                       |          | 5     | 3 | 6   | 8  | 7 | 1 - 4 | --- | 2     | 6   | 3 - 5         | Must show short on 1 - 2 - 4 - 6                                                                                     |
| 6DW4                                                       |          | 3     | 4 | 0   | 16 | 7 | 7     | --- | 2     | --- | 4 - 5         | Must show short on 2 - 7                                                                                             |
| 6DY5                                                       |          | 1     | 4 | 7   | 10 | 7 | ---   | 9   | 7     | 2   | 4 - 5         |                                                                                                                      |
| 6DZ4                                                       |          | 2     | 3 | 19  | 10 | 7 | 1 - 2 | --- | 7     | 6   | 3 - 4         | Must short on 1 - 2 - 6 - 7                                                                                          |
| 6DZ8                                                       | Triode   | 1     | 4 | 20  | 18 | 7 | ---   | --- | 9     | 1   | 4 - 5         |                                                                                                                      |
| 6DZ8                                                       | Pentode  | 2     | 4 | 7   | 12 | 7 | ---   | 7   | 6     | 3   | 4 - 5         |                                                                                                                      |
| 6E8                                                        | Pentode  | 4     | 2 | 29  | 24 | 7 | ---   | 4   | 3     | 11  | 2 - 7         |                                                                                                                      |
| 6E8                                                        | Triode   | 1     | 2 | 33  | 28 | 7 | ---   | --- | 6     | 5   | 2 - 7         |                                                                                                                      |
| 6EA4                                                       |          | 5     | 1 | 50  | 50 | 7 | ---   | --- | 11    | 8   | 1 - 3         | Key at 2; Must show short on 4 - 7; Cap goes to top of tube; OK if reads above 30                                    |
| 6EC4                                                       | *        | 3     | 4 | 0   | 16 | 7 | 7 - 8 | --- | 2     | --- | 4 - 5         | * Must use magnoval adapter; Must show short on 2 - 7 - 8; Cap goes to top of tube                                   |
| 6ED4                                                       | *        | 4     | 4 | 10  | 45 | 7 | ---   | --- | 11    | 8   | 4 - 5         | * Must use magnoval adapter; Must show short on 1 - 2 - 3 - 6 - 7 - 9; OK if reads above 30; Cap goes to top of tube |

| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |          |       |   |    |    |   |     |       |    |       |               |                                                                                   |
|------------------------------------------------------------|----------|-------|---|----|----|---|-----|-------|----|-------|---------------|-----------------------------------------------------------------------------------|
|                                                            |          | LEVER |   |    |    |   |     |       |    |       |               |                                                                                   |
| TUBE                                                       | SECTION  | A     | B | C  | D  | E | W   | X     | Y  | Z     | FIL.<br>CONT. | COMMENT                                                                           |
| 6EF4                                                       |          | 4     | 2 | 20 | 41 | 7 | --- | ---   | 11 | 9     | 2 - 4         | Key at 3; Black cap goes to top of tube                                           |
| 6EH4                                                       |          | 5     | 1 | 50 | 50 | 7 | --- | ---   | 11 | 8     | 1 - 3         | Key at 2; Must show short on 4 - 7; Cap goes to top of tube; OK if reads above 25 |
| 6EJ4                                                       |          | 4     | 2 | 22 | 45 | 7 | --- | ---   | 11 | 9     | 2 - 4         | Must show short on 1 - 5; Cap goes to top of tube                                 |
| 6EL4                                                       |          | 4     | 2 | 15 | 50 | 7 | --- | ---   | 11 | 5     | 2 - 7         | May show short on 1 - 3 - 4 - 6 - 8; OK past 1/3 scale                            |
| 6EN4                                                       |          | 4     | 2 | 13 | 50 | 7 | *   | ---   | 11 | 5     | 2 - 7         | * 3 - 4 - 6 - 8; OK past 1/3 scale                                                |
| 6EX6                                                       |          | 1     | 2 | 0  | 4  | 7 | --- | 8     | 11 | 5     | 2 - 7         |                                                                                   |
| 6F10                                                       |          | 1     | 2 | 6  | 26 | 7 | --- | 6     | 8  | 4     | 2 - 7         |                                                                                   |
| 6F19                                                       |          | 4     | 4 | 5  | 10 | 7 | 3   | 8     | 7  | 2     | 4 - 5         | Must show short on 1 - 3                                                          |
| 6F21                                                       |          | 4     | 3 | 14 | 10 | 7 | --- | 7     | 5  | 1     | 3 - 4         |                                                                                   |
| 6F22                                                       |          | 1     | 4 | 17 | 30 | 7 | --- | 1     | 6  | 9     | 4 - 5         | Must show short on 2 - 7                                                          |
| 6F26                                                       |          | 4     | 4 | 5  | 10 | 7 | 3   | 8     | 7  | 2     | 4 - 5         | Must show short on 1 - 3                                                          |
| 6F29                                                       |          | 1     | 4 | 5  | 23 | 7 | --- | 8     | 7  | 2     | 4 - 5         | Must show short on 1 - 3; Cathode short test<br>Depress 1 - 3 together            |
| 6F30                                                       |          | 1     | 4 | 5  | 25 | 7 | --- | 8     | 7  | 2     | 4 - 5         | Must show short on 1 - 3; Cathode short test<br>Depress 1 - 3 together            |
| 6F33                                                       |          | 1     | 3 | 11 | 32 | 7 | --- | 6     | 5  | 1     | 3 - 4         |                                                                                   |
| 6F35                                                       |          | 1     | 3 | 13 | 17 | 7 | --- | 6     | 5  | 1     | 3 - 4         | Must show short on 2 - 7; Cathode short test<br>Depress 2 - 7 together            |
| 6FD6                                                       |          | 1     | 3 | 8  | 20 | 7 | --- | 6     | 5  | 1     | 3 - 4         |                                                                                   |
| 6FD10                                                      |          | 2     | 2 | 5  | 9  | 7 | --- | ---   | 6  | 8     | 4 - 5         |                                                                                   |
| 6FJ7 *                                                     | Triode-1 | 1     | 5 | 26 | 10 | 7 | --- | ---   | 4  | 3     | 5 - 7         | *Use G-140 adapter; Connect red grid cap to G-140 plug; Key at 6                  |
| 6FJ7 *                                                     | Triode-2 | 1     | 1 | 5  | 10 | 7 | --- | ---   | 5  | 3     | 5 - 7         | *Use G-140 adapter; Connect red grid cap to G-140 plug; Key at 0                  |
| 6FM7                                                       | Triode-1 | 4     | 5 | 0  | 30 | 7 | 1   | ---   | 4  | 9     | 5 - 7         | Key at 6; Must show short on 1 - 9                                                |
| 6FM7                                                       | Triode-2 | 2     | 3 | 0  | 10 | 7 | --- | ---   | 7  | 5     | 1 - 3         | Key at 2; Red grid cap goes to top of tube                                        |
| 6FQ7                                                       | Triode-1 | 1     | 4 | 19 | 14 | 7 | --- | ---   | 6  | 7     | 4 - 5         |                                                                                   |
| 6FQ7                                                       | Triode-2 | 1     | 4 | 19 | 14 | 7 | --- | ---   | 1  | 2     | 4 - 5         |                                                                                   |
| 6FR7                                                       | Triode-1 | 4     | 4 | 10 | 13 | 7 | --- | ---   | 6  | 7     | 4 - 5         | Must show short on 2 - 3                                                          |
| 6FR7                                                       | Triode-2 | 2     | 4 | 5  | 6  | 7 | 2   | ---   | 1  | 3     | 4 - 5         |                                                                                   |
| 6FY7                                                       | Triode-1 | 4     | 4 | 15 | 10 | 7 | --- | ---   | 3  | 2     | 4 - 6         | Key at 5; Use red grid cap                                                        |
| 6FY7                                                       | Triode-2 | 1     | 1 | 0  | 9  | 7 | --- | ---   | 7  | 5     | 1 - 3         | Key at 2                                                                          |
| 6G11                                                       | Pent-1   | 2     | 7 | 5  | 7  | 7 | --- | 3     | 4  | 1     | 5 - 7         | Key at 6                                                                          |
| 6G11                                                       | Pent-2   | 3     | 1 | 11 | 23 | 7 | --- | 9     | 8  | 5 - 6 | 1 - 3         | Key at 2                                                                          |
| 6GA7                                                       | Pentode  | 3     | 3 | 4  | 19 | 9 | --- | 4 - 5 | 9  | 6     | 1 - 3         | Key at 2; Must show short on 4 - 5                                                |
| 6GA7                                                       | Diode    | 3     | 7 | 0  | 18 | 9 | --- | ---   | 4  | ---   | 5 - 7         | Key at 6; Must show short on 8 - 9                                                |
| 6GB3                                                       |          | 3     | 2 | 0  | 17 | 7 | --- | 4     | 11 | 5     | 2 - 7         |                                                                                   |

| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |          |       |   |    |    |   |           |     |        |     |               |                                                                                                                                                      |
|------------------------------------------------------------|----------|-------|---|----|----|---|-----------|-----|--------|-----|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| TUBE                                                       | SECTION  | LEVER |   |    |    |   |           |     |        |     | FIL.<br>CONT. | COMMENT                                                                                                                                              |
|                                                            |          | A     | B | C  | D  | E | W         | X   | Y      | Z   |               |                                                                                                                                                      |
| 6GB5                                                       | *        | 3     | 4 | 2  | 16 | 7 | 2 - 7 - 8 | 6   | 12     | 1   | 4 - 5         | * Must use magnoval adapter; Must show short on 1 - 2 - 3 - 6 - 7 - 8; Cathode short test - Depress 3 - 8 together; Red grid cap goes to top of tube |
| 6GB6                                                       |          | 3     | 2 | 0  | 17 | 7 | ---       | 4   | 11     | 5   | 2 - 7         |                                                                                                                                                      |
| 6GB7                                                       |          | 2     | 2 | 7  | 10 | 7 | ---       | 4   | 11     | 5   | 2 - 7         |                                                                                                                                                      |
| 6GB9                                                       |          | 2     | 2 | 7  | 10 | 7 | ---       | 4   | 11     | 5   | 2 - 7         |                                                                                                                                                      |
| 6GD7                                                       | Triode   | 5     | 4 | 7  | 11 | 7 | ---       | --- | 2      | 1   | 4 - 5         | Must show short on 3 - 8; Cathode short test                                                                                                         |
| 6GD7                                                       | Pentode  | 5     | 4 | 0  | 21 | 7 | ---       | 7   | 6      | 9   | 4 - 5         | Depress 3 - 8 together                                                                                                                               |
| 6GE5                                                       |          | 5     | 6 | 7  | 7  | 7 | 8 - 9     | --- | 7 - 12 | 3   | 4 - 6         | Key at 5; Must show short on 2 - 3 - 8 - 9; Use red grid cap; Cathode short test - Depress 2 - 9 together                                            |
| 6GF5                                                       |          | 5     | 6 | 7  | 7  | 7 | 8 - 9     | --- | 7 - 12 | 3   | 4 - 6         | Key at 5; Must show short on 2 - 3 - 8 - 9; Use red grid cap; Cathode short test - Depress 2 - 9 together                                            |
| 6GF7                                                       | Triode-1 | 5     | 4 | 27 | 10 | 7 | ---       | --- | 8      | 9   | 4 - 5         |                                                                                                                                                      |
| 6GF7                                                       | Triode-2 | 2     | 4 | 2  | 10 | 7 | ---       | --- | 6      | 2   | 4 - 5         |                                                                                                                                                      |
| 6GJ5                                                       |          | 1     | 4 | 2  | 5  | 7 | 1 - 2     | 7   | 12     | 6   | 4 - 5         | Must show short on 1 - 2 - 6 - 7; Red grid cap goes to top of tube                                                                                   |
| 6GJ7                                                       | Triode   | 5     | 4 | 7  | 8  | 7 | ---       | --- | 8      | 9   | 4 - 5         | Must show short on 1 - 3; Cathode short test                                                                                                         |
| 6GJ7                                                       | Pentode  | 1     | 4 | 0  | 38 | 7 | ---       | 7   | 6      | 2   | 4 - 5         | Depress 1 - 3 together                                                                                                                               |
| 6GK6                                                       |          | 1     | 4 | 10 | 10 | 7 | ---       | 8   | 7      | 2   | 4 - 5         | Must show short on 3 - 9                                                                                                                             |
| 6GK17                                                      |          | 5     | 7 | 0  | 5  | 7 | ---       | --- | 5      | --- | 7 - 8         |                                                                                                                                                      |
| 6GL7                                                       | Triode-1 | 2     | 7 | 15 | 31 | 7 | ---       | --- | 5      | 4   | 7 - 8         |                                                                                                                                                      |
| 6GL7                                                       | Triode-2 | 2     | 7 | 5  | 6  | 7 | ---       | --- | 2      | 1   | 7 - 8         |                                                                                                                                                      |
| 6GM5                                                       |          | 4     | 4 | 3  | 9  | 7 | ---       | 1   | 9      | 6   | 4 - 5         |                                                                                                                                                      |
| 6GM8                                                       | Triode-1 | 2     | 4 | 10 | 10 | 7 | ---       | --- | 6      | 7   | 4 - 5         |                                                                                                                                                      |
| 6GM8                                                       | Triode-2 | 2     | 4 | 10 | 10 | 7 | ---       | --- | 1      | 2   | 4 - 5         |                                                                                                                                                      |
| 6GN8                                                       | Triode   | 4     | 4 | 9  | 10 | 7 | ---       | --- | 3      | 2   | 4 - 5         |                                                                                                                                                      |
| 6GN8                                                       | Pentode  | 1     | 4 | 18 | 10 | 7 | ---       | 8   | 9      | 7   | 4 - 5         |                                                                                                                                                      |
| 6GQ7                                                       | Diode-1  | 3     | 4 | 0  | 15 | 7 | ---       | --- | 8      | --- | 4 - 5         |                                                                                                                                                      |
| 6GQ7                                                       | Diode-2  | 3     | 4 | 0  | 15 | 7 | ---       | --- | 6      | --- | 4 - 5         |                                                                                                                                                      |
| 6GQ7                                                       | Diode-3  | 3     | 4 | 0  | 15 | 7 | ---       | --- | 2      | --- | 4 - 5         |                                                                                                                                                      |
| 6GS7                                                       | Triode   | 5     | 4 | 7  | 10 | 7 | ---       | --- | 2      | 1   | 4 - 5         |                                                                                                                                                      |
| 6GS7                                                       | Pentode  | 5     | 4 | 0  | 21 | 7 | ---       | 7   | 6      | 9   | 4 - 5         |                                                                                                                                                      |
| 6GT5                                                       |          | 2     | 4 | 6  | 7  | 7 | 1 - 2     | 7   | 9      | 6   | 4 - 5         | Must show short on 1 - 2 - 6 - 7                                                                                                                     |
| 6GU5                                                       |          | 4     | 3 | 5  | 10 | 7 | 2         | 6   | 5      | 1   | 3 - 4         | Must show short on 2 - 7; Cathode short test                                                                                                         |
| 6GU7                                                       | Triode-1 | 1     | 4 | 15 | 9  | 7 | ---       | --- | 6      | 7   | 4 - 5         | Depress 2 - 7 together                                                                                                                               |
| 6GU7                                                       | Triode-2 | 1     | 4 | 15 | 9  | 7 | ---       | --- | 1      | 2   | 4 - 5         |                                                                                                                                                      |



| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |          |       |   |    |    |   |     |     |       |       |               |                                                                                                                                     |
|------------------------------------------------------------|----------|-------|---|----|----|---|-----|-----|-------|-------|---------------|-------------------------------------------------------------------------------------------------------------------------------------|
|                                                            |          | LEVER |   |    |    |   |     |     |       |       |               |                                                                                                                                     |
| TUBE                                                       | SECTION  | A     | B | C  | D  | E | W   | X   | Y     | Z     | FIL.<br>CONT. | COMMENT                                                                                                                             |
| 6GV5                                                       |          | 2     | 4 | 1  | 9  | 7 | 2   | 7   | 12    | 9     | 3 - 5         | Key at 4; Must show short on 1 - 2 - 7 - 8;<br>Use red grid cap; Cathode short test -<br>Depress 1 - 8 together                     |
| 6GV7                                                       | Triode   | 5     | 4 | 7  | 10 | 7 | --- | --- | 1     | 9     | 4 - 5         | Must show short on 6 - 8; Cathode short test<br>Depress 6 - 8 together                                                              |
| 6GV7                                                       | Pentode  | 5     | 4 | 0  | 22 | 7 | --- | 2   | 3     | 7     | 4 - 5         |                                                                                                                                     |
| 6GV8                                                       | Triode   | 2     | 4 | 34 | 10 | 7 | --- | --- | 1     | 2     | 4 - 5         |                                                                                                                                     |
| 6GV8                                                       | Pentode  | 2     | 4 | 7  | 10 | 7 | --- | 7   | 6     | 9     | 4 - 5         |                                                                                                                                     |
| 6GW5                                                       |          | 5     | 3 | 7  | 8  | 7 | 2   | --- | 1     | 6     | 3 - 4         | Must show short on 2 - 6                                                                                                            |
| 6GW6                                                       |          | 3     | 2 | 0  | 17 | 7 | --- | 4   | 11    | 5     | 2 - 7         |                                                                                                                                     |
| 6GW8                                                       | Triode   | 4     | 4 | 15 | 10 | 7 | --- | --- | 9     | 1     | 4 - 5         |                                                                                                                                     |
| 6GW8                                                       | Pentode  | 1     | 4 | 19 | 10 | 7 | --- | 3   | 6     | 8     | 4 - 5         |                                                                                                                                     |
| 6GX6                                                       |          | 1     | 3 | 10 | 36 | 7 | --- | 6   | 5     | 1     | 3 - 4         |                                                                                                                                     |
| 6GX7                                                       | Triode   | 5     | 4 | 9  | 12 | 7 | --- | --- | 8     | 9     | 4 - 5         | Must show short on 1 - 3; Cathode short test<br>Depress 1 - 3 together                                                              |
| 6GX7                                                       | Pentode  | 1     | 4 | 15 | 24 | 7 | --- | 7   | 6     | 2     | 4 - 5         |                                                                                                                                     |
| 6GX8                                                       | Triode   | 5     | 4 | 9  | 14 | 7 | --- | --- | 1     | 8     | 4 - 5         |                                                                                                                                     |
| 6GX8                                                       | Eye      | 7     | 4 | 0  | 0  | 7 | --- | --- | 6 - 7 | ---   | 4 - 5         | See instructions for eye test                                                                                                       |
| 6GY5                                                       | *        | 3     | 3 | 3  | 15 | 7 | 2   | 7   | 11    | 9     | 3 - 5         | * Key at 4; Must show short on 1 - 2 - 7 - 8;<br>Cathode short test - Depress 1 - 8 together;<br>Black grid cap goes to top of tube |
| 6GY6                                                       |          | 1     | 3 | 10 | 32 | 7 | --- | 6   | 5     | 1 - 7 | 3 - 4         |                                                                                                                                     |
| 6GY8                                                       | Triode-1 | 2     | 4 | 0  | 10 | 7 | --- | --- | 6     | ---   | 4 - 5         |                                                                                                                                     |
| 6GY8                                                       | Triode-2 | 1     | 4 | 30 | 10 | 7 | --- | --- | 9     | 3     | 4 - 5         |                                                                                                                                     |
| 6GY8                                                       | Triode-3 | 1     | 4 | 31 | 10 | 7 | --- | --- | 2     | 1     | 4 - 5         |                                                                                                                                     |
| 6GZ5                                                       |          | 1     | 3 | 11 | 14 | 7 | 5   | 6   | 7     | 2     | 3 - 4         | Must show short on 2 - 5                                                                                                            |
| 6HA5                                                       |          | 1     | 3 | 13 | 10 | 7 | 2   | --- | 5     | 1     | 3 - 4         | Must show short on 2 - 7; Cathode short test<br>Depress 2 - 7 together                                                              |
| 6HA6                                                       |          | 5     | 4 | 6  | 9  | 7 | 6   | 8   | 7     | 2     | 4 - 5         | Must show short on 3 - 6 - 8 - 9                                                                                                    |
| 6HB5                                                       | *        | 3     | 1 | 3  | 17 | 7 | --- | 2   | 7     | 3     | 1 - 12        | * Key at 0; Use red grid cap                                                                                                        |
| 6HB6                                                       |          | 2     | 4 | 5  | 16 | 7 | 6   | 8   | 7     | 2     | 4 - 5         | May show short on 3 - 6 - 8 - 9                                                                                                     |
| 6HB7                                                       | Triode   | 1     | 4 | 25 | 10 | 7 | 1   | --- | 8     | 9     | 4 - 5         | Must show short on 1 - 3; Cathode short test<br>Depress 1 - 3 together                                                              |
| 6HB7                                                       | Pentode  | 4     | 4 | 9  | 10 | 7 | 1   | 7   | 6     | 2     | 4 - 5         |                                                                                                                                     |
| 6HC8                                                       | Triode   | 4     | 4 | 10 | 10 | 7 | --- | --- | 9     | 1     | 4 - 5         |                                                                                                                                     |
| 6HC8                                                       | Pentode  | 1     | 4 | 15 | 10 | 7 | --- | 7   | 6     | 3     | 4 - 5         |                                                                                                                                     |
| 6HD5                                                       | *        | 5     | 1 | 0  | 5  | 7 | 9   | 5   | 7     | 3     | 1 - 11        | * Key at 0; Must show short on 5 - 9                                                                                                |
| 6HD7                                                       | Triode   | 5     | 4 | 10 | 14 | 7 | --- | --- | 8     | 9     | 4 - 5         | Must show short on 1 - 3; Cathode short test<br>Depress 1 - 3 together                                                              |
| 6HD7                                                       | Pentode  | 4     | 4 | 6  | 7  | 7 | --- | 7   | 6     | 2     | 4 - 5         |                                                                                                                                     |

| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |         |       |   |    |    |   |       |     |       |     |               |                                                                                                             |
|------------------------------------------------------------|---------|-------|---|----|----|---|-------|-----|-------|-----|---------------|-------------------------------------------------------------------------------------------------------------|
|                                                            |         | LEVER |   |    |    |   |       |     |       |     |               |                                                                                                             |
| TUBE                                                       | SECTION | A     | B | C  | D  | E | W     | X   | Y     | Z   | FIL.<br>CONT. | COMMENT                                                                                                     |
| 6HE5                                                       | *       | 1     | 1 | 35 | 10 | 7 | 12    | 5   | 8     | 4   | 1 - 3         | * Key at 2; Must show short on 5 - 12; Use red grid cap                                                     |
| 6HE7 *                                                     | Diode   | 3     | 1 | 0  | 15 | 7 | ---   | --- | 2     | --- | 1 - 11        | * Key at 0                                                                                                  |
| 6HE7 *                                                     | Pentode | 5     | 6 | 0  | 5  | 7 | 4     | 5   | 11    | 3   | 6 - 8         | * Key at 7; CAUTION: Throw lever 4 to "W" position before inserting tube                                    |
| 6HF5                                                       | *       | 1     | 3 | 0  | 4  | 7 | 2     | 7   | 12    | 9   | 3 - 5         | * Key at 4; Must show short on 1 - 2 - 7 - 8; Cathode short test - Depress 1 - 8 together; Use red grid cap |
| 6HF8                                                       | Triode  | 2     | 4 | 36 | 10 | 7 | ---   | --- | 3     | 2   | 4 - 5         |                                                                                                             |
| 6HF8                                                       | Pentode | 1     | 4 | 26 | 10 | 7 | 1     | 6   | 5     | 7   | 3 - 4         |                                                                                                             |
| 6HG5                                                       |         | 1     | 3 | 29 | 10 | 7 | 1     | 6   | 5     | 7   | 3 - 4         | Must show short on 1 - 7                                                                                    |
| 6HJ5                                                       | *       | 1     | 1 | 0  | 4  | 7 | 9     | 5   | 7     | 3   | 1 - 11        | * Key at 0; Must show short on 5 - 9                                                                        |
| 6HJ7                                                       | Triode  | 5     | 4 | 5  | 16 | 7 | ---   | --- | 8     | 9   | 4 - 5         | Must show short on 1 - 3; Cathode short test                                                                |
| 6HJ7                                                       | Pentode | 4     | 4 | 5  | 8  | 7 | ---   | 7   | 6     | 2   | 4 - 5         | Depress 1 - 3 together                                                                                      |
| 6HJ8                                                       | Pentode | 1     | 4 | 11 | 22 | 7 | ---   | 3   | 6     | 2   | 4 - 5         |                                                                                                             |
| 6HJ8                                                       | Diode   | 3     | 4 | 0  | 16 | 7 | ---   | --- | 8     | --- | 4 - 5         |                                                                                                             |
| 6HK5                                                       |         | 1     | 3 | 14 | 10 | 7 | 2     | --- | 5     | 1   | 3 - 4         | Must show short on 2 - 7; Cathode short test                                                                |
| 6HL5                                                       |         | 5     | 4 | 0  | 6  | 7 | 1     | 9   | 7     | 2   | 4 - 5         | Depress 2 - 7 together                                                                                      |
| 6HL7                                                       |         | 1     | 6 | 5  | 10 | 7 | ---   | 8   | 7     | 2   | 4 - 5         | Must show short on 1 - 2                                                                                    |
| 6HL8                                                       | Triode  | 2     | 4 | 27 | 12 | 7 | ---   | --- | 1     | 9   | 4 - 5         | Must show short on 3 - 9                                                                                    |
| 6HL8                                                       | Pentode | 4     | 4 | 9  | 7  | 7 | ---   | 3   | 6     | 2   | 4 - 5         |                                                                                                             |
| 6HM5                                                       |         | 2     | 3 | 25 | 14 | 7 | 2     | --- | 5     | 1   | 3 - 4         | Must show short on 2 - 7; Cathode short test                                                                |
| 6HM6                                                       |         | 5     | 4 | 0  | 16 | 7 | ---   | 8   | 7     | 2   | 4 - 5         | Depress 2 - 7 together                                                                                      |
| 6HQ5                                                       |         | 1     | 3 | 10 | 8  | 7 | 2     | --- | 5     | 1   | 3 - 4         | Must show short on 1 - 3; Cathode short test                                                                |
| 6HR5                                                       |         | 1     | 3 | 32 | 8  | 7 | 1     | 6   | 5     | 7   | 3 - 4         | Depress 1 - 3 together                                                                                      |
| 6HR6                                                       |         | 4     | 3 | 6  | 10 | 7 | ---   | 6   | 5     | 1   | 3 - 4         | Must show short on 2 - 7; Cathode short test                                                                |
| 6HS5                                                       |         | 5     | 1 | 5  | 30 | 7 | ---   | --- | 7     | 2   | 1 - 11        | Depress 2 - 7 together                                                                                      |
| 6HS6                                                       |         | 1     | 3 | 15 | 19 | 7 | ---   | 6   | 5     | 1   | 3 - 4         | Must show short on 1 - 7                                                                                    |
| 6HT5                                                       |         | 4     | 2 | 18 | 50 | 7 | ---   | --- | 11    | 9   | 2 - 4         | Key at 0                                                                                                    |
| 6HT6                                                       |         | 4     | 4 | 4  | 10 | 7 | 3     | 8   | 7     | 2   | 4 - 5         | Key at 3; May show short on 1 - 5 - 7; OK above 1/3 scale; Cap goes to top of tube                          |
| 6HU6                                                       | Triode  | 5     | 4 | 15 | 20 | 7 | ---   | --- | 9     | 1   | 4 - 5         | Must show short on 1 - 3; Cathode short test                                                                |
| 6HU6                                                       | Eye     | 7     | 4 | 0  | 0  | 7 | 2 - 8 | --- | 6 - 7 | --- | 4 - 5         | Depress 1 - 3 together                                                                                      |
| 6HU8                                                       | Pent-1  | 5     | 4 | 6  | 8  | 7 | ---   | 1   | 3     | 2   | 4 - 5         | Must show short on 2 - 6 - 8; Target short test - Depress 2 - 6 - 8 together                                |
| 6HU8                                                       | Pent-2  | 5     | 4 | 6  | 8  | 7 | ---   | 9   | 8     | 6   | 4 - 5         | See instructions for eye test                                                                               |

| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |          |       |   |    |    |   |       |     |       |     |               |                                                                                                                  |
|------------------------------------------------------------|----------|-------|---|----|----|---|-------|-----|-------|-----|---------------|------------------------------------------------------------------------------------------------------------------|
|                                                            |          | LEVER |   |    |    |   |       |     |       |     |               |                                                                                                                  |
| TUBE                                                       | SECTION  | A     | B | C  | D  | E | W     | X   | Y     | Z   | FIL.<br>CONT. | COMMENT                                                                                                          |
| 6HV5                                                       |          | 5     | 1 | 5  | 30 | 7 | ---   | --- | 7     | 2   | 1 - 11        | Key at 0                                                                                                         |
| 6HW8                                                       | Plate-1  | 4     | 4 | 5  | 20 | 7 | ---   | 3   | 8 - 9 | 6   | 4 - 5         |                                                                                                                  |
| 6HW8                                                       | Plate-2  | 4     | 4 | 5  | 20 | 7 | ---   | 3   | 1 - 2 | 6   | 4 - 5         |                                                                                                                  |
| 6HZ5                                                       | *        | 5     | 1 | 30 | 12 | 7 | ---   | --- | 7     | 2   | 1 - 11        | * Key at 0                                                                                                       |
| 6HZ6                                                       |          | 4     | 3 | 15 | 15 | 7 | ---   | 6   | 5     | 1   | 3 - 4         |                                                                                                                  |
| 6J9                                                        | Triode-1 | 5     | 4 | 7  | 16 | 7 | ---   | --- | 8     | 7   | 4 - 5         |                                                                                                                  |
| 6J9                                                        | Triode-2 | 5     | 4 | 7  | 16 | 7 | ---   | --- | 6     | 9   | 4 - 5         |                                                                                                                  |
| 6J9                                                        | Triode-3 | 5     | 4 | 7  | 16 | 7 | ---   | --- | 1     | 2   | 4 - 5         |                                                                                                                  |
| 6J10                                                       | Sect-1   | 1     | 5 | 21 | 11 | 7 | ---   | 8   | 2     | 4   | 5 - 7         | Key at 6; Use red grid cap                                                                                       |
| 6J10                                                       | Sect-2   | 1     | 1 | 0  | 25 | 7 | ---   | --- | 4 - 6 | --- | 1 - 12        | Key at 0                                                                                                         |
| 6J11                                                       | Pent-2   | 1     | 3 | 5  | 31 | 7 | ---   | 4   | 5     | 7   | 1 - 3         | Key at 2                                                                                                         |
| 6J11                                                       | Pent-1   | 1     | 9 | 5  | 31 | 7 | ---   | 2   | 4     | 6   | 7 - 9         | Key at 8                                                                                                         |
| 6JA5                                                       | *        | 1     | 1 | 5  | 5  | 7 | 12    | 5   | 8     | 4   | 1 - 3         | * Key at 2; May show short on 5 - 6 - 12; Use red grid cap                                                       |
| 6JA8                                                       | Triode   | 2     | 4 | 35 | 10 | 7 | ---   | --- | 3     | 2   | 4 - 5         | Must show short on 1 - 2 - 6 - 7; Red grid cap goes to top of tube                                               |
| 6JA8                                                       | Tetrode  | 2     | 4 | 12 | 15 | 7 | ---   | 8   | 9     | 7   | 4 - 5         |                                                                                                                  |
| 6JB5                                                       | *        | 1     | 1 | 35 | 10 | 7 | 12    | 5   | 8     | --- | 1 - 3         | * Key at 2; Must show short on 5 - 12; Use red grid cap                                                          |
| 6JB6                                                       |          | 2     | 4 | 1  | 6  | 7 | 1 - 2 | 7   | 12    | 6   | 4 - 5         | Must show short on 1 - 2 - 6 - 7; Red grid cap goes to top of tube                                               |
| 6JC5                                                       | *        | 1     | 1 | 23 | 10 | 7 | 12    | 5   | 8     | 4   | 1 - 3         | * Key at 2; Must show short on 5 - 12; Use red grid cap                                                          |
| 6JC6                                                       |          | 1     | 4 | 5  | 24 | 7 | 3     | 8   | 7     | 2   | 4 - 5         | Must short on 1 - 3; Cathode short test - Depress 1 - 3 together                                                 |
| 6JC8                                                       | Triode   | 1     | 4 | 27 | 10 | 7 | 7     | --- | 9     | 8   | 4 - 5         | Cathode short test - Depress 1 - 7 together                                                                      |
| 6JC8                                                       | Pentode  | 4     | 4 | 19 | 9  | 7 | 7     | 3   | 6     | 2   | 4 - 5         |                                                                                                                  |
| 6JD5                                                       | *        | 5     | 1 | 30 | 12 | 7 | ---   | --- | 7     | 2   | 1 - 11        | * Key at 0                                                                                                       |
| 6JD6                                                       |          | 1     | 4 | 8  | 20 | 7 | 3     | 8   | 7     | 2   | 4 - 5         | Must show short on 1 - 3; Cathode short test - Depress 1 - 3 together                                            |
| 6JE6                                                       |          | 3     | 4 | 0  | 17 | 7 | 1 - 2 | 7   | 12    | 6   | 4 - 5         | Must show short on 1 - 2 - 6 - 7; Red grid cap goes to top of tube                                               |
| 6JF6                                                       |          | 5     | 4 | 0  | 6  | 7 | 1-2-9 | 7   | 12    | 6   | 4 - 5         | Must show short on 1 - 2 - 6 - 7; Red grid cap goes to top of tube                                               |
| 6JG5                                                       |          | 3     | 4 | 3  | 23 | 7 | ---   | 8   | 9     | 7   | 5             |                                                                                                                  |
| 6JG6                                                       |          | 1     | 4 | 10 | 28 | 7 | 1     | 6   | 9     | 2   | 4 - 5         | Must show short on 1 - 7                                                                                         |
| 6JH5                                                       | *        | 3     | 1 | 10 | 25 | 7 | #     | 3   | 7     | 2   | 12            | * Key at 0; # 8 - 10 - 11; Must show short on 7 - 8; Use red grid cap; Plate short test - Depress 7 - 8 together |
| 6JH6                                                       |          | 4     | 3 | 7  | 10 | 7 | ---   | 6   | 5     | 1   | 3 - 4         |                                                                                                                  |
| 6JH8                                                       | Sect-1   | 4     | 4 | 18 | 19 | 7 | ---   | 3   | 9     | 6   | 4 - 5         |                                                                                                                  |

| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |          |       |   |    |    |   |       |     |    |     |               |                                                                                                                  |
|------------------------------------------------------------|----------|-------|---|----|----|---|-------|-----|----|-----|---------------|------------------------------------------------------------------------------------------------------------------|
|                                                            |          | LEVER |   |    |    |   |       |     |    |     |               |                                                                                                                  |
| TUBE                                                       | SECTION  | A     | B | C  | D  | E | W     | X   | Y  | Z   | FIL.<br>CONT. | COMMENT                                                                                                          |
| 6JH8                                                       | Sect-2   | 4     | 4 | 18 | 20 | 7 | ---   | 3   | 8  | 6   | 4 - 5         |                                                                                                                  |
| 6JK5                                                       | *        | 3     | 1 | 10 | 25 | 7 | #     | 3   | 7  | 2   | 12            | * Key at 0; # 8 - 10 - 11; Must show short on 7 - 8; Use red grid cap; Plate short test - Depress 7 - 8 together |
| 6JK6                                                       |          | 1     | 3 | 9  | 16 | 7 | ---   | 6   | 5  | 1   | 3 - 4         |                                                                                                                  |
| 6JK8                                                       | Triode-1 | 1     | 4 | 23 | 10 | 7 | ---   | --- | 6  | 7   | 4 - 5         |                                                                                                                  |
| 6JK8                                                       | Triode-2 | 1     | 4 | 15 | 10 | 7 | ---   | --- | 1  | 2   | 4 - 5         |                                                                                                                  |
| 6JL6                                                       |          | 1     | 3 | 2  | 17 | 7 | ---   | 6   | 5  | 1   | 3 - 4         |                                                                                                                  |
| 6JM6                                                       |          | 5     | 2 | 0  | 5  | 7 | ---   | 6   | 11 | 8   | 2 - 4         | Key at 3; Black cap goes to top of tube                                                                          |
| 6JN6                                                       |          | 1     | 4 | 0  | 5  | 7 | ---   | 8   | 11 | 3   | 4 - 6         | Key at 5; Will show short on 2 - 9                                                                               |
| 6JN8                                                       | Triode   | 2     | 4 | 15 | 18 | 7 | ---   | --- | 2  | 1   | 4 - 5         |                                                                                                                  |
| 6JN8                                                       | Pentode  | 1     | 4 | 15 | 22 | 7 | ---   | 7   | 6  | 9   | 4 - 5         |                                                                                                                  |
| 6JQ6                                                       | Pentode  | 1     | 4 | 10 | 5  | 7 | 2 - 7 | 3   | 1  | 8   | 4 - 5         |                                                                                                                  |
| 6JQ6                                                       | Diode    | 3     | 4 | 0  | 22 | 7 | ---   | --- | 6  | --- | 4 - 5         |                                                                                                                  |
| 6JR6                                                       |          | 4     | 4 | 5  | 20 | 7 | 1     | 6   | 9  | 2   | 4 - 5         | Must show short on 1 - 7                                                                                         |
| 6JS6                                                       |          | 5     | 4 | 0  | 6  | 7 | 1     | 6   | 11 | 8   | 2 - 4         | Key at 3; Black cap goes to top of tube; Must show short on 1 - 6                                                |
| 6JT6                                                       |          | 1     | 4 | 2  | 5  | 7 | ---   | --- | 3  | 2   | 4 - 5         | Must show short on 1 - 7                                                                                         |
| 6JT8                                                       | Triode   | 4     | 4 | 10 | 9  | 7 | ---   | --- | 3  | 2   | 4 - 5         |                                                                                                                  |
| 6JT8                                                       | Pentode  | 1     | 4 | 0  | 17 | 7 | ---   | 8   | 9  | 7   | 4 - 5         |                                                                                                                  |
| 6JU6                                                       |          | 1     | 4 | 7  | 32 | 7 | 6     | 1   | 12 | 2   | 4 - 5         | Red grid cap goes to top of tube; Must show short on 1 - 2 - 6 - 7                                               |
| 6JU8                                                       | Diode-1  | 3     | 4 | 0  | 16 | 7 | 7     | --- | 8  | --- | 4 - 5         | Must show short on 2 - 8; Cathode short test Depress 8 - 9 together; Cathode short test - Depress 2 - 3 together |
| 6JU8                                                       | Diode-2  | 3     | 4 | 0  | 16 | 7 | ---   | --- | 7  | --- | 4 - 5         |                                                                                                                  |
| 6JU8                                                       | Diode-3  | 3     | 4 | 0  | 16 | 7 | 1     | --- | 2  | --- | 4 - 5         |                                                                                                                  |
| 6JU8                                                       | Diode-4  | 3     | 4 | 0  | 16 | 7 | ---   | --- | 1  | --- | 4 - 5         |                                                                                                                  |
| 6JV8                                                       | Triode   | 4     | 4 | 4  | 9  | 7 | ---   | --- | 3  | 2   | 4 - 5         |                                                                                                                  |
| 6JV8                                                       | Pentode  | 4     | 4 | 3  | 10 | 7 | ---   | 8   | 9  | 7   | 4 - 5         |                                                                                                                  |
| 6JW8                                                       | Triode   | 5     | 4 | 10 | 15 | 7 | ---   | --- | 1  | 9   | 4 - 5         |                                                                                                                  |
| 6JW8                                                       | Pentode  | 4     | 4 | 7  | 11 | 7 | ---   | 3   | 6  | 2   | 4 - 5         |                                                                                                                  |
| 6JX8                                                       | Triode   | 5     | 4 | 9  | 17 | 7 | ---   | --- | 8  | 9   | 4 - 5         |                                                                                                                  |
| 6JX8                                                       | Heptode  | 5     | 4 | 6  | 16 | 7 | ---   | 7   | 6  | 2   | 4 - 5         |                                                                                                                  |
| 6JY8                                                       | Triode   | 1     | 4 | 16 | 11 | 7 | ---   | --- | 3  | 2   | 4 - 5         |                                                                                                                  |
| 6JY8                                                       | Pentode  | 1     | 4 | 10 | 16 | 7 | ---   | 8   | 9  | 7   | 4 - 5         |                                                                                                                  |
| 6JZ6                                                       |          | 2     | 2 | 0  | 6  | 7 | ---   | 6   | 11 | 8   | 2 - 4         | Key at 3; Black cap goes to top of tube                                                                          |
| 6JZ8                                                       | Pentode  | 2     | 7 | 7  | 7  | 7 | 1     | 3   | 12 | 2   | 7 - 9         | Key at 8; Must show short on 1 - 2                                                                               |
| 6JZ8                                                       | Triode   | 2     | 4 | 30 | 10 | 7 | ---   | --- | 7  | 2   | 4 - 6         | Key at 5; Use red grid cap                                                                                       |
| 6K11 *                                                     | Triode-2 | 1     | 1 | 33 | 10 | 7 | ---   | --- | 5  | 7   | 1 - 12        | *Use G-140 adapter; Connect red grid cap to G-140 plug; Key at 0                                                 |

| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |           |       |   |    |    |   |       |     |       |       |               |                                                                                                      |
|------------------------------------------------------------|-----------|-------|---|----|----|---|-------|-----|-------|-------|---------------|------------------------------------------------------------------------------------------------------|
|                                                            |           | LEVER |   |    |    |   |       |     |       |       |               |                                                                                                      |
| TUBE                                                       | SECTION   | A     | B | C  | D  | E | W     | X   | Y     | Z     | FIL.<br>CONT. | COMMENT                                                                                              |
| 6K11 *                                                     | Triode-1  | 1     | 6 | 27 | 10 | 7 | ---   | --- | 2     | 1     | 1 - 12        | *Use G-140 adapter; Connect red grid cap to G-140 plug; Key at 5                                     |
| 6K11 *                                                     | Triode-3  | 1     | 6 | 33 | 10 | 7 | ---   | --- | 7     | 3     | 1 - 12        | *Use G-140 adapter; Connect red grid cap to G-140 plug; Key at 5                                     |
| 6KA8                                                       | Triode    | 4     | 4 | 2  | 10 | 7 | ---   | --- | 1     | 2     | 4 - 5         |                                                                                                      |
| 6KA8                                                       | Pentode   | 4     | 4 | 8  | 13 | 7 | ---   | 8   | 9     | 6     | 4 - 5         |                                                                                                      |
| 6KD6                                                       |           | 5     | 3 | 0  | 5  | 7 | 2     | 7   | 11    | 9     | 3 - 5         | Key at 4; Must show short on 1 - 2 - 7 - 8; Cap goes to top of tube                                  |
| 6KD8                                                       | Triode    | 1     | 4 | 25 | 10 | 7 | ---   | --- | 1     | 9     | 4 - 5         |                                                                                                      |
| 6KD8                                                       | Pentode   | 1     | 4 | 18 | 25 | 7 | ---   | 3   | 6     | 2     | 4 - 5         |                                                                                                      |
| 6KE8                                                       | Triode    | 2     | 4 | 32 | 10 | 7 | ---   | --- | 1     | 9     | 4 - 5         |                                                                                                      |
| 6KE8                                                       | Pentode   | 4     | 4 | 5  | 10 | 7 | ---   | 3   | 6     | 2     | 4 - 5         |                                                                                                      |
| 6KF8                                                       | Pent-1    | 4     | 4 | 5  | 30 | 7 | ---   | 2   | 8     | 7     | 4 - 5         |                                                                                                      |
| 6KF8                                                       | Pent-2    | 4     | 4 | 5  | 30 | 7 | ---   | 2   | 3     | 7     | 4 - 5         |                                                                                                      |
| 6KG6                                                       | *         | 1     | 4 | 8  | 26 | 7 | 1-2-3 | 7   | 11    | 8     | 4 - 5         | * Must use magnoval adapter; Must show short on 1 - 2 - 3 - 6 - 7 - 8; Black cap goes to top of tube |
| 6KH8                                                       |           | 3     | 4 | 35 | 20 | 7 | ---   | --- | 1 - 9 | 2     | 4 - 5         |                                                                                                      |
| 6KH8                                                       |           | 1     | 4 | 23 | 15 | 7 | ---   | 9   | 3     | 2     | 4 - 5         |                                                                                                      |
| 6KH8                                                       |           | 1     | 4 | 23 | 15 | 7 | ---   | 9   | 8     | 6     | 4 - 5         |                                                                                                      |
| 6KL8                                                       | Pentode   | 4     | 4 | 13 | 10 | 7 | ---   | 6   | 7     | 2     | 4 - 5         |                                                                                                      |
| 6KL8                                                       | Diode     | 3     | 4 | 0  | 27 | 7 | ---   | --- | 8     | ---   | 4 - 5         |                                                                                                      |
| 6KM6                                                       |           | 5     | 4 | 0  | 6  | 7 | 1 - 2 | 7   | 12    | 6     | 4 - 5         | Must show short on 1 - 2 - 6 - 7; Red grid cap goes to top of tube                                   |
| 6KM8                                                       | Diode     | 3     | 4 | 0  | 27 | 7 | ---   | --- | 3     | ---   | 4 - 5         | Must show short on 4 - 9; Black cap goes to top of tube                                              |
| 6KM8                                                       | Tetrode-1 | 4     | 4 | 18 | 10 | 7 | ---   | 8   | 1     | 7     | 4 - 5         |                                                                                                      |
| 6KM8                                                       | Tetrode-2 | 4     | 4 | 19 | 10 | 7 | ---   | 8   | 2     | 7     | 4 - 5         |                                                                                                      |
| 6KM8                                                       | Tetrode-3 | 4     | 4 | 21 | 10 | 7 | ---   | 8   | 9     | 7     | 4 - 5         |                                                                                                      |
| 6KN6                                                       |           | 1     | 5 | 12 | 25 | 7 | 9     | 3   | 11    | 2     | 5 - 7         | Key at 6; Must show short on 4 - 9; Black cap goes to top of tube                                    |
| 6KN8                                                       | Triode-1  | 1     | 4 | 5  | 9  | 7 | ---   | --- | 6     | 7     | 4 - 5         |                                                                                                      |
| 6KN8                                                       | Triode-2  | 1     | 4 | 5  | 9  | 7 | ---   | --- | 1     | 2     | 4 - 5         |                                                                                                      |
| 6KR8                                                       | Triode    | 1     | 4 | 7  | 13 | 7 | ---   | --- | 3     | 2     | 4 - 5         |                                                                                                      |
| 6KR8                                                       | Pentode   | 1     | 4 | 5  | 11 | 7 | ---   | 8   | 9     | 7     | 4 - 5         |                                                                                                      |
| 6KS6                                                       |           | 4     | 3 | 6  | 41 | 7 | ---   | 5   | 7     | 2 - 6 | 3 - 4         |                                                                                                      |
| 6KS8                                                       | Triode    | 5     | 4 | 14 | 13 | 7 | ---   | --- | 3     | 2     | 4 - 5         |                                                                                                      |
| 6KS8                                                       | Pentode   | 1     | 4 | 11 | 15 | 7 | ---   | --- | 8     | 9     | 4 - 5         |                                                                                                      |
| 6KT6                                                       |           | 5     | 4 | 0  | 20 | 7 | ---   | 8   | 7     | 2     | 4 - 5         | Must show short on 1 - 3; Cathode short test<br>Depress 1 - 3 together                               |
| 6KT8                                                       | Triode    | 4     | 4 | 6  | 6  | 7 | ---   | --- | 3     | 2     | 4 - 5         |                                                                                                      |
| 6KT8                                                       | Pentode   | 2     | 4 | 0  | 44 | 7 | ---   | 8   | 9     | 7     | 4 - 5         |                                                                                                      |

| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |          |       |   |    |    |   |       |     |    |     |               |                                                                        |
|------------------------------------------------------------|----------|-------|---|----|----|---|-------|-----|----|-----|---------------|------------------------------------------------------------------------|
|                                                            |          | LEVER |   |    |    |   |       |     |    |     |               |                                                                        |
| TUBE                                                       | SECTION  | A     | B | C  | D  | E | W     | X   | Y  | Z   | FIL.<br>CONT. | COMMENT                                                                |
| 6KU8                                                       | Diode-1  | 3     | 4 | 0  | 24 | 7 | 2     | --- | 3  | --- | 4 - 5         |                                                                        |
| 6KU8                                                       | Diode-2  | 3     | 4 | 0  | 24 | 7 | 3     | --- | 2  | --- | 4 - 5         |                                                                        |
| 6KU8                                                       | Pentode  | 1     | 4 | 9  | 8  | 7 | ---   | 8   | 9  | 7   | 4 - 5         |                                                                        |
| 6KV6                                                       |          | 5     | 4 | 0  | 5  | 7 | 1     | 7   | 9  | 2   | 4 - 5         | Must show short on 1 - 7                                               |
| 6KV8                                                       | Triode   | 1     | 4 | 31 | 10 | 7 | ---   | --- | 3  | 2   | 4 - 5         |                                                                        |
| 6KV8                                                       | Pentode  | 1     | 4 | 9  | 9  | 7 | ---   | 8   | 9  | 7   | 4 - 5         |                                                                        |
| 6KX8                                                       | Triode-1 | 5     | 4 | 16 | 17 | 7 | ---   | --- | 7  | 9   | 4 - 5         |                                                                        |
| 6KX8                                                       | Triode-2 | 5     | 4 | 16 | 17 | 7 | ---   | --- | 3  | 1   | 4 - 5         |                                                                        |
| 6KY6                                                       |          | 1     | 4 | 6  | 9  | 7 | ---   | 8   | 7  | 2   | 4 - 5         | Must show short on 3 - 9                                               |
| 6KY8                                                       | Triode   | 1     | 4 | 12 | 24 | 7 | ---   | --- | 8  | 9   | 4 - 5         |                                                                        |
| 6KY8                                                       | Pentode  | 5     | 4 | 0  | 6  | 7 | ---   | 7   | 6  | 2   | 4 - 5         |                                                                        |
| 6KZ8                                                       | Pentode  | 4     | 4 | 9  | 10 | 7 | ---   | 7   | 6  | 2   | 4 - 5         |                                                                        |
| 6KZ8                                                       | Triode   | 3     | 4 | 15 | 18 | 7 | ---   | --- | 1  | 9   | 4 - 5         |                                                                        |
| 6LB6                                                       |          | 5     | 3 | 0  | 5  | 7 | 2     | 7   | 11 | 9   | 3 - 5         | Key at 4; Must show short on 1 - 2 - 7 - 8;<br>Cap goes to top of tube |
| 6LB8                                                       | Triode   | 1     | 4 | 18 | 10 | 7 | ---   | --- | 3  | 2   | 4 - 5         |                                                                        |
| 6LB8                                                       | Pentode  | 2     | 4 | 7  | 18 | 7 | ---   | 8   | 9  | 7   | 4 - 5         |                                                                        |
| 6LC6                                                       |          | 4     | 2 | 22 | 50 | 7 | ---   | --- | 11 | 5   | 2 - 7         | May show short on 1 - 3 - 4                                            |
| 6LC8                                                       | Triode   | 1     | 4 | 29 | 10 | 7 | ---   | --- | 1  | 2   | 4 - 5         | May show short on 3                                                    |
| 6LC8                                                       | Pentode  | 4     | 4 | 8  | 16 | 7 | ---   | 8   | 9  | 6   | 4 - 5         |                                                                        |
| 6LD6                                                       |          | 1     | 4 | 5  | 15 | 7 | 6     | 8   | 7  | 2   | 4 - 5         | Must show short on 3 - 6 - 8 - 9                                       |
| 6LE8                                                       | Pent-1   | 5     | 4 | 0  | 27 | 7 | ---   | 8   | 1  | 9   | 4 - 5         |                                                                        |
| 6LE8                                                       | Pent-2   | 5     | 4 | 0  | 33 | 7 | ---   | 8   | 6  | 9   | 4 - 5         |                                                                        |
| 6LF6                                                       |          | 5     | 3 | 0  | 5  | 7 | 2     | 7   | 11 | 9   | 3 - 5         | Key at 4; Must show short on 1 - 2 - 7 - 8;<br>Cap goes to top of tube |
| 6LF8                                                       | Triode   | 1     | 4 | 29 | 11 | 7 | ---   | --- | 3  | 2   | 4 - 5         |                                                                        |
| 6LF8                                                       | Pentode  | 1     | 4 | 21 | 10 | 7 | ---   | 8   | 9  | 7   | 4 - 5         |                                                                        |
| 6LG6                                                       |          | 3     | 3 | 3  | 20 | 9 | 2     | 7   | 11 | 9   | 3 - 5         | Key at 4; Must show short on 1 - 2 - 7 - 8                             |
| 6LH6                                                       |          | 4     | 2 | 18 | 50 | 7 | ---   | --- | 11 | 5   | 2 - 7         | May show short on 1 - 3 - 4                                            |
| 6LJ6                                                       |          | 7     | 7 | 33 | 43 | 7 | 1 - 4 | 3   | 11 | 5   | 2 - 7         | Must show short on 1 - 3 - 4                                           |
| 6LJ8                                                       | Triode   | 5     | 4 | 8  | 12 | 7 | ---   | --- | 2  | 1   | 4 - 5         | Must show short on 3 - 8; Cathode short test                           |
| 6LJ8                                                       | Pentode  | 5     | 4 | 0  | 26 | 7 | 7     | 6   | 9  | --- | 4 - 5         | Depress 3 - 8 together                                                 |
| 6LM8                                                       | Triode   | 1     | 4 | 24 | 10 | 7 | ---   | --- | 1  | 9   | 4 - 5         |                                                                        |
| 6LM8                                                       | Pentode  | 4     | 4 | 3  | 12 | 7 | ---   | 3   | 6  | 2   | 4 - 5         |                                                                        |
| 6LN8                                                       | Triode   | 1     | 4 | 14 | 10 | 7 | ---   | --- | 1  | 9   | 4 - 5         |                                                                        |
| 6LN8                                                       | Pentode  | 1     | 4 | 23 | 16 | 7 | ---   | 3   | 6  | 2   | 4 - 5         |                                                                        |
| 6LQ6                                                       |          | 3     | 4 | 0  | 17 | 7 | 1 - 2 | 7   | 12 | 6   | 4 - 5         | Must show short on 1 - 2 - 6 - 7; Red grid<br>cap goes to top of tube  |
| 6LQ8                                                       | Triode   | 5     | 4 | 8  | 11 | 7 | ---   | --- | 3  | 2   | 4 - 5         |                                                                        |
| 6LQ8                                                       | Pentode  | 1     | 4 | 7  | 11 | 7 | ---   | 8   | 9  | 7   | 4 - 5         |                                                                        |

| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |          |       |   |    |    |   |           |     |    |     |               |                                                                                                                                                      |
|------------------------------------------------------------|----------|-------|---|----|----|---|-----------|-----|----|-----|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                            |          | LEVER |   |    |    |   |           |     |    |     |               |                                                                                                                                                      |
| TUBE                                                       | SECTION  | A     | B | C  | D  | E | W         | X   | Y  | Z   | FIL.<br>CONT. | COMMENT                                                                                                                                              |
| 6LR6                                                       |          | 5     | 4 | 0  | 6  | 7 | 1         | 6   | 11 | 8   | 2 - 4         | Key at 3; Cap goes to top of tube; Must show short on 1 - 6                                                                                          |
| 6LR8                                                       | Triode   | 5     | 4 | 8  | 14 | 7 | ---       | --- | 8  | 9   | 4 - 5         |                                                                                                                                                      |
| 6LR8                                                       | Pentode  | 5     | 4 | 0  | 6  | 7 | ---       | 7   | 6  | 2   | 4 - 5         |                                                                                                                                                      |
| 6LT8                                                       | Diode-1  | 3     | 4 | 0  | 15 | 7 | ---       | --- | 8  | --- | 4 - 5         | May show short on 1                                                                                                                                  |
| 6LT8                                                       | Diode-2  | 3     | 4 | 0  | 15 | 7 | ---       | --- | 6  | --- | 4 - 5         |                                                                                                                                                      |
| 6LT8                                                       | Pentode  | 5     | 4 | 0  | 22 | 7 | ---       | 2   | 3  | 9   | 4 - 5         |                                                                                                                                                      |
| 6LU6                                                       |          | 3     | 3 | 5  | 29 | 7 | ---       | 6   | 5  | 1   | 4             |                                                                                                                                                      |
| 6LU8                                                       | Triode   | 2     | 4 | 13 | 19 | 7 | ---       | --- | 7  | 2   | 4 - 6         | Key at 5; Use red grid cap                                                                                                                           |
| 6LU8                                                       | Pentode  | 2     | 7 | 5  | 5  | 7 | 1         | 3   | 12 | 2   | 7 - 9         | Key at 8; Must show short on 1 - 2                                                                                                                   |
| 6LV6                                                       | *        | 5     | 3 | 0  | 5  | 7 | 2         | 7   | 11 | 9   | 3 - 5         | * Key at 4; Must show short on 1 - 2 - 7 - 8; Cap goes to top of tube                                                                                |
| 6LW6                                                       |          | 1     | 7 | 0  | 5  | 7 | 1 - 4 - 6 | 3   | 11 | 5   | 7 - 8         | Must show short on 1 - 2 - 5 - 6; Cathode short test - Depress 2 - 6 together                                                                        |
| 6LX6                                                       | *        | 3     | 4 | 15 | 20 | 7 | 1         | 6   | 11 | 8   | 2 - 4         | * Key at 3; Must show short on 1 - 6; Black cap goes to top of tube                                                                                  |
| 6LX8                                                       | Triode   | 1     | 4 | 11 | 16 | 7 | ---       | --- | 1  | 9   | 4 - 5         |                                                                                                                                                      |
| 6LX8                                                       | Pentode  | 5     | 4 | 5  | 18 | 7 | ---       | 3   | 6  | 2   | 4 - 5         |                                                                                                                                                      |
| 6LY8                                                       | Triode   | 2     | 4 | 25 | 25 | 7 | ---       | --- | 3  | 2   | 4 - 5         |                                                                                                                                                      |
| 6LY8                                                       | Pentode  | 1     | 4 | 7  | 12 | 7 | ---       | 8   | 9  | 7   | 4 - 5         |                                                                                                                                                      |
| 6LZ6                                                       |          | 2     | 4 | 10 | 27 | 7 | 1 - 2     | 6   | 11 | 7   | 4 - 5         | Must show short on 1 - 2 - 6 - 7                                                                                                                     |
| 6M11                                                       | Triode-1 | 2     | 1 | 28 | 19 | 7 | ---       | --- | 7  | 8   | 1 - 12        | Key at 0; Use red grid cap                                                                                                                           |
| 6M11                                                       | Triode-2 | 2     | 1 | 28 | 19 | 7 | ---       | --- | 6  | 5   | 1 - 12        |                                                                                                                                                      |
| 6M11                                                       | Pentode  | 1     | 5 | 14 | 25 | 7 | ---       | 7   | 2  | 6   | 1 - 12        | Key at 4                                                                                                                                             |
| 6MA6                                                       |          | 4     | 3 | 29 | 32 | 7 | *         | --- | 11 | 6   | #             | * 2 - 3 - 4 - 5 - 8; # 1 - 2 - 4 - 5; Good tube reads above 40                                                                                       |
| 6MB6                                                       | *        | 3     | 6 | 6  | 20 | 7 | 8 - 9     | 3   | 11 | 1   | 4             | * Key at 5; Must show short on 2 - 3 - 8 - 9; Grid cap goes to top of tube                                                                           |
| 6MB8                                                       | Triode   | 5     | 4 | 10 | 12 | 7 | ---       | --- | 2  | 1   | 4 - 5         |                                                                                                                                                      |
| 6MB8                                                       | Pentode  | 4     | 4 | 5  | 7  | 7 | ---       | 7   | 6  | 9   | 4 - 5         |                                                                                                                                                      |
| 6MC6                                                       |          | 3     | 4 | 15 | 20 | 7 | 6 - 7     | 1   | 11 | 2   | 5             | Must show short on 1 - 2 - 6 - 7; Grid short test - Depress 2 - 6 together; Screen short test - Depress 1 - 7 together; Grid cap goes to top of tube |
| 6MD8                                                       | Triode-1 | 1     | 4 | 11 | 10 | 7 | ---       | --- | 3  | 6   | 4 - 5         |                                                                                                                                                      |
| 6MD8                                                       | Triode-2 | 1     | 4 | 11 | 10 | 7 | ---       | --- | 2  | 8   | 4 - 5         |                                                                                                                                                      |
| 6MD8                                                       | Triode-3 | 1     | 4 | 11 | 10 | 7 | ---       | --- | 1  | 9   | 4 - 5         |                                                                                                                                                      |
| 6ME6                                                       |          | 3     | 4 | 4  | 20 | 7 | 6 - 7     | 1   | 11 | 2   | 5             | Must show short on 1 - 2 - 6 - 7; Grid short test - Depress 2 - 6 together; Screen short test - Depress 1 - 7 together; Grid cap goes to top of tube |
| 6ME8                                                       | Sect-1   | 4     | 4 | 18 | 20 | 7 | ---       | 3   | 9  | 6   | 4 - 5         |                                                                                                                                                      |

| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |           |       |   |    |    |   |       |     |    |     |               |                                                                            |
|------------------------------------------------------------|-----------|-------|---|----|----|---|-------|-----|----|-----|---------------|----------------------------------------------------------------------------|
|                                                            |           | LEVER |   |    |    |   |       |     |    |     |               |                                                                            |
| TUBE                                                       | SECTION   | A     | B | C  | D  | E | W     | X   | Y  | Z   | FIL.<br>CONT. | COMMENT                                                                    |
| 6ME8                                                       | Sect-2    | 4     | 4 | 18 | 20 | 7 | ---   | 3   | 8  | 6   | 4 - 5         |                                                                            |
| 6MF8                                                       | Pentode   | 2     | 7 | 5  | 17 | 7 | 1     | 3   | 12 | 2   | 7 - 9         | Key at 8; Must show short on 1 - 2                                         |
| 6MF8                                                       | Triode    | 2     | 4 | 8  | 30 | 7 | ---   | --- | 7  | 2   | 4 - 6         | Key at 5; Use red grid cap                                                 |
| 6MG8                                                       | Triode    | 2     | 4 | 15 | 20 | 7 | ---   | --- | 1  | 9   | 4 - 5         |                                                                            |
| 6MG8                                                       | Pentode   | 4     | 4 | 8  | 10 | 7 | ---   | 3   | 6  | 2   | 4 - 5         |                                                                            |
| 6MH1                                                       |           | 1     | 3 | 33 | 6  | 7 | 1 - 5 | --- | 7  | 6   | 3 - 4         | Must show short on 1 - 5 - 6; Grid short test - Depress 1 - 5 - 6 together |
| 6MH6                                                       | *         | 5     | 3 | 0  | 5  | 7 | 2     | 7   | 11 | 9   | 3 - 5         | * Key at 4; Must show short on 1 - 2 - 7 - 8; Cap goes to top of tube      |
| 6MHH3                                                      | Triode    | 1     | 3 | 16 | 13 | 7 | ---   | --- | 2  | 5   | 3 - 4         |                                                                            |
| 6MHH3                                                      | Triode    | 1     | 3 | 16 | 13 | 7 | ---   | --- | 1  | 6   | 3 - 4         |                                                                            |
| 6MJ6                                                       |           | 3     | 4 | 0  | 17 | 7 | 1 - 2 | 7   | 12 | 6   | 4 - 5         | Must show short on 1 - 2 - 6 - 7; Red grid cap goes to top of tube         |
| 6MJ8                                                       | Triode-1  | 1     | 1 | 10 | 11 | 7 | ---   | --- | 6  | 8   | 1 - 11        | Key at 0                                                                   |
| 6MJ8                                                       | Triode-2  | 1     | 3 | 10 | 11 | 7 | ---   | --- | 8  | 1   | 1 - 11        | Key at 4                                                                   |
| 6MJ8                                                       | Triode-3  | 1     | 3 | 10 | 11 | 7 | ---   | --- | 6  | 2   | 1 - 11        |                                                                            |
| 6MK8                                                       | Pent-1    | 4     | 4 | 10 | 26 | 7 | ---   | 2   | 8  | 7   | 4 - 5         |                                                                            |
| 6MK8                                                       | Pent-2    | 4     | 4 | 10 | 26 | 7 | ---   | 2   | 3  | 7   | 4 - 5         |                                                                            |
| 6ML4                                                       |           | 2     | 3 | 19 | 10 | 7 | 1 - 2 | --- | 7  | 6   | 3 - 4         | Must show short on 1 - 2 - 6 - 7                                           |
| 6ML8                                                       | Triode-1  | 1     | 4 | 12 | 16 | 7 | ---   | --- | 3  | 6   | 4 - 5         |                                                                            |
| 6ML8                                                       | Triode-2  | 1     | 4 | 12 | 16 | 7 | ---   | --- | 2  | 8   | 4 - 5         |                                                                            |
| 6ML8                                                       | Triode-3  | 1     | 4 | 12 | 16 | 7 | ---   | --- | 1  | 9   | 4 - 5         |                                                                            |
| 6MN8                                                       | Triode-1  | 1     | 7 | 7  | 19 | 7 | ---   | --- | 8  | 4   | 5             | Key at 6                                                                   |
| 6MN8                                                       | Triode-2  | 1     | 6 | 7  | 21 | 7 | ---   | --- | 9  | 2   | 5             | Key at 5                                                                   |
| 6MN8                                                       | Triode-3  | 1     | 1 | 7  | 19 | 7 | ---   | --- | 6  | 8   | 5             | Key at 0                                                                   |
| 6MP17                                                      |           | 2     | 4 | 18 | 19 | 7 | ---   | 6   | 5  | 1   | 3 - 4         |                                                                            |
| 6MP18                                                      |           | 1     | 3 | 10 | 13 | 7 | 1     | 6   | 5  | 7   | 3 - 4         |                                                                            |
| 6MP20                                                      |           | 1     | 3 | 12 | 20 | 5 | ---   | 6   | 5  | 1   | 3 - 4         |                                                                            |
| 6MQ8                                                       | Triode    | 1     | 4 | 17 | 15 | 7 | ---   | --- | 1  | 9   | 5             |                                                                            |
| 6MQ8                                                       | Pentode   | 1     | 4 | 17 | 21 | 7 | ---   | 3   | 6  | 2   | 5             |                                                                            |
| 6MU8                                                       | Triode    | 1     | 4 | 25 | 11 | 7 | ---   | --- | 1  | 9   | 4 - 5         |                                                                            |
| 6MU8                                                       | Pentode   | 1     | 4 | 14 | 16 | 7 | ---   | 3   | 6  | 2   | 4 - 5         |                                                                            |
| 6MV8                                                       | Triode    | 1     | 4 | 15 | 18 | 7 | ---   | --- | 3  | 2   | 4 - 5         |                                                                            |
| 6MV8                                                       | Pentode   | 1     | 4 | 15 | 22 | 7 | ---   | 8   | 9  | 7   | 4 - 5         |                                                                            |
| 6MX8                                                       | Triode    | 1     | 4 | 12 | 24 | 7 | ---   | --- | 8  | 9   | 4 - 5         |                                                                            |
| 6MX8                                                       | Pentode   | 5     | 4 | 0  | 6  | 7 | ---   | 7   | 6  | 2   | 4 - 5         |                                                                            |
| 6MY8                                                       | Triode *  | 2     | 4 | 13 | 19 | 7 | ---   | --- | 7  | 2   | 6             | * Key at 5                                                                 |
| 6MY8                                                       | Pentode * | 2     | 7 | 5  | 5  | 7 | 1     | 3   | 12 | 2   | 9             | * Key at 8; Must show short on 1 - 2; Use red grid cap                     |
| 6N3                                                        |           | 3     | 4 | 0  | 18 | 7 | ---   | --- | 9  | --- | 4 - 5         |                                                                            |
| 6PL12                                                      | Triode    | 1     | 4 | 31 | 11 | 7 | ---   | --- | 9  | 1   | 4 - 5         |                                                                            |
| 6PL12                                                      | Pentode   | 1     | 4 | 10 | 12 | 7 | ---   | 7   | 6  | 3   | 4 - 5         |                                                                            |



| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |          |       |   |    |    |   |       |       |       |     |               |                                                                       |
|------------------------------------------------------------|----------|-------|---|----|----|---|-------|-------|-------|-----|---------------|-----------------------------------------------------------------------|
|                                                            |          | LEVER |   |    |    |   |       |       |       |     |               |                                                                       |
| TUBE                                                       | SECTION  | A     | B | C  | D  | E | W     | X     | Y     | Z   | FIL.<br>CONT. | COMMENT                                                               |
| 6Q8                                                        | Pentode  | 4     | 2 | 29 | 24 | 7 | ---   | 4     | 3     | 11  | 2 - 7         |                                                                       |
| 6Q8                                                        | Triode   | 1     | 2 | 33 | 28 | 7 | ---   | ---   | 6     | 5   | 2 - 7         |                                                                       |
| 6Q11                                                       | Triode-1 | 1     | 6 | 25 | 10 | 7 | ---   | ---   | 2     | 1   | 4 - 6         | Key at 5                                                              |
| 6Q11                                                       | Triode-3 | 1     | 6 | 25 | 18 | 7 | ---   | ---   | 7     | 3   | 4 - 6         |                                                                       |
| 6Q11                                                       | Triode-2 | 1     | 3 | 25 | 18 | 7 | ---   | ---   | 7     | 9   | 1 - 3         | Key at 2                                                              |
| 6R3                                                        |          | 3     | 4 | 0  | 16 | 7 | 2     | ---   | 9     | --- | 4 - 5         | May show short on all pins                                            |
| 6R4                                                        |          | 1     | 4 | 11 | 11 | 7 | ---   | ---   | 8     | 1   | 4 - 5         |                                                                       |
| 6RA6                                                       |          | 3     | 4 | 9  | 20 | 7 | 7     | ---   | 9     | 2   | 4 - 5         | Must show short on 2 - 7; Grid short test -<br>Depress 2 - 7 together |
| 6RA9                                                       |          | 3     | 4 | 9  | 20 | 7 | 7     | ---   | 9     | 2   | 4 - 5         | Must show short on 2 - 7; Grid short test -<br>Depress 2 - 7 together |
| 6RB11                                                      |          | 2     | 4 | 10 | 10 | 7 | 6     | 1     | 9     | 3   | 4 - 5         | Must show short on 3 - 6                                              |
| 6RHH2                                                      | Triode   | 1     | 4 | 15 | 11 | 7 | ---   | ---   | 6     | 7   | 4 - 5         |                                                                       |
| 6RHH2                                                      | Triode   | 1     | 4 | 15 | 11 | 7 | ---   | ---   | 1     | 2   | 4 - 5         |                                                                       |
| 6RHH8                                                      | Triode-1 | 1     | 4 | 5  | 9  | 7 | ---   | ---   | 6     | 7   | 4 - 5         |                                                                       |
| 6RHH8                                                      | Triode-2 | 1     | 4 | 5  | 9  | 7 | ---   | ---   | 1     | 2   | 4 - 5         |                                                                       |
| 6RK19                                                      |          | 3     | 4 | 0  | 15 | 7 | 2     | ---   | 9     | --- | 4 - 5         | May show short on 2 - 19                                              |
| 6RP15                                                      |          | 5     | 4 | 10 | 8  | 7 | 1     | 9     | 7     | 2   | 4 - 5         | Must show short on 1 - 2                                              |
| 6RP22                                                      |          | 4     | 4 | 0  | 11 | 7 | 9     | 3 - 8 | 6     | 2   | 4 - 5         | Must show short on 2 - 3 - 8 - 9                                      |
| 6T10                                                       |          | 2     | 3 | 24 | 11 | 7 | 1 - 2 | ---   | 7     | 6   | 3 - 4         | Must show short on 1 - 2 - 6 - 7                                      |
| 6T9                                                        | Triode   | 1     | 3 | 32 | 10 | 7 | ---   | ---   | 6     | 8   | 3 - 5         | Key at 4; Use red grid cap                                            |
| 6T9                                                        | Pentode  | 1     | 7 | 30 | 10 | 7 | ---   | 5     | 6     | 3   | 7 - 9         | Key at 8                                                              |
| 6T10                                                       |          | 4     | 1 | 15 | 11 | 7 | ---   | 6     | 7     | 3   | 1 - 12        | Key at 0; Use red grid cap                                            |
| 6T10                                                       |          | 5     | 7 | 10 | 10 | 7 | ---   | 3     | 4     | 1   | 5 - 7         | Key at 6                                                              |
| 6U3                                                        |          | 3     | 4 | 0  | 18 | 7 | ---   | ---   | 9     | --- | 4 - 5         |                                                                       |
| 6U9                                                        | Triode   | 5     | 5 | 9  | 10 | 7 | ---   | ---   | 9     | 11  | 5 - 6         |                                                                       |
| 6U9                                                        | Pentode  | 5     | 5 | 0  | 20 | 7 | ---   | 8     | 7     | 3   | 5 - 6         |                                                                       |
| 6U10                                                       |          | 1     | 4 | 27 | 10 | 7 | ---   | ---   | 2     | 1   | 4 - 6         | Key at 5; Use red grid cap                                            |
| 6U10                                                       |          | 4     | 1 | 20 | 10 | 7 | ---   | ---   | 5     | 7   | 1 - 12        | Key at 0                                                              |
| 6U10                                                       |          | 5     | 2 | 28 | 10 | 7 | ---   | ---   | 5     | 1   | 4 - 2         | Key at 3                                                              |
| 6V9                                                        | Triode   | 5     | 5 | 8  | 10 | 7 | ---   | ---   | 11    | 8   | 5 - 6         |                                                                       |
| 6V9                                                        | Pentode  | 5     | 5 | 5  | 23 | 7 | ---   | 4     | 7     | 3   | 5 - 6         |                                                                       |
| 6X9                                                        | Triode   | 4     | 5 | 10 | 14 | 7 | ---   | ---   | 9     | 11  | 5 - 6         |                                                                       |
| 6X9                                                        | Pentode  | 2     | 5 | 0  | 39 | 7 | ---   | 8     | 7     | 3   | 5 - 6         |                                                                       |
| 6Y9                                                        | Pent-1   | 1     | 5 | 7  | 11 | 7 | ---   | 9     | 11    | 8   | 5 - 6         |                                                                       |
| 6Y9                                                        | Pent-2   | 1     | 5 | 15 | 16 | 7 | ---   | 3     | 4     | 1   | 5 - 6         |                                                                       |
| 6Y10                                                       | Pent-1   | 4     | 1 | 7  | 13 | 7 | ---   | 6     | 7     | 3   | 1 - 11        | Key at 0                                                              |
| 6Y10                                                       | Pent-2   | 5     | 7 | 5  | 11 | 7 | ---   | 3     | 4     | 1   | 1 - 11        | Key at 6                                                              |
| 6Z4                                                        |          | 2     | 3 | 0  | 3  | 7 | ---   | ---   | 1     | --- | 3 - 4         |                                                                       |
| 6Z4                                                        |          | 2     | 3 | 0  | 3  | 7 | ---   | ---   | 6     | --- | 3 - 4         |                                                                       |
| 6Z10                                                       | Pent-1   | 1     | 5 | 21 | 11 | 7 | ---   | 8     | 2     | 4   | 5 - 7         | Key at 6; Use red grid cap                                            |
| 6Z10                                                       | Pent-2   | 1     | 1 | 0  | 25 | 7 | ---   | ---   | 4 - 6 | --- | 1 - 12        | Key at 0                                                              |

| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |          |       |   |    |    |   |     |     |   |     |               |                                                                        |
|------------------------------------------------------------|----------|-------|---|----|----|---|-----|-----|---|-----|---------------|------------------------------------------------------------------------|
|                                                            |          | LEVER |   |    |    |   |     |     |   |     |               |                                                                        |
| TUBE                                                       | SECTION  | A     | B | C  | D  | E | W   | X   | Y | Z   | FIL.<br>CONT. | COMMENT                                                                |
| 6CL8                                                       | Triode   | 1     | 4 | 22 | 10 | 8 | --- | --- | 2 | 1   | 4 - 5         |                                                                        |
| 6CL8                                                       | Tetrode  | 4     | 4 | 9  | 10 | 8 | --- | 7   | 6 | 9   | 4 - 5         |                                                                        |
| 7D10                                                       |          | 1     | 4 | 20 | 12 | 7 | --- | 8   | 7 | 2   | 4 - 5         |                                                                        |
| 7D11                                                       |          | 1     | 2 | 9  | 9  | 7 | --- | 4   | 3 | 5   | 2 - 7         |                                                                        |
| 7DZ7                                                       | Pent-1   | 1     | 2 | 17 | 10 | 9 | --- | 4   | 6 | 5   | 2 - 7         |                                                                        |
| 7DZ7                                                       | Pent-2   | 1     | 2 | 15 | 10 | 9 | --- | 4   | 3 | 1   | 2 - 7         |                                                                        |
| 7GS7                                                       | Triode   | 5     | 4 | 7  | 10 | 8 | --- | --- | 2 | 1   | 4 - 5         | Must show short on 3 - 8; Cathode short test<br>Depress 3 - 8 together |
| 7GS7                                                       | Pentode  | 5     | 4 | 0  | 21 | 8 | --- | 7   | 6 | 9   | 4 - 5         |                                                                        |
| 7GV7                                                       | Triode   | 5     | 4 | 7  | 10 | 8 | --- | --- | 1 | 9   | 4 - 5         | Must show short on 6 - 8; Cathode short test<br>Depress 6 - 8 together |
| 7KY6                                                       |          | 1     | 4 | 6  | 9  | 8 | --- | 8   | 7 | 2   | 4 - 5         |                                                                        |
| 7KZ6                                                       |          | 1     | 4 | 6  | 8  | 8 | --- | 8   | 7 | 2   | 4 - 5         | Must show short on 3 - 9                                               |
| 7MP18                                                      |          | 1     | 3 | 10 | 13 | 8 | 1   | 6   | 5 | 7   | 3 - 4         |                                                                        |
| 8A8                                                        | Triode   | 1     | 4 | 13 | 10 | 8 | --- | --- | 1 | 9   | 4 - 5         |                                                                        |
| 8A8                                                        | Pentode  | 1     | 4 | 30 | 15 | 8 | --- | 3   | 6 | 2   | 4 - 5         |                                                                        |
| 8AC9                                                       | Diode    | 3     | 1 | 0  | 15 | 8 | --- | --- | 2 | --- | 1 - 11        | Key at 0; May show short on 3                                          |
| 8AC9                                                       | Pentode  | 4     | 6 | 7  | 8  | 8 | --- | 4   | 5 | 3   | 1 - 11        | Key at 7                                                               |
| 8AC10                                                      | Triode-1 | 1     | 4 | 14 | 14 | 8 | --- | --- | 2 | 1   | 4 - 6         | Key at 5                                                               |
| 8AC10                                                      | Triode-2 | 4     | 1 | 14 | 15 | 8 | --- | --- | 5 | 7   | 4 - 6         | Key at 0                                                               |
| 8AC10                                                      | Triode-3 | 5     | 2 | 14 | 15 | 8 | --- | --- | 5 | 1   | 4 - 6         | Key at 3                                                               |
| 8AL9                                                       | Triode   | 2     | 1 | 14 | 30 | 8 | --- | --- | 9 | 7   | 1 - 3         | Key at 2                                                               |
| 8AL9                                                       | Pentode  | 2     | 6 | 10 | 15 | 8 | --- | 2   | 7 | 3   | 4 - 6         | Key at 5                                                               |
| 8AR11                                                      | Pent-2   | 1     | 3 | 7  | 30 | 8 | --- | 5   | 4 | 7   | 1 - 3         | Key at 2                                                               |
| 8AR11                                                      | Pent-1   | 1     | 9 | 7  | 30 | 8 | --- | 4   | 3 | 5   | 1 - 3         | Key at 8                                                               |
| 8AV11                                                      | Triode-1 | 1     | 6 | 15 | 15 | 8 | --- | --- | 2 | 1   | 4 - 6         | Key at 5                                                               |
| 8AV11                                                      | Triode-3 | 1     | 6 | 15 | 15 | 8 | --- | --- | 7 | 3   | 4 - 6         |                                                                        |
| 8AV11                                                      | Triode-2 | 1     | 3 | 15 | 15 | 8 | --- | --- | 7 | 9   | 4 - 6         | Key at 2                                                               |
| 8B8                                                        | Triode   | 1     | 4 | 32 | 10 | 8 | --- | --- | 9 | 1   | 4 - 5         |                                                                        |
| 8B8                                                        | Pentode  | 1     | 4 | 15 | 10 | 8 | --- | 7   | 6 | 3   | 4 - 5         |                                                                        |
| 8B10                                                       | Triode-1 | 1     | 1 | 28 | 10 | 8 | --- | --- | 6 | 5   | 1 - 11        | Key at 0; Use black grid cap                                           |
| 8B10                                                       | Triode-2 | 1     | 1 | 28 | 10 | 8 | --- | --- | 4 | 3   | 1 - 11        |                                                                        |
| 8B10                                                       | Diode-1  | 3     | 7 | 0  | 16 | 8 | --- | --- | 3 | --- | 1 - 11        | Key at 6                                                               |
| 8B10                                                       | Diode-2  | 3     | 7 | 0  | 16 | 8 | --- | --- | 1 | --- | 1 - 11        |                                                                        |
| 8BA11                                                      | Pent-1   | 4     | 3 | 27 | 20 | 8 | --- | 7   | 6 | 8   | 3 - 5         | Key at 4; Use red grid cap                                             |
| 8BA11                                                      | Pent-2   | 4     | 1 | 21 | 26 | 8 | --- | 3   | 6 | 4   | 1 - 12        | Key at 0                                                               |
| 8BA11                                                      | Triode   | 3     | 7 | 16 | 17 | 8 | --- | --- | 6 | 4   | 7 - 9         | Key at 8                                                               |
| 8BM11                                                      | Pent-2   | 4     | 1 | 7  | 9  | 8 | --- | 3   | 2 | 6   | 1 - 11        | Key at 0                                                               |
| 8BM11                                                      | Pent-1   | 4     | 7 | 5  | 10 | 8 | --- | 4   | 2 | 6   | 1 - 11        | Key at 8                                                               |
| 8BN11                                                      | Pent-1   | 5     | 6 | 0  | 28 | 8 | --- | 3   | 5 | 1   | 6 - 8         | Key at 7                                                               |
| 6BN11                                                      | Pent-2   | 5     | 1 | 0  | 28 | 8 | --- | 6   | 7 | 5   | 6 - 8         | Key at 2                                                               |
| 8BQ7                                                       | Triode-1 | 1     | 4 | 15 | 11 | 8 | --- | --- | 6 | 7   | 4 - 5         |                                                                        |

| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |          |       |   |    |    |    |       |     |   |     |               |                                               |
|------------------------------------------------------------|----------|-------|---|----|----|----|-------|-----|---|-----|---------------|-----------------------------------------------|
|                                                            |          | LEVER |   |    |    |    |       |     |   |     |               |                                               |
| TUBE                                                       | SECTION  | A     | B | C  | D  | E  | W     | X   | Y | Z   | FIL.<br>CONT. | COMMENT                                       |
| 8BQ7                                                       | Triode-2 | 1     | 4 | 15 | 11 | 8  | ---   | --- | 1 | 2   | 4 - 5         |                                               |
| 8BQ11                                                      | Pent-2   | 1     | 3 | 14 | 23 | 8  | ---   | 5   | 4 | 7   | 1 - 3         | Key at 2                                      |
| 8BQ11                                                      | Pent-1   | 1     | 9 | 14 | 23 | 8  | ---   | 4   | 3 | 5   | 1 - 3         | Key at 8                                      |
| 8BU11                                                      | Triode-1 | 5     | 1 | 8  | 13 | 8  | ---   | --- | 3 | 4   | 1 - 11        | Key at 0                                      |
| 8BU11                                                      | Triode-2 | 5     | 1 | 8  | 13 | 8  | ---   | --- | 7 | 6   | 1 - 11        |                                               |
| 8BU11                                                      | Pentode  | 5     | 6 | 8  | 9  | 7? | ---   | 3   | 4 | 2   | 1 - 11        | Key at 7; Lever E?                            |
| 8CB11                                                      | Pent-2   | 1     | 3 | 7  | 30 | 8  | ---   | 5   | 4 | 7   | 1 - 3         | Key at 2                                      |
| 8CB11                                                      | Pent-1   | 1     | 9 | 7  | 30 | 8  | ---   | 4   | 3 | 5   | 1 - 3         | Key at 8                                      |
| 8CL8                                                       | Triode   | 1     | 4 | 22 | 10 | 8  | ---   | --- | 2 | 1   | 4 - 5         |                                               |
| 8CL8                                                       | Tetrode  | 4     | 4 | 9  | 10 | 8  | ---   | 7   | 6 | 9   | 4 - 5         |                                               |
| 8CW5                                                       |          | 1     | 4 | 0  | 10 | 8  | 1-6-8 | 9   | 7 | 2   | 4 - 5         |                                               |
| 8CY5                                                       |          | 2     | 3 | 20 | 11 | 8  | ---   | 6   | 5 | 1   | 3 - 4         |                                               |
| 8D8                                                        |          | 1     | 4 | 17 | 30 | 8  | ---   | 1   | 6 | 9   | 4 - 5         | Must show short on 2 - 7                      |
| 8DX8                                                       | Triode   | 1     | 4 | 31 | 10 | 8  | ---   | --- | 2 | 1   | 4 - 5         |                                               |
| 8DX8                                                       | Pentode  | 1     | 4 | 26 | 11 | 8  | ---   | 9   | 6 | 8   | 4 - 5         |                                               |
| 8FE5                                                       |          | 1     | 2 | 5  | 6  | 8  | ---   | 4   | 3 | 5   | 2 - 7         |                                               |
| 8FQ7                                                       | Triode-1 | 1     | 4 | 19 | 14 | 8  | ---   | --- | 6 | 7   | 4 - 5         |                                               |
| 8FQ7                                                       | Triode-2 | 1     | 4 | 19 | 14 | 8  | ---   | --- | 1 | 2   | 4 - 5         |                                               |
| 8FY7                                                       | *        | 4     | 4 | 15 | 10 | 8  | ---   | --- | 3 | 2   | 4 - 6         | * Key at 5; Use red grid cap                  |
| 8FY7                                                       | *        | 1     | 1 | 0  | 9  | 8  | ---   | --- | 7 | 5   | 4 - 6         | * Key at 2                                    |
| 8GJ7                                                       | Triode   | 5     | 4 | 7  | 8  | 8  | ---   | --- | 8 | 9   | 4 - 5         | Must show short on 1 - 3; Cathode short test  |
| 8GJ7                                                       | Pentode  | 1     | 4 | 0  | 38 | 8  | ---   | 7   | 6 | 2   | 4 - 5         | Depress 1 - 3 together                        |
| 8GM6                                                       |          | 4     | 3 | 4  | 10 | 8  | ---   | 6   | 5 | 1   | 3 - 4         |                                               |
| 8GN8                                                       | Triode   | 4     | 4 | 9  | 10 | 8  | ---   | --- | 3 | 2   | 4 - 5         |                                               |
| 8GN8                                                       | Pentode  | 1     | 4 | 18 | 10 | 8  | ---   | 8   | 9 | 7   | 4 - 5         |                                               |
| 8GU7                                                       | Triode-1 | 1     | 4 | 15 | 9  | 8  | ---   | --- | 6 | 7   | 4 - 5         |                                               |
| 8GU7                                                       | Triode-2 | 1     | 4 | 15 | 9  | 8  | ---   | --- | 1 | 2   | 4 - 5         |                                               |
| 8GX7                                                       | Triode   | 5     | 4 | 9  | 8  | 8  | ---   | --- | 8 | 9   | 4 - 5         | Must show short on 1 - 3; Cathode short test  |
| 8GX7                                                       | Pentode  | 4     | 4 | 5  | 7  | 8  | ---   | 7   | 6 | 2   | 4 - 5         | Depress 1 - 3 together                        |
| 8HA6                                                       |          | 5     | 4 | 6  | 9  | 8  | 6     | 8   | 7 | 2   | 4 - 5         | Must show short on 3 - 6 - 8 - 9              |
| 8HG8                                                       | Triode   | 1     | 4 | 5  | 10 | 8  | ---   | --- | 7 | 6   | 4 - 5         | May show short on 1 - 3; Cathode short test - |
| 8HG8                                                       | Pentode  | 1     | 4 | 7  | 25 | 8  | ---   | 9   | 8 | 2   | 4 - 5         | Depress 1 - 3 together                        |
| 8JK8                                                       | Triode-1 | 1     | 4 | 23 | 10 | 8  | ---   | --- | 6 | 7   | 4 - 5         |                                               |
| 8JK8                                                       | Triode-2 | 1     | 4 | 15 | 10 | 8  | ---   | --- | 1 | 2   | 4 - 5         |                                               |
| 8JT8                                                       | Triode   | 4     | 4 | 10 | 9  | 8  | ---   | --- | 3 | 2   | 4 - 5         |                                               |
| 8JT8                                                       | Pentode  | 1     | 4 | 0  | 17 | 7? | ---   | 8   | 9 | 7   | 4 - 5         | Lever E ?                                     |
| 8JU8                                                       | Diode-1  | 3     | 4 | 0  | 16 | 8  | 7     | --- | 8 | --- | 4 - 5         | Must show short on 2 - 8; Cathode short test  |
|                                                            |          |       |   |    |    |    |       |     |   |     |               | Depress 8 - 9 together; Cathode short test -  |
|                                                            |          |       |   |    |    |    |       |     |   |     |               | Depress 2 - 3 together                        |

| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |          |       |   |    |    |   |     |     |   |     |               |                              |
|------------------------------------------------------------|----------|-------|---|----|----|---|-----|-----|---|-----|---------------|------------------------------|
|                                                            |          | LEVER |   |    |    |   |     |     |   |     |               |                              |
| TUBE                                                       | SECTION  | A     | B | C  | D  | E | W   | X   | Y | Z   | FIL.<br>CONT. | COMMENT                      |
| 8JU8                                                       | Diode-2  | 3     | 4 | 0  | 16 | 8 | --- | --- | 7 | --- | 4 - 5         |                              |
| 8JU8                                                       | Diode-3  | 3     | 4 | 0  | 16 | 8 | 1   | --- | 2 | --- | 4 - 5         |                              |
| 8JU8                                                       | Diode-4  | 3     | 4 | 0  | 16 | 8 | --- | --- | 1 | --- | 4 - 5         |                              |
| 8JV8                                                       | Triode   | 4     | 4 | 4  | 9  | 8 | --- | --- | 3 | 2   | 4 - 5         |                              |
| 8JV8                                                       | Pentode  | 4     | 4 | 3  | 10 | 8 | --- | 8   | 9 | 7   | 4 - 5         |                              |
| 8K11 *                                                     | Triode-2 | 1     | 1 | 33 | 10 | 8 | --- | --- | 5 | 7   | 1 - 12        | * Key at 0; Use red grid cap |
| 8K11 *                                                     | Triode-1 | 1     | 6 | 27 | 10 | 8 | --- | --- | 2 | 1   | 1 - 12        | * Key at 5                   |
| 8K11                                                       | Triode-3 | 1     | 6 | 33 | 10 | 8 | --- | --- | 7 | 3   | 1 - 12        |                              |
| 8KA8                                                       | Triode   | 4     | 4 | 2  | 10 | 8 | --- | --- | 1 | 2   | 4 - 5         |                              |
| 8KA8                                                       | Pentode  | 4     | 4 | 15 | 10 | 8 | --- | 8   | 9 | 6   | 4 - 5         |                              |
| 8KR8                                                       | Triode   | 1     | 4 | 7  | 13 | 8 | --- | --- | 3 | 2   | 4 - 5         |                              |
| 8KR8                                                       | Pentode  | 1     | 4 | 5  | 11 | 8 | --- | 8   | 9 | 7   | 4 - 5         |                              |
| 8KS8                                                       | Triode   | 5     | 4 | 14 | 13 | 8 | --- | --- | 3 | 2   | 4 - 5         |                              |
| 8KS8                                                       | Pentode  | 1     | 4 | 11 | 15 | 8 | --- | 8   | 9 | 7   | 4 - 5         |                              |
| 8KT8                                                       | Triode   | 4     | 4 | 6  | 6  | 8 | --- | --- | 3 | 2   | 4 - 5         |                              |
| 8KT8                                                       | Pentode  | 2     | 4 | 0  | 44 | 8 | --- | 8   | 9 | 7   | 4 - 5         |                              |
| 8LC8                                                       | Triode   | 1     | 4 | 29 | 10 | 8 | --- | --- | 1 | 2   | 4 - 5         | May show short on 3          |
| 8LC8                                                       | Pentode  | 4     | 4 | 8  | 16 | 8 | --- | 8   | 9 | 6   | 4 - 5         |                              |
| 8LE8                                                       | Pent-1   | 5     | 4 | 0  | 27 | 8 | --- | 8   | 1 | 9   | 4 - 5         |                              |
| 8LE8                                                       | Pent-2   | 5     | 4 | 0  | 33 | 8 | --- | 8   | 6 | 9   | 4 - 5         |                              |
| 8LS6                                                       |          | 1     | 4 | 25 | 34 | 8 | 9   | 3   | 7 | 2   | 4 - 5         | Must show short on 3 - 9     |
| 8LT8                                                       | Diode-1  | 3     | 4 | 0  | 15 | 8 | --- | --- | 8 | --- | 4 - 5         | May show short on 1          |
| 8LT8                                                       | Diode-2  | 3     | 4 | 0  | 15 | 8 | --- | --- | 6 | --- | 4 - 5         |                              |
| 8LT8                                                       | Pentode  | 5     | 4 | 0  | 22 | 8 | --- | 2   | 3 | 9   | 4 - 5         |                              |
| 8LX8                                                       | Triode   | 1     | 4 | 11 | 16 | 8 | --- | --- | 1 | 9   | 4 - 5         |                              |
| 8LX8                                                       | Pentode  | 5     | 4 | 5  | 18 | 8 | --- | 3   | 6 | 2   | 4 - 5         |                              |
| 8MD8                                                       | Triode-1 | 1     | 4 | 11 | 10 | 8 | --- | --- | 3 | 6   | 4 - 5         |                              |
| 8MD8                                                       | Triode-2 | 1     | 4 | 11 | 10 | 8 | --- | --- | 2 | 8   | 4 - 5         |                              |
| 8MD8                                                       | Triode-3 | 1     | 4 | 11 | 10 | 8 | --- | --- | 1 | 9   | 4 - 5         |                              |
| 8MU8                                                       | Triode   | 1     | 4 | 25 | 11 | 8 | --- | --- | 1 | 9   | 4 - 5         |                              |
| 8MU8                                                       | Pentode  | 1     | 4 | 14 | 16 | 8 | --- | 3   | 6 | 2   | 4 - 5         |                              |
| 8MV8                                                       | Triode   | 1     | 4 | 15 | 18 | 8 | --- | --- | 3 | 2   | 4 - 5         |                              |
| 8MV8                                                       | Pentode  | 1     | 4 | 15 | 22 | 8 | --- | 8   | 9 | 7   | 4 - 5         |                              |
| 8RHP1                                                      | Triode   | 1     | 4 | 32 | 10 | 8 | --- | --- | 9 | 1   | 4 - 5         |                              |
| 8RHP1                                                      | Pentode  | 1     | 4 | 15 | 10 | 8 | --- | 7   | 6 | 3   | 4 - 5         |                              |
| 8U9                                                        | Triode   | 2     | 5 | 9  | 10 | 8 | --- | --- | 9 | 11  | 5 - 6         |                              |
| 8U9                                                        | Pentode  | 2     | 5 | 0  | 20 | 8 | --- | 8   | 7 | 3   | 5 - 6         |                              |
| 8X9                                                        | Triode   | 4     | 5 | 10 | 14 | 8 | --- | --- | 9 | 11  | 5 - 6         |                              |
| 8X9                                                        | Pentode  | 2     | 5 | 0  | 39 | 8 | --- | 8   | 7 | 3   | 5 - 6         |                              |
| 9A8                                                        | Triode   | 1     | 4 | 13 | 10 | 9 | --- | --- | 1 | 9   | 4 - 5         |                              |
| 9A8                                                        | Pentode  | 1     | 4 | 30 | 15 | 9 | --- | 3   | 6 | 2   | 4 - 5         |                              |
| 9AB4                                                       |          | 1     | 3 | 30 | 10 | 9 | --- | --- | 1 | 6   | 3 - 4         |                              |

| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |          |       |   |    |    |    |       |     |       |     |            |                                                                                                             |
|------------------------------------------------------------|----------|-------|---|----|----|----|-------|-----|-------|-----|------------|-------------------------------------------------------------------------------------------------------------|
|                                                            |          | LEVER |   |    |    |    |       |     |       |     |            |                                                                                                             |
| TUBE                                                       | SECTION  | A     | B | C  | D  | E  | W     | X   | Y     | Z   | FIL. CONT. | COMMENT                                                                                                     |
| 9AH9 *                                                     | Triode   | 1     | 1 | 8  | 13 | 8  | ---   | --- | 3     | 2   | 1 - 11     | * Key at 0; Must show short on 5 - 6                                                                        |
| 9AH9 *                                                     | Pentode  | 1     | 6 | 5  | 12 | 8  | ---   | 2   | 5     | 11  | 1 - 11     | * Key at 7                                                                                                  |
| 9AK10                                                      | Triode-2 | 2     | 1 | 5  | 35 | 9  | ---   | --- | 5     | 7   | 11         | Key at 0                                                                                                    |
| 9AK10                                                      | Triode-1 | 2     | 5 | 5  | 34 | 9  | ---   | --- | 8     | 4   | 7          | Key at 6                                                                                                    |
| 9AK10                                                      | Triode-3 | 2     | 7 | 5  | 32 | 9  | ---   | --- | 5     | 4   | 9          | Key at 8                                                                                                    |
| 9AM10 *                                                    |          | 1     | 4 | 13 | 18 | 8  | ---   | --- | 2     | 1   | 4 - 6      | * Key at 5                                                                                                  |
| 9AM10 *                                                    |          | 3     | 1 | 13 | 18 | 8  | ---   | --- | 5     | 7   | 4 - 6      | * Key at 0                                                                                                  |
| 9AM10 *                                                    |          | 5     | 2 | 13 | 18 | 8  | ---   | --- | 5     | 1   | 4 - 6      | * Key at 3                                                                                                  |
| 9AQ8                                                       | Triode-1 | 1     | 4 | 25 | 11 | 9  | ---   | --- | 6     | 7   | 4 - 5      |                                                                                                             |
| 9AQ8                                                       | Triode-2 | 1     | 4 | 25 | 11 | 9  | ---   | --- | 1     | 2   | 4 - 5      |                                                                                                             |
| 9BJ11                                                      | Pent-2   | 1     | 4 | 0  | 16 | 9  | ---   | 3   | 2     | 6   | 1 - 11     | Key at 0                                                                                                    |
| 9BJ11                                                      | Pent-1   | 4     | 7 | 0  | 15 | 9  | ---   | 4   | 2     | 6   | 1 - 11     | Key at 8                                                                                                    |
| 9CG8                                                       | Triode   | 1     | 4 | 18 | 12 | 9  | ---   | --- | 2     | 1   | 4 - 5      | Must show short on 3 - 8; Cathode short test                                                                |
| 9CG8                                                       | Pentode  | 1     | 4 | 25 | 28 | 9  | ---   | 7   | 6     | 9   | 4 - 5      | - Depress 3 - 8 together                                                                                    |
| 9DK3                                                       |          | 3     | 4 | 0  | 20 | 9  | 3 - 9 | --- | 1 - 7 | --- | 4 - 5      |                                                                                                             |
| 9DZ8                                                       | Triode   | 1     | 4 | 20 | 18 | 9  | ---   | --- | 9     | 1   | 4 - 5      |                                                                                                             |
| 9DZ8                                                       | Pentode  | 2     | 4 | 7  | 12 | 9  | ---   | 7   | 6     | 3   | 4 - 5      |                                                                                                             |
| 9EA8                                                       | Triode   | 1     | 4 | 18 | 11 | 9  | ---   | --- | 1     | 9   | 4 - 5      |                                                                                                             |
| 9EA8                                                       | Pentode  | 1     | 4 | 20 | 23 | 9  | ---   | 3   | 6     | 2   | 4 - 5      |                                                                                                             |
| 9ED4                                                       | *        | 4     | 4 | 10 | 45 | 8  | ---   | --- | 11    | 8   | 4 - 5      | * Must use magnoval adapter; Must show short on 1 - 2 - 3 - 6 - 7 - 9; OK above 30; Cap goes to top of tube |
| 9FG6                                                       | Triode   | 4     | 4 | 10 | 34 | 5  | ---   | --- | 9     | 1   | 4 - 5      | Must show short on 2 - 6 - 8                                                                                |
| 9FG6                                                       | Eye      | 7     | 4 | 0  | 0  | 5  | 2 - 8 | --- | 6 - 7 | --- | 4 - 5      | See instructions for eye test                                                                               |
| 9GH8                                                       | Triode   | 1     | 4 | 25 | 10 | 9  | ---   | --- | 1     | 9   | 4 - 5      |                                                                                                             |
| 9GH8                                                       | Pentode  | 1     | 4 | 18 | 21 | 9  | ---   | 3   | 6     | 2   | 4 - 5      |                                                                                                             |
| 9GV7                                                       | Triode   | 5     | 4 | 7  | 10 | 9  | ---   | --- | 1     | 9   | 4 - 5      | Must show short on 6 - 8; Cathode short test                                                                |
| 9GV7                                                       | Pentode  | 5     | 4 | 0  | 22 | 9  | ---   | 2   | 3     | 7   | 4 - 5      | Depress 6 - 8 together                                                                                      |
| 9GV8                                                       | Triode   | 2     | 4 | 34 | 10 | 8  | ---   | --- | 1     | 2   | 4 - 5      |                                                                                                             |
| 9GV8                                                       | Pentode  | 2     | 4 | 7  | 10 | 8  | ---   | 7   | 6     | 9   | 4 - 5      |                                                                                                             |
| 9JW8                                                       | Triode   | 5     | 4 | 10 | 15 | 9  | ---   | --- | 1     | 9   | 4 - 5      |                                                                                                             |
| 9JW8                                                       | Pentode  | 4     | 4 | 7  | 10 | 9  | ---   | 3   | 6     | 2   | 4 - 5      |                                                                                                             |
| 9KC6                                                       |          | 5     | 4 | 0  | 20 | 8  | ---   | 9   | 7     | 2   | 4 - 5      |                                                                                                             |
| 9KG6                                                       | *        | 1     | 4 | 8  | 26 | 9  | 1-2-3 | 7   | 11    | 8   | 4 - 5      | * Must use magnoval adapter; Black cap goes to top of tube; Must show short on 1 - 2 - 3 - 6 - 7 - 8        |
| 9KV8                                                       | Triode   | 1     | 4 | 31 | 10 | 9  | ---   | --- | 3     | 2   | 4 - 5      |                                                                                                             |
| 9KV8                                                       | Pentode  | 1     | 4 | 9  | 9  | 9  | ---   | 8   | 9     | 7   | 4 - 5      |                                                                                                             |
| 9KX6                                                       |          | 1     | 4 | 5  | 8  | 12 | ---   | 8   | 7     | 2   | 4 - 5      | Must show short on 3 - 9                                                                                    |
| 9KZ8                                                       | Pentode  | 4     | 4 | 9  | 10 | 9  | ---   | 7   | 6     | 2   | 4 - 5      |                                                                                                             |

| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |          |       |   |    |    |    |       |     |    |     |               |                                                                       |
|------------------------------------------------------------|----------|-------|---|----|----|----|-------|-----|----|-----|---------------|-----------------------------------------------------------------------|
|                                                            |          | LEVER |   |    |    |    |       |     |    |     |               |                                                                       |
| TUBE                                                       | SECTION  | A     | B | C  | D  | E  | W     | X   | Y  | Z   | FIL.<br>CONT. | COMMENT                                                               |
| 9KZ8                                                       | Triode   | 3     | 4 | 15 | 18 | 9  | ---   | --- | 1  | 9   | 4 - 5         |                                                                       |
| 9LA6                                                       |          | 1     | 4 | 6  | 11 | 8  | ---   | 8   | 7  | 2   | 4 - 5         | Must show short on 3 - 9                                              |
| 9MD8                                                       | Triode-1 | 1     | 4 | 11 | 10 | 9  | ---   | --- | 3  | 6   | 4 - 5         |                                                                       |
| 9MD8                                                       | Triode-2 | 1     | 4 | 11 | 10 | 9  | ---   | --- | 2  | 8   | 4 - 5         |                                                                       |
| 9MD8                                                       | Triode-3 | 1     | 4 | 11 | 10 | 9  | ---   | --- | 1  | 9   | 4 - 5         |                                                                       |
| 9MHH3                                                      | Triode   | 1     | 3 | 16 | 13 | 8  | ---   | --- | 2  | 5   | 3 - 4         |                                                                       |
| 9MHH3                                                      | Triode   | 1     | 3 | 16 | 13 | 8  | ---   | --- | 1  | 6   | 3 - 4         |                                                                       |
| 9ML8                                                       | Triode-1 | 1     | 4 | 12 | 16 | 8  | ---   | --- | 3  | 6   | 4 - 5         |                                                                       |
| 9ML8                                                       | Triode-2 | 1     | 4 | 12 | 16 | 8  | ---   | --- | 2  | 8   | 4 - 5         |                                                                       |
| 9ML8                                                       | Triode-3 | 1     | 4 | 12 | 16 | 8  | ---   | --- | 1  | 9   | 4 - 5         |                                                                       |
| 9MN8 *                                                     | Triode-1 | 1     | 7 | 10 | 19 | 8  | ---   | --- | 8  | 4   | 5             | * Key at 6                                                            |
| 9MN8 *                                                     | Triode-2 | 1     | 6 | 10 | 21 | 8  | ---   | --- | 9  | 2   | 5             | * Key at 5                                                            |
| 9MN8 *                                                     | Triode-3 | 1     | 1 | 10 | 19 | 8  | ---   | --- | 6  | 8   | 5             | * Key at 0                                                            |
| 9MP12                                                      |          | 1     | 3 | 8  | 18 | 8  | ---   | 6   | 5  | 1   | 3 - 4         |                                                                       |
| 9RA6                                                       |          | 3     | 4 | 10 | 20 | 9  | 7     | --- | 9  | 2   | 4 - 5         | Must show short on 2 - 7; Grid short test -<br>Depress 2 - 7 together |
| 9RAL1                                                      | Triode-1 | 1     | 4 | 14 | 15 | 9  | ---   | --- | 6  | 7   | 4 - 5         | Must show short on 2 - 3                                              |
| 9RAL1                                                      | Triode-2 | 1     | 4 | 0  | 10 | 9  | 3     | --- | 1  | 2   | 4 - 5         |                                                                       |
| 9RAL1                                                      | Triode-1 | 1     | 4 | 14 | 15 | 9  | ---   | --- | 6  | 7   | 4 - 5         | Must show short on 2 - 3                                              |
| 9RAL1                                                      | Triode-2 | 1     | 4 | 0  | 10 | 9  | 3     | --- | 1  | 2   | 4 - 5         |                                                                       |
| 9RHH2                                                      | Triode   | 1     | 4 | 25 | 10 | 9  | ---   | --- | 1  | 9   | 4 - 5         |                                                                       |
| 9RHH2                                                      | Pentode  | 1     | 4 | 18 | 21 | 9  | ---   | 3   | 6  | 2   | 4 - 5         |                                                                       |
| 9RHR2                                                      | Triode   | 1     | 4 | 25 | 10 | 9  | ---   | --- | 1  | 9   | 4 - 5         |                                                                       |
| 9RHR2                                                      | Pentode  | 1     | 4 | 18 | 21 | 9  | ---   | 3   | 6  | 2   | 4 - 5         |                                                                       |
| 9V9                                                        | Triode   | 5     | 5 | 8  | 10 | 9  | ---   | --- | 11 | 8   | 5 - 6         |                                                                       |
| 9V9                                                        | Pentode  | 5     | 5 | 5  | 21 | 9  | ---   | 4   | 7  | 3   | 5 - 6         |                                                                       |
| 10AF11 *                                                   | Triode-1 | 2     | 1 | 19 | 21 | 9  | ---   | --- | 8  | 6   | 1 - 12        | * Key at 0                                                            |
| 10AF11 *                                                   | Triode-2 | 2     | 1 | 19 | 23 | 9  | ---   | --- | 4  | 3   | 1 - 12        |                                                                       |
| 10AF11 *                                                   | Pentode  | 2     | 6 | 5  | 21 | 9  | ---   | 2   | 7  | 3   | 4 - 6         | * Key at 5                                                            |
| 10AL11                                                     | Pent-1   | 4     | 1 | 17 | 10 | 9  | ---   | 9   | 8  | 5   | 1 - 3         | Key at 2; Use red grid cap                                            |
| 10AL11                                                     | Pent-2   | 4     | 5 | 2  | 10 | 9  | ---   | 3   | 4  | 1   | 5 - 7         | Key at 6                                                              |
| 10CW5                                                      |          | 1     | 4 | 0  | 10 | 9  | 1-6-8 | 9   | 7  | 2   | 4 - 5         | May show short on 1 - 2 - 6 - 7 - 8 - 9                               |
| 10DX8                                                      | Triode   | 1     | 4 | 31 | 10 | 9  | ---   | --- | 2  | 1   | 4 - 5         |                                                                       |
| 10DX8                                                      | Pentode  | 1     | 4 | 26 | 11 | 9  | ---   | 9   | 6  | 8   | 4 - 5         |                                                                       |
| 10EM7                                                      | Triode-1 | 4     | 7 | 12 | 10 | 9  | ---   | --- | 5  | 4   | 7 - 8         |                                                                       |
| 10EM7                                                      | Triode-2 | 2     | 7 | 0  | 8  | 9  | ---   | --- | 2  | 1   | 7 - 8         |                                                                       |
| 10FD12                                                     | Pentode  | 1     | 4 | 21 | 17 | 11 | ---   | 1   | 6  | 2   | 4 - 5         |                                                                       |
| 10FD12                                                     | Diode-1  | 3     | 4 | 0  | 20 | 11 | ---   | --- | 7  | --- | 4 - 5         |                                                                       |
| 10FD12                                                     | Diode-2  | 3     | 4 | 0  | 20 | 11 | ---   | --- | 8  | --- | 4 - 5         |                                                                       |
| 10FG7                                                      | Triode-1 | 5     | 4 | 27 | 10 | 9  | ---   | --- | 8  | 9   | 4 - 5         | ? Maybe 10GF7                                                         |
| 10FG7                                                      | Triode-2 | 2     | 4 | 2  | 10 | 7  | ---   | --- | 6  | 2   | 4 - 5         |                                                                       |
| 10FR7                                                      | Triode-1 | 4     | 4 | 10 | 13 | 9  | ---   | --- | 6  | 7   | 4 - 5         | Must show short on 2 - 3                                              |

| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |          |       |   |     |    |    |     |     |   |     |               |                                                                |
|------------------------------------------------------------|----------|-------|---|-----|----|----|-----|-----|---|-----|---------------|----------------------------------------------------------------|
|                                                            |          | LEVER |   |     |    |    |     |     |   |     |               |                                                                |
| TUBE                                                       | SECTION  | A     | B | C   | D  | E  | W   | X   | Y | Z   | FIL.<br>CONT. | COMMENT                                                        |
| 10FR7                                                      | Triode-2 | 2     | 4 | 5   | 6  | 9  | 2   | --- | 1 | 3   | 4 - 5         |                                                                |
| 10GF7                                                      | Triode-1 | 5     | 4 | 27  | 10 | 9  | --- | --- | 8 | 9   | 4 - 5         | ? Maybe 10FG7                                                  |
| 10GF7                                                      | Triode-2 | 2     | 4 | 2   | 10 | 7  | --- | --- | 6 | 2   | 4 - 5         |                                                                |
| 10GH8                                                      | Triode   | 1     | 4 | 25  | 10 | 9  | --- | --- | 1 | 9   | 4 - 5         |                                                                |
| 10GH8                                                      | Pentode  | 1     | 4 | 18  | 21 | 9  | --- | 3   | 6 | 2   | 4 - 5         |                                                                |
| 10GK6                                                      |          | 1     | 4 | 21  | 10 | 9  | --- | 8   | 7 | 2   | 4 - 5         | Must show short on 3 - 9                                       |
| 10GN8                                                      | Triode   | 4     | 4 | 9   | 10 | 9  | --- | --- | 3 | 2   | 4 - 5         |                                                                |
| 10GN8                                                      | Pentode  | 1     | 4 | 18  | 10 | 9  | --- | 8   | 9 | 7   | 4 - 5         |                                                                |
| 10GV8                                                      | Triode   | 2     | 4 | 34  | 10 | 8  | --- | --- | 1 | 2   | 4 - 5         |                                                                |
| 10GV8                                                      | Pentode  | 2     | 4 | 7   | 10 | 8  | --- | 7   | 6 | 9   | 4 - 5         |                                                                |
| 10HA6                                                      |          | 5     | 4 | 6   | 9  | 9  | 6   | 8   | 7 | 2   | 4 - 5         | Must show short on 3 - 6 - 8 - 9                               |
| 10HF8                                                      | Triode   | 2     | 4 | 36  | 10 | 9  | --- | --- | 3 | 2   | 4 - 5         |                                                                |
| 10HF8                                                      | Pentode  | 1     | 4 | 26  | 10 | 9  | --- | 8   | 9 | 7   | 4 - 5         |                                                                |
| 10JA5                                                      | *        | 1     | 1 | 5   | 5  | 9  | 12  | 5   | 8 | 4   | 3             | * Key at 2; Must show short on 5 - 6 - 12;<br>Use red grid cap |
| 10JA8                                                      | Triode   | 2     | 4 | 35  | 10 | 9  | --- | --- | 3 | 2   | 4 - 5         |                                                                |
| 10JA8                                                      | Tetrode  | 2     | 4 | 12  | 15 | 9  | --- | 8   | 9 | 7   | 4 - 5         |                                                                |
| 10JT8                                                      | Triode   | 4     | 4 | 10  | 9  | 9  | --- | --- | 3 | 2   | 4 - 5         |                                                                |
| 10JT8                                                      | Pentode  | 1     | 4 | 0   | 17 | 9  | --- | 8   | 9 | 7   | 4 - 5         |                                                                |
| 10JY8                                                      | Triode   | 5     | 4 | 13  | 9  | 9  | --- | --- | 3 | 2   | 4 - 5         |                                                                |
| 10JY8                                                      | Pentode  | 1     | 4 | 24  | 9  | 9  | --- | 8   | 9 | 7   | 4 - 5         |                                                                |
| 10KR8                                                      | Triode   | 1     | 4 | 7   | 13 | 9  | --- | --- | 3 | 2   | 4 - 5         |                                                                |
| 10KR8                                                      | Pentode  | 1     | 4 | 5   | 11 | 9  | --- | 8   | 9 | 7   | 4 - 5         |                                                                |
| 10KU8                                                      | Diode-1  | 3     | 4 | --- | 24 | 9  | 2   | --- | 3 | --- | 4 - 5         |                                                                |
| 10KU8                                                      | Diode-2  | 3     | 4 | --- | 24 | 9  | 3   | --- | 2 | --- | 4 - 5         |                                                                |
| 10KU8                                                      | Pentode  | 1     | 4 | 9   | 8  | 9  | --- | 8   | 9 | 7   | 4 - 5         |                                                                |
| 10L14                                                      | Triode-1 | 1     | 4 | 25  | 11 | 12 | --- | --- | 6 | 7   | 4 - 5         |                                                                |
| 10L14                                                      | Triode-2 | 1     | 4 | 25  | 11 | 12 | --- | --- | 1 | 2   | 4 - 5         |                                                                |
| 10LB8                                                      | Triode   | 5     | 4 | 18  | 10 | 9  | --- | --- | 3 | 2   | 4 - 5         |                                                                |
| 10LB8                                                      | Pentode  | 2     | 4 | 7   | 18 | 9  | --- | 8   | 9 | 7   | 4 - 5         |                                                                |
| 10LD6                                                      |          | 1     | 4 | 5   | 15 | 9  | 6   | 8   | 7 | 2   | 4 - 5         | Must show short on 3 - 6 - 8 - 9                               |
| 10LD12                                                     | Triode   | 1     | 4 | 35  | 12 | 12 | --- | --- | 9 | 8   | 4 - 5         |                                                                |
| 10LD12                                                     | Diode-1  | 3     | 4 | 0   | 25 | 12 | --- | --- | 6 | --- | 4 - 5         |                                                                |
| 10LD12                                                     | Diode-2  | 3     | 4 | 0   | 17 | 12 | --- | --- | 2 | --- | 4 - 5         |                                                                |
| 10LD12                                                     | Diode-3  | 3     | 4 | 0   | 17 | 12 | --- | --- | 1 | --- | 4 - 5         |                                                                |
| 10LD13                                                     | Triode   | 1     | 4 | 34  | 10 | 10 | --- | --- | 1 | 2   | 4 - 5         | May show short on 7 - 8                                        |
| 10LD13                                                     | Diode-1  | 3     | 4 | 0   | 25 | 10 | --- | --- | 8 | --- | 4 - 5         |                                                                |
| 10LD13                                                     | Diode-2  | 3     | 4 | 0   | 25 | 10 | --- | --- | 6 | --- | 4 - 5         |                                                                |
| 10LE8                                                      | Pent-1   | 5     | 4 | 0   | 27 | 9  | --- | 8   | 1 | 9   | 4 - 5         |                                                                |
| 10LE8                                                      | Pent-2   | 5     | 4 | 0   | 33 | 9  | --- | 8   | 6 | 9   | 4 - 5         |                                                                |
| 10LM8                                                      | Triode   | 1     | 4 | 24  | 10 | 9  | --- | --- | 1 | 9   | 4 - 5         |                                                                |
| 10LM8                                                      | Pentode  | 4     | 4 | 3   | 12 | 7  | --- | 3   | 6 | 2   | 4 - 5         |                                                                |

| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |          |       |   |    |    |    |           |     |       |     |            |                                                                       |
|------------------------------------------------------------|----------|-------|---|----|----|----|-----------|-----|-------|-----|------------|-----------------------------------------------------------------------|
|                                                            |          | LEVER |   |    |    |    |           |     |       |     |            |                                                                       |
| TUBE                                                       | SECTION  | A     | B | C  | D  | E  | W         | X   | Y     | Z   | FIL. CONT. | COMMENT                                                               |
| 10LW8                                                      | Triode   | 5     | 4 | 10 | 16 | 9  | ---       | --- | 3     | 2   | 4 - 5      |                                                                       |
| 10LW8                                                      | Pentode  | 5     | 4 | 0  | 14 | 9  | ---       | 8   | 9     | 7   | 4 - 5      |                                                                       |
| 10LY8                                                      | Triode   | 2     | 4 | 25 | 25 | 9  | ---       | --- | 3     | 2   | 4 - 5      |                                                                       |
| 10LY8                                                      | Pentode  | 1     | 4 | 7  | 12 | 9  | ---       | 8   | 9     | 7   | 4 - 5      |                                                                       |
| 10LZ8                                                      | Triode   | 5     | 4 | 15 | 15 | 9  | ---       | --- | 3     | 2   | 4 - 5      |                                                                       |
| 10LZ8                                                      | Pentode  | 1     | 4 | 9  | 16 | 9  | ---       | 8   | 9     | 7   | 4 - 5      |                                                                       |
| 10P18                                                      |          | 1     | 4 | 5  | 9  | 13 | 1 - 6 - 8 | 9   | 7     | 2   | 4 - 5      | Fil Cont - Set control "E" at 12; May show short on 1 - 2 - 6 - 8 - 9 |
| 10T10                                                      |          | 4     | 1 | 15 | 11 | 9  | ---       | 6   | 7     | 3   | 1 - 12     | Key at 0; Use red grid cap                                            |
| 10T10                                                      |          | 5     | 7 | 10 | 10 | 9  | ---       | 3   | 4     | 1   | 5 - 7      | Key at 6                                                              |
| 10Z10 *                                                    | Pent-1   | 1     | 5 | 21 | 11 | 9  | ---       | 8   | 2     | 4   | 5 - 7      | * Key at 6; Use red grid cap                                          |
| 10Z10 *                                                    | Pent-2   | 1     | 1 | 0  | 25 | 9  | ---       | --- | 4 - 6 | --- | 5 - 7      | * Key at 0                                                            |
| 11AF9                                                      | Pent-1   | 1     | 5 | 7  | 11 | 9  | ---       | 9   | 11    | 8   | 5 - 6      | May show short on 2                                                   |
| 11AF9                                                      | Pent-2   | 1     | 5 | 15 | 16 | 9  | ---       | 3   | 4     | 1   | 5 - 6      |                                                                       |
| 11AR11                                                     | Pent-2   | 1     | 3 | 7  | 30 | 9  | ---       | 5   | 4     | 7   | 3 - 1      | Key at 2; Use red grid cap                                            |
| 11AR11                                                     | Pent-1   | 1     | 9 | 7  | 30 | 9  | ---       | 4   | 3     | 5   | 9 - 7      |                                                                       |
| 11BM8                                                      | Triode   | 1     | 4 | 31 | 11 | 9  | ---       | --- | 9     | 1   | 4 - 5      |                                                                       |
| 11BM8                                                      | Pentode  | 1     | 4 | 10 | 12 | 9  | ---       | 7   | 6     | 3   | 4 - 5      |                                                                       |
| 11BN11                                                     | Pent-1   | 5     | 6 | 0  | 28 | 9  | ---       | 3   | 5     | 1   | 6 - 8      | Key at 7                                                              |
| 11BN11                                                     | Pent-2   | 5     | 1 | 0  | 28 | 9  | ---       | 6   | 7     | 5   | 6 - 8      | Key at 2                                                              |
| 11BQ11                                                     | Pent-2   | 1     | 3 | 14 | 23 | 9  | ---       | 5   | 4     | 7   | 1 - 3      | Key at 2                                                              |
| 11BQ11                                                     | Pent-1   | 1     | 9 | 14 | 23 | 9  | ---       | 4   | 3     | 5   | 1 - 3      | Key at 8                                                              |
| 11BT11                                                     | Triode-1 | 4     | 1 | 5  | 6  | 9  | ---       | --- | 9     | 7   | 1 - 3      | Key at 2                                                              |
| 11BT11                                                     | Triode-2 | 5     | 4 | 10 | 11 | 9  | ---       | --- | 1     | 8   | 1 - 3      | Key at 5                                                              |
| 11BT11                                                     | Pentode  | 5     | 5 | 0  | 7  | 9  | ---       | 3   | 8     | 4   | 1 - 3      | Key at 6                                                              |
| 11CA11                                                     | Triode-2 | 3     | 1 | 8  | 26 | 9  | ---       | --- | 2     | 3   | 11         | Key at 0; May show short on 7                                         |
| 11CA11                                                     | Triode-1 | 3     | 1 | 8  | 24 | 9  | ---       | --- | 4     | 6   | 11         |                                                                       |
| 11CA11                                                     | Pentode  | 3     | 7 | 3  | 23 | 9  | ---       | 5   | 6     | 3   | 9          | Key at 8                                                              |
| 11CF11 *                                                   | Pentode  | 1     | 1 | 12 | 12 | 9  | ---       | 4   | 3     | 5   | 11         | * Key at 0                                                            |
| 11CF11 *                                                   | Diode-1  | 1     | 6 | 15 | 15 | 9  | ---       | --- | 7     | 3   | 11         | * Key at 5                                                            |
| 11CF11 *                                                   | Diode-2  | 1     | 7 | 15 | 17 | 9  | ---       | --- | 3     | 2   | 11         | * Key at 6                                                            |
| 11CH11 *                                                   | Triode-1 | 4     | 1 | 5  | 9  | 9  | ---       | --- | 9     | 7   | 1 - 3      | * Key at 2                                                            |
| 11CH11 *                                                   | Triode-2 | 5     | 4 | 10 | 15 | 9  | ---       | --- | 1     | 8   | 1 - 3      | * Key at 5                                                            |
| 11CH11 *                                                   | Pentode  | 5     | 5 | 10 | 13 | 9  | ---       | --- | 8     | 4   | 1 - 3      | * Key at 6                                                            |
| 11CY7                                                      | Triode-1 | 2     | 9 | 20 | 30 | 9  | ---       | --- | 6     | 7   | 4 - 5      | May show short on 2 - 3                                               |
| 11CY7                                                      | Triode-2 | 2     | 9 | 20 | 5  | 9  | 2         | --- | 1     | 3   | 4 - 5      |                                                                       |
| 11DS5                                                      |          | 1     | 3 | 13 | 14 | 9  | 1         | 6   | 5     | 7   | 3 - 4      | Must show short on 1 - 7; Grid short test - Depress 1 - 7 together    |
| 11FY7                                                      | Triode-1 | 4     | 4 | 15 | 10 | 9  | ---       | --- | 3     | 2   | 4 - 5      | Key at 5; Use red grid cap                                            |
| 11FY7                                                      | Triode-2 | 1     | 1 | 0  | 9  | 9  | ---       | --- | 7     | 5   | 4 - 5      | Key at 2                                                              |
| 11HM7                                                      |          | 1     | 6 | 9  | 9  | 6  | ---       | 8   | 7     | 2   | 4 - 5 - 6  | Must show short on 3 - 9                                              |
| 11KV8                                                      | Triode   | 1     | 4 | 31 | 10 | 9  | ---       | --- | 3     | 2   | 4 - 5      |                                                                       |



| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |          |       |   |    |    |    |       |     |    |     |               |                                                                                                      |
|------------------------------------------------------------|----------|-------|---|----|----|----|-------|-----|----|-----|---------------|------------------------------------------------------------------------------------------------------|
|                                                            |          | LEVER |   |    |    |    |       |     |    |     |               |                                                                                                      |
| TUBE                                                       | SECTION  | A     | B | C  | D  | E  | W     | X   | Y  | Z   | FIL.<br>CONT. | COMMENT                                                                                              |
| 11KV8                                                      | Pentode  | 1     | 4 | 9  | 9  | 9  | ---   | 8   | 9  | 7   | 4 - 5         |                                                                                                      |
| 11LQ8                                                      | Triode   | 5     | 4 | 8  | 11 | 9  | ---   | --- | 3  | 2   | 4 - 5         |                                                                                                      |
| 11LQ8                                                      | Pentode  | 1     | 4 | 7  | 11 | 9  | ---   | --- | 3  | 2   | 4 - 5         |                                                                                                      |
| 11LT8                                                      | Diode-1  | 3     | 4 | 0  | 15 | 9  | ---   | --- | 8  | --- | 4 - 5         | May show short on 1                                                                                  |
| 11LT8                                                      | Diode-2  | 3     | 4 | 0  | 15 | 9  | ---   | --- | 6  | --- | 4 - 5         |                                                                                                      |
| 11LT8                                                      | Pentode  | 5     | 4 | 0  | 22 | 9  | ---   | 2   | 3  | 9   | 4 - 5         |                                                                                                      |
| 11LY6                                                      |          | 3     | 4 | 8  | 28 | 9  | ---   | 8   | 7  | 2   | 5             | Must show short on 3 - 9; Grid-3 short test -<br>Depress 3 - 9 together                              |
| 11MS8                                                      | Triode   | 2     | 4 | 34 | 10 | 9  | ---   | --- | 1  | 2   | 4 - 5         |                                                                                                      |
| 11MS8                                                      | Pentode  | 2     | 4 | 7  | 7  | 9  | ---   | 7   | 6  | 9   | 4 - 5         |                                                                                                      |
| 11R3                                                       |          | 3     | 4 | 0  | 16 | 9  | 2     | --- | 9  | --- | 4 - 5         | May show short on all pins                                                                           |
| 11Y9                                                       | Pent-1   | 1     | 5 | 7  | 11 | 9  | ---   | 9   | 11 | 8   | 5 - 6         |                                                                                                      |
| 11Y9                                                       | Pent-2   | 1     | 5 | 15 | 16 | 9  | ---   | 3   | 4  | 1   | 5 - 6         |                                                                                                      |
| 12AC10 *                                                   | Triode-1 | 1     | 4 | 14 | 18 | 10 | ---   | --- | 2  | 1   | 4 - 6         | * Key at 5                                                                                           |
| 12AC10 *                                                   | Triode-2 | 3     | 1 | 13 | 27 | 10 | ---   | --- | 5  | 7   | 4 - 6         | * Key at 0                                                                                           |
| 12AC10 *                                                   | Triode-3 | 5     | 2 | 14 | 15 | 10 | ---   | --- | 5  | 1   | 4 - 6         | * Key at 3                                                                                           |
| 12AE10                                                     | Pent-1   | 4     | 1 | 10 | 17 | 10 | ---   | 6   | 7  | 3   | 1 - 12        | Key at 0; Use red grid cap                                                                           |
| 12AE10                                                     | Pent-2   | 5     | 7 | 0  | 9  | 10 | ---   | 3   | 4  | 1   | 5 - 6         | Key at 6                                                                                             |
| 12AF4                                                      |          | 2     | 3 | 24 | 11 | 10 | 1 - 2 | --- | 7  | 6   | 3 - 4         | Must show short on 1 - 2 - 6 - 7                                                                     |
| 12AF11 *                                                   | Triode-1 | 2     | 1 | 19 | 21 | 10 | ---   | --- | 8  | 6   | 1 - 12        | * Key at 0; Use red grid cap                                                                         |
| 12AF11 *                                                   | Triode-2 | 2     | 1 | 19 | 23 | 10 | ---   | --- | 4  | 3   | 1 - 12        |                                                                                                      |
| 12AF11 *                                                   | Pentode  | 2     | 6 | 5  | 21 | 10 | ---   | 2   | 7  | 3   | 1 - 12        | * Key at 5                                                                                           |
| 12AJ7                                                      | Triode   | 5     | 4 | 11 | 12 | 10 | ---   | --- | 8  | 9   | 4 - 5         |                                                                                                      |
| 12AJ7                                                      | Heptode  | 5     | 4 | 9  | 15 | 10 | ---   | 1   | 6  | 2   | 4 - 5         |                                                                                                      |
| 12AL11                                                     | Pent-1   | 4     | 1 | 17 | 10 | 10 | ---   | 9   | 8  | 5   | 1 - 3         | Key at 2; Use red grid cap                                                                           |
| 12AL11                                                     | Pent-2   | 4     | 5 | 2  | 10 | 10 | ---   | 3   | 4  | 1   | 5 - 7         | Key at 6                                                                                             |
| 12AU8                                                      | Pentode  | 2     | 4 | 8  | 24 | 10 | ---   | 8   | 9  | 7   | 4 - 5         |                                                                                                      |
| 12AU8                                                      | Triode   | 2     | 4 | 15 | 25 | 10 | ---   | --- | 3  | 2   | 4 - 5         |                                                                                                      |
| 12AW6                                                      |          | 1     | 3 | 7  | 33 | 10 | ---   | 6   | 5  | 1   | 3 - 4         |                                                                                                      |
| 12AX3                                                      |          | 1     | 4 | 0  | 4  | 10 | 2     | --- | 9  | --- | 4 - 6         | Key at 5; Must show short on 2 - 9; Use red<br>grid cap                                              |
| 12AX12                                                     |          | 1     | 3 | 16 | 17 | 7  | ---   | 6   | 5  | 1   | 4 - 6         |                                                                                                      |
| 12AY3                                                      |          | 1     | 4 | 0  | 4  | 10 | 2     | --- | 7  | --- | 4 - 5         | Must show short on 2 - 7                                                                             |
| 12BB14                                                     | *        | 5     | 4 | 0  | 5  | 10 | 2 - 7 | 6   | 11 | 1   | 4 - 5         | * Must use magnoval adapter; Must show<br>short on 1 - 2 - 3 - 6 - 7 - 8; Cap goes to top<br>of tube |
| 12BE3                                                      |          | 3     | 1 | 0  | 16 | 10 | 12    | --- | 6  | --- | 1 - 3         | Key at 2; Must show short on 6 - 12; Use red<br>grid cap                                             |
| 12BF11                                                     | Sect-1   | 4     | 1 | 23 | 15 | 10 | ---   | 6   | 7  | 3   | 1 - 12        | Key at 0; Use red grid cap                                                                           |
| 12BF11                                                     | Sect-2   | 1     | 7 | 7  | 10 | 10 | ---   | 5   | 6  | 3   | 7 - 9         | Key at 8                                                                                             |
| 12BR3                                                      |          | 3     | 4 | 0  | 15 | 10 | 2     | --- | 9  | --- | 4 - 5         | May show short on 2 - 9                                                                              |
| 12BS3                                                      |          | 3     | 4 | 0  | 15 | 10 | 7     | --- | 2  | --- | 4 - 5         |                                                                                                      |

| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |          |       |   |     |    |    |       |     |        |       |               |                                                                                                                                  |
|------------------------------------------------------------|----------|-------|---|-----|----|----|-------|-----|--------|-------|---------------|----------------------------------------------------------------------------------------------------------------------------------|
|                                                            |          | LEVER |   |     |    |    |       |     |        |       |               |                                                                                                                                  |
| TUBE                                                       | SECTION  | A     | B | C   | D  | E  | W     | X   | Y      | Z     | FIL.<br>CONT. | COMMENT                                                                                                                          |
| 12BT3                                                      |          | 3     | 1 | 0   | 17 | 10 | ---   | --- | 4      | ---   | 1 - 12        | Key at 0; Use red grid cap                                                                                                       |
| 12BT6                                                      | Triode   | 1     | 3 | 12  | 29 | 10 | ---   | --- | 7      | 1     | 3 - 4         |                                                                                                                                  |
| 12BT6                                                      | Diode-1  | 3     | 3 | 0   | 25 | 10 | ---   | --- | 5      | ---   | 3 - 4         |                                                                                                                                  |
| 12BT6                                                      | Diode-2  | 3     | 3 | 0   | 25 | 10 | ---   | --- | 6      | ---   | 3 - 4         |                                                                                                                                  |
| 12BV11                                                     | Pent-1   | 4     | 6 | 9   | 15 | 10 | ---   | 3   | 4      | 1     | 6 - 8         | Key at 7                                                                                                                         |
| 12BV11                                                     | Pent-2   | 4     | 1 | 9   | 15 | 10 | ---   | 6   | 5      | 8     | 6 - 8         | Key at 2                                                                                                                         |
| 12CA4                                                      |          | 2     | 4 | 0   | 1  | 10 | ---   | --- | 1      | ---   | 4 - 5         |                                                                                                                                  |
| 12CA4                                                      |          | 2     | 4 | 0   | 1  | 10 | ---   | --- | 7      | ---   | 4 - 5         |                                                                                                                                  |
| 12CK3                                                      |          | 1     | 4 | 0   | 4  | 10 | 2     | --- | 7      | ---   | 4 - 5         | Must show short on 2 - 7                                                                                                         |
| 12CL3                                                      |          | 3     | 4 | 0   | 16 | 10 | 2     | --- | 7      | ---   | 4 - 5         | Must show short on 2 - 7                                                                                                         |
| 12CT3                                                      |          | 3     | 4 | 0   | 17 | 10 | 2     | --- | 6      | ---   | 4 - 5         | Must show short on 2 - 6                                                                                                         |
| 12DA6                                                      |          | 1     | 4 | 20  | 25 | 10 | ---   | 8   | 7      | 2     | 4 - 5         | Must show short on 1 -6                                                                                                          |
| 12DK6                                                      |          | 1     | 3 | 6   | 29 | 10 | ---   | 6   | 5      | 1     | 3 - 4         |                                                                                                                                  |
| 12DM4                                                      |          | 1     | 7 | --- | 4  | 10 | ---   | --- | 5      | ---   | 7 - 8         |                                                                                                                                  |
| 12DM7                                                      | Triode-1 | 1     | 9 | 12  | 32 | 7  | ---   | --- | 6      | 7     | 4 - 5 - 9     |                                                                                                                                  |
| 12DM7                                                      | Triode-2 | 1     | 9 | 12  | 32 | 7  | ---   | --- | 1      | 2     | 4 - 5 - 9     |                                                                                                                                  |
| 12DQ4                                                      |          | 3     | 7 | 0   | 15 | 10 | ---   | --- | 5      | ---   | 7 - 8         |                                                                                                                                  |
| 12DQ6                                                      |          | 1     | 2 | 0   | 4  | 10 | ---   | 4   | 11     | 5     | 2 - 7         |                                                                                                                                  |
| 12DT7                                                      | Triode-1 | 1     | 9 | 12  | 32 | 7  | ---   | --- | 6      | 7     | 4 - 5 - 9     |                                                                                                                                  |
| 12DT7                                                      | Triode-2 | 1     | 9 | 12  | 32 | 7  | ---   | --- | 1      | 2     | 4 - 5 - 9     |                                                                                                                                  |
| 12DW4                                                      |          | 3     | 4 | -   | 16 | 10 | 7     | --- | 2      | ---   | 4 - 5         | May show short on 2 - 7                                                                                                          |
| 12DZ7                                                      | Pent-1   | 1     | 2 | 17  | 10 | 10 | ---   | 4   | 6      | 5     | 2 - 7         |                                                                                                                                  |
| 12DZ7                                                      | Pent-2   | 1     | 2 | 15  | 10 | 10 | ---   | 4   | 3      | 1     | 2 - 7         |                                                                                                                                  |
| 12DZ8                                                      | Triode   | 1     | 4 | 20  | 18 | 10 | ---   | --- | 9      | 1     | 4 - 5         |                                                                                                                                  |
| 12DZ8                                                      | Pentode  | 2     | 4 | 7   | 12 | 10 | ---   | 7   | 6      | 3     | 4 - 5         |                                                                                                                                  |
| 12E13                                                      |          | 1     | 2 | 9   | 9  | 7  | ---   | 4   | 3      | 5     | 2 - 7         |                                                                                                                                  |
| 12FQ7                                                      | Triode-1 | 1     | 4 | 19  | 14 | 10 | ---   | --- | 6      | 7     | 4 - 5         |                                                                                                                                  |
| 12FQ7                                                      | Triode-2 | 1     | 4 | 19  | 14 | 10 | ---   | --- | 1      | 2     | 4 - 5         |                                                                                                                                  |
| 12FS5                                                      |          | 4     | 3 | 20  | 33 | 10 | ---   | --- | 5      | 1     | 3 - 4         | Must show short on 2 - 7; Cathode short test<br>Depress 2 - 7 together                                                           |
| 12FV7                                                      | Triode-1 | 2     | 5 | 17  | 10 | 10 | ---   | --- | 6      | 7     | 4 - 5 - 9     |                                                                                                                                  |
| 12FV7                                                      | Triode-2 | 2     | 5 | 17  | 10 | 10 | ---   | --- | 1      | 2     | 4 - 5 - 9     |                                                                                                                                  |
| 12FX5                                                      |          | 2     | 3 | 13  | 9  | 10 | 5     | 6   | 7      | 2     | 3 - 4         | Must show short on 2 - 5                                                                                                         |
| 12G11                                                      | Pent-1   | 2     | 7 | 4   | 5  | 10 | ---   | 3   | 4      | 1     | 5 - 7         | Key at 6                                                                                                                         |
| 12G11                                                      | Pent-2   | 3     | 1 | 11  | 23 | 10 | ---   | 9   | 8      | 5 - 6 | 5 - 7         | Key at 2                                                                                                                         |
| 12GB3                                                      |          | 3     | 2 | 0   | 17 | 10 | ---   | 4   | 11     | 5     | 2 - 7         |                                                                                                                                  |
| 12GB7                                                      |          | 2     | 2 | 7   | 10 | 10 | ---   | 4   | 11     | 5     | 2 - 7         |                                                                                                                                  |
| 12GC5                                                      |          | 1     | 4 | 7   | 7  | 10 | 1 - 3 | 8   | 9      | 6     | 4 - 5         | Must show short on 1 - 3 - 6 - 8                                                                                                 |
| 12GE5                                                      |          | 5     | 6 | 7   | 7  | 10 | 8 - 9 | --- | 7 - 12 | 3     | 4 - 6         | Key at 5; Must show short on 2 - 3 - 8 - 9;<br>Red grid cap goes to adapter stud; Cathode<br>short test - Depress 2 - 9 together |

| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |           |       |   |    |    |    |       |     |    |     |               |                                                                                                                                                                           |
|------------------------------------------------------------|-----------|-------|---|----|----|----|-------|-----|----|-----|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                            |           | LEVER |   |    |    |    |       |     |    |     |               |                                                                                                                                                                           |
| TUBE                                                       | SECTION   | A     | B | C  | D  | E  | W     | X   | Y  | Z   | FIL.<br>CONT. | COMMENT                                                                                                                                                                   |
| 12GJ5                                                      |           | 1     | 4 | 2  | 5  | 10 | 1 - 2 | 7   | 12 | 6   | 4 - 5         | Must show short on 1 - 2 - 6 - 7; Use red grid cap                                                                                                                        |
| 12GK17                                                     |           | 2     | 7 | 0  | 3  | 10 | ---   | --- | 5  | --- | 7 - 8         |                                                                                                                                                                           |
| 12GN7                                                      |           | 1     | 6 | 8  | 10 | 7  | ---   | 8   | 7  | 2   | 4 - 5 - 6     | Must show short on 3 - 9                                                                                                                                                  |
| 12GT5                                                      |           | 2     | 4 | 6  | 7  | 10 | 1 - 2 | 7   | 9  | 6   | 4 - 5         | Must show short on 1 - 2 - 6 - 7                                                                                                                                          |
| 12GV5                                                      | *         | 2     | 5 | 1  | 9  | 10 | 2     | 7   | 12 | 9   | 3 - 5         | * Key at 4; Must show short on 1 - 2 - 7 - 8; Use red grid cap; Cathode short test - Depress 1 - 8 together                                                               |
| 12GW6                                                      |           | 3     | 2 | 0  | 17 | 10 | ---   | 4   | 11 | 5   | 2 - 7         |                                                                                                                                                                           |
| 12HB25                                                     | *         | 5     | 4 | 0  | 5  | 10 | 2 - 7 | 6   | 11 | 1   | 4 - 5         | * Must use magnoval adapter; Must show short on 1 - 2 - 3 - 6 - 7 - 8; Cap goes to top of tube                                                                            |
| 12HE7                                                      | Diode     | 3     | 1 | 0  | 15 | 10 | ---   | --- | 2  | --- | 1 - 11        | Key at 0                                                                                                                                                                  |
| 12HE7                                                      | Pentode * | 5     | 6 | 0  | 5  | 10 | 4     | 5   | 11 | 3   | 6 - 8         | Key at 7; * CAUTION: Throw lever #4 to "W" position before inserting tube                                                                                                 |
| 12HG7                                                      |           | 1     | 6 | 7  | 10 | 7  | ---   | 8   | 7  | 2   | 4 - 5 - 6     | Must show short on 3 - 9                                                                                                                                                  |
| 12HL5                                                      |           | 5     | 4 | 0  | 6  | 10 | 1     | 9   | 7  | 2   | 4 - 5         | Must show short on 1 - 2                                                                                                                                                  |
| 12HL7                                                      |           | 1     | 6 | 5  | 10 | 7  | ---   | 8   | 7  | 2   | 4 - 5 - 6     | Must show short on 3 - 9                                                                                                                                                  |
| 12HU8                                                      | Pent-1    | 5     | 4 | 6  | 8  | 10 | ---   | 1   | 3  | 2   | 4 - 5         |                                                                                                                                                                           |
| 12HU8                                                      | Pent-2    | 5     | 4 | 6  | 8  | 10 | ---   | 9   | 8  | 6   | 4 - 5         |                                                                                                                                                                           |
| 12JB6                                                      |           | 2     | 4 | 1  | 6  | 10 | 1 - 2 | 7   | 12 | 6   | 4 - 5         | Must show short on 1 - 2 - 6 - 7; Red grid cap goes to top of tube                                                                                                        |
| 12JF5                                                      | *         | 3     | 4 | 10 | 35 | 10 | 8 - 9 | 7   | 11 | 3   | 6             | * Key at 5; Must show short on 2 - 3 - 8 - 9; Grid-1 short test - Depress 3 - 8 together; Cathode short test - Depress 2 - 9 together; Black grid cap goes to top of tube |
| 12JM6                                                      | *         | 5     | 2 | 0  | 5  | 10 | ---   | 6   | 11 | 8   | 2 - 4         | * Key at 3                                                                                                                                                                |
| 12JN6                                                      |           | 1     | 4 | 0  | 5  | 10 | ---   | 8   | 11 | 3   | 4 - 6         | Must show short on 2 - 9                                                                                                                                                  |
| 12JN8                                                      | Triode    | 2     | 4 | 15 | 18 | 10 | ---   | --- | 2  | 1   | 4 - 5         |                                                                                                                                                                           |
| 12JN8                                                      | Pentode   | 1     | 4 | 15 | 22 | 10 | ---   | 7   | 6  | 9   | 4 - 5         |                                                                                                                                                                           |
| 12JQ6                                                      | Pentode   | 1     | 4 | 10 | 5  | 10 | 2 - 7 | 3   | 1  | 8   | 4 - 5         |                                                                                                                                                                           |
| 12JQ6                                                      | Diode     | 3     | 4 | 0  | 22 | 10 | ---   | --- | 6  | --- | 4 - 5         |                                                                                                                                                                           |
| 12JS6                                                      |           | 5     | 4 | 0  | 6  | 10 | 1     | 6   | 11 | 8   | 2 - 4         | Must show short on 1 - 6; Black cap goes to top of tube                                                                                                                   |
| 12JT6                                                      |           | 1     | 4 | 2  | 5  | 10 | 1     | 7   | 9  | 2   | 4 - 5         | Must show short on 1 - 7                                                                                                                                                  |
| 12JZ8                                                      | Pentode   | 2     | 7 | 7  | 7  | 10 | 1     | 3   | 12 | 2   | 7 - 9         | Key at 8; Must show short on 1 - 2                                                                                                                                        |
| 12JZ8                                                      | Triode    | 2     | 4 | 30 | 10 | 10 | ---   | --- | 7  | 2   | 4 - 6         | Key at 5; Use red grid cap                                                                                                                                                |
| 12KA8                                                      |           | 4     | 4 | 2  | 10 | 10 | ---   | --- | 1  | 2   | 4 - 5         |                                                                                                                                                                           |
| 12KA8                                                      | Pentode   | 4     | 4 | 15 | 10 | 10 | ---   | 8   | 9  | 6   | 4 - 5         |                                                                                                                                                                           |

| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |          |       |   |    |    |    |           |     |       |     |               |                                                                                                                                                      |
|------------------------------------------------------------|----------|-------|---|----|----|----|-----------|-----|-------|-----|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                            |          | LEVER |   |    |    |    |           |     |       |     |               |                                                                                                                                                      |
| TUBE                                                       | SECTION  | A     | B | C  | D  | E  | W         | X   | Y     | Z   | FIL.<br>CONT. | COMMENT                                                                                                                                              |
| 12KG6                                                      | *        | 1     | 4 | 8  | 26 | 10 | 1 - 2 - 3 | 7   | 11    | 8   | 4 - 5         | * Must use magnoval adapter; Must show short on 1 - 2 - 3 - 6 - 7 - 8; Cap goes to top of tube                                                       |
| 12KL8                                                      | Pentode  | 4     | 4 | 13 | 10 | 10 | ---       | 6   | 7     | 2   | 4 - 5         |                                                                                                                                                      |
| 12KL8                                                      | Diode    | 3     | 4 | 0  | 27 | 10 | ---       | --- | 8     | --- | 4 - 5         |                                                                                                                                                      |
| 12MD8                                                      | Triode-1 | 1     | 4 | 11 | 10 | 10 | ---       | --- | 3     | 6   | 4 - 5         |                                                                                                                                                      |
| 12MD8                                                      | Triode-2 | 1     | 4 | 11 | 10 | 10 | ---       | --- | 2     | 8   | 4 - 5         |                                                                                                                                                      |
| 12MD8                                                      | Triode-3 | 1     | 4 | 11 | 10 | 10 | ---       | --- | 1     | 9   | 4 - 5         |                                                                                                                                                      |
| 12ML8                                                      |          | 1     | 4 | 12 | 16 | 10 | ---       | --- | 3     | 6   | 4 - 5         |                                                                                                                                                      |
| 12ML8                                                      |          | 1     | 4 | 12 | 16 | 10 | ---       | --- | 2     | 8   | 4 - 5         |                                                                                                                                                      |
| 12ML8                                                      |          | 1     | 4 | 12 | 16 | 10 | ---       | --- | 1     | 9   | 4 - 5         |                                                                                                                                                      |
| 12MX8                                                      | Triode   | 1     | 4 | 12 | 24 | 10 | ---       | --- | 8     | 9   | 4 - 5         |                                                                                                                                                      |
| 12MX8                                                      | Pentode  | 5     | 4 | 0  | 6  | 10 | ---       | 7   | 6     | 2   | 4 - 5         |                                                                                                                                                      |
| 12RK19                                                     |          | 3     | 4 | 0  | 16 | 10 | 2         | --- | 9     | --- | 4 - 5         | May show short on 2 - 6 - 7 - 9                                                                                                                      |
| 12RLL3                                                     | Triode-1 | 5     | 9 | 14 | 12 | 7  | ---       | --- | 6     | 7   | 4 - 5 - 9     |                                                                                                                                                      |
| 12RLL3                                                     | Triode-2 | 5     | 9 | 14 | 12 | 7  | ---       | --- | 1     | 2   | 4 - 5 - 9     |                                                                                                                                                      |
| 12RLL5                                                     | Triode-1 | 1     | 4 | 19 | 14 | 10 | ---       | --- | 6     | 7   | 4 - 5         |                                                                                                                                                      |
| 12RLL5                                                     | Triode-2 | 1     | 4 | 19 | 14 | 10 | ---       | --- | 1     | 2   | 4 - 5         |                                                                                                                                                      |
| 12T10                                                      |          | 4     | 1 | 15 | 11 | 10 | ---       | 6   | 7     | 3   | 1 - 12        | Key at 0; Use red grid cap                                                                                                                           |
| 12T10                                                      |          | 5     | 7 | 10 | 10 | 10 | ---       | 3   | 4     | 1   | 1 - 12        | Key at 6                                                                                                                                             |
| 13CM5                                                      |          | 2     | 2 | 1  | 7  | 10 | 1         | 4   | 12    | 5   | 2 - 7         | Must show short on 1 - 3 - 4 - 8; Use red grid cap; Cathode short test - Depress 3 - 8 together                                                      |
| 13CW4                                                      |          | 5     | 4 | 9  | 10 | 10 | ---       | --- | 1     | 2   | 4 - 5         |                                                                                                                                                      |
| 13CW9                                                      |          | 1     | 2 | 21 | 11 | 7  | ---       | 8   | 6     | 3   | 4 - 5         |                                                                                                                                                      |
| 13DR7                                                      | Triode-1 | 1     | 4 | 20 | 25 | 10 | ---       | --- | 6     | 7   | 4 - 5         | Must show short on 2 - 3                                                                                                                             |
| 13DR7                                                      | Triode-2 | 2     | 4 | 21 | 5  | 10 | 2         | --- | 1     | 3   | 4 - 5         |                                                                                                                                                      |
| 13FM7                                                      |          | 4     | 5 | 0  | 23 | 10 | 1         | --- | 4     | 9   | 5 - 7         | Key at 6; Must show short on 1 - 9                                                                                                                   |
| 13FM7                                                      |          | 2     | 3 | 0  | 10 | 10 | ---       | --- | 7     | 5   | 1 - 3         | Key at 2; Use red grid cap                                                                                                                           |
| 13FR7                                                      | Triode-1 | 4     | 4 | 10 | 13 | 10 | ---       | --- | 6     | 7   | 4 - 5         | Must show short on 2 - 3                                                                                                                             |
| 13FR7                                                      | Triode-2 | 2     | 4 | 5  | 6  | 10 | 2         | --- | 1     | 3   | 4 - 5         |                                                                                                                                                      |
| 13GB5                                                      | *        | 3     | 4 | 2  | 16 | 10 | 2 - 7 - 8 | 6   | 12    | 1   | 4 - 5         | * Must use magnoval adapter; Must show short on 1 - 2 - 3 - 6 - 7 - 8; Cathode short test - Depress 3 - 8 together; Red grid cap goes to top of tube |
| 13GF7                                                      | Triode-1 | 5     | 4 | 27 | 10 | 10 | ---       | --- | 8     | 9   | 4 - 5         |                                                                                                                                                      |
| 13GF7                                                      | Triode-2 | 2     | 4 | 2  | 10 | 10 | ---       | --- | 6     | 2   | 4 - 5         |                                                                                                                                                      |
| 13J10                                                      | Pent-1   | 1     | 5 | 21 | 11 | 10 | ---       | 8   | 2     | 4   | 5 - 7         | Key at 6; Use red grid cap                                                                                                                           |
| 13J10                                                      | Pent-2   | 1     | 1 | 0  | 25 | 10 | ---       | --- | 4 - 6 | --- | 1 - 12        | Key at 0                                                                                                                                             |
| 13JT8                                                      | Triode   | 4     | 4 | 10 | 9  | 10 | ---       | --- | 3     | 2   | 4 - 5         |                                                                                                                                                      |
| 13JT8                                                      | Pentode  | 1     | 4 | 0  | 17 | 10 | ---       | 8   | 9     | 7   | 4 - 5         |                                                                                                                                                      |
| 13JZ8 *                                                    | Pentode  | 2     | 1 | 4  | 10 | 10 | 7         | 8   | 4     | 6   | 11            | * Key at 0; Must show short on 6 - 7                                                                                                                 |

| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |          |       |   |    |    |     |           |     |       |     |               |                                         |
|------------------------------------------------------------|----------|-------|---|----|----|-----|-----------|-----|-------|-----|---------------|-----------------------------------------|
|                                                            |          | LEVER |   |    |    |     |           |     |       |     |               |                                         |
| TUBE                                                       | SECTION  | A     | B | C  | D  | E   | W         | X   | Y     | Z   | FIL.<br>CONT. | COMMENT                                 |
| 13JZ8 *                                                    | Triode   | 3     | 3 | 14 | 23 | 10  | ---       | --- | 6     | 1   | 11            | * Key at 4                              |
| 13V10                                                      | Pent-1   | 4     | 1 | 10 | 21 | 10  | ---       | 6   | 7     | 3   | 1 - 11        | Key at 0                                |
| 13V10                                                      | Pent-2   | 1     | 7 | 10 | 10 | --- | 5?        | 6?  | 3?    | ?   | 1 - 11        | Key at 8                                |
| 13Z10                                                      | Pent-1   | 1     | 5 | 21 | 11 | 10  | ---       | 8   | 2     | 4   | 5 - 7         | Key at 6; Use red grid cap              |
| 13Z10                                                      | Pent-2   | 1     | 1 | 0  | 25 | 10  | ---       | --- | 4 - 6 | --- | 1 - 12        | Key at 0                                |
| 14BF11                                                     | Sect-1   | 4     | 1 | 23 | 15 | 10  | ---       | 6   | 7     | 3   | 1 - 12        | Key at 0                                |
| 14BF11                                                     | Sect-2   | 1     | 7 | 7  | 10 | 10  | ---       | 5   | 6     | 3   | 7 - 9         | Key at 8                                |
| 14BL11                                                     | Triode-1 | 1     | 1 | 13 | 17 | 10  | ---       | --- | 7     | 5   | 1 - 11        | Key at 0                                |
| 14BL11                                                     | Triode-2 | 5     | 4 | 10 | 13 | 10  | ---       | --- | 1     | 8   | 1 - 11        | Key at 5                                |
| 14BL11                                                     | Pentode  | 1     | 6 | 10 | 12 | 10  | ---       | 4   | 9     | 5   | 1 - 11        | Key at 7                                |
| 14BQ11                                                     | Pent-2   | 1     | 3 | 14 | 23 | 10  | ---       | 5   | 4     | 7   | 1 - 3         | Key at 2                                |
| 14BQ11                                                     | Pent-1   | 1     | 9 | 14 | 23 | 10  | ---       | 4   | 3     | 5   | 1 - 3         | Key at 8                                |
| 14BR11                                                     | Triode-1 | 4     | 1 | 5  | 7  | 10  | ---       | --- | 6     | 8   | 1 - 11        | Key at 0                                |
| 14BR11                                                     | Triode-2 | 4     | 4 | 5  | 7  | 10  | ---       | --- | 1     | 2   | 1 - 11        | Key at 5                                |
| 14BR11                                                     | Pentode  | 4     | 4 | 5  | 6  | 10  | ---       | 8   | 3     | 7   | 1 - 11        |                                         |
| 14GW8                                                      | Triode   | 4     | 4 | 15 | 10 | 10  | ---       | --- | 9     | 1   | 4 - 5         |                                         |
| 14GW8                                                      | Pentode  | 1     | 4 | 19 | 10 | 10  | ---       | 3   | 6     | 8   | 4 - 5         |                                         |
| 14JG8                                                      | Diode-1  | 3     | 4 | 0  | 16 | 10  | ---       | --- | 2     | --- | 4 - 5         |                                         |
| 14JG8                                                      | Diode-2  | 3     | 4 | 0  | 17 | 10  | ---       | --- | 6     | --- | 4 - 5         |                                         |
| 14JG8                                                      | Triode   | 2     | 4 | 35 | 10 | 10  | ---       | --- | 9     | 8   | 4 - 5         |                                         |
| 15A6                                                       |          | 4     | 4 | 3  | 10 | 10  | ---       | 1   | 7     | 2   | 4 - 5         |                                         |
| 15AF11                                                     | Pentode  | 4     | 8 | 2  | 10 | 10  | ---       | 4   | 9     | 5   | 6 - 8         | Key at 7; Use red grid cap              |
| 15AF11                                                     | Diode-1  | 4     | 1 | 2  | 10 | 10  | ---       | --- | 6     | 5   | 1 - 3         | Key at 2                                |
| 15AF11                                                     | Diode-2  | 4     | 1 | 2  | 10 | 10  | ---       | --- | 8     | 6   | 1 - 12        | Key at 0                                |
| 15BD11                                                     | Triode-1 | 4     | 1 | 2  | 10 | 10  | ---       | --- | 8     | 6   | 1 - 12        | Key at 0; Use red grid cap              |
| 15BD11                                                     | Triode-2 | 4     | 1 | 2  | 10 | 10  | ---       | --- | 4     | 3   | 1 - 12        |                                         |
| 15BD11                                                     | Pentode  | 4     | 4 | 3  | 10 | 10  | ---       | 2   | 7     | 3   | 4 - 6         | Key at 5                                |
| 15CW5                                                      |          | 1     | 4 | 0  | 9  | 10  | 1 - 6 - 8 | 9   | 7     | 2   | 4 - 5         | May show short on 1 - 2 - 6 - 7 - 8 - 9 |
| 15DQ8                                                      | Triode   | 1     | 4 | 26 | 10 | 10  | ---       | --- | 2     | 1   | 4 - 5         |                                         |
| 15DQ8                                                      | Pentode  | 1     | 4 | 15 | 13 | 10  | ---       | 9   | 6     | 8   | 4 - 5         |                                         |
| 15EW7                                                      | Triode-1 | 5     | 4 | 17 | 10 | 10  | ---       | --- | 6     | 7   | 4 - 5         | Must show short on 2 - 3                |
| 15EW7                                                      | Triode-2 | 2     | 4 | 1  | 10 | 10  | 3         | --- | 1     | 2   | 4 - 5         |                                         |
| 15FM7                                                      | Triode-1 | 4     | 5 | 0  | 23 | 10  | 1         | --- | 4     | 9   | 5 - 7         | Key at 6; Must show short on 1 - 9      |
| 15FM7                                                      | Triode-2 | 2     | 3 | 0  | 10 | 10  | ---       | --- | 7     | 5   | 1 - 3         | Key at 2; Use red grid cap              |
| 15FO7                                                      |          | 8     | 2 | 13 | 14 | 7   | 6         | 3   | 1     | 4   | 2 - 7 - 9     |                                         |
| 15FY7                                                      | Triode-1 | 4     | 4 | 15 | 10 | 10  | ---       | --- | 3     | 2   | 4 - 6         | Key at 5                                |
| 15FY7                                                      | Triode-2 | 1     | 1 | 0  | 9  | 10  | ---       | --- | 7     | 5   | 1 - 3         | Key at 2                                |
| 15HA6                                                      |          | 5     | 4 | 6  | 9  | 10  | 6         | 8   | 7     | 2   | 4 - 5         | Must show short on 3 - 6 - 8 - 9        |
| 15HB6                                                      |          | 2     | 4 | 5  | 16 | 10  | 6         | 8   | 7     | 2   | 4 - 5         | May show short on 3 - 6 - 8 - 9         |
| 15KY8                                                      | Triode   | 1     | 4 | 12 | 24 | 10  | ---       | --- | 8     | 9   | 4 - 5         |                                         |
| 15KY8                                                      | Pentode  | 5     | 4 | 0  | 6  | 10  | ---       | 7   | 6     | 2   | 4 - 5         |                                         |
| 15LE8                                                      | Pent-1   | 5     | 4 | 0  | 27 | 10  | ---       | 8   | 1     | 9   | 4 - 5         |                                         |

| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |          |       |   |    |    |    |     |     |       |     |               |                                                                                                                             |
|------------------------------------------------------------|----------|-------|---|----|----|----|-----|-----|-------|-----|---------------|-----------------------------------------------------------------------------------------------------------------------------|
|                                                            |          | LEVER |   |    |    |    |     |     |       |     |               |                                                                                                                             |
| TUBE                                                       | SECTION  | A     | B | C  | D  | E  | W   | X   | Y     | Z   | FIL.<br>CONT. | COMMENT                                                                                                                     |
| 15LE8                                                      | Pent-2   | 5     | 4 | 0  | 33 | 10 | --- | 8   | 6     | 9   | 4 - 5         |                                                                                                                             |
| 15MF8 *                                                    | Pentode  | 2     | 7 | 5  | 17 | 10 | 1   | 3   | 12    | 2   | 7 - 9         | * Key at 8; Must show short on 1 - 2                                                                                        |
| 15MF8 *                                                    | Triode   | 2     | 4 | 8  | 30 | 10 | --- | --- | 7     | 2   | 4 - 6         | * Key at 5; Use red grid cap                                                                                                |
| 15MX8                                                      | Triode   | 1     | 4 | 12 | 24 | 10 | --- | --- | 8     | 9   | 5             |                                                                                                                             |
| 15MX8                                                      | Pentode  | 5     | 4 | 0  | 6  | 10 | --- | 7   | 6     | 2   | 5             |                                                                                                                             |
| 16A                                                        |          | 1     | 3 | 31 | 10 | 7  | --- | 7   | 5     | 1   | 3 - 4         |                                                                                                                             |
| 16A5                                                       |          | 1     | 4 | 7  | 7  | 11 | --- | 9   | 7     | 2   | 4 - 5         |                                                                                                                             |
| 16A8                                                       | Triode   | 1     | 4 | 12 | 27 | 10 | --- | --- | 9     | 1   | 4 - 5         |                                                                                                                             |
| 16A8                                                       | Pentode  | 1     | 4 | 10 | 9  | 10 | --- | 7   | 6     | 3   | 4 - 5         |                                                                                                                             |
| 16AK9                                                      | Pentode  | 2     | 1 | 31 | 14 | 7  | --- | --- | 6     | 5   | 1 - 7 - 9     | Key at 8                                                                                                                    |
| 16AK9                                                      | Triode-2 | 2     | 1 | 27 | 13 | 7  | --- | --- | 4     | 3   | 1 - 7 - 9     |                                                                                                                             |
| 16AK9                                                      | Triode-1 | 2     | 6 | 31 | 13 | 7  | --- | --- | 2     | 3   | 1 - 6 - 11    | Key at 0                                                                                                                    |
| 16AQ3                                                      |          | 1     | 4 | 0  | 4  | 10 | #   | --- | 9     | --- | 4 - 5         | # W=1 - 2 - 3 - 6 - 7 - 8; May show short on all pins                                                                       |
| 16BQ11                                                     | Pent-1   | 1     | 3 | 15 | 25 | 10 | --- | 5   | 4     | 7   | 1 - 3         | Key at 2                                                                                                                    |
| 16BQ11                                                     | Pent-2   | 1     | 9 | 14 | 25 | 10 | --- | 4   | 3     | 5   | 1 - 3         | Key at 8                                                                                                                    |
| 16BX11                                                     | Triode-1 | 2     | 1 | 28 | 19 | 10 | --- | --- | 7     | 8   | 1 - 12        | Key at 0                                                                                                                    |
| 16BX11                                                     | Triode-2 | 2     | 1 | 28 | 19 | 10 | --- | --- | 6     | 5   | 1 - 12        |                                                                                                                             |
| 16BX11                                                     | Pentode  | 1     | 5 | 14 | 25 | 10 | --- | 7   | 2     | 6   | 1 - 12        | Key at 4; Use red grid cap                                                                                                  |
| 16CB28                                                     | *        | 3     | 3 | 3  | 19 | 10 | 2   | 7   | 11    | 9   | 3 - 5         | * Key at 4; Must show short on 2 - 7                                                                                        |
| 16GK6                                                      |          | 1     | 4 | 10 | 10 | 11 | --- | 8   | 7     | 2   | 4 - 5         | Must show short on 3 - 9                                                                                                    |
| 16GY5                                                      |          | 3     | 3 | 3  | 15 | 10 | 2   | 7   | 11    | 9   | 3 - 5         | Key at 4; Must show short on 1 - 2 - 7 - 8; Cathode short test - Depress 1 - 8 together; Black grid cap goes to top of tube |
| 16HB5                                                      | *        | 3     | 1 | 3  | 17 | 10 | --- | 2   | 7     | 3   | 1 - 12        | * Key at 0; Use red grid cap                                                                                                |
| 16KA6                                                      |          | 5     | 3 | 0  | 6  | 10 | --- | 7   | 11    | 9   | 3 - 5         | Key at 4; Must show short on 2 - 8; Black cap goes to top of tube                                                           |
| 16KH8                                                      |          | 3     | 4 | 35 | 20 | 10 | --- | --- | 1 - 9 | 2   | 4 - 5         |                                                                                                                             |
| 16KH8                                                      |          | 1     | 4 | 23 | 15 | 10 | --- | 9   | 3     | 2   | 4 - 5         |                                                                                                                             |
| 16KH8                                                      |          | 1     | 4 | 23 | 15 | 10 | --- | 9   | 8     | 6   | 4 - 5         |                                                                                                                             |
| 16LD6                                                      |          | 1     | 4 | 5  | 15 | 10 | 6   | 8   | 7     | 2   | 4 - 5         | Must show short on 3 - 6 - 8 - 9                                                                                            |
| 16LU8                                                      | *        | 2     | 4 | 13 | 19 | 10 | --- | --- | 7     | 2   | 4 - 6         | * Key at 5; Use red grid cap                                                                                                |
| 16LU8                                                      | *        | 2     | 7 | 5  | 5  | 10 | 1   | 3   | 12    | 2   | 4 - 6         | * Key at 8; Must show short on 1 - 2                                                                                        |
| 16MY8 *                                                    | Triode   | 2     | 4 | 13 | 19 | 10 | --- | --- | 7     | 2   | 4 - 6         | * Key at 5; Use red grid cap; Must show short on 1 - 2                                                                      |
| 16MY8 *                                                    | Pentode  | 2     | 7 | 5  | 5  | 10 | 1   | 3   | 12    | 2   | 4 - 6         | * Key at 8                                                                                                                  |
| 16Y9                                                       | Pent-1   | 1     | 5 | 7  | 11 | 11 | --- | 9   | 11    | 8   | 5 - 6         |                                                                                                                             |
| 16Y9                                                       | Pent-2   | 1     | 5 | 15 | 16 | 11 | --- | 3   | 4     | 1   | 5 - 6         |                                                                                                                             |
| 17A8                                                       | Triode   | 1     | 4 | 13 | 10 | 11 | --- | --- | 1     | 9   | 4 - 5         |                                                                                                                             |
| 17A8                                                       | Pentode  | 1     | 4 | 30 | 15 | 11 | --- | 3   | 6     | 2   | 4 - 5         |                                                                                                                             |
| 17AB10                                                     | Pent-1   | 1     | 5 | 5  | 6  | 11 | --- | 8   | 2     | 4   | 5 - 7         | Key at 6                                                                                                                    |

| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |           |       |   |     |    |    |       |     |       |     |               |                                                                                                           |
|------------------------------------------------------------|-----------|-------|---|-----|----|----|-------|-----|-------|-----|---------------|-----------------------------------------------------------------------------------------------------------|
|                                                            |           | LEVER |   |     |    |    |       |     |       |     |               |                                                                                                           |
| TUBE                                                       | SECTION   | A     | B | C   | D  | E  | W     | X   | Y     | Z   | FIL.<br>CONT. | COMMENT                                                                                                   |
| 17AB10                                                     | ?         | 4     | 1 | 0   | 6  | 11 | ---   | --- | 4 - 6 | --- | 5 - 7         | Key at 0                                                                                                  |
| 17AX3                                                      |           | 1     | 4 | 0   | 4  | 11 | 2     | --- | 9     | --- | 4 - 6         | Key at 5; Must show short on 2 - 9; Use red grid cap                                                      |
| 17AY3                                                      |           | 1     | 4 | 0   | 4  | 11 | 2     | --- | 7     | --- | 4 - 5         | Must show short on 2 - 7                                                                                  |
| 17B4                                                       |           | 1     | 2 | 40  | 4  | 11 | ---   | --- | 3     | 5   | 2 - 7         |                                                                                                           |
| 17BB14                                                     | *         | 5     | 4 | 0   | 5  | 11 | 2 - 7 | 6   | 11    | 1   | 4 - 5         | * Must use magnoval adapter; Cap goes to top of tube; Must show short on 1 - 2 - 3 - 6 - 7 - 8            |
| 17BD11                                                     | Triode-2  | 4     | 1 | 2   | 10 | 11 | ---   | --- | 4     | 3   | 1 - 12        | Key at 0; Use red grid cap                                                                                |
| 17BD11                                                     | Triode-1  | 4     | 1 | 2   | 10 | 11 | ---   | --- | 8     | 6   | 1 - 12        |                                                                                                           |
| 17BD11                                                     | Pentode   | 4     | 4 | 3   | 10 | 11 | ---   | 2   | 7     | 3   | 4 - 6         | Key at 5                                                                                                  |
| 17BE3                                                      |           | 3     | 1 | 0   | 16 | 11 | 12    | --- | 6     | --- | 1 - 3         | Key at 2; Must show short on 6 - 12; Use red grid cap                                                     |
| 17BF11                                                     | Pent-1    | 4     | 1 | 21  | 15 | 11 | ---   | 6   | 7     | 3   | 1 - 12        | Key at 0; Use red grid cap                                                                                |
| 17BF11                                                     | Pent-2    | 1     | 7 | 5   | 10 | 11 | ---   | 5   | 6     | 3   | 7 - 9         | Key at 8                                                                                                  |
| 17BH3                                                      |           | 1     | 4 | 0   | 4  | 11 | 2     | --- | 7     | --- | 4 - 5         | Must show short on 2 - 7; Use red grid cap                                                                |
| 17BJ6                                                      |           | 4     | 3 | 10  | 10 | 11 | ---   | 6   | 5     | 1   | 3 - 4         |                                                                                                           |
| 17BR3                                                      |           | 1     | 4 | 0   | 4  | 11 | 2     | --- | 9     | --- | 4 - 5         | Will show short on 2 - 9                                                                                  |
| 17BS3                                                      |           | 3     | 4 | 0   | 15 | 10 | 7     | --- | 2     | --- | 4 - 5         | Must show short on 2 - 7                                                                                  |
| 17BW3                                                      |           | 3     | 1 | 0   | 15 | 11 | ---   | --- | 4     | --- | 1 - 11        | Key at 0                                                                                                  |
| 17BZ3                                                      |           | 3     | 1 | 0   | 15 | 11 | ---   | --- | 4     | --- | 1 - 11        | Key at 0                                                                                                  |
| 17C9                                                       | Tetrode-1 | 4     | 4 | 5   | 9  | 10 | ---   | 8   | 9     | 7   | 4 - 5         | Use red grid cap                                                                                          |
| 17C9                                                       | Tetrode-2 | 3     | 4 | 9   | 23 | 10 | ---   | 2   | 3     | 1   | 4 - 5         |                                                                                                           |
| 17CK3                                                      |           | 1     | 4 | 0   | 4  | 11 | 2     | --- | 7     | --- | 4 - 5         | Must show short on 2 - 7                                                                                  |
| 17CL3                                                      |           | 3     | 4 | 0   | 16 | 11 | 2     | --- | 7     | --- | 4 - 5         | Must show short on 2 - 7                                                                                  |
| 17CT3                                                      |           | 3     | 4 | 0   | 17 | 10 | 2     | --- | 6     | --- | 4 - 5         | Must show short on 2 - 6                                                                                  |
| 17DM4                                                      |           | 1     | 7 | --- | 4  | 11 | ---   | --- | 5     | --- | 7 - 8         |                                                                                                           |
| 17DQ4                                                      |           | 3     | 7 | 0   | 15 | 11 | ---   | --- | 5     | --- | 7 - 8         |                                                                                                           |
| 17DQ6                                                      |           | 1     | 2 | 0   | 4  | 11 | ---   | 4   | 11    | 5   | 2 - 7         |                                                                                                           |
| 17DW4                                                      |           | 3     | 4 | 0   | 16 | 11 | 7     | --- | 2     | --- | 4 - 5         | Must show short on 2 - 7                                                                                  |
| 17EW8                                                      | Triode-1  | 1     | 5 | 21  | 13 | 11 | ---   | --- | 6     | 7   | 4 - 5         |                                                                                                           |
| 17EW8                                                      | Triode-2  | 1     | 5 | 21  | 13 | 11 | ---   | --- | 1     | 2   | 4 - 5         |                                                                                                           |
| 17FY7                                                      | Triode-1  | 4     | 4 | 15  | 10 | 11 | ---   | --- | 3     | 2   | 4 - 6         | Key at 5                                                                                                  |
| 17FY7                                                      | Triode-2  | 1     | 1 | 0   | 9  | 11 | ---   | --- | 7     | 5   | 4 - 6         | Key at 2                                                                                                  |
| 17GE5                                                      |           | 5     | 6 | 7   | 7  | 11 | 8 - 9 | 7   | 12    | 3   | 4 - 6         | Key at 5; Must show short on 2 - 3 - 8 - 9; Use red grid cap; Cathode short test - Depress 2 - 9 together |
| 17GJ5                                                      |           | 1     | 4 | 2   | 5  | 11 | 1 - 2 | 7   | 12    | 6   | 4 - 5         | Must show short on 1 - 2 - 6 - 7; Use red grid cap                                                        |
| 17GT5                                                      |           | 2     | 4 | 6   | 7  | 11 | 1 - 2 | 7   | 9     | 6   | 4 - 5         | Must show short on 1 - 2 - 6 - 7                                                                          |
| 17GT6                                                      |           | 3     | 9 | 0   | 12 | 11 | ---   | --- | 6     | 1   | 4 - 5         |                                                                                                           |

| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |          |       |   |    |    |    |       |     |    |     |               |                                                                                                                                   |
|------------------------------------------------------------|----------|-------|---|----|----|----|-------|-----|----|-----|---------------|-----------------------------------------------------------------------------------------------------------------------------------|
|                                                            |          | LEVER |   |    |    |    |       |     |    |     |               |                                                                                                                                   |
| TUBE                                                       | SECTION  | A     | B | C  | D  | E  | W     | X   | Y  | Z   | FIL.<br>CONT. | COMMENT                                                                                                                           |
| 17GV5                                                      |          | 2     | 5 | 1  | 9  | 11 | 2     | 7   | 12 | 9   | 3 - 5         | Key at 4; Must show short on 1 - 2 - 7 - 8;<br>Red grid cap goes to top of tube; Cathode<br>short test - Depress 1 - 8 together   |
| 17GW6                                                      |          | 3     | 2 | 0  | 17 | 10 | ---   | 4   | 11 | 5   | 2 - 7         |                                                                                                                                   |
| 17GY5                                                      |          | 3     | 3 | 3  | 15 | 11 | 2     | 7   | 11 | 9   | 3 - 5         | Key at 4; Must show short on 1 - 2 - 7 - 8;<br>Cathode short test - Depress 1 - 8 together;<br>Black grid cap goes to top of tube |
| 17HB25                                                     | *        | 5     | 4 | 0  | 5  | 11 | 2 - 7 | 6   | 11 | 1   | 4 - 5         | * Must use magnoval adapter; Must show<br>short on 1 - 2 - 3 - 6 - 7 - 8; Cap goes to top<br>of tube                              |
| 17HC8                                                      | Triode   | 4     | 4 | 10 | 10 | 10 | ---   | --- | 9  | 1   | 4 - 5         |                                                                                                                                   |
| 17HC8                                                      | Pentode  | 1     | 4 | 15 | 10 | 10 | ---   | 7   | 6  | 3   | 4 - 5         |                                                                                                                                   |
| 17HG8                                                      | Triode   | 1     | 4 | 5  | 10 | 11 | ---   | --- | 7  | 6   | 4 - 5         | May show short on 1 - 3; Cathode short test -<br>Depress 1 - 3 together                                                           |
| 17HG8                                                      | Pentode  | 1     | 4 | 7  | 25 | 11 | ---   | 9   | 8  | 2   | 4 - 5         |                                                                                                                                   |
| 17JB6                                                      |          | 2     | 4 | 1  | 6  | 11 | 1 - 2 | 7   | 12 | 6   | 4 - 5         | Must show short on 1 - 2 - 6 - 7; Red grid<br>cap goes to top of tube                                                             |
| 17JF6                                                      |          | 5     | 4 | 0  | 6  | 10 | 1 - 2 | 7   | 12 | 6   | 4 - 5         | Must show short on 1 - 2 - 6 - 7; Red cap<br>goes to top of tube                                                                  |
| 17JG6                                                      |          | 1     | 4 | 10 | 28 | 10 | 1     | 6   | 9  | 2   | 4 - 5         | Must show short on 1 - 7                                                                                                          |
| 17JK8                                                      | Triode-1 | 1     | 4 | 23 | 10 | 10 | ---   | --- | 6  | 7   | 4 - 5         |                                                                                                                                   |
| 17JK8                                                      | Triode-2 | 1     | 4 | 15 | 10 | 10 | ---   | --- | 1  | 2   | 4 - 5         |                                                                                                                                   |
| 17JM6                                                      |          | 5     | 2 | 0  | 5  | 11 | ---   | 6   | 11 | 8   | 2 - 4         | Key at 3; Black cap goes to top of tube                                                                                           |
| 17JN6                                                      |          | 1     | 4 | 0  | 5  | 11 | ---   | 8   | 11 | 3   | 4 - 6         | Key at 5; Must show short on 2 - 9                                                                                                |
| 17JQ6                                                      | Pentode  | 1     | 4 | 10 | 5  | 11 | 2 - 7 | 3   | 1  | 8   | 4 - 5         |                                                                                                                                   |
| 17JQ6                                                      | Diode    | 3     | 4 | 0  | 22 | 11 | ---   | --- | 6  | --- | 4 - 5         |                                                                                                                                   |
| 17JR6                                                      |          | 4     | 4 | 5  | 20 | 11 | 1     | 6   | 9  | 2   | 4 - 5         | Must show short on 1 - 7                                                                                                          |
| 17JS6                                                      |          | 5     | 4 | 0  | 6  | 11 | 1     | 6   | 11 | 8   | 2 - 4         | Key at 3; Black cap goes to top of tube; Must<br>show short on 1 - 6                                                              |
| 17JT6                                                      |          | 1     | 4 | 2  | 5  | 11 | 1     | 7   | 9  | 2   | 4 - 5         | Must show short on 1 - 7                                                                                                          |
| 17JZ8                                                      | Pentode  | 2     | 7 | 7  | 7  | 11 | 1     | 3   | 12 | 2   | 7 - 9         | Key at 8; Must show short on 1 - 2; Use red<br>grid cap                                                                           |
| 17JZ8                                                      | Triode   | 2     | 4 | 30 | 10 | 11 | ---   | --- | 7  | 2   | 4 - 6         | Key at 5                                                                                                                          |
| 17KV6                                                      |          | 5     | 4 | 0  | 5  | 10 | 1     | 7   | 9  | 2   | 4 - 5         | Must show short on 1 - 7                                                                                                          |
| 17LD8                                                      | Triode   | 5     | 4 | 10 | 16 | 11 | ---   | --- | 8  | 9   | 4 - 5         |                                                                                                                                   |
| 17LD8                                                      | Pentode  | 5     | 4 | 0  | 5  | 11 | ---   | 7   | 6  | 2   | 4 - 5         |                                                                                                                                   |
| 17RHH2                                                     | Triode-1 | 1     | 5 | 21 | 13 | 11 | ---   | --- | 6  | 7   | 4 - 5         |                                                                                                                                   |
| 17RHH2                                                     | Triode-2 | 1     | 5 | 21 | 13 | 11 | ---   | --- | 1  | 2   | 4 - 5         |                                                                                                                                   |
| 17RK19                                                     |          | 1     | 4 | 0  | 4  | 11 | 2     | --- | 9  | --- | 4 - 5         |                                                                                                                                   |
| 17W6                                                       |          | 1     | 2 | 10 | 5  | 10 | ---   | 4   | 3  | 5   | 2 - 7         |                                                                                                                                   |
| 17X10                                                      | Pent-1   | 5     | 4 | 0  | 6  | 11 | ---   | 7   | 1  | 3   | 4 - 6         | Key at 5                                                                                                                          |



| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |          |       |   |    |    |    |           |     |         |     |               |                                                                                                                                                       |
|------------------------------------------------------------|----------|-------|---|----|----|----|-----------|-----|---------|-----|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                            |          | LEVER |   |    |    |    |           |     |         |     |               |                                                                                                                                                       |
| TUBE                                                       | SECTION  | A     | B | C  | D  | E  | W         | X   | Y       | Z   | FIL.<br>CONT. | COMMENT                                                                                                                                               |
| 17X10                                                      | Pent-2   | 4     | 1 | 0  | 42 | 11 | ---       | 6   | 4       | 7   | 4 - 6         | Key at 0                                                                                                                                              |
| 17Y9                                                       | Pent-1   | 1     | 5 | 7  | 11 | 11 | ---       | 9   | 11      | 8   | 5 - 6         |                                                                                                                                                       |
| 17Y9                                                       | Pent-2   | 1     | 5 | 15 | 16 | 11 | ---       | 3   | 4       | 1   | 5 - 6         |                                                                                                                                                       |
| 18AJ10                                                     | Pent-2   | 3     | 1 | 5  | 35 | 11 | ---       | 8   | 9       | 5   | 3             | Key at 2                                                                                                                                              |
| 18AJ10                                                     | Pent-1   | 3     | 5 | 5  | 24 | 11 | ---       | 3   | 4       | 1   | 7             | Key at 6                                                                                                                                              |
| 18DZ8                                                      | Triode   | 1     | 4 | 20 | 18 | 11 | ---       | --- | 9       | 1   | 4 - 5         |                                                                                                                                                       |
| 18DZ8                                                      | Pentode  | 2     | 4 | 7  | 12 | 11 | ---       | 7   | 6       | 3   | 4 - 5         |                                                                                                                                                       |
| 18GB5                                                      | *        | 3     | 4 | 2  | 16 | 11 | 2 - 7 - 8 | 6   | 12      | 1   | 4 - 5         | * Must use magnoval adapter; Must show short on 1 - 2 - 3 -- 6 - 7 - 8; Cathode short test - Depress 3 - 8 together; Red grid cap goes to top of tube |
| 18GD6                                                      |          | 5     | 3 | 7  | 15 | 11 | ---       | 6   | 5       | 1   | 3 - 4         |                                                                                                                                                       |
| 18GV5                                                      |          | 2     | 5 | 1  | 9  | 11 | 2         | 7   | 12      | 9   | 3 - 5         | Key at 4; Must show short on 1 - 2 - 7 - 8; Red grid cap goes to top of tube                                                                          |
| 18GV8                                                      | Triode   | 2     | 4 | 34 | 10 | 11 | ---       | --- | 1       | 2   | 4 - 5         |                                                                                                                                                       |
| 18GV8                                                      | Pentode  | 2     | 4 | 7  | 10 | 11 | ---       | 7   | 6       | 9   | 4 - 5         |                                                                                                                                                       |
| 18RAL1                                                     | Triode-1 | 1     | 4 | 14 | 15 | 11 | ---       | --- | 6       | 7   | 4 - 5         | Must show short on 2 - 3                                                                                                                              |
| 18RAL1                                                     | Triode-2 | 1     | 4 | 0  | 10 | 11 | 3         | --- | 1       | 2   | 4 - 5         |                                                                                                                                                       |
| 19A3                                                       |          | 3     | 6 | 0  | 20 | 7  | ---       | --- | 5       | --- | 3 - 4 - 6     |                                                                                                                                                       |
| 19AJ8                                                      | Heptode  | 1     | 4 | 26 | 32 | 11 | ---       | 1   | 6       | 2   | 4 - 5         |                                                                                                                                                       |
| 19AJ8                                                      | Triode   | 1     | 4 | 26 | 11 | 11 | ---       | --- | 8       | 9   | 4 - 5         |                                                                                                                                                       |
| 19AQ5                                                      |          | 1     | 3 | 32 | 8  | 11 | 1         | 6   | 5       | 7   | 3 - 4         | Must show short on 1 - 7                                                                                                                              |
| 19BR5                                                      | Triode   | 2     | 4 | 35 | 10 | 11 | ---       | --- | 7       | 1   | 4 - 5         | Must show short on 3 - 6 - 9                                                                                                                          |
| 19BR5                                                      | Eye      | 1     | 4 | 0  | 0  | 11 | ---       | --- | 7-3-6-9 | ?   | 4 - 5         | See instructions for eye test                                                                                                                         |
| 19BX6                                                      |          | 1     | 4 | 8  | 28 | 11 | ---       | 8   | 7       | 2   | 4 - 5         | Must show short on 1 - 3; Cathode short test Depress 1 - 3 together                                                                                   |
| 19BY7                                                      |          | 4     | 4 | 3  | 10 | 11 | ---       | 8   | 7       | 2   | 4 - 5         | Must show short on 1 - 3; Cathode short test Depress 1 - 3 together                                                                                   |
| 19CG3                                                      |          | 5     | 1 | 0  | 5  | 11 | ---       | --- | 4       | --- | 1 - 11        | Key at 0                                                                                                                                              |
| 19DE3                                                      | *        | 3     | 6 | 0  | 20 | 11 | 1         | --- | 4       | --- | 8             | * Key at 7; Grid cap goes to top of tube                                                                                                              |
| 19DE7                                                      | Triode-1 | 1     | 4 | 20 | 14 | 11 | ---       | --- | 6       | 7   | 4 - 5         | Must show short on 2 - 3                                                                                                                              |
| 19DE7                                                      | Triode-2 | 2     | 4 | 7  | 6  | 11 | 3         | --- | 1       | 2   | 4 - 5         |                                                                                                                                                       |
| 19DK3                                                      |          | 3     | 4 | 0  | 20 | 11 | 3 - 9     | --- | 2 - 7   | --- | 4 - 5         |                                                                                                                                                       |
| 19DQ3                                                      | *        | 5     | 1 | 0  | 6  | 11 | ---       | --- | 4       | --- | 1 - 11        | * Key at 0                                                                                                                                            |
| 19EW7                                                      | Triode-1 | 5     | 4 | 17 | 10 | 11 | ---       | --- | 6       | 7   | 4 - 5         | Must show short on 2 - 3                                                                                                                              |
| 19EW7                                                      | Triode-2 | 2     | 4 | 1  | 10 | 11 | 3         | --- | 1       | 2   | 4 - 5         |                                                                                                                                                       |
| 19EZ8                                                      | Triode-1 | 1     | 4 | 33 | 10 | 11 | ---       | --- | 8       | 9   | 4 - 5         |                                                                                                                                                       |
| 19EZ8                                                      | Triode-2 | 1     | 4 | 33 | 10 | 11 | ---       | --- | 6       | 7   | 4 - 5         |                                                                                                                                                       |
| 19EZ8                                                      | Triode-3 | 1     | 4 | 31 | 10 | 11 | ---       | --- | 3       | 2   | 4 - 5         |                                                                                                                                                       |
| 19FL8                                                      | Pentode  | 1     | 4 | 20 | 18 | 11 | ---       | 1   | 6       | 2   | 4 - 5         |                                                                                                                                                       |
| 19FL8                                                      | Diode-1  | 3     | 4 | 0  | 22 | 11 | ---       | --- | 7       | --- | 4 - 5         |                                                                                                                                                       |
| 19FL8                                                      | Diode-2  | 3     | 4 | 0  | 22 | 11 | ---       | --- | 8       | --- | 4 - 5         |                                                                                                                                                       |

| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |          |       |   |    |    |    |     |     |    |     |               |                                                                                                                   |
|------------------------------------------------------------|----------|-------|---|----|----|----|-----|-----|----|-----|---------------|-------------------------------------------------------------------------------------------------------------------|
|                                                            |          | LEVER |   |    |    |    |     |     |    |     |               |                                                                                                                   |
| TUBE                                                       | SECTION  | A     | B | C  | D  | E  | W   | X   | Y  | Z   | FIL.<br>CONT. | COMMENT                                                                                                           |
| 19FX5                                                      |          | 2     | 3 | 13 | 9  | 11 | 5   | 6   | 7  | 2   | 3 - 4         | Must show short on 2 - 5                                                                                          |
| 19GQ7                                                      | Diode-1  | 3     | 4 | 0  | 15 | 11 | --- | --- | 8  | --- | 4 - 5         |                                                                                                                   |
| 19GQ7                                                      | Diode-2  | 3     | 4 | 0  | 15 | 11 | --- | --- | 6  | --- | 4 - 5         |                                                                                                                   |
| 19GQ7                                                      | Diode-3  | 3     | 4 | 0  | 15 | 11 | --- | --- | 2  | --- | 4 - 5         |                                                                                                                   |
| 19HR6                                                      |          | 4     | 3 | 6  | 10 | 11 | --- | 6   | 5  | 1   | 3 - 4         |                                                                                                                   |
| 19HS6                                                      |          | 1     | 3 | 15 | 19 | 11 | --- | 6   | 5  | 1   | 4 - 5         |                                                                                                                   |
| 19JC6                                                      |          | 1     | 4 | 5  | 24 | 11 | 3   | 8   | 7  | 2   | 4 - 5         | Must show short on 1 - 2 - 6 - 7; Red cap goes to top of tube                                                     |
| 19JN8                                                      | Pentode  | 1     | 4 | 15 | 22 | 11 | --- | 7   | 6  | 9   | 4 - 5         |                                                                                                                   |
| 19JN8                                                      | Triode   | 2     | 4 | 15 | 18 | 11 | --- | --- | 2  | 1   | 4 - 5         |                                                                                                                   |
| 19KF6                                                      | *        | 5     | 4 | 0  | 5  | 11 | 1   | 6   | 9  | 7   | 4 - 5         | * Must use magnoval adapter; Must show short on 1 - 7                                                             |
| 19KG8                                                      | Triode   | 1     | 4 | 19 | 10 | 11 | --- | --- | 1  | 2   | 4 - 5         |                                                                                                                   |
| 19KG8                                                      | Pentode  | 4     | 4 | 8  | 10 | 11 | --- | 7   | 6  | 9   | 4 - 5         |                                                                                                                   |
| 19MR9                                                      |          | 5     | 3 | 7  | 15 | 11 | --- | 6   | 5  | 1   | 3 - 4         |                                                                                                                   |
| 19Q9                                                       | Triode   | 5     | 4 | 9  | 10 | 11 | --- | --- | 9  | 8   | 4 - 5         |                                                                                                                   |
| 19Q9                                                       | Pentode  | 4     | 4 | 5  | 9  | 11 | --- | 2   | 3  | 1   | 4 - 5         |                                                                                                                   |
| 19U3                                                       |          | 1     | 4 | 0  | 4  | 10 | --- | --- | 9  | --- | 4 - 5         |                                                                                                                   |
| 19W3                                                       |          | 1     | 4 | 0  | 4  | 10 | --- | --- | 9  | --- | 4 - 5         |                                                                                                                   |
| 19Y3                                                       |          | 7     | 4 | 0  | 3  | 10 | --- | --- | 9  | --- | 4 - 5         |                                                                                                                   |
| 20AQ3                                                      |          | 1     | 4 | 0  | 4  | 11 | #   | --- | 9  | --- | 4 - 5         | # W = 1 - 2 - 3 - 6 - 7 - 8; May show short on all pins                                                           |
| 20D4                                                       | Amp      | 1     | 4 | 14 | 31 | 7  | --- | 1   | 6  | 2   | 4 - 5         |                                                                                                                   |
| 20D4                                                       | Osc      | 1     | 4 | 25 | 10 | 7  | --- | --- | 1  | 2   | 4 - 5         |                                                                                                                   |
| 20D4                                                       | Triode   | 1     | 4 | 25 | 13 | 7  | --- | --- | 8  | 9   | 4 - 5         |                                                                                                                   |
| 20EW7                                                      | Triode-1 | 5     | 4 | 17 | 10 | 11 | --- | --- | 6  | 7   | 4 - 5         | Must show short on 2 - 3                                                                                          |
| 20EW7                                                      | Triode-2 | 2     | 4 | 1  | 10 | 11 | 3   | --- | 1  | 2   | 4 - 5         |                                                                                                                   |
| 20LF6                                                      | *        | 5     | 3 | 0  | 5  | 11 | 2   | 7   | 11 | 9   | 3 - 5         | * Key at 4; Must show short on 1 - 2 - 7 - 8; Cap goes to top of tube                                             |
| 21A6                                                       |          | 5     | 4 | 0  | 6  | 11 | 7   | 8   | 10 | 2   | 4 - 5         | Must show short on 1 - 6 - 7 - 8 - 9                                                                              |
| 21AK6                                                      |          | 1     | 3 | 32 | 10 | 11 | --- | 6   | 5  | 1   | 3 - 4         |                                                                                                                   |
| 21EX6                                                      |          | 1     | 2 | 0  | 4  | 11 | --- | 8   | 11 | 15  | 2 - 7         |                                                                                                                   |
| 21GY5                                                      |          | 3     | 3 | 3  | 15 | 11 | 2   | 7   | 11 | 9   | 3 - 5         | Must show short on 1 - 2 - 7 - 8; Cathode short test - Depress 1 - 8 together; Black grid cap goes to top of tube |
| 21HA6                                                      |          | 5     | 4 | 6  | 9  | 11 | 2   | --- | 5  | 1   | 3 - 4         | Must show short on 2 - 7; Cathode short test Depress 1 - 7 together                                               |
| 21HB3                                                      |          | 1     | 1 | 15 | 15 | 11 | 6   | 2   | 5  | 3   | 3 - 4         |                                                                                                                   |
| 21HB5                                                      |          | 3     | 1 | 3  | 17 | 11 | --- | 2   | 7  | 3   | 1 - 12        | Key at 0; Use red grid cap                                                                                        |
| 21HD5                                                      |          | 5     | 1 | 0  | 5  | 11 | 9   | 5   | 7  | 3   | 1 - 11        | Key at 0; Must show short on 5 - 9                                                                                |
| 21HJ5                                                      |          | 1     | 1 | 0  | 4  | 11 | 9   | 5   | 7  | 3   | 1 - 11        | Key at 0; Must show short on 5 - 9                                                                                |
| 21JS6                                                      | *        | 5     | 4 | 0  | 6  | 11 | 1   | 6   | 11 | 8   | 2 - 4         | * Key at 3                                                                                                        |

| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |          |       |   |    |    |    |           |       |    |     |               |                                                                                                   |
|------------------------------------------------------------|----------|-------|---|----|----|----|-----------|-------|----|-----|---------------|---------------------------------------------------------------------------------------------------|
|                                                            |          | LEVER |   |    |    |    |           |       |    |     |               |                                                                                                   |
| TUBE                                                       | SECTION  | A     | B | C  | D  | E  | W         | X     | Y  | Z   | FIL.<br>CONT. | COMMENT                                                                                           |
| 21JV6                                                      |          | 5     | 4 | 0  | 5  | 11 | ---       | 8     | 11 | 3   | 4 - 6         | Key at 5; Must show short on 2 - 9                                                                |
| 21JZ6                                                      |          | 2     | 2 | 0  | 6  | 11 | ---       | 6     | 11 | 8   | 2 - 4         | Key at 3; Black cap goes to top of tube                                                           |
| 21KA6                                                      |          | 5     | 3 | 0  | 6  | 11 | ---       | 7     | 11 | 9   | 3 - 5         | Key at 4; Must show short on 2 - 8; Black cap goes to top of tube                                 |
| 21KQ6                                                      | *        | 5     | 4 | 0  | 5  | 11 | 6 - 8     | 3     | 11 | 1   | 4 - 5         | * Must use magnoval adapter; Must show short on 1 - 2 - 3 - 6 - 7 - 8; Cao goes to top of tube    |
| 21LG6                                                      |          | 3     | 3 | 3  | 20 | 12 | 2         | 7     | 11 | 9   | 3 - 5         | Key at 4; Must show short on 1 - 2 - 7 - 8                                                        |
| 21LR8                                                      | Triode   | 5     | 4 | 8  | 14 | 11 | ---       | ---   | 8  | 9   | 4 - 5         |                                                                                                   |
| 21LR8                                                      | Pentode  | 5     | 4 | 0  | 6  | 11 | ---       | 7     | 6  | 2   | 4 - 5         |                                                                                                   |
| 21LU8                                                      | Triode   | 2     | 4 | 13 | 19 | 11 | ---       | ---   | 7  | 2   | 4 - 6         | Key at 5; Use red grid cap                                                                        |
| 21LU8                                                      | Pentode  | 2     | 7 | 5  | 5  | 11 | 1         | 3     | 12 | 2   | 7 - 9         | Key at 8; Must show short on 1 - 2                                                                |
| 21MY8 *                                                    | Triode   | 2     | 4 | 13 | 19 | 11 | ---       | ---   | 7  | 2   | 4 - 6         | * Key at 5; Must show short on 1 - 2; Use red grid cap                                            |
| 21MY8 *                                                    | Pentode  | 2     | 7 | 5  | 5  | 11 | 1         | 3     | 12 | 2   | 4 - 6         | * Key at 8                                                                                        |
| 22AL3                                                      |          | 3     | 4 | 0  | 15 | 12 | #         | ---   | 9  | --- | 4 - 5         | # Levers 1 - 2 - 3 - 6 - 7 - 8 must be thrown to "W"; May show short on 1 - 2 - 3 - 6 - 7 - 8 - 9 |
| 22BH3                                                      |          | 1     | 4 | 0  | 4  | 12 | 2         | ---   | 7  | --- | 4 - 5         | Must show short on 2 - 7; Use red grid cap                                                        |
| 22BW3                                                      |          | 3     | 1 | 0  | 15 | 11 | ---       | ---   | 4  | --- | 1 - 11        | Key at 0                                                                                          |
| 22JF6                                                      |          | 5     | 4 | 0  | 6  | 11 | 1 - 2 - 9 | 7     | 12 | 6   | 4 - 5         | Must show short on 1 - 2 - 6 - 7; Red cap goes to top of tube                                     |
| 22JG6                                                      |          | 1     | 4 | 10 | 28 | 11 | 1         | 6     | 9  | 2   | 4 - 5         | Must show short on 1 - 7                                                                          |
| 22JR6                                                      |          | 4     | 4 | 5  | 20 | 11 | 1         | 6     | 9  | 2   | 4 - 5         | Must show short on 1 - 7                                                                          |
| 22JS6                                                      |          | 5     | 4 | 0  | 6  | 11 | 1         | 6     | 11 | 8   | 2 - 4         | Key at 3; Must show short on 1 - 6; Black cap goes to top of tube                                 |
| 22JU6                                                      |          | 1     | 4 | 7  | 32 | 11 | 6         | 1     | 12 | 2   | 4 - 5         | Must show short on 1 - 2 - 6 - 7; Red grid cap goes to top of tube                                |
| 22KM6                                                      |          | 5     | 4 | 0  | 6  | 12 | 1 - 2     | 7     | 12 | 6   | 4 - 5         | Must show short on 1 - 2 - 6 - 7; Red cap goes to top of tube                                     |
| 22KV6                                                      |          | 5     | 4 | 0  | 7  | 11 | 1         | 7     | 9  | 2   | 4 - 5         | Must show short on 1 - 7                                                                          |
| 23MB6                                                      | *        | 3     | 6 | 6  | 20 | 11 | 8 - 9     | 3     | 11 | 1   | 4             | * Key at 5; Must show short on 2 - 3 - 8 - 9; Grid cap goes to top of tube                        |
| 23Z9                                                       | Triode-1 | 5     | 4 | 8  | 20 | 11 | ---       | ---   | 7  | 8   | 4 - 6         | Key at 5                                                                                          |
| 23Z9                                                       | Triode-2 | 5     | 4 | 8  | 18 | 11 | ---       | ---   | 3  | 2   | 4 - 6         |                                                                                                   |
| 23Z9                                                       | Pentode  | 5     | 6 | 0  | 7  | 11 | ---       | 3     | 11 | 2   | 4 - 6         | Key at 7                                                                                          |
| 24AX4                                                      |          | 2     | 7 | 0  | 3  | 12 | ---       | ---   | 5  | --- | 7 - 8         |                                                                                                   |
| 24BF11                                                     | Pent-1   | 4     | 1 | 23 | 15 | 12 | ---       | 6     | 7  | 3   | 1 - 12        | Key at 0; Use red grid cap                                                                        |
| 24BF11                                                     | Pent-2   | 1     | 7 | 7  | 10 | 12 | ---       | 5     | 6  | 3   | 1 - 12        | Key at 8                                                                                          |
| 24GA7                                                      | Diode    | 3     | 7 | 0  | 18 | 12 | ---       | ---   | 4  | --- | 5 - 7         | Key at 6; Must show short on 8 - 9                                                                |
| 24GA7                                                      | Pentode  | 3     | 3 | 4  | 19 | 12 | ---       | 4 - 5 | 9  | 6   | 1 - 3         | Key at 2; Must show short on 4 - 5                                                                |

| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |          |       |   |    |    |    |       |     |       |     |               |                                                                                                                                                                             |
|------------------------------------------------------------|----------|-------|---|----|----|----|-------|-----|-------|-----|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                            |          | LEVER |   |    |    |    |       |     |       |     |               |                                                                                                                                                                             |
| TUBE                                                       | SECTION  | A     | B | C  | D  | E  | W     | X   | Y     | Z   | FIL.<br>CONT. | COMMENT                                                                                                                                                                     |
| 24JE6                                                      | Pentode  | 3     | 4 | 0  | 17 | 12 | 1 - 2 | 7   | 12    | 6   | 4 - 5         | Must show short on 1 - 2 - 6 - 7; Red cap goes to top of tube                                                                                                               |
| 24JZ8                                                      |          | 2     | 7 | 7  | 7  | 12 | 1     | 3   | 12    | 2   | 7 - 9         | Key at 8; Must show short on 1 - 2                                                                                                                                          |
| 24JZ8                                                      |          | 2     | 4 | 30 | 10 | 12 | ---   | --- | 7     | 2   | 4 - 6         | Key at 5; Use red grid cap                                                                                                                                                  |
| 24LQ6                                                      |          | 3     | 4 | 0  | 17 | 12 | 1 - 2 | 7   | 12    | 6   | 4 - 5         | Must show short on 1 - 2 - 6 - 7; Red cap goes to top of tube                                                                                                               |
| 24LZ6                                                      |          | 2     | 4 | 10 | 27 | 12 | 1 - 2 | 6   | 11    | 7   | 4 - 5         | Must show short on 1 - 2 - 6 - 7                                                                                                                                            |
| 25BB14                                                     | *        | 5     | 4 | 0  | 5  | 12 | 2 - 7 | 6   | 11    | 1   | 4 - 5         | * Must use magnoval adapter; Must show short on 1 - 2 - 3 - 6 - 7 - 8; Cap goes to top of tube                                                                              |
| 25CG3                                                      |          | 3     | 1 | 0  | 15 | 12 | ---   | --- | 4     | --- | 1 - 11        | Key at 0                                                                                                                                                                    |
| 25CK3                                                      |          | 1     | 4 | 0  | 4  | 12 | 2     | --- | 7     | --- | 4 - 5         | Must show short on 2 - 7                                                                                                                                                    |
| 25CM3                                                      |          | 3     | 4 | 0  | 17 | 12 | 2     | --- | 7     | --- | 4 - 5         | Must show short on 2 - 7                                                                                                                                                    |
| 25CT3                                                      |          | 3     | 4 | 0  | 17 | 12 | 2     | --- | 6     | --- | 4 - 5         | Must show short on 2 - 6                                                                                                                                                    |
| 25DK3                                                      |          | 3     | 4 | 0  | 20 | 12 | 3 - 9 | --- | 2 - 7 | --- | 4 - 5         |                                                                                                                                                                             |
| 25DL3                                                      |          | 3     | 4 | 0  | 17 | 12 | *     | --- | 7     | --- | 4 - 5         | * 2 - 3 - 6 - 8 - 9                                                                                                                                                         |
| 25DQ6                                                      |          | 1     | 2 | 0  | 4  | 12 | ---   | 4   | 11    | 5   | 2 - 7         |                                                                                                                                                                             |
| 25DT5                                                      |          | 1     | 4 | 13 | 11 | 12 | 3     | 1   | 9     | 6   | 4 - 5         | Must show short on 3 - 6                                                                                                                                                    |
| 25GB6                                                      |          | 3     | 2 | 0  | 17 | 12 | ---   | 4   | 11    | 5   | 2 - 7         |                                                                                                                                                                             |
| 25HX5                                                      | *        | 3     | 4 | 14 | 20 | 12 | 3 - 7 | 6   | 9     | 1   | 4 - 5         | * Must use magnoval adapter; Must show short on 1 - 2 - 3 - 7; Grid short test - Depress 1 - 7 together; Cathode short test - Depress 2 - 3 together                        |
| 25JQ6                                                      | Pentode  | 1     | 4 | 10 | 5  | 12 | 2 - 7 | 3   | 1     | 8   | 4 - 5         |                                                                                                                                                                             |
| 25JQ6                                                      | Diode    | 3     | 4 | 0  | 22 | 12 | ---   | --- | 6     | --- | 4 - 5         |                                                                                                                                                                             |
| 25JZ8 *                                                    | Pentode  | 2     | 7 | 7  | 7  | 12 | 1     | 3   | 12    | 2   | 7 - 9         | * Key at 8; Must show short on 1 - 2                                                                                                                                        |
| 25JZ8 *                                                    | Triode   | 2     | 4 | 30 | 10 | 12 | ---   | --- | 7     | 2   | 4 - 6         | * Key at 5; Use red grid cap                                                                                                                                                |
| 25KA6                                                      | *        | 5     | 3 | 0  | 6  | 12 | ---   | 7   | 11    | 9   | 3 - 5         | * Key at 4; Must show short on 2 - 8; Cap goes to top of tube                                                                                                               |
| 25MP20                                                     |          | 1     | 3 | 12 | 20 | 12 | ---   | 6   | 5     | 1   | 3 - 4         |                                                                                                                                                                             |
| 25RK19                                                     |          | 1     | 4 | 0  | 4  | 12 | 2     | --- | 9     | --- | 4 - 5         | Must show short on 2 - 9                                                                                                                                                    |
| 26AQ8                                                      | Triode-1 | 1     | 4 | 25 | 11 | 12 | ---   | --- | 6     | 7   | 4 - 5         |                                                                                                                                                                             |
| 26AQ8                                                      | Triode-2 | 1     | 4 | 25 | 11 | 12 | ---   | --- | 1     | 2   | 4 - 5         |                                                                                                                                                                             |
| 26DQ5                                                      |          | 1     | 2 | 0  | 5  | 12 | 1 - 4 | 8   | 11    | 5   | 2 - 7         | Must show short on 1 - 3 - 4 - 5 - 6 - 8; Grid short test - Depress 1 - 5 together; Screen short test - Depress 4 - 8 together; Cathode short test - Depress 3 - 6 together |
| 26HU5                                                      |          | 3     | 7 | 35 | 20 | 12 | 5 - 6 | 3   | 11    | 1   | 8             | Must show short on 1 - 2 - 5 - 6; Grid short test - Depress 1 - 5 together; Cathode short test - Depress 2 - 6 together                                                     |

| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |          |       |   |    |    |    |           |     |    |     |               |                                                                                                                                                                                                                                         |
|------------------------------------------------------------|----------|-------|---|----|----|----|-----------|-----|----|-----|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                            |          | LEVER |   |    |    |    |           |     |    |     |               |                                                                                                                                                                                                                                         |
| TUBE                                                       | SECTION  | A     | B | C  | D  | E  | W         | X   | Y  | Z   | FIL.<br>CONT. | COMMENT                                                                                                                                                                                                                                 |
| 26HV5                                                      |          | 5     | 1 | 5  | 30 | 12 | ---       | --- | 7  | 2   | 1             | Key at 0                                                                                                                                                                                                                                |
| 26JG6                                                      |          | 4     | 4 | 3  | 12 | 12 | 1         | 6   | 9  | 2   | 4 - 5         | Must show short on 1 - 7                                                                                                                                                                                                                |
| 26LW6                                                      |          | 1     | 7 | 0  | 5  | 12 | 1 - 4 - 6 | 3   | 11 | 5   | 7 - 8         | Must show short on 1 - 2 - 5 - 6; Cathode short test - Depress 2 - 6 together                                                                                                                                                           |
| 26LX6                                                      | *        | 3     | 4 | 15 | 20 | 11 | 1         | 6   | 11 | 8   | 2 - 4         | * Key at 3; Must show short on 1 - 6                                                                                                                                                                                                    |
| 27GB5                                                      | *        | 3     | 4 | 2  | 16 | 12 | 2 - 7 - 8 | 6   | 12 | 1   | 4 - 5         | * Must use magnoval adapter; Must show short on 1 - 2 - 3 - 6 - 7 - 8; Cathode short test - Depress 3 - 8 together; Red grid cap goes to top of tube                                                                                    |
| 27KG6                                                      | *        | 1     | 4 | 8  | 26 | 12 | 1 - 2 - 3 | 7   | 11 | 8   | 4 - 5         | * Must use magnoval adapter; Must show short on 1 - 2 - 3 - 6 - 7 - 8; Black cap goes to top of tube                                                                                                                                    |
| 27LF6                                                      | *        | 5     | 3 | 0  | 5  | 12 | 2         | 7   | 11 | 9   | 3 - 5         | * Key at 4; Must show short on 1 - 2 - 7 - 8; Cap goes to top of tube                                                                                                                                                                   |
| 28GB5                                                      | *        | 3     | 4 | 2  | 16 | 12 | 2 - 7 - 8 | 6   | 12 | 1   | 4 - 5         | * Must use magnoval adapter; Must show short on 1 - 2 - 3 - 6 - 7 - 8; Cathode short test - Depress 3 - 8 together; Red grid cap goes to top of tube                                                                                    |
| 28HA6                                                      |          | 5     | 4 | 6  | 9  | 12 | 6         | 8   | 7  | 2   | 4 - 5         | Must show short on 3 - 6 - 8 - 9                                                                                                                                                                                                        |
| 28HD5                                                      |          | 5     | 1 | 0  | 5  | 12 | 9         | 5   | 7  | 3   | 1 - 11        | Key at 0; Must show short on 5 - 9                                                                                                                                                                                                      |
| 29GK6                                                      |          | 1     | 4 | 10 | 10 | 12 | ---       | 8   | 7  | 2   | 4 - 5         | Must show short on 3 - 9                                                                                                                                                                                                                |
| 29KQ6                                                      | *        | 5     | 4 | 0  | 5  | 12 | 6 - 8     | 3   | 11 | 1   | 4 - 5         | * Must use magnoval adapter; Must show short on 1 - 2 - 3 - 6 - 7 - 8; Cap goes to top of tube                                                                                                                                          |
| 29LE6                                                      | *        | 4     | 4 | 8  | 15 | 12 | 6 - 7 - 8 | 2   | 11 | 1   | 5             | * Must use magnoval adapter; Must show short on 1 - 2 - 3 - 6 - 7 - 8; Grid-1 short test - Depress 1 - 8 together; Grid-2 short test - Depress 3 - 6 together; Screen short test - Depress 2 - 7 together; Grid cap goes to top of tube |
| 30A3                                                       |          | 1     | 4 | 0  | 4  | 12 | #         | --- | 9  | --- | 4 - 5         | # W = 1 - 2 - 3 - 6 - 7 - 8; May show short on 1 - 2 - 3 - 6 - 7 - 8 - 9                                                                                                                                                                |
| 30A5                                                       |          | 1     | 3 | 5  | 6  | 12 | 2         | 6   | 7  | 5   | 3 - 4         | Must show short on 2 - 5                                                                                                                                                                                                                |
| 30AG11                                                     | Triode-1 | 2     | 9 | 16 | 23 | 12 | ---       | --- | 2  | 3   | 7 - 9         | Key at 8                                                                                                                                                                                                                                |
| 30AG11                                                     | Diode-1  | 3     | 9 | 0  | 16 | 12 | ---       | --- | 5  | --- | 7 - 9         |                                                                                                                                                                                                                                         |
| 30AG11                                                     | Triode-2 | 2     | 3 | 16 | 23 | 12 | ---       | --- | 8  | 7   | 1 - 3         | Key at 2                                                                                                                                                                                                                                |
| 30AG11                                                     | Diode-2  | 3     | 3 | 0  | 16 | 12 | ---       | --- | 5  | --- | 1 - 3         |                                                                                                                                                                                                                                         |
| 30C18                                                      | Triode   | 5     | 4 | 7  | 10 | 8  | ---       | --- | 1  | 9   | 4 - 5         | Must show short on 6 - 8; Cathode short test                                                                                                                                                                                            |
| 30C18                                                      | Pentode  | 5     | 4 | 0  | 22 | 8  | ---       | 2   | 3  | 7   | 4 - 5         | Depress 6 - 8 together                                                                                                                                                                                                                  |
| 30CW5                                                      |          | 1     | 4 | 0  | 10 | 12 | 1 - 6 - 8 | 9   | 7  | 2   | 4 - 5         | May show short on 1 - 2 - 6 - 7 - 8 - 9                                                                                                                                                                                                 |
| 30HD5                                                      |          | 5     | 1 | 0  | 5  | 12 | 9         | 5   | 7  | 3   | 1 - 11        | Key at 0; Must show short on 5 - 9                                                                                                                                                                                                      |

| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |           |       |    |    |    |     |           |       |    |     |            |                                                                                                      |
|------------------------------------------------------------|-----------|-------|----|----|----|-----|-----------|-------|----|-----|------------|------------------------------------------------------------------------------------------------------|
|                                                            |           | LEVER |    |    |    |     |           |       |    |     |            |                                                                                                      |
| TUBE                                                       | SECTION   | A     | B  | C  | D  | E   | W         | X     | Y  | Z   | FIL. CONT. | COMMENT                                                                                              |
| 30HJ5                                                      |           | 1     | 1  | 0  | 4  | 12  | 9         | 5     | 7  | 3   | 1 - 11     | Key at 0; Must show short on 5 - 9                                                                   |
| 30JZ6                                                      |           | 2     | 2  | 0  | 6  | 12  | ---       | 6     | 11 | 8   | 2 - 4      | Key at 3; Black cap goes to top of tube                                                              |
| 30KD6                                                      |           | 5     | 3  | 0  | 5  | 12  | 2         | 7     | 11 | 9   | 3 - 5      | Key at 4; Must show short on 1 - 2 - 7 - 8; Black cap goes to top of tube                            |
| 30KG6                                                      | *         | 1     | 4  | 8  | 26 | 12  | 1 - 2 - 3 | 7     | 11 | 8   | 4 - 5      | * Must use magnoval adapter; Must show short on 1 - 2 - 3 - 6 - 7 - 8; Black cap goes to top of tube |
| 30LW6                                                      |           | 1     | 7  | 0  | 5  | 12  | 1 - 4 - 6 | 3     | 11 | 5   | 7 - 8      | Must show short on 1 - 2 - 5 - 6; Cathode short test - Depress 2 - 6 together                        |
| 30MB6                                                      | *         | 3     | 6  | 6  | 20 | 12  | 8 - 9     | 3     | 11 | 1   | 4          | * Key at 5; Must show short on 2 - 3 - 8 - 9; Grid cap goes to top of tube                           |
| 30MP23                                                     |           | 3     | 3  | 5  | 22 | 12  | 5         | 6     | 7  | 2   | 4          | Must show short on 2 - 5; Grid short test - Depress 2 - 5 together                                   |
| 30MP27                                                     |           | 3     | 3  | 5  | 20 | 12  | 5         | 6     | 7  | 2   | 4          | Must show short on 2 - 5; Grid short test - Depress 2 - 5 together                                   |
| 30PL12                                                     | Triode    | 1     | 4  | 12 | 27 | 10  | ---       | ---   | 9  | 1   | 4 - 5      |                                                                                                      |
| 30PL12                                                     | Pentode   | 1     | 4  | 10 | 9  | 10  | ---       | 7     | 6  | 3   | 4 - 5      |                                                                                                      |
| 31A3                                                       |           | 2     | 1  | 0  | 3  | 13? | 6         | ---   | 2  | --- | 1 - 8      | Fil Cont - Set control "E" at 12                                                                     |
| 31AL10                                                     | Pentode   | 3     | 6  | 7  | 23 | 10  | ---       | 5     | 4  | 8   | 1 - 11     | Key at 0                                                                                             |
| 31AL10                                                     | Triode-2  | 3     | 6  | 7  | 29 | 10  | ---       | ---   | 2  | 3   | 1 - 11     |                                                                                                      |
| 31AL10                                                     | Triode-1  | 3     | 11 | 7  | 28 | 10  | ---       | ---   | 2  | 4   | 5 - 7      | Key at 6                                                                                             |
| 31JS6                                                      |           | 5     | 4  | 0  | 6  | 12  | 1         | 6     | 11 | 8   | 2 - 4      | Key at 3; Must show short on 1 - 6; Black cap goes to top of tube                                    |
| 31LQ6                                                      |           | 3     | 4  | 0  | 19 | 12  | 1 - 2     | 7     | 12 | 6   | 4 - 5      | Must show short on 1 - 2 - 6 - 7; Red cap goes to top of tube                                        |
| 31LR8                                                      | Triode    | 5     | 4  | 8  | 14 | 12  | ---       | ---   | 8  | 9   | 4 - 5      |                                                                                                      |
| 31LR8                                                      | Pentode   | 5     | 4  | 0  | 6  | 12  | ---       | 7     | 6  | 2   | 4 - 5      |                                                                                                      |
| 31LZ6                                                      |           | 2     | 4  | 10 | 27 | 12  | 1 - 2     | 6     | 11 | 7   | 4 - 5      | Must show short on 1 - 2 - 6 - 7                                                                     |
| 32A8                                                       | Triode    | 1     | 4  | 31 | 13 | 12  | ---       | ---   | 9  | 1   | 4 - 5      |                                                                                                      |
| 32A8                                                       | Pentode   | 1     | 4  | 10 | 14 | 12  | ---       | 7     | 6  | 3   | 4 - 5      |                                                                                                      |
| 32GA7                                                      | Diode     | 3     | 7  | 0  | 18 | 12  | ---       | ---   | 4  | --- | 5 - 7      | Key at 6; Must show short on 4 - 5                                                                   |
| 32GA7                                                      | Pentode   | 3     | 3  | 4  | 19 | 12  | ---       | 4 - 5 | 9  | --- | 1 - 3      | Key at 2                                                                                             |
| 32HQ7                                                      | Diode     | 3     | 1  | 0  | 20 | 12  | 7         | ---   | 2  | --- | 1 - 11     | Key at 0                                                                                             |
| 32HQ7                                                      | Pentode * | 4     | 8  | 10 | 13 | 12  | 1         | 4     | 11 | 3   | 8 - 6      | Key at 7; Throw lever #1 to "W" position before inserting tube                                       |
| 33GT7                                                      | Diode     | 3     | 3  | 0  | 15 | 13  | ---       | ---   | 6  | --- | 3 - 5      | Key at 4; Use red grid cap                                                                           |
| 33GT7                                                      | Pentode   | 3     | 3  | 2  | 17 | 13  | ---       | 1     | 9  | 2   | 3 - 5      |                                                                                                      |
| 33GY7                                                      | Diode     | 3     | 4  | 0  | 15 | 13  | ---       | ---   | 5  | --- | 2 - 4      | Key at 3; Use red grid cap                                                                           |
| 33GY7                                                      | Pentode   | 3     | 3  | 2  | 18 | 13  | ---       | 2     | 9  | 1   | 3 - 5      |                                                                                                      |
| 33HE7 *                                                    | Diode     | 3     | 10 | 0  | 15 | 13  | ---       | ---   | 2  | --- | 1 - 11     |                                                                                                      |
| 33HE7 *                                                    | Pentode   | 5     | 6  | 0  | 5  | 13  | 4         | 5     | 11 | 3   | 1 - 11     |                                                                                                      |
| 33JR6                                                      |           | 4     | 4  | 5  | 20 | 12  | 1         | 6     | 9  | 2   | 4 - 5      | Must show short on 1 - 7                                                                             |

| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |           |       |   |    |    |    |           |     |       |     |               |                                                                                                                                                               |
|------------------------------------------------------------|-----------|-------|---|----|----|----|-----------|-----|-------|-----|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                            |           | LEVER |   |    |    |    |           |     |       |     |               |                                                                                                                                                               |
| TUBE                                                       | SECTION   | A     | B | C  | D  | E  | W         | X   | Y     | Z   | FIL.<br>CONT. | COMMENT                                                                                                                                                       |
| 33JV6                                                      |           | 5     | 4 | 0  | 5  | 13 | ---       | 8   | 11    | 3   | 4 - 6         | Key at 5; Must show short on 2 - 9                                                                                                                            |
| 34CD3                                                      |           | 5     | 1 | 0  | 5  | 13 | ---       | --- | 4     | --- | 1 - 11        | Key at 0                                                                                                                                                      |
| 34CE3                                                      |           | 5     | 1 | 0  | 5  | 13 | ---       | --- | 4     | --- | 1 - 11        | Key at 0                                                                                                                                                      |
| 34CM3                                                      |           | 3     | 4 | 0  | 17 | 13 | 2         | --- | 7     | --- | 4 - 5         | Must show short on 2 - 7                                                                                                                                      |
| 34DK3                                                      |           | 3     | 4 | 0  | 20 | 13 | 3 - 9     | --- | 2 - 7 | --- | 4 - 5         |                                                                                                                                                               |
| 34R3                                                       |           | 3     | 4 | 0  | 17 | 13 | 2         | --- | 9     | --- | 4 - 5         | Must show short on 2 - 9                                                                                                                                      |
| 35C3                                                       |           | 3     | 3 | 0  | 16 | 13 | ---       | --- | 5     | --- | 3 - 4         |                                                                                                                                                               |
| 35DZ8                                                      | Triode    | 1     | 4 | 20 | 18 | 13 | ---       | --- | 9     | 1   | 4 - 5         |                                                                                                                                                               |
| 35DZ8                                                      | Pentode   | 2     | 4 | 7  | 12 | 13 | ---       | 7   | 6     | 3   | 4 - 5         |                                                                                                                                                               |
| 35LR6                                                      |           | 5     | 4 | 0  | 6  | 13 | 1         | 6   | 11    | 8   | 2 - 4         | Key at 3                                                                                                                                                      |
| 36KD6                                                      |           | 5     | 3 | 0  | 5  | 13 | 2         | 7   | 11    | 9   | 3 - 5         | Key at 4; Must show short on 1 - 2 - 7 - 8;<br>Black cap goes to top of tube                                                                                  |
| 36LW6                                                      |           | 1     | 7 | 0  | 5  | 13 | 1 - 4 - 6 | 3   | 11    | 5   | 7 - 8         | Must show short on 1 - 2 - 5 - 6; Cathode<br>short test - Depress 2 - 6 together                                                                              |
| 36MC6                                                      |           | 3     | 4 | 15 | 20 | 13 | 6 - 7     | 1   | 11    | 2   | 5             | Must show short on 1 - 2 - 6 - 7; Grid short<br>test - Depress 2 - 6 together; Screen short<br>test - Depress 1 - 7 together; Grid cap goes<br>to top of tube |
| 38HE7                                                      | Diode     | 3     | 1 | 0  | 15 | 13 | ---       | --- | 2     | --- | 1 - 11        | Key at 0                                                                                                                                                      |
| 38HE7                                                      | Pentode   | 5     | 6 | 0  | 5  | 13 | 4         | 5   | 11    | 3   | 6 - 8         | Key at 7                                                                                                                                                      |
| 38HK7                                                      | Diode     | 3     | 1 | 0  | 15 | 13 | ---       | --- | 2     | --- | 1 - 11        | Key at 0                                                                                                                                                      |
| 38HK7                                                      | Pentode * | 5     | 6 | 0  | 5  | 13 | 4         | 5   | 11    | 3   | 6 - 8         | Key at 7; * CAUTION - Throw lever #4 to "W"<br>before inserting tube                                                                                          |
| 40KD6                                                      |           | 5     | 3 | 0  | 5  | 13 | 2         | 7   | 11    | 9   | 3 - 5         | Key at 4; Must show short on 1 - 2 - 7 - 8;<br>Cap goes to top of tube                                                                                        |
| 40KG6                                                      | *         | 1     | 4 | 8  | 26 | 13 | 1 - 2 - 3 | 7   | 11    | 8   | 4 - 5         | * Must use magnoval adapter; Must show<br>short on 1 - 2 - 3 - 6 - 7 - 8; Black cap goes<br>to top of tube                                                    |
| 40SUA                                                      |           | 1     | 2 | 21 | 35 | 3  | ---       | 4   | 3     | 11  | 2 - 7         |                                                                                                                                                               |
| 42EC4                                                      | *         | 3     | 4 | 0  | 16 | 13 | 7 - 8     | --- | 2     | --- | 4 - 5         | * Must use magnoval adapter; Must show<br>short on 2 - 7 - 8; Cap goes to top of tube                                                                         |
| 42KN6                                                      |           | 1     | 5 | 12 | 25 | 13 | 9         | 3   | 11    | 2   | 5 - 7         | Key at 6; Must show short on 4 - 9; Black<br>cap goes to top of tube                                                                                          |
| 50BM8                                                      | Triode    | 2     | 4 | 32 | 10 | 14 | ---       | --- | 9     | 1   | 4 - 5         |                                                                                                                                                               |
| 50BM8                                                      | Pentode   | 2     | 4 | 9  | 10 | 14 | ---       | 7   | 6     | 3   | 4 - 5         |                                                                                                                                                               |
| 50GY7 *                                                    | Diode     | 3     | 4 | 0  | 18 | 14 | ---       | --- | 5     | --- | 2 - 4         | * Key at 3; Use red grid cap                                                                                                                                  |
| 50GY7 *                                                    | Pentode   | 3     | 3 | 2  | 18 | 14 | ---       | 2   | 9     | 1   | 2 - 4         | * Key at 4                                                                                                                                                    |
| 50HN5                                                      |           | 5     | 4 | 0  | 25 | 14 | 1         | 9   | 7     | 2   | 4 - 5         | Must show short on 1 - 2                                                                                                                                      |
| 50JY6                                                      |           | 5     | 2 | 0  | 6  | 14 | 1         | 4   | 11    | 5   | 2 - 7         | Must show short on 1 - 4                                                                                                                                      |
| 53HK7                                                      | Diode     | 3     | 1 | 0  | 15 | 14 | ---       | --- | 2     | --- | 1 - 11        | Key at 0                                                                                                                                                      |
| 53HK7                                                      | Pentode * | 5     | 6 | 0  | 5  | 14 | 4         | 5   | 11    | 3   | 6 - 8         | Key at 7; *CAUTION - Throw lever #4 to "W"<br>before inserting tube                                                                                           |

| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |           |       |   |    |    |    |           |     |    |     |            |                                                                                                                                           |
|------------------------------------------------------------|-----------|-------|---|----|----|----|-----------|-----|----|-----|------------|-------------------------------------------------------------------------------------------------------------------------------------------|
|                                                            |           | LEVER |   |    |    |    |           |     |    |     |            |                                                                                                                                           |
| TUBE                                                       | SECTION   | A     | B | C  | D  | E  | W         | X   | Y  | Z   | FIL. CONT. | COMMENT                                                                                                                                   |
| 58HE7                                                      | Diode     | 3     | 1 | 0  | 15 | 14 | ---       | --- | 2  | --- | 1 - 11     | Key at 0                                                                                                                                  |
| 58HE7                                                      | Pentode * | 5     | 6 | 0  | 5  | 14 | 4         | 5   | 11 | 3   | 6 - 8      | Key at 7; * CAUTION - Throw lever #4 to "W" before inserting tube                                                                         |
| 60HL5                                                      |           | 5     | 4 | 0  | 14 | 14 | 1         | 9   | 7  | 2   | 4 - 5      | Must show short on 1 - 2                                                                                                                  |
| 163PEN                                                     |           | 1     | 4 | 7  | 7  | 11 | ---       | 9   | 7  | 2   | 4 - 5      |                                                                                                                                           |
| 171DDP                                                     | Pentode   | 4     | 4 | 12 | 10 | 11 | ---       | 9   | 7  | 2   | 4 - 5      |                                                                                                                                           |
| 171DDP                                                     | Diode     | 3     | 4 | 0  | 23 | 11 | ---       | --- | 8  | --- | 4 - 5      |                                                                                                                                           |
| 171DDP                                                     | Diode     | 3     | 4 | 0  | 23 | 11 | ---       | --- | 7  | --- | 4 - 5      |                                                                                                                                           |
| 396A                                                       | Triode-1  | 1     | 1 | 21 | 9  | 7  | ---       | --- | 4  | 3   | 1 - 9      |                                                                                                                                           |
| 396A                                                       | Triode-2  | 1     | 1 | 21 | 9  | 7  | ---       | --- | 6  | 7   | 1 - 9      |                                                                                                                                           |
| 403B                                                       |           | 1     | 3 | 22 | 16 | 7  | ---       | 6   | 5  | 1   | 3 - 4      | Must show short on 2 - 7; Cathode short test                                                                                              |
| TJ880                                                      |           | 1     | 4 | 10 | 6  | 7  | ---       | 8   | 7  | 2   | 4 - 5      | Depress 2 - 7 together                                                                                                                    |
| 2713                                                       |           | 3     | 4 | 7  | 32 | 7  | 7         | 1   | 6  | 9   | 4 - 5      | Must show short on 1 - 3 - 6 - 9                                                                                                          |
|                                                            |           |       |   |    |    |    |           |     |    |     | 4 - 5      | Must show short on 2 - 7                                                                                                                  |
| 5763                                                       |           | 1     | 4 | 27 | 10 | 7  | 8         | 6   | 1  | 9   | 4 - 5      | Must show short on 8 - 9; Grid short test -                                                                                               |
| 5823                                                       |           | 7     | 1 | 0  | 0  | 18 | ---       | --- | 1  | --- | ---        | Depress 8 - 9 together                                                                                                                    |
| 5844                                                       | Triode-1  | 1     | 3 | 10 | 14 | 7  | ---       | --- | 2  | 5   | 3 - 4      | Must show short on 3 - 7                                                                                                                  |
| 5844                                                       | Triode-2  | 1     | 3 | 10 | 14 | 7  | ---       | --- | 1  | 6   | 3 - 4      |                                                                                                                                           |
| 5845 *                                                     | Plate-1   | 4     | 3 | 0  | 50 | 5z | 7         | --- | 5  | --- | 3 - 4      | * CAUTION: Throw lever 7 to "W" position before inserting tube; Set switch "E" to #6 if there is no 5z position; Good tube reads above 30 |
| 5845 *                                                     | Plate-2   | 4     | 3 | 0  | 50 | 5z | 7         | --- | 1  | --- | 3 - 4      |                                                                                                                                           |
| 5896                                                       | Diode-1   | 1     | 3 | 0  | 5  | 7  | ---       | --- | 5  | --- | 3 - 6      |                                                                                                                                           |
| 5896                                                       | Diode-2   | 1     | 3 | 0  | 5  | 7  | ---       | --- | 1  | --- | 3 - 6      |                                                                                                                                           |
| 5933                                                       |           | 7     | 1 | 20 | 10 | 7  | ---       | 2   | 12 | 3   | 1 - 5      | Use red grid cap                                                                                                                          |
| 6012                                                       |           | 2     | 2 | 10 | 0  | 7  | ---       | 8   | 5  | 3   | 2 - 7      |                                                                                                                                           |
| 6084                                                       |           | 3     | 4 | 7  | 32 | 7  | 7         | 1   | 6  | 9   | 4 - 5      | Must show short on 2 - 7                                                                                                                  |
| 6085                                                       | Triode-1  | 1     | 9 | 27 | 10 | 7  | ---       | --- | 1  | 2   | 4 - 5 - 9  |                                                                                                                                           |
| 6085                                                       | Triode-2  | 1     | 9 | 27 | 10 | 7  | ---       | --- | 6  | 7   | 4 - 5 - 9  |                                                                                                                                           |
| 6094                                                       |           | 4     | 3 | 5  | 8  | 7  | 6 - 7 - 9 | 2   | 4  | 1   | 3 - 5      | Must show short on 1 - 2 - 4 - 6 - 7 - 9                                                                                                  |
| 6216A                                                      |           | 1     | 4 | 5  | 8  | 7  | 6         | 7   | 1  | 2   | 4 - 5      | Must show short on 1 - 3 - 6 - 8; Cathode short test - Depress 3 - 8 together                                                             |
| 6227                                                       |           | 1     | 4 | 10 | 16 | 7  | ---       | 8   | 7  | 2   | 4 - 5      | Must show short on 1 - 6                                                                                                                  |
| CK6293                                                     |           | 3     | 2 | 6  | 21 | 7  | ---       | 3   | 11 | 5   | 7          | Must show short on 1 - 4 - 6; Cathode short test - Depress 1 - 4 - 6 together                                                             |
| CK6526                                                     |           | 4     | 5 | 6  | 9  | 2  | ---       | 2   | 1  | 4   | 3 - 5      |                                                                                                                                           |
| PL6574                                                     |           | 3     | 1 | 20 | 25 | 7  | ---       | 6   | 3  | 5   | 7          |                                                                                                                                           |
| 6686                                                       |           | 4     | 4 | 4  | 9  | 7  | 1         | 8   | 7  | 2   | 4 - 5      |                                                                                                                                           |
| 6689                                                       |           | 1     | 4 | 12 | 20 | 7  | ---       | 1   | 6  | 2   | 5          |                                                                                                                                           |
| 6939                                                       | Pent-1    | 1     | 9 | 7  | 14 | 7  | ---       | 7   | 8  | 3   | 4 - 5      |                                                                                                                                           |



| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |          |       |   |    |    |    |           |     |       |   |            |                                                                                                                        |
|------------------------------------------------------------|----------|-------|---|----|----|----|-----------|-----|-------|---|------------|------------------------------------------------------------------------------------------------------------------------|
|                                                            |          | LEVER |   |    |    |    |           |     |       |   |            |                                                                                                                        |
| TUBE                                                       | SECTION  | A     | B | C  | D  | E  | W         | X   | Y     | Z | FIL. CONT. | COMMENT                                                                                                                |
| 6939                                                       | Pent-2   | 1     | 9 | 7  | 14 | 7  | ---       | 7   | 6     | 1 | 4 - 5      |                                                                                                                        |
| 7058                                                       | Triode-1 | 1     | 4 | 12 | 32 | 10 | 9         | --- | 6     | 7 | 4 - 5      |                                                                                                                        |
| 7058                                                       | Triode-2 | 1     | 4 | 12 | 32 | 10 | 9         | --- | 1     | 2 | 4 - 5      |                                                                                                                        |
| 7119                                                       | Triode-1 | 1     | 8 | 27 | 5  | 7  | ---       | --- | 9     | 7 | 4 - 5 - 8  |                                                                                                                        |
| 7119                                                       | Triode-2 | 1     | 8 | 27 | 5  | 7  | ---       | --- | 1     | 2 | 4 - 5 - 8  |                                                                                                                        |
| 7233                                                       |          | 3     | 4 | 16 | 18 | 7  | *         | --- | 1     | 2 | 5          | * 3 - 6 - 7 - 9; Must show short on 1 - 2 - 3 - 6 - 7 - 9                                                              |
| 7308                                                       | Triode-1 | 1     | 4 | 10 | 10 | 7  | ---       | --- | 6     | 7 | 4 - 5      |                                                                                                                        |
| 7308                                                       | Triode-2 | 1     | 4 | 10 | 10 | 7  | ---       | --- | 1     | 2 | 4 - 5      |                                                                                                                        |
| 7320                                                       |          | 1     | 4 | 28 | 7  | 7  | 1         | 9   | 7     | 2 | 4 - 5      | Must show short on 1 - 2                                                                                               |
| 7360                                                       |          | 4     | 4 | 0  | 32 | 7  | ---       | 2   | 6 - 7 | 3 | 4 - 5      |                                                                                                                        |
| 7586                                                       | *        | 2     | 4 | 18 | 10 | 7  | ---       | --- | 1     | 2 | 4 - 5      | *Use G-140 adapter; Connect red grid cap to G-140 plug                                                                 |
| 7643                                                       | Triode   | 1     | 4 | 15 | 10 | 7  | ---       | --- | 1     | 9 | 4 - 5      |                                                                                                                        |
| 7643                                                       | Pentode  | 1     | 4 | 10 | 25 | 7  | ---       | 3   | 6     | 2 | 4 - 5      |                                                                                                                        |
| 7751                                                       |          | 1     | 2 | 5  | 5  | 7  | 1         | 4   | 3     | 5 | 2 - 7      |                                                                                                                        |
| 7788                                                       |          | 5     | 4 | 0  | 13 | 7  | 9         | 6   | 7     | 2 | 4 - 5      | Must show short on 1 - 3 - 6 - 9                                                                                       |
| 7802                                                       | Triode-1 | 2     | 7 | 2  | 9  | 7  | ---       | --- | 2     | 1 | 7 - 8      |                                                                                                                        |
| 7802                                                       | Triode-2 | 2     | 7 | 3  | 9  | 7  | ---       | --- | 5     | 4 | 7 - 8      |                                                                                                                        |
| 7868                                                       |          | 1     | 4 | 14 | 10 | 7  | 6 - 7     | 1   | 9     | 2 | 4 - 5      | Will show short on 1 - 2 - 6 - 7                                                                                       |
| 7898                                                       | Triode-2 | 1     | 4 | 33 | 12 | 10 | 9         | --- | 1     | 2 | 4 - 5      |                                                                                                                        |
| 7898                                                       | Triode-1 | 1     | 4 | 33 | 12 | 10 | 9         | --- | 6     | 7 | 4 - 5      |                                                                                                                        |
| 7984                                                       |          | 2     | 6 | 0  | 7  | 10 | 1         | 5   | 12    | 4 | 6 - 8      | Key at 7; Must show short on 2 - 3 - 9 - 1 - 5; Use red grid cap; Cathode short test - Depress 2 - 3 - 9 together      |
| 8032                                                       |          | 1     | 2 | 6  | 6  | 10 | ---       | 3   | 11    | 5 | 2 - 7      | Must show short on 1 - 4 - 6; Cathode short test - Depress 1 - 4 - 6 together                                          |
| 8056                                                       |          | 3     | 4 | 2  | 20 | 7  | ---       | --- | 1     | 2 | 4 - 5      |                                                                                                                        |
| 8077                                                       |          | 1     | 4 | 16 | 12 | 10 | ---       | 8   | 7     | 2 | 4 - 5      | Must show short on 3 - 9                                                                                               |
| 8102                                                       | Triode   | 5     | 4 | 10 | 11 | 10 | ---       | --- | 1     | 3 | 4 - 5      |                                                                                                                        |
| 8102                                                       | Pentode  | 4     | 4 | 8  | 10 | 10 | ---       | 7   | 6     | 9 | 4 - 5      |                                                                                                                        |
| 8106                                                       |          | 1     | 4 | 25 | 9  | 10 | #         | 3   | 1     | 7 | 4 - 5      | # Throw levers 6 - 8 - 9 to "W"; Must show short on 2 - 3 - 6 - 8 - 9; Cathode short test - Depress 2 - 6 - 9 together |
| 8113                                                       |          | 5     | 3 | 5  | 10 | 7  | 2         | 6   | 5     | 1 | 3 - 4      | Must show short on 2 - 7; Cathode short test - Depress 2 - 7 together                                                  |
| 8136                                                       |          | 1     | 3 | 6  | 29 | 7  | ---       | 6   | 5     | 1 | 3 - 4      |                                                                                                                        |
| 8156                                                       |          | 2     | 5 | 7  | 10 | 10 | 6 - 7 - 8 | 2   | 9     | 1 | 3 - 5      | Key at 4; Must show short on 6 - 7 - 8 - 9 - 12; Use red grid cap; Cathode short tester - Depress 6 - 12 together      |
| 8203                                                       |          | 3     | 4 | 19 | 16 | 7  | ---       | --- | 1     | 2 | 4 - 5      |                                                                                                                        |

| PRECISION 10-12, 10-15, 10-20, 10-22, 10-54 TUBE TEST DATA |         |       |   |    |    |    |       |       |    |   |               |                                                                                                                          |
|------------------------------------------------------------|---------|-------|---|----|----|----|-------|-------|----|---|---------------|--------------------------------------------------------------------------------------------------------------------------|
|                                                            |         | LEVER |   |    |    |    |       |       |    |   |               |                                                                                                                          |
| TUBE                                                       | SECTION | A     | B | C  | D  | E  | W     | X     | Y  | Z | FIL.<br>CONT. | COMMENT                                                                                                                  |
| 8233                                                       | *       | 1     | 4 | 5  | 7  | 7  | ---   | 3     | 1  | 8 | 4 - 5         | * Must use magnoval adapter; Must show short on 2 - 6 - 7 - 9                                                            |
| 8278                                                       | *       | 1     | 4 | 5  | 6  | 7  | 7 - 8 | 1     | 9  | 3 | 4 - 5         | * Must use magnoval adapter; Must show short on 1 - 2 - 3 - 6 - 7 - 8                                                    |
| 8298                                                       |         | 1     | 2 | 6  | 6  | 7  | ---   | 3     | 11 | 5 | 2 - 7         | Must show short on 1 - 4 - 6; Cathode short test - Depress 1 - 4 - 6 together                                            |
| 8417                                                       |         | 1     | 2 | 7  | 7  | 7  | ---   | 4     | 3  | 5 | 2 - 7         |                                                                                                                          |
| 8425                                                       |         | 1     | 3 | 16 | 29 | 7  | ---   | 6     | 5  | 1 | 3 - 4         |                                                                                                                          |
| 8441                                                       |         | 5     | 4 | 12 | 10 | 7  | ---   | ---   | 1  | 2 | 4 - 5         |                                                                                                                          |
| 8532                                                       |         | 1     | 3 | 33 | 6  | 7  | 1 - 5 | ---   | 7  | 6 | 3 - 4         | Must show short on 1 - 5 - 6                                                                                             |
| 8552                                                       |         | 1     | 2 | 6  | 6  | 10 | ---   | 3     | 11 | 5 | 2 - 7         | Must show short on 1 - 4 - 6; Cathode short test - Depress 1 - 4 - 6 together                                            |
| 8908                                                       |         | 3     | 7 | 15 | 20 | 7  | 1 - 2 | 3     | 11 | 5 | 8             | Must show short on 1 - 2 - 5 - 6; Grid-1 short test - Depress 1 - 5 together; Grid-3 short test - Depress 2 - 6 together |
| 8950                                                       | *       | 1     | 3 | 9  | 38 | 10 | ---   | 2 - 7 | 11 | 6 | 3 - 5         | * Key at 4; Must show short on 1 - 2 - 7 - 8                                                                             |
|                                                            |         |       |   |    |    |    |       |       |    |   |               |                                                                                                                          |