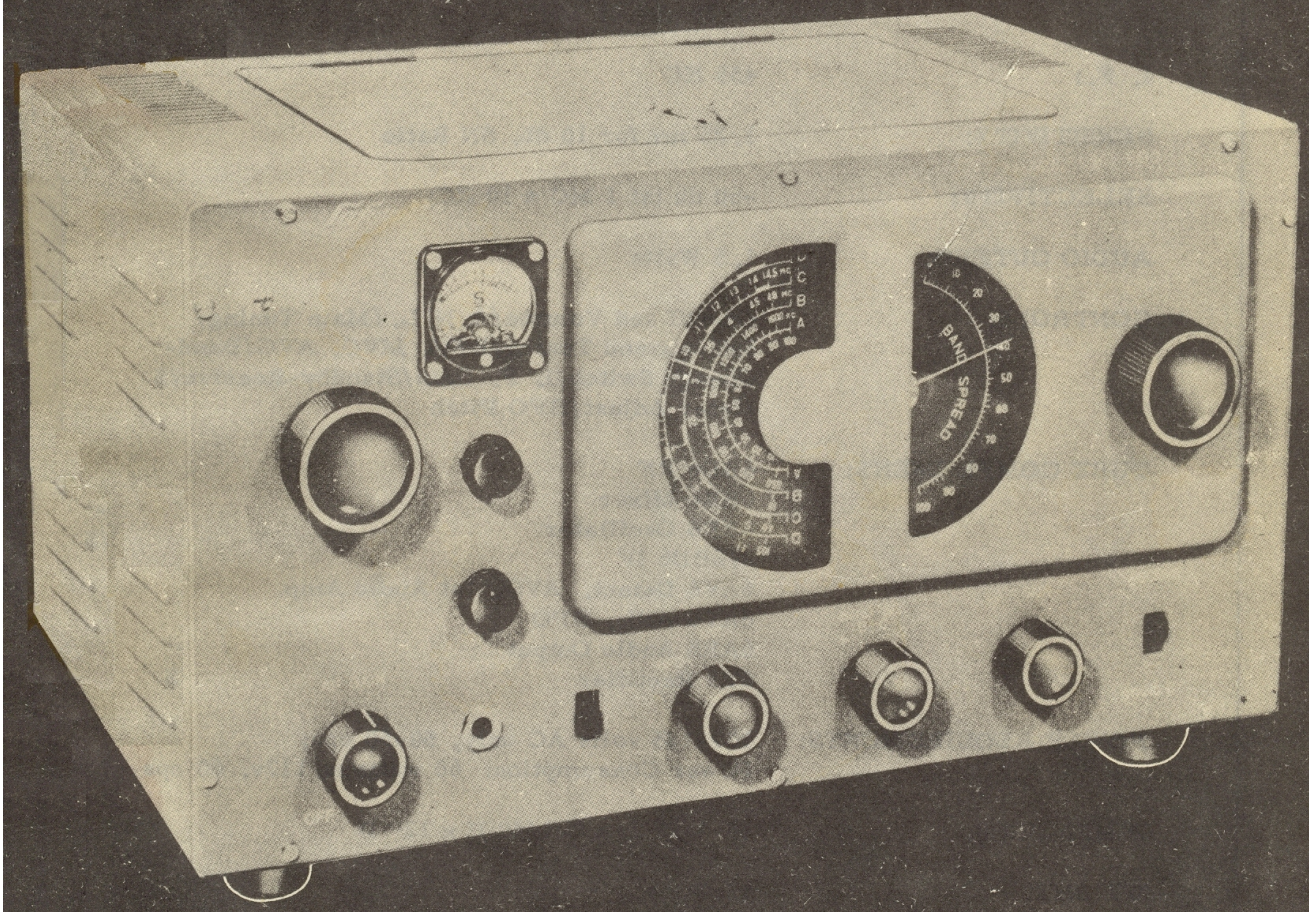
LAFAYETTE KT-200 COMMUNICATIONS RECEIVER



ASSEMBLY MANUAL

Lafayette Radio ELECTRONICS CORP.

111 JERICHO TURNPIKE SYOSSET, L. I., N. Y.

SPECIFICATIONS

FREQUENCY RANGES:	A: 550-1600 KC B: 1.6-4.8 MC C: 4.8-14.5 MC D: 10.5 - 30 MC
I. F.:	455 KC
SENSITIVITY:	1.25 mv for 10 db. SN Ratio
SELECTIVITY:	-60 db (at 1 MC ± 10 KC)
AUDIO OUTPUT:	1.5 Watts
CONTROLS:	On-Off and Volume/A. N. L. /Main Tuning/ Bandspread Tuning/BFO, MVC, AVC/Band-Change Switch/I. F. Gain/Standby-Receive/S Meter Adjust/BFO Pitch
TUBE COMPLEMENT:	6BD6 RF 6BE6 Mixer 6BE6 Oscillator 2/6BD6 IF 6AV6 Detect. AVC, 1st Audio Amp. 6AV6 ANL, BFO 6AR5 Audio Output 5Y3 Rectifier
POWER REQUIREMENTS:	100-125 volts AC only, 50-60 cps; Power Consumption: 60 watts at 117v. 60 cps
DIMENSIONS:	15-1/2" L x 8-1/4" H x 12" D
WEIGHT	19.3 lbs.

1M-162-11-9-2M A

GENERAL DESCRIPTION

Your KT-200 is a high-performance communications receiver incorporating top flight operation with simplicity of construction. Both the overall rugged, compact design and the high quality operation make this unit well suited for Radio Amateurs, Short Wave Listeners, Electronic Experimenters and Marine Installations.

The receiver tunes 550 KC to 30 MC continuously in four switched bands, ABCD. Besides the Main Tuning, there is a Bandspread Tuning Control with a large logging scale which makes tuning the short wave bands quite easy.

The 9 tube circuit does an excellent job of pulling in those weak DX stations. The incoming signal from the antenna is fed into a 6BD6 High Gain RF amplifier (V1). From there it goes through a 6BE6 mixer (V2) where it is mixed with a signal from the 6BE6 oscillator (V3). Note the separation of the oscillator and mixer into two stages, yielding greater stability of operation. The next two stages, V4 and V5, are IF amplifers utilizing 6BD6's. One diode section of V6, 6AV6 dual diode triode, serves as the 2nd detector while the remaining diode and triode sections serve as the AVC rectifier and 1st audio amplifier respectively. The audio signal is then sent to the 6AR5 (V7) which is the final stage of audio amplification. Another 6AV6 (V8) is used as a BFO and Automatic Noise Limiter (ANL). Finally, there is the 5Y3 Full Wave Rectifier.

ALL coils and condensers in the tuning sections are premounted and prealigned. However, alignment procedures have been included on the latter pages of this manual if further alignment is desired.

The KT-200 comes complete with all parts, with the exception of the speaker. The audio output is sufficient to drive any 4 or 8 ohm PM speaker.

UNPACKING INSTRUCTIONS

Check all the included unmounted parts and leads against the Unmounted Parts list below. Some components may differ slightly from the specified values given in the parts list. Such minor differences (where the supplied value falls within the listed tolerance for the component, such as a 510K resistor for a 470K 10% resistor) do not indicate an error. These substitutions are checked carefully before being made, and are only made in circuits allowing such substitutions. However, any large variation from the specified value or any shortage of parts should be reported to us immediately. Include with your letter, the inspection slip from the package.

Included also are all the necessary leads required to carry out the relatively simple wiring of this kit. Your KT-200 kit consists of the main chassis and cabinet with all major parts already mounted. These are listed in the Mounted Parts list for your convenience. Resistors and capacitors to be connected will be found on marked cards which will enable you to identify them easily. In addition, the components are themselves marked with values.

DAMAGE IN SHIPMENT

If your kit was damaged in shipment, please notify us immediately, describing the damage, and get in touch with the carrier so that you can make a claim. We will cooperate fully in such cases, but please note that only you can recover from the carrier.

REPLACEMENT WARRANTY

In accordance with the terms of the industry-wide Electronics Industry Association (EIA) warranty, Lafayette Radio will replace, free of charge, any defective parts returned to us within 90 days from the date of purchase of this kit by the original purchaser. Such replacement will be made only in cases where parts were defective at the time of sale or became defective in normal operation during the 90-day warranty period. Parts damaged during kit construction or through customer's wiring error are not subject to replacement.

UNMOUNTED PARTS LIST

CIRCUIT DESIGNATION	DESCRIPTION	QUANTITY
	CAPACITORS	
C1, C3	250 μμfd (PF) ± 10% mica	2
C2, C4, C5, C7, C8, C9, C10, C13, C14, C23	0.01 μfd ceramic disc	10
C6, C15, C17	100 μμfd (PF) ± 10% mica	3
C11	2.2 μμfd disc cap	1
C12	0.05 μfd 400v tubular	1
C16, C18, C24	0.01 μfd 400v tubular	3
C19	10 μfd 50v Electrolytic	1
C20	0.005 μfd 400v tubular	1
C25	0.05 μfd 400v Molded	1
	RESISTORS	
R1, R7	1 Meg ohm 1/4 watt 10%	2
R2, R11, R8	300 ohm 1/2 watt 10%	3
R3	1.5K ohm 1/2 watt 10%	1
R4	15K ohm 1/2 watt 10%	1
R5	20K ohm 1/4 watt 10%	1
R6, R9, R12, R13, R15	1K ohm 1/2 watt 10%	5
R10	100K ohm 1/4 watt 10%	1
R14	2 Meg ohm 1/4 watt 10%	1
R16	5 Meg ohm 1/4 watt 10%	1
R18	250 K ohm 1/2 watt 10%	1
R19	500K ohm 2 watt 10%	1
R20	500 ohm 1 watt 10%	1
R21	2K ohm 10 watt 10%	1
R22	50K ohm 1/2 watt 10%	1
	CABLES, LEADS AND SLEEVING	
	Single conductor shielded cable	6 ft.
	Black lead	10 ft.
	Blue lead	8 ft.
	Yellow lead	10 ft.
	Red lead	13 ft.
	Bare wire	3 ft.
	Sleeving	1 ft.
	MISCELLANEOUS	
	6 ft. AC line cord and plug	1
	Speaker lead	6 ft. 6 inches
	5-pin plug	1
	Standard telephone plug	1

MOUNTED PARTS LIST

CIRCUIT DESIGNATION	DESCRIPTION	QUANTITY
CAPACITORS		
C21a, C21b	40-40 μfd 300 volt electrolytic	1
C100A, C100B, C100C, C100D	Antenna Tuning Section Trimmer Cond.	4
C101A, C101B, C101C, C101D	RF Tuning Section Trimmer Cond.	4
C102A, C102B, C102C, C102D	Osc. Tuning Section Trimmer Cond.	4
C102E, C102F, C102G	Osc. Tuning Section Padder Cond.	3
C200A-Ant., C200B-RF, C200C-Osc.	Main Tuning Cond. 3 section gauged	1
C300	BFO Tuning Cond. (Pitch)	1
RESISTORS, SWITCHES AND CONTROLS		
R17, S1	500K ohm control with SPDT switch (Audio Gain)	1
R23	10K ohm control (IF Gain)	1
R24	1K ohm control (S-Meter Adj.)	1
R25	30 ohm 1/2 watt	1
S2	SPDT Slide Switch	1
S3a, S3b	2 Section Rotary switch	1
S4a, S4b, S4c	3 Section Rotary Switch (Band switch)	1
S5	SPDT Slide Switch	1
TRANSFORMERS, AND COILS		
L100A, L100B, L100C, L100D	Ant. Tuning Section Coils	4
L101A, L101B, L101C, L101D	RF Tuning Section Coils	4
L102A, L102B, L102C, L102D	Osc. Tuning Section Coils	4
T3	BFO Coil	1
T1	Power Transformer	1
T2	Audio Output Transformer	1
IFT-1, IFT-2, IFT-3	IF Transformers	3
KNOBS		
	Large Tuning Knobs	2
	Medium Size Control Knobs	4
	Small Control Knobs	2
MISCELLANEOUS		
	Main Chassis	1
	Front Panel	1
	Cabinet	1
	S Meter	1
	Fuse Holder	1
	1 Amp Fuse	1
	Terminal Posts	9
	Terminal Strip	1
	Pilot Light Assembly	1
	7 Pin Miniature Tube Sockets	8
	Octal Socket	1
	Rubber Feet	4

MOUNTED PARTS LIST (Cont'd)

CIRCUIT DESIGNATION	DESCRIPTION	QUANTITY
	JACKS	
J1	Normally Closed Phone Jack	1
J2	5 Prong Socket Jack	1
	TUBES AND LAMP	
V1, V4, V5	6BD6	3
V2, V3	6BE6	2
V6, V8	6AV6	2
V7	6AR5	1
V9	5Y3	1
PL 1	#40 Pilot Light	1

TOOLS YOU WILL NEED

Just a few standard tools are all you will need to successfully assemble this kit. You should use a small iron (about 25 to 50 watts) for soldering. A pair of long-nose pliers; a pair of diagonal or side-cutting pliers; a small screwdriver and a small adjustable wrench complete your tool requirements; an ohmmeter such as the Lafayette TE-10, TK-10, or RW-60 would be of value.

STEP-BY-STEP INSTRUCTIONS

The instructions which follow have been carefully planned and arranged in the most logical and practical sequence possible. Skilled engineers and technical writers have prepared these instructions while actually assembling samples of this kit. We are certain we have provided you with the best and fastest method of assembling your kit.

Each instructional step should be read and thoroughly understood before it is performed. In this way, errors will be avoided. Check off each step in the check space ( ) provided. In this way, you will avoid omitting any steps. You might also use a colored pencil to cross out each wire and component on the wiring pictorials after insertion.

Assembly and wiring pictorials have been provided to assist you in following the step-by-step instructions. All components have been assigned letter and/or number designations. Those components which also appear on the schematic diagram have generally been assigned the same designations on the wiring pictorials. Other components, such as terminal strips, solder lugs, etc. have been assigned letter and/or number designations.

The instructions tell you when to solder and when not to solder a connection. When you see "No Solder" (NS) after or during a step, simply wrap or "crimp" the lead to the terminal and proceed to the next step. When all leads have been connected to this terminal, a solder designation (S) will follow. The figures which appear with these designations indicate the number of connections which have been made to that terminal or lug when the "Solder" instruction is given.

Example: If a connection being soldered has two leads attached to it, the designation would be -- "(S-2)"

"S" = Solder
"2" = Number of connections being soldered

READ CAREFULLY BEFORE PROCEEDING

NOTES ON WIRING

Each kit is supplied with more than enough hook-up wire for complete wiring. A length of insulated hook-up wire, unless otherwise specified, should have about 1/4" of insulation removed or "stripped" from each end. Excessive wire exposure increases the possibility of shorts to nearby wiring or terminals. Use a razor blade or sharp knife to cut off the insulation; during this operation, be sure not to cut into the wire itself. The length to which each hook-up wire is to be cut is specified in the step-by-step instructions, and allowance has been made for the removal of the insulation from each end. The hook-up wire supplied is solid wire, however some of the enclosed leads are stranded; the latter should be tinned (coated with solder) before connecting to the specified point. To prepare these transformer leads, remove a 1/4" length of insulation from the end of the lead, twist all the strands together with your fingers, and tin the end. To connect a wire to a lug as specified in the step-by-step instructions, put about three-quarters of the bared end of the wire through the hole in the lug, and then, using the long-nose pliers, wrap the wire around the lug.

NOTES ON SOLDERING

The importance of good soldering technique in the construction of kits cannot be over-emphasized. Good solder joints are essential if you are to realize the quality and stability of performance that has been engineered into this unit. If you are inexperienced in soldering, we suggest that you spend a little time practicing with pieces of scrap wire and an old tube socket or terminal strip before attempting to do any soldering on your kit. The purpose of soldering an electrical connection is to provide a permanent electrical bond between the wires and terminals to be joined. This prevents the formation of corrosion which insulates or produces unwanted resistance between the joined parts. It is not at all difficult to make a good solder connection that will provide the required electrical bond if you will simply observe a few basic rules for good soldering.

1. Use only good quality, rosin-core solder made specifically for radio and television use; a good composition is 60 per cent tin and 40 per cent lead (usually indicated as 60/40). Acid core solder or paste flux must NOT, under any circumstances, be used, as the corrosive effects of these materials will cause much damage to the circuit components.

CAUTION

THE USE OF ACID CORE SOLDER OR PASTE FLUX ON THIS KIT OR ANY PORTION THEREOF AUTOMATICALLY VOIDS OUR WARRANTY COVERAGE.

2. Use a good soldering iron, 25-50 watts. The tip of the iron must be kept clean and well tinned, in accordance with the instructions of the soldering iron manufacturer, to obtain consistently good connections. The tip should present a bright appearance and be free of excess solder. An old rag or a pad of steel wool may be used to wipe the hot tip clean occasionally during use.

3. Be sure leads and terminals to be joined are clean and free of wax or corrosion before soldering. The solder will not adhere properly to the joint if the leads and terminals are dirty or corroded. This will usually result in a "cold" or high resistance connection.

4. A good mechanical connection should always be made before soldering, by crimping the leads on the terminals with your pliers. Do not rely on solder alone for physical strength. Stranded hook-up wire should always be tinned with solder before being connected.

5. To solder properly, apply the iron to the joint for a few seconds; then apply the solder

and hold the iron on the connection until the solder flows freely. The solder must flow completely over the connection. Simply melting drops of solder onto the connection will not produce the desired results, but will result in a "cold" solder connection. This presents a dull and pitted or "grainy" appearance. A good connection will have a smooth and shiny appearance. Remember, the joint itself must be heated sufficiently to melt solder before the solder will flow smoothly and freely in and around the connection; however, you must be careful not to apply heat too long. Excessive heat from the iron may damage components and insulation on wires connected to the joint. When soldering a joint having a small component connected to it (a 1/2 watt resistor, for example) the component may be protected from excessive heat from the iron by grasping the lead between the joint and the component with long-nose pliers. The pliers will then conduct most of the heat away from the component, preventing overheating. Do not use too much solder when making a connection. Use only enough to completely cover all leads and to fill lug or terminal holes. Excessive use of solder may result in the formation of solder "bridges" or shorts between adjacent terminals or nearby wiring, particularly on tube sockets and switch terminals. Also, solder may flow into the switch contacts, destroying switch action.

PRE-WIRING PROCEDURE

1. ( ) Remove the larger of the two Phillips head screws found on the underside of the chassis.
2. ( ) Remove the 10 Phillips screws found around the edge of the front panel.
3. ( ) The chassis and panel assembly can now be removed by pulling the panel out of the cabinet, with a slight upward-outward motion.
4. ( ) Slip all retaining clips from the tube tops and remove all the tubes from the chassis.
5. ( ) You will notice, on the underside of the chassis, that there are 12 tinned ground lugs. (See Pictorial 1.) These must be bent away from the chassis so that the appropriate wires can be wrapped around them. This is most easily accomplished by exerting a downward force on each lug (with the exception of GP1 which must be pried up) from the top of the chassis with a screw driver.
6. ( ) Now turn the chassis over with the knobs and front panel facing away from you. Proceed as follows to wire.

WIRING

Underchassis Wiring

Refer to Pictorial 1 for the following steps:

1. ( ) Connect one end of a 2-1/2" length of bare wire to R23 lug 2 (S-1). Connect the other end to GP1 (S-1)
2. ( ) Connect pins 5 (NS), 6 (NS), and 7 (NS) of V3 together using a 1" length of bare wire. Now solder V3 pin 6 (S-1) and V3 pin 7 (S-1).
3. ( ) Connect one end of a 2-1/2" length of bare wire through the center shield of V4 (NS) to pin 2 of V4 (S-1) Solder the center shield of V4 (S-1). Now connect the remaining end of the bare wire to GP2 (NS).
4. ( ) Connect one end of a 3" length of bare wire through the center shield of V5 (NS) to pin 2 of V5 (S-1) Solder the center shield of V5 (S-1). Now connect the remaining end of bare wire to GP6 (NS).
5. ( ) Connect one end of a 2" length of bare wire to TP3 lug 2 (NS). Connect the other end to GP6 (S-2)
6. ( ) Connect one end of a 3" length of bare wire through pin 4 of V6. (NS) through one hole of the center shield of V6 (NS) to pin 2 of V6 (NS). Connect the free end from pin 4 to TP4 lug 3 (NS)
7. ( ) Connect one end of a 3" length of bare wire to the center shield of V6 (S-2). Wrap the remainder of the wire once around GP8 (NS) and connect it to TP5 lug 2 (NS).

8. ( ) Connect one end of a 3" length of bare wire to TP8 (S-1). Connect the other end to GP8 (S-2).

9. ( ) Connect one end of a 5" length of bare wire to T1 lug 6 (S-1). Wrap the remainder of the wire once around T1 lug 2 (NS) and terminate the wire at GP10 (NS).

10. ( ) Connect one end of a 3-1/2" length of bare wire to the center shield of V8 (S-1). Wrap the remainder of the wire once around GP11 (NS) and connect the free end to T3 lug E (S-1).

11. ( ) Connect one end of a 3" length of bare wire to J1 lug 3 (S-1). Connect the other end to GP12 (NS).

12. ( ) Connect one end of a 2-1/4" length of bare wire through lug 4 of S2 (NS) to lug 3 of S2 (S-1). Solder S2 lug 4 (S-1). Connect the free end from S2 lug 4 to J1 lug 1 (NS).

13. ( ) Wrap the shield wire located at the base of the Oscillator Tuning Section once around its corresponding ground lug GP3 and trim off excess (NS).

14. ( ) Strip 1/2" insulation from each end of a 3-1/2" black lead. Connect one end to the center shield of V3 (S-1). Connect the remaining end to GP3 (NS).

15. ( ) Wrap the shield wire located at the base of the RF Tuning Section once around its corresponding ground lug GP4 and trim off excess (NS).

16. ( ) Strip 1/2" insulation from each end of a 2-1/2" black lead. Connect one end to the center shield of V2 (NS). Connect the other end to GP4 (NS).

17. ( ) Wrap the shield wire located at the base of the Antenna Tuning Section once around its corresponding ground lug GP5 and trim off excess (NS).

18. ( ) Strip 1/2" insulation from each end of a 3" black lead. Connect one end through pin 2 of V1 (NS) to the center shield of V1 (NS). Solder V1 pin 2 (S-1). Connect the free end from V1 pin 2 to GP5 (S-2).

19. ( ) Connect one end of a 3-3/4" black lead to C21 lug 2 (S-1). Connect the other end to GP10 (S-2).

20. ( ) Connect one end of a 3" black lead to GP12 (NS). Push the remaining end through chassis hole BB and leave unconnected.

21. ( ) Connect one end of a 5-1/2" black lead to S3 lug 10 (S-1). Connect the other end to GP12 (S-3).

22. ( ) Connect one end of an 8" black lead to S1 lug 2 (located at the rear of R17) (S-1). Connect the free end to T1 lug 11 (NS).

23. ( ) Twist two 10-1/4" black and yellow leads together. Connect one end of the yellow lead to T1 lug 8 (NS). Connect the adjacent end of the black lead to T1 lug 7 (NS). Connect the other end of the yellow lead to V7 pin 4 (NS), and the adjacent end of the black lead to V7 pin 3 (NS).

24. ( ) Twist two 5-1/2" black and yellow leads together. Connect one end of the yellow lead to V7 pin 4 (S-2). Connect the adjacent end of the black lead to V7 pin 3 (S-2). Connect the other end of the yellow lead to V6 pin 4 (NS), and the adjacent end of the black lead to V6 pin 3 (NS).

25. ( ) Twist two 7-1/2" black and yellow leads together. Connect one end of the yellow lead to V6 pin 4 (S-3). Connect the adjacent end of the black lead to V6 pin 3 (S-2). Connect the other end of the yellow lead to V5 pin 4 (NS) and the adjacent end of the black lead to V5 pin 3 (NS).

26. ( ) Twist two 7" black and yellow leads together. Connect one end of the yellow lead to V5 pin 4 (S-2). Connect the adjacent end of the black lead to V5 pin 3 (S-2). Connect the other end of the yellow lead to V1 pin 4 (NS) and the adjacent end of the black lead to V1 pin 3 (NS).

27. ( ) Twist two 4" black and yellow leads together. Connect one end of the yellow lead to V1 pin 4 (S-2). Connect the adjacent end of the black lead to V1 pin 3 (S-2). Connect the other end of the yellow lead to V4 pin 4 (NS), and the adjacent end of the black lead to V4 pin 3 (NS).

28. ( ) Twist two 3-1/2" black and yellow leads together. Connect one end of the yellow lead to V4 pin 4 (S-2). Connect the adjacent end of the black lead to V4 pin 3 (S-2). Connect the other end of the yellow lead to V2 pin 4 (NS), and the adjacent end of the black lead to V2 pin 3 (NS).

29. ( ) Twist two 4-3/4" black and yellow leads together. Connect one end of the yellow lead to V2 pin 4 (S-2). Connect the adjacent end of the black lead to V2 pin 3 (S-2). Connect the other end of the yellow lead to V3 pin 4 (NS) and the adjacent end of the black lead to V3 pin 3 (NS).

30. ( ) Twist two 9" black and yellow leads together. Connect one end of the yellow lead to V3 pin 4 (S-2). Connect the adjacent end of the black lead to V3 pin 3 (S-2). Push the other end of the twisted pair through chassis hole DD and leave unconnected.

31. ( ) Connect one end of an 11-1/2" red lead to C21 lug 1 (NS). Connect the other end to V7 pin 6 (NS). Dress as shown.

32. ( ) Twist two 3-1/2" red and yellow leads together. Connect one end of the red lead to T1 lug 4 (NS). Connect the adjacent end of the yellow lead to T1 lug 5 (S-1). Connect the other end of the red lead to V9 pin 8 (NS), and the adjacent end of the yellow lead to V9 pin 2 (NS)

33. ( ) Connect one end of a 6" red lead to T1 lug 4 (S-2). Connect the other end to C21 lug 2 (NS).

34. ( ) Connect one end of a 3" red lead to TP9 lug 5 (NS). Connect the other end to C21 lug 2 (S-2).

35. ( ) Connect one end of a 4" red lead to T1 lug 3 (S-1). Connect the other end to V9 pin 4 (S-1).

36. ( ) Connect one end of a 5-1/2" red lead to T1 lug 1 (S-1). Connect the other end to V9 pin 6 (S-1).

37. ( ) Connect one end of a 5" red lead to V7 pin 6 (S-2). Connect the other end to TP4 lug 4 (NS).

38. ( ) Connect one end of a 4-3/4" red lead to TP4 lug 4 (NS). Connect the other end to TP3 lug 3 (NS).

39. ( ) Connect one end of a 4" red lead to TP4 lug 4 (NS). Connect the other end to J2 lug 5 (S-1).

40. ( ) Strip 1/2" insulation from one end of an 11-1/2" red lead. Connect this end through lug 5 of S5 (NS) to lug 6 of S5 (S-1). Solder S5 lug 5 (S-1). Connect the other end of the lead to TP3 lug 3 (NS).

41. ( ) Strip 1/2" insulation from one end of a 14-1/2" red lead. Connect this end through lug 3 of S5 (NS) to lug 4 of S5 (NS). Solder S5 lug 3 (S-1). Connect the other end to J2 pin 1 (S-1). Dress as shown.

42. ( ) Connect one end of a 3" red lead to S5 lug 4 (S-2). Connect the other end to TP1 lug 3 (NS).

43. ( ) Connect one end of a 13-1/2" red lead to TP1 lug 1 (NS). Push the other end of the lead through chassis hole CC and leave unconnected.

44. ( ) Connect one end of a 5-1/2" red lead to S3 lug 12 (S-1). Connect the other end to C21 lug 1 (NS).

45. ( ) Connect one end of a 12" blue lead to TP9 lug 1 (NS). Push the other end of the lead through chassis hole CC and leave unconnected.

46. ( ) Strip 1/2" insulation from each end of a 6" yellow lead. Connect one end through lug 6 of S2 (NS) to lug 5 of S2 (S-1). Solder S2 lug 6 (S-1). Connect the other end of the lead through pin 5 of V8 (NS) to pin 6 of V8 (S-1). Solder V8 pin 5 (S-1).

Refer to Pictorial 2 for the following steps:

47. ( ) Connect one end of a 15-1/2" blue lead to TP9 lug 2 (NS). Connect the other end to V1 pin 7 (NS). Dress as shown.

48. ( ) Twist two 8" black and yellow leads together. Connect one end of the yellow lead to T1 lug 8 (S-2). Connect the adjacent end of the black lead to T1 lug 7 (S-2). Connect the other end of the yellow lead to V8 pin 4 (S-1), and the adjacent end of the black lead to V8 pin 3 (S-1).

49. ( ) Strip 1/2" insulation from one end of a 13-1/4" blue lead. Connect this end through lug 3 of S3 (NS) to lug 2 of S3 (S-1). Solder S3 lug 3 (S-1). Connect the remaining free end of the lead to TP2 lug 1 (NS). Dress as shown.

50. ( ) Connect one end of a 5" blue lead to TP2 lug 1 (NS). Connect the other end to IFT-2 lug E (NS).

51. ( ) Connect one end of a 4-1/4" blue lead to IFT-2 lug E (NS). Connect the other end to TP4 lug 1 (NS).

52. ( ) Connect one end of a 9" blue lead to R23 lug 1 (S-1). Connect the other end to TP2 lug 3 (NS).

53. ( ) Connect one end of a 7" blue lead to TP2 lug 3 (NS). Connect the other end to TP3 lug 1 (NS).

Note: The following four steps (54, 55, 56, 57) involve certain wires already connected to the various tuning sections (Oscillator, RF, Antenna)

54. ( ) Locate the green lead labeled "K" at the base of the Oscillator Tuning Section. The free end of this lead is to be connected to V3 pin 2. Cut the green lead "K" to 2-3/4" in length and connect to V3 pin 2 (S-1).

55. ( ) Locate the brown lead labeled "B" connected to lug B at the base of the RF Tuning Section. The free end of this lead is to be connected to TP1 lug 3. Cut the brown lead "B" to 4-1/2" in length and connect to TP1 lug 3 (NS).

56. ( ) Connect one end of a 3-1/4" red lead to the lug "B", attached to the base of the RF Tuning Section. (S-3). Connect the other end of the red lead to V1 pin 6 (S-1).

57. ( ) Locate the red lead labeled "P" at the base of the RF Tuning Section. The free end of this lead is to be connected to V1 pin 5. Cut the red lead "P" to 4" in length and connect to V1 pin.5 (S-1).

58. ( ) Connect one end of a 3-1/4" red lead to V2 pin 6 (NS). Connect the other end to IFT-1 lug B (NS).

59. ( ) Connect one end of a 4-1/2" red lead to V2 pin 5 (S-1). Connect the other end to IFT-1 lug P (S-1).

60. ( ) Connect one end of a 2" yellow lead to V2 pin 1 (S-1). Connect the other end to V3 pin 1 (NS).

61. ( ) Connect one end of a 2" yellow lead to IFT-1 lug 1 (S-1). Connect the other end to V4 pin 1 (S-1).

62. ( ) Connect one end of a 2" red lead to V4 pin 5 (S-1). Connect the other end to IFT-2 lug P (S-1).

63. ( ) Connect one end of a 2" red lead to V4 pin 6 (NS). Connect the other end to IFT-2 lug B (NS).

64. ( ) Connect one end of a 3" yellow lead to IFT-2 lug 1 (S-1). Connect the other end to V5 pin 1 (S-1).

65. ( ) Connect one end of a 2" red lead to V5 pin 6 (NS). Connect the other end to IFT-3 lug B (NS).

66. ( ) Connect one end of a 2" red lead to V5 pin 5 (S-1). Connect the other end to IFT-3 lug P (S-1).

67. ( ) Strip 1/2" insulation from one end of a 3" yellow lead. Connect this end through pin 5 of V6 (NS) to pin 6 of V6 (S-1). Connect the other end to IFT-3 lug 1 (S-1).

68. ( ) Connect one end of a 1-1/2" yellow lead to T3 lug G (NS). Connect the other end to V8 pin 1 (S-1).

69. ( ) Connect one end of a 5-1/4" yellow lead to T3 lug G (NS). Push the remaining end of the lead through chassis hole BB and leave unconnected.

70. ( ) Connect one end of a 2-3/4" blue lead to T3 lug K (S-1). Connect the other end to V8 pin 2(S-1).

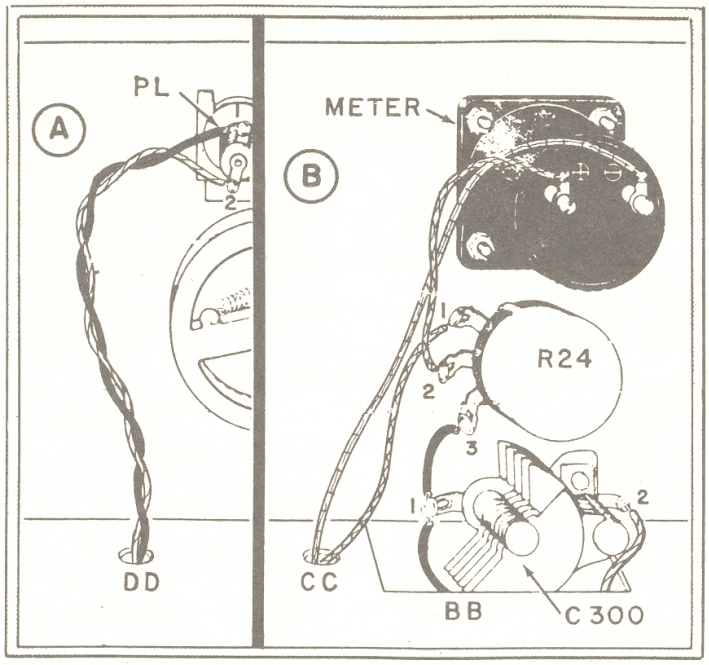
71. ( ) Connect one end of a 7" red lead to TP9 lug 4 (NS). Connect the other end to S3 lug 9 (S-1).

Top Chassis Wiring - Turn chassis over with the knobs and front panel facing away from you.

Refer to Figure 1A for Steps 72 and 73

CAUTION

When soldering these connections exercise a great deal of care so as not to bring the Soldering Iron in contact with the Dial Cord.



72. ( ) Connect the black lead of the twisted pair coming through chassis hole DD to PL lug 1 (S-1).

73. ( ) Connect the adjacent yellow lead to PL lug 2 (S-1). Dress these leads so that they will not interfere with the operation of the flywheel and tuning mechanisms.

Refer to Figure 1B for Steps 74 - 79.

CAUTION

When soldering these connections exercise a great deal of care so as not to bring the Soldering Iron in contact with the Dial Cord.

74. ( ) Connect the free end of the black lead coming from chassis hole BB to C 300 lug 1 (NS)

75. ( ) Connect the free end of the yellow lead coming from chassis hole BB to C300 lug 2 (S-1)

76. ( ) Connect one end of a 2" black lead to C 300 lug 1 (S-2). Connect the other end to R24 lug 3 (S-1)

77. ( ) Connect the free end of the red lead coming from chassis hole CC to R24 lug 1 (S-1).

78. ( ) Connect one end of a 4-1/4" red lead to R24 lug 2 (S-1). Connect the other end to the positive (+) terminal of the meter (S-1).

79. ( ) Connect the free end of the blue lead coming from chassis hole CC to the negative (-) terminal of the meter (S-1).

Refer to Photograph A of the insert for the following steps:

80. (✓) Locate the audio output transformer, T2, on the top of the chassis. Cut the leads to the lengths prescribed below. Remove 1/4" insulation, twist and tin the free ends of all these leads.

Blue 4", Red 3-3/4", Black 4-1/2", Green 4-1/2", Yellow 5".

81. ( ) Push the yellow lead from T2 through chassis hole GG and leave unconnected.

82. (✓) Similarly push the green lead from T2 through chassis hole GG and leave unconnected.

83. (✓) Similarly push the black lead from T2 through chassis hole FF and leave unconnected.

84. (✓) Similarly push the red lead from T2 through chassis hole EE and leave unconnected.

Refer to Pictorial 2 for the following steps:

85. (✓) Connect the yellow lead coming from chassis hole GG to TS1 lug 3 (S-1).

86. (✓) Connect the green lead coming from chassis hole GG to TS1 lug 2 (S-1).

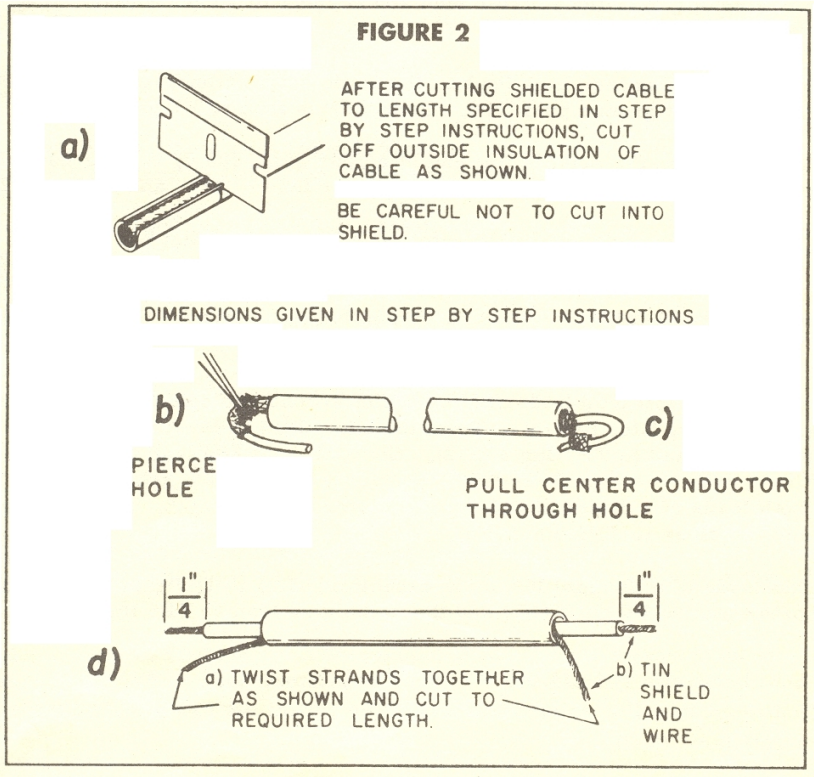
87. (✓) Connect the black lead coming from chassis hole FF to TS1 lug 1 (S-1).

88 (✓) Connect the red lead coming from chassis hole EE to V9 pin 8 (NS).

89. (✓) Using a pair of pliers pry up ground post GP9 so that it is vertical to the underside of the chassis. (See pictorial 2.)

90. (✓) Prepare a 12" length of shielded cable as follows. Remove 1" of outer insulation from one end (See Figure 2a). Push the shield back exposing the center conductor. Bend the end of the cable sharply as shown in Figure 2b. Using a pointed tool make a hole in the shielding at the bend and pull the center conductor through (See Figure 2c). Pull, twist and tin the shield. Remove 1/4" insulation from the center conductor, twist and tin. (See Figure 2d). Remove 3/4" outer insulation from the other end of the cable and, using a razor blade or wire cutter, remove the shield from this end also. Strip 1/4" insulation from the center conductor, twist and tin.

FIGURE 2



91. (✓) Connect the center conductor of the end with the shield to V7 pin 1 (NS). Connect the shield to GP9 (NS). Connect the center conductor of the other end to J1 lug 2 (S-1).

92. (✓) Prepare a 13" length of shielded cable as you did in Step 90. Connect the center conductor of the end with the shield to TP5 lug 1 (NS) and its adjacent shield to TP5 lug 2 (NS). Connect the center conductor of the other end to J1 lug 1 (S-2).

Refer to Pictorial 3 for the following steps

93. (✓) Prepare a 16-3/4" length of shielded cable as in step 90, one end having a tinned shield and center conductor and the other end consisting of a tinned center conductor, the shield having been removed. Connect the center conductor of the end with the shield to IFT - 3 lug E (NS) and its adjacent shield to TP4 lug 3 (NS). Connect the center conductor of the other end to R17 lug 1 (S-1).

94. (✓) Prepare a 13-1/2" length of shielded cable as follows. Remove 1" of outer insulation and treat both ends as shown in Figure 2 so that each end consists of a tinned center conductor and shield. Connect the center conductor of one end to TP5 lug 3 (NS) and its adjacent shield to TP5 lug 2 (NS). Connect the center conductor of the other end to R17 lug 2 (S-1). Slip 3/4" insulated sleeving over the adjacent shield and connect to R17 lug 3 (S-1)

95. (✓) Prepare a 12" length of shielded cable as in step 90, one end having a tinned center conductor and shield and the other end consisting of a tinned center conductor, the shield having been removed. Connect the center conductor of the end with the shield to TP4 lug 2 (NS). Slip 3/4" insulated sleeving over the adjacent shield and connect to V6 pin 2 (S-2). Connect the center conductor of the other end to T3 lug G (S-3).

96. (✓) Trim the leads of a 500 K ohm 1/4 W. 10% resistor, R19, to 1" and 1/2" respectively. Connect the shorter lead to V7 pin 1 (S-2) and tack the other lead to GP9.

Note: To tack a lead, use a small amount of solder and attach lightly. Do not let the solder flow over the whole lug as with other connections. A mere physical connection will suffice for now.

97. (✓) Trim both leads of a 50 μfd. 50 WV. capacitor, C19, to 7/8". Slip 5/8" sleeving on the lead from the end marked positive (+) and connect to V7 pin 2 (NS). Tack the other lead to GP9.

98. (✓) Trim the leads of a 500 ohm 1 W. 10% resistor, R20, to 1" and 3/4" respectively. Slip 1/2" sleeving over the shorter lead and connect to V7 pin 2 (S-2). Connect the other lead to GP9 (S-4).

99. (✓) Locate the remaining free blue lead on the audio output transformer, T2, and push it through the hole at ground post GP9. Connect this lead to V7 pin 5 (NS).

100. (✓) Trim the lead from the outside foil end of a .005 μfd. 400 v. tubular capacitor, C20, to 1" and slip on 3/4" sleeving. Trim the other lead to 3/4" and slip on 1/2" sleeving.

Note: The outside foil end is indicated by a line around that end of the capacitor.

101. (✓) Connect the outside foil end of C20 to V9 pin 8 (S-3). Connect the other end to V7 pin 5 (S-2).

102. (✓) Trim the outside foil lead (indicated by a line around one end of the capacitor) of a .01 μfd 400 V. tubular capacitor, C16, to 3/4". Trim the other lead to 1" and slip on 3/4" sleeving. Connect the outside foil lead to TP5 lug 3 (S-2). Connect the other lead to V6 pin 1 (NS).

103. (✓) Trim both leads of a 5 Meg ohm 1/4 w. resistor, R16, to 1/2". Connect one lead to V6 pin 1 (S-2) and the other to TP5 lug 2 (NS).

104. (✓) Trim the leads of a 100 μμfd 10% mica capacitor, C17, to 1/2" and 3/4" respectively. Connect the shorter lead to V6 pin 7 (NS) and the remaining lead to TP5 lug 2 (S-5).

105. (✓) Trim both leads of a .01 μfd 400 V tubular capacitor, C18, to 5/8". Connect the outside foil lead (indicated by a line around one end of the capacitor) to V6 pin 7 (NS). Connect the other lead to TP5 lug 1 (S-2).

106. ( ) Trim the leads of a 250 K ohm resistor , R18, to 7/8" and 1/2" respectively. Connect the shorter lead to V6 pin 7 (S-3). Connect the other lead to TP4 lug 4 (S-4).

107. ( ) Trim both leads of a 2.2 μμfd disc capacitor, C11, to 5/8". Connect one lead to V6 pin 5 (S-2) and the other to TP4 lug 2 (S-2).

108. ( ) Trim the leads of a 100 μμfd 10% mica capacitor, C15, to 3/4" and 1-1/2" respectively. Slip 1/2" sleeving over the shorter lead and connect to IFT-3 lug E (NS). Connect the other lead to GP7 (S-1).

109. ( ) Trim both leads of a 2 Meg ohm 1/4 w. 10% resistor, R 14, to 5/8". Connect one lead to IFT 3 lug E (S-3) and the other to TP4 lug 1 (S-2).

110. ( ) Locate the black and white leads attached to the Antenna Tuning Section. Cut the white lead to 5-1/2" and the black lead to 4-1/2". Remove 1/4" insulation, twist and tin the free ends of both leads. Twist the black and white leads together so as to form a twisted pair.

111. ( ) Connect the black lead of the black and white twisted pair to TP7 (S-1). Connect the adjacent white lead to TP6 (S-1). Dress the twisted pair so that they run parallel to the chassis at approximately the same height that TP6 and TP7 are above the chassis.

112. ( ) Trim both leads of a 1 K ohm 1/2 w 10% resistor, R15, to 5/8". Connect one lead to IFT 3 lug B (S-2) and the other to TP3 lug 3 (NS).

113. ( ) Trim both leads of a .01 μfd disc capacitor, C13, to 5/8". Connect one lead to TP3 lug 2 (NS) and the other lead to V5 pin 7 (NS).

114. ( ) Trim both leads of a 1 K ohm 1/2 w 10% resistor, R 13, to 5/8". Connect one lead to V5 pin 7 (S-2). Leave the other lead temporarily disconnected.

115. ( ) Trim both leads of a .01 μfd. disc capacitor, C14, to 1/2". Connect one lead to V5 pin 6 (S-2) and the other to TP3 lug 2 (NS).

116. ( ) Connect the free end of 1 K ohm resistor, R 13, (See Step 114) to TP3 lug 1 (S-2).

117. ( ) Trim the outside foil lead (Indicated by a line around one end of the capacitor) of a .05 μfd, 400 V tubular capacitor , C12, to 1" and slip on 3/4" sleeving. Trim the other lead to 5/8". Connect the outside foil lead to TP3 lug 2 (S-4). Connect the other lead to IFT 2 lug E (NS).

118. ( ) Trim both leads of a 1 K ohm 1/2 w 10% resistor, R12, to 3/4". Slip 1/2" sleeving on one lead and connect it to IFT 2 lug B (S-2). Connect the other lead to TP3 lug 3 (S-4).

119. ( ) Trim both leads of a 1 Meg ohm 1/4 w 10% resistor, R1, to 3/4" and slip 1/2" sleeving on each lead. Connect one lead to IFT 2 lug E (S-4) and the other to V1 pin 1 (NS).

120. ( ) Trim the leads of a 300 ohm 1/2 w 10% resistor, R2, to 3/4" and 1/2" respectively. Slip 1/2" sleeving on the longer lead. Connect the shorter lead to V1 pin 7 (NS). Leave the other lead temporarily disconnected.

121. ( ) Trim both leads of a .01 μfd. disc capacitor, C2, to 1/2". Connect one lead to V1 pin 7 (S-3). Leave the other lead temporarily disconnected.

122. ( ) Connect the remaining lead of the 300 ohm resistor, R2, (See Step 120) to the center shield of V I (NS).

123. ( ) Connect the remaining lead of the .01 μfd disc capacitor, C2, (See Step 121) to the center shield of V1 (S-3).

124. ( ) Trim the leads of a 250 μμfd 10% mica capacitor, C1, to 3/4" and 1 1/8" respectively. Slip 1/2" sleeving on the shorter lead and connect to V1 pin 1 (S-2). Leave the other lead temporarily disconnected.

125. ( ) Locate the yellow lead labeled "RFG" connected to lug RFG on the Antenna Tuning Section. Clip this lead off as close as possible to lug RFG. Remember the location of lug RFG as it is involved in the next step.

126. ( ) Connect the remaining lead of the 250 μμfd mica capacitor, CI, (See Step 124) to lug RFG of the Antenna Tuning Section (See preceding Step) (S-2).

127. ( ) Trim the leads of a .01 μfd disc capacitor, C9, to 1/2" and 3/4" respectively. Connect the shorter lead to V4 pin 7 (NS). Leave the other lead temporarily disconnected.

128. ( ) Trim both leads of a 300 ohm 1/2 W 10% resistor, R11, to 1/2". Connect one lead to V4 pin 7 (S-2) and the other to TP2 lug 3 (S-3).

129. ( ) Trim the leads of a .01 μfd disc capacitor, C10, to 1/2" and 3/4" respectively. Slip 1/4" sleeving on the shorter lead and connect to V4 pin 6 (S-2). Connect the other lead to GP2 (NS).

130. ( ) Trim both leads of a 100 K ohm 1/4 W 10% resistor, R10, to 5/8". Connect one lead to TP2 lug 1 (S-3) and the other IFT 1 lug E (NS).

131. ( ) Trim the leads of a .01 μfd disc capacitor, C8, to 5/8" and 3/4" respectively. Slip 3/8" sleeving on the shorter lead and connect to IFT 1 lug E (S-2). Connect the other lead to GP2 (NS).

132. ( ) Connect the remaining lead of the .01 μfd disc capacitor, C9, (See Step 127) to GP2 (S-4).

133. ( ) Trim both leads of a .01 disc capacitor, C5, to 1/2". Connect one lead to V2 pin 6 (S-2). Connect the other lead to GP4 (S-3).

134. ( ) Trim the leads of a 250 μμfd 10% mica capacitor, C3, to 5/8" and 1" respectively. Connect the shorter lead to V2 pin 7 (NS). Leave the other lead temporarily disconnected.

135. ( ) Locate the yellow lead labeled "G3" connected to lug G3 on the RF Tuning Section. Clip this lead off as close as possible to lug G3. Remember the location of lug G3 as it is involved in the next step.

136. ( ) Connect the remaining lead of the 250 μμfd 10% mica capacitor, C3 (See Step 134), to lug G3 of the RF Tuning Section (S-2).

137. ( ) Trim the leads of a 1 Meg ohm 1/4 W 10% resistor, R7, to 1/2" and 3/4" respectively. Connect the shorter lead to V2 pin 7 (S-2) and the other lead to GP3 (NS).

138. ( ) Trim the leads of a .01 μfd disc capacitor, C4, to 5/8" and 1/2" respectively. Slip 3/8" sleeving on the longer lead. Connect the shorter lead to V2 pin 2 (NS). Connect the longer, sleeved lead to the center shield of V2 (NS). Dress the component as shown in pictorial 3.

139. ( ) Trim the leads of a 300 ohm 1/2 W 10% resistor, R8, to 1/2" and 5/8" respectively. Slip 3/8" sleeving on the longer lead. Connect the shorter lead to V2 pin 2 (S-2). Connect the longer, sleeved lead to the center shield of V2 (S-3). Dress the component as shown in Pictorial 3.

140. ( ) Trim both leads of a 20 K ohm 1/4 W 10% resistor, R5, to 3/4". Connect one lead to V3 pin 1 (NS) and the other lead to GP3 (S-4).

141. ( ) Trim both leads of a .01 disc capacitor, C7, to 3/4". Slip 1/2" sleeving on one lead and connect to V3 pin 5 (NS). Leave the other lead temporarily disconnected.

142. ( ) Locate the red lead labeled "P" connected to lug P on the Oscillator Tuning Section. Clip this lead off as close as possible to lug P. Remember the location of lug P as it is involved in the next step.

143. ( ) Connect the remaining lead of the .01 disc capacitor, C7 (See Step 141), to lug P of the Oscillator Tuning Section (S-1).

144. ( ) Trim both leads of a 1 K ohm 1/2 W 10% resistor, R6, to 1/2". Connect one lead to V3 pin 5 (S-3). Connect the other lead to TP1 lug 3 (NS).

145. ( ) Trim both leads of a 100 μfd 10% mica capacitor, C6, to 3/4". Connect one lead to V3 pin 1 (S-3). Leave the other lead temporarily disconnected.

146. ( ) Locate the orange lead labeled "G1" connected to lug G1 on the Oscillator Tuning Section. Clip this lead off as close as possible to lug G1. Remember the location of lug G1 as it is involved in the next step.

147. ( ) Connect the remaining lead of the 100 μμfd mica capacitor, C6 (See Step 145) to lug G1 of the Oscillator Tuning Section. (S-2).

148. ( ) Trim both leads of a 1 K ohm 1/2 W 10% resistor, R9, to 1/2". Connect one lead to IFT 1 lug B (S-2). Connect the other lead to TP1 lug 3 (NS).

149. (✓) Trim both leads of a 15 K ohm 1/2 w 10% resistor, R4, to 1/2". Connect one lead to TP1 lug 3 (S-5). Connect the other lead to TP1 lug 1 (S-2).

150. (✓) Trim both leads of a .01 μfd disc capacitor, C23, to 1/2". Connect one lead to V8 pin 7 (NS). Connect the other lead to GP11 (S-2).

151. (✓) Trim both leads of a 50 K ohm 1/2 w 10% resistor, R22, to 1/2". Connect one lead to V8 pin 7 (S-2). Connect the other lead to TP9 lug 4 (S-2).

152. (✓) Trim both leads of a 1.5K ohm 1/2 W 10% resistor, R3, to 1/2". Connect one lead to TP9 lug 1 (S-2) and the other to TP9 lug 2 (S-2).

153. (✓) Trim both leads of a 2 K ohm 10 W 10% resistor, R21, to 5/8". Connect one lead to C21 lug 1 (S-3) and the other to TP9 lug 5 (S-2).

154. (✓) Trim the outside foil lead of a .05 μfd 400V molded capacitor, C25, to 1/2" and the remaining lead to 3/4". Connect the outside foil lead to T1 lug 2 (S-2). Connect the other lead to V9 pin 2 (S-2).

155. (✓) Connect one end of a 2" yellow lead to lug 1 of the fuse holder (S-1). Connect the other end of the lead to T1 lug 9 (NS).

156. (✓) Trim both leads of a .01 μfd 400V tubular capacitor, C24, to 1/2". Connect the outside foil lead to T1 lug 9 (S-2) and the other lead to T1 lug 11 (S-2).

157. (✓) Slip the free end of the 6 ft. line cord through chassis hole AA. Tie a knot in the cord 8-1/2" from the free end as shown in Pictorial 3. Using a razor blade or knife, separate the line cord into two individual leads each 7-1/2" in length. Trim off 5-1/2" from one of these leads. Remove 1/4" insulation, twist and tin the free ends of both these leads.

158. (✓) Connect the shorter lead of the line cord to lug 2 of the fuse holder (S-1). Connect the adjacent longer lead to lug 1 of S1 (located at the rear of R17) (S-1).

This completes the wiring of the KT-200.

159. ( ) Insert the nine tubes in their correct sockets making sure the tube designations match those on the chassis. Insert the #40 Pilot Light in its holder, PL.

160. ( ) Slip the 8 tube clips over the eight miniature tubes. Make sure that the section of the clip on the underside of the chassis does not interfere with the wiring.

PRELIMINARY CHECKS

The construction of your KT-200 is now completed. Before proceeding any further, check over the wiring carefully to make sure that you have not made any errors or have left any connections unsoldered. If possible, have a friend check the construction with you, as there is a tendency for a person to repeat his errors. If an ohmmeter is available, you should make the following DC resistance measurements before plugging the unit into the power line:

Check for a cold resistance of approximately 6 ohms between the prongs of the line cord; a resistance of approximately 18K ohm from V9 pin 8 to ground.
If any discrepancy exists, do not plug in the unit until the cause has been determined and the fault corrected.

161. ( ) Insert the KT-200 in its cabinet making sure that no part of the line cord gets caught between the chassis and the cabinet.

162. ( ) Replace the 10 Phillips head screws in the holes running along the edge of the panel.

163. ( ) Turn the unit over and replace the Phillips head retaining screw on underside of cabinet.

INSTALLATION

POWER SOURCE. The receiver is designed to operate from a 105-125 volt, 50-60 cycle AC power source. Power consumption is 50 watts. Failure to operate the receiver from the specified sources of power may result in serious damage. DO NOT OPERATE FROM A DC SOURCE.

SPEAKER CONNECTION. A three-terminal strip marked OUTPUT is provided at the rear of the receiver for speaker connections. Any PM speaker with either 4 or 8 ohm impedance can be used. Simply connect one lead to the ground terminal "O" and the other lead to the terminal that corresponds to the speaker impedance. The output power of the receiver is sufficient to drive a 4-12" PM speaker adequately.

HEADPHONES. A standard phone jack is provided on the front panel of the receiver for headphone reception. Use of high impedance headphones is necessary for maximum headphone output. Any commercial high impedance crystal or magnetic headphones may be used. The Lafayette MS-260 or MS-369 Crystal headphones will provide excellent results and either is recommended for use with this receiver. The speaker output is automatically disconnected when a phone plug is inserted into the "phono" jack on the receiver.

ANTENNAS

The terminals marked "A1, "A2", and "E" at the rear of the receiver are for antenna and ground connections. Either of the following two types of connections can be used to obtain satisfactory results.

INVERTED L ANTENNA. The Inverted L type of antenna will provide satisfactory performance over the entire tuning range. Simply short A2 and E with the jumper wire, and connect one end of the antenna wire to A1. For good reception, the antenna wire should be placed as high as possible and 50-100 feet long (See Fig. A). In some instances, a wire connected from terminal "E" to a water pipe may improve reception.

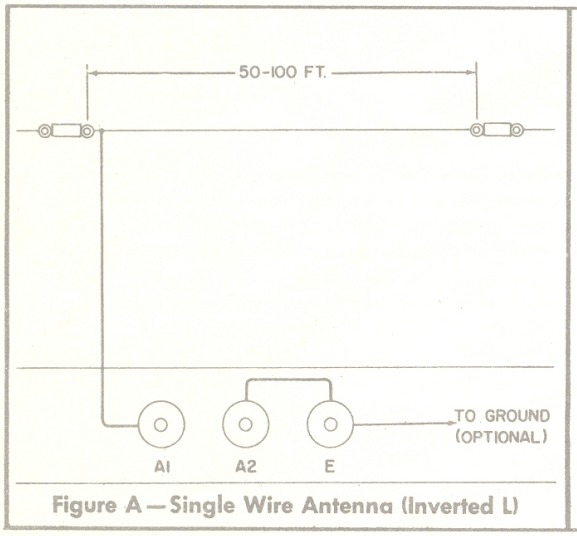


Figure A — Single Wire Antenna (Inverted L)

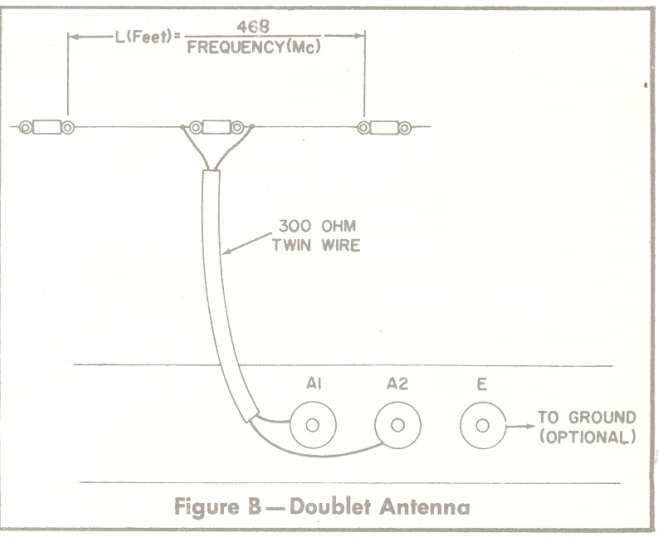


Figure B — Doublet Antenna

DOUBLET ANTENNA. A doublet antenna will give excellent results, especially on amateur bands. A 300 ohms balanced transmission line such as "TV twin lead" (shown in Fig. B) may be used. Since the doublet antenna provides optimum performance only at a given frequency, it should be cut to the length for the most often used band of frequencies. The overall length of a doublet antenna can be determined by using the following formula:

$$L \text{ (Length in feet)} = \frac{468}{\text{Frequency in megacycles}}$$

Since the doublet antenna displays directional properties broadside to its length, it should be oriented in such a manner that maximum signal pickup can be realized.

When using either a balanced transmission line or a twisted pair, the leads connect to terminals "A1" and "A2" respectively, and the jumper wire between "A2" and "E" is removed. A height of 30-50 feet is recommended for good reception of weak signals.

FUSE. A 1 amp fuse is located at the rear of the receiver. To remove it, unscrew the spring loaded cap.

OPERATION

Following is a brief description of the functions of the various controls on the front panel. Full appreciation as well as realization of the capabilities of the receiver can be expected only if you become familiar with each of the control functions.

AF GAIN. This control is a combination receiver on-off switch and volume control. Clockwise rotation turns on the receiver and increases volume; counter-clockwise rotation decreases volume and turns off the receiver. Illumination of dial scales indicates that the receiver is operative.

BAND SEL. The Band Selector Control should be set for the band covering the desired range of frequencies.

RECEIVE/STAND BY. This switch should be normally set at "RECEIVE". Switching to "STAND BY" silences receiver without turning it off. In this position, DC voltage to the RF stages is cut off, but the tube heaters remain in operation. To resume reception instantly, simply return the switch to the "RECEIVE" position. This feature is useful to the "ham" who may wish to have the receiver inoperative during periods of transmission.

Auxiliary Control: A socket in the back of the receiver allows simultaneous control of this receiver with a transmitter. An external switching device can be constructed so that the receiver will be inoperative during periods of transmission. In this case, the RECEIVE/STAND BY switch is placed in the STAND BY position. The external switch can be attached to the 5-pin socket so that pins (3) and (2) (see Fig. C) of the socket will be connected when signal reception is desired. In this manner, signal reception will be instantaneous, as plate voltage will be applied to the RF stages when the switch is closed accordingly.

ANL ON/OFF. This switch should be normally set at "OFF". If excessive spurious noises (such as those caused by auto ignition) interfere with reception, turn the switch to "ANL ON", and the automatic noise limiter circuit will be in operation. This control should be used only when necessary, since it tends to reduce the overall efficiency of the receiver.

MAIN TUNING. This tuning control operates the main tuning dial. This dial has four calibrated frequency scales, one for each of the four frequency bands. The frequency band is shown in KC on the standard broadcast range and in MC on the short-wave ranges. A 100-division logging scale is provided for logging stations on this dial when necessary.

BANDSPREAD TUNING. This is a supplementary control which electrically spreads out the scales of the main tuning dial. This is especially useful on the short-wave bands where separation between stations is often very small or almost non-existent. When the bandspread tuning pointer is set at 0 on the 0-100 logging scale, the calibration of the Main Tuning Scale is correct. However, moving the bandspread pointer towards 100 on the logging scale subtracts from the frequency indicated on the Main Tuning scale. Logging of short-wave stations is possible by noting the readings on both the Main Tuning and Bandspread Scales.

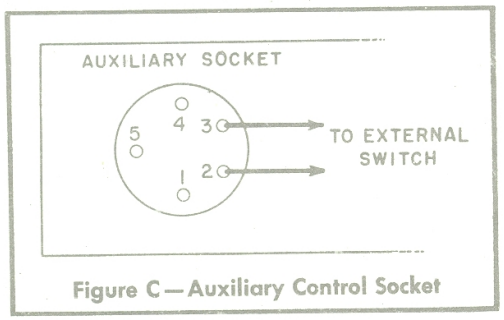


Figure C—Auxiliary Control Socket

BFO PITCH. This control may be used to vary the audio tone of CW signals. It should be set for the tone most pleasing to your ears. This control is in effect only when the BFO-MVC-AVC Switch is in the BFO position.

BFO-MVC-AVC. This switch, when set to the AVC position, places the automatic volume control circuit in operation, and provides effective compensation for fading and maintains constant output on either strong or weak signals. In certain instances, it may be advisable to use the MVC position (making the AVC circuit inoperative), as in the case where a desired weak station is adjacent to a powerful one. Generally, the position should be used which provides the better reception.

The MVC position should not be used for the reception of strong signals (such as the local stations on the broadcast band), otherwise overloading and distortion will occur. Although this can be overcome by reducing the IF GAIN, no benefit is obtained by listening to a strong AM signal with the AVC circuit off.

The MVC position can be used where added gain is required during the reception of weak signals. The gain of the receiver can be adjusted using both the AF and IF gain controls. The AVC circuit is inoperative in this position.

The BFO position is used only for CW reception. It places the beat frequency oscillator in operation to make code signals intelligible, and is used in conjunction with the BFO PITCH Control explained earlier.

IF GAIN. This control is used in conjunction with the AF GAIN Control to regulate the output of the receiver during CW reception.

In cases where the incoming signal is too strong, causing overloading and distortion, the control should be turned counter-clockwise accordingly to reduce the sensitivity of the receiver.

S METER. This meter provides a means of measuring the relative strength of incoming AM signals, and will only operate when the BFO-MVC-AVC switch is in the AVC position. The meter has an adjustment control (S METER ADJUST) with which to calibrate the S meter. This should be carried out in the following way:

> Remove the antenna from the receiver terminals so that there is no signal input to the unit. Adjust the S METER ADJUST control for a reading of 0 on the S Meter with the IF GAIN control at maximum. When tuning to very powerful stations (such as the local stations on the broadcast band), it may be necessary to reduce the IF gain to prevent too high a reading on the S Meter.

SHORT-WAVE LISTENING

Bands B, C and D cover the high frequency or short-wave bands. On these frequencies can be found the millions of radio stations transmitting from all over the world, which provide both English and foreign-language broadcasts. These include transmissions by amateurs or "hams" who operate on various selected bands of frequencies which can also be tuned in with your Lafayette receiver. The bands of frequencies on which the majority of commercial stations broadcast are indicated by the thick white segments of the main tuning scale. An example of this is the range covering 11 to 12 MC on band D.

A characteristic of short-wave is that reception varies with the time of day, the season of the year and with weather conditions. In order to know just when and where to listen, a listening chart which lists English language broadcast stations best heard in North America is included in this manual.

The various bands of frequencies assigned to amateurs can be obtained by referring to The Amateur's Radio Handbook (available from Lafayette Radio as BK 1000 at $3.50).

TUNING THE RECEIVER

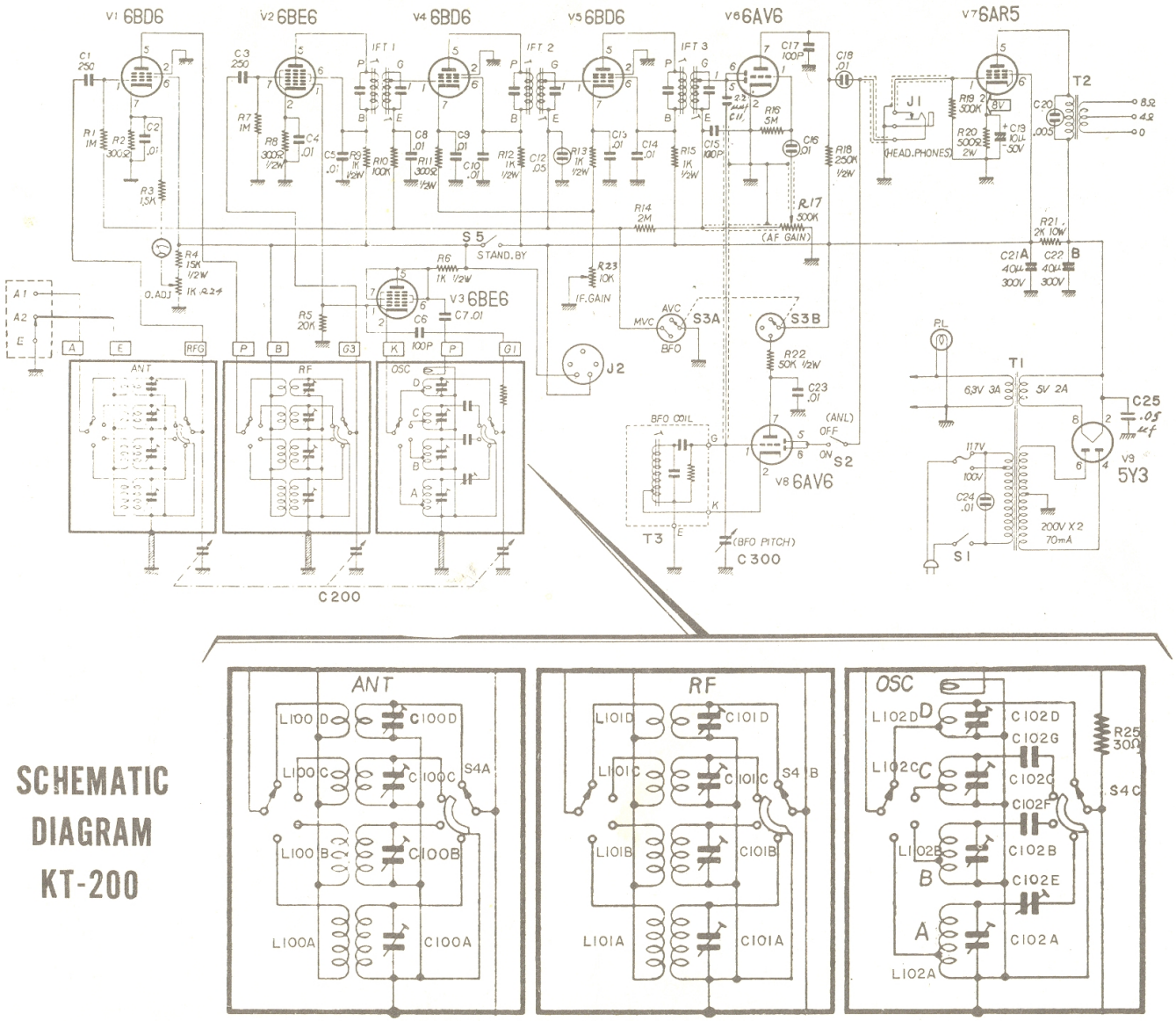
AM RECEPTION. Set the Band Selector to the band which covers the desired frequency. Set the BFO-MVC-AVC switch to AVC, IF GAIN to maximum, AF GAIN for a comfortable listening level. Set the Bandspread pointer to "O" and tune to the desired station with the Main Tuning control. If you are unable to locate the station fairly easily in this way, set the Main Tuning pointer to a point slightly higher in frequency than the station being sought, and slowly turn the Bandspread control clockwise. This will provide fine tuning in the direction of the desired station. If noisy conditions are encountered, use the ANL switch if it improves reception. If the station is very weak, set the BFO-MVC-AVC switch to MVC to provide added gain. If the signal becomes stronger and overloading and distortion occur, use the IF gain control to reduce the sensitivity of the receiver, or switch back to AVC.

CW RECEPTION. Set the Band Selector to the band which covers the desired frequency. Set the BFO-MVC-AVC switch to BFO, IF GAIN to approximately its mid-way position, AF GAIN for a comfortable listening level. Tune in to any CW signal and adjust the BFO PITCH control for a pleasing note. Use the Main Tuning control to tune to the desired station (with Bandspread at "O").

If you are unable to locate the station, set the main tuning indicator to a point slightly higher in frequency than the station being sought, and slowly rotate the Bandspread control clockwise. This will provide fine tuning in the direction of the desired station. When the station is finally located, the BFO PITCH control can be readjusted to provide any suitable tone. Use the ANL switch to reduce excessive noise if it exists, and the IF GAIN control for a suitable level to prevent overloading.

Note: Always set the IF GAIN as close to maximum as possible, without causing the receiver to overload and distort.

SCHEMATIC DIAGRAM KT-200



IN THE EVENT OF DIFFICULTY

Carefully recheck all wiring, and inspect solder connections.

If you have not already done so, trace each lead in the pictorials with a colored pencil. If a voltmeter is available, make measurements referring to the voltage chart below. A deviation of ±15% from the indicated values may be considered normal. WARNING: Use caution when making any checks with the KT-200 turned on. If any voltage is incorrect, recheck that part of the circuit involved carefully. If one of the components appears to be at fault, try to locate the defective one. In the event that these checks do not enable you to correct the defect, the KT-200 may be returned to us for repair. The charge for this service is $12.50, plus the cost of any parts which have been damaged during installation in the kit through improper handling or soldering. Kits which were not wired in accordance with our detailed instructions, or kits wired with acid core solder or paste flux are not eligible for service, and will be returned to you at your expense.

VOLTAGE CHART

All measurements made using a VTVM from chassis ground to the point indicated, with a line voltage of 117V AC, 60 cps.

All voltages shown are DC unless otherwise specified. Variations of ±15% may be considered normal.

	PINS						
TUBE	1	2	3	4	5	6	7
V1	0	0	6.3ac	0	115	115	3.5V
V2	-6V	2.6V	6.3ac	0	107	107	0
V3	-6V	0	6.3ac	0	107	107	107
V4	0	0	6.3ac	0	115	115	18
V5	0	0	6.3	0	115	115	18
V6	-.25	0	6.3	0	-.12	-.12	75V
V7	0	7.5V	6.3	0	200	115	NC
V8	-.28	0	6.3	0	-.15	-.15	-.006
V9	NC	200	NC	200ac	NC	200	200

ALIGNMENT

Your KT-200 comes completely pretuned and prealigned. However, for optimum results it is suggested that you follow the alignment procedure as prescribed below.

An A.C. voltmeter having a 10 volt scale and a calibrated R.F. signal generator is all the test equipment needed. In making adjustments use short, non-magnetic alignment tools.

Remove the receiver from its cabinet and stand it up on one end with the knobs and front panel facing away from you. In this manner both the top and underside of the chassis are easily accessible for making adjustments. Connect any 4 or 8Ω speaker to the speaker terminals at the rear of the receiver.

Allow the receiver and signal generator at least ten minutes to warm up before attempting any adjustments.

In setting the signal generator during alignment, adjust the output from the generator for the lowest possible reading on the voltmeter taking care, however, that the injected signal is audible above the noise level of the receiver. As the various stages are peaked and the signal increases in intensity, it will be necessary to further attenuate the signal generator output.

I.F. ALIGNMENT

Refer to Pictorial 4 on page 24 for the following steps:

1. ( ) Remove the 6BE6 local oscillator, V3, from its socket.

2. ( ) Switch the BFO, MVC, AVC switch to the MVC position.

3. ( ) Rotate the I. F. GAIN control to 3/4 of its full clockwise rotation and the A. F. GAIN control to its extreme clockwise rotation.

4. ( ) Connect the A. C. voltmeter (10 volt range) across the "0Ω" and "8Ω" speaker terminals (located at the rear of the receiver).

5. ( ) Connect the signal generator between pin 7 of V2 (6BE6 mixer tube) and ground.

6. ( ) Set the signal generator at 455KC and modulate it with either 400 or 1000 c. p. s.

7. ( ) Adjust the slugs of the I. F. transformers (starting with IFT-3, IFT-2, IFT-1 in that order) so as to give a peak reading on the voltmeter. (Each transformer has two slugs located on the top and underside of the chassis respectively) Since the peaking of one transformer can affect that of another, it is advisable to go back and repeak IFT-3, IFT-2, IFT-1 again, in that order.

This completes the I. F. alignment of the KT-200

BFO ALIGNMENT

1. ( ) Disconnect the voltmeter but leave the signal generator connected as in the I. F. Alignment.
2. ( ) All receiver controls should be set as in the I. F. Alignment.
3. ( ) Set the signal generator at 455KC. unmodulated RF.
4. ( ) Adjust the plates of the BFO capacitor, C300 so that they are half meshed.
5. ( ) Adjust the slug of the BFO coil, T3 (located on the topside of the chassis next to the AC power transformer), until a zero BEAT is heard.

This completes the BFO Alignment

R.F. ALIGNMENT

Refer to Pictorial 4 on page 24 for the following steps:

1. ( ) Connect terminals A2 and E, located at the rear of the receiver, together.

2. ( ) Replace V3 (6BE6 local oscillator) in its proper socket. (See I. F. Alignment, step 1.)

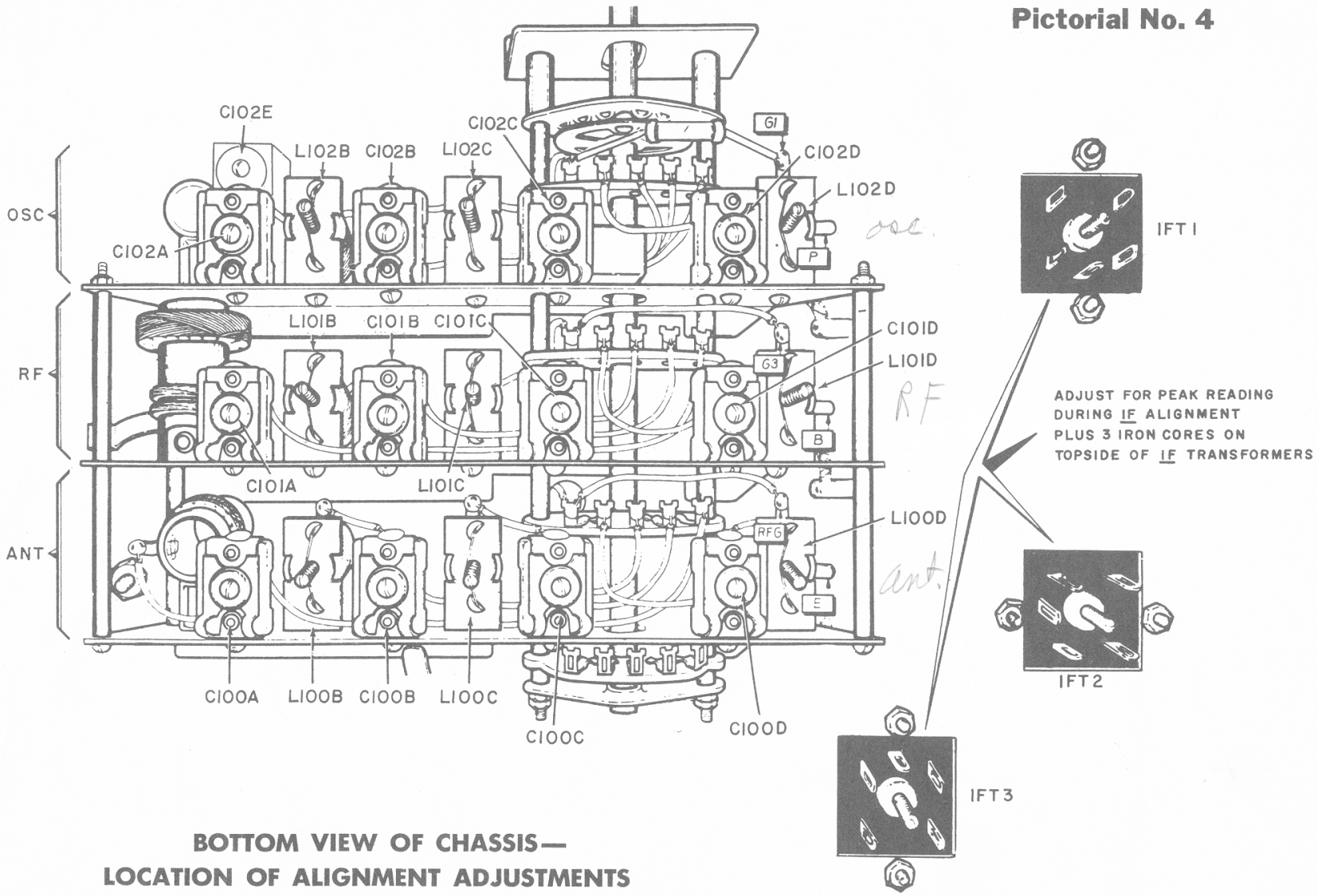
3. ( ) Rotate the I. F. GAIN control to 3/4 of its full clockwise rotation and the A. F. GAIN control to its extreme clockwise rotation.

4. ( ) Connect the A. C. voltmeter (10 volt range) across the "0Ω" and "8Ω" speaker terminals (located at the rear of the receiver).

5. ( ) Connect the "hot" lead and ground lead of the R. F. signal generator output to terminals A1 and E respectively (A1 and E are located at the rear of the receiver).

6. ( ) Set the Bandspread Tuning Control at 0.

Pictorial No. 4



BOTTOM VIEW OF CHASSIS—
LOCATION OF ALIGNMENT ADJUSTMENTS

7.( ) Align the receiver by following the R. F. Alignment chart below.

Note: Step 1 on the R. F. Alignment chart should be interpreted to read as follows:

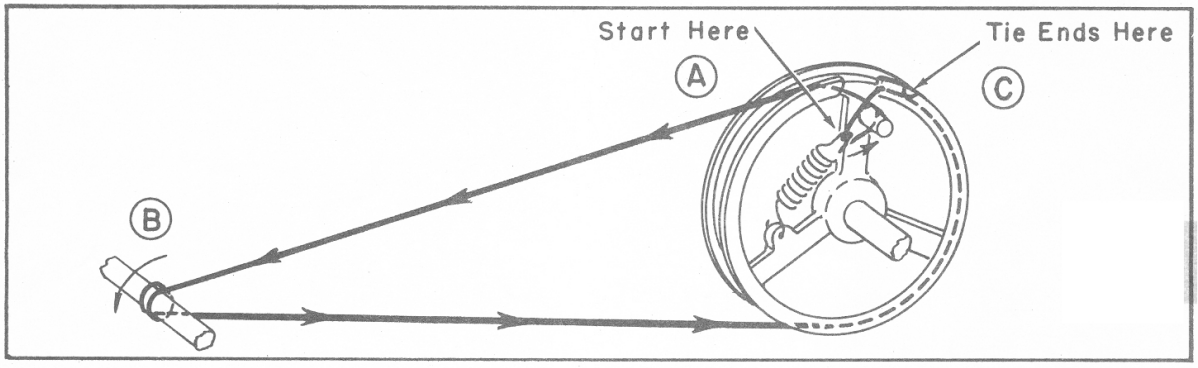
--Set the Band Selector switch at Band A.
--Set Main Tuning control at 600 KC.
--Set signal generator at 600 KC.
--Adjust C 102E (oscillator padder) for a peak reading on the A. C. voltmeter (10 volt scale)

RF ALIGNMENT CHART

Step	Band	Main Tuning & S. G. * Setting	Adjust Osc. Stage	Adjust RF & Ant. Stage	Note
1	A	600KC	C102E		Adjust for peak reading on the voltmeter
2		1400KC	C102A		
Repeat steps 1 and 2 until both ends of the Main Tuning Control dial are calibrated on Band A					
3	A	1400KC		C101A C100A	Adjust for peak reading on the voltmeter
4	B	1.8MC	L102B		Adjust for peak reading on the voltmeter
5		4.0MC	C102B		
Repeat steps 4 and 5 until both ends of the main tuning control dial are calibrated on Band B					
6	B	1.8MC		L101B L100B	Adjust for peak reading on the voltmeter
7		4.0MC		C101B C100B	
Repeat steps 6 and 7 until both ends of the main tuning control dial are calibrated on Band B					
8	C	6.0MC	L102C		Adjust for peak reading on the voltmeter
9		12.0MC	C102C		
Repeat steps 8 and 9 until both ends of the main tuning control dial are calibrated for Band C					
10		6.0MC		L101C L100C	Adjust for peak reading on the voltmeter
11		12.0MC		C101C C100C	
Repeat steps 10 and 11 until both ends of the main tuning control dial are calibrated for Band C					
12	D	13.0MC	L102D		Adjust for peak reading on the voltmeter
13		26.0MC	C102D		
Repeat steps 12 and 13 until both ends of the main tuning control dial are calibrated for Band D					
14		13.0MC		L101D L100D	Adjust for peak reading on voltmeter
15		26.0MC		C101D C100D	
Repeat steps 14 and 15 until both ends of the main tuning control dial are calibrated for Band D.					

* Signal Generator

DIAL CORD STRINGING



RESTRINGING DIAL CORD - The dial drive system of the receiver consists of two separate string drives, (1) the main tuning dial drive and (2) the bandspread tuning dial drive. Restringing should be carried out with gangs fully meshed. Since both dial drives are identical, only one has been shown.

Main Tuning Dial Drive:

1. Cut a 24 inch length of dial cord (General Cement HF 396-F).
2. Connect the free end of the tension spring to a point 6 inches from one end of the cord (tie point A).
3. Run the longer end of the cord around the stud on the dial wheel and proceed in the direction shown in the diagram.
4. Loop twice at B and return the cord to the top of the dial wheel. After pulling on the cord to apply tension to the spring, tie both cords at C. Be sure sufficient tension exists, otherwise drive cord will slip.
5. Cut off excess cord at C.

Bandspread Tuning Dial Drive:

Follow the same procedure as that given above, except that the direction of stringing is reversed.

SHIPPING INSTRUCTIONS

If the kit must be returned for service, pack it carefully, making sure that separate or loose parts are adequately covered to prevent damage and movement. The carton in which the equipment was shipped may be used, provided shredded paper or excelsior is used around the unit. Mark the shipment FRAGILE. Ship by prepaid express if possible. Shipment to you will be by express collect. Bear in mind that the carrier will disclaim responsibility for damage if in his opinion it was caused by improper packing.

Listen to the Voices of the World

ENGLISH LANGUAGE SHORT-WAVE BROADCAST STATIONS BEST HEARD IN WESTERN NORTH AMERICA

Readers in the western part of the United States and Canada will find the following list of "Best Heard" stations helpful in tuning the short-wave broadcast bands. The left-hand column lists the hour in Pacific Standard Time for broadcasts in English only; in the middle column, the city and country from which the broadcasts originate are listed with the name the station uses for identification in parentheses; and on the right are the frequencies and call letters for stations using them during their broadcasts.

TIME (PST)	CITY, COUNTRY (NAME)	FREQUENCIES (kc.)
6:00- 8:00 a.m.	Manila, Philippines *(The Call of the Orient)*	11855, 9730
6:30- 7:30 a.m.	Djakarta, Indonesia *(The Voice of Indonesia)*	9710, 4910
7:15- 8:15 a.m.	Melbourne, Australia *(Radio Australia)*	11770 (VLC11)
8:00- 8:15 a.m.	Stockholm, Sweden *(Radio Sweden)*	15155
10:00- 1:00 p.m.	London, England *(North American Service)*	17700
1:00- 2:15 p.m.	London, England *(General Overseas Service)*	17700, 15310
2:15- 3:15 p.m.	London, England *(General Overseas Service)*	15310, 11930
3:00- 3:30 p.m.	Tokyo, Japan *(Radio Japan)*	17825 (JOA22), 15235 (JOB9)
3:00- 7:00 p.m.	London, England *(General Overseas Service)*	11930, 9825
3:00-10:00 p.m.	Moscow, USSR *(Radio Moscow)*	17865, 15140
4:30- 4:50 p.m.	Tokyo, Japan *(Radio Japan)*	15235 (JOB9), 11705 (JOA4)
4:55- 5:45 p.m.	Montreal, Canada *(Radio Canada)*	15190 (CKCX), 11720 (CHOL)
5:00- 7:30 p.m.	Cape Haitien, Haiti *(The Evangelistic Voice)* — no broadcasts on Wednesday and Thursday	15400, 9656
5:30- 7:15 p.m.	Berne, Switzerland *(Switzerland Calling)*	11865 (HER5), 9535 (HER4), 6165 (HER3)
6:00- 9:00 p.m.	Quito, Ecuador (HCJB — *The Voice of the Andes)* — no broadcast on Monday	15115, 11915, 9745
6:25- 6:45 p.m.	Rome, Italy *(Italian Broadcasting & TV System)*	9575, 6010
6:30- 6:40 p.m.	Cologne, Germany *(The Voice of Germany)*	11795, 9640
6:30- 7:00 p.m.	Warsaw, Poland *(Radio Warsaw)*	9525, 6025
6:30- 7:10 p.m.	Hilversum, Holland *(Radio Netherlands)*	11950, 9590
6:30- 8:00 p.m.	Hilversum, Holland *(The Happy Station)* — special program on Sundays only	11950, 9590
6:45- 7:00 p.m.	Brazzaville, FEA *(Radio Brazzaville, French Equatorial Africa)*	11970, 9625
6:55- 7:35 p.m.	Montreal, Canada *(Radio Canada)*	11945 (CKNK), 9585 (CKLP)
7:00- 7:30 p.m.	Bucharest, Romania *(Bucharest Calling)*	11937, 9570
7:00- 7:30 p.m.	Peking, China *(Radio Peking)*	17745, 17720, 15350, 15118
7:00- 8:30 p.m.	Prague, Czechoslovakia *(Radio Prague)*	9585, 6170, 6105, 6055
7:00- 8:45 p.m.	Guatemala City, Guatemala (TGNA)	9668, 5952
7:15- 8:00 p.m.	Madrid, Spain *(The Voice of Spain)*	9360, 6130
7:30- 8:00 p.m.	Copenhagen, Denmark *(The Voice of Denmark)* — no English on Sundays	9520 (OZF)
7:30- 8:00 p.m.	Tokyo, Japan *(Radio Japan)*	15235 (JOB9), 11705 (JOA4)
8:00- 8:20 p.m.	Oslo, Norway *(Radio Norway)* — on Sundays only	15175, 11735, 9540
8:00- 8:30 p.m.	Budapest, Hungary *(Radio Budapest)*	11910, 9833
8:00- 8:30 p.m.	Sofia, Bulgaria *(Sofia Calling)*	9700
8:00- 9:00 p.m.	San Jose, Costa Rica (TIFC — *The Lighthouse of the Caribbean)*	9647, 6037
8:15- 9:00 p.m.	Berne, Switzerland *(Switzerland Calling)*	11865 (HER5), 9535 (HER4)
8:15- 9:00 p.m.	Madrid, Spain *(The Voice of Spain)*	9360, 6130
8:30- 9:00 p.m.	Bucharest, Romania *(Bucharest Calling)*	11937, 9570
9:00- 9:30 p.m.	Taipei, Taiwan *(The Voice of Free China)*	15225, 11815
9:00- 9:30 p.m.	Stockholm, Sweden *(Radio Sweden)*	9620
9:15- 9:30 p.m.	Brazzaville, FEA *(Radio Brazzaville, French Equatorial Africa)*	11970
9:15-10:00 p.m.	Madrid, Spain *(The Voice of Spain)*	9360, 6130
9:30-10:00 p.m.	Warsaw, Poland *(Radio Warsaw)*	9525, 6025
10:30-11:00 p.m.	Taipei, Taiwan *(The Voice of Free China)*	15225, 11815

TIME (PST)	CITY, COUNTRY (NAME)	FREQUENCIES (kc.)
10:30- 2:45 a.m.	Wellington, New Zealand *(Radio New Zealand)*	9540 (ZL2), 6080 (ZL7)
11:30-11:45 p.m.	Papeete, Tahiti *(The Voice of France in the Pacific)*	6135
12:00- 1:15 a.m.	Manila, Philippines *(Call of the Orient)*	17805, 15300, 11855, 9730

NEWS BROADCASTS FOR WESTERN NORTH AMERICA

The following listing of news broadcasts has been prepared for those readers living in the Western United States and Canada. Times are given in Pacific Standard Time and the frequencies in kilocycles.

TIME (PST)	CITY AND COUNTRY	FREQUENCIES (kc.)
6:45 a.m.	Djakarta, Indonesia	9710, 4910
7:00 a.m.	Manila, Philippines	11855,9730
7:30 a.m.	Melbourne, Australia	11770
8:00 a.m.	Stockholm, Sweden	15155
9:00 a.m.	London, England	17700
12:00 Noon	London, England	17700
3:00 p.m.	London, England	15310, 11930, 9825
3:00 p.m.	Tokyo, Japan	17825, 15235
3:00 p.m.	Moscow, USSR	17865, 15140
4:00 p.m.	Moscow, USSR	17865, 15140
4:30 p.m.	Delhi, India	17720, 15160
4:30 p.m.	Tokyo, Japan	15235, 11705
5:00 p.m.	Montreal, Canada	15190, 11720
5:00 p.m.	Moscow, USSR	17865, 15140
5:00 p.m.	Karachi, Pakistan	17750, 15335
5:30 p.m.	Montreal, Canada	15190, 11720
5:35 p.m.	Berne, Switzerland	11865, 9535, 6165
6:00 p.m.	London, England	11930, 9825
6:00 p.m.	Moscow, USSR	17865, 15140
6:25 p.m.	Rome, Italy	9575, 6010
6:30 p.m.	Cologne, Germany	11795, 9640
6:30 p.m.	Warsaw, Poland	9525, 6025
6:30 p.m.	Hilversum, Holland (not on Sunday)	11950, 9590
6:30 p.m.	Delhi, India	17830, 15160, 11710
6:45 p.m.	Brazzaville, French Equatorial Africa	11970, 9625
7:00 p.m.	Moscow, USSR	17865, 15140
7:00 p.m.	Montreal, Canada	11945, 9585
7:00 p.m.	Bucharest, Romania	11937, 9570
7:00 p.m.	Peking, China	17745, 17720, 15350, 15118
7:00 p.m.	Prague, Czechoslovakia	9585, 6170, 6105, 6055
7:15 p.m.	Madrid, Spain	9360, 6130
7:30 p.m.	Copenhagen, Denmark (only Mondays)	9520
7:30 p.m.	Tokyo, Japan	15235, 11705
8:00 p.m.	Moscow, USSR	17865, 15140
8:00 p.m.	Oslo, Norway (only Sundays)	15175, 11735, 9540
8:00 p.m.	Sofia, Bulgaria	9700
8:15 p.m.	Madrid, Spain	9360, 6130
8:20 p.m.	Berne, Switzerland	11865, 9535
8:30 p.m.	Bucharest, Romania	11937, 9570
9:00 p.m.	Taipei, Taiwan	15225, 11815
9:00 p.m.	Moscow, USSR	17865, 15140
9:00 p.m.	Stockholm, Sweden	9620
9:15 p.m.	Brazzaville, French Equatorial Africa	11970
9:15 p.m.	Madrid, Spain	9360, 6130
9:30 p.m.	Warsaw, Poland	9525, 6025
10:30 p.m.	Taipei, Taiwan	15225, 11815
11:30 p.m.	Wellington, New Zealand	9540, 6080
11:30 p.m.	Papeete, Tahiti	6135
12:30 a.m.	Wellington, New Zealand (not on Sunday)	9540, 6080
1:00 a.m.	Manila, Philippines	11855, 9730
2:30 a.m.	Wellington, New Zealand	9540, 6080

ENGLISH LANGUAGE SHORT-WAVE BROADCAST STATIONS BEST HEARD IN EASTERN NORTH AMERICA

TIME (EST)	CITY, COUNTRY (NAME)	FREQUENCIES (kc.)
6:00- 6:30 a.m.	Warsaw, Poland *(Radio Warsaw)*	17000, 15120
7:00- 7:15 a.m.	Helsinki, Finland *(Finland Calling)* — no English on Sundays and holidays	17798, 15190
7:15- 8:15 a.m.	Warsaw, Poland *(Radio Warsaw)*	17800, 15120
7:15- 8:45 a.m.	Melbourne, Australia *(Radio Australia)*	11770, (VLA11)
8:00- 9:30 a.m.	Cape Haitien, Haiti *(The Evangelistic Voice)* — no broadcast on Thursdays	15390, 9638
8:15- 8:45 a.m.	Stockholm, Sweden *(Radio Sweden)*	17840
10:00-12:15 p.m.	London, England *(North American Service)*	17700
1:00- 4:00 p.m.	London, England *(North American Service)*	17700
4:00- 5:15 p.m.	London, England *(General Overseas Service)*	17700, 15310, 9008
4:15- 4:45 p.m.	Hilversum, Holland *(Radio Netherlands)* — no English on Sundays	15365, 11950
4:30- 5:20 p.m.	Jerusalem, Israel *(The Voice of Zion)*	9008
5:00- 5:30 p.m.	Port-au-Prince, Haiti *(Radio Commerce)*—on Sundays only	9482 (4VC)
5:15- 6:15 p.m.	London, England *(General Overseas Service)*	15310, 11930
6:00- 6:30 p.m.	Tokyo, Japan *(Radio Japan)*	17825 (JOA22), 15235 (JOB9)
6:00-10:00 p.m.	London, England *(General Overseas Service)*	11930, 9825
6:00- 1:00 a.m.	Moscow, USSR *(Radio Moscow)*	11937, 11890, 11845, 11825, 11805, 11740, 11700, 9700, 9665
6:15- 7:00 p.m.	Ankara, Turkey *(Radio Ankara)*	9515
7:15- 7:35 p.m.	Rome, Italy *(Italian Broadcasting and Television System)*	9575, 6010
7:30- 7:50 p.m.	Tokyo, Japan *(Radio Japan)*	15235, (JOB9), 11705 (JOA4)
7:30- 8:00 p.m.	Budapest, Hungary *(Radio Budapest)*	11910, 9833
7:30- 8:00 p.m.	Prague, Czechoslovakia *(Radio Prague)*	9585, 6170, 6105, 6055
7:30- 8:30 p.m.	Warsaw, Poland *(Radio Warsaw)*	9525, 6025
7:55- 8:45 p.m.	Montreal, Canada *(Rddio Canada)*	15190 (CKCX), 11720 (CHOL)
8:00- 8:30 p.m.	Sofia, Bulgaria *(Sofia Calling)*	9700
8:00- 9:30 p.m.	Stockholm, Sweden *(Radio Sweden)*	9620
8:00-10:30 p.m.	Cape Haitien, Haiti *(The Evangelistic Voice)* — no broadcasts on Wednesdays and Thursdays	15400, 9656, 6105
8:15- 9:00 p.m.	Brazzaville, French Equatorial Africa *(Radio Brazzaville)*	11970, 9625
8:30-10:15 p.m.	Berne, Switzerland *(Switzerland Calling)*	11865 (HER5), 9535 (HER4), 6165 (HER3)
9:00- 9:20 p.m.	Oslo, Norway *(Radio Norway)* — on Sundays only	15175, 11735, 9540
9:00- 9:30 p.m.	Copenhagen, Denmark *(The Voice of Denmark)* — no English on Sundays	9520 (OZF)
9:00-12:00 p.m.	Quito, Ecuador (HCJB — *The Voice of the Andes)* — no broadcasts on Mondays	15115, 11915, 9745
9:25- 9:45 p.m.	Rome, Italy *(Italian Broadcasting and Television System)*	9575, 6010
9:30-9:40 p.m.	Cologne, Germany *(The Voice of Germany)*	11795, 9640
9:30-10:00 p.m.	Warsaw, Poland *(Radio Warsaw)*	9525, 6025
9:30-10:10 p.m.	Hilversum, Holland *(Radio Netherlands)*	11950, 9590
9:30-11:00 p.m.	Hilversum, Holland *(The Happy Station)* — special program on Sundays only	11950, 9590
9:30-11:00 p.m.	Port-au-Prince, Haiti *(Radio Haiti)* — on Thursdays only	6192 (4VHW)
9:45-10:00 p.m.	Brazzaville, French Equatorial Africa *(Radio Brazzaville)*	11970, 9625
9:55-10:35 p.m.	Montreal, Canada *(Radio Canada)*	11945 (CKNK), 9585 (CKLP)
10:00-10:30 p.m.	Bucharest, Romania *(Bucharest Calling)*	11937, 9570
10:00-11:00 p.m.	Prague, Czechoslovakia *(Radio Prague)*	9585, 6170, 6105, 6055
10:00-11:45 p.m.	Guatemala City, Guatemala (TGNA)	9668, 5952
10:15-11:00 p.m.	Madrid, Spain *(The Voice of Spain)*	9360, 6130
10:30-11:00 p.m.	Copenhagen, Denmark *(The Voice of Denmark)* — no English on Sundays	9520 (OZF)
11:00-11:30 p.m.	Budapest, Hungary *(Radio Budapest)*	11910, 9833
11:00-11:30 p.m.	Sofia, Bulgaria *(Sofia Calling)*	9700
11:00-12:00 p.m.	San Jose, Costa Rica (TIFC — *The Lighthouse of the Caribbean)*	9647, 6037
11:15-12:00 p.m.	Berne, Switzerland *(Switzerland Calling)*	11865 (HER5), 9535 (HER4)
11:15-12:00 p.m.	Madrid, Spain *(The Voice of Spain)*	9360, 6130
11:30-12:00 p.m.	Bucharest, Romania *(Bucharest Calling)*	11937, 9570
12:00-12:30 a.m.	Stockholm, Sweden *(Radio Sweden)*	9620
12:15-12:30 a.m.	Brazzaville, French Equatorial Africa *(Radio Brazzaville)*	11970
12:15- 1:00 a.m.	Madrid, Spain *(The Voice of Spain)*	9360 6130
12:30- 1:00 a.m.	Warsaw, Poland *(Radio Warsaw)*	9525, 6025

NEWS BROADCASTS FOR EASTERN NORTH AMERICA

TIME (EST)	CITY AND COUNTRY	FREQUENCIES (kc.)
5:30 a.m.	Wellington, New Zealand	9540, 6080
6:00 a.m.	Warsaw, Poland	17800, 15120
6:15 a.m.	Djakarta, Indonesia	9710
7:00 a.m.	Helsinki, Finland	17798, 15190
7:15 a.m.	Warsaw, Poland	17800, 15120
7:15 a.m.	Melbourne, Australia	11770
7:45 a.m.	Warsaw, Poland	17800, 15120
8:15 a.m.	Stockholm, Sweden	17840
8:15 a.m.	Melbourne, Australia	11770
8:45 a.m.	Lisbon, Portugal	21495, 17895
12:00 Noon	London, England	17700
12:15 p.m.	Lisbon, Portugal	21700, 17895
12:30 p.m.	Athens, Greece	17775, 15345
3:00 p.m.	London, England	17700
3:15 p.m.	Teheran, Iran	15100
3:30 p.m.	Damascus, Syria	17865
4:15 p.m.	Hilversum, Holland	15365, 11950
4:30 p.m.	Jerusalem, Israel	9008
5:15 p.m.	Belgrade, Yugoslavia	6100
6:00 p.m.	London, England	15310, 11930, 9825
6:00 p.m.	Tokyo, Japan	17825, 15235
6:00 p.m.	Moscow, USSR	11937, 11890, 11845, 11825, 11805, 11740, 11700, 9700, 9665
6:15 p.m.	Ankara, Turkey	9515
6:30 p.m.	Caracas, Venezuela (Monday-Friday)	4970
7:00 p.m.	Moscow, USSR	11937, 11890, 11845, 11825, 11805, 11740, 11700, 9700, 9665
7:15 p.m.	Rome, Italy	9575, 6010
7:30 p.m.	Tokyo, Japan	15235, 11705
7:30 p.m.	Prague, Czechoslovakia	9585, 6170, 6105, 6055
7:30 p.m.	Warsaw, Poland	9525, 6025
8:00 p.m.	Moscow, USSR	11890, 11845, 11825, 11805, 11740, 11700, 9665
8:00 p.m.	Montreal, Canada	15190, 11720
8:00 p.m.	Wawsaw, Poland	9525, 6025
8:00 p.m.	Sofia, Bulgaria	9700
8:15 p.m.	Stockholm, Sweden	9620
8:15 p.m.	Brazzaville, French Equatorial Africa	11970, 9625
8:30 p.m.	Montreal, Canada	15190, 11720
8:30 p.m.	Paramaribo, Surinam (Mondays only)	15407, 4752
8:35 p.m.	Berne, Switzerland	11865, 9535, 6165
9:00 p.m.	Stockholm, Sweden	9620
9:00 p.m.	Oslo, Norway (Sundays only)	15175, 11735, 9540
9:00 p.m.	Copenhagen, Denmark (Mondays only)	9520
9:00 p.m.	Moscow, USSR	11890, 11845, 11825, 11805, 11740, 11700, 9700, 9665
9:25 p.m.	Rome, Italy	9575, 6010
9:30 p.m.	Cologne, Germany	11795, 9640
9:30 p.m.	Warsaw, Poland	9525, 6025
9:30 p.m.	Hilversum, Holland (not on Sundays)	11950, 9590
9:45 p.m.	Brazzaville, French Equatorial Africa	11970, 9625
10:00 p.m.	Montreal, Canada	11945, 9585
10:00 p.m.	Moscow, USSR	11890, 11845, 11825, 11805, 11740, 11700, 9665
10:00 p.m.	Bucharest, Romania	11937, 9570
10:15 p.m.	Madrid, Spain	9360, 6130
10:30 p.m.	Copenhagen, Denmark (Monday only)	9520
11:00 p.m.	Sofia, Bulgaria	9700
11:00 p.m.	Moscow, USSR	11890, 11845, 11825, 11805, 11740, 11700
11:15 p.m.	Madrid, Spain	9360, 6130
11:20 p.m.	Berne, Switzerland	11865, 9535
11:30 p.m.	Bucharest, Romania	11937, 9570
12:00 Midnight	Stockholm, Sweden	9620
12:00 Midnight	Moscow, USSR	11860, 11845, 11805, 11740, 11700, 9685, 9665, 9610
12:15 a.m.	Madrid, Spain	9360, 6130
12:15 a.m.	Brazzaville, French Equatorial Africa	11970
12:30 a.m.	Warsaw, Poland	9525, 6025

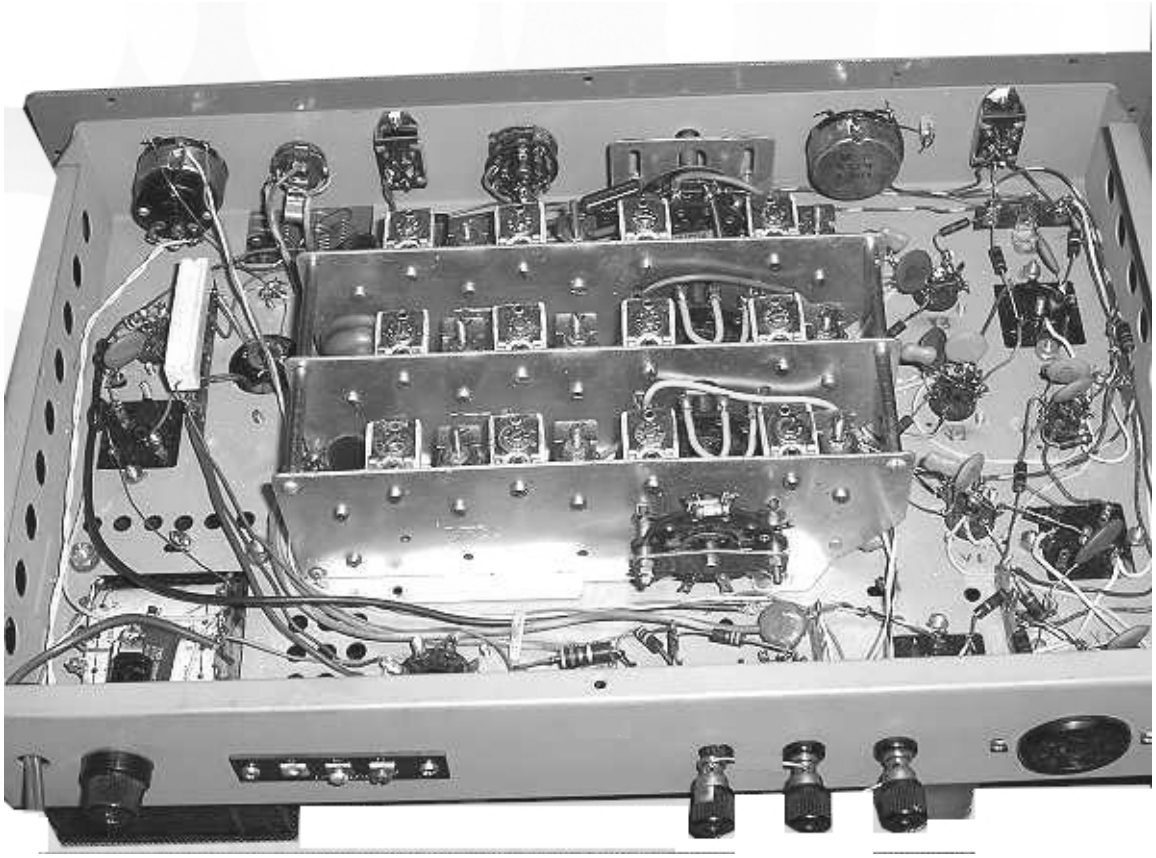
Printed in Japan

PARTS LIST
KT-200 HE-10

The parts listed below, for the LAFAYETTE KT-200/HE-10 are those which are not readily replaceable with standard American parts. The listing does not mean that the parts are in stock.

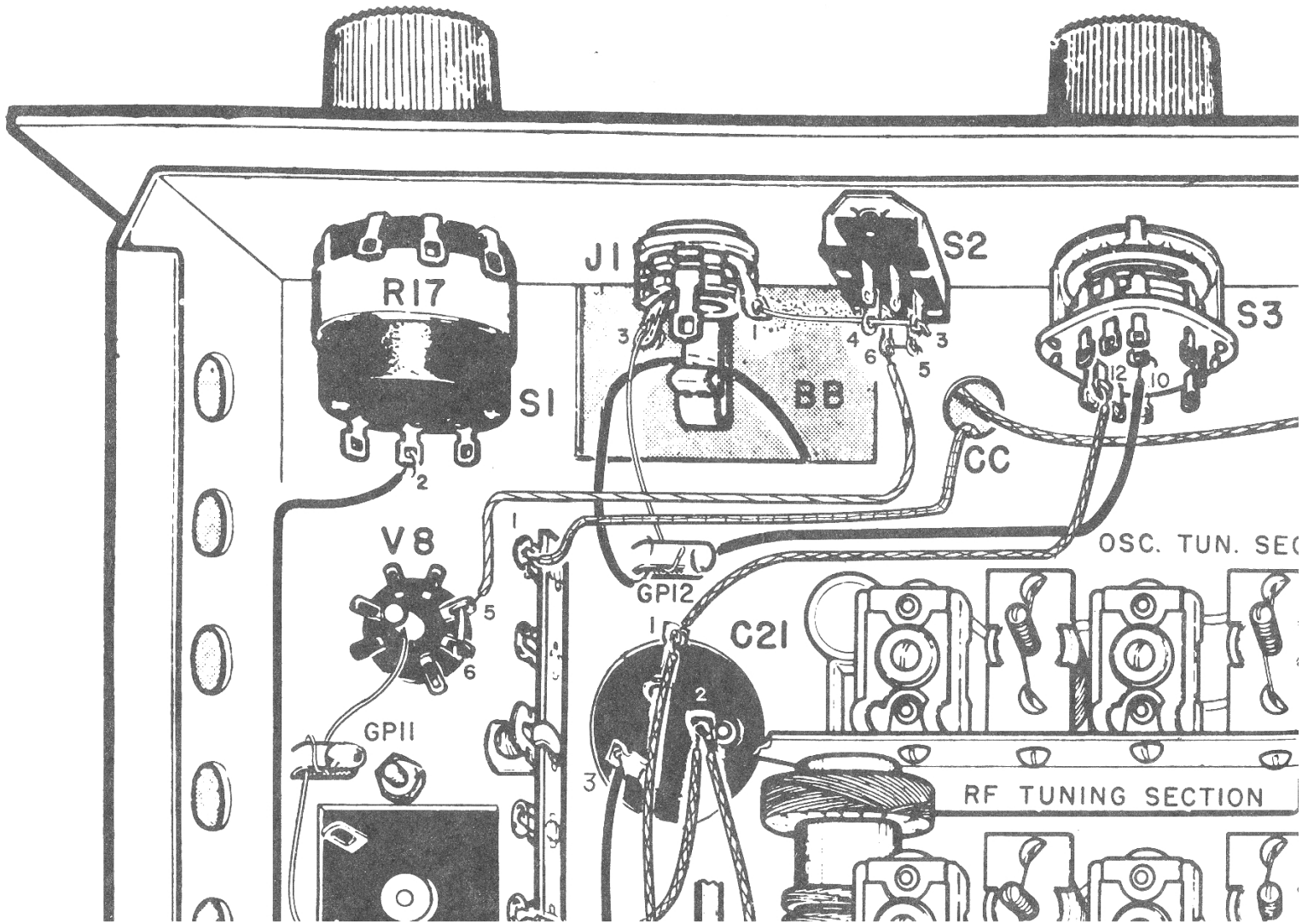
Part #	DESCRIPTION	PRICE EA.
200-100	Case (cover)	$ 8.00
200-101	Escutcheon (Dial cover)	1.25
200-102	Chassis	3.00
200-103	Front panel	3.00
200-104	Structural reinforcement arms, righf or left	.20
200-120	Three ganged tuning capacitor	5.00
200-121	BFO tuning capacitor	1.00
200-122	Filter capacitor, 40-40μf @300WVDC, insulated	1.71
200-123	Trimmer capacitors	.45
200-124	Padder capacitor	.50
200-140	Band selector switch	4.25
200-150	Power transformer	6.00
200-151	Output transformer	1.00
200-180	Small knob	.12
200-181	Medium knob	.20
200-182	Large knob	.25
200-200	Dial plate (includes main tuning and bandspread)	.75
200-201	Clear plastic window for dial	.60
200-202	Pilot lamp bracket	.20
200-204	Pulley (dial cord)	.20
200-205	Flywheel	.28
200-206	Pilot lamp socket	.15
200-207	Bandspread shaft and bracket	.38
200-208	Main tuning shaft and bracket	.38
200-209	Mounting insulator for BFO tuning capacitor	.12
200-203	S Meter,1 MADC	3.35
200-230	Antenna coils L100A	.72
200-231	Antenna coils L100B	.72
200-232	Antenna coils L100C	.72
200-233	Antenna coils L100D	.72
200-234	RF coils L101A	.72
200-235	RF coils L101B	.72
200-236	RF coils L101C	.72
200-237	RF coils L101D	.72
200-238	Osc coils L102A	.72
200-239	Osc coils L102B	.72
200-240	1st IF transformer	2.00
200-241	2nd IF transformer	2.00
200-242	3rd IF transformer	2.00
200-2011	Bracket for RF. Ant and Osc tuning	2.00
200-2311	Osc coils L102C	.72
200-2312	Osc coils L102D	.72
200-2313	BFO coil	1.50


OUT PUT



LAFAYETTE KT-200

PICTO

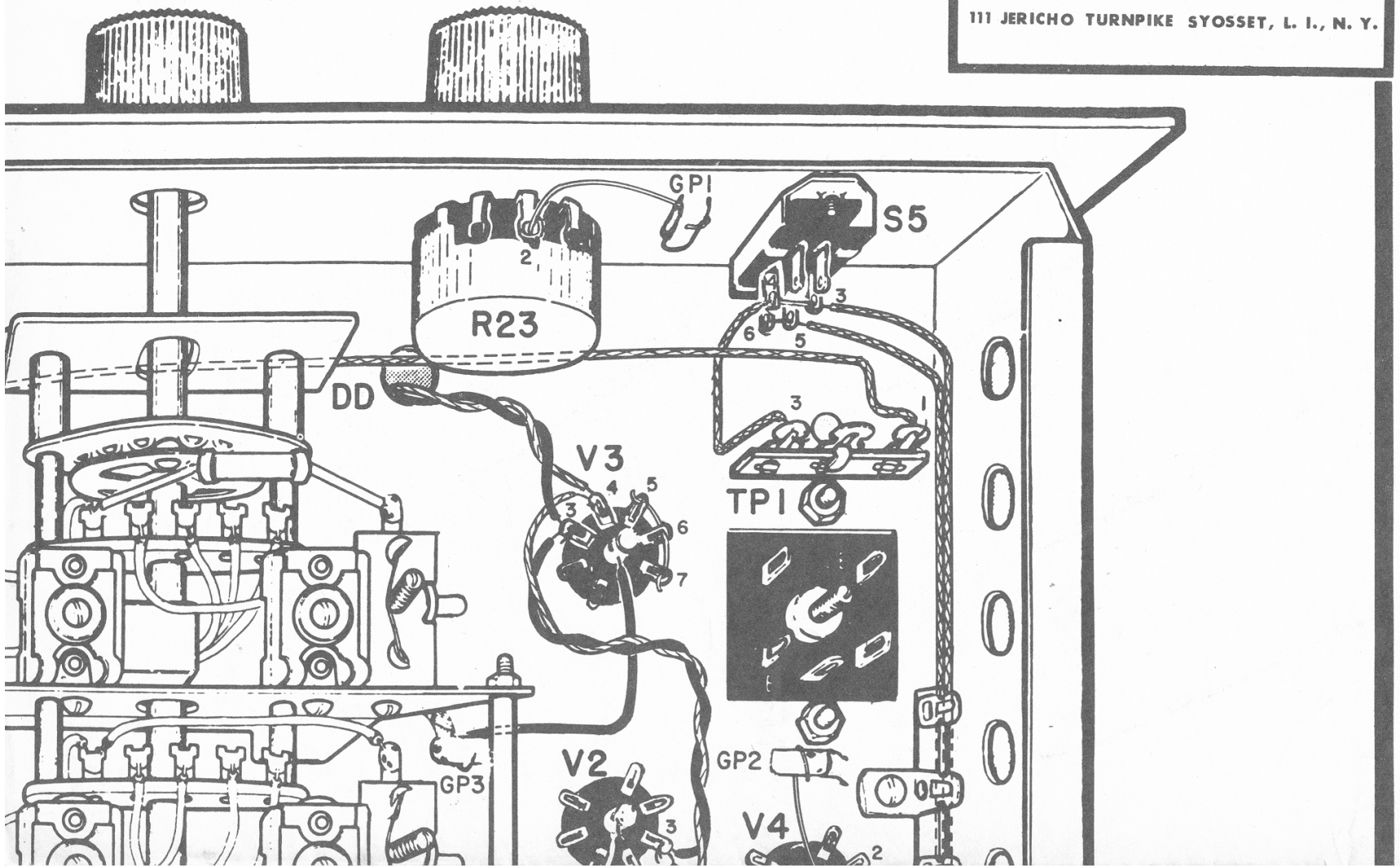


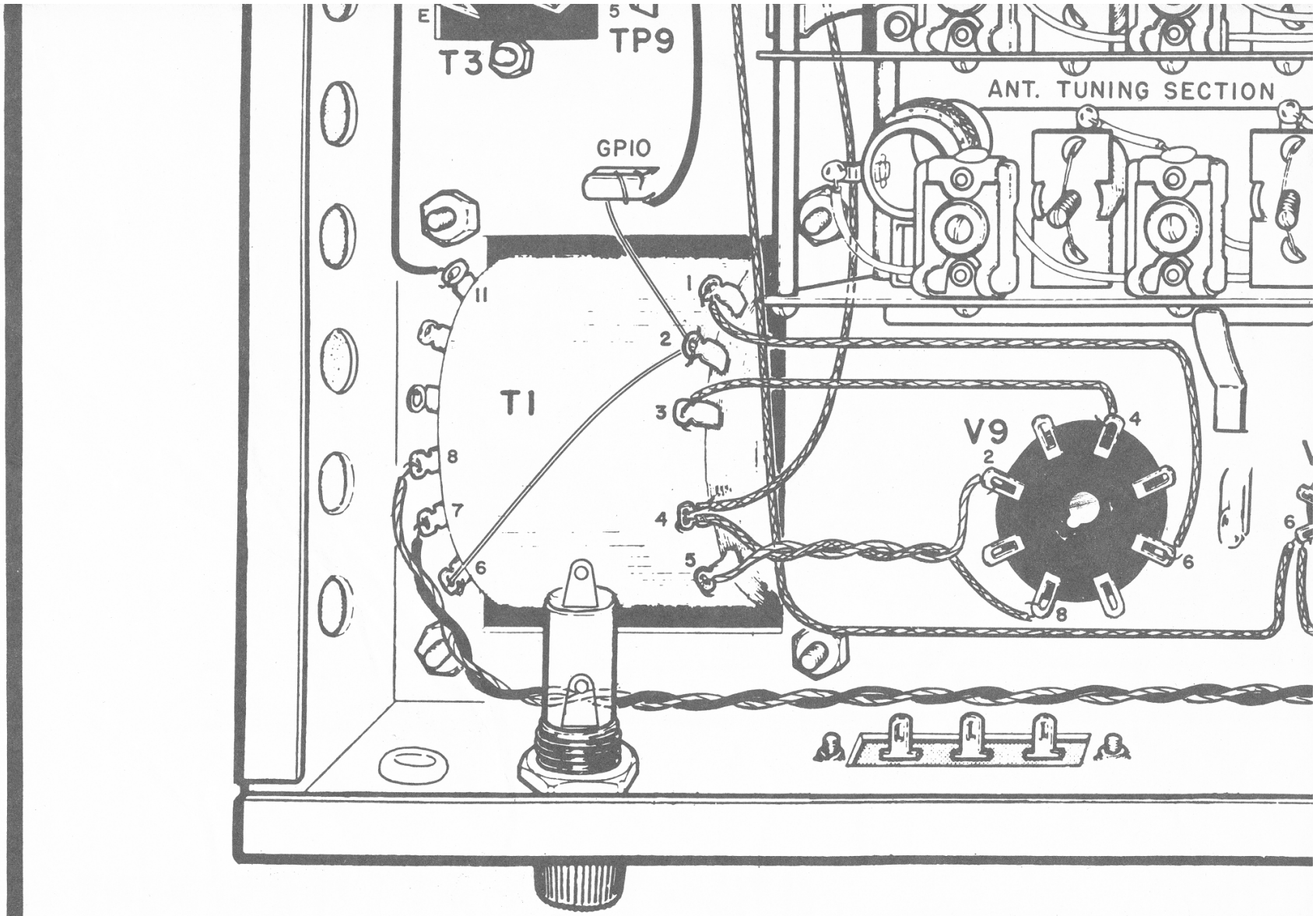
RIAL 1

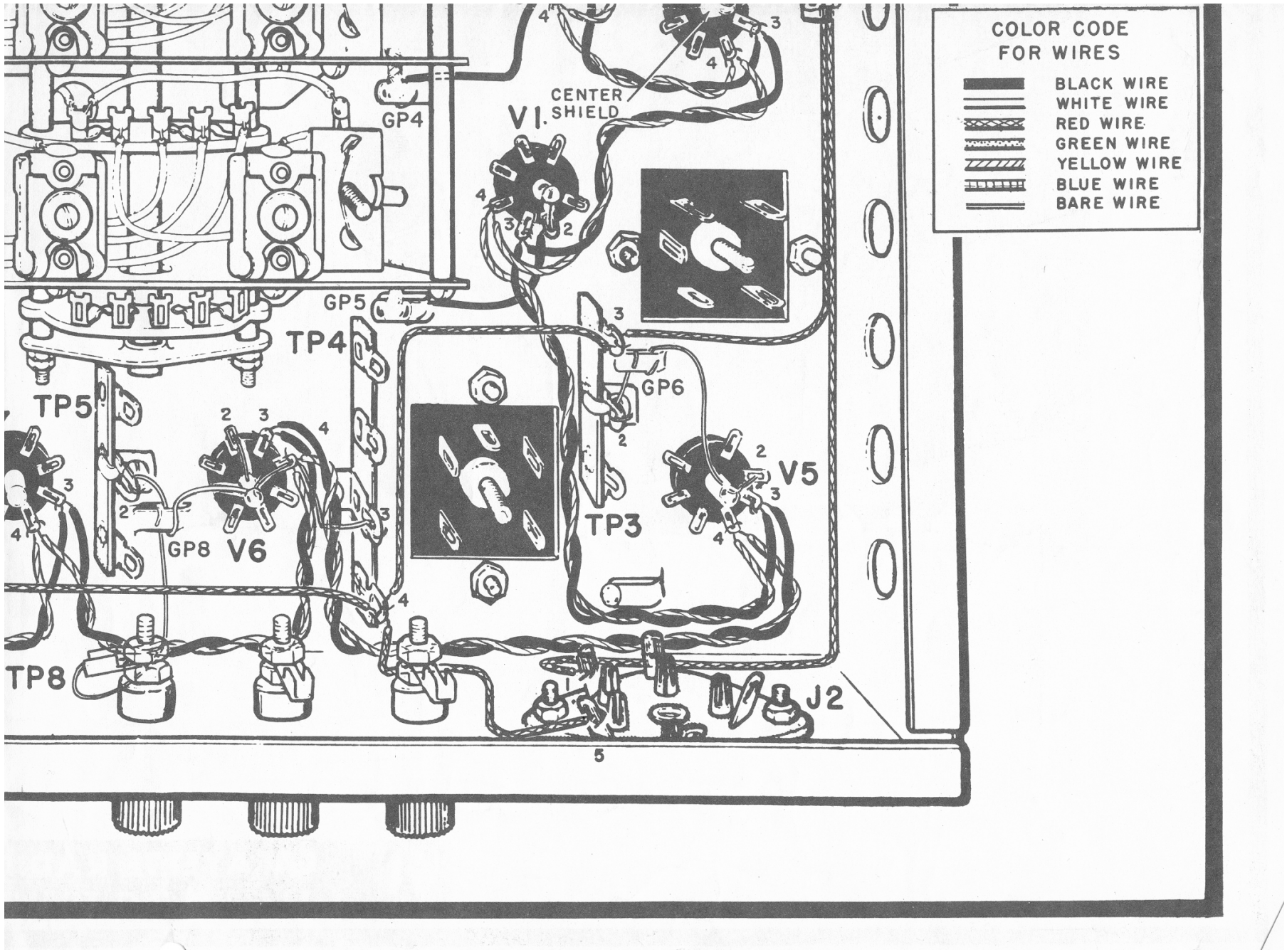
Lafayette Radio

LAFAYETTE RADIO ELECTRONICS CORP.

111 JERICHO TURNPIKE SYOSSET, L. I., N. Y.




E
5
TP9
T3
GPIO
ANT. TUNING SECTION
11
1
2
T1
3
8
7
4
5
6
V9
2
4
6
8
6


COLOR CODE
FOR WIRES
BLACK WIRE
WHITE WIRE
RED WIRE
GREEN WIRE
YELLOW WIRE
BLUE WIRE
BARE WIRE
CENTER SHIELD
V1
GP4
GP5
TP4
TP5
GP6
TP3
V5
GP8
V6
TP8
J2
5

Warranty

The Lafayette equipment you have just purchased has been expertly designed and was carefully tested and inspected before being shipped to you. If properly installed and operated in accordance with the instructions furnished, it should provide you with the finest results.

A. All parts contained in Lafayette equipment are warranted to be free from defect for 90 days from date of original purchase. Exchange, replacement or repair will be made to any part of the equipment which proves to be defective within this period without charge to the owner for parts or labor incurred in such repair.

B. After 90 day period is past, we can supply any replacement part for Lafayette equipment at a nominal charge for parts and labor.

This warranty shall not apply unless the equipment or part is returned for our examination, with all transportation charges prepaid, to the address below; nor shall it apply to equipment which has been subjected to misuse, accident or neglect.

This registration card must be filled out and mailed within ten days of purchase to place this warranty into effect.

LAFAYETTE RADIO
165-08 Liberty Avenue, Jamaica 33, N. Y.

Warranty Registration

The following Lafayette equipment is hereby registered and guaranteed as described.

Model .....

Date of Purchase .....

Where did you see item advertised? .....

The major reason for choosing Lafayette equipment was .....

.....

Comments .....

Purchaser .....

Street Address .....

City Zone State

Postage Will be Paid by Addressee

No Postage Stamp Necessary If Mailed in the United States

BUSINESS REPLY CARD

First Class Permit No. 7200, New York, N. Y.

LAFAYETTE RADIO

165-08 LIBERTY AVENUE

JAMAICA 33, NEW YORK

REGISTRATION DEPT.