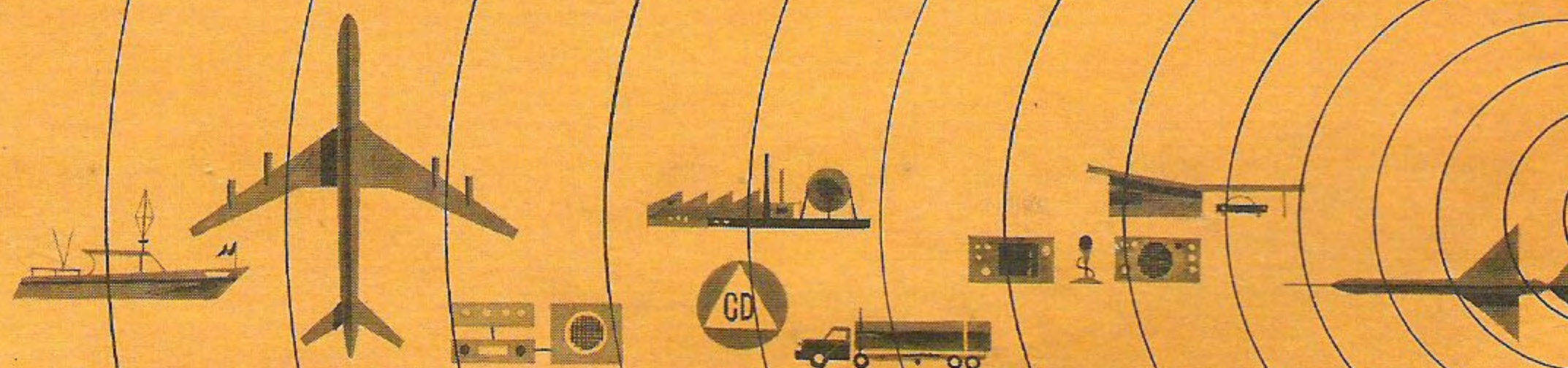


GONSET

INSTRUCTION MANUAL
COMMUNICATOR IV (6 Meter)
TRANSMITTER-RECEIVER
MODEL 3342, 3342-CD, 3342-CAP



GONSET DIVISION / YOUNG SPRING & WIRE CORPORATION



**INSTRUCTION MANUAL
COMMUNICATOR IV (6 METER)
TRANSMITTER-RECEIVER
MODEL 3342, 3342-CD**



GONSET DIVISION

**Young Spring & Wire Corporation
801 South Main Street
Burbank, California**

MADE IN U. S. A.

WARRANTY POLICY

The Gonset Division warrants its equipment, when properly registered against defects in workmanship, materials, and construction under normal use and service for a period of 90 days from the date of original purchase. Under this warranty our obligation is limited to repairing or replacing any defective parts.

This warranty does not apply to any equipment which has been tampered with in any way, or which has been misused or damaged by accident or negligence, or which has had the serial number removed, altered or effaced.

On equipment employing a vibrator, all components are covered by this warranty with the exception of the vibrator itself.

This warranty is valid only when the enclosed card is properly filled in and returned within ten days from purchase date.

The Gonset Division reserves the right to discontinue or change, at any time, specifications, design or prices without notice and without incurring obligations.

DO NOT SEND EQUIPMENT TO THE FACTORY WITHOUT FIRST SECURING AUTHORIZATION TO DO SO.

THIS WARRANTY DOES NOT INCLUDE TRANSPORTATION COSTS TO AND FROM THE FACTORY.

GONSET DIVISION

**Young Spring & Wire Corporation
801 South Main Street
Burbank, California**

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INTRODUCTION

The new Communicator IV is the latest addition to the Gonset Communicator line and embodies many new design concepts. The latest in engineering know-how has been integrated with established techniques to provide the ultimate in VHF reception and transmission.

This Communicator is a complete six-meter amateur radio station which can be used in mobile and fixed-station installations. Triple conversion is employed to achieve a high degree of frequency stability and selectivity. A new frame grid RF tube is employed to provide a very low noise figure, resulting in very outstanding VHF receiver sensitivity.

A transmitter power input of 24 watts to the push-pull final RF amplifier results in a clean signal of 12 to 14 watts into 50 ohms. An outstanding feature of this transmitter is the simplicity of tuning. Only two adjustments are required to tune the transmitter. A full 100% modulation capability is achieved by the use of push-pull modulation and audio shaping.

Other features include a push-to-talk mike provision; an integral transistorized two-way power supply; built-in antenna changeover relay; transmitter frequency spot switch; automatic noise limiter and adjustable squelch control.

SPECIFICATIONS

RECEIVER

Frequency Range:	49.9 Mc. to 54.1 Mc.
Sensitivity:	$0.5 \mu v$ (for $10 \text{ db } \frac{S + N}{N}$)
	Noise figure 4-6 db
Selectivity:	6 db 8.6 Kc. 20 db 14 Kc. 60 db 32 Kc.
Frequency Stability:	Better than .05%
Spurious Rejection:	45 db down or better
Antenna Input:	50-75 ohms unbalanced (coaxial cable)
Intermediate Frequencies:	First IF 9-13 Mc. Second IF 2.3 Mc. Third IF 455 Kc.
Squelch Range:	$0.1 \mu v$ to $50 \mu v$
"S" Meter:	Relative signal strength
Audio Output:	2 watts undistorted
Noise & Hum Level:	More than 40 db down

TRANSMITTER

Frequency Range:	49.9 Mc. to 54.1 Mc.
Crystal Frequency:	6.25 Mc. to 6.75 Mc. 8.333 Mc. to 9 Mc.
	External VFO input provision
Power Input:	24 watts DC to RF power amplifier
Spurious Emissions:	50 db or better
Output Impedance:	50-75 ohms unbalanced (coaxial cable)
RF Output Indicator:	Relative output
RF Bandwidth:	Less than 8 Kc.
Noise & Hum Level:	40 db below 100% modulation

MODULATOR

Power Capabilities:	10 watts push-pull 6BQ5's Class AB ₁ Audio (plate modulation)
Speech:	High level speech clipping and audio shaping
Microphone:	High impedance microphone with push-to-talk provision

NOTE: One 6BQ5 operates as an audio amplifier in receive.

POWER SUPPLY

12.6 VDC Input

Receive 7.2 amps
Transmit 10.3 amps

117 VAC Input

Receive 87.5 watts
Transmit 110 watts

TECHNICAL DESCRIPTION

The Communicator IV is an AM transmitter-receiver for the 6-meter amateur band, designed for use on either a 12-volt DC source for mobile/portable operation or 117 VAC for fixed-station applications.

The receiver portion employs a frame grid 6ER5 RF amplifier, resulting in a good low-noise front end. A 6J6 oscillator uses an overtone crystal operating at 41.0 Mc. for injection into the first mixer, a 6ER5. The crystal controlled first conversion provides for excellent frequency stability. The second oscillator, a 6C4, is tunable over the frequency range 6.7 Mc. to 10.7 Mc. and combines with the first I. F. frequency of 9 Mc. to 13 Mc. in the second mixer, 6AV6, resulting in a fixed frequency output of 2.3 Mc.

The 2.3 Mc. second I. F. signal is coupled through a double-tuned bandpass transformer to the third mixer, a 6BE6, where it is heterodyned against a 2755 Kc. oscillator, to produce the 455 Kc. third I. F. signal. Two stages of amplification, using 6BA6's, are employed at 455 Kc. Six tuned circuits provide the desired selectivity. A vacuum diode (1/3 of 6AV6), is used as a detector. This same tube is used as a delayed AVC rectifier furnishing delayed AVC to the R.F. amplifier. One-half of a 6AL5 is used as a highly effective automatic noise limiter switched in or out, as desired, by a front panel control. The other half of the 6AL5 is used for squelch operation to permit muting of the background noise in the absence of a signal. The first audio amplifier is the triode section of the 6AV6. This audio is then fed into the triode section of a 7059 in the

modulator and into a 6BQ5 audio amplifier. An audio output jack is provided on the rear panel for an external speaker or headphones.

The transmitter uses either 6 or 8 Mc. crystals or an external VFO as the frequency source and the plate circuit of a 12BY7 is broadbanded, operating in the 25 Mc. to 27 Mc. range. A second 12BY7 doubles to 50 Mc. - 54 Mc. This signal is then fed into a 6360 push-pull amplifier running 24 watts input. Only two adjustments are necessary, the plate tuning and plate loading, resulting in simplicity of operation. The modulator portion uses a pentode section of a 7059 as a speech amplifier and the triode section as a phase inverter feeding a pair of 6BQ5 tubes in push-pull, providing 10 watts of Class AB₁ audio to plate modulate the final amplifier. The 7059 and 6BQ5 tubes serve a dual function as receiver audio and transmitter modulator.

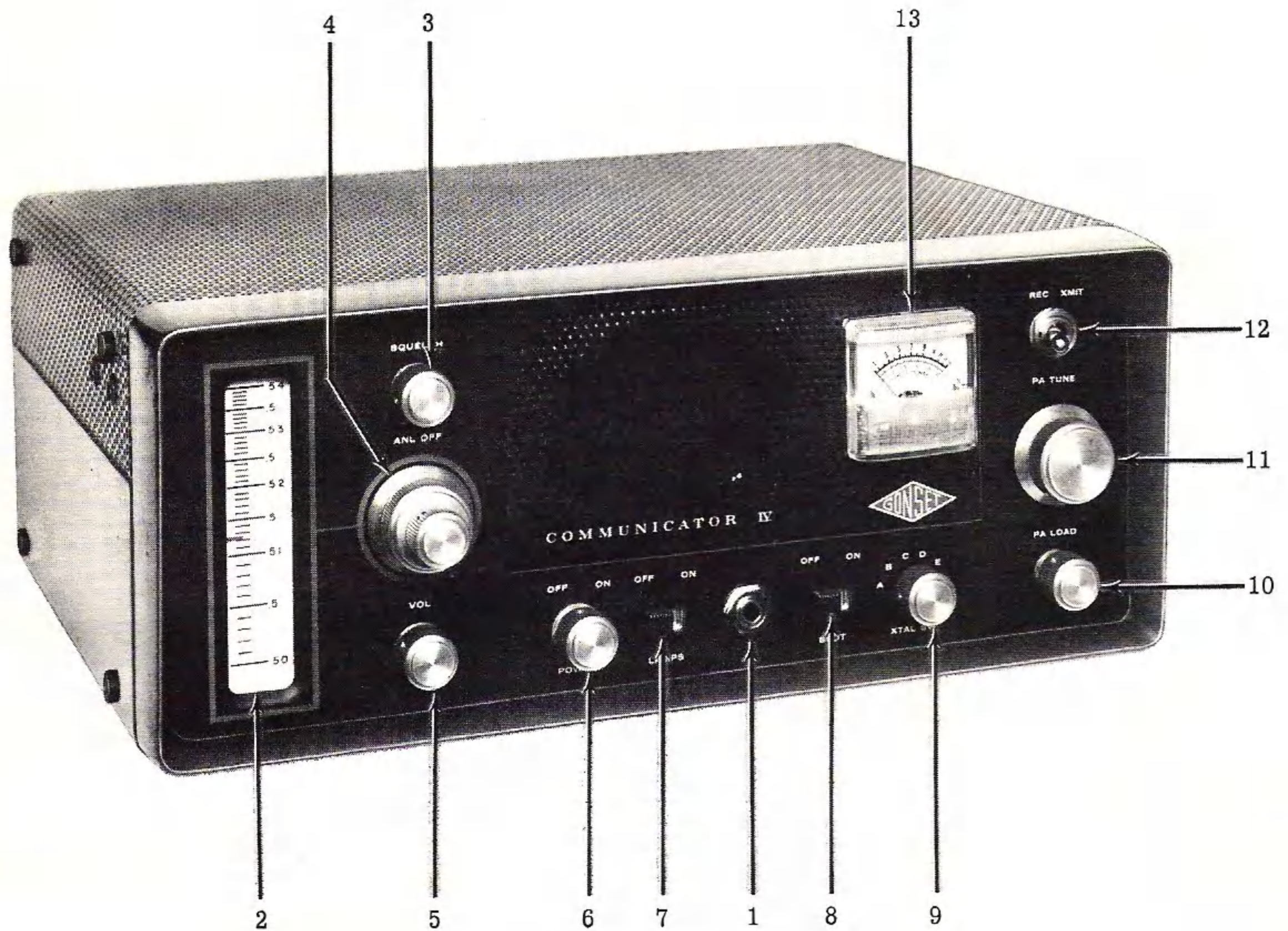
The universal power supply utilizes two 2N1554 transistors for 12 VDC operation. 117 VAC operation is possible merely by changing power cords. The two-way power transformer operates into a bridge rectifier circuit, and the output is filtered by a capacitor input filter.

A high impedance microphone with a push-to-talk switch is recommended. The push-to-talk feature operates a relay which switches:

- (1) The antenna from receive to transmit
- (2) B+ from receiver to modulator section
- (3) Ground from speaker to transmitter keying

In addition, a toggle switch on the front panel also provides transmit-receive operation in absence of a push-to-talk mike.

An output meter reads relative output in transmit and acts as an "S" meter, giving relative readings in the receive position.



1. MIKE JACK
2. RECEIVER TUNING DIAL
3. SQUELCH CONTROL - ANL OFF SWITCH
4. RECEIVER TUNING CONTROL
5. AUDIO GAIN CONTROL
6. POWER ON-OFF SWITCH
7. PILOT LIGHTS ON-OFF SWITCH
8. TRANSMITTER SPOT SWITCH
9. CRYSTAL SWITCH
10. PA LOAD CONTROL
11. PA TUNE CONTROL
12. T-R SWITCH
13. METER

FIG. 1, FRONT PANEL CONTROLS

INSTALLATION & OPERATION

After unpacking the Communicator IV, check to make sure that all tubes and pilot lamps are firmly seated.

For fixed-station operation, check to see that the power switch is turned off and plug the AC cord into the receptacle on the rear of the unit. Place a crystal in one of the sockets on the rear and place the front panel crystal switch to the matching position. For VFO operation, a VFO with 6, 8 or 25 Mc. output can be employed by inserting the RF output plug into any one of the crystal sockets. A VFO jack is provided to connect to the VFO control for automatic operation (Gonset Model 3357).

NOTE: When using crystal control, the VFO must be turned off or VFO control disconnected. Otherwise, a signal from the VFO will be transmitted.

For mobile operation, change to the DC power cord supplied and connect to the ammeter or accessory terminal.

WARNING: Observe correct polarity when connecting to the 12 VDC source.

A NEGATIVE GROUND SYSTEM MUST BE USED. Otherwise, serious damage will result to some of the components.

The antenna circuit is designed for 50-75 ohm coaxial cable. To obtain the best possible performance, a good antenna is very important. Either a six-meter ground plane or a good directional array will greatly increase the range of the Communicator.

RECEIVER . . . Receiver operation is self-explanatory. The tuning meter serves as a relative carrier strength indicator and is not intended to read

actual "S" units. On the rear of the unit is a potentiometer adjustment to set the "S" meter to zero. This zero adjustment should be made without an antenna connected. To use the squelch function, turn the control counter-clockwise just to the point where the background noise disappears. This is the proper setting and is the most sensitive. A change in AVC voltage as small as 0.1 volt will gate the receiver when the threshold control is set properly. It is not necessary to turn it full clockwise. For best operation of the squelch, the noise clipper is left on at all times when the squelch is in use. A phone jack is provided on the rear for an external speaker or headphones. The internal loudspeaker is disconnected from the circuit when an output plug is inserted.

RECEIVER SELECTIVITY . . . As shipped from the factory, the bandwidth is approximately 8.6 Kc. wide at the 6 db points to conform with O.C.D.M. requirements.

TRANSMITTER . . . The transmitter portion of the Communicator is tuned by placing the transmit-receive switch in the transmit position or with a push-to-talk mic. button depressed, alternately adjusting the PA load and PA tune controls for a MAXIMUM R. F. output meter indication. For determining the operating frequency, turn the SPOT switch on and tune the receiver for maximum meter indication. Turn the SPOT switch off before attempting to transmit.

A front panel switch is provided to turn off the pilot lamps when not desired. As an added feature, a handle is provided on the unit for easy portability.

For Civil Defense application, it is necessary to obtain a kit consisting of the following: High impedance mike, crystal certificate, yellow carrying case, and appropriate decals. This kit is available as follows:

Civil Defense Kit: Model 3409 (converts a Model 3342 to 3342-CD)

A universal mounting kit, Model 3365, is also available for mobile installations consisting of the necessary mounting brackets and hardware for installing the Communicator IV under the dash.

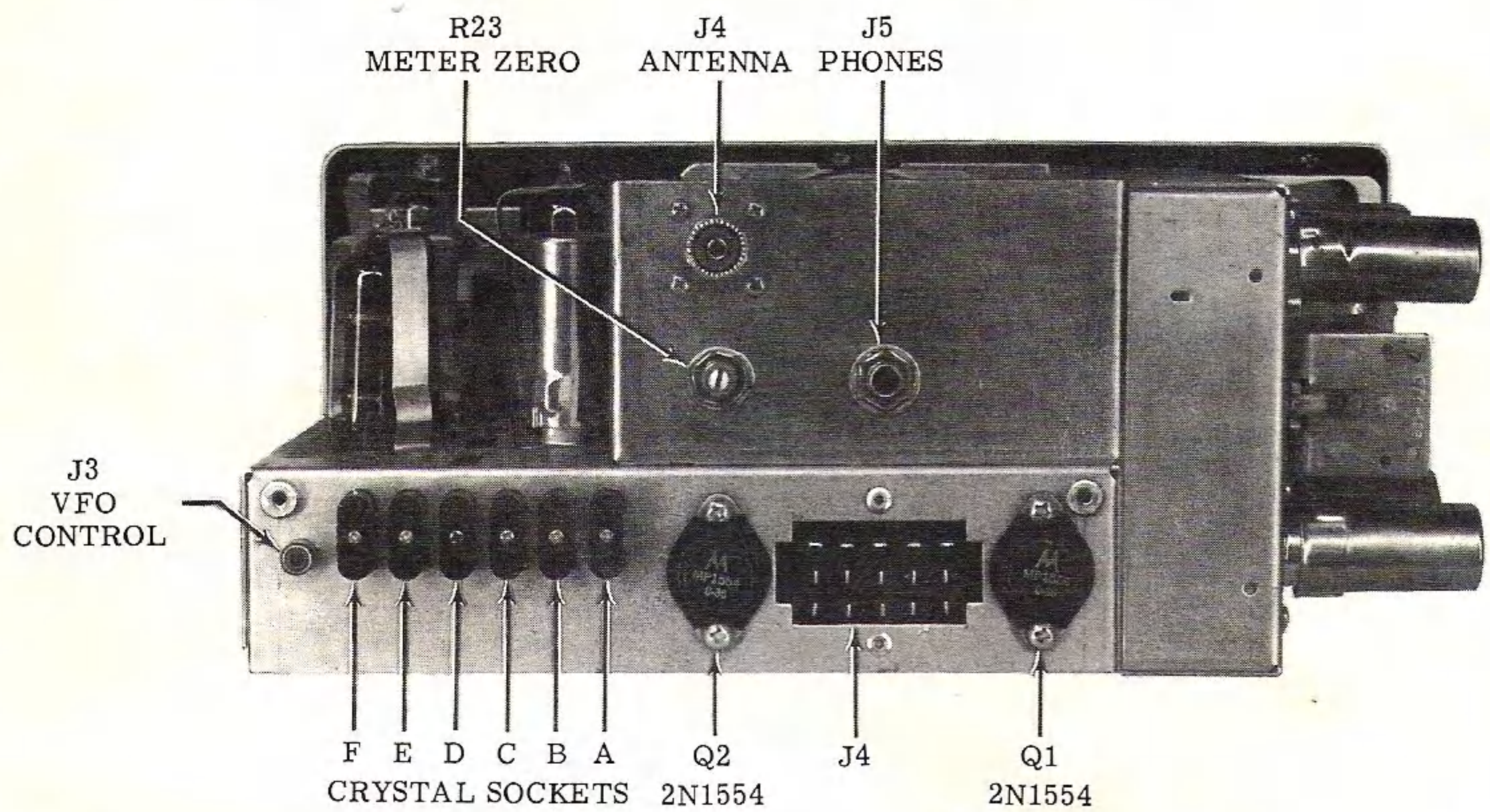


FIG. 2, CHASSIS, REAR VIEW

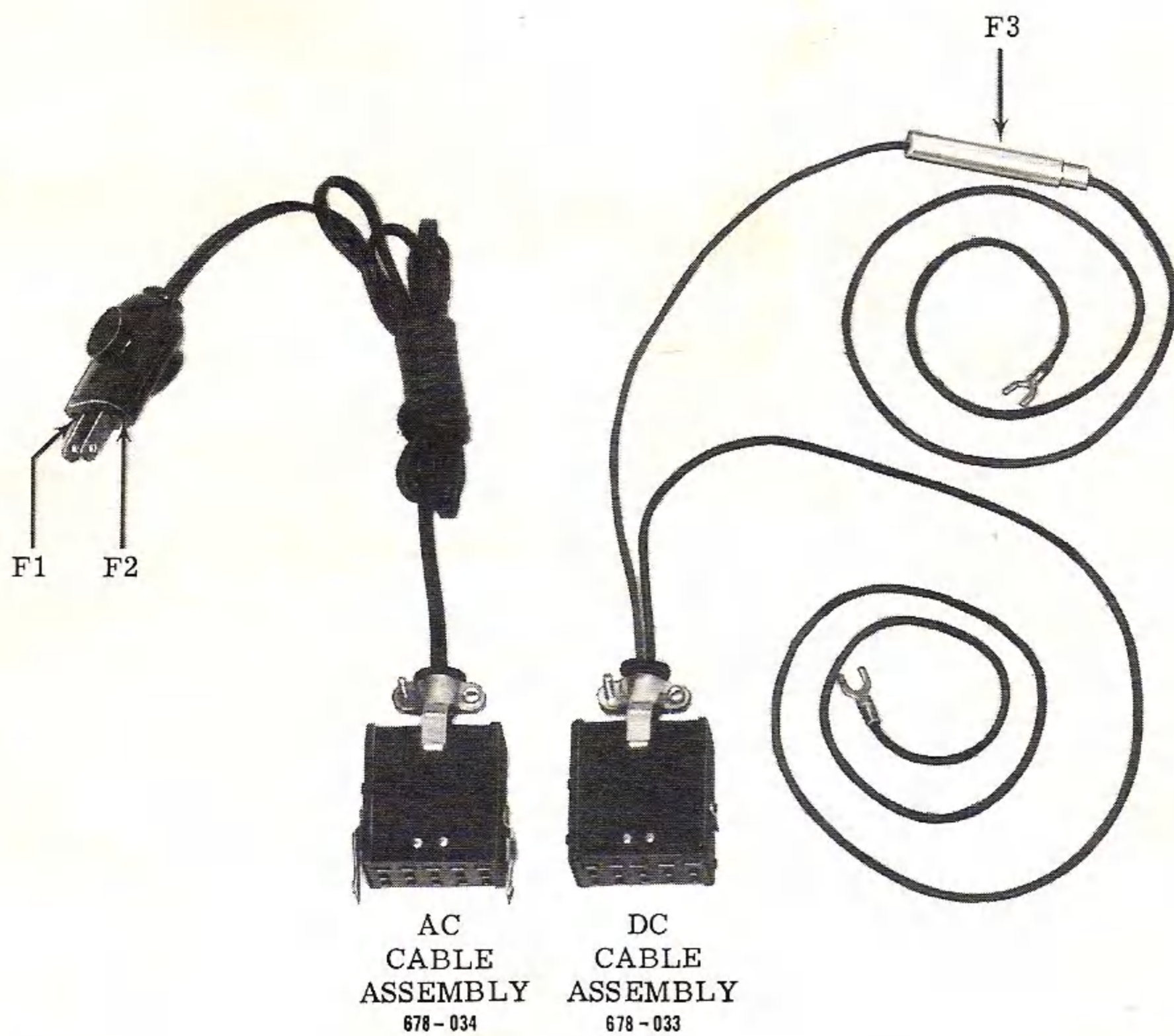


FIG. 3, POWER CABLES

ALIGNMENT & TROUBLE-SHOOTING

Alignment Tools Required

- (1) General Cement #5097 or equivalent.
- (2) General Cement #8606 or equivalent.
- (3) Small insulated screwdriver.

RECEIVER ALIGNMENT

455 Kc. I. F. Alignment

Couple the signal generator through a .001 mfd. blocking capacitor to Pin 7 of V6, the 6BE6 third mixer and oscillator. Connect a VTVM to the AVC test point on the receiver. Align T4, T3, T2 at 455 Kc., setting the input level for an AVC voltage of -1 to -2 volts. Adjust each transformer top and bottom for maximum reading of VTVM. Repeat the procedure several times to compensate for minor interaction.

2.755 Mc. Oscillator Alignment

Set signal generator to 2.3 Mc. and adjust slug in L-10 for maximum reading of VTVM.

2.3 Mc. I. F. Alignment

Couple the signal generator through a .001 mfd. blocking capacitor to Pin 1 of V5, the 6AV6 second mixer. Set signal generator to 2.3 Mc. and adjust T1 top and bottom for maximum reading of VTVM.

6.7 - 10.7 Mc. Tunable Oscillator Tracking

Couple the signal generator through a .001 mfd. blocking capacitor to Pin 2 of V3, the 6ER5 first mixer. Set main tuning dial to 50 Mc. Set signal

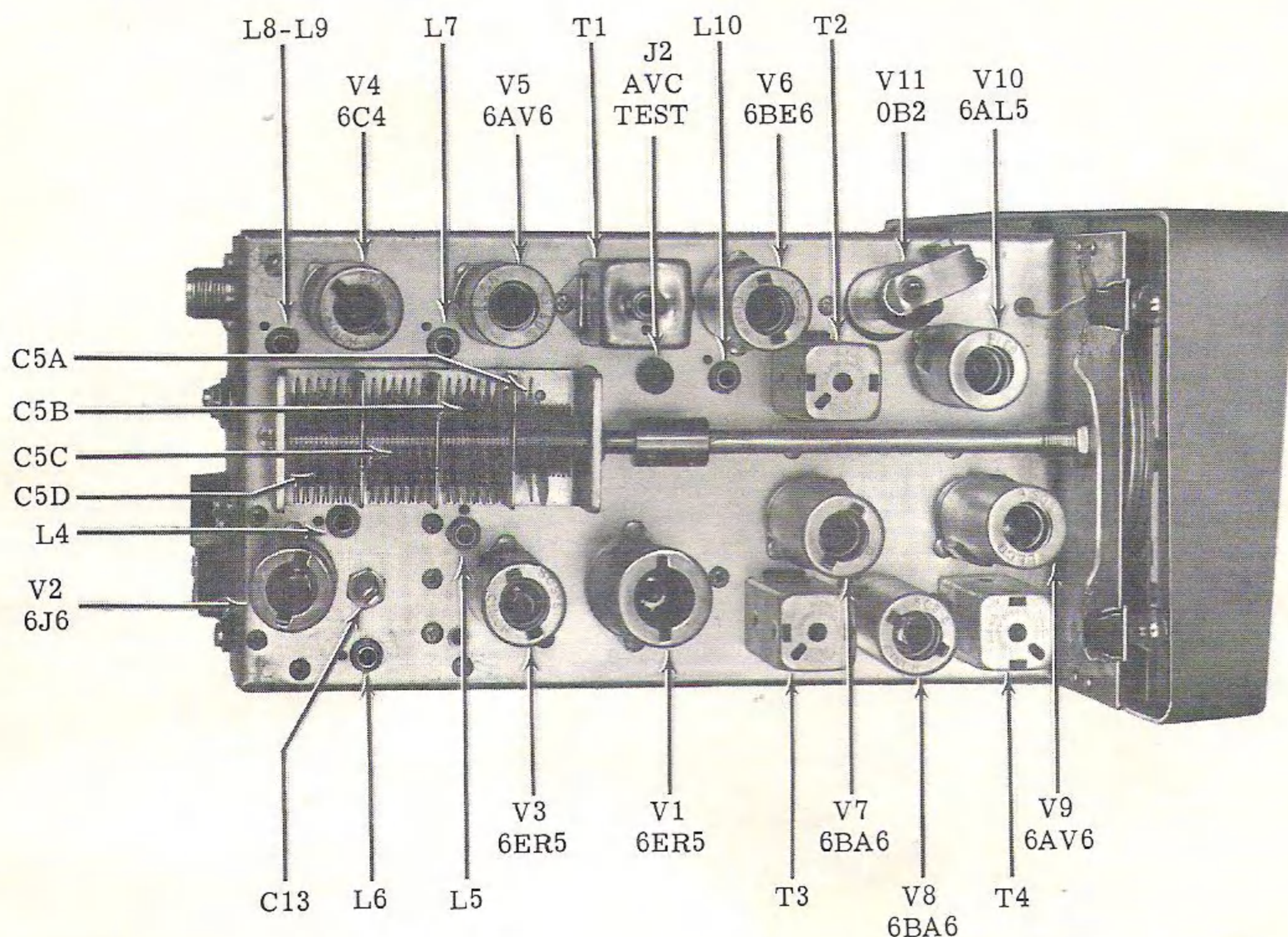


FIG. 4, RECEIVER SUB CHASSIS, TOP VIEW

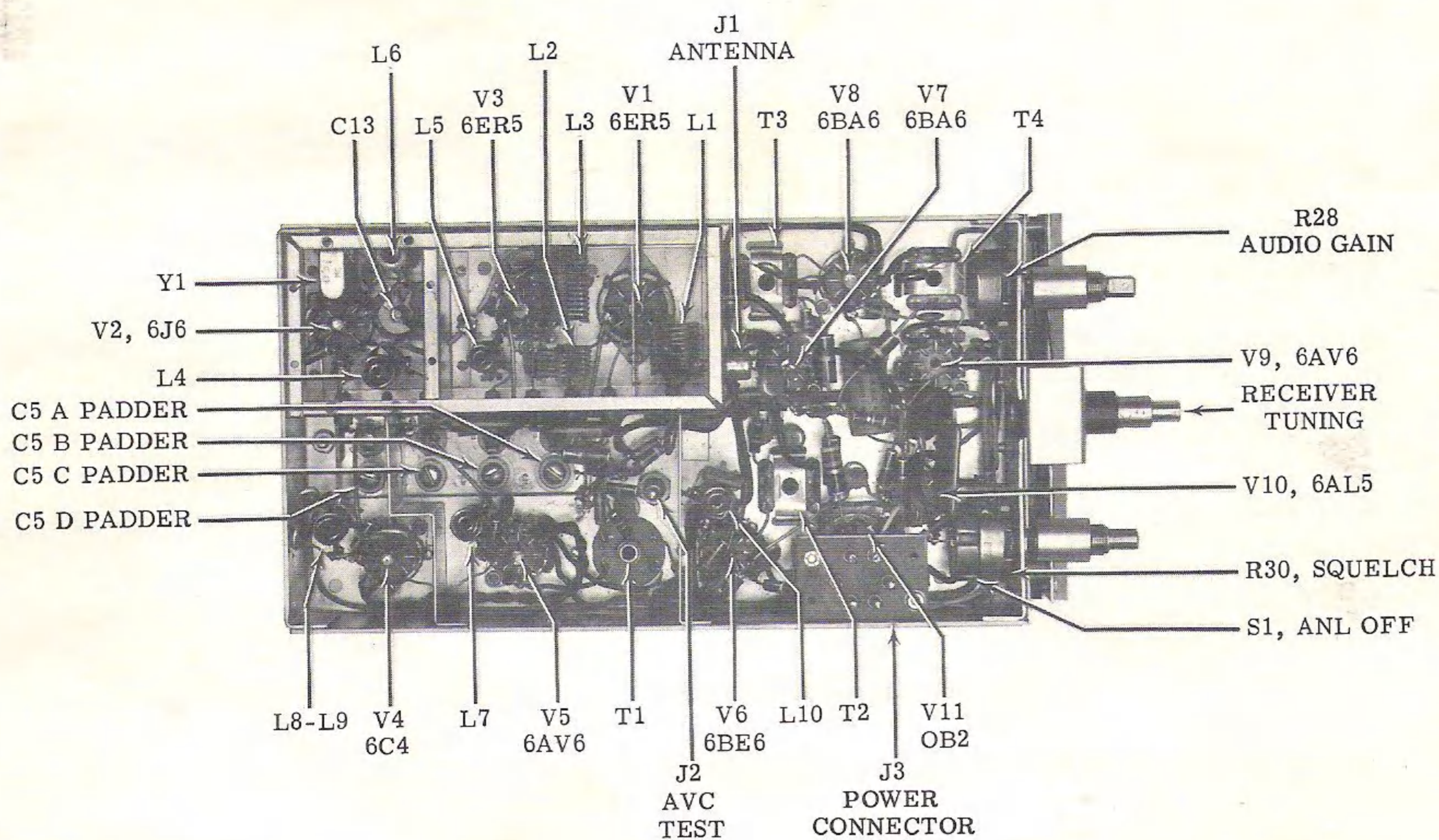


FIG. 5, RECEIVER SUB CHASSIS, BOTTOM VIEW

generator to 9.0 Mc., and adjust slug in Coils L8-L9 for maximum reading of VTVM. Turn main tuning dial to 54 Mc. and change signal to 13 Mc. Adjust slug in Coils L8-L9 for maximum reading of VTVM. If slug had to be moved away from chassis, add capacity by tightening C5D padder. If slug had to be moved toward chassis, loosen C5D padder. Return dial to 50 Mc. and injected frequency to 9 Mc. Repeat above procedure as often as necessary until proper tracking has been achieved.

9 - 13 Mc. Second Mixer Tracking

Set the main tuning dial to 50 Mc. and injected frequency to 9 Mc. Adjust slug in Coil L7 for maximum reading of VTVM. Turn main tuning dial to 54 Mc. and change injected frequency to 13 Mc. Adjust slug in Coil L7 for maximum reading of VTVM. If slug had to be moved away from chassis, add capacity by tightening C5C padder. If slug had to be moved toward chassis, loosen C5C padder. Return dial to 50 Mc. and injected frequency to 9 Mc. Repeat above procedure as often as necessary until proper tracking has been achieved.

9 - 13 Mc. First Mixer Tracking

Set the main tuning dial to 50 Mc. and injected frequency to 9 Mc. Adjust slug in Coil L5 for maximum reading of VTVM. Turn main tuning dial to 54 Mc. and change injected frequency to 13 Mc. Adjust slug in Coil L5 for maximum reading of VTVM. If slug had to be moved away from chassis, add capacity by tightening C5B padder. If slug had to be moved toward chassis, loosen C5B padder. Return dial to 50 Mc. and injected frequency

to 9 Mc. Repeat above procedure as often as necessary until proper tracking has been achieved.

Crystal Oscillator Adjustment

Set grid dip meter to 41.0 Mc. and use as a diode detector. Couple grid dip meter to Coil L6. Starting with C-13 fully closed, slowly rotate counter-clockwise until crystal oscillator suddenly "pops" on. Advance slightly clockwise past this position.

Set grid dip meter to 41 Mc. and couple to ground end of Coil L3. Adjust slug of L4 for maximum output as indicated by grid dip meter.

R. F. Amplifier Tracking

Inject 50 Mc. signal into antenna connector of receiver and adjust dial to 50 Mc. Adjust C5A padder for maximum reading of VTVM. Repeat at 54 Mc. Adjust spacing of turns of Coil L2 and distance from L3 to obtain a peak VTVM reading at the same setting of C5A padder at either 50 or 54 Mc.

TRANSMITTER ALIGNMENT

Crystal Oscillator Check

Insert 8.333 Mc. and 9 Mc. band edge crystals in crystal sockets. Connect VTVM to Pin 2 of V1, the 12BY7 oscillator. Reading should be at least 20 volts on either crystal with push-to-talk switch depressed. C1, the 5-25 mmf. trimmer Capacitor in the grid circuit is set at the factory, but can be adjusted to zero in any single crystal. A hole is provided in the rear panel to mount an additional capacitor (E. F. Johnson Type #15M-11) to be wired across one of the crystals to zero in a second crystal frequency.

25 Mc. Alignment

Connect VTVM to junction of Coils L2 and R3-C7. Using 9 Mc. crystal, adjust slug in Coils L1 and L2 for maximum VTVM reading. Using 8.333 Mc. and 9 Mc. crystals, keep switching from one crystal to the other and adjusting slugs in Coils L1 and L2 clockwise a small amount until VTVM reading does not change.

50 Mc. Alignment

Connect VTVM to center tap of Coil L6, the 6360 final grid coil. Using 9 Mc. crystal, adjust slug in Coils L5 and L6 for maximum VTVM reading. Switch to 8.333 Mc. crystal and adjust PA tune and PA load controls for maximum output on wattmeter. Keep switching from one crystal to the other and adjusting slugs in Coils L5 and L6 a small amount until VTVM reading does not change. Be sure to peak output into wattmeter each time you switch crystals. Switch to crystal position that has no crystal. There should be no reading of VTVM while you rotate the PA tune control 180°.

CAUTION: Make this test as short as possible, as damage to tubes can result under prolonged operation.

SPEECH AMPLIFIER AND MODULATOR

Using a diode detector with headphones, listen to modulation while speaking into microphone. Speech should be clear and free of distortion. The Communicator IV does not employ a microphone gain control.

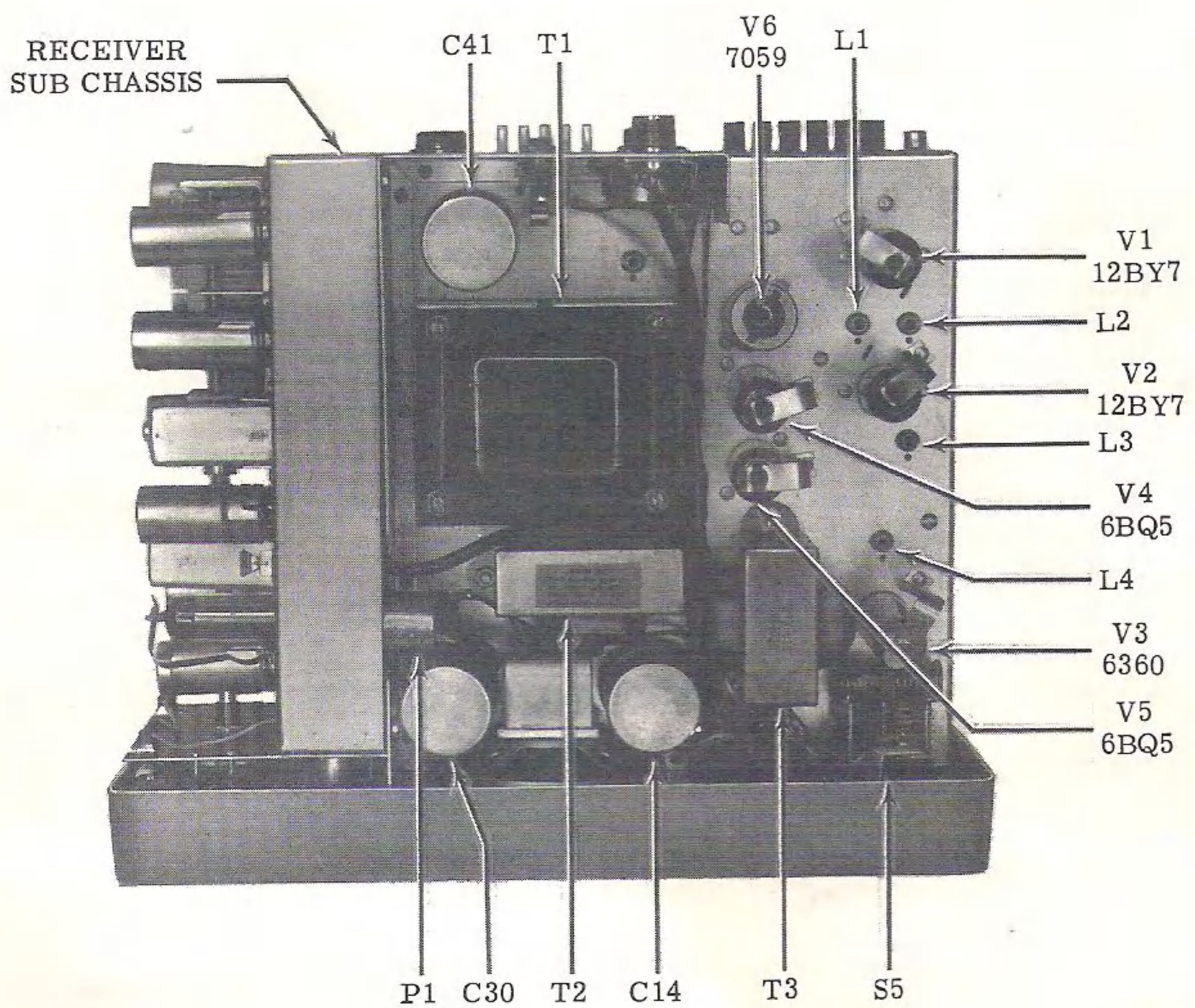


FIG. 6, CHASSIS, TOP VIEW

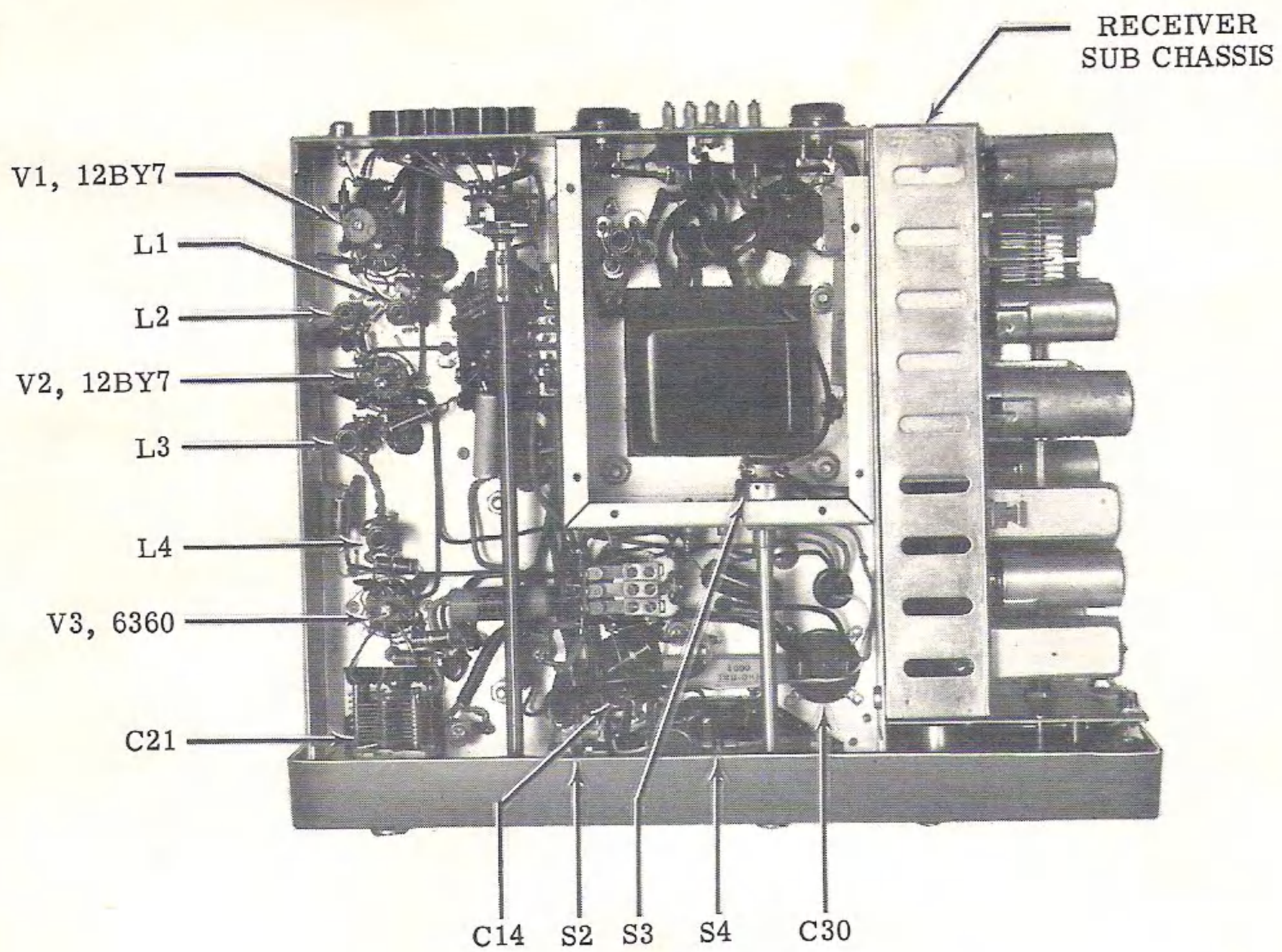


FIG. 7, CHASSIS, BOTTOM VIEW

TROUBLE SHOOTING

When trouble develops, the first thing to look for is a defective tube, as this trouble will represent about 90 percent of that encountered in service. If the trouble is not traced to a defective tube, then voltage measurements should be made to locate the trouble. Typical voltages are given in Figure 8 Voltage Charts and are also shown on the schematic diagram.

The push-to-talk relay ordinarily will be trouble-free for several years of normal use without need for adjustment. However, when the equipment is exposed to wind-blown dust, sand, etc., difficulty may be encountered with foreign matter lodging between contacts. Such foreign matter often can be blown out with compressed air or the contacts can be cleaned with a burnishing tool. Care should be taken not to upset the blade tension on any of the contacts. Do not use liquid contact cleaners.

VOLTAGE CHART, COMMUNICATOR 4 6 METER TRANSMITTER

TUBE	PIN NUMBER								
	1	2	3	4	5	6	7	8	9
V1 12BY7	.4	-25 (2)	0	0	12.5 VAC	-	275*	135	0
V2 12BY7	0	-32	0	0	12.5 VAC	-	275*	150	0
V3 6360	-82*	12	-82*	12.5 VAC	0	265*	200	265	-
V4 6BQ5	-	0	9.6 7.8 (1)	12.5 VAC	6.2 VAC	-	280 320 (1)	-	260 0 (1)
V5 6BQ5	-	0	9.6 7.8 (1)	6.2 VAC	0	-	280 320 (1)	-	260 260 (1)
V6 7059	155 175 (1)	0 -.72 (1)	35 0 (1)	0	12.5 VAC	62 0 (1)	1.5 0 (1)	104 116 (1)	57 63 (1)

* SEE SCHEMATIC

VOLTAGE AT INPUT TO FILTER 295 VDC ON TRANSMIT

(1) ON RECEIVE

(2) VARIES ACCORDING TO XTAL ACTIVITY

ALL VOLTAGES ARE APPROX., TAKEN WITH VTVM
AND MEASURED TO GROUND. LINE VOLTAGE 117 VAC.

FIG. 8, VOLTAGE CHARTS (SHEET 1 OF 2)

VOLTAGE CHART, COMMUNICATOR 4 6 METER RECEIVER

TUBE	PIN NUMBER						
	1	2	3	4	5	6	7
V1 6ER5	0	-.65	0	6.2 VAC	155	0	0
V2 6J6	15.5	22	5.1 VAC	0	-1.4	-9.2 (2)	0
V3 6ER5	-	0	6 VAC	0	155	0	2
V4 6C4	-	-	12.5 VAC	6.3 VAC	12.3	-.61	0
V5 6AV6	0	.85	12.5 VAC	6.3 VAC	-	-	58
V6 6BE6	-1.8	0	12.5 VAC	6.3 VAC	28	28	-.11
V7 6BA6	-1.08	0	12.5 VAC	6.3 VAC	230	55 (3)	0
V8 6BA6	-1.08	0	12.5 VAC	6.3 VAC	230	55 (3)	0
V9 6AV6	-.92	0	0	6.3 VAC	-1.2	-.55	70
V10 6AL5	25 (3) 142 (4)	-.62 (3) -.62 (4)	2.8 VAC	6.3 VAC	-.62 (3) -.78 (4)	-	26 (3) 52 (4)
V11 0B2	106	-	-	-	105	-	0

(3) WITH SQUELCH OFF
(4) WITH SQUELCH FULL ON

VOLTAGE AT INPUT TO FILTER 320 VDC ON RECEIVE
NO SIGNAL CONDITIONS
ANL ON

ALL VOLTAGES ARE APPROX., TAKEN WITH VTVM
AND MEASURED TO GROUND. LINE VOLTAGE 117 VAC.

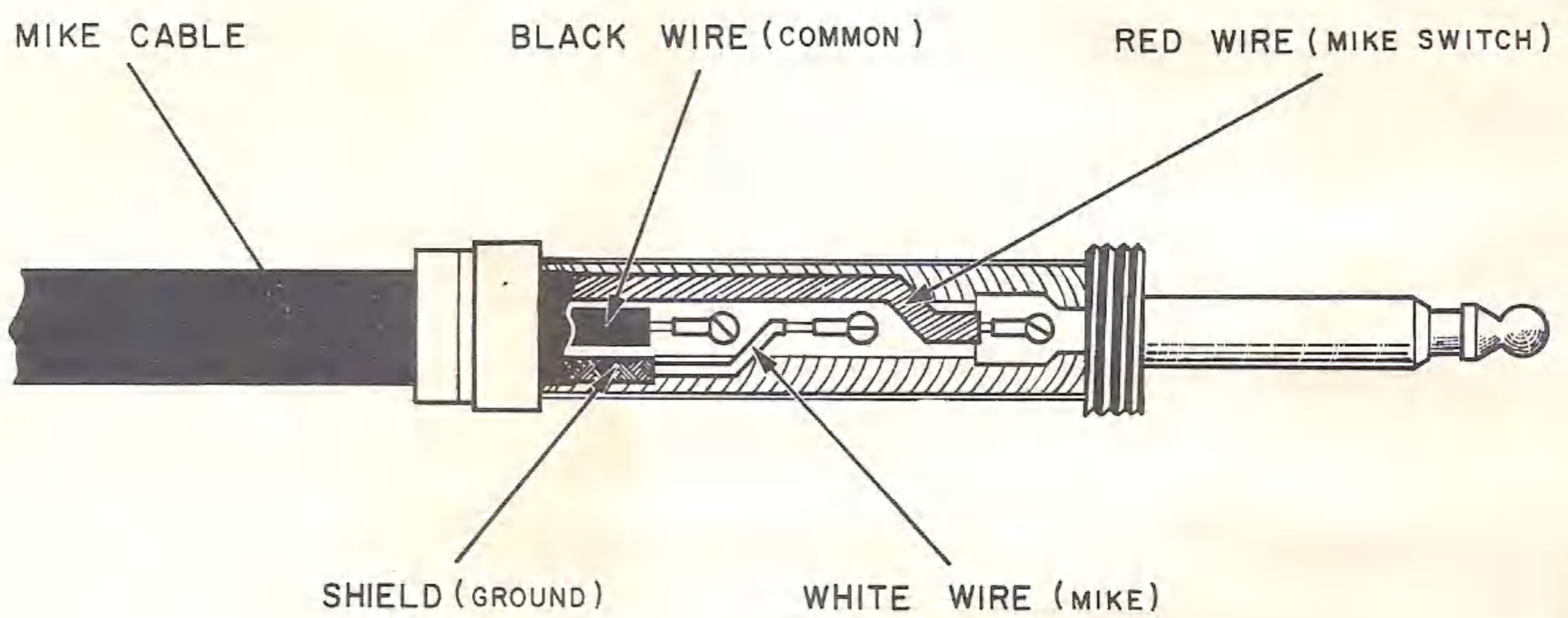
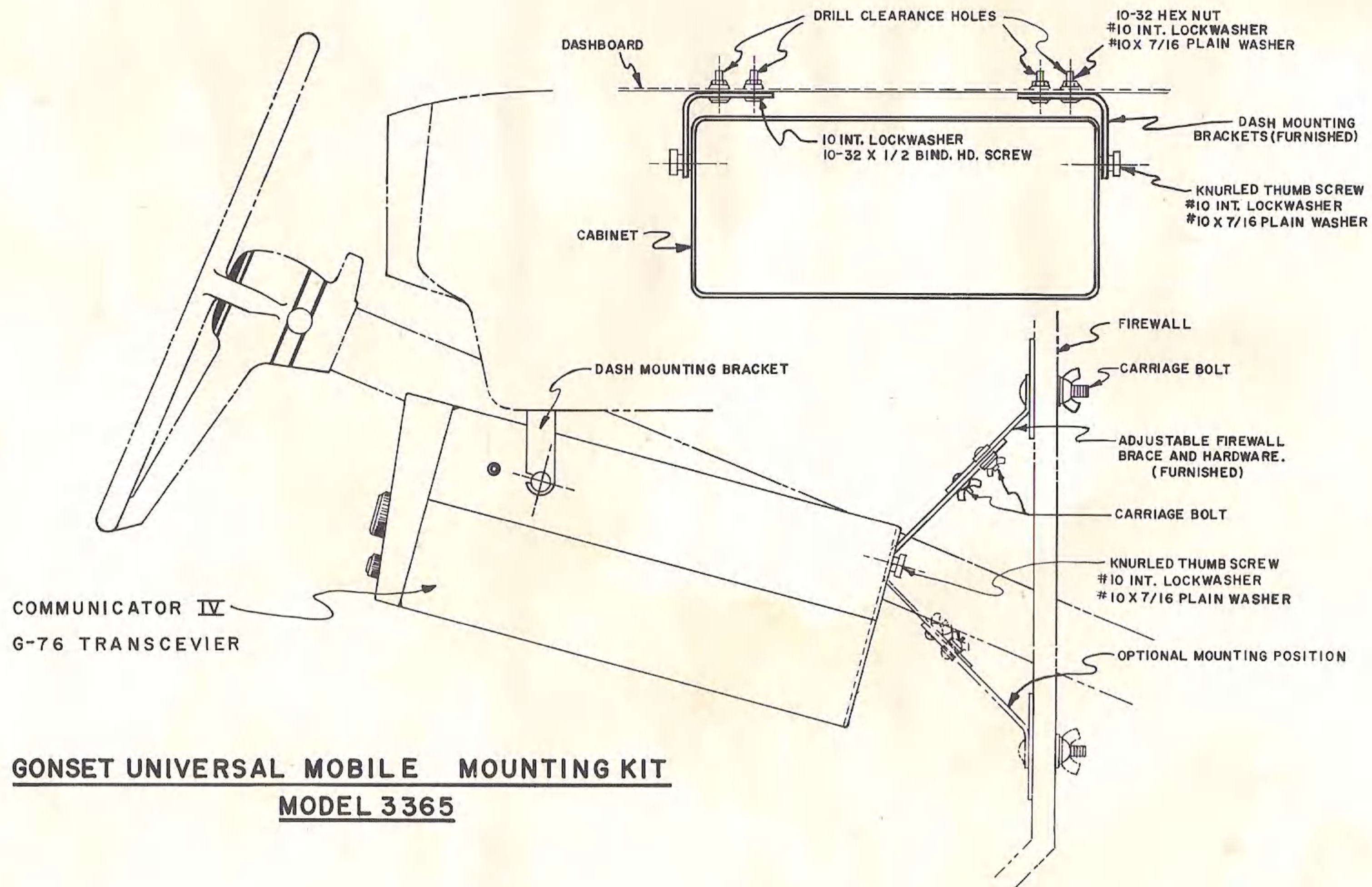
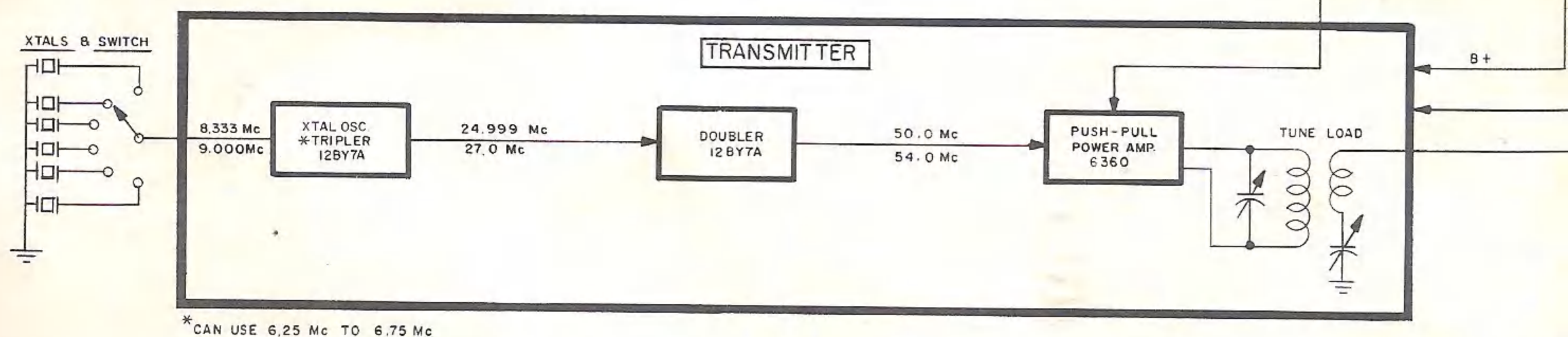
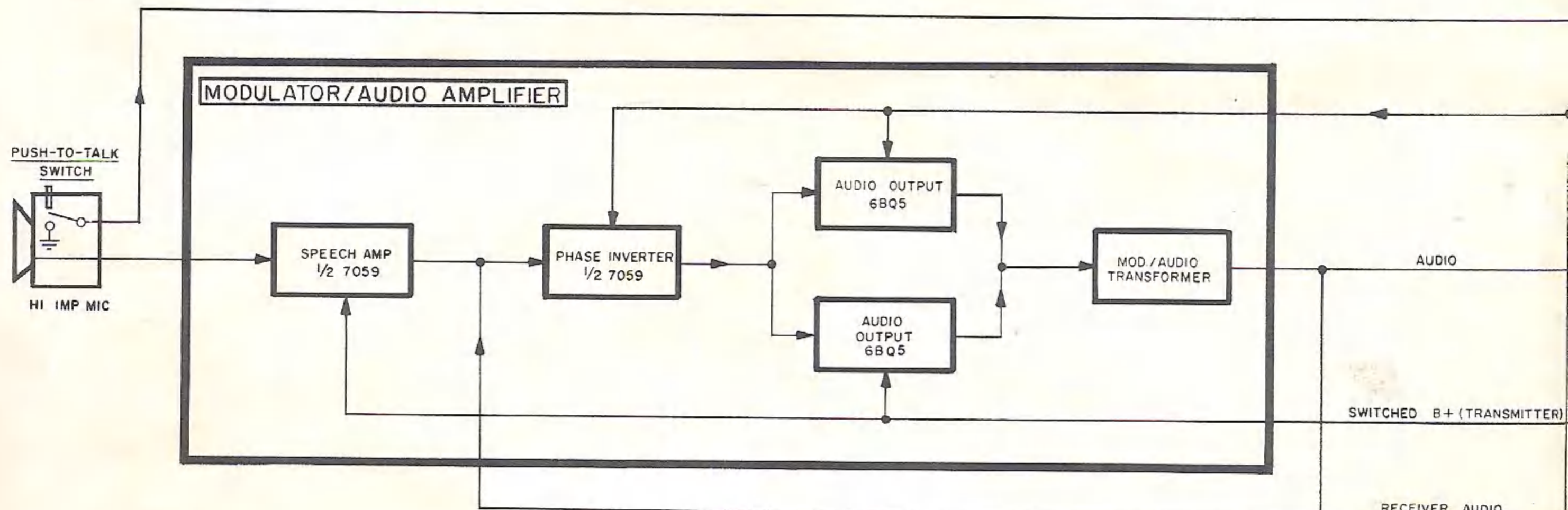
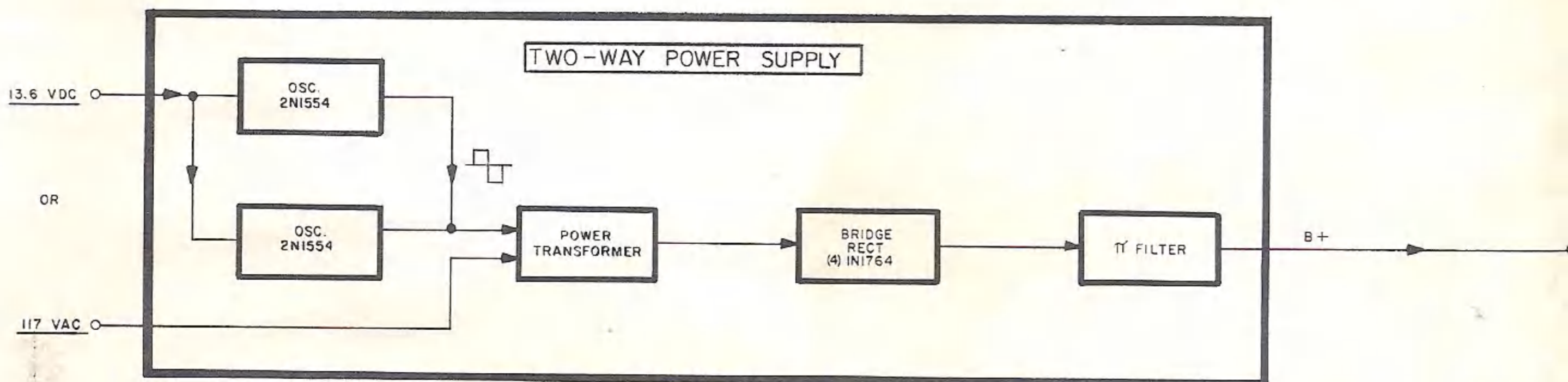
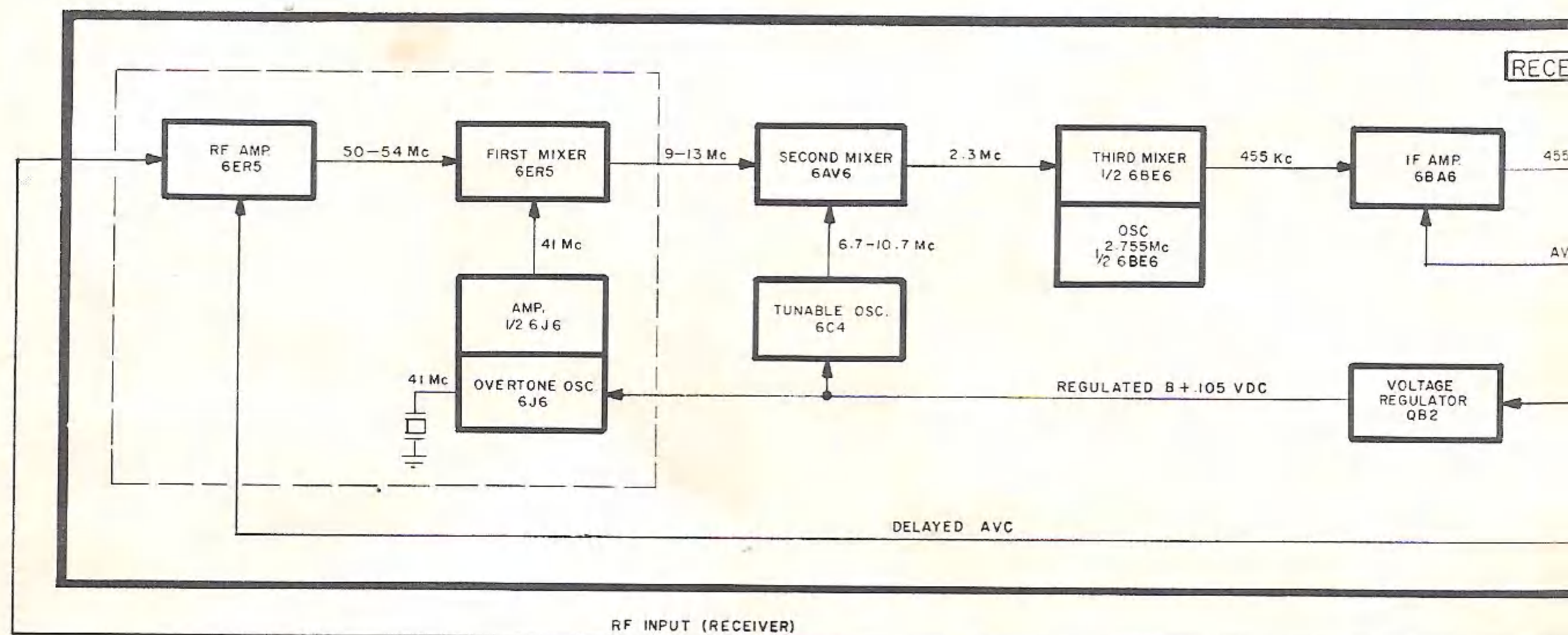


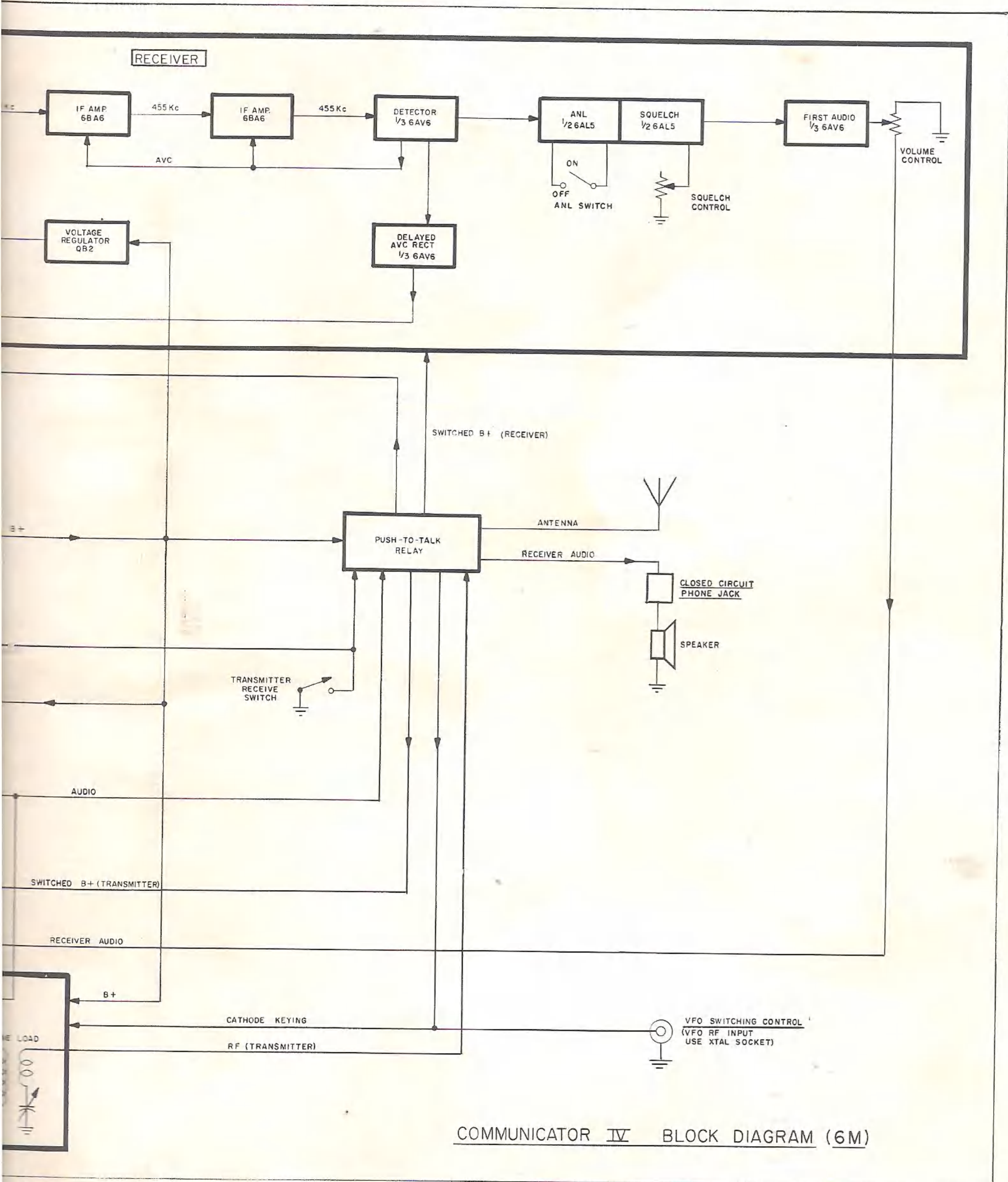
FIG. 10, PL-68 TYPE MIKE PLUG

FIG. 11, MOBILE INSTALLATION





* CAN USE 6.25 Mc TO 6.75 Mc



COMMUNICATOR IV BLOCK DIAGRAM (6M)

RECEIVER PARTS LIST

Schematic No.	Description	Gonset Part No.
C1	39 $\mu\mu\text{f}$ Silver Mica 5%	088-154
C2	1000 $\mu\mu\text{f}$ Feed-Thru	077-001
C3	.01 μf Disc 300 V	072-169
C4	1000 $\mu\mu\text{f}$ Feed-Thru	077-001
C5	4 Gang Tuning Capacitor	074-125
C6	1000 $\mu\mu\text{f}$ Feed-Thru	077-001
C7	4.7 $\mu\mu\text{f}$ Tubular	071-037
C8	7 $\mu\mu\text{f}$ Disc NPO	084-272
C9	18 $\mu\mu\text{f}$ Disc NPO	084-273
C10	.01 μf Disc 300 V	072-169
C11	1000 $\mu\mu\text{f}$ Feed-Thru	077-001
C12	.01 μf Disc 300 V	072-169
C13	2.3 - 14 $\mu\mu\text{f}$ Min. Variable	075-015
C14	1000 $\mu\mu\text{f}$ Feed-Thru	077-001
C15	0.68 $\mu\mu\text{f}$ Tubular	071-020
C16	5 $\mu\mu\text{f}$ Silver Mica 5%	088-180
C17	.01 μf Disc 300 V	072-169
C18	68 $\mu\mu\text{f}$ Disc N750	084-236
C19	.01 μf Disc 300 V	072-169
C20	.01 μf Disc 300 V	072-169
C21	.01 μf Disc 300 V	072-169
C22	40 $\mu\mu\text{f}$ Tubular N330	084-037
C23	130 $\mu\mu\text{f}$ Silver Mica 5%	088-041
C24	47 $\mu\mu\text{f}$ Tubular NPO	084-225
C25	.01 μf Disc 300 V	072-169
C26	.01 μf Disc 300 V	072-169
C27	.01 μf Disc 300 V	072-169
C28	.01 μf Disc 300 V	072-169
C29	.01 μf Disc 300 V	072-169
C30	.01 μf Disc 300 V	072-169
C31	.01 μf Disc 300 V	072-169
C32	.01 μf Disc 300 V	072-169
C33	.01 μf Disc 300 V	072-169
C34	100 $\mu\mu\text{f}$ Silver Mica 5%	088-017
C35	1 μf Electrolytic 150 V	073-126
C36	.01 μf Disc 300 V	072-169
C37	470 $\mu\mu\text{f}$ Disc	072-213
C38	.01 μf Disc 300 V	072-169
C39	.001 μf Disc	072-108
C40	.1 μf Disc 100 V	072-174
C41	.001 μf Disc	072-108

RECEIVER PARTS LIST (CONT)

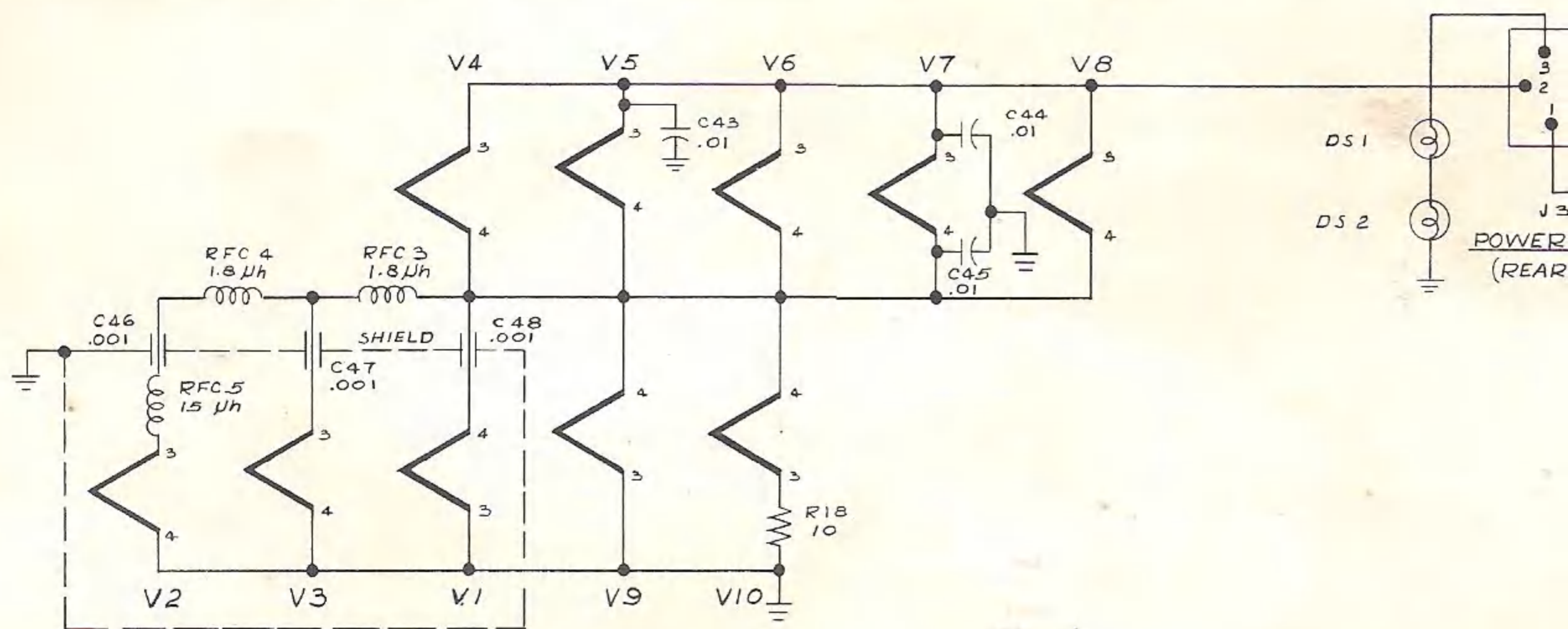
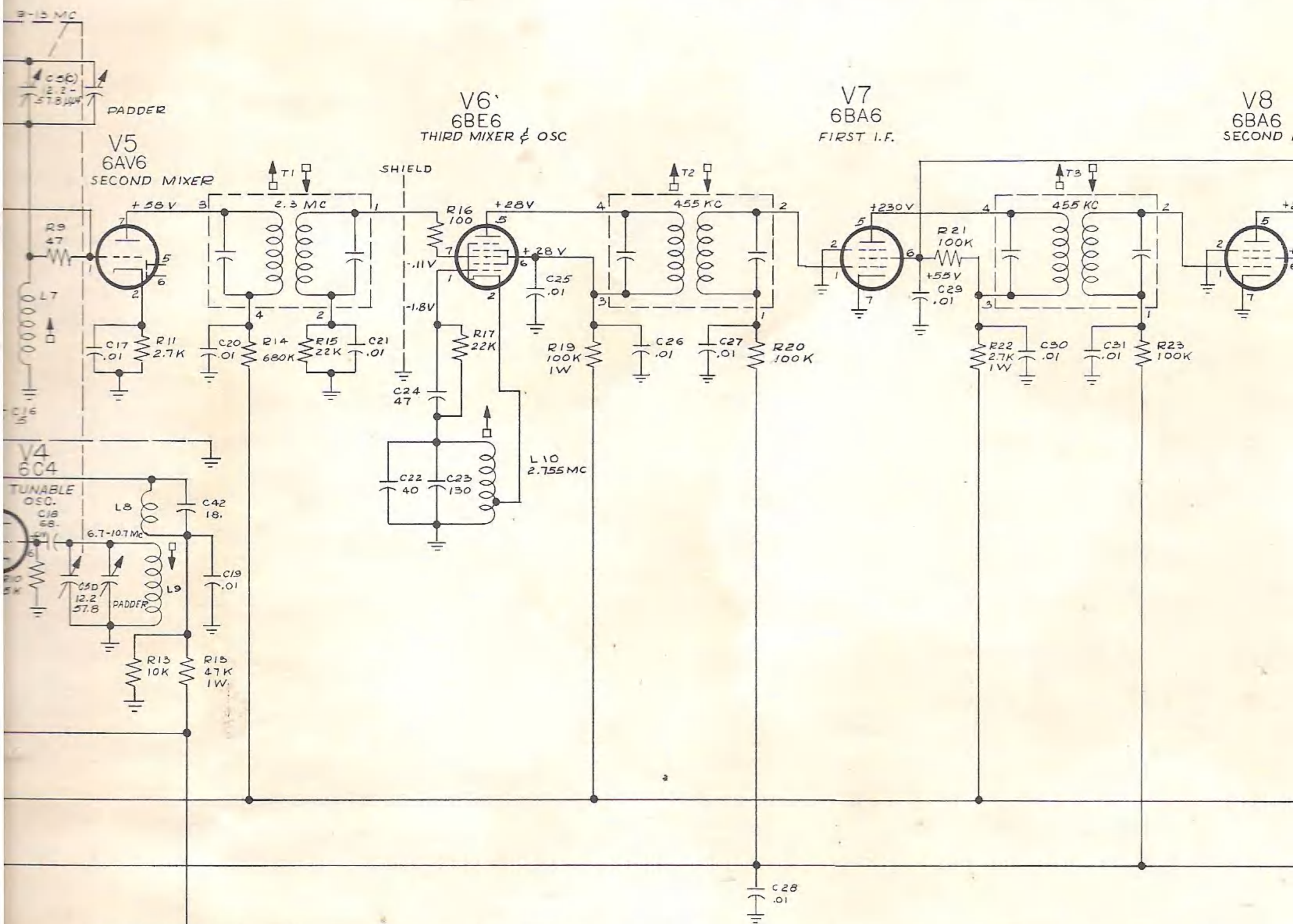
Schematic No.	Description	Gonset Part No.
C42	18 $\mu\mu\text{f}$ Disc NPO	084-273
C43	.01 μf Disc 300 V	072-169
C44	.01 μf Disc 300 V	072-169
C45	.01 μf Disc 300 V	072-169
C46	1000 $\mu\mu\text{f}$ Feed-Thru	077-001
C47	1000 $\mu\mu\text{f}$ Feed-Thru	077-001
C48	1000 $\mu\mu\text{f}$ Feed-Thru	077-001
DS1	Dial Lamp #12	471-003
DS2	Dial Lamp #12	471-003
J1	Antenna Receptacle	344-010
J2	AVC Test Jack	342-017
J3	Power Receptacle	344-009
L1	Antenna Coil	011-128
L2	RF Plate Coil	011-129
L3	First Mixer Grid Coil	012-507
L4	OSC. AMP Plate Coil	012-505
L5	First Mixer Plate Coil	012-488
L6	XTAL OSC. Plate Coil	012-506
L7	Second Mixer Grid Coil	012-487
L8-9	Tunable OSC. Coil	012-486
L10	Third OSC. Mixer Coil	012-448
R1	1500 Ω 1/2 W 10%	
R2	82K 1/2 W 10%	
R3	1 Meg Ω 1/2 W 10%	
R4	91 Meg Ω 1/2 W 10%	
R5	10K 1/2 W 10%	
R6	1500 Ω 1/2 W 10%	
R7	6.8K 1 Watt 10%	
R8	47K 1/2 Watt 10%	
R9	47 Ω 1/2 Watt 10%	
R10	15K 1/2 Watt 10%	
R11	2.7K 1/2 Watt 10%	
R12	47K 1 Watt 10%	
R13	10K 1/2 Watt 10%	
R14	680K 1/2 Watt 10%	
R15	22K 1/2 Watt 10%	
R16	100 Ω 1/2 Watt 10%	

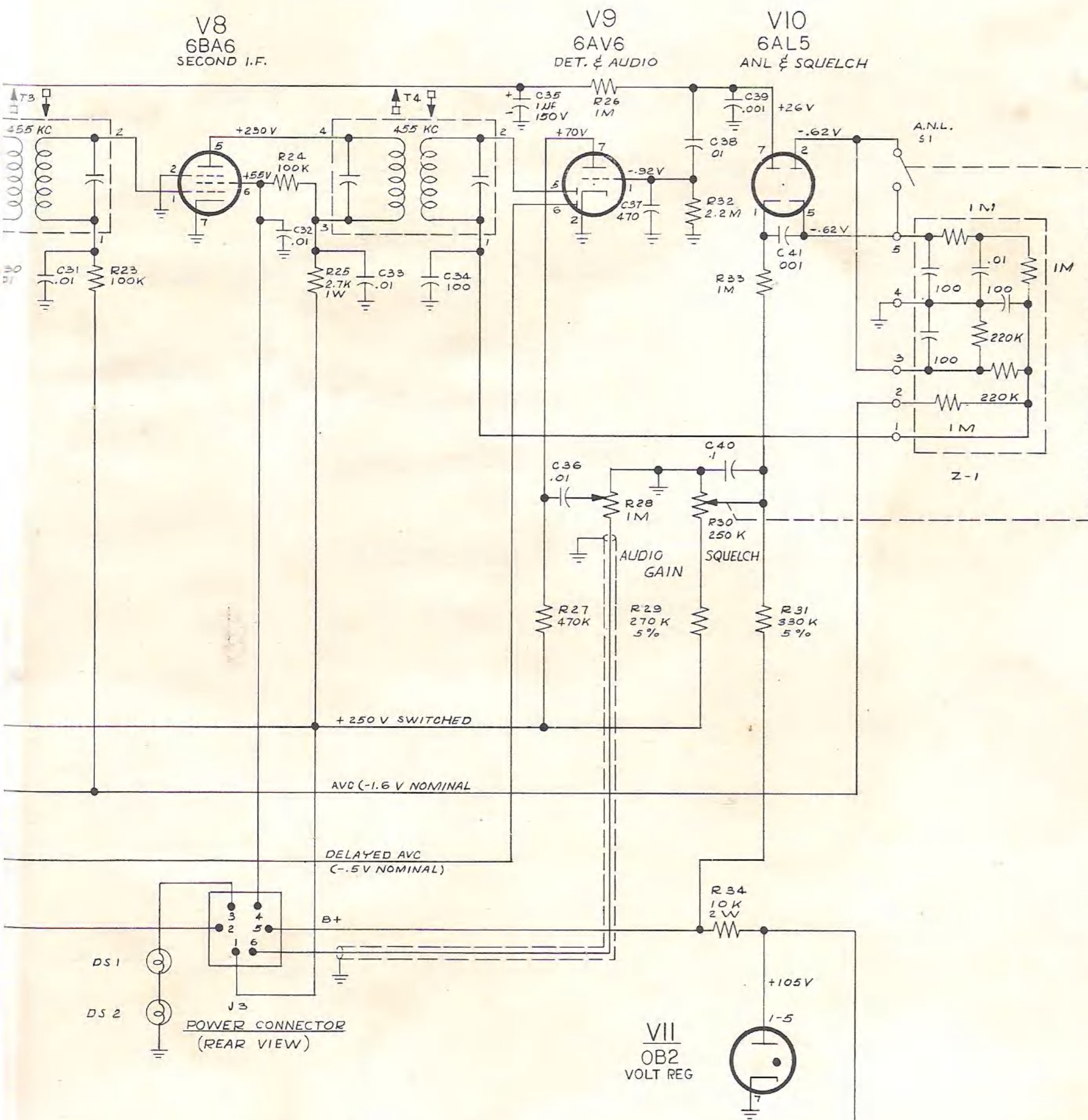
RECEIVER PARTS LIST (CONT)

Schematic No.	Description	Gonset Part No.
R17	27K 1/2 Watt 10%	
R18	10 Ω 1/2 Watt 10%	
R19	100K 1 Watt 10%	
R20	100K 1/2 Watt 10%	
R21	100K 1/2 Watt 10%	
R22	2.7K 1 Watt 10%	
R23	100K 1/2 Watt 10%	
R24	100K 1/2 Watt 10%	
R25	2.7K 1 Watt 10%	
R26	1 Meg Ω 1/2 Watt 10%	
R27	470K 1/2 Watt 10%	
R28	1 Meg Potentiometer, Audio Gain	052-099
R29	270K 1/2 Watt 5%	
R30	250K Potentiometer, Squelch	052-100
R31	330K 1/2 Watt 5%	
R32	2.2 Meg Ω 1/2 Watt 10%	
R33	1 Meg Ω 1/2 Watt 10%	
R34	10K 2 Watt 10%	
R35	2.2 Meg 1/2 Watt 10%	
RFC1	15 μ h RF Choke	027-080
RFC2	8.2 μ h RF Choke	027-079
RFC3	1.8 μ h RF Choke	027-059
RFC4	1.8 μ h RF Choke	027-059
RFC5	15 μ h RF Choke	027-080
T1	2.3 Mc. I. F. Transformer	014-014
T2	455 Kc. I. F. Transformer	014-079
T3	455 Kc. I. F. Transformer	014-079
T4	455 Kc. I. F. Transformer	014-079
Y1	41 Mc. Crystal	486-021
Z1	Printed Noise Limiter Circuit	069-003



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DRAWN	H.L.M. 4-11-61
CHECKED	AYE 1-12-64
DES. APPR.	
PROJ. APPR.	AYE 4-12-64
CUST. APPR.	
MODEL	3347
PROJ	270

COMMUNICATOR IV
RECEIVER (6M)

510-078



DIVISION OF
YOUNG SPRING & WIRE CORP.
BURBANK, CALIF.

TRANSMITTER AND POWER SUPPLY PARTS LIST

Schematic No.	Description	Gonset Part No.
C1	5-25 $\mu\mu$ f Variable	089-002
C2	100 $\mu\mu$ f Silver Mica 5%	088-017
C3	.01 μ f Disc 300 V	072-169
C4	.01 μ f Disc 500 V	072-173
C5	6.8 $\mu\mu$ f Tubular	084-226
C6	.01 μ f Disc 500 V	072-173
C7	.01 μ f Disc 500 V	072-173
C8	.01 μ f Disc 300 V	072-169
C9	.01 μ f Disc 300 V	072-169
C10	.01 μ f Disc 500 V	072-173
C11	.01 μ f Disc 500 V	072-173
C12	.3 $\mu\mu$ f Tubular	071-109
C13	.01 μ f Disc 300 V	072-169
C14A	50 μ f 450 V	073-124
C14B	100 μ f 25 V	
C14C	25 μ f 25 V	
C15	.01 μ f Disc (1.5 KV)	072-123
C16	.01 μ f Disc (1.5 KV)	072-123
C17	.001 μ f Disc (2 KV)	072-217
C18	.001 μ f Feed-Thru	077-001
C19	.01 μ f Disc 300 V	072-169
C20	PA Tuning Capacitor	074-124
C21	PA Load Capacitor	074-123
C22	.015 μ f 1.6 KV	085-047
C23	.003 μ f 2 KV	085-092
C24	25 μ f 25 WVDC	073-127
C25	.01 μ f Disc 300 V	072-169
C26	.01 μ f Disc 300 V	072-169
C27	.01 μ f Disc 300 V	072-169
C28	.01 μ f Disc 300 V	072-169
C29	.01 μ f Disc 500 V	072-173
C30A	80 μ f 450 VDC	073-128
C30B	10 μ f 450 VDC	
C31	.1 μ f Disc 100 V	072-174
C32	.01 μ f Disc 300 V	072-169
C33	.01 μ f Disc 300 V	072-169
C34	.01 μ f Disc 300 V	072-169
C35	.1 μ f Tubular 200 V	085-002
C36	.01 μ f Disc 300 V	072-169
C37	.1 μ f Disc 100 V	072-174
C38	.1 μ f Tubular 200 V	085-002

TRANSMITTER AND POWER SUPPLY PARTS LIST (CONT)

Schematic No.	Description	Gonset Part No.
C39	.001 μ f Feed-Thru	077-001
C40	.001 μ f Feed-Thru	077-001
C41A	50 μ f 25 V	073-125
C41B	1000 μ f 25 V	
C42	470 μ f Disc	072-213
C43	.1 μ f Disc 100 V	072-174
CR1	Silicon Diode	474-013
CR2	Silicon Diode	474-012
CR3	Silicon Diode	474-012
CR4	Silicon Diode	474-012
CR5	Silicon Diode	474-012
CR6	Germanium Diode IN34A	475-013
DS1	Meter Lamp	471-017
J3	VFO Jack	344-010
J4	Antenna Jack	344-011
J5	Phone Jack	342-001
J6	Mike Jack	342-002
K1	Relay 12 VDC	111-089
L1	Oscillator Plate Coil	012-440
L2	Doubler Grid Coil	012-441
L3	Doubler Plate Coil	012-467
L4	Final Grid Coil	012-468
L5	Final Plate Coil	011-126
L6	Transmitter Link Coil	011-127
M1	Meter	112-037
Q1	Transistor 2N1554	476-006
Q2	Transistor 2N1554	476-006
R1	100K 1/2 Watt 10%	
R2	68K 1 Watt 10%	
R3	22K 1/2 Watt 10%	
R4	22K 1 Watt 10%	
R5		
R6	1K 10 Watt	049-082

TRANSMITTER AND POWER SUPPLY PARTS LIST (CONT)

Schematic No.	Description	Gonset Part No.
R7		
R8	15K 1 Watt 10%	
R9	12K 1 Watt 10%	
R10	33K 1 Watt 10%	
R11	150 Ω 2 Watt 10%	
R12	270K 1/2 Watt 10%	
R13	270K 1/2 Watt 10%	
R14	150K 1/2 Watt 10%	
R15	1 Meg 1/2 Watt 10%	
R16	2700 Ω 1/2 Watt 10%	
R17	150K 1/2 Watt 10%	
R18	2700 Ω 1/2 Watt 10%	
R19	470K 1/2 Watt 10%	
R20	1.5 Meg Ω 1/2 Watt 10%	
R21	470K 1/2 Watt 10%	
R22	82K 1/2 Watt 10%	
R23	25K 1/2 Watt 10%	
R24	47K 1 Watt 10%	
R25	47 Ω 1/2 Watt 10%	
R26	50 Ω 10 Watt	049-081
R27	1.0 Ω 5 Watt	049-080
R28	10K 1 Watt 10%	
R29	15K 1 Watt 10%	
R30	47 Ω 1 Watt 10%	
R31	100 Ω 1 Watt 10%	
RFC1	600 μ h RF Choke	027-019
RFC2	15 μ h RF Choke	027-080
RFC3	8.2 μ h RF Choke	027-079
RFC4	8.2 μ h RF Choke	027-079
RFC5	1.8 μ h RF Choke	027-059
SW1	Crystal Switch	171-104
SW2	Spot Switch	172-008
SW3	Power Switch	174-011
SW4	Lamp Switch	172-001
SW5	Transmit Switch	172-010
SPKR	Speaker 3.2 Ω Voice Coil	152-017
T1	Power Transformer	271-084
T2	Filter Choke	274-022
T3	Modulation Transformer	273-012

V2
12BY7
DOUBLER

V3
6360
POWER AMP.

