

BC 225

PRELIMINARY INSTRUCTION BOOK
FOR
RADIO RECEIVER BC-225-T1
AND POWER SUPPLY



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R E S T R I C T E D

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Prepared at
SIGNAL CORPS LABORATORIES
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PRELIMINARY INSTRUCTION BOOK

FOR

RADIO RECEIVER BC-225-T1 AND POWER SUPPLY

SECTION I

GENERAL DESCRIPTION

1. Radio Receiver BC-225-T1.

a. Use. Radio Receiver BC-225-T1 is of the metal-tube, integral-coil superheterodyne type, intended for aircraft and vehicular use where remote control is required. It provides reception of modulated (phone-tone) signals over the frequency band of 190-400 , 2500-8000 kc when connected to a primary d-c source (storage battery) whose voltage is 11 to 14 volts. It eliminates the necessity for using plug-in coil sets by including all necessary coils in a compact form inside the receiver.

b. Frequency Bands. The spectrum of 190-400 , 2500-8000 kc is covered in four bands without the use of plug-in coil sets and is divided as follows:

<u>Band</u>	<u>Nominal Frequency Band</u>
1	190-400 kc
2	2500-3700 kc
3	3700-5500 kc
4	5500-8000 kc

c. Tubes. The following types of metal tubes are employed:

<u>Position</u>	<u>Type of Tube</u>
1st r.f.	6K7
1st detector (mixer)	6L7
R-f oscillator	6C5
1st i.f.	6K7
2nd i.f.	6K7
2nd detector and 1st audio amplifier	6Q7
AVC amplifier	6J7
Audio amplifier	6F6

d. Current Values.

Filaments: approximately 2.8 amperes at 12.0 volts

Total plate: 50 ma at 220 volts

Total dynamotor and filament current without heaters:

4.15 amperes at 12 volts

4.65 amperes at 14 volts

Total dynamotor and filament current with heaters:

5.85 amperes at 12 volts

6.65 amperes at 14 volts

e. Average Performance (Primary Power Source - 14 volts).

(1) Sensitivity.

(a) Manual volume control; tone reception: approximately 5 microvolts input for 10 milliwatts output over the frequency range 200-8000 kc. Approximately 10 microvolts input for stated output over the range 190-400 kc.

(b) Automatic volume control; tone reception: approximately 5 microvolts input for 10 milliwatts output over the frequency range 2500-8000 kc. Approximately 10 microvolts input for stated output over the range 190-400 kc.

(2) Selectivity.

(a) Band width not greater than 19 kc at a ratio of 10 to 1.

(b) Band width not greater than 30 kc at a ratio of 100 to 1.

(c) Band width not greater than 52 kc at a ratio of 1000 to 1.

2. Receiver Mounting. A special frame has been designed to flexibly mount the Radio Receiver BC-225-T1. This frame attaches to the BC-225-T1 with four snap fasteners which are operated from the side of the receiver.

3. Power Unit PE-(). This is a totally inclosed unit, size 6-3/4" x 7-7/16" x 4", provided with a special plug permitting direct attachment to the radio receiver without the use of an auxiliary cord. When the power unit is in place, the receiver length is increased 3-1/8". One cord connecting to the remote Control Box BC-() is required. This unit supplies all the high-voltage power required by Radio Receiver BC-225-T1. It operates on 11-15 volts d.c.

4. Cords and Remote Control Shafts.

a. Cord from Radio Receiver BC-225-T1 to Remote Control Box BC-(). This is a special seven-conductor shielded cable terminating in a Plug PL-98 on the dynamotor end and a Plug PL-98 on the receiver end.

b. Cord from Remote Control Box BC-() to Storage Battery. This is a seven-conductor shielded cable terminating in Plug PL-89 on the dynamotor end and two battery clips on the storage-battery end.

c. Remote Tuning Shaft MC-124. Two remote Tuning Shafts MC-124 are required to connect from Radio Receiver BC-225-T1 to the remote

Control Box BC-(). These are ten feet long and are similar to those furnished with Radio Set SCR-183.

5. Component Parts. The component parts are as follows:

	Size			Weight lbs.
	Length in.	Height in.	Depth in.	
1 Radio Receiver BC-225-T1 (complete with tubes)	8-1/2	x 8-3/4	x 12-7/8 (Overall)	19.25
1 Receiver mounting frame	8	x 1-1/8	x 11 (Overall)	1.10
3 Tubes, RCA 6K7, 1-1/2 oz ea.		3-1/8	x 1-5/16 Dia.	.282
1 Tube, RCA 6C5, 1-1/2 oz ea.		2-5/8	x 1-5/16 Dia.	.094
1 Tube, RCA 6Q7, 1 oz ea.		3-1/8	x 1-5/16 Dia.	.094
1 Tube, RCA 6J7, 1-1/2 oz ea.		3-1/8	x 1-5/16 Dia.	.094
1 Tube, RCA 6F6, 1-1/2 oz ea.		3-1/4	x 1-5/16 Dia.	.094
1 Tube, RCA 6L7, 1-1/2 oz ea.		3-1/8	x 1-5/16 Dia.	.094
1 Power Unit PE-()	6-3/4	x 7-7/16	x 4 (Overall)	8.25
1 Cord, BC-225-T1 to Control Box BC-()	10'	4-1/2"		2.10
1 Cord, Control Box BC-() to Storage Battery	6'	0"		1.10
2 Remote Tuning Shafts MC-124, BC-225-T1 to remote Control Box BC-()	10'	1"		3.70
1 Control Box BC-()	9-1/2	x 3-5/8	x 8-1/4 (Overall)	5.50
Total weight of complete receiver				41.00

SECTION II

DETAILED DESCRIPTION

6. Radio Receiver BC-225-T1.

a. General Mechanical Features. The thought of compactness and sturdiness has been paramount in the design of this receiver. At the same time certain components such as i-f and r-f transformers have been made as detachable integral assemblies. Thus, the separate units may be wired individually, permitting rapid test of components and quick inspection during either production or repair. Further, in order to secure the maximum of frequency stability, the complete r-f oscillator assembly is inclosed in a shielded, heat-insulated compartment and thermostatically maintained at a temperature of 120 degrees F. Air-trimmer condensers are used exclusively to insure that the maximum of frequency stability is secured. These air trimmers may be locked in place once they have been set, thus vibration and jarring should not impair receiver performance or necessitate frequent readjustment. While the use of air trimmers of this type results in a considerably larger receiver than can be constructed using leaf-type mica condensers, the disadvantage of increased size is amply repaid.

b. Controls.

(1) This receiver has been especially designed for entirely remote operation. The main tuning dial is located in the Control Box BC-() and turns by means of a flexible Tuning Shaft MC-124 the variable condenser located in the radio receiver. A 100 to 1 gear reduction is employed to facilitate resettability.

(2) Band Changing. The band-changing mechanism is operated from the remote control box by means of a flexible shaft connecting to the mechanism located within the receiver cabinet. An especially designed indicating device is provided within the remote Control Box BC-() to enable the unused portion of the calibrated dial to be hidden from view on any of the four bands selected for reception. The electrical circuit is such that the r-f oscillator, 1st r.f. and 1st detector portions are simultaneously connected to the proper bands grounding all unused coils. This latter precaution has been taken to eliminate all tendency towards "dead spots" due to absorption.

(3) OFF-MANUAL-AUTO Switch. This switch, located in the remote Control Box BC-(), permits selection of either manual volume control or automatic volume control as well as turning the set off and on. It is located to the left of the calibrated tuning dial and is identified by the panel engraving OFF-MAN-AUTO. This switch is the only OFF-ON control provided and turns on the filaments and the "B" supply when rotated to either the MANUAL or AUTO position.

(4) Volume Control. A dual potentiometer is provided for high signal attenuation to secure the optimum results on both manual volume control and automatic volume control by means of a special circuit. It is located to the right of the main calibrated tuning dial.

c. Circuit.

(1) General. The circuit is of the superheterodyne type adapted for either manual or automatic volume control. It utilizes an r-f stage for preselection, a special image rejection coupling network, a first detector, an r-f oscillator, two intermediate-frequency amplifiers (470 kc), a diode second detector with means for securing automatic volume control together with the first audio amplifier incorporated within the same tube, an AVC amplifier and a final audio stage of amplification.

(2) Antenna Input. The antenna-input circuit may be divided into two parts, an inductively coupled antenna transformer and a special image-rejection circuit of the "Wheeler" type. This image-rejection circuit is included only in the three upper bands. In the lowest frequency portion an intermediate-frequency wave trap is also included. The design is such that the antenna tracking is satisfactory for any antenna between 50 and 200 $\mu\mu f$ with the use of external trimmers once the installation has been made.

(3) Radio Frequency Stage. The r-f stage is of the inductively coupled, tuned-grid type, employing a 6K7 vacuum tube, ganged and tuned with both the oscillator and first detector stages. The automatic-volume-control voltage is applied to the grid return in such a manner that it does not interfere with the normal biasing secured by means of a "H.V." bleeder. Thus effective control of radio-frequency sensitivity is secured.

(4) First Detector (Mixer). The tube employed in this stage, a 6L7, is particularly suitable for use as a mixer, especially at high frequencies. The stage comprises a variable tuned-grid circuit, inductively coupled to the r-f amplifier stage, and a fixed tuned-plate circuit, coupled into the first i-f transformer. Grid bias is provided by means of a voltage-bleeder resistor and automatic-volume-control voltage is applied to the grid.

(5) Radio Frequency Oscillator. This stage employs a 6C5 tube in a modified Hartley circuit, directly coupled to the injector grid of the mixer tube. It is tracked with both the r-f amplifier stage and the first detector stage.

(6) Intermediate Frequency Amplifiers. The circuits for these amplifiers are essentially the same, employing 6K7 tubes in a tuned-grid tuned-plate arrangement. The frequency employed is 470 kc. The input to the first of the two amplifiers is inductively coupled from the mixer stage. Iron-core intermediate-frequency transformers are employed. The gain of both stages is controlled by the automatic-volume-control voltage, and fixed bias is secured by means of a voltage bleeder. In addition, the cathode of the first i-f tube is returned to the variable portion of the r-f cathode resistance and hence varied simultaneously, permitting manual control of sensitivity.

(7) Second Detector and First Audio Amplifier. This stage employs a duo-diode triode tube of the 6Q7 type, utilizing the diode plates for i-f detection and the triode portion for audio amplification.

(8) Automatic Volume Control System. This stage employs a sharp cut-off triode tube of the 6J7 type inductively coupled from the last i-f transformer by means of a third winding isolated from the normal signal channel. By maintaining the plate of this tube below ground, it is possible to secure improved automatic volume control with the minimum of complication. The bias is so adjusted that delayed automatic volume control starts at approximately 60-mw output. The time constant on phone signals is approximately 1/10 of a second.

7 Cords and Remote Control Shafts.

a. Cord from Radio Receiver BC-225-T1 to Radio Control Box BC-(). This cord, 10 feet in length, comprised of Cordage CO-(), carries the terminations already mentioned under General Description.

b. Cord from Radio Control Box BC-() to Storage Battery. This cord, six feet in length, comprised of Cordage CO-120, carries the terminations as already mentioned under General Description.

c. Remote Tuning Shaft MC-124. See section I, paragraph 4, of General Description.

SECTION III

INSTALLATION

8 General. The receiver installation is largely determined by the requirements and choice of position desired. Attention is invited to the fact that radio Control Box BC-() has twin terminations on opposite sides which will permit the tuning shafts and remote-control cable to enter where most convenient.

SECTION IV

PREPARATION FOR USE

9 Insertion of Tubes. The following tubes must be placed in the sockets which bear like identification:

<u>Function</u>	<u>Type of Tube</u>
R-f oscillator	6C5
1st r.f.	6K7
1st detector (mixer)	6L7
1st i.f.	6K7
2nd i.f.	6K7
2nd detector and 1st audio amplifier	6Q7
AVC amplifier	6J7
Audio amplifier	6F6

10 Connection of Chassis to Power Supply and Control Box.

a. Power Unit PE-(). Attach this power supply directly to the receiver cabinet by means of three threaded studs projecting from the front panel of the receiver. This requires removal of the front cover of the power unit. When in place, the power unit is electrically connected to the receiver by means of the special plug incorporated within the shielded housing. Attach the remote-control cable into the socket located on the bottom of the Power Unit PE-().

b. Radio Control Box BC-(). Connect the other end of the cable previously attached to the Power Unit PE-() to either of the input sockets of the Control Box BC-(). Attach one Tuning Shaft MC-124 to

the radio receiver outlet marked "Tuning" and to the input spline on the control box, taking care that the alignment of the tuning condenser on the receiver and the tuning dial on the control box correspond in the following manner: With the tuning condenser of the receiver at the minimum position, the calibrated dial located in the remote-control position should indicate the highest frequency on Band #1. A pointer is provided on the variable condenser to indicate when the condenser is set at this position. A window is provided in the receiver cabinet to permit installation with the receiver in its housing. The remote "Band Change" shaft is attached to the remaining two spline outlets which correspond to the position for Band #1. (When removing this remote shaft, care should be taken to always turn the band-change mechanism to #1 position.) Attach the battery cable to the socket located in the bottom side of the control box, connecting the ends with terminals to a source of voltage between 11 and 15 volts.

11 Connection of Antenna and Ground. Attach an antenna to the post marked ANT whose capacity does not exceed 200 mu mu f maximum or 50 mu mu f minimum, connecting a ground wire to the post marked GND.

12 Connection of Headphones. Insert a pair of headphones or a loud speaker into the phone jacks whose impedance does not depart materially from the range 1500 to 7000 ohms for maximum power transfer.

SECTION V

OPERATION

13. Tuning Procedure.

a. Set the tuning dial to the frequency desired as indicated by the calibrated dial on the remote control box. This may involve rotation of the band-change switch to secure the wanted frequency.

b. Select the type of reception desired by turning the switch marked OFF-MANUAL-AUTO to the proper position. If set to the AUTO position, automatic volume control results. In either position the action is to light the dial light and filaments, at the same time starting the "B" power supply.

c. Adjust the volume control by turning the knob until a satisfactory signal is obtained.

SECTION VI

MAINTENANCE

14. General. A periodic check of the equipment should be made to insure satisfactory performance. Each tube should be checked at regular

intervals either by a tube checker or by interchange with a tube known to be satisfactory. Filament batteries should be checked regularly and replaced when the potential has decreased to 11 volts. The antenna and ground system should be checked and inspected for loose connections, etc.

15. Location and Remedy of Faults.

a. Test all tubes on tube checker. The following average characteristics apply:

	6K7	6L7	6C5	6Q7	6J7	6F6
Heater voltage	6.3	6.3	6.3	6.3	6.3	6.3
Heater current	0.3	0.3	0.3	0.3	0.3	0.7
Plate voltage	250	250	250	250	100	250
Screen voltage	100	100	-	-	100	250
Grid voltage	-3	-3	-8	-2	-3	-16.5
Plate current	7	5.3	8	0.5	2	34
Screen current	1.7	5.5	-	-	0.5	6
Plate resistance	800,000	800,000	100,000	-	1 Meg.	800,000
Amplification factor	1160	-	20	-	1185	200
Mutual conductance	1450	1100	2000	-	1185	2500
Load resistance	-	-	-	200,000	-	7000
Max. overall length	3-1/8"	3-1/8"	2-5/8"	3-1/8"	3-1/8"	3-1/4"
Max. diameter	1-5/16"	1-5/16"	1-5/16"	1-5/16"	1-5/16"	1-5/16"

b. Check all voltages at the tube socket by means of a high-resistance voltmeter. If normal, the following voltages will be noted when using the Power Unit PE-() with 14 volts input on MVC. All grid voltages measured at voltage divider.

Position	Tube	Plate	Screen	Filament	Grid Bias
1st r.f.	6K7	215	94	7.0	-3.0
1st detector (mixer)	6L7	222	82	7.0	-3.0
R-f oscillator	6C5	(225 Band No. 4) (166 Band No. 3) (160 Band No. 2) (70 Band No. 1)	-	7.0	-
1st i.f.	6K7	218	92	7.0	-3.0
2nd i.f.	6K7	215	94	7.0	-3.0
2nd detector and 1st audio amplifier	6Q7	160	-	7.0	-2
AVC amplifier	6J7	-2.4	-24	7.0	-60*
Audio amplifier	6F6	218	225	7.0	-24

* At divider

Attention is invited to the fact that the filaments are connected in series-parallel across the low-voltage line.

16. Fuses. Two fuses are provided in the Power Unit PE-(), one a general fuse for the radio receiver chassis, rated at 10 amperes and the other for the dynamotor alone rated at 5 amperes.

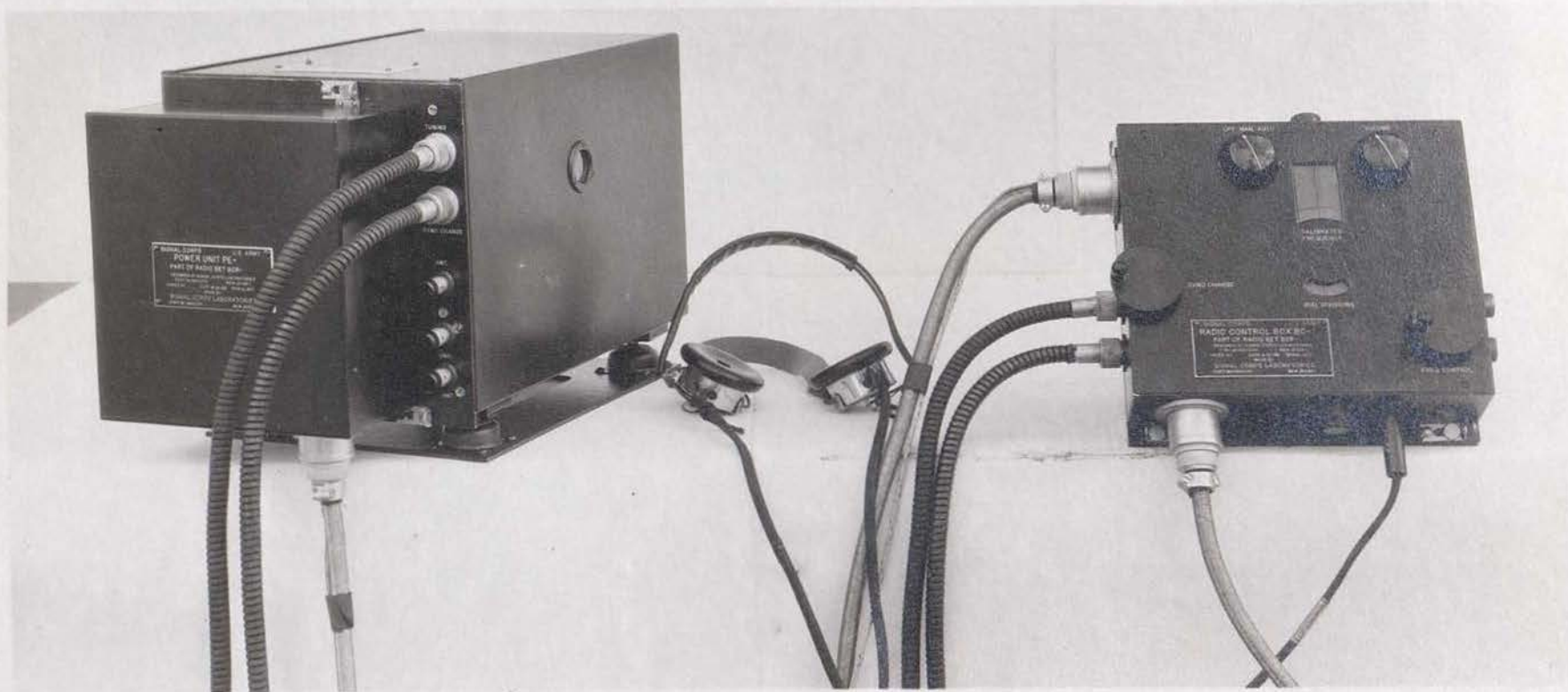


Fig. 1 - Complete Radio Receiver BC-225-T1 with Remote Control Unit Attached

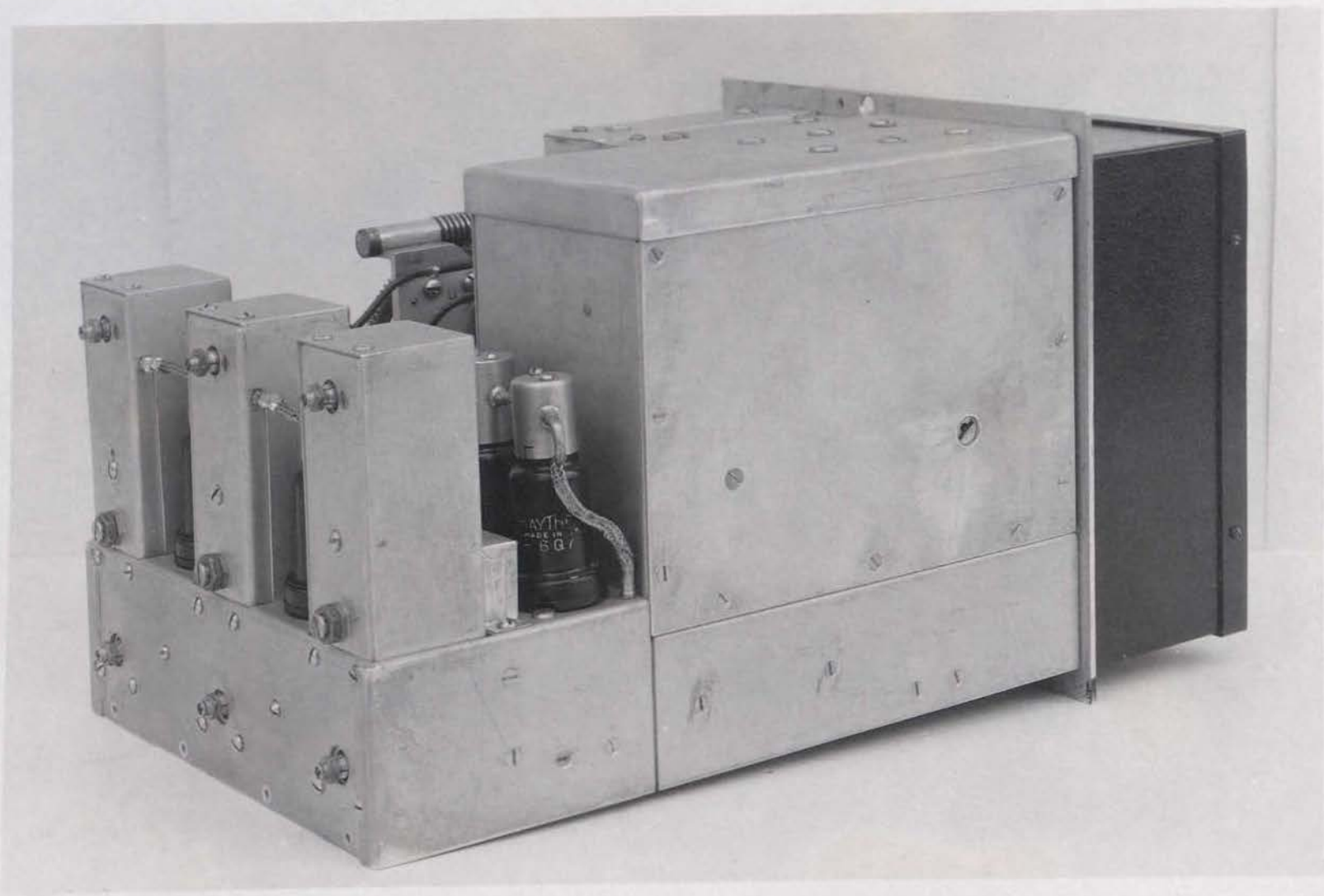


Fig. 2 - Three-quarter Rear View of Chassis, Radio Receiver BC-225-T1
Showing Power Unit Attached

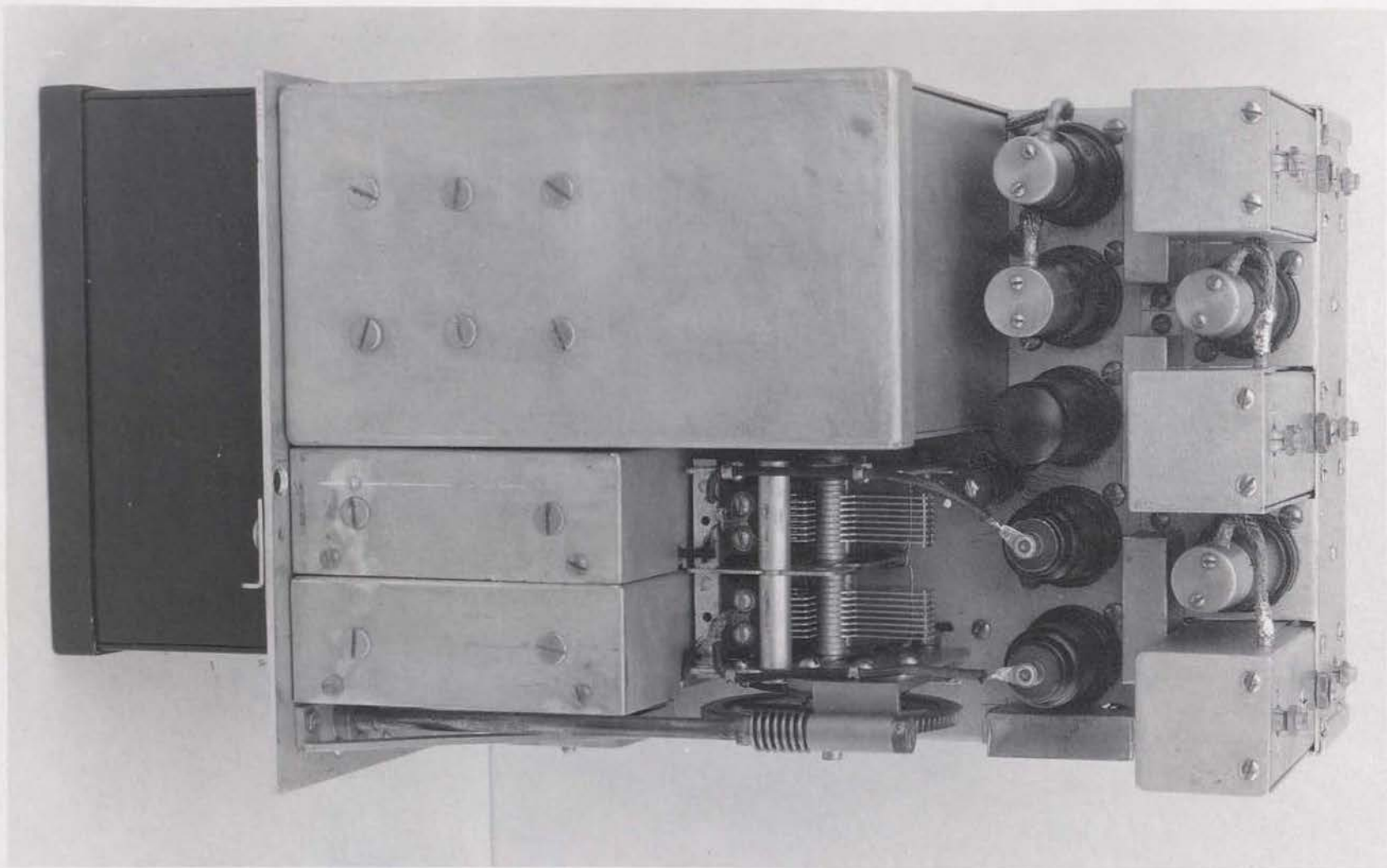


Fig. 3 - Top View of Radio Receiver BC-225-T1 with Power Unit Attached

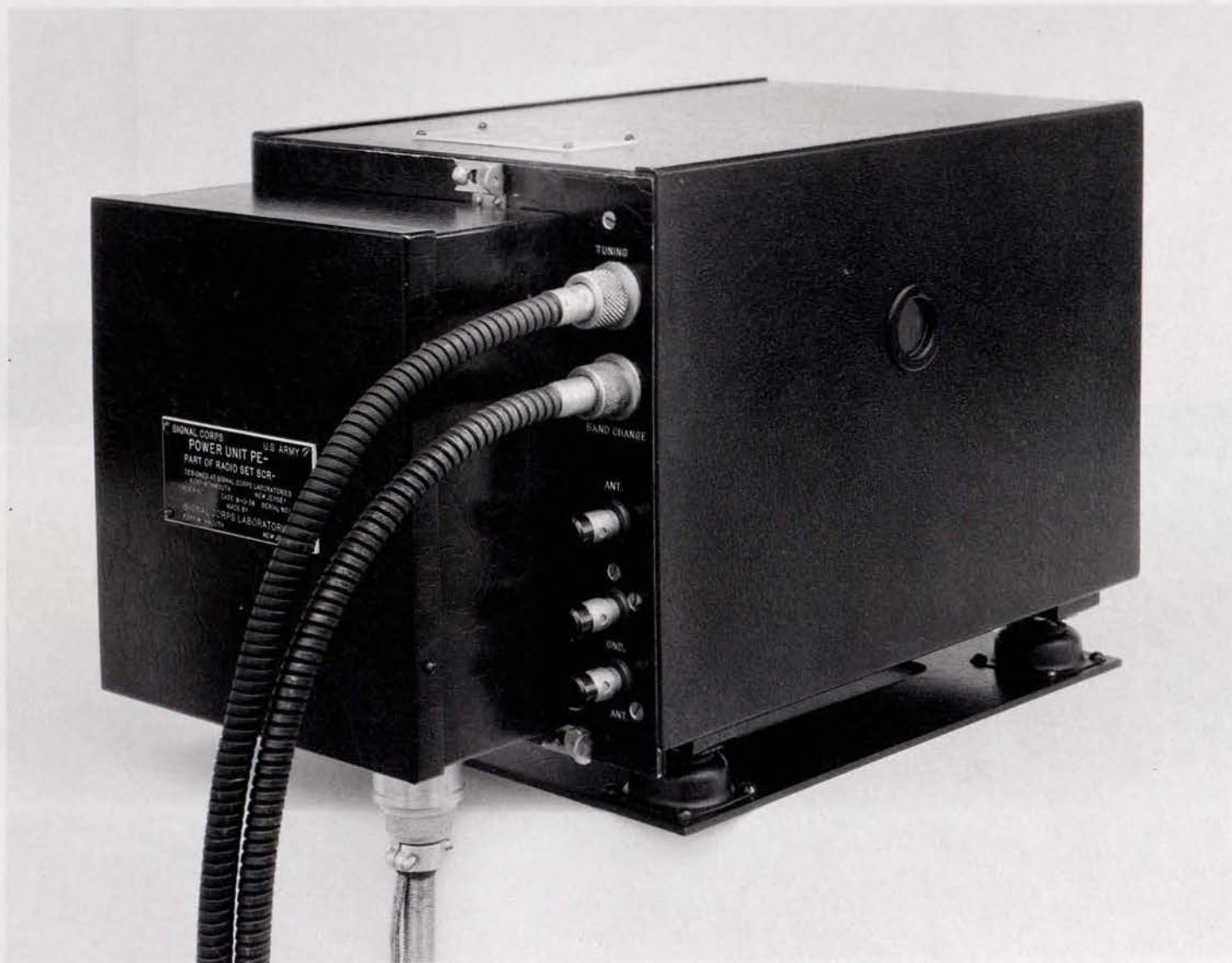


Fig. 4 - Three-quarter Front View of Radio Receiver BC-225-T1 Showing Remote Control Cables Attached

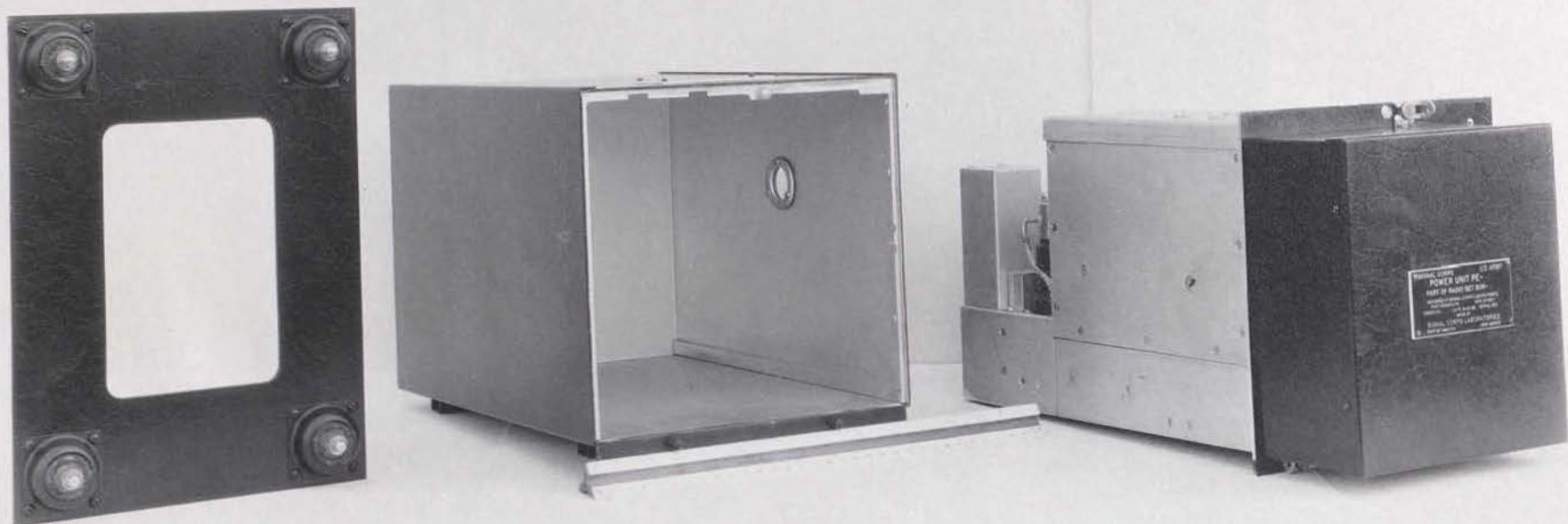


Fig. 5 - Radio Receiver BC-225-T1 Removed from Cabinet with Mounting Plate Attached



Fig. 6 - Remote Control Box BC-()



Fig. 7 - Front View of Radio Receiver BC-225-T1 with Power Unit PE- () Attached

PARTS LIST OF BC-225-T1 CHASSIS

Capacitors

C1 10-100 mu mu f
C2 50 mu mu f
C3 10-50 mu mu f
C4 100 mu mu f
C5 10-75 mu mu f
C6 100 mu mu f
C7 10-75 mu mu f
C8 100 mu mu f
C9 10-100 mu mu f
C10 .01 mu f
C11 256 max., 13 min.
C12 .05 mu f
C13 10-50 mu mu f
C14 100 mu mu f
C15 10-75 mu mu f
C16 100 mu mu f
C17 10-75 mu mu f
C18 100 mu mu f
C19 10-100 mu mu f
C20 .05 mu f
C21 .01 mu f
C22 256 max., 13 min.
C23 .05 mu f
C24 .05 mu f
C25
C26 250 mu mu f
C27 10-100 mu mu f
C28 .01 mu f
C29 10-100 mu mu f
C30 10-100 mu mu f
C31 .01 mu f
C32 .01 mu f
C33 .01 mu f
C34 .05 mu f
C35 10-100 mu mu f
C36 10-100 mu mu f
C37 .01 mu f
C38 .05 mu f
C39 .001 mu f
C40 .01 mu f
C41 .01 mu f
C42 .05 mu f
C43 .05 mu f
C44 .05 mu f
C45 .05 mu f
C46 .05 mu f
C47 .05 mu f
C48 .05 mu f

Capacitors

C49 .05 mu f
C50 5689 mu mu f
C51 3694 mu mu f
C52 2584 mu mu f
C53 10-140 mu mu f
C54 100 mu mu f
C55 10-100 mu mu f
C56 100 mu mu f
C57 10-100 mu mu f
C58 100 mu mu f
C59 10-75 mu mu f
C60 10-50 mu mu f
C61 100 mu mu f
C62 256 max., 13 min.
C63 .01 mu f
C64 .002 mu f
C65 1.0 mu f

J1 Audio jack

Coils

L1 1500 mu h
L2 875 mu h
L3 16.0 mu h
L4 3-1/4 turns #28E, 11/16" dia., close wound
L5 89 mu h
L6 2-1/4 turns #28E, 11/16" dia., close wound
L7 3.8 mu h
L8 2-1/2 turns #28E, 7/16" dia., close wound
L9 12 turns #20E, 3/4" dia. 16 turns per inch
L10 16-1/4 turns #20E, 1" dia. 20 turns
per inch
L11 20-1/4 turns #28E, 1" dia. 40 turns
per inch
L12 2385 mu h
L13 3.6 mu h
L14 5.1 mu h
L15 5.4 mu h
L16 11-1/2 turns #20E, 3/4" dia. 16 turns
per inch
L17 15.8 turns #20E, 1" dia. 20 turns per
inch
L18 20-1/4 turns #28E, 1" dia. 40 turns per
inch

Coils

L19	2325 mu h
L20	21.5 turns #28E, 7/16" dia., close wound
L21	12 turns #28E, 11/16" dia., close wound
L22	15 turns #28E, 11/16" dia., close wound
L23	190 mu h
L24	6.4 turns #20E, 1" dia., close wound, center tapped
L25	12.4 turns #20E, 1" dia. 20 turns per inch, center tapped
L26	20 turns #28E, 1" dia. 24 turns per inch, center tapped
L27	437 mu h, 2 secondaries, equal inductance, spaced 3/16"
L28	
L29	700 mu h
L30	400 mu h
L31	1200 mu h
L32	1200 mu h
L33	1200 mu h
L34	1200 mu h
L35	1200 mu h

Resistors

R1	100,000 ohms, 1/2 watt
R2	1,000 ohms, 1/2 watt
R3	100,000 ohms, 1/2 watt
R4	350 ohms, 1/2 watt
R5	30,000 ohms, 1/2 watt
R6	1000 ohms, 1/2 watt
R7	100,000 ohms, 1/2 watt
R8	1000 ohms, 1/2 watt
R9	100,000 ohms, 1/2 watt
R10	10,000 ohms, 1 watt
R11	10,000 ohms, 1 watt
R12	1000 ohms, 1/2 watt
R13	1 Meg., 1/2 watt
R14	1 Meg., 1/2 watt
R15	100,000 ohms, 1/2 watt
R16	100,000 ohms, 1/2 watt
R17	100,000 ohms, 1/2 watt
R18	75 ohms, 1/2 watt
R19	750 ohms, 1 watt
R20	500 ohms, 1 watt
R21	50 ohms, 1/2 watt
R22	6 ohms, 40 watts
R23	15 ohms, 3 watts
R24	40,000 ohms, 1/2 watt
R25	15,000 ohms, 1/2 watt
R26	10,000 ohms, 1/2 watt

Switches

SW₁ 1st r.f.
SW₂ Image rejection circuit
SW₃)
SW₄) Mixer
SW₅)
SW₆) Oscillator

T₁ Output transformer

THS₁ Heater thermostat

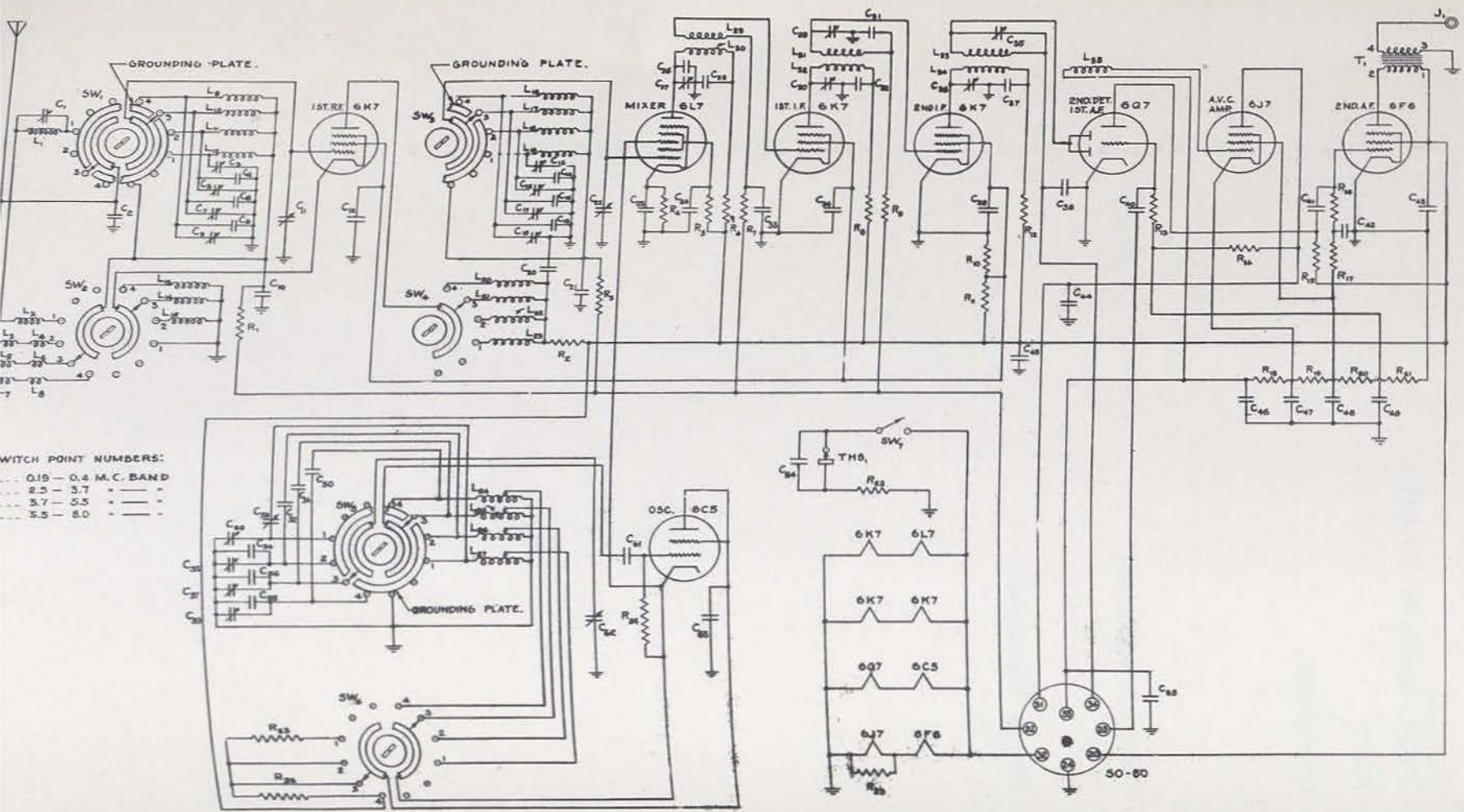


Fig. 3 - Schematic Wiring Diagram, Radio Receiver BC-225-T1

APPARATUS LEGEND:

CAPACITORS:	
C ₁ --10-100 MMF.	C ₂₂ --12-264 MMF.
C ₂ --50 MMF.	C ₂₃ --.05 MF.
C ₃ --10-50 MMF.	C ₂₄ --.05 MF.
C ₄ --100 MMF.	C ₂₆ --250 MMF.
C ₅ --10-75 MMF.	C ₂₇ --10-100 MMF.
C ₆ --100 MMF.	C ₂₈ --.01 MF.
C ₇ --10-75 MMF.	C ₂₉ --10-100 MMF.
C ₈ --100 MMF.	C ₃₀ --10-100 MMF.
C ₉ --10-100 MMF.	C ₃₁ --.01 MF.
C ₁₀ --.01 MF.	C ₃₂ --.01 MF.
C ₁₁ --12-264 MMF.	C ₃₃ --.01 MF.
C ₁₂ --.05 MF.	C ₃₄ --.05 MF.
C ₁₃ --10-50 MMF.	C ₃₅ --10-100 MMF.
C ₁₄ --100 MMF.	C ₃₆ --10-100 MMF.
C ₁₅ --10-75 MMF.	C ₃₇ --.01 MF.
C ₁₆ --100 MMF.	C ₃₈ --.05 MF.
C ₁₇ --10-75 MMF.	C ₃₉ --.001 MF.
C ₁₈ --100 MMF.	C ₄₀ --.01 MF.
C ₁₉ --10-100 MMF.	C ₄₁ --.01 MF.
C ₂₀ --.05 MF.	C ₄₂ --.05 MF.
C ₂₁ --.01 MF.	C ₄₃ --.05 MF.
	C ₄₄ --.05 MF.
	C ₄₅ --.05 MF.
	C ₄₆ --.05 MF.
	C ₄₇ --.05 MF.
	C ₄₈ --.05 MF.
	C ₄₉ --.05 MF.
	C ₅₀ --5689 MMF.
	C ₅₁ --3694 MMF.
	C ₅₂ --2584 MMF.
	C ₅₃ --10-140 MMF.
	C ₅₄ --100 MMF.
	C ₅₅ --10-100 MMF.
	C ₅₆ --100 MMF.
	C ₅₇ --10-100 MMF.
	C ₅₈ --100 MMF.
	C ₅₉ --10-75 MMF.
	C ₆₀ --10-50 MMF.
	C ₆₁ --100 MMF.
	C ₆₂ --12-264 MMF.
	C ₆₃ --.01 MF.
	C ₆₄ --.002 MF.
	C ₆₅ --1.0 MF.

J₁--AUDIO JACK

COILS:

L ₁ --1500 μ h.
L ₂ --875 μ h.
L ₃ --16.0 μ h.
L ₄ --3 1/4 T. #28E. 1/16" DIA. CL. WD.
L ₅ --8.9 μ h.
L ₆ --2 1/4 T. #28E. 1/16" DIA. CL. WD.
L ₇ --3.8 μ h.
L ₈ --2 1/2 T. #28E. 7/16" DIA. CL. WD.
L ₉ --12 T. #20E. 3/4" DIA. 16 T. P. I.
L ₁₀ --16 1/4 T. #20E. 1" DIA. 20 T. P. I.
L ₁₁ --20 1/4 T. #28E. 1" DIA. 40 T. P. I.
L ₁₂ --2385 μ h.
L ₁₃ --3.6 μ h.
L ₁₄ --5.1 μ h.
L ₁₅ --5.4 μ h.
L ₁₆ --11 1/2 T. #20E. 3/4" DIA. 16 T. P. I.

L ₁₇ --15.8 T. #20E. 1" DIA. 20 T. P. I.
L ₁₈ --20 1/4 T. #28E. 1" DIA. 40 T. P. I.
L ₁₉ --2325 μ h.
L ₂₀ --21.5 T. #28E. 7/16" DIA. CL. WD.
L ₂₁ --12 T. #28E. 1/16" DIA. CL. WD.
L ₂₂ --15 T. #28E. 1/16" DIA. CL. WD.
L ₂₃ --190 μ h.
L ₂₄ --6.4 T. #20E. 1" DIA. CL. WD. CEN. TAP.
L ₂₅ --12.4 T. #20E. 1" DIA. 20 T. P. I. CEN. TAP.
L ₂₆ --20 T. #28E. 1" DIA. 24 T. P. I. CEN. TAP.
L ₂₇ --437 μ h. 2 SEC. EQUAL INDUC. SPACED 3/16"
L ₂₉ --700 μ h.
L ₃₀ --400 μ h.
L ₃₁ --1200 μ h.
L ₃₂ --1200 μ h.
L ₃₃ --1200 μ h.
L ₃₄ --1200 μ h.
L ₃₅ --1200 μ h.

RESISTORS:

R ₁ --100,000 Ω 1/2 W.
R ₂ --1,000 Ω "
R ₃ --100,000 Ω "
R ₄ --350 Ω "
R ₅ --30,000 Ω "
R ₆ --1,000 Ω "
R ₇ --100,000 Ω "
R ₈ --1,000 Ω "
R ₉ --100,000 Ω "
R ₁₀ --10,000 Ω 1 W.
R ₁₁ --10,000 Ω "
R ₁₂ --1,000 Ω 1/2 W.
R ₁₃ --1 MEG. "
R ₁₄ --1 MEG. "
R ₁₅ --100,000 Ω "
R ₁₆ --100,000 Ω "
R ₁₇ --100,000 Ω "
R ₁₈ --75 Ω "
R ₁₉ --750 Ω 1 W.
R ₂₀ --500 Ω 1 W.
R ₂₁ --50 Ω 1/2 W.

R ₂₂ --6 Ω	40 W.
R ₂₃ --15 Ω	3 W.
R ₂₄ --40,000 Ω	1/2 W.
R ₂₅ --75,000 Ω	"
R ₂₆ --10,000 Ω	"

SWITCHES:

SW ₁ --15T. R.F.
SW ₂ --IMAGE REJECTION CIR.
SW ₃ --MIXER.
SW ₄ --OSCILLATOR
SW ₅ --OSC. COMPARTMENT HEATER.

T₁--OUTPUT TRANSFORMER.

THS--HEATER THERMOSTAT.

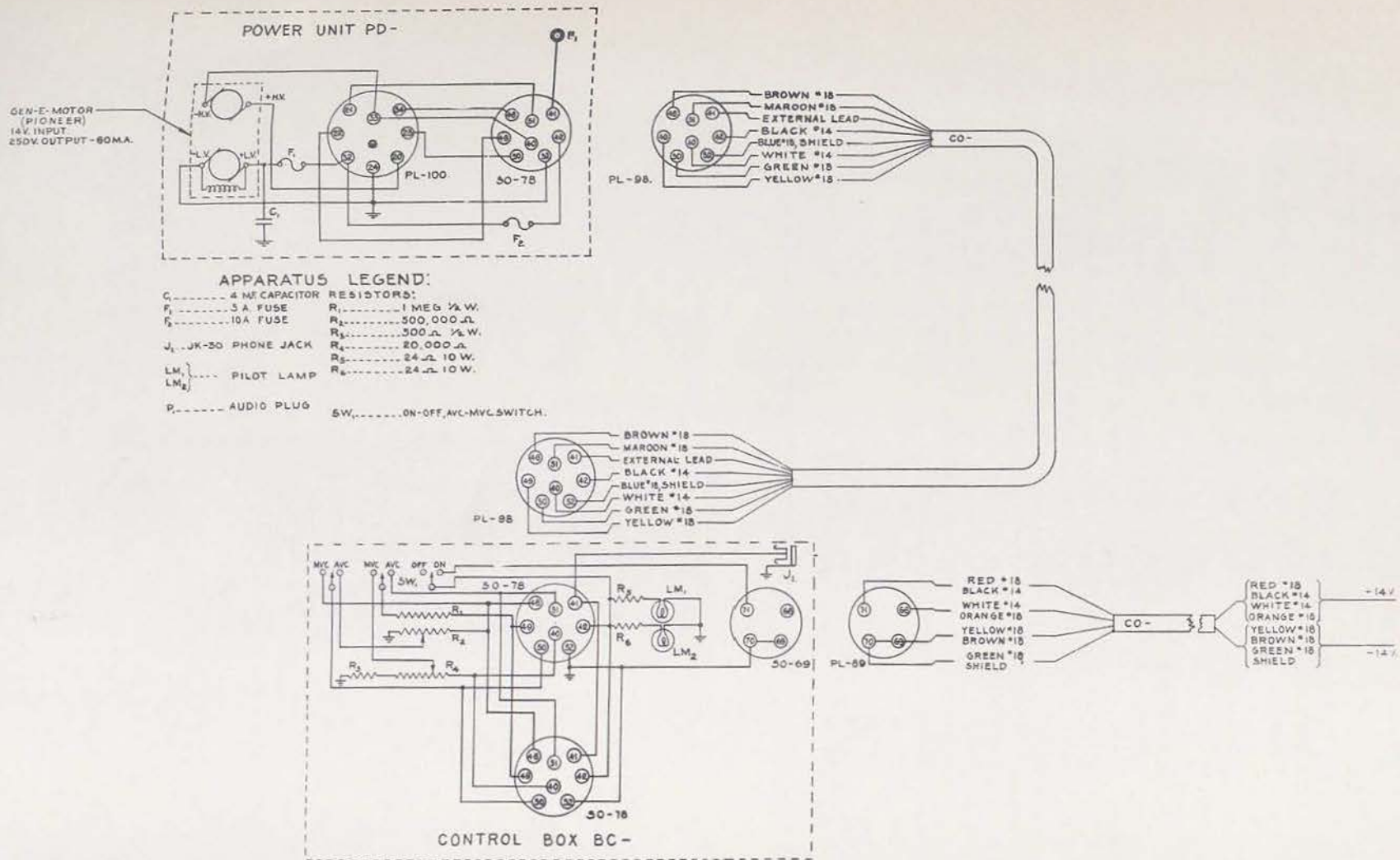


Fig. 9 - Cord Diagram, Radio Receiver BC-225-T1

