

MODELS 49L11Q, 49L13Q;
Ch. HS-183

GENERAL INFORMATION

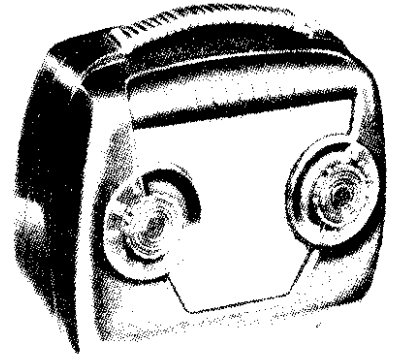
TYPE - A battery-operated portable receiver. Four miniature type tubes are used in a superheterodyne circuit.

TUNING RANGE - 535 to 1620 Kc IF - 455 Kc

TUBE COMPLEMENT - 1R5 - Converter
1U4 - IF Amplifier
1U5 - Detector, AVC & 1st AF Amplifier
3S4 - Power Amplifier

POWER SUPPLY - Operates from the following batteries:

Two 1-1/2V flashlight cells (Eveready #950 or equivalent)
One 67-1/2V 'B' battery (Eveready #467 or equivalent)



INSTALLATION & OPERATING INSTRUCTIONS

CONTROLS. The power switch is combined and operated with the volume (left-hand) knob.

BATTERY OPERATION. Open the rear cover and install the batteries. The rear cover is opened by inserting the fingertips into the slots under the handle and pulling back. See Figure 1 for complete battery installation instructions.

When low volume or fuzzy tone is noticed, re-

place the flashlight cells. Normally, the 67-1/2 volt 'B' battery will last for 3 or 4 changes of flashlight cells.

If the receiver is to be placed in storage, remove the batteries and store them in a cool place; this will prevent battery leakage and possible damage to the receiver. Replace or remove run-down batteries immediately, or they will leak and damage receiver.

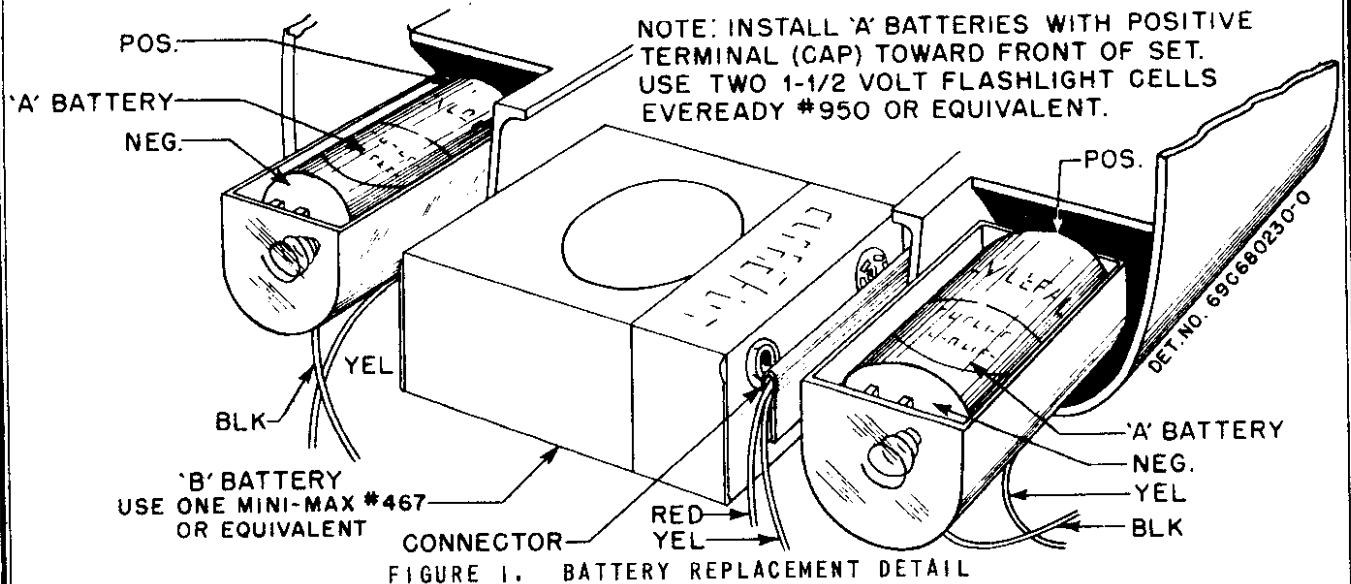


FIGURE 1. BATTERY REPLACEMENT DETAIL

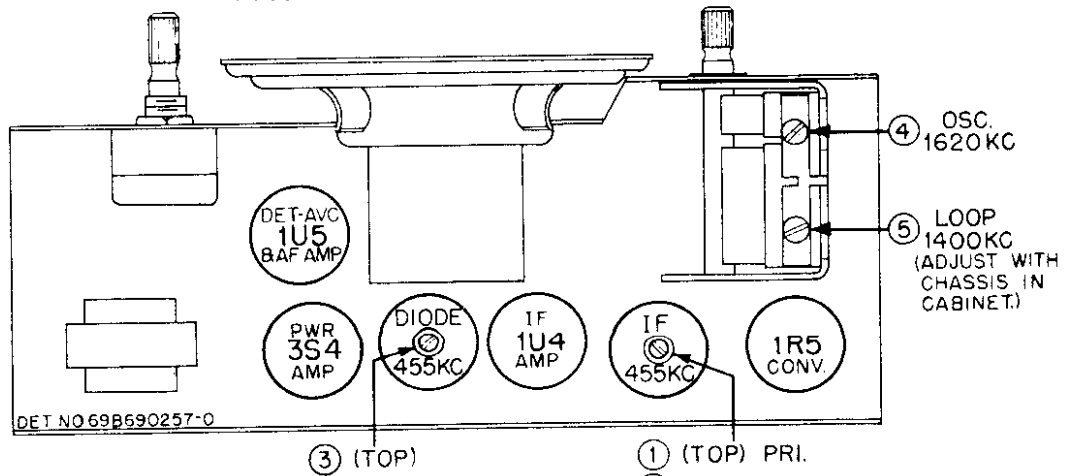


FIGURE 2. TUBE & TRIMMER LOCATIONS

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SERVICE NOTES

Tubes can be replaced without removing the chassis from the cabinet; open the back cover and remove the chassis insulator to expose the tubes. Two plug buttons hold the chassis insulator in position.

2. Open the back cover and remove the chassis insulator.
3. Disconnect the two loop leads from the pin receptacles.
4. Remove the two Phillips head screws on each end of the chassis and slide the chassis out of the cabinet.

To remove the chassis from the cabinet:

1. Remove the control knobs.

ALIGNMENT

Connect a low range output meter across the speaker voice coil terminal and receiver chassis. Set the receiver volume control to maximum. For greatest accuracy keep the output of the receiver at approximately .05 watt (.05 watt = .40 volts on output meter) throughout alignment by reducing

generator output as stages are brought into alignment. Use a small fibre screwdriver for aligning the IF and diode transformers.

Loop antenna should be connected to chassis during alignment.

STEP	DUMMY ANTENNA	GENERATOR CONNECTION	GENERATOR FREQUENCY	DIAL SET TO	ADJUST	REMARKS
IF ALIGNMENT						
1.	.1 mf	Rear stator of tuning capacitor.	455 Kc	Gang opened	1, 2 & 3	Adjust for maximum.
RF ALIGNMENT						
2.	.1 mf	"	1620 Kc	"	4	Adjust for maximum.
3.	-	-	-	-	-	**Install chassis in cabinet, leaving output meter connected to speaker.
4.	-	Radiation loop*	1400 Kc	Tune for maximum	5	Adjust for maximum. Trimmer is reached through hole under left-hand battery holder.

* Connect generator output to a 5" diameter 3 turn loop and couple to receiver loop. Keep loops at least 12" apart.

** As an alternate method, the output meter may be disconnected at this point and the set installed in the cabinet. Tune in a weak station near 1400 Kc and adjust trimmer #5 through the hole in the bottom of the cabinet for maximum signal output.

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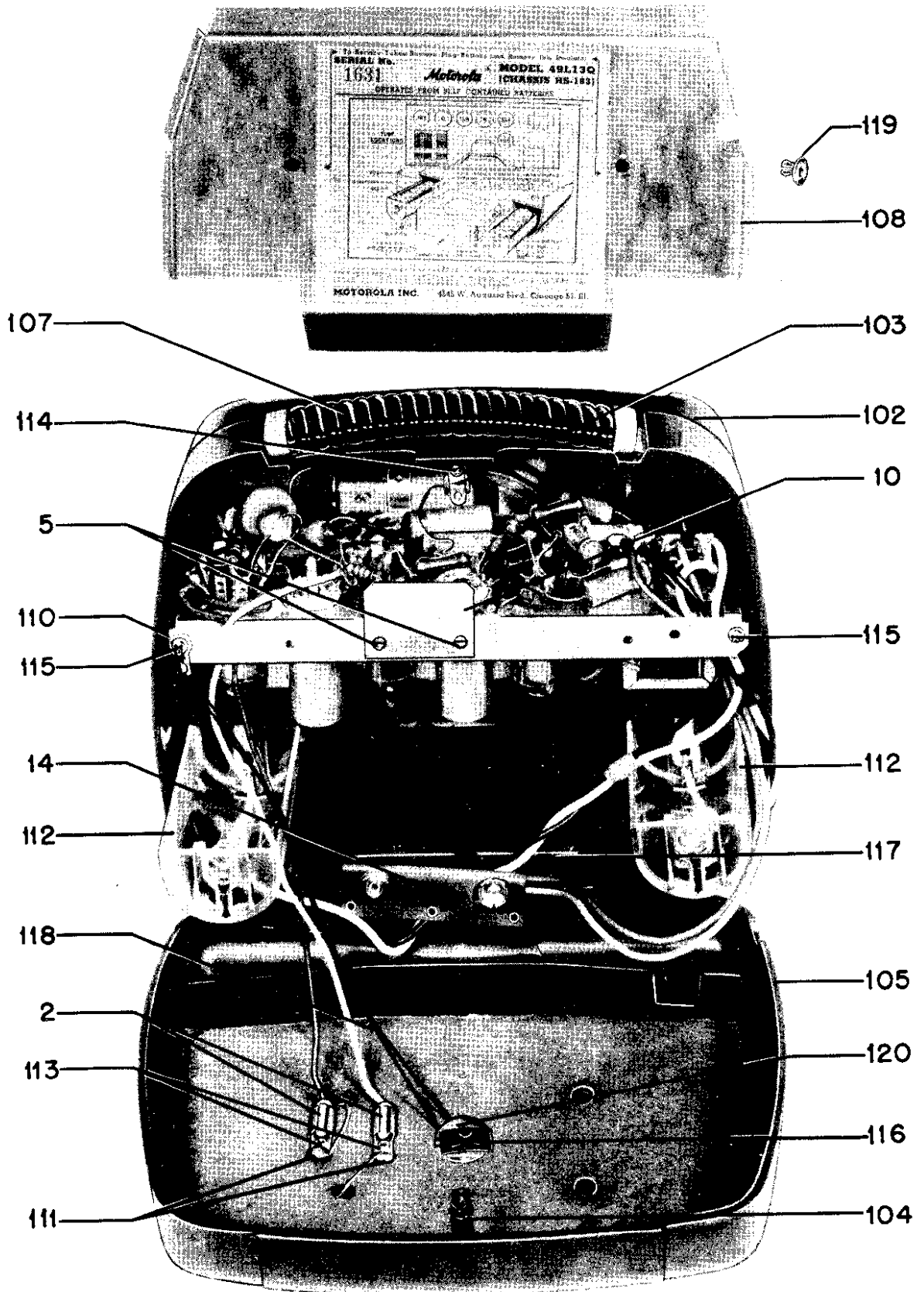


FIGURE 3. PARTS LOCATION - CABINET REAR VIEW

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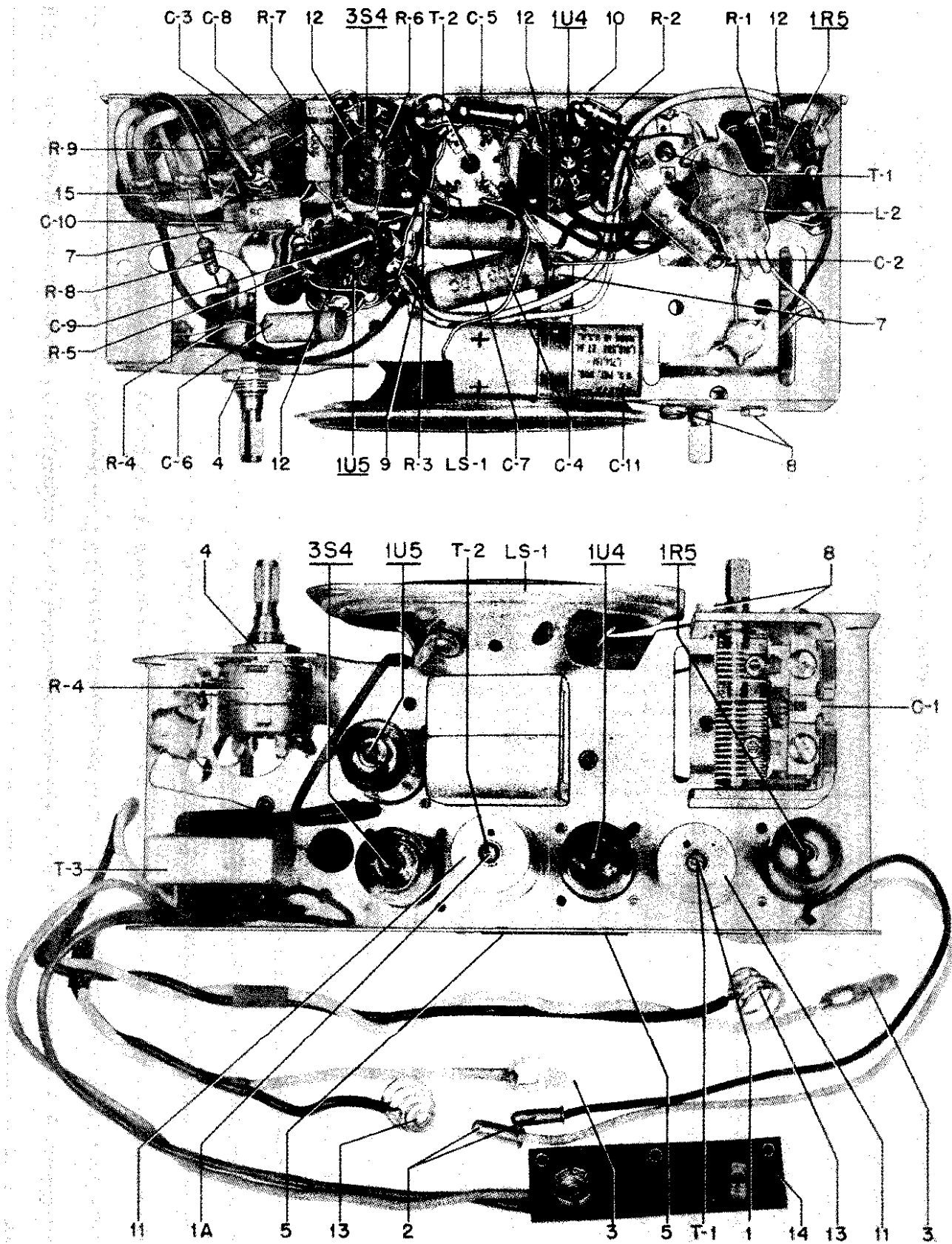


FIGURE 4. PARTS LOCATION - CHASSIS TOP & BOTTOM

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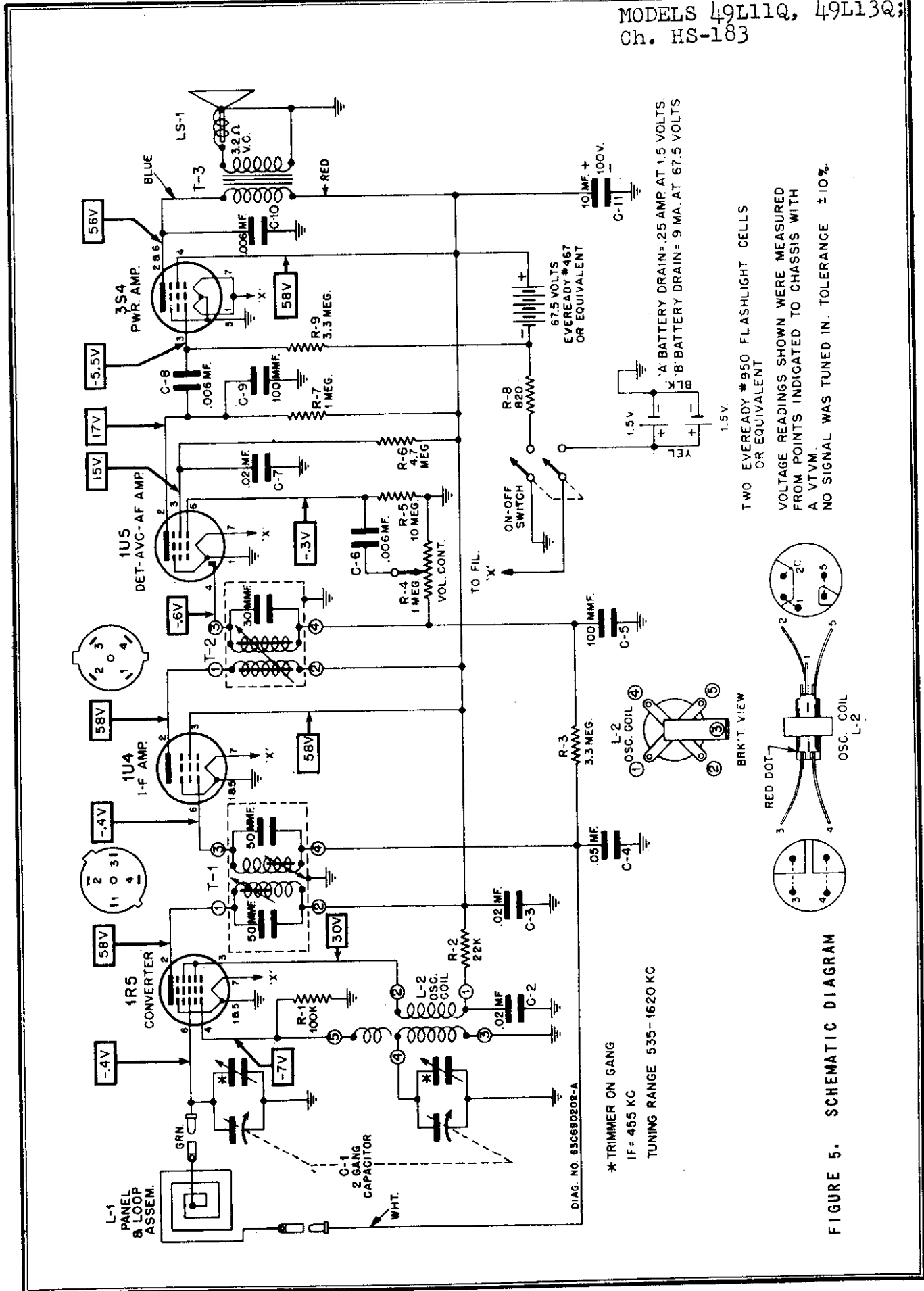


FIGURE 5. SCHEMATIC DIAGRAM

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REPLACEMENT PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
CHASSIS PARTS - ELECTRICAL					
CAPACITORS					
C-1	19K680360	Variable: 2 gang	8	3S7247	Screw, machine: 6-32 x 3/16; slotted locking hex head; stl; cad pl (tuning capacitor mounting)
C-2	8K471628	Paper: .02 mf 100V	9	3S7205	Screw, machine: 8-32 x 1/4; slotted locking hex head; stl; cad pl (spkr mtg)....
C-3	8K471628	Paper: .02 mf 100V	10	26A480034	Shield, circuit
C-4	8A71213	Paper: .05 mf 100V	11	1K480037	Shield & Sleeve Assembly (for T-1, part no. 24B480042 & T-2)
C-5	21B77286	Ceramic: 100 mmf 500V	or	26K480038	Shield, coil (for T-1, part no. 24B690840)
C-6	8C4529	Paper: .006 mf 100V	12	9A472534	Socket, tube: 7-prong miniature; wafer type
C-7	8K471628	Paper: .02 mf 100V	13	41K680029	Spring, battery contact ...
C-8	8C4529	Paper: .006 mf 100V	14	31A480032	Strip, terminal ('B' battery connector)
C-9	21B77286	Ceramic: 100 mmf 500V	15	31K51511	Strip, terminal: 3 insulated lugs, #3 gnd; 3/8 spacing ..
C-10	8C4529	Paper: .006 mf 100V			
C-11	23A75235	Electrolytic: 10 mf 100V			
COILS					
L-1	24B480092	Panel and Loop Assembly			
L-2	24A485989	Oscillator coil			
RESISTORS			CABINET PARTS		
Note: All resistors are carbon, insulated type unless otherwise specified.			101	35B690002	Baffle, speaker: cardboard
R-1	6R6031	100,000 10% 1/2W	102	1X690081	Cabinet Assembly: tan; complete with handle, grille and back cover catch; less back cover and hinge spring (49L11Q)....
R-2	6R6397	22,000 10% 1/2W	or	1X690491	Cabinet Assembly: green; complete with handle, grille and back cover catch; less back cover and hinge spring (49L13Q)
R-3	6R2118	3.3 meg 20% 1/2W	103	42A480079	Clip, fuse (cover catch) ...
R-4	18K480039	Volume control: 1 meg; with DPST switch	104	42A480078	Clip, speed (on back cover catch stud)
R-5	6R2109	10 meg 20% 1/2W	105	16K690076	Cover, cabinet back: tan (49L11Q)
R-6	6R2122	4.7 meg 20% 1/2W	or	16K690141	Cover, cabinet back: green (49L13Q)
R-7	6R6004	1 meg 20% 1/2W	106	13C690005	Grille, speaker
R-8	6R6269	820 10% 1/2W	107	55K690069	Handle, carrying (49L11Q)
R-9	6R2118	3.3 meg 20% 1/2W	or	55K690112	Handle, carrying (49L13Q)
SPEAKER			108	14C480095	Insulator, chassis: gray fibre.
LS-1	50B480048	Speaker: 3-1/2" PM; 3.2 ohm VC.	109	36K690072	Knob, control: tan (49L11Q) ...
	or 50B482759		or	36K690148	Knob, control: green (49L13Q) ..
TRANSFORMERS			110	29A690089	Lug, clinch (connects cover stop cord to chassis)
T-1	24B480042	IF transformer: 455 Kc; complete with tuning cores and padding capacitors, but less shield...	111	9A481743	Receptacle, 1 pin (on loop).
	or 24B690840		112	15B481896	Retainer, 'A' battery: plastic.
T-2	24B480040	Diode transformer: 455 Kc; complete with tuning cores and padding capacitors, but less shield	113	5S7720	Rivet: .083 x 1/8 stl; nkl pl (loop receptacle mtg)....
T-3	25B470622	Output transformer	114	3S488008	Screw, machine: #4 x 1/4; Phillips round head; thread cutting type; stl; cad pl (cover catch mtg)
CHASSIS PARTS - MECHANICAL			115	3S490390	Screw, sheet metal: #4 x 3/8 Phillips round head; thread cutting type; stl; cad pl (chassis mtg)
1	46K680318	Core, iron: threaded (T-1)	116	2S7089	Speednut: .187 round; 3/8 x 5/8; blk parkerized finish (loop and grille retainer)..
1A	46A470885	Core, iron: threaded (T-2)	117	41A480094	Spring, hinge (back cover)...
2	5S7855	Eyelet: .156 x .484 (loop lead tips)	118	30A690007	Stop Assembly, cover: includes cord and lug
3	29R3020	Lug, soldering (battery contact)	119	46B480108	Stud, trimount (chassis insulator mtg)
4	2S7051	Nut, hex: 3/8-32 x 9/16; stl cad pl (vol control mtg)...	120	4K19943	Washer, paper: 11/16 x 17/64 x 1/32 thick (cover stop cord guard)
5	5S7769	Rivet: .088 x 3/32; stl; nkl pl (shield mtg)			
6	5S7771	Rivet: .088 x 3/16; stl; nkl pl (tube socket mtg)			
7	5S7706	Rivet: .122 x 1/8; stl; nkl pl (electrolytic and terminal strip mtg)			