

The schematic diagram illustrates the internal wiring of a vacuum tube radio receiver. Key components and sections include:

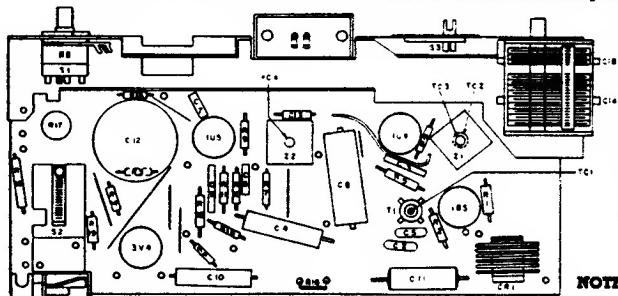
- Filament Circuit:** Divided into AC operation (top left) and battery operation (bottom left), both utilizing a 155 converter and a 154 3F amplifier.
- 155 Converter:** The first vacuum tube stage, connected to a 1.2 OHMS antenna (LA1) and a 154 3F amplifier.
- 154 3F Amplifier:** The second vacuum tube stage, which also functions as a volume control, connected to a 154 3F amplifier and a 3V6 output stage.
- 3V6 Output Stage:** The third vacuum tube stage, connected to a 3V4 output stage.
- 3V4 Output Stage:** The final vacuum tube stage, connected to a 3V4 output stage and a speaker (LS1).
- Volume Control:** A section labeled "VOLUME CONTROL" featuring a 154 3F amplifier and a 3V6 output stage.
- Line Switch:** A switch labeled "S2 LINE - BATTERY" that selects between line and battery power.
- Flash-Light Switch:** A switch labeled "S3 FLASH-LIGHT SWITCH" that controls the flash-light bulb (FL1).
- Power Sources:** A 75 X BATTERY and a 3 V. BATTERY are shown, along with a 90 V. B. (BATTERY) and a 110 V. B. (BATTERY).
- Components:** The circuit includes numerous resistors (R1 through R19) and capacitors (C1 through C19), as well as vacuum tubes (155, 154, 3V6, 3V4).
- Labels:** The diagram is labeled with "IF=455 KC" and "FIG. 1".

**Dial Indicator** — Before alignment, the dial knob should be set as follows: with the condenser gang plates fully meshed, the first knob marking (past the 550 KC point) should be perpendicular to the front of the chassis.

**Signal Generator** — Use an AM r-f signal generator. Connect the ground lead to B—, and connect the output lead as indicated in the alignment chart.

STEP	SIGNAL GENERATOR		RADIO		ADJUST
	CONNECTION TO RADIO	DIAL SETTING	DIAL SETTING	SPECIAL INSTRUCTIONS	
1	Connect signal generator through a .1 mfd condenser to pin 6 (converter grid) of 1R5.	455 kc.	Tuning gang fully open.	Adjust for maximum output in order given.	TC4—2nd I-F sec. TC3—1st I-F sec. TC2—1st I-F pri.
2	Use radiating loop (See note one below).	1620 kc.	1620 kc. (See note 2 below).	Adjust for maximum.	C1B—osc. trimmer
3	Same as step 2.	1400 kc.	1400 kc. (Tune for signal.)	Adjust for maximum.	C1A—ant. trimmer
4	Same as step 2.	600 kc.	600 kc. (Tune for signal.)	Adjust for maximum output. Rock tuning gang while making this adjustment.	TC-1—Osc. core
5	Repeat steps 2, 3, and 4 until no further improvement is noted.				

NOTE 2: The tuning condenser can be set to the proper frequency for the oscillator adjustment as follows: Fully open the tuning gang and insert a .006 non-metallic shim between the heel of the rotor and the top of the stator plates. Close the gang sufficiently to hold the shim in place, and then remove the shim without disturbing the gang setting.



**SPECIFICATIONS**

CABINET ..... PLASTIC PORTABLE  
CIRCUIT ..... FOUR TUBE SUPERHETERODYNE (PLATE ALUMINUM RECTIFIER)  
AUXILIARY OUTPUT ..... 400 MC OPERATION - 100 MILLIWATT  
BATTERY OPERATION ..... 100 MILLIWATT  
SUPPLY VOLTAGE ..... 17 VOLTS, 60 MC  
8.0 VOLT 1/2 SUPPLY 7.5 VOLT 1/4 BATTERY  
POWER ..... 400 MC OPERATION ..... 1/4 WATT  
BATTERY OPERATION ..... 1/4 WATT  
CONSUMPTION ..... 400 MC FROM "A"  
300 MA FROM "B"

ANTENNA ..... WIRELESS, NON-IMPEDANCE LUMP  
INTERMEDIATE FREQUENCY ..... 455 KC  
PULSED TONE ..... 100 KHZ, 100-1/2 AMPLIFIER  
100 DETECTOR-A.M.E.-1 AUDIO, EYE OUTPUT  
BATTERY TYPE ..... 9-VOLT BATTERY  
(32 "D" TTY "B" BATTERIES)  
FLAMMABLE SOLID TYPE 72-X, POLYESTER WINDING 5400-5

**NOTES**

VALVES-TESTED TO 100% CONSUMPTION IN PPM VALVES OTHERWISE MARKED...  
@ 1200 TUBE 100%  
VOLTAGE MEASURED WITH A 5,000 OHM PER-VOLT METER FROM 0-...  
THE VOLTAGE-TUBE VOLTAGE WITH LINE SUPPLY, DUTY CYCLE VOLTAGE WITH BATTERY.

**S2 LUG VIEW**

**NOTES:** R20 wired between positive "A" battery terminal and the flashlight socket assembly. Jumpers are indicated by solid lines.