

TECHNICAL INFORMATION

MODEL RAW

6 VALVE BROADCAST A.C. BATT. 1951

DESIGNED & MANUFACTURED BY

RADIO (1936) LTD.

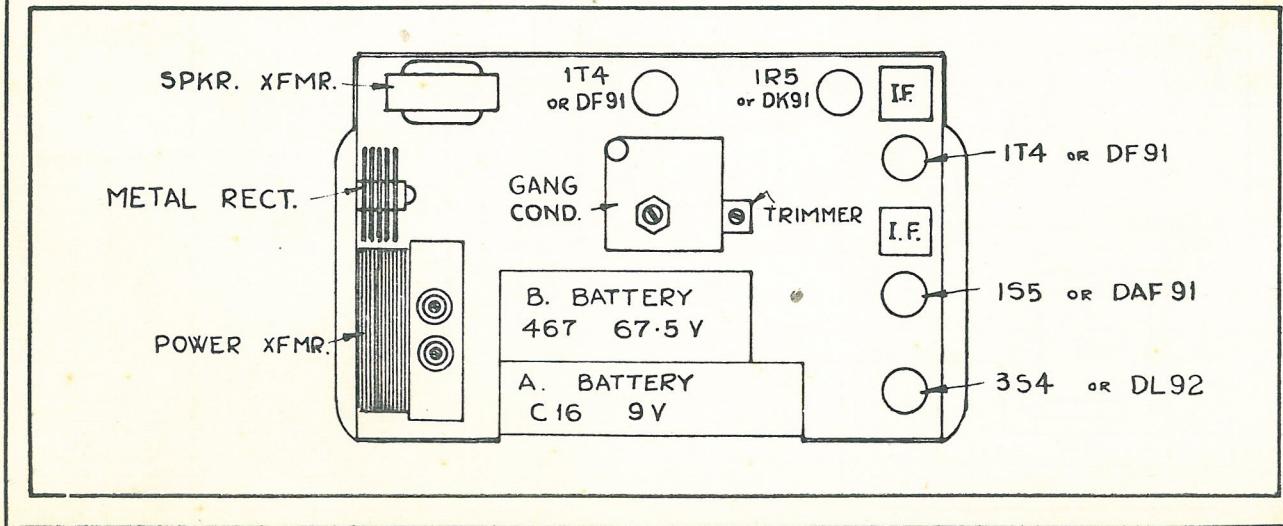
| | | | | |
|----------------|--------------------|--|--------------|----------------|
| Power Supply | 230v. AC 50 Cp/s. | | Rating | 20 Watts |
| Tuning Range | 1600Kc/s - 550Kc/s | | Speaker | Rola 3 C. |
| I.F. Frequency | 460Kc/s | | Power Output | 100 Milliwatts |

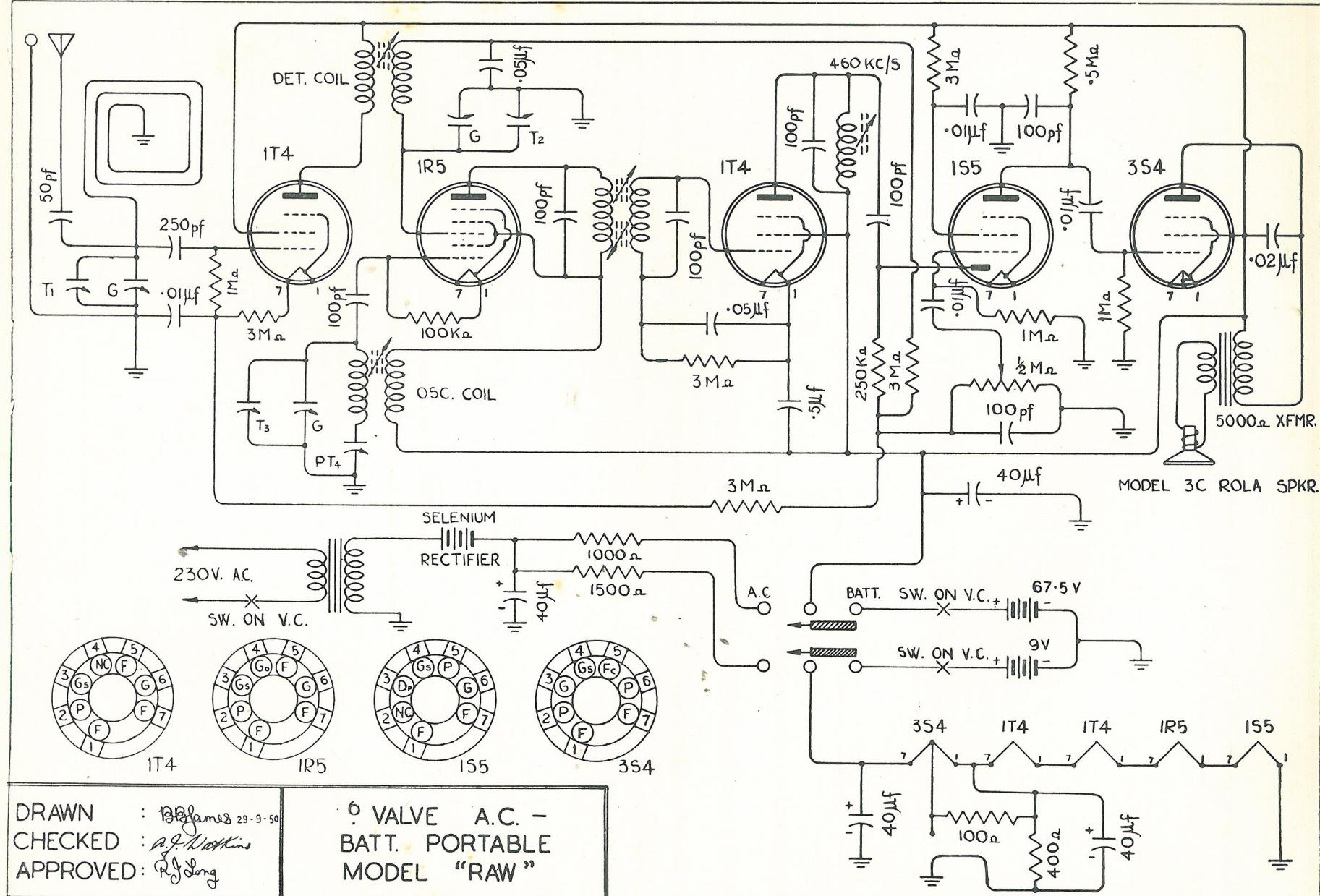
CIRCUIT DESCRIPTION:

A type IT4 valve is employed as a radio frequency amplifier and is coupled to a type DK91 frequency changer which is in turn coupled by means of a double tuned high gain I.F. transformer to a type IT4 used as an I.F. amplifier. The type IS5 performs the combined functions of detection AGC source and voltage amplification and is capacitively coupled to a type 3S4 power amplifier. The 230-volt AC mains source is converted to direct current by means of a double-wound transformer, type RMI. Centercel selenium rectifier and filter system.

ANTENNA:

A standard inverted "L" type antenna with a flat top of approximately 30 feet is recommended when an outside antenna is desired and connections are provided at the back of the receiver. When using an outside antenna it is essential for best results that an efficient earth such as a water pipe be used.





VOLTAGES APPEARING BETWEEN VALVE PINS AND CHASSIS FRAME.

| VALVE PIN No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|--------------------|-------|-----|------|------|-----|------|-------|---|
| IT4 R.F. Amp. | +2.7 | +63 | +63 | +1.9 | 0 | +1.9 | +3.9 | |
| DK91 Freq. Changer | +1.35 | +61 | +61 | -21 | 1.2 | -.2 | +2.65 | |
| IT4 I.F. Amp. | +3.9 | +63 | +63 | -.15 | 0 | +3.5 | +5.0 | |
| IS5 Diode Det. | 0 | -.2 | -.25 | +17 | +32 | -2.5 | +1.35 | |
| 3S4 Power Amp. | +5.0 | +61 | -.2 | +63 | +6 | 0 | +7.4 | |

NOTE: D.C. Readings taken with vacuum type voltmeter.

Receiver on A.C. mains.

D.C. RESISTANCES.

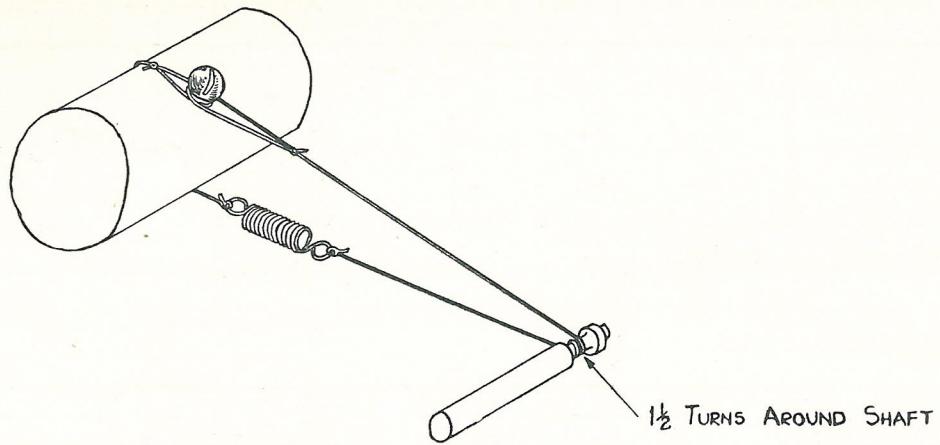
| | | | | | | |
|-------------------------|----------|--|---------------------------|-----|-----|----------|
| Loop Ant. | 1.5 ohms | | 1st I.F. Primary | --- | --- | 14.5 |
| Det. Coil Primary | 100 ohms | | 1st I.F. Secondary | --- | --- | 14.5 |
| Det. Coil Secondary | 4.5 ohms | | 2nd I.F. Primary | --- | --- | 14.5 |
| Osc. Coil Primary | .75 ohms | | Speaker Xformer Primary | --- | --- | 475 ohms |
| Osc. Coil Secondary | 2.0 ohms | | Speaker Xformer Secondary | --- | --- | .75 ohms |
| Power Xformer Primary | 210 ohms | | | | | |
| Power Xformer Secondary | 200 ohms | | | | | |

ALIGNMENT INFORMATION:

Adjust volume control for maximum gain.

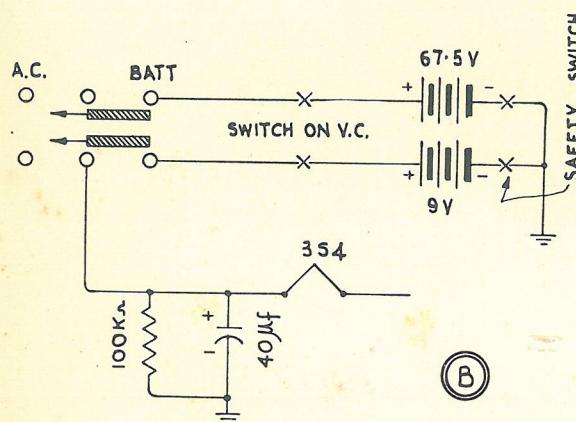
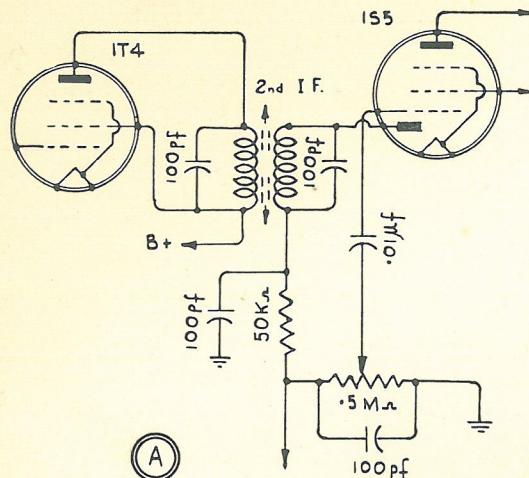
Adjust sig. generator output to no higher than necessary to obtain output meter reading.

| Dummy Ant. | Generator Coupled to | Generator Frequency | Receiver Dial Setting | Adjust. | Remarks | Approx. Sensitivity |
|---------------|-------------------------|------------------------|--------------------------|--|--------------------|------------------------|
| .1 Mfd. | Grid IT4 I.F. Amp. | 460 Kc/s. | 550 Kc/s. | 2nd I.F. slug. | Adjust for max. | 9000 micro- volts. |
| .1 Mfd. | Grid DK91 | 460 Kc/s. | 550 Kc/s. | 2nd I.F. slug. 1st I.F. Prim. slug. 1st I.F. Sec. slug. | Adjust for max. | 600 micro volts. |
| | Loop Loosely | 1400 Kc/s. | 1400 Kc/s. | Osc. Trimmer | Adjust for max. | |
| | | 600 Kc/s. | 600 Kc/s. | Osc. Padder | Adjust for max. | |
| | | 1400 Kc/s. | 1400 Kc/s. | Det. and Ant. Trimmer | Adjust for max. | |



AMENDMENTS AND REMARKS:

1. Production chassis have had added a 50 P.F. condenser which is connected across the detector coil primary.
2. A special switch has been added breaking the B-Lead and is actuated by the volume control shaft.
3. The number of turns around the tuning drive shaft has been increased to $2\frac{1}{2}$ turns.



A. Change from Wearite to Phillip's Type I.F. Transformers.

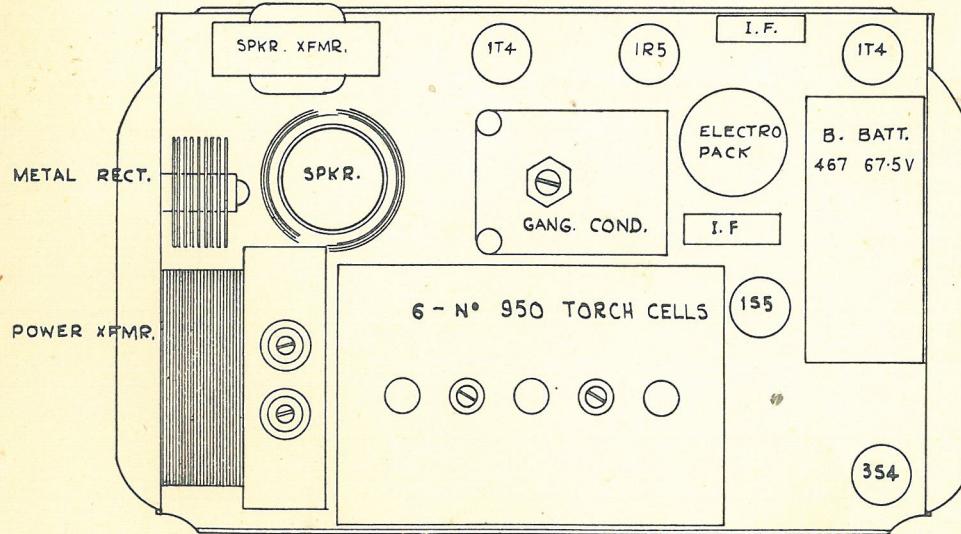
B. Incorporating an additional switch in the "A" battery lead, preventing operator from playing receiver on BATT. when A.C. plug is inserted.

MODIFICATION COMMENCING

Serial No. 143314 on

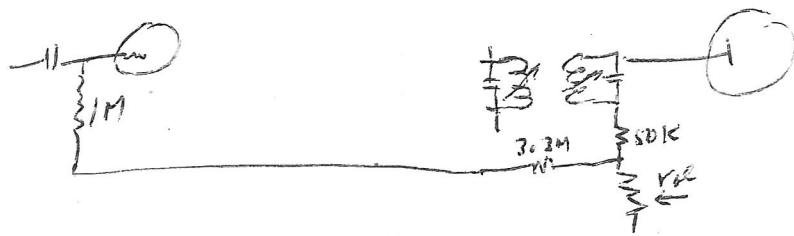
"A" modification plus a change to 6 - 950 type torch cells as substituting for type C-16 Battery.

Also new valve layout diagram.

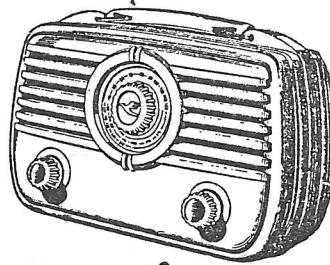


VALVE LAYOUT FOR
5.V. A.C. BATT. PORT.
MODEL RAW

R FW s/n 181477 01 Rola 3C = 29K5
using 2- Philips flat IF TS = 1955



R AW



R AW mod.