RADIO SERVICE BULLETIN

Issue No. 52.
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Subject: Model 225

SPECIFICATION OF S.T.C. MODEL 225 PORTABLE & TABLE

CIRCUIT: Five valve, dual wave, battery operated superheterodyne with R.F. stage, converter, I.F. stage, detector-audio stage, and power output stage.

FEATURES: A.V.C. variable tone control, high impedance loop aerial, (detachable when set used with external aerial). High gain aerial coil, provision for external batteries.

TUNING RANGE:

Broadcast 530-1620 Kc/s.
Short Wave 5.9-18 Mc/s.

INTERMEDIATE FREQUENCY: 455 Kc/s.

VALVE COMPLEMENT:

V1 R.F. Amplifier 1T4.
V2 Frequency Changer 1R5.
V3 I.F. Amplifier 1T4.
V4 Detector-Audio 1S5.
V5 Power Output 3V4.

POWER SUPPLY:

"A" Battery 1.5 Volts—300 M.A.
"B" Battery 90 Volts—15 M.A.

LOUD SPEAKER: Permag 6 inch cone, 10,000 ohm Transformer.

CIRCUIT VOLTAGES:

	Plate	Screen	Osc. Plate	Grid	Filament
V1	84	30	—	—	1.4
V2	67.5	67.5	* 67.5	—	1.4
V3	84	40	—	—	1.4
V4	84 volts thru 1 megohm	84 volts thru 3 megohms	—	—	1.4
V5	83	84	—	—	1.4

* NOTE Screen of V2 used as Oscillator Plate.
These voltages must be measured to receiver earth with voltmeter having a resistance of at least 1000 ohms per volt (Tolerance ± 5%). Volume control must be turned to maximum.

MEASUREMENT SPECIFICATION:

I.F. Sensitivity—V2 grid 170 microvolts.
I.F. Sensitivity—V3 grid 10 millivolts.
Broadcast Sensitivity 4 microvolts average.
Shortwave Sensitivity 60 microvolts average.

These figures are related to an audio frequency output of 22.5 volts measured between plate of V5 and CHASSIS through a series condenser of .1 MFD capacity.

When measuring sensitivity, a .1 MFD condenser should be used between the "Hot" signal generator lead and the grid of the valve (stage) being checked. Do not disconnect any wiring.

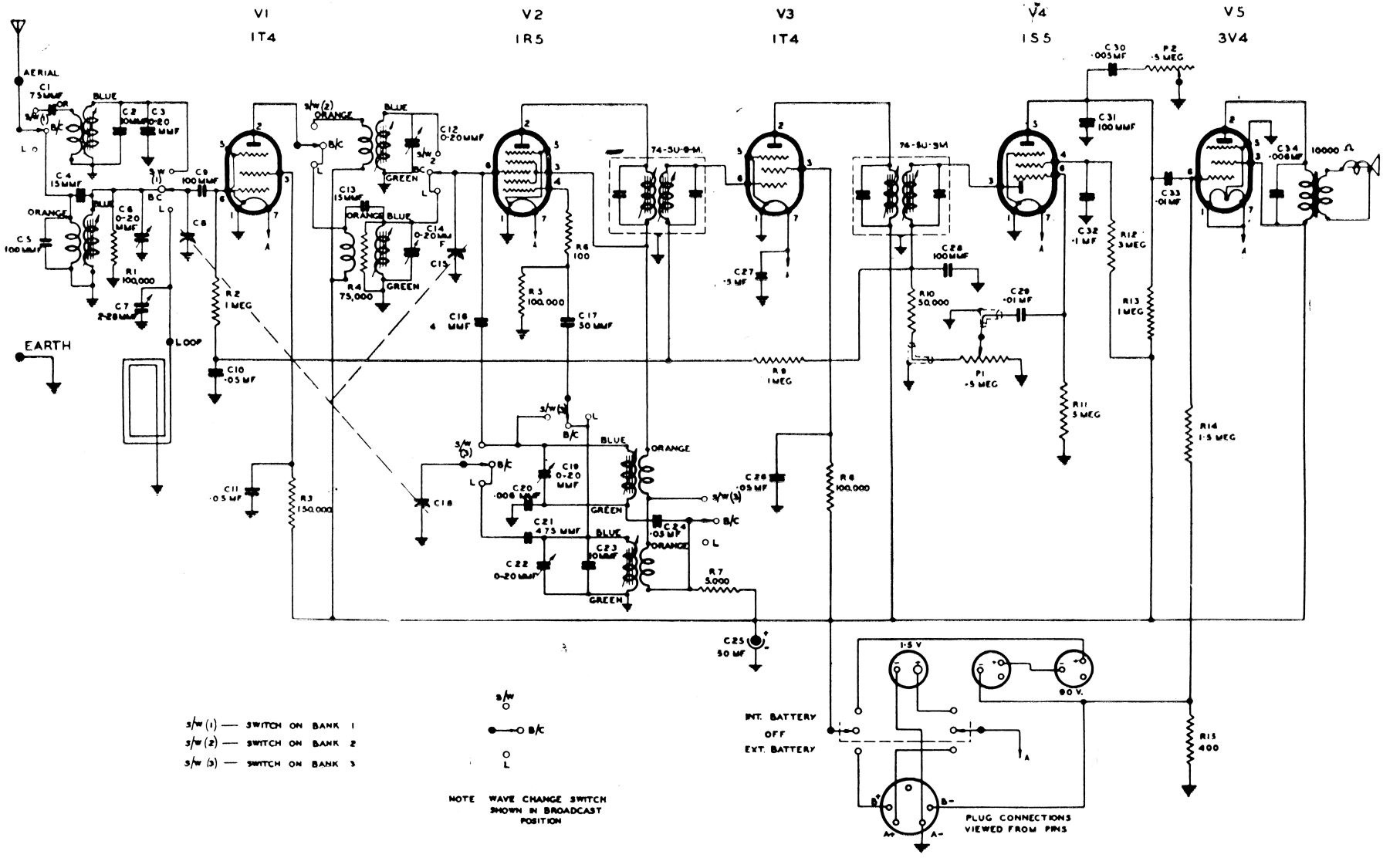
ALIGNMENT FREQUENCIES:

Broadcast 1400 Kc/s and 600 Kc/s.
Shortwave 16 Mc/s and 6 Mc/s.

CHECK POINTS:

Broadcast 1000 Kc/s.
Shortwave 10 Mc/s.

MODEL 225


V1
1T4
V2
1R5
V3
1T4
V4
1S5
V5
3V4
AERIAL
EARTH
LOOP
C1 75 MMF
C2 10 MMF
C3 0-20 MMF
C4 15 MMF
C5 100 MMF
C6 0-20 MMF
C7 2-28 MMF
C8
C9 100 MMF
C10 ·05 MF
C11 ·05 MF
C12 0-20 MMF
C13 15 MMF
C14 0-20 MMF
C15
C16 4 MMF
C17 50 MMF
C18
C19 0-20 MMF
C20 ·006 MF
C21 475 MMF
C22 0-20 MMF
C23 10 MMF
C24 ·03 MF
C25 50 MF
C26 ·05 MF
C27 ·5 MF
C28 100 MMF
C29 ·01 MF
C30 ·005 MF
C31 100 MMF
C32 ·1 MF
C33 ·01 MF
C34 ·006 MF
R1 100,000
R2 1 MEG
R3 150,000
R4 75,000
R5 100,000
R6 100
R7 5,000
R8 100,000
R9 1 MEG
R10 50,000
R11 5 MEG
R12 3 MEG
R13 1 MEG
R14 1·5 MEG
R15 400
P1 ·5 MEG
P2 ·5 MEG
10000 Ω
74-SU-8-M
74-SU-9M
BLUE
ORANGE
GREEN
S/W (1)
S/W (2)
S/W (3)
B/C
L
1·5 V
90 V.
INT. BATTERY
OFF
EXT. BATTERY
PLUG CONNECTIONS
VIEWED FROM PINS
S/W (1) — SWITCH ON BANK 1
S/W (2) — SWITCH ON BANK 2
S/W (3) — SWITCH ON BANK 3
NOTE WAVE CHANGE SWITCH
SHOWN IN BROADCAST
POSITION