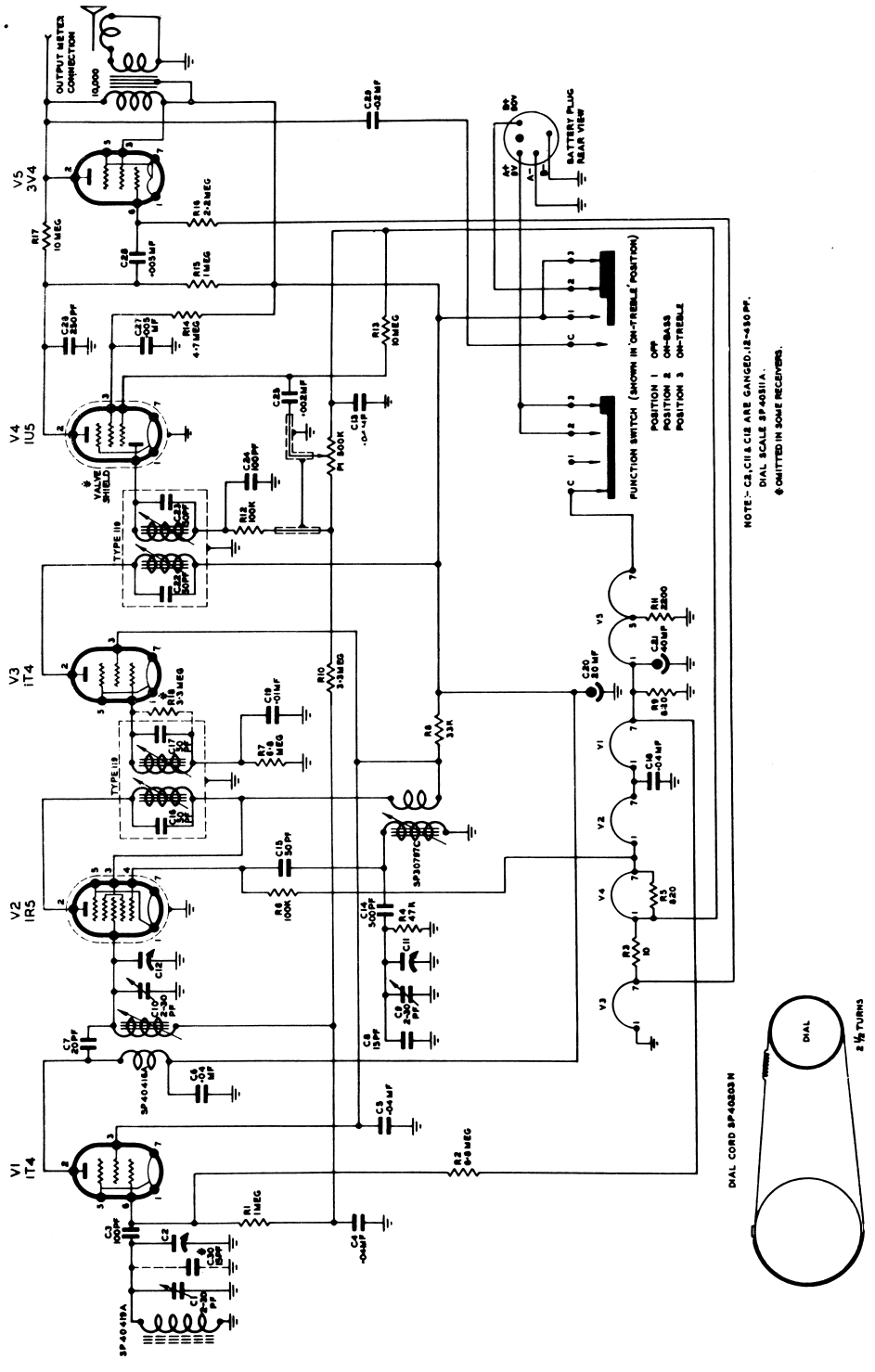
STC MODEL 1540



SPECIFICATION OF S.T.C. MODEL 1540

DESCRIPTION:

A five valve, battery operated portable receiver, incorporating:—
Inbuilt Ferrite Rod Aerial.
Automatic volume control.
Three position selector switch for "TREBLE—BASS—OFF".

TUNING RANGE: 530-1620 Kc/s.

INTERMEDIATE FREQUENCY: 455 Kc/s.

VALVE COMPLEMENT:

V1. R.F. Amplifier. IT4.
V2. Frequency Converter. IR5.
V3. I.F. Amplifier. IT4.
V4. Detector A.V.C. and Audio Amplifier. IU5.
V5. Power Output Pentode. 3V4.

POWER SUPPLY: "A" Battery 9 Volts at 50 Milliamps.
"B" Battery 90 Volts at 12 Milliamps Approx.

LOUD SPEAKER: Four inch permagnetic with 10,000 ohm transformer.

CIRCUIT VOLTAGES:

	Plate	Screen	Filament
V1	90	36	1.25 to 1.55 (Pins 1 to 7)
V2	36	36	1.25 to 1.55 (Pins 1 to 7)
V3	90	36	1.25 to 1.55 (Pins 1 to 7)
V4	90 thru 1 meg.	90 thru 4.7 meg.	1.25 to 1.55 (Pins 1 to 7)
V5	87	90	1.25 to 1.55 (Pins 1 to 5)
V5			1.25 to 1.55 (Pins 5 to 7)

These voltages may vary with 5% of their stated values and must be measured with a voltmeter having a resistance of at least 1000 ohms per volt. Plate and Screen volts should be measured to receiver earth, but filament readings must be taken across each individual filament.

MEASUREMENT SPECIFICATION:

I.F. Sensitivity—V2 grid. 100 microvolts.
I.F. Sensitivity—V3 grid. 5.3 millivolts.
Broadcast Sensitivity—V1 grid. 10 microvolts.
The above sensitivity figures indicate the input, which when modulated 30% at 400 c.p.s. provides an audio frequency output of 22.5 volts measured between chassis and the plate of V5 through a series condenser of 0.1 MFD. Volume control must be turned to maximum. When measuring sensitivity a 0.1 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: R.F. Coil—600 Kc/s. and 1400 Kc/s.
Rod Aerial Coil—570 Kc/s. and 1400 Kc/s.

CHECK POINT: Broadcast—1000 Kc/s.

FERRITE ROD AERIAL:

The Material is of a ceramic nature and is extremely fragile. Care should be used in handling to avoid fracture. If realignment of this component is necessary the signal generator should be connected as shown in Bulletin No. 105 and its output adjusted to give a readable voltage on the output meter.
A signal at 1400 Kc/s should be tuned to maximum by means of the aerial trimmer condenser.
At 570 Kc/s the aerial rod winding should be moved along the rod to give maximum deflection on the output meter. Repeat alignment at 1400 Kc/s with trimmer and again at 570 Kc/s by sliding the coil until no further improvement can be obtained. Seal with a small amount of suitable lacquer to prevent future movement.