

DYNATRON**“ GYPSY ”****Model TP16**

General Description: Six-transistor (plus two crystal diodes), two-wave-band, portable receiver with car aerial socket. An identical chassis is fitted to the “Deputy” Model TP22.

Power Supply: Two 6-volt batteries (two PP1 or equivalents). No-signal consumption about 10 mA.

Wavebands: M.W. 183–555 m.; L.W. 1090–1925 m.

Transistor Analysis: Following measurement taken with Avo Model 8 (20,000 ohms/volt).

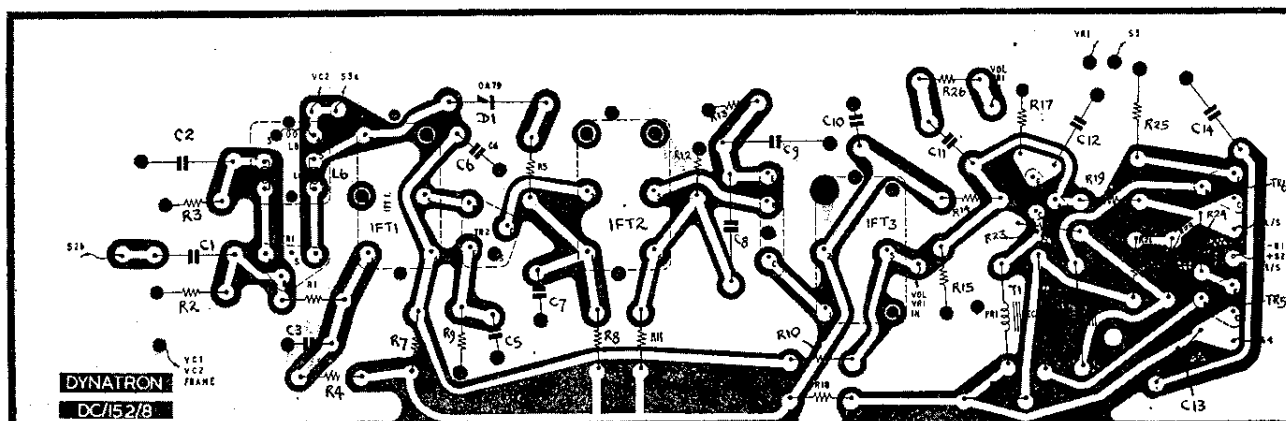
| Transistor | | Function | Emitter, volts | Base, volts | Collector, volts |
|------------|-----------|------------------------|----------------|-------------|------------------|
| TR1 | AF117 . . | Self-oscillating mixer | 1.22 | 1.26 | 8.0 |
| TR2 | AF117 . . | I.F. amplifier | 0.75 | 0.93 | 5.6 |
| TR3 | AF117 . . | I.F. amplifier | 0.70 | 0.92 | 8.2 |
| TR4 | OC81D . . | A.F. driver | 2.15 | 2.30 | 11.5 |
| TR5 | OC81 . . | Push-pull output | 6.02 | 6.20 | 12.0 |
| TR6 | OC81 . . | Push-pull output | 0.02 | 0.20 | 6.0 |

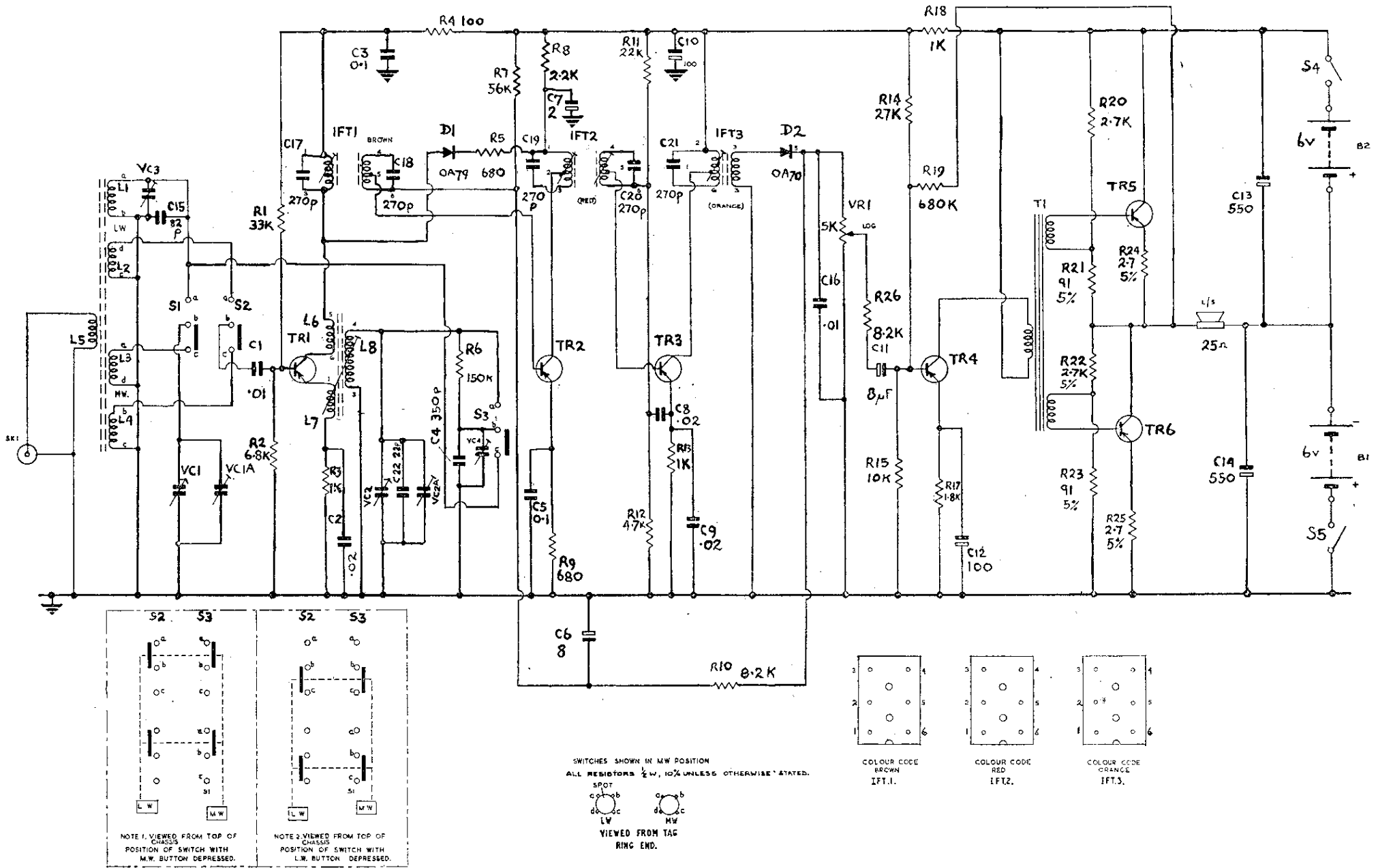
Diodes (D1) OA79 (A.G.C.); (D2) OA70 (detector).

Dismantling: Remove rear cover. Disconnect battery and speaker leads. Remove four nuts and shake proof washers securing chassis to case. Remove chassis carefully from case, ensuring that the rod aerial coils are not damaged by being brought into contact with cover clips located at top of case.

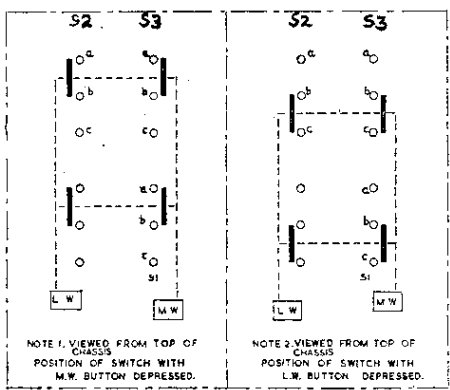
A.G.C. Circuit: Diode D1 is reverse biased and presents a high impedance, having a negligible effect on circuit. When a strong signal is received the collector current of TR2 is reduced by the A.G.C. action, this decrease in current causes the voltage dropped across R8 to decrease, reducing the reverse bias on D1 and lowering its impedance, thus damping the primary of IFT1, resulting in a further reduction in gain. With reception of very strong signal, D1 conducts fully and heavily damps IFT1. D1 also operates as a “catching diode” and prevents the collector voltage of TR1 from bottoming, as might otherwise occur with strong impulsive interference.

Alignment Frequencies: I.F. 470 kc/s. (IFT3—single core—IFT2, 1—twin cores). 540 kc/s. (L8), 1640 kc/s. (VC2A), 200 kc/s. (VC4), 600 kc/s. (L3), 1300 kc/s. (VC1A), 160 kc/s. (L1), 260 kc/s. (VC3).





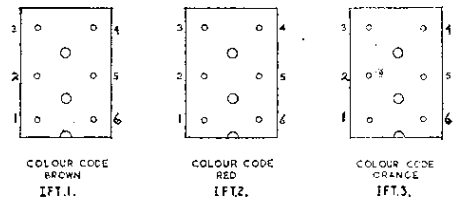
DYNATRON



SWITCHES SHOWN IN M.W. POSITION
 ALL RESISTORS 1/2 W, 10% UNLESS OTHERWISE STATED.

SPOT

 VIEWED FROM TAG RING END.



CIRCUIT DIAGRAM—DYNATRON "GYPSY" MODEL TP16