

RECEIVERS—CAR

SERVICE DATA

NT346V

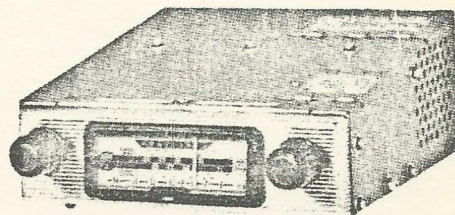
PHILIPS CAR RADIO

MODEL NT346V

SPECIFICATIONS

(Subject to alteration without notice)

Power Supply	6 or 12V Car Battery
Tuning Range	530-1620 Kc/s
Tuning Type	Permeability
Intermediate Frequency	455 Kc/s
Battery Consumption	3.8 Amps. (6V), 1.8 Amps. (12V)
Vibrator	Synchronous, 6V, Type V5124
Aerial	Telescopic, Type TC3



VALVE EQUIPMENT AND VOLTAGE ANALYSIS

Valve Function	Valve No.	Valve Type	Plate Volts	Screen Volts	Cathode Volts
Frequency Converter	V1	6AN7	232	70	1.1
I.F. Amplifier	V2	6BH5	232	70	—
Demodulator, A.V.C. and 1st Audio Amplifier	V3	6BD7	66	—	—
Power Amplifier	V4	6M5	250	232	7.5
Unfiltered B+ (across C33): 260 \pm 15V Filament Volts (7.2 or 14.4 applied): 6.8 Total H.T. Current (through L19): 55mA		V1 Osc. Plate Volts: 90 Vibrator Drive Coil Volts: 6.6V with 7.2V applied 10.6V with 14.4V applied			

NOTE: H.T. voltages are measured on the 250V and L.T. voltages on the 10V scale of a 1,000 ohms/volt meter and may vary \pm 10% of quoted figure. Applied battery voltage is 7.2 and 14.4 for 6V and 12V connections respectively.

POLARITY AND VOLTAGE ADJUSTMENT

The receiver is designed to operate from a 6 or 12 volt car type battery installation incorporating either a negative or positive polarity earthing system. Production receivers are adjusted for the 12 volt positive earth system, but facility for readjustment to suit individual conditions without removal of cover is provided beneath the vibrator and filament change-over plates. For details of change-over procedure, refer Installation Instruction Sheet CS.444.011.1.

Polarity change-over reverses vibrator transformer primary connections only while voltage adjustment provides for:—

- Alternative connection 2 and 3 (6V), or 1 and 4 (12V), to vibrator transformer primary.
- Bridged (6V) or in-circuit (12V), vibrator drive coil dropping resistors R19 and 20.
- Parallel (6V) or series-parallel (12V), filament circuit configuration as shown.

CHASSIS COVER REMOVAL AND REPLACEMENT

To gain access to all chassis, separate receiver from installation and remove each of the case cover screws, consisting of:—

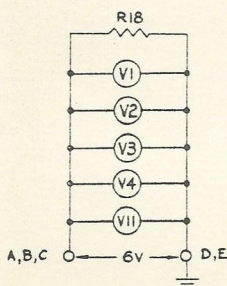
Sixteen (16) $\frac{1}{8}$ " W. ch. hd. (3: top, 6: L.H.S., 5: R.H.S., 2: rear)

Three (3) $\frac{5}{16}$ " W. ch. hd. (1: L.H.S., 1: R.H.S., 1: rear)

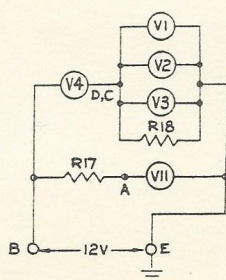
Two (2) $\frac{5}{16}$ " W. mushroom hd. (top front outer)

One (1) $\frac{1}{4}$ " W. inst. hd. (top front centre) together with all plain and lock washers.

Initially ease cover from front of receiver and hinge apart on rear bottom edge to ensure that vibrator reten-



FILAMENT CIRCUIT: 6V



FILAMENT CIRCUIT 12V

tion bush (cover fixture) does not foul pip of output tube V4. Note location of corrugated contact strips along upper and lower edge of power chassis.

Replacement is a reversal of removal process; initially correct cover placement and contact strip location being important. All plain and lock washers must be refitted in the correct sequence and screw heads turned fully home to ensure electrical continuity with chassis. The centre row screws into power base plate should always be checked for tightness prior to receiver installation.

- Note: 1. Cover removal does **not** require extraction of any screws beneath receiver base plate.
2. Access to and replacement of dial scale, escutcheon, dial lamp, knobs and associated parts thereof does **not** require removal of cover.

CHASSIS LAYOUT, ACCESSIBILITY AND COMPONENT REPLACEMENT

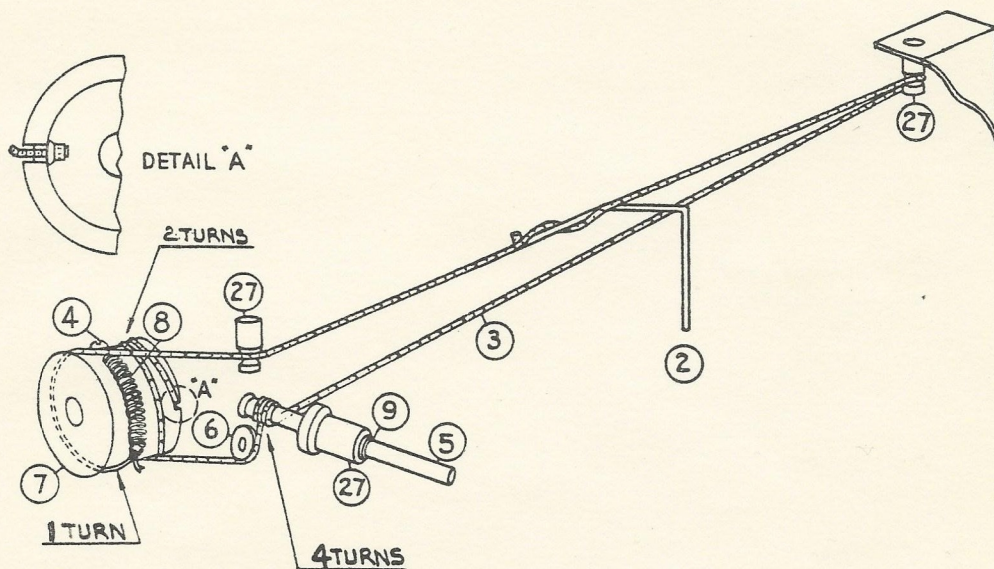
The receiver chassis is of semi-unit construction con-

sisting of two physically isolated but electrically inter-dependent sections comprising (A) the H.F., I.F., audio amplifier chassis and front panel components; and (B) the audio output and power supply circuitry.

Facility is provided for valve replacement (note adjacent chassis cut-outs), vibrator replacement, alignment, dial cord fitting and service to many major components without need for chassis separation. Where service to or replacement of a normally inaccessible component is required, the necessary separation of the "B" chassis from the remainder of receiver, although a simple operation, requires careful implementation.

Removal of the 4 appropriate base plate screws and L.S. terminal block connections will allow chassis "B" to be separated from "A" at the aerial end. Carefully pivot the "B" chassis through 90° while ensuring that the flexible leads to feed through capacitors are not pulled taut. These capacitors are easily damaged if subjected to stress.

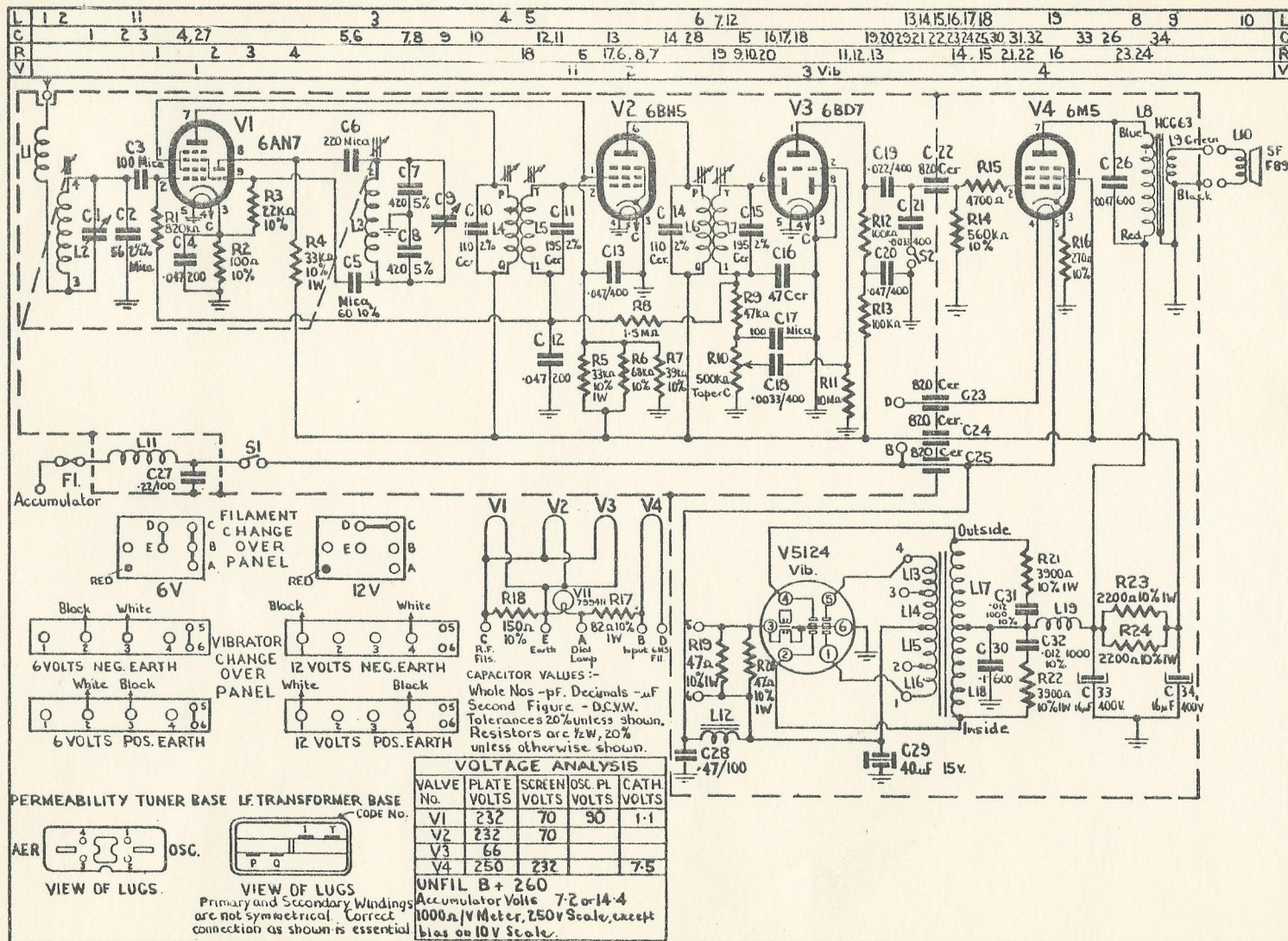
The receiver will operate satisfactorily with chassis separated provided the two units are adequately earth clamped together.



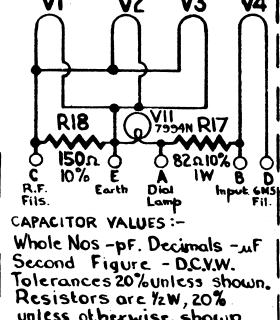
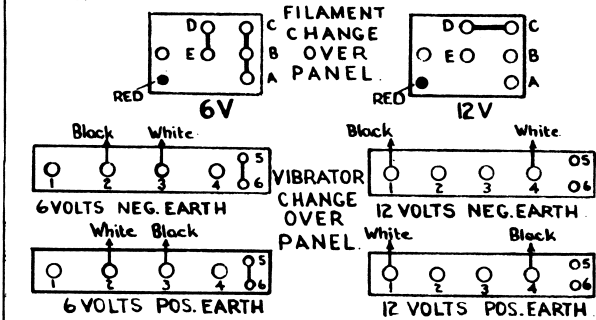
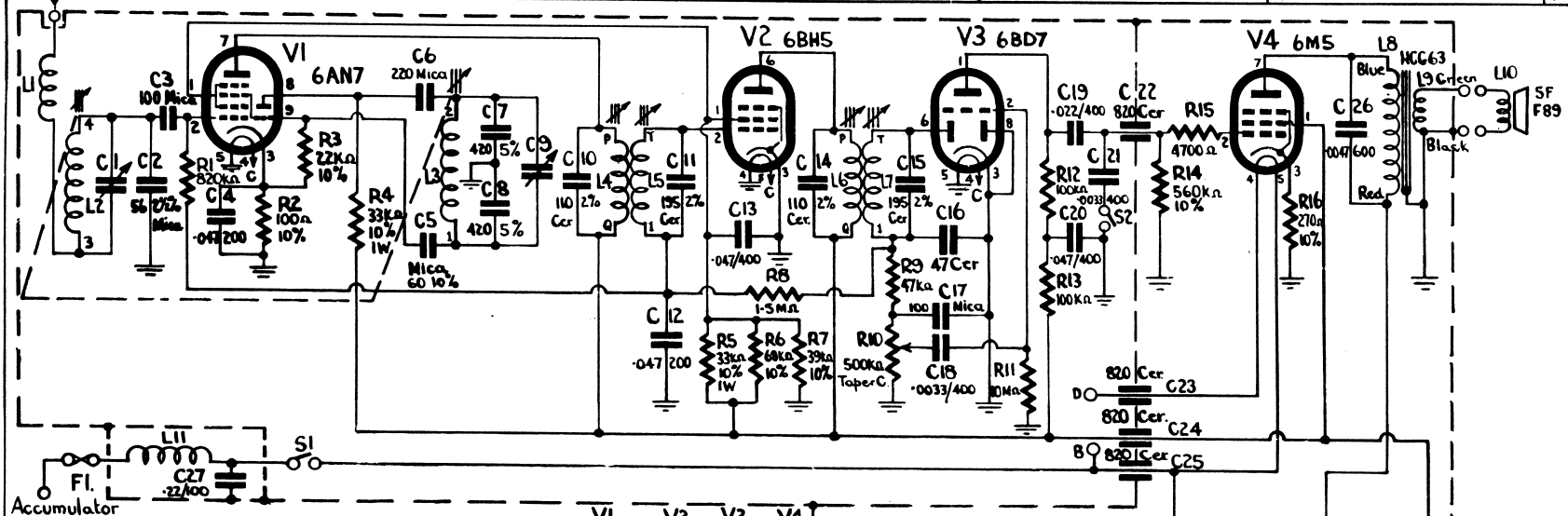
NOTE PERM. TUNER IN
CLOSED POSITION

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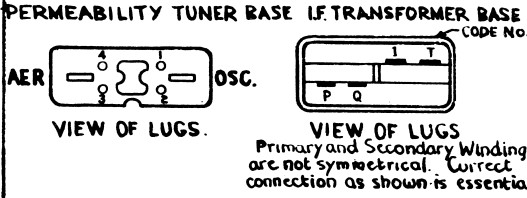
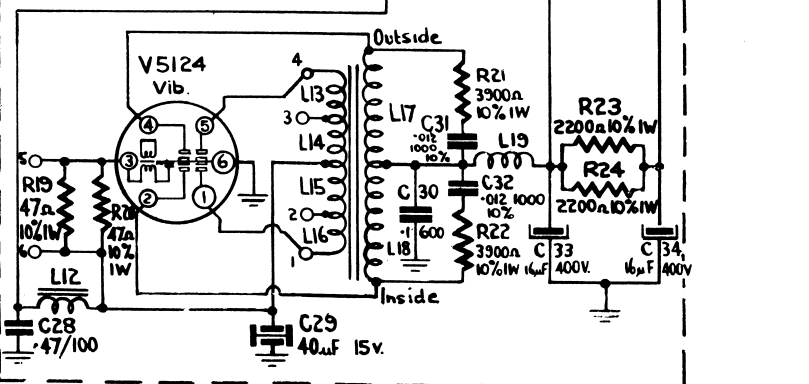
L	1	2	11	3	4	5	6	7,12	13,14,15,16,17,18	19	8	9	10	L	
C	1	2	3	4,27	5,6	7,8	9	10	12,11	13	14	28	15	16,17,18	C
R	1	2	3	4	18	5	17,6	8,7	19	9,10,20	11,12,13	14	15	21,22	R
V	1	2	3	4	11	2	3	Vib	4	16	23,24	33	26	34	V



VOLTAGE ANALYSIS

VALVE No.	PLATE VOLTS	SCREEN VOLTS	OSC. PL. VOLTS	CATH. VOLTS
V1	232	70	90	11
V2	232	70		
V3	66			
V4	250	232		7.5

UNFIL B + 260
Accumulator Volts 7.2 or 14.4
1000Ω/V Meter, 250V Scale, except bias on 10V Scale



PRELIMINARY SERVICE DATA
MODEL NT 346V
CAR RADIO