

SERVICE INFORMATION SHEET

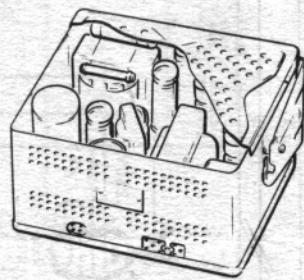
* B & D AMPLIFIER *



"HIS MASTER'S VOICE" AUTOMOBILE RADIO B & D AMPLIFIER

SIX VALVE AMPLIFIER FOR 12 & 6 VOLT
BATTERIES RESPECTIVELY

SMITHS RADIOMOBILE



"In certain countries overseas, notably N. & S. America, this identical equipment is marketed as EMITRON CAR RADIO".

In view of similarities and for convenience of description, this Sheet deals with the above two models. Unless otherwise stated, all details apply to both.

SPECIFICATION

Physical.

Height	4½ inches (11.5 cm.)	Overall.
Width	7 15/16 inches (20.2 cm.)	
Depth	6 inches (15.3 cm.)	
Weight	7½ lbs. (3.3 kg.)	

Low Tension Supply.

'B' Amplifier, 12 volt Battery } Positive
'D' Amplifier, 6 volt Battery } earthed supply *

* These amplifiers cannot be adapted for use with vehicles having a negative earthed supply, and on no account should the connections to the electrolytic condensers be reversed.

High Tension Supply.

Non-synchronous vibrator with hard valve rectifier.

Power Output.

7 watts maximum. (5 watts at 5% distortion).

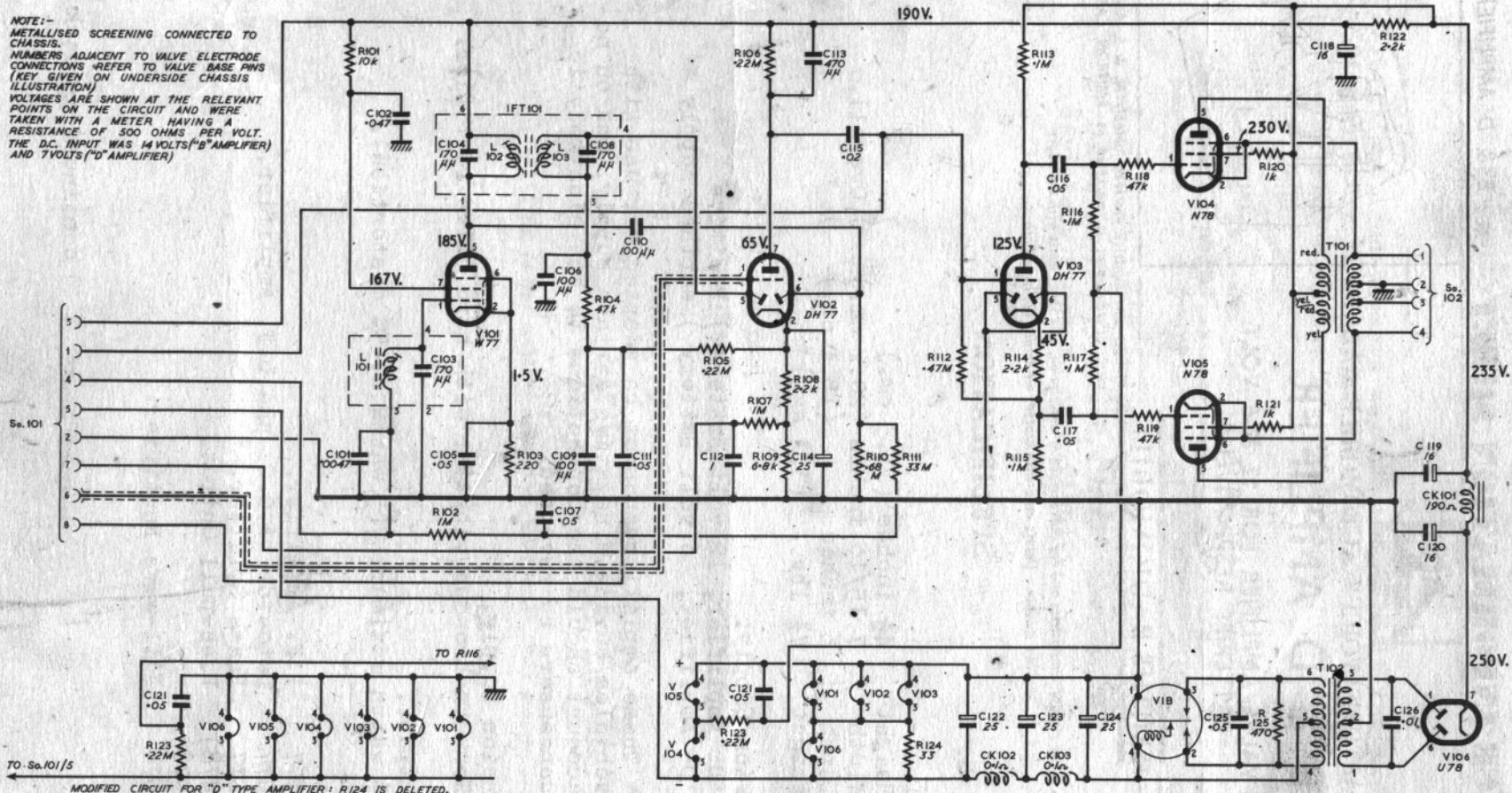
Valves.

W77	I.F. Amplifier.
DH77	Detector, A.G.C. and L.F. Amplifier.
DH77	Phase Splitter.
N78}	Push-pull Output.
N78}	
U78	Full-wave Rectifier.

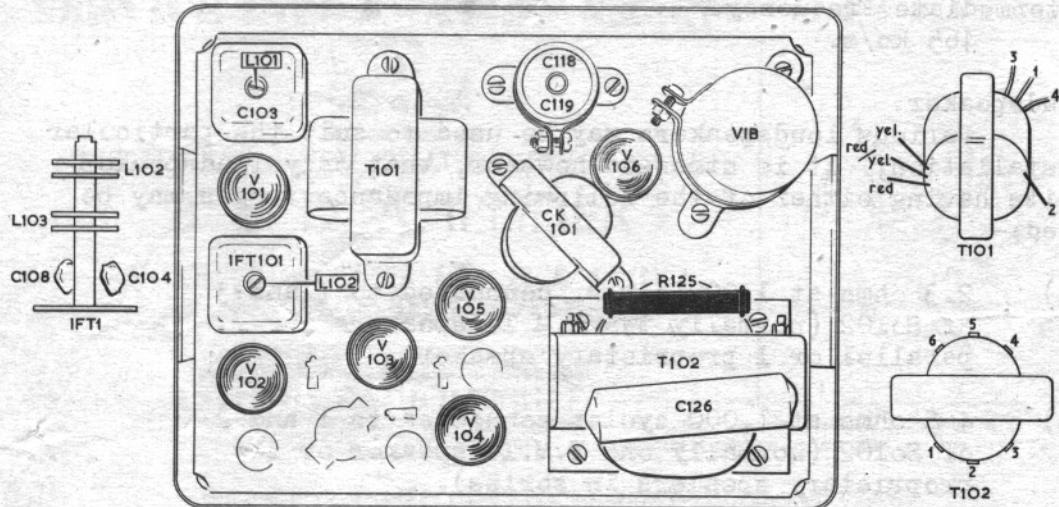
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C	101	102	103, 104, 105	106, 109, 107, 108	110, 111	112	121	114	113, 115	122	123, 116, 117	124	125	118	126	119, 120	C	
R	101	102	103	104	105	106	123, 106, 107, 109	108	110	111	124, 112	114, 115, 113	116, 117	118, 119	125, 120, 121	122		R
MISC.	Sa.101				V101, L102, IFT 101, L105		V102		CK 102	V103, CK 103	V104, V105	V105	V104, V105	V101, V102	Sa.102, CK 101, V106	MISC.		

NOTE:-
METALLISED SCREENING CONNECTED TO CHASSIS.
NUMBERS ADJACENT TO VALVE ELECTRODE CONNECTIONS REFER TO VALVE BASE PINS
(ALL GIVEN ON UNDERSIDE CHASSIS
ILLUSTRATION).
VOLTAGES ARE SHOWN AT THE RELEVANT
POINTS ON THE CIRCUIT AND WERE
TAKEN WITH A METER HAVING A
RESISTANCE OF 500 OHMS PER VOLT.
THE DC. INPUT WAS 14 VOLTS ("B" AMPLIFIER)
AND 7 VOLTS ("D" AMPLIFIER).

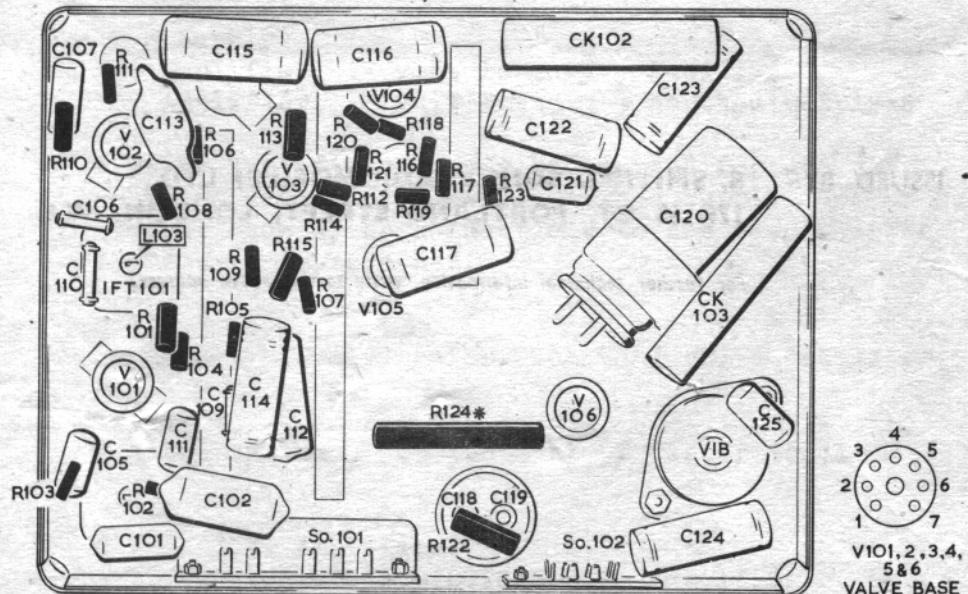


CIRCUIT FOR B & D AMPLIFIER



TOP-SIDE CHASSIS

*R124 is used with 46028B (12V) only



○¹ ○⁴ ○⁶
 ○² ○³ ○⁵ ○⁷ ○⁸
 So.101
 VIEWED FROM TAGS

3 4
1 6

UNDERSIDE CHASSIS

Intermediate Frequency.
465 kc/s.

Loudspeaker.

Various loudspeakers may be used to suit the particular installation; it is stressed however, that only loudspeaker units having either of the following impedance ranges may be used:-

- (a) 2.3 ohms at 1,000 c.p.s. connected to 1 and 3 of Sol02 (normally two E.M.I. speakers in parallel or 1 proprietary speaker).
- (b) 4-5 ohms at 1,000 cycles connected to 1 and 2 of Sol02 (normally one E.M.I. speaker or two proprietary speakers in series).

ISSUED BY:- **S. SMITH & SONS (RADIOMOBILE) LTD.,
179-185 GT. PORTLAND STREET, LONDON, W.1.**

For further technical information, write to the above address.

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Issue 2

'B' AND 'D' AMPLIFIER UNITS

Provisional Service Manual

I.F. ALIGNMENT

- 1) Set volume control of control unit fully clockwise and bring tuning carriage right out (i.e., towards the front panel).
- 2) Inject a modulated signal at 465 kc/s. (modulated at 400 cycles to 30 per cent) between the grid of frequency changer (X78) and chassis, leaving grid connection made.
- 3) Adjust cores of L103, L102, L101 and appropriate control unit I.F. coil core for maximum output. When adjusting any coil its companion coil must be damped with a 47,000-ohm resistor (e.g., when L103 is adjusted L102 must be damped).
- 4) Repeat the procedure outlined above until no further increase in output is obtained.

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