

Tasma

SERVICE DATA

for

MODEL 190 SUPERHETERODYNE

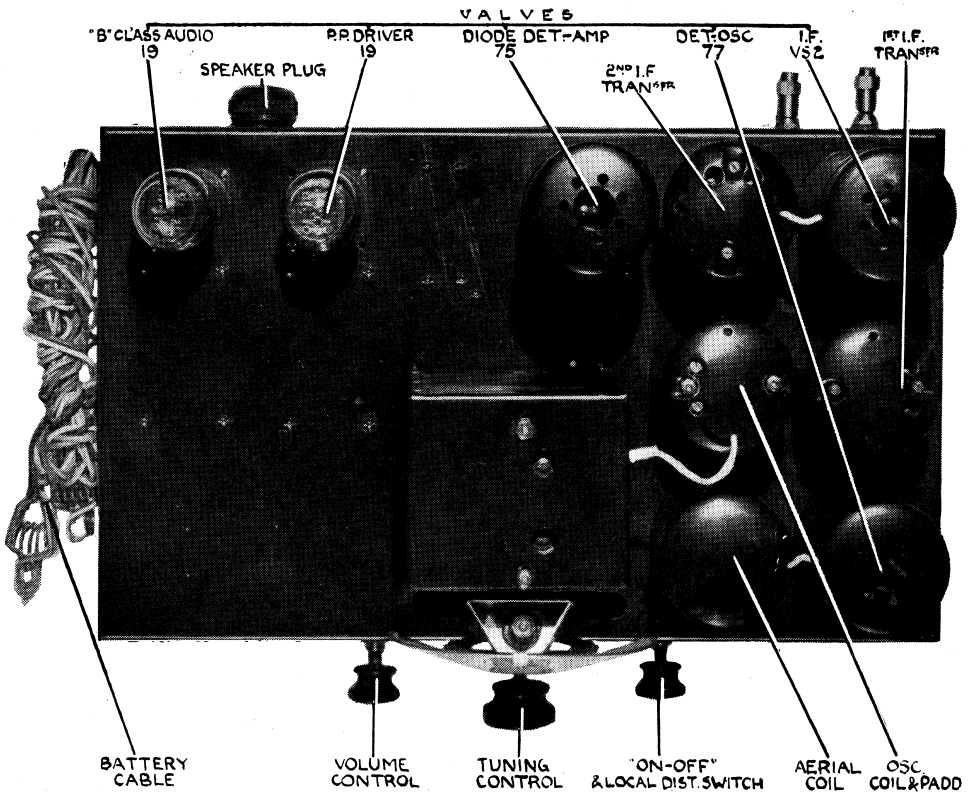
(for Battery Operation)

I. GENERAL CHARACTERISTICS.

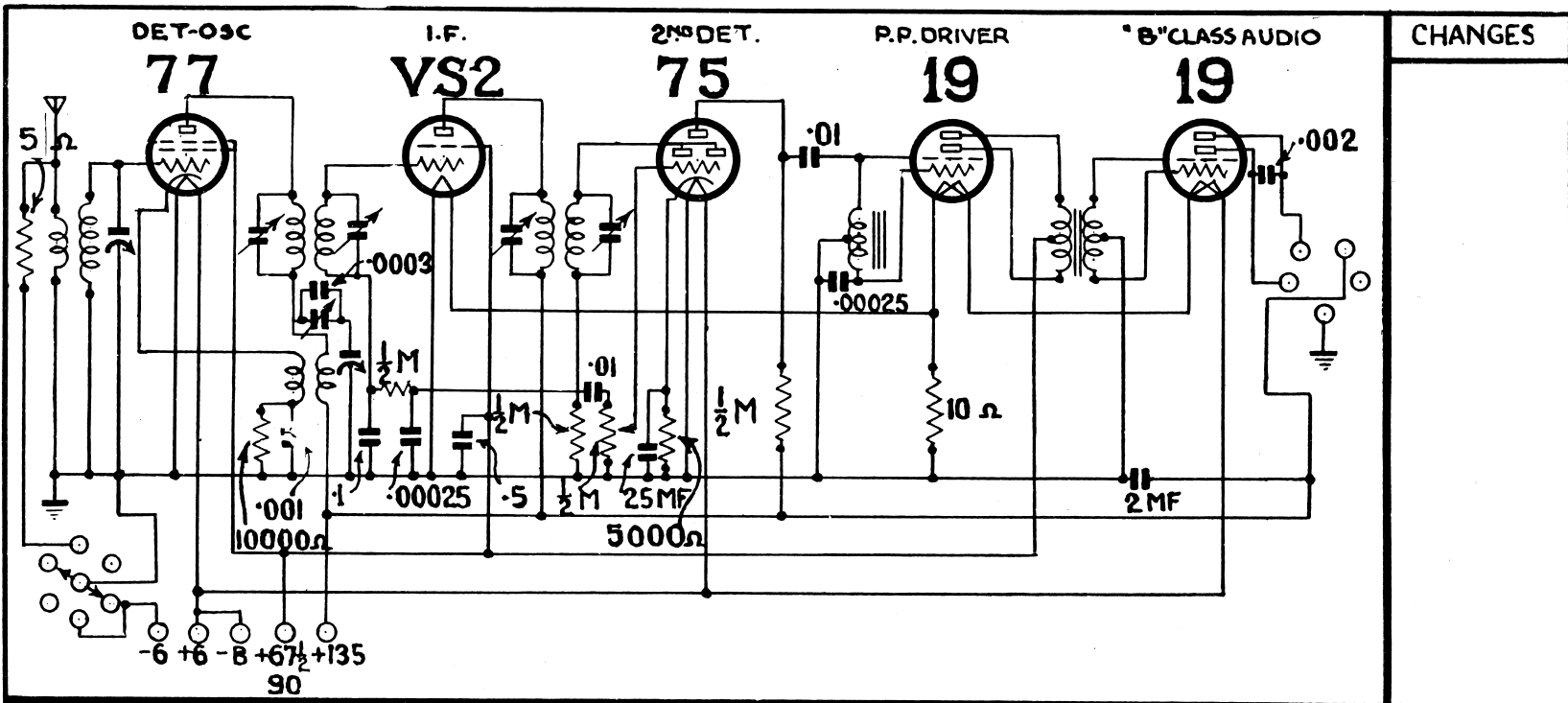
The TASMA Model 190 is a 5-valve battery-operated radio receiver designed on the super-heterodyne principle to give ample sensitivity for daylight reception in Country districts.

At the time of compilation of this bulletin, the Model 190 is the most economical receiver of its type on the market, whilst it incorporates Diode Detection, Automatic Volume Control, Push-Pull Drive Amplifier, and "B" Class Push-Pull Output—features which are usually found only on the multi-valve receivers in the higher price class.

With the volume control set for normal reception, the drain on the "A" battery is only .91 amps., and on the "B" battery less than 10 milliamps.



Layout of Top of Chassis



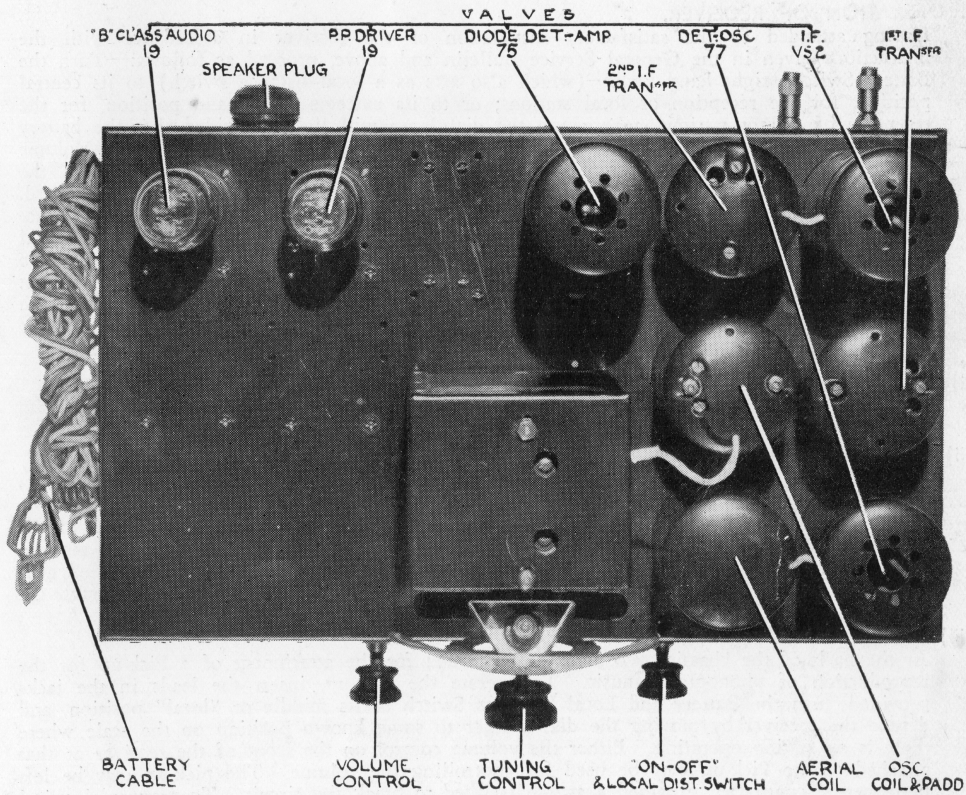
CHANGES

THOM & SMITH LTD
 55-57 DOWLING STREET
 SYDNEY N.S.W

Tasma SUPERHETERODYNE M190
 BATTERY OPERATED 5 VALVES

DR'N BY *W. Bamforth* 31-10-33
 CH'D BY *B. Buchanan* 31-10-33
 AP'D BY *F. J. J. J.* 31-10-33

DRAWING
 N°
 78



Lay-out of Top of Chassis

TASMA RADIO RECEIVER MODEL 190 SUPERHETERODYNE

4. DETAILS OF COMPONENTS (Continued).

(iv) Removal of Chassis from Cabinet.

To remove the chassis from the cabinet for servicing purposes, proceed as follows:—

- (a) Disconnect batteries.
- (b) Remove the three knobs from the controls on the front of the cabinet.
- (c) Disconnect aerial and earth leads from binding posts and speaker plug from chassis.
- (d) Loosen and remove the four bolts which affix the chassis to the shelf.
- (e) Slide the chassis slowly off the supporting shelf.
- (f) If necessary for convenient testing, remove the speaker from its baffle board.
- (g) Before commencing to test, reconnect Aerial and Earth leads and speaker plug. Then switch on batteries.

5. TABLE OF VOLTAGE AND CURRENT READINGS.

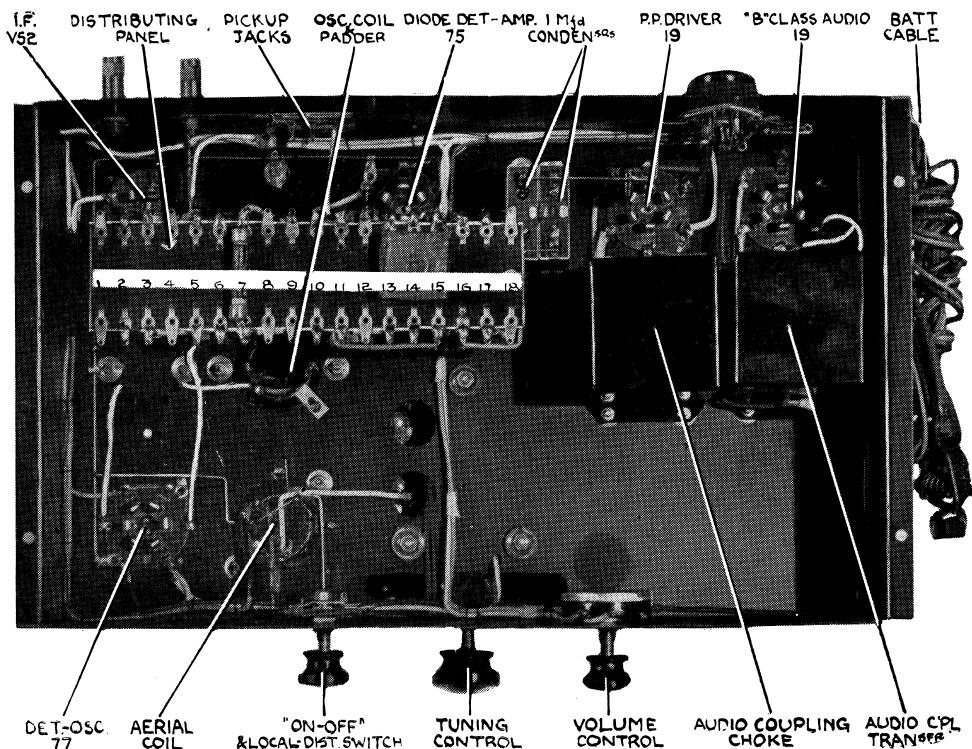
Type of Valve	Function of Valve.	Filament Volts	Plate Volts	Plate Current M.A.	Screen Volts	Bias Volts
77	Det.-Osc.	6	135	.4	90	5.5
VS2	I.F.	2.0	135	6	90	0
75	2nd Det.	6	60	.14	—	.5
19	P.P. Driver	2.0	90	2.2	—	2
19	"B" Class Output	2.0	135	2	—	4

6. FAULT LOCATION.

Reference should be made under this heading to Item 2 of the General Service Bulletin.

For the convenience of Dealers in locating the various components wired to the Distribution Panel underneath the chassis, the key given below will prove useful if considered in conjunction with the numbers shown on the "Sub-Panel View of Chassis" photograph.

1. Spare.
2. Resistor, 500,000-ohms.
3. Condenser, .1 mfd.
4. Spare.
5. Condenser, .5 mfd.
6. Condenser, .001 mfd.
7. Resistor, 10,000-ohms.
8. Spare.
9. Spare.
10. Resistor, 5,000-ohms.
11. Condenser, 25 mfd.
12. Spare.
13. Condenser, .00025 mfd.
14. R.F. Choke and Resistor, 500,000-ohms.
15. Condenser, .01 mfd.
16. Resistor, 500,000-ohms.
17. Condenser, .01 mfd.
18. Spare.



Sub-panel View of Chassis.

TASMA RADIO RECEIVER MODEL 190 SUPERHETERODYNE

2. INSTALLATION HINTS AND PRECAUTIONS.

In addition to the hints contained in Item 1 of the General Service Bulletin, the following special hint is applicable to this Model:—

(i) Batteries.

(a) A Battery. This consists of a 6 volt car battery.

(b) B Battery. This consists of a bank of 3 heavy-duty 45-volt dry batteries.

(ii) Battery Housing.

A Shelf is provided at the bottom of the cabinet for the housing of the B Battery. The A Battery should not be placed on this shelf, but outside on the floor, where fumes or acid will not damage the components of the receiver.

(iii) Battery Connections.

The five-way cable from the chassis should be joined to the batteries as follows:—

Blue to B —

Black to A —

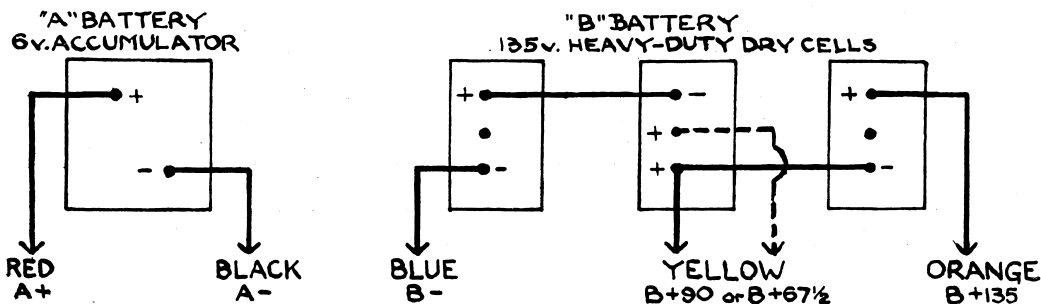
*Yellow to B + 90 or + 67½

Orange to B + 135

Red to A +

Take extreme care to connect these leads to the correct terminals on the batteries, as shown on diagram below, otherwise damage to the valves will result.

*Slightly better tonal reproduction will be obtained with the tapping at + 90 volts, but more economical battery consumption will result with the tapping at + 67½ volts.



3. OPERATION OF RECEIVER.

Having attended to the satisfactory installation of the receiver in accordance with the instructions given in the General Service Bulletin and above, proceed as follows:—Turn the Battery Switch—right hand knob—(which also acts as a local-distance switch) to its central position, for the reception of local stations; or to its extreme right hand position, for the reception of distant stations, whereupon the dial lamp will light, provided that the battery connections have been properly made and that the batteries are in good order. Turn Volume Control (left hand knob) in a clockwise direction to its greatest extent, then turn the Tuning Control (centre knob) to the right or left until the desired Station is heard. Adjust the Volume Control by turning in an anti-clockwise direction until the signals are received at ample room volume. Re-adjust the Tuning Control until the maximum signal is obtained and also readjust the Volume Control if necessary. Care should be taken to keep the Volume Control at a position which will enable the receiver to reproduce at just the correct room volume. Injudicious use of this control will result in distorted reproduction and in the early exhaustion of the batteries.

4. DETAILS OF COMPONENTS.

(i) I.F. Transformers.

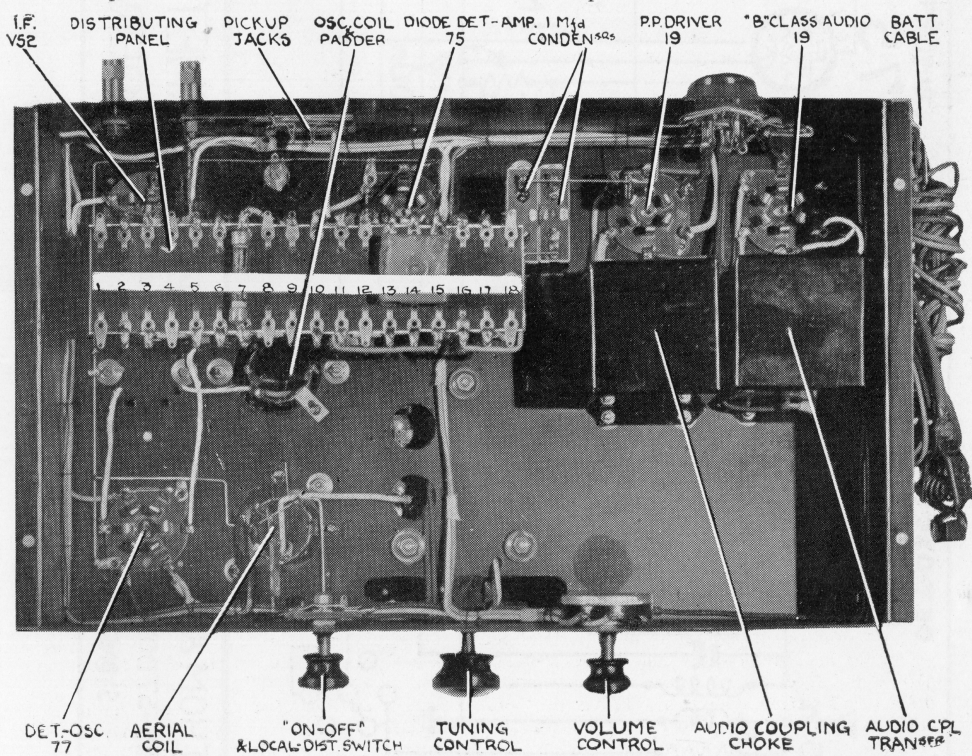
These are tuned and adjusted at the Factory to 445 k.c. For data on alignment, see Item 3 of General Service Bulletin.

(ii) Pilot Light.

The A Battery will last longer between each charging if the Pilot Lamp is not used. This may be removed easily by unscrewing from the socket, such removal having no effect upon the operation of the receiver. Such a procedure is entirely a matter for the decision of the customer, but involves a certain amount of danger due to the possibility of the receiver being left operating for long periods since, if the station to which the receiver is tuned goes off the air, there is no indication that the batteries have been left discharging through the receiver.

(iii) Pick-up Jacks.

At the back of the chassis, two jacks are provided for the attachment of a Pick-up for the reproduction of phonograph music. To operate the pick-up, insert the leads in the jacks provided, turn the Battery and Local Distance Switch to its middle or "local" position, and detune the receiver by moving the dial pointer to some known position on the scale where there is no station operating. Either the volume control on the front of the receiver or that attached to the Pick-up may be used for controlling the volume. The pick-up may be left permanently connected, provided a switch is fitted to break the circuit. To prevent electrical interference, the Pick-up leads should be of the shielded type.



Sub-panel View of Chassis.