

For more information remember www.savoy-hifi.co.uk

PYE 811

Four-valve, plus rectifier, three-waveband superhet with cathode-ray tuning indicator and provision for pickup and low-impedance extra loudspeaker. Suitable for operation from AC mains 200-250v. Marketed by Pye Radio, Ltd., Cambridge.

THE aerial input is fed to the tuning coils L3 (SW), L5 (MW), and L6 (LW) by coupling coils L2 (SW) and L4 (MW and LW). The latter has a 465-kc filter coil L1 and trimmer T12 in shunt with it to prevent interference on IF wavelengths. L6 is shunted by a second channel filter L7 and its trimmer T11.

The coils are tuned by VC1 section of the ganged condenser and the signals are fed direct to the control grid of the triode-hexode frequency changer V1. AVC is applied to this valve and it is cathode biased by R3 decoupled by C3.

The oscillator section employs tuned grid circuits with R5 and C5, the grid leak and condenser, and the oscillator coils L9 (SW), L11 (MW), and L12 (LW) which are tuned by the VC2 section of the ganged condenser. L8 and L10 are the anode feedback coils connected to the HT line via R6 which is decoupled by C9.

The intermediate-frequency signal is transferred by L13, L14 to the grid of the IF amplifier pentode V2 to which AVC is applied. Permanent bias is derived by the cathode resistor R7 decoupled by C11.

A second IF transformer L15, L16 passes on the

signal to the signal diode of the double-diode-triode V3 which is biased by R16 decoupled by C18.

The low frequency signal is developed across R13 after filtering by R12, C13, and C14. The DC potential across R13 is applied to a potential divider R10, R11 which feeds the control grid of the tuning indicator.

The LF signal is coupled by C15, and a further filter circuit R14, C17, to the volume control R15, and from here the signal is fed to the grid of the triode section of V3.

Pickup sockets for a high impedance pickup with associated switching are connected across the volume control. On gram the radio signals from C15 are shorted to earth via switch contacts S7.

The automatic volume control diode of V3 is fed from the anode of V2 via C16, R19 being the AVC load resistance, and R1 and R8 the decoupling components, for the grid circuits of V1 and V2 respectively.

The LF signal from V3 is resistance-capacity coupled by R18, C20, and R21 to the grid of the output pentode V4. R22 is a grid stopper. V4 is cathode biased by R23 decoupled by C22.

A permanent degree of tone correction is effected by C23, and a tone control system, C24, C25, and R20, is controlled by the four-position tone control switch. C24 (not shown) is between C25 and V4 anode.

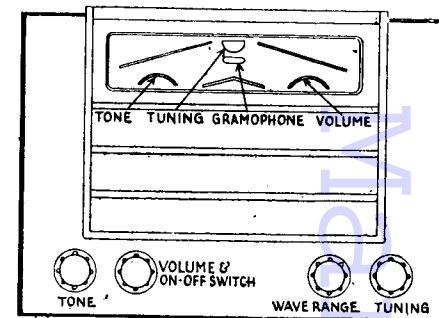
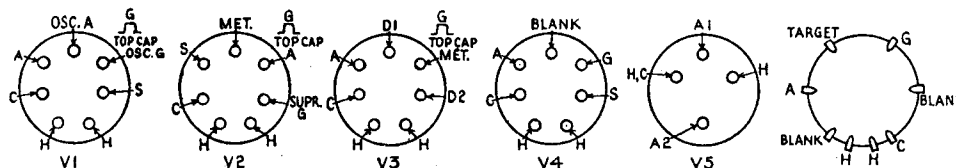
Whistle filtering is effected by L17 and C26 (tuned

to 9 kc) connected across the primary L18 of the output transformer which couples V4 to the energised moving-coil loudspeaker in which L20 and L21 are the hum-bucking and speech coils. L22 is the field winding.

The high tension circuit employs a full-wave rectifier V5 with smoothing effected by L22, C27, and C28.

VALVE READINGS

V	Type	Electrode	Volts	Mas
1	TH4 (Met) Mullard or A36A (Met) Ever Ready	Anode	260	5.3
		Osc anode	51	2.5
		Screen	57	2.4
		Cathode	2	—
2	VP4B (Met) Mullard or A50P (Met) Ever Ready	Anode	260	9.2
		Screen	260	3.4
3	TDD4 (Met) Mullard or A23A (Met) Ever Ready	Cathode	4	—
		Anode	76	1.3
4	A70D Ever Ready or PEN A4 Mullard A11D Ever Ready or IW 4/350 Mullard	Cathode	1.8	—
		Anode	239	33
		Screen	260	4.5
		Cathode	5.5	—
5	A11D Ever Ready or IW 4/350 Mullard	Anode	350 AC	—
		Target	390	61
Tuning TV4 Mullard Indicator or A39A Ever Ready		Anode	260	—
Pilot Lamps, 6.2v, .3amp.				



This diagram shows the frontal appearance of the Pye 811 and identifies the various controls.

GANGING

IF Circuits.—With volume control at maximum, inject a 465 kc signal between the control grid of V1 and chassis via a .002 mfd condenser. The lead to the control grid should be removed and a .5 megohm resistance connected between this valve

Continued overleaf

CONDENSERS

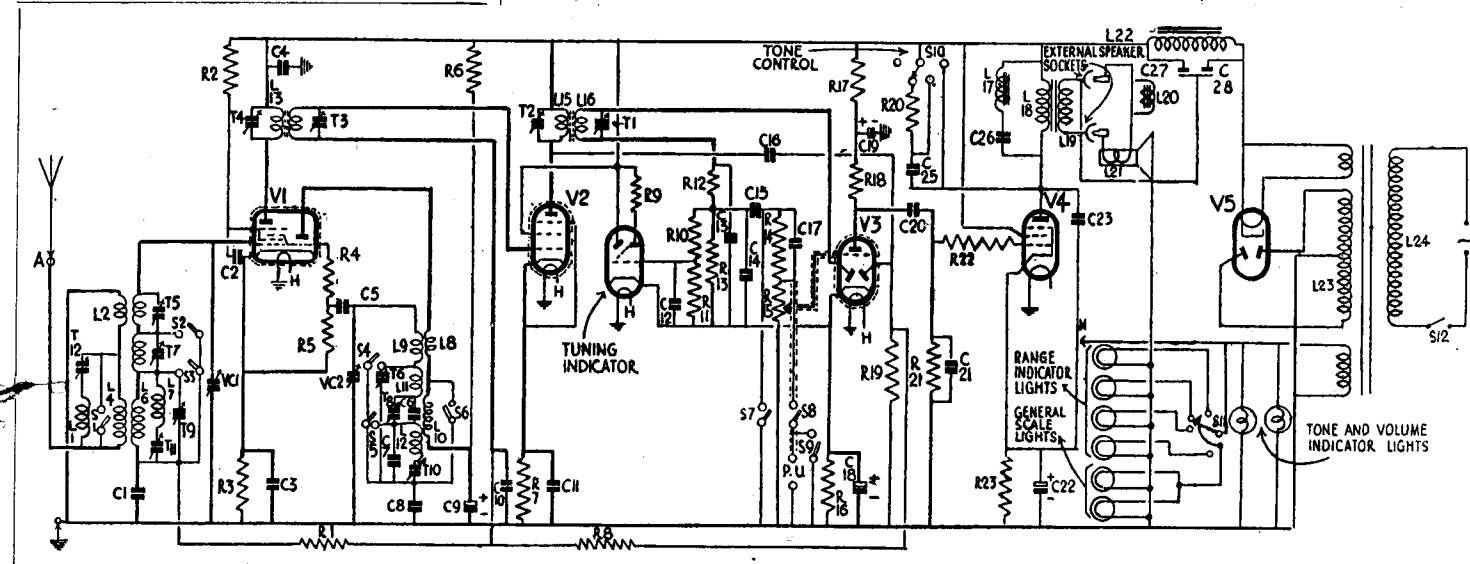
C	Mfds	C	Mfds
1	.05	15	.01
2	.1	16	.0001
3	.1	17	.0002
4	.1	18	.00002
5	.0001	19	.2
6	.00055	20	.025
7	.00032	21	.0005
8	.005	22	.00005
9	.2	23	.001
10	.05	24	.025
11	.1	25	.025
12	.1	26	.002
13	.00005	27	.16
14	.00005	28	.8

RESISTANCES

R	Ohms	R	Ohms
1	110,000	13	510,000
2	80,000	14	510,000
3	200	15	500,000
4	50	16	1,000
5	25,000	17	25,000
6	80,000	18	110,000
7	300	19	1.1 meg
8	1.1 meg	20	20,000
9	2.1 meg	21	260,000
10	2.1 meg	22	25,000
11	510,000	23	150
12	110,000		

WINDINGS

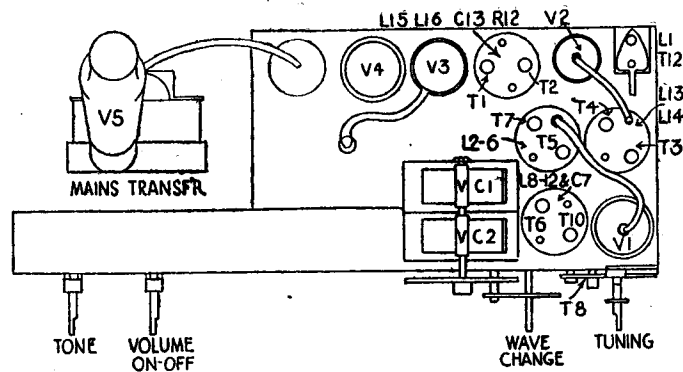
L	Ohms	L	Ohms
1	18	13	5
2	Very low	14	5
3	Very low	15	5
4 (+L2)	145	16	5
5 (+L3)	3	17	480
6	12	18	700
7	7	19	Very low
8	32.5	20	2
9	Very low	21	2
10	6.5	22	2000
11 (+L9)	2	23	380+398
12	4.5	24	19+1.8+1.8



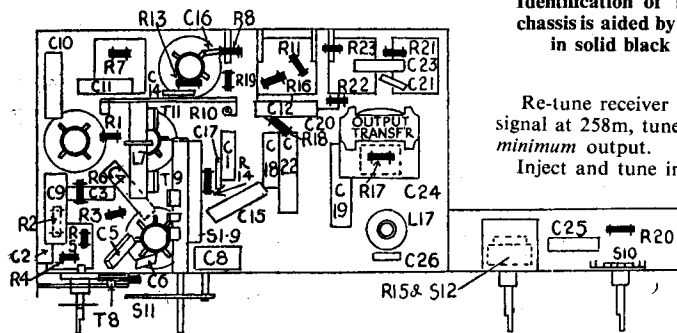
PYE 811

Continued

This drawing of the top of the Pye chassis gives the positions of the valves and other major parts and shows the extension carrying the tone and volume controls.



Identification of small components below the chassis is aided by the representation of resistors in solid black and condensers in outline.



Re-tune receiver to 1300 m, and inject a powerful signal at 258 m, tune it in exactly and adjust T11 for minimum output.

Inject and tune in a signal of 1200 m, and adjust T9 for maximum output. T11 should then be readjusted for minimum output from the 258 m. signal with the receiver tuned to approximately 130 m.

T11 must always be readjusted after any other MW or LW trimmer has been altered.

IF Filter.—Inject a signal of 465 kc into the aerial and earth sockets and adjust T12 for minimum output.

FERRANTI VALVE LITERATURE

THREE pamphlets which give details of Ferranti valve characteristics and equivalents have been published by Ferranti, Ltd., of Radio Works, Moston, Manchester, 10.

The first publication is entitled "Ferranti Valve Characteristics and Base Connections." The second is a "Master Chart of Valves and Principal Components" used in all Ferranti radio receivers since 1931.

Lastly, there is a "Comparative Table of Ferranti Valve Equivalents," with conversion notes for Ferranti receivers.

Copies of these publications are available to retailers on application to Ferranti, Ltd., either at Moston, Manchester, or at the London office, 36 King'sway, London, WC2.

COSSOR VALVE LITERATURE

Cossor valve literature is now available from A. C. Cossor, Ltd., of Cossor House, Highbury Grove, London, N5. Folder L370 gives Cossor valve technical data with details of base connections, Folder CL423 gives Cossor cathode ray tubes technical data with base connections. There is also a useful valve equivalent chart.

terminal and chassis. A .25 mfd condenser should be connected between oscillator anode and chassis to prevent V1 oscillating.

Adjust T1, T2, T3, and T4 in that order for maximum output, keeping the input signal low to avoid AVC action.

SW Band.—Before carrying out HF adjustments the calibration should be checked by fully meshing the gang to see whether the cursor is on the setting mark at the top end of the MW scale.

Correct cursor if necessary before proceeding with ganging.

Switch receiver to SW and tune to 20 metres. Inject a 20 m signal via a dummy aerial into the A and E sockets and adjust T5 for maximum output.

MW Band.—Switch to MW and tune receiver to 210 m. Inject a signal of this wavelength and adjust T6 and T7 for maximum output.

Tune to, and inject a signal of 520 m, and adjust T8 for maximum output.

Readjust T6 and T7 for best results.

LW Band.—Switch receiver to LW and fully open T9. Tune receiver to 1800m, inject a signal of that wavelength and adjust T10 for maximum output.

Tune to, and inject a signal of 1300 m and adjust T11 for maximum output.

Return receiver tuner and input signal to 1800 m, and adjust T10 for maximum output while rocking gang.

111—RADIO MARKETING SERVICE ENGINEER

More grumbles, please!

It's an odd business. We give you twelve-months' guarantee on every product. We ask you to return any faulty component. We beg you to make full use of our guarantee. We implore you to grumble whenever necessary. . . . And still we don't get as many grumbles as we want!

Yes, we've discovered in roundabout ways that a few customers who could return faulty, don't. (We can only think they suspect us of deep-

laid plots for revenge!) But without full figures how can we keep accurate records? Don't they realize that, while we take every humanly possible precaution to distribute only first-grade components, we do like to 'check up'?

So have a heart. Read the terms of our guarantee carefully in any number of our Bulletin. And whenever you're entitled to use it, please use it. We can't speak straighter than that, can we?

Radiospares Ltd.

44 BIRCHINGTON ROAD, LONDON, N.W.6 TEL: MAIDA VALE 9586-7

For more information remember www.savoy-hill.co.uk

Manuals Radio