

'TRADER' SERVICE SHEET

199

VIDOR 269
AND BURNDIPT 271

TWO short-wave bands are covered by the Vidor 269 3-valve (plus rectifier) A.C./D.C. receiver, the actual ranges being 13.5-48.5 metres (referred to below as S.W.1) and 75-210 metres (S.W.2). The receiver is adjustable for mains of 200-250 V (50-100 C.S. in the case of A.C.). An identical chassis is fitted in the Burndipt 271.

CIRCUIT DESCRIPTION

There are two alternative aerial connections—A1 direct and A2 via a pre-set condenser C19—to the coupling coils L1 (S.W.1), L3 (S.W.2) and L5 (M.W. and L.W.). On S.W.1 and S.W.2, coupling is to a single-tuned circuit L2, L4, C27, while on M.W. and L.W., coupling is to an inductively coupled band-pass filter, the primary of which (L6, L7) is tuned by C22 and the secondary (L8, L9) by C27.

The first valve (V1, Mazda metallised VP1321) is a variable-mu pentode R.F. amplifier, with gain control R2 in S.G. potentiometer circuit varying the G.B. applied. Tuned-anode coupling by L11, L13 (S.W.1 and S.W.2), L15, L16 (M.W. and L.W.) and C32 to R.F. pentode detector (V2, Mullard metallised SP130C) operating on grid leak system with C6 and R8.

Reaction is applied from the anode by L10, L12 (S.W.1 and S.W.2), and L14 with series resistance R5 (M.W. and L.W.) and controlled by C28. R.F. filtering is provided by C8, C9, C10 and R11.

V2 is resistance-capacity coupled by R10, C11 and R13 to pentode output

valve (V3, Mullard Pen36C). R14 is a grid stopper, and C14 gives fixed tone correction.

H.T. current is supplied by an L.H.C. half-wave rectifier (V4, Brimar 1D5). Smoothing by speaker field coil (L19) and dry electrolytic condensers C15, C16. The valve heaters are connected in series together with the two scale lamps and a tapped ballast resistance R16 across the mains supply.

The chokes L20, L21 and the condenser C17 form a filter for the suppression of mains-borne interference.

DISMANTLING THE SET

A detachable bottom is fitted to the cabinet and upon removal (four counter-sunk-head wood screws) gives access to the components beneath the chassis.

Removing Chassis.—If it should be necessary to remove the chassis from the cabinet, remove the four control knobs (recessed grub screws) and the four bolts (with washers) holding it to the bottom of the cabinet. The chassis can now be withdrawn to the extent of the leads.

To free the chassis entirely, unsolder the speaker leads and, when replacing, connect them as follows:—F, red; 1, blue; 2, green; 3 and F joined together, black.

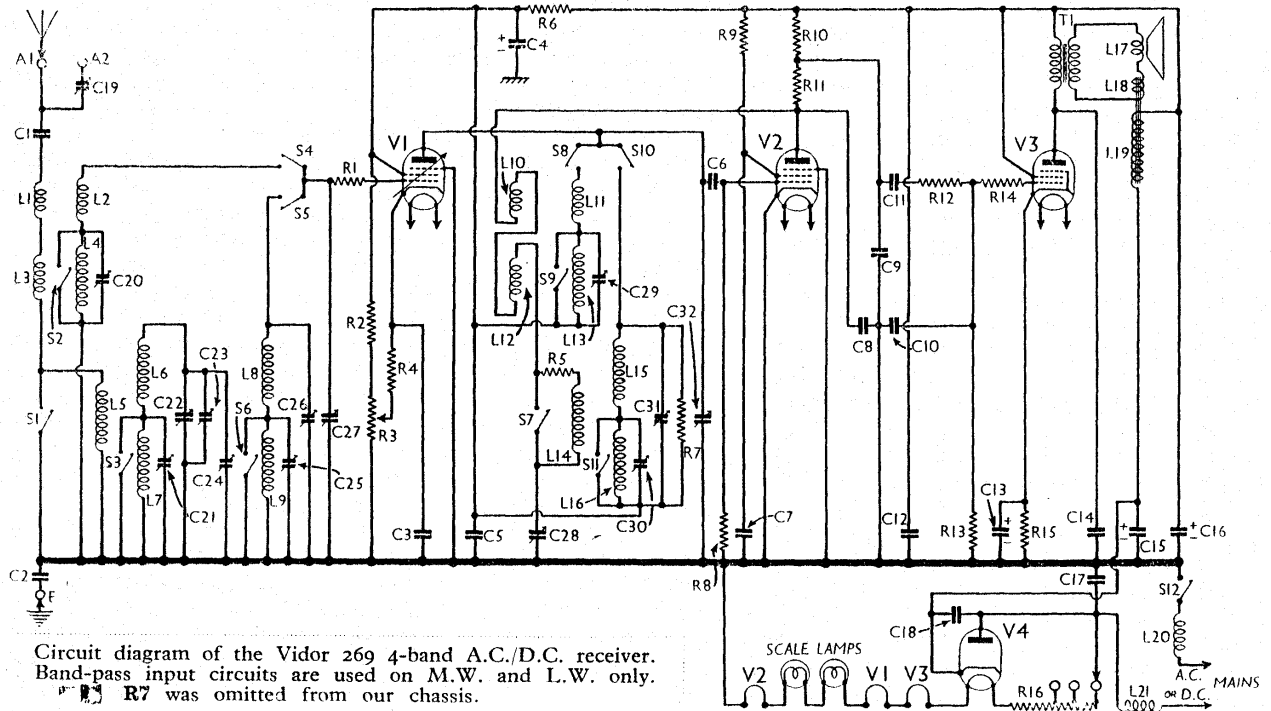
Removing Speaker.—Unsolder the leads and remove the nuts and lock washers from the four screws holding it to the sub-baffle. When replacing, see that the transformer is on the left and connect the leads from the chassis as

above and the leads from the electrolytic condenser as follows:—Yellow, F; black, 2; red, F and 3 joined together.

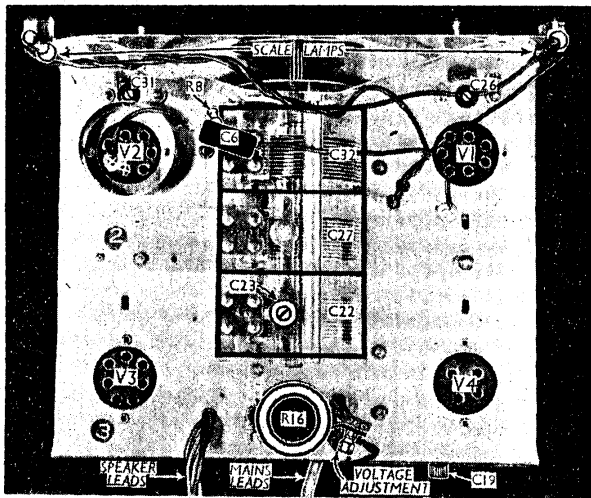
COMPONENTS AND VALUES

CONDENSERS		Values (μF)
C1	Aerial series condenser	0.0005
C2	Earth blocking condenser	0.02
C3	V1 cathode by-pass	0.1
C4*	V1 S.G. and anode reservoir	8.0
C5	V1 S.G. and anode R.F. by-pass	0.25
C6	V2 C.G. condenser	0.0001
C7	V2 S.G. by-pass	0.1
C8	Parts of V2 to V3	0.00005
C9	R.F. filter circuit	0.0005
C10	R.F. filter circuit	0.0002
C11	A.F. coupling to V3	0.01
C12	H.T. line by-pass	0.5
C13*	V3 cathode by-pass	25.0
C14	Fixed tone corrector	0.005
C15*	H.T. smoothing	16.0
C16*	H.T. smoothing	24.0
C17	Mains circuit R.F. by-pass	0.01
C18	V4 anode-cathode by-pass	0.02
C19†	A2 aerial series condenser	—
C20‡	Aerial circuit trimmer (S.W.2)	0.00003
C21‡	Band-pass pri. trimmer (L.W.)	0.00003
C22†	Band-pass pri. tuning (M.W. and L.W.)	—
C23‡	Band-pass pri. trimmer	—
C24‡	Band-pass pri. extra trimmer	0.00003
C25‡	Band-pass sec. trimmer (L.W.)	0.00003
C26†	Band-pass sec. trimmer (M.W. and L.W.)	0.00006
C27†	Band-pass sec. and grid circ. (S.W. 1 and S.W. 2) tuning	—
C28†	Reaction control	0.0005
C29‡	V1 anode circ. trimmer (S.W.2)	0.00003
C30‡	V1 anode circ. trimmer (L.W.)	0.00003
C31†	V1 anode circ. trimmer (M.W. and L.W.)	0.00006
C32†	V1 anode circuit tuning	—

* Electrolytic. † Variable. ‡ Pre-set.



Circuit diagram of the Vidor 269 4-band A.C./D.C. receiver. Band-pass input circuits are used on M.W. and L.W. only. R7 was omitted from our chassis.



Plan view of the chassis. C26 and C31 are adjusted through holes in the chassis. R16 is the heater circuit ballast resistance, tapped for different mains voltages.

switch positions for the various control settings.

It should be noted that the control knob can be continuously rotated and, if it is removed, the ranges will have to be identified by the switch positions, as there are no markings on the knob apart from a white dot. S.W.1 is the lowest wavelength range.

Switch	S.W.1	S.W.2	M.W.	L.W.
S1	C	C	O	O
S2	C	O	O	O
S3	O	O	C	O
S4	C	C	O	O
S5	O	O	C	C
S6	O	O	C	O
S7	C	C	O	O
S8	C	C	O	O
S9	C	O	O	O
S10	O	O	C	C
S11	O	O	C	O

S12 is the mains switch, gauged with the gain control, R3.

Coils.—These are all on tubular formers, unscreened and mounted beneath the chassis. L5-L9 and L14-18 are mounted horizontally and their positions are clearly shown, while L1-L4 and L10-L13 are on two formers mounted vertically. L1 is wound between the turns of L2, and L3 is wound over L4. L10 is between the turns of L11, and L12 is over L13.

L20 and L21 are filter chokes in the mains input circuit.

External Speaker.—No provision is made for using an extension speaker, but a low resistance type (20) could be connected across the secondary of the internal speaker transformer T1.

Scale Lamps.—These are two M.E.S. types rated at 6 V, 0.3 A.

Trimmers.—C26 and C31 are adjusted through rubber bushed holes near the front of the chassis deck. With the exception of C23, which is on the gauged

Continued overleaf

RESISTANCES		Values (ohms)
R1	V1 C.G. stabiliser	100
R2	V1 gain control, variable	10,000
R3	Part V1 cathode circ. pot.	50,000
R4	V1 gain control fixed min.	150
R5	Series reaction (M.W. and L.W.)	500
R6	V1 S.G. and anode H.T. feed	5,000
R7	V1 tuned anode circ. shunt (M.W. and L.W.)	50,000*
R8	V2 C.G. resistance	1,000,000
R9	V2 S.G. H.T. feed	750,000
R10	V2 anode load	250,000
R11	Parts of V2 to V3 R.F.	50,000
R12	filter	50,000
R13	V3 C.G. resistance	250,000
R14	V3 grid R.F. stopper	100,000
R15	V3 cathode resistance	150
R16	Heater circuit ballast, total	700

If V2 should become unstable when its anode current is being measured, it can be stabilised by connecting a non-inductive condenser of about 0.1 μF from anode to chassis.

Valve	Anode Voltage (V)	Anode Current (mA)	Screen Voltage (V)	Screen Current (mA)
V1 VPr32r	150	6.5	150	1.8
V2 SP13C	25	0.5	30	0.2
V3 Pen36C	170	45.0	200	7.8
V4 1D5†	—	—	—	—

† Cathode to chassis, 260V D.C.

GENERAL NOTES

Switches.—S1-S11 are the waveband switches, in a single unit beneath the chassis, which is shown in our under-chassis view, with the individual switches indicated. The table (col. 3) gives the

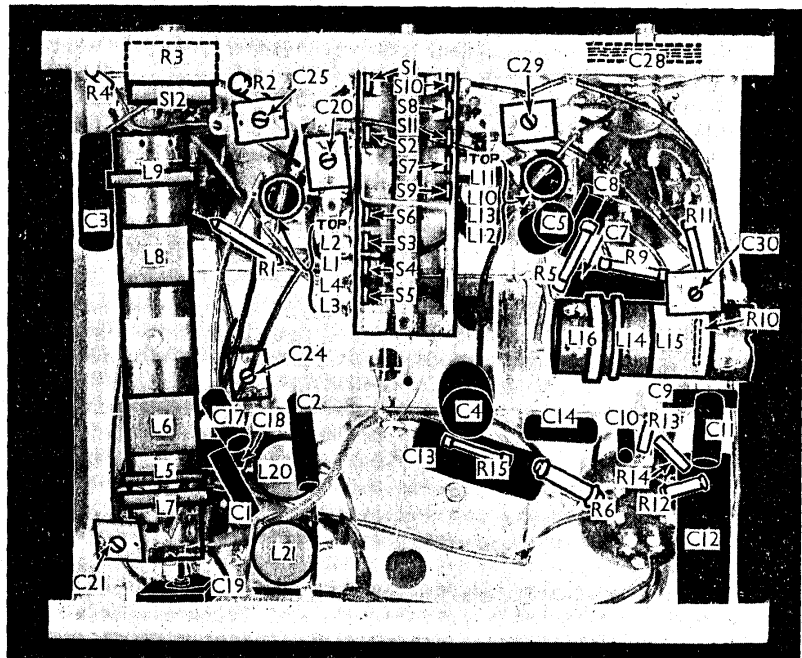
* Not in our chassis.

OTHER COMPONENTS		Approx. Values (ohms)
L.1	Aerial coupling coil (S.W.1)	0.15
L.2	Aerial tuning coil (S.W.1)	Very low
L.3	Aerial coupling coil (S.W.2)	0.35
L.4	Aerial tuning coil (S.W.2)	1.2
L.5	Aerial coupling coil (M.W. and L.W.)	3.7
L.6	Band-pass primary coils (M.W. and L.W.)	4.5
L.7	Band-pass secondary coils (M.W. and L.W.)	19.5
L.8	Band-pass secondary coils (M.W. and L.W.)	4.5
L.9	Reaction coil (S.W.1)	0.15
L.10	V1 anode tuning coil (S.W.1)	Very low
L.11	Reaction coil (S.W.2)	0.35
L.12	V1 anode tuning coil (S.W.2)	1.2
L.13	Reaction coil (M.W. and L.W.)	2.8
L.14	V1 anode tuning coil (M.W.)	4.5
L.15	V1 anode tuning coil (L.W.)	19.5
L.16	V1 anode tuning coil (L.W.)	1.8
L.17	Speaker speech coil	0.1
L.18	Hmm neutralising coil	820.0
L.19	Speaker field coil	6.2
L.20	Mains filter chokes	6.2
L.21	Mains filter chokes	6.2
T1	Speaker input trans. (Pri.)	670.0
	Speaker input trans. (Sec.)	0.5
St.1-11	Waveband switches	—
St.12	Mains switch, gauged R3	—

VALVE ANALYSIS

Valve voltages and currents given in the table (col. 2), are those measured in our receiver when it was operating on mains of 230 V, using the 220-240 V tapping on the mains resistance. The receiver was tuned to the lowest wavelength on the medium band and the volume control was at maximum, but the reaction control was at minimum. There was no signal input.

Voltages were measured on the 1,200 V scale of an Avometer, chassis being negative.



Under-chassis view. All the switches are clearly indicated.