

VIDOR 272 BATTERY PORTABLE

The Vidor 272 is a "straight" three portable in a black leatherette case.



CIRCUIT.—The carrying case includes a frame aerial wound inside the lid, and is, of course, of the directional type. The lid also encloses the speaker.

The H.F. amplifier V1, a tetrode, includes this frame aerial in its grid circuit. The aerial has two trimmers for the two wavebands.

The output of V1 is inductively and capacitively coupled to the grid of another tetrode, V2, the detector. Reaction is obtained from the anode of the detector in the usual manner.

The demodulated signal passes to the grid of V3, an output pentode, via a resistance capacity coupling network, and thence to the speaker.

Battery equipment consists of two compact units designed for portable sets. The accumulator is a jelly electrolyte type made by Vidor, and the H.T. battery is a No. 17872 made by the same firm.

Special Notes.—The frame aerial trimmers are to be found on the speaker baffle in the lid, and are covered with a paper seal for protection against unauthorised adjustment.

A switch situated on the tuning panel enables the dial light to be switched off when tuning is accomplished. The dial light is mounted in a screw-in holder of

the usual type and is rated at 2.6 volts .3 amp.

Chassis Removal.—First disconnect the leads to the H.T. battery and the accumulator and remove these units from the case. Undo the two fixing screws securing the tuning panel to the chassis.

The three control knobs are fixed with grub screws and must be removed together with the screw in dial light and on/off switch. The panel can then be completely removed together with the side panel. The two screws fixing the chassis to the case, revealed by removing the front panel, can now be taken out.

Turn the set up on its side and remove the two fixing screws thereon (and nuts inside cabinet), whereupon the chassis is available for all the usual service requirements.

To remove the speaker from the lid the four screws on the outer surface of the lid must be removed.

Circuit Alignment Notes

A signal generator covering the ranges from 200 to 550 metres and 1,000 to 2,000

metres is necessary. A coil of wire of about 60 turns is also needed for injection of the signal into the frame aerial circuits.

This coil is stood on edge facing the frame aerial and some distance from it. The signal generator is connected across this coil.

Alignment should be carried out with the chassis removed from the cabinet so as to obtain access to the various trimmers.

RESISTANCES

R.	Purpose.	Ohms.
1	V1 grid leak ...	500,000
2	V2 grid leak ...	2 meg.
3	V2 screen decoupling ...	500,000
4	V3 grid leak ...	500,000
5	V3 grid stopper ...	100,000
6	V2 anode load ...	250,000

CONDENSERS

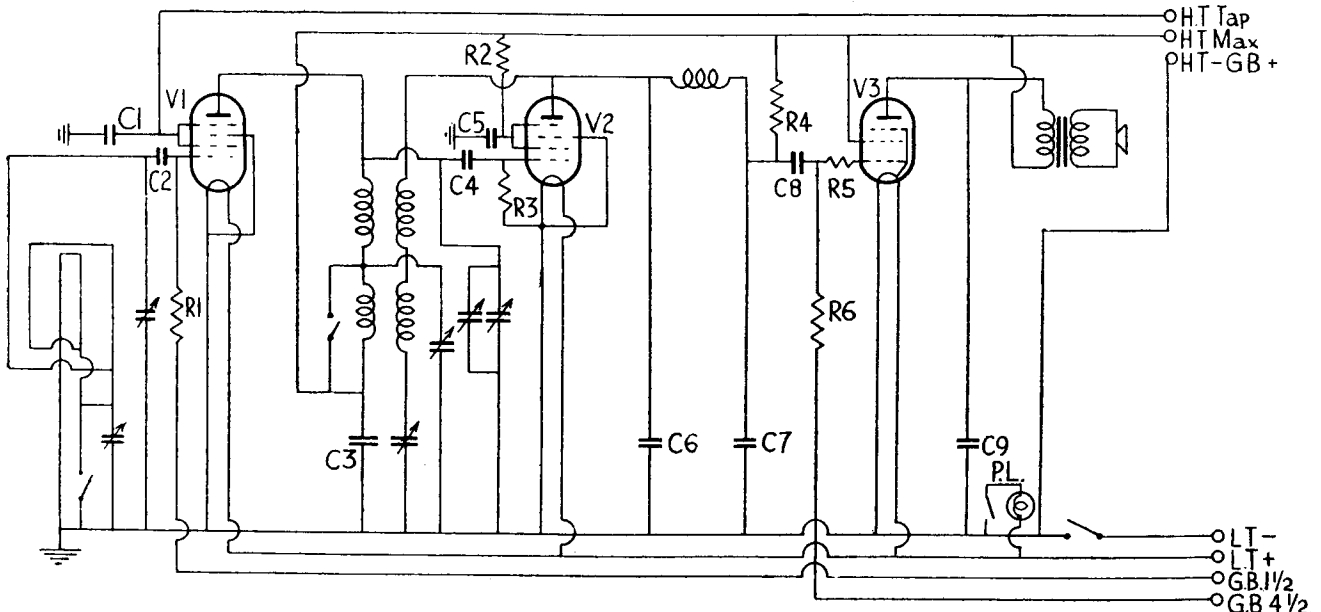
C.	Purpose.	Mfds.
1	V1 screen H.F. by-pass1
2	V1 grid isolating0001
3	H.T. reservoir ...	8
4	V2 grid0001
5	V2 screen decoupling1
6	H.F. by-pass0002
7	H.F. by-pass0002
8	L.F. coupling01
9	Pentode compensator001

VALVE READINGS

No signal. No reaction. Volume maximum. New batteries.

V.	Type.	Electrode.	Volts.	Ma.
1	All Mullard. VP2B Met. (7)	Anode ...	99	1.2
		Screen ...	65	*
2	VP2B Met. (7)	Anode ...	31	}
		Screen ...	20	
3	PM22A (5)	Anode ...	98	3.7
		Screen ...	99	.6

* Inaccessible.



While the circuit of the 272 is the essence of simplicity, important points of design are observed, and the result is a good performance with easy control over both wavebands.

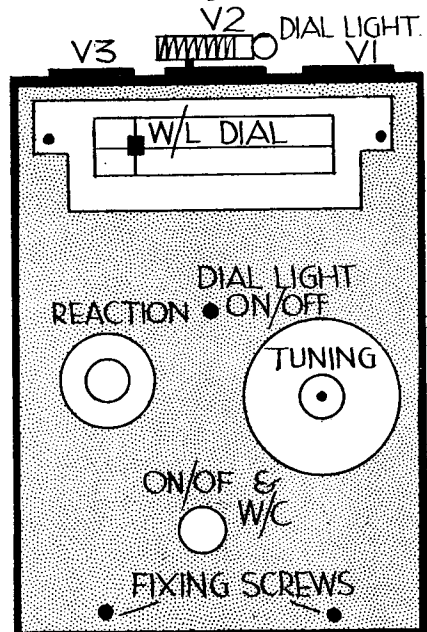
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A trimmer on the lower section of the gang will be noticed; this is the medium wave anode trimmer, while the long wave anode trimmer is the one connected to the lug on the left-hand side of the chassis. The frame aerial trimmers are underneath the sealing name tab on the speaker baffle.

Check that the tuning pointer travels to the last division on the wavelength scale (above 550 metres) with the gang condenser in the maximum position. If this should not be the case, adjust the pointer by loosening the grub screw on the wire drum and rotating the drum.

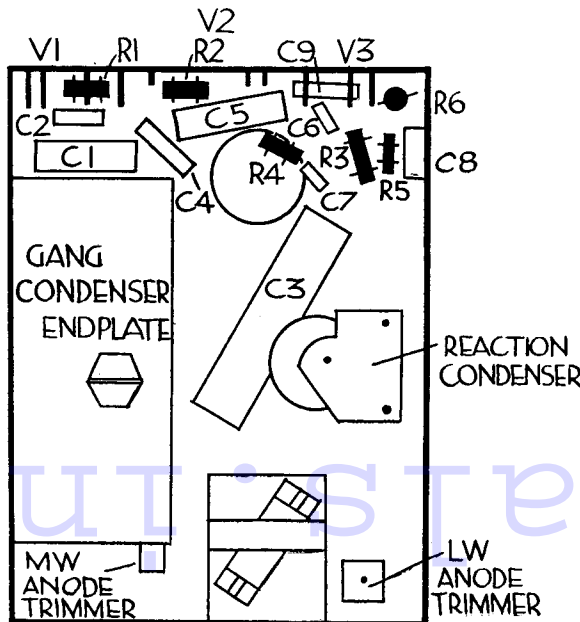
Medium Waves.—Inject a signal of 270 metres (1,112 kc.) from the signal generator into the feeding coil. Tune this signal in on the receiver, at the same time advancing the reaction as far as possible without making the set oscillate.

Note whether the signal is tuned at the maximum strength at the 270 metres



The "tinted" diagram above shows the top view of the 272 receiver and identifies the controls and the valves.

Right, the interior of the Vidor 272 chassis. The construction is straightforward and the diagram shows where the two long-wave trimmers are to be found. Two other trimmers are mounted in the lid of the set.



division on the wavelength scale. If not, then adjust the medium-wave anode trimmer until it does. Then, keeping the reaction control advanced as far as possible, adjust the medium-wave aerial trimmer (the right-hand trimmer under the sealing tab on the speaker baffle).

As the circuits come into line the receiver may start to howl, and if it does the reaction control should be turned back until oscillation ceases. The main tuning control should also be swung slightly during the previous operation to make sure that the circuits are in resonance.

The medium wave calibration should be checked by injecting signals of various wavelengths and noting their positions on the tuning scale. If necessary, put the 270-metre point a little out to adjust the whole range.

Long Waves.—Switch the receiver to the long waves and tune to 1,300 metres (230 kc.). Inject a signal of corresponding wavelength via the feeding coil.

Adjust the long-wave anode trimmer until maximum response at the 1,300 metre point is obtained and then adjust the long-wave aerial trimmer for maximum sensitivity, swinging the condenser gang until optimum output is obtained. The receiver should not be allowed to oscillate.

Note that the aerial trimmers should be at about half their maximum capacity, when correctly trimmed. Care should be taken that no false maximum reading is obtained when the trimmers are at one end or the other of their travel.

A replacement condenser for C3, the H.T. reservoir, is available from A. H. Hunt, Ltd., Garratt Lane, Wandsworth, London, S.W.18. This is list number 3490, price 2s. 6d.

Sell Fuse Plugs

WHEN the owner of a mains set has had the misfortune to suddenly see smoke pouring out of the receiver cabinet, as will occasionally happen when a mains transformer, for some reason or other, overloads and "cooks," he or she is apt to become somewhat nervous that the same

Vidor 272 on Test

MODEL 272.—Standard model suitcase portable for battery operation. Price £6 19s. 6d.

DESCRIPTION.—Three-valve, two-waveband portable, with reaction control.

FEATURES.—Full-vision scale calibrated in station names and wavelengths. On-off dial light switch. Self-contained frame aerial. Special Vidor batteries.

LOADING.—H.T., 9.2 ma.; L.T., .4 amp., .64 amp. with dial light.

Sensitivity and Selectivity

MEDIUM WAVES (200-600 metres).—Sensitivity good for a very small three-valve set. Local stations easily received and selection of distant British stations as well as some Continental.

LONG WAVES (900-2,200 metres).—More powerful stations easily received by using the directional properties of the aerial.

The set handles easily on all bands without overlap or H.F. trouble.

Acoustic Output

Quite good for small self-contained set. Reasonable balance. Sufficient strength without overloading.

thing may happen again and become, not unnaturally, prejudiced against mains receivers.

In such cases it is a wise move to fit a fuse plug to the mains lead as well as suitable fuses in each end of the transformer H.T. winding, and impress upon the customer that this has been done in the interests of safety.—M. B.

* * *

Sometimes it is difficult to convince a customer that interference is due to agencies outside the set.

Every service man's kit should include simple set lead suppression gear so that when a complaint is made he can demonstrate there and then the real nature of the trouble.

When the static is entering the receiver by the aerial and not via the mains, the disconnection of the aerial will, of course, prove the point to the customer. Installation of a screened anti-static aerial system is then the solution.—P. C.

TUNGSRAM AMPLIFIER CIRCUITS

A special department devoted entirely to the technical service of high power output and transmitting type valves has been created by Tungsram Electric Lamp Works (G.B.), Ltd., of 72, Oxford Street, London, W.C.2.

Two folders are available, one giving details of the valves handled by this section and the other containing circuits of low frequency amplifiers using certain of the valves.

There are some dozen circuits in this second folder dealing with various types of amplifier from a 5-8 watt car-battery operated type to a 110 watt A.C. mains class B type.