

SERVICE NOTESMODEL 1101 ELECTRIC ALL WAVE RECEIVER

The Lekmek 1101 Model is an eleven valve All Wave Receiver of a very high standard, reception on both the broadcast and the short wave band is excellent; the push pull output system allows of exceptional fidelity of reproduction. The Model 1101 supersedes the 11EC, the latter combining the tuning function of both the Short Wave and Standard Broadcast Range on one dial. This is accomplished by the incorporation of a "split-gang condenser". The remainder of the circuit, however, is exactly the same, and is as follows:

The Short Wave Signal is received on the aerial and transferred to the grid of a 57 Short Wave Detector Valve. The output from a 56 Oscillator valve is mixed with the incoming Short Wave signal in the Short Wave Detector to give a resultant frequency of 595KC; at this frequency the signal passes through an Intermediate Frequency Transformer which is accurately set at 595KC. The signal is now fed through a 58 type I.F. amplifier valve and the signal is then impressed on the grid of the Radio frequency valve (type 58) by means of a Special Lekmek Short Wave Coupler. It is at this point that the Broadcast signal enters the circuit when operating on the 200-550 metre band. This stage is transformer coupled to a type 57 autodyne detector oscillator valve.

The resultant signal from this stage has a frequency of 186KC. This signal now passes through two stages of intermediate frequency amplification at 186KC. The signal is then demodulated or in other words, converted to an audible frequency, by a 2A6 type linear diode detector amplifier valve. This valve also functions as an audio driver stage to two 2A5 valves which are coupled by a special Resistance-Coupled Push-Pull circuit, the patent rights of which Lekmek controls for Australia and New Zealand. The output of the Push-Pull stage passes through an input transformer to an Amplion Dynamic Speaker. A 280 type valve rectified the alternating high tension voltage for the plate supply of the receiver.

VALVES.

The complete set of valves required for this receiver are as follows:-

2	-	57 type valves	1	-	2A6 type valve
1	-	56 " "	2	-	2A5 " "
4	-	58 " "	1	-	280 " "

See Fig. 1 for valve positions in chassis.

CONTROLS.

The controls are clearly shown in the diagram. Stations Selector, Short Wave Vernier, Short Wave Band Selector, Tone Volume Control and Broadcast-Short Wave Switch.

Station Selector: The scale of the Station Selector is calibrated in metres on concentric circles, one for each Wave Band.

200-550 metres	Broadcast Band
80-200 "	Short Wave "
40-80 "	" "
20-40 "	" "
10-20 "	" "

The Short Wave Band Selector: The Short Wave Band Selector is suitably engraved to correspond with the scale calibrations. Therefore the Station Selector tunes the Wave Band to which the Wave Band Selector is pointing.

Short Wave Vernier: This control is for final adjustment on the Short Wave Bands only, and is inoperative on the Broadcast Band.

Volume and Tone Control: These controls are operative on both the Broadcast and Short Wave Bands.

Broadcast - Short Wave Switch. As the name implies, it is for changing from the Broadcast Band to the Short Wave Band or vice versa.

TUNING BROADCAST STATIONS 200-550 metres.

Turn the Broadcast-Short Wave Switch to the right, and then tune in the desired station with the Station Selector. The calibrated concentric circle marked 200-550 will assist in locating the station, e.g. 2GB's wavelength is 316 metres, and will be found just past 300 metres on circle 200-550. After the station has been tuned in, note the dial number (0-100°) on the log card. Adjust both the tone and volume controls to your liking.

TUNING SHORT WAVE STATIONS.

Turn the Broadcast-Short Wave Switch to the left and select the Short Wave Band desired with the Short Wave Band Selector. Then advance the volume control and tune in the desired station with the Station Selector, taking the appropriate Dial Calibration as a guide, e.g. Daventry, London, on 25.5 metres will be located on calibration 20-40, between 23 and 27 metres. The Station Selector and Short Wave Vernier may be used concurrently for best results. The Tone Control in addition to its regular function will be found useful to reduce extraneous noise and static.

Note: When tuning on either band make sure that the Station Selector pointer is exactly on the station, and not to either side of it. Always adjust the volume to the desired sound level with the volume control, and under no circumstances detune with the Station Selector.

PICKUP.

Two pickup terminals are provided to which the Pickup wires may be attached. The Pickup must not be connected when using the set for Radio Reception.

AERIAL.

Two aerial terminals are provided, one marked S.W.A. for outdoor aerial from 30 to 70 feet for Short Wave Reception, the other aerial terminal marked A. being for an indoor aerial from say 20 to 35 feet, for standard Broadcasting.

The earth Terminal marked E. may be connected to a convenient water pipe or other suitable ground connection with an earth clamp.

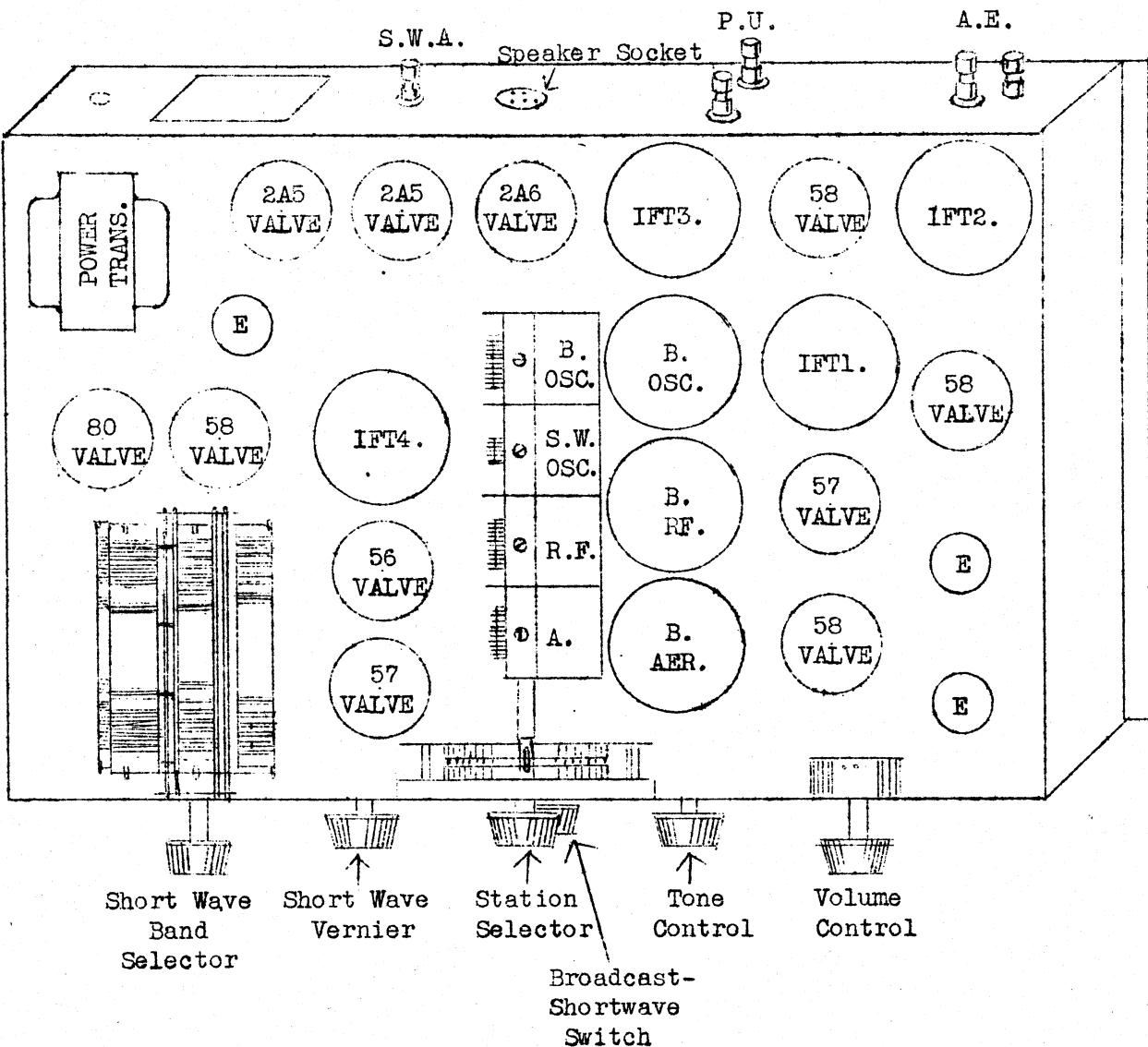
VOLTAGE LIMITS.

A chart is shown below, which shows approximate voltages which should be measured at the valve sockets, with the valves and speaker connected. The plate, screen and bias voltages were measured with a 1000 ohm per volt meter.

Valve Function		Valve Type	Plate Volts	Screen Volts	Bias Volts	Filament Volts
Output	Push	2A5	250	250	16.5	2.5
Output	Pull	2A5	250	250	16.5	2.5
2nd. Det.		2A6	110	100 approx.	1.5	2.5
I.F. Amp.		58	250	100	3-40	2.5
I.F. Amp.		58	250	100	3-40	2.5
B.C. 1st Det.		57	250	100	4 V.	2.5
R.F. Amp.		58	250	100	3-35	2.5
I.F. Amp. (S.W.)		58	250	100	3-35	2.5
Det. (S.W.)		57	250	100	3	2.5
Osc. (S.W.)		56	130	-	-	2.5
Rectifier		80	385-385	-	-	5.0

VOLTAGE CHART - MODEL 1101.

NOTE: To use radio disconnect the pick up leads.
Turn B.-S.W. switch to right for broadcast reception.



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LEKMEK MODEL 11 VALVE A.C. SET

