

PHILIPS RADIOPLAYER

MODEL 6501

SPECIFICATIONS.

(Subject to alteration without notice.)

Voltage Rating (power supply)	220-260 volts A.C. 40-100 cycles.
Tuning range	200-550 metres
Intermediate frequency	462.5 kc/s.

VALVE EQUIPMENT.

Frequency Converter	AK2—octode
I.F. Amplifier	AF3—R.F. penthode
A.V.C., Demodulator and Audio Amplifier	ABC1—diode triode
Power Amplifier	AL2—power penthode
Rectifier	AZ3—indirectly heated rectifier
Dial Lamps	4.5 volt, 0.3A panel lamps

INSTALLATION. Full instructions for the installation of Model 6501 are contained in the instruction book supplied with each Radioplayer.

VOLTAGE ADJUSTMENT.

The power transformer may be adapted for A.C. mains of 220-240 or 260 volts by means of a switch located at rear of chassis. This switch is normally covered by an inspection plate and the plate should not be removed unless the power plug is disconnected at the socket. It is important that the receiver should be operated with the transformer switch set at the correct position in accordance with the mains voltage in the locality.

DISMANTLING THE SET.

1. Disconnect power plug.
2. Remove knobs at front of cabinet (recessed grub screws).
3. Withdraw loudspeaker plug from socket.
4. Unscrew the four bolts holding the chassis to floor of cabinet. The chassis may now be withdrawn from the cabinet.

REMOVING LOUDSPEAKER.

If it is desired to remove the speaker, this may be accomplished by unscrewing the four woodscrews securing same.

ALIGNMENT. Precise alignment is vital to the proper functioning of this receiver. There are four trimming adjustments provided on the intermediate frequency transformers and three in the octode tuning circuits (two at the gang condenser together with the padder).

These trimmers are accurately adjusted at the factory and will retain the alignment unless affected by abnormal climatic conditions or unless alterations have been made to the trimmers or wiring for service purposes. Incorrect alignment is usually indicated by loss of selectivity coupled with poor sensitivity. The correct performance can only be obtained if the set alignment is achieved by reliable test apparatus and no attempt should be made to tamper with the trimmers unless a suitable service oscillator and visual output meter is available.

I.F. TRIMMER ADJUSTMENTS. The position of the four I.F. trimmers is shown in the chassis layout diagram. Each must be aligned to the basic frequency of 462.5 kc/s. To accomplish this, connect an output meter to the receiver. The "hot" side of the test oscillator should be connected to the grid of the AK2 octode through an 0.5 uF condenser and the "earth" side of the oscillator should be joined to the receiver chassis. The normal grid clip should remain on the cap of the valve. Tune the oscillator to exactly 462.5 kc/s. Advance the volume control to full on position and adjust the receiver tuning control to a point where the condenser plates are fully engaged. Increase the output of the test oscillator until a slight indication is observed on the output indicator.

(Continued on back page.)

SERVICE DATA.

(Continued from page 1.)

Then adjust the two trimmers on the 2nd I.F. transformer for peak receiver output. Next adjust the two trimmers on the first I.F. transformer for maximum indication on the output meter.

During these adjustments the output of the test oscillator should be regulated so that the output is as low as possible. This will prevent errors in alignment due to the A.V.C. action. The I.F. trimmers should be gone over again to ensure that mutual coupling has not displaced the original adjustment.

R.F. TRIMMER ADJUSTMENTS. The trimmers on the gang condenser are indicated as aerial, and oscillator trimmer in the chassis layout diagram.

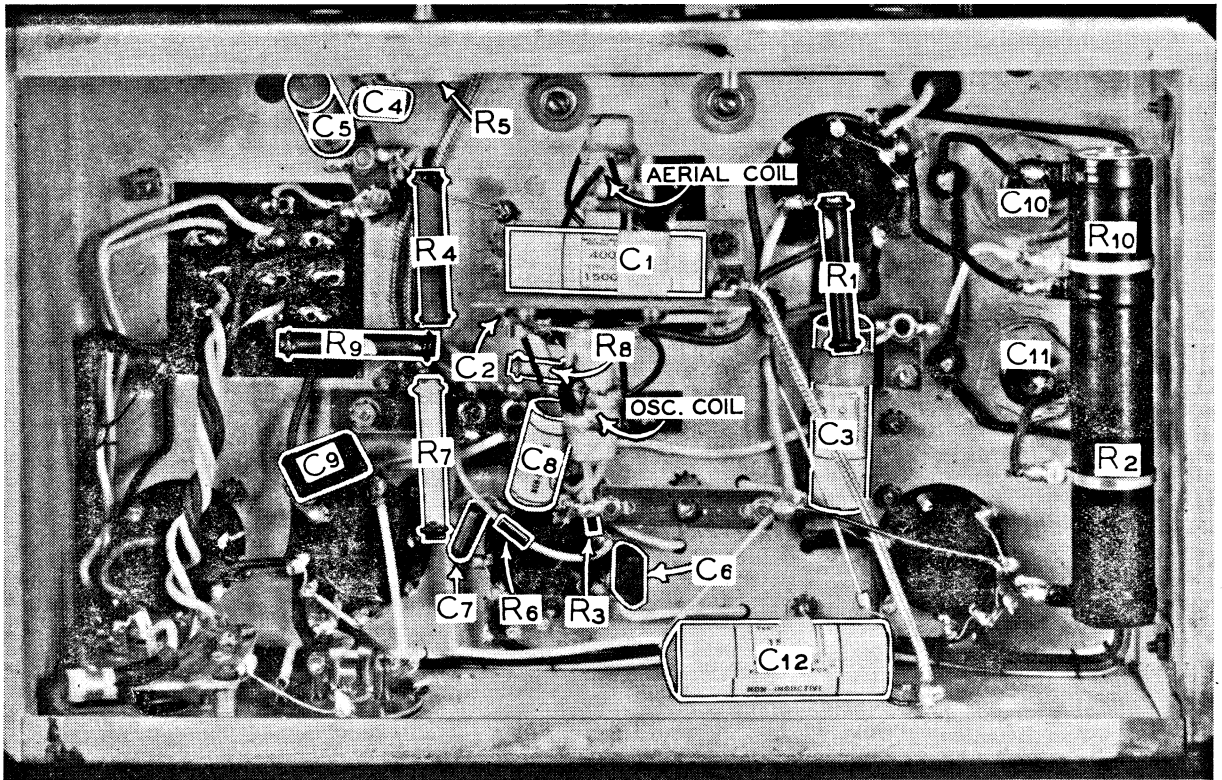
The padder is indicated in the component illustration (C2). Before proceeding with the R.F. adjustment see that the dial pointer just coincides with the end of the scale when the tuning condenser plates are fully engaged. Attach the output of the test oscillator to the aerial and earth terminal of the receiver.

Proceed further as follows:—

- (a) Connect output meter to output of set and turn volume control to maximum.
- (b) Adjust test oscillator to 1500 kc/s and tune receiver until pointer indicates 1500 kc/s on dial.
- (c) Increase test oscillator output until a small indication is given on output meter.
- (d) Adjust the oscillator trimmer until a maximum output is recorded.
- (e) Adjust test oscillator to 1400 kc/s and set dial of receiver to same frequency. Adjust aerial trimmer for maximum output on meter.
- (f) Adjust test oscillator to 600 kc/s and tune dial of set to same frequency. Adjust padder for maximum output.
- (g) If padder has been altered very much it will be advisable to return to 1400 kc/s and recheck alignment as per para. (e).

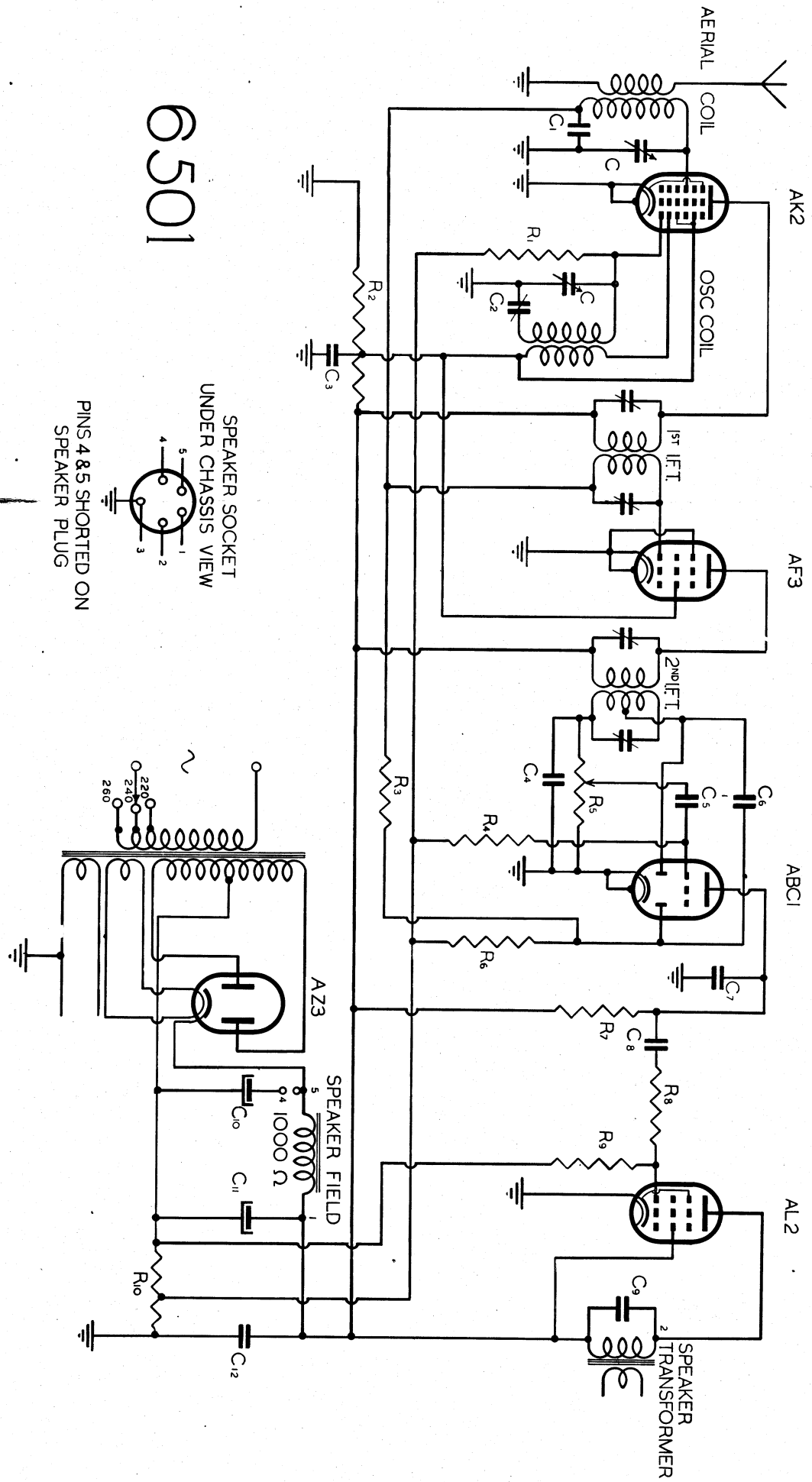


COMPONENT LOCATIONS.



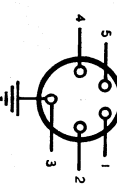
COMPONENT PARTS.

CONDENSERS.		RESISTORS.	
C, C	Two gang condenser	R1	50,000 ohm, 1 watt
C1, C3	0.1 uF paper	R2	25,000 ohm voltage divider
C2	Padder	R3, R6	1 megohm, 1/3 watt
C4, C7	0.00025 uF mica	R4	1 megohm, 1 watt
C6	0.0001 uF mica	R5	0.5 megohm potentiometer
C5, C8	0.02 uF mica	R7	0.25 megohm, 1 watt
C9	0.004 uF mica	R8	0.25 megohm, 1/2 watt
C10, C11	8 uF electrolytic	R9	0.5 megohm, 1 watt
C12	0.25 uF paper	R10	300 ohm wire wound

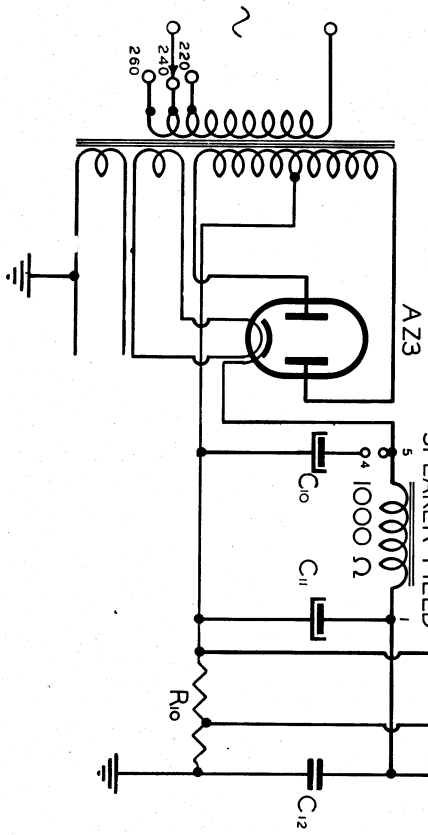


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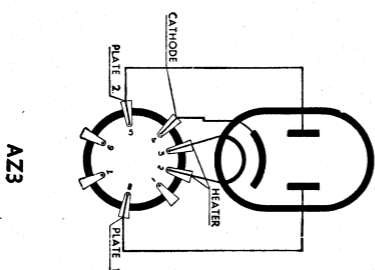
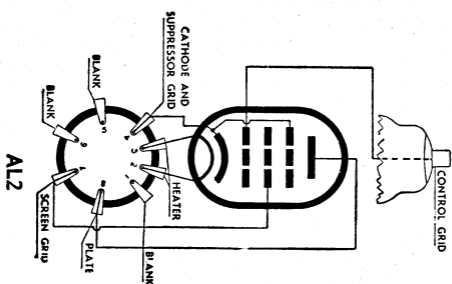
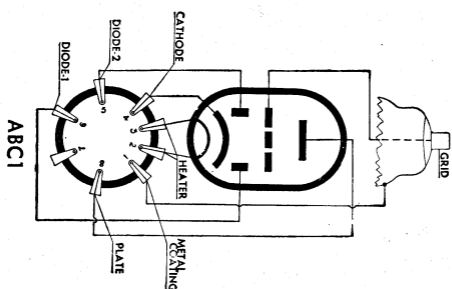
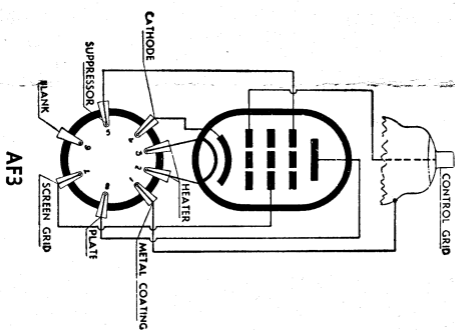
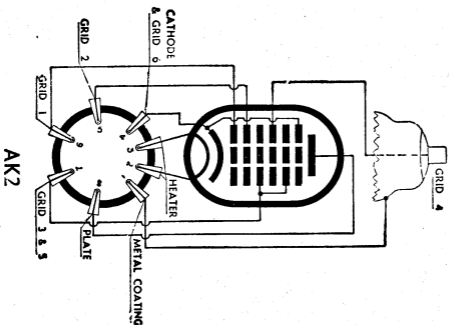
SPEAKER SOCKET
UNDER CHASSIS VIEW



PINS 4 & 8 SHORTED ON
SPEAKER PLUG



SOCKET CONNECTIONS VIEWED FROM BOTTOM OF BASE



VOLTAGE ANALYSIS.

Valve Type	Plate Voltage	Plate Current (mA)	Screen Voltage	Grid Bias Voltage	Heater Voltage (A.C.)
AK2	250	1.5	90	-3	4.0
AF3	250	8.0	90	-3	4.0
ABC1	95	0.6	—	-3	4.0
AL2	235	36	250	-24	4.0
AZ3	—	—	—	—	4.0

AE

NOTE.—The above mentioned voltage values are measured between the socket points indicated and chassis with the receiver in the no signal condition and with the volume control at zero. Voltages are measured with a 1,000 ohm per volt voltmeter and may vary as much as 10% from the figures quoted.

Bias voltages are measured at the voltage source and not at the socket.



CHASSIS LAYOUT.

