SERVICE DATA

PHILIPS RADIOPLAYER MODEL 642

A 6-VALVE, DUAL WAVE RECEIVER

with incorporated vibrator unit for operation from a six volt accumulator

Valve Equipment:	Radio Frequency Amplifier	KF3 Cap P.
	Frequency Converter	KK2 „ P.
	Intermediate Frequency Amplifier	KF3 „ P.
	Detector-first Audio Amplifier	KBC1 „ P.
	Power Amplifiers (2)	KL4 „ P.

Dial Lamps: Two—6 volt, .1 amp. Radio Panel Lamps

Fuse: 5 amp. Tubular Type

Battery Equipment: 6 volt Accumulator

Current Consumption: 1.1 amp. (with dial lights switched off)

Intermediate Frequency: 472.5 KC/sec.

SERVICE HINTS

Lineup Data.

Owing to the high quality of the components and the use of air dielectric trimming condensers with low loss insulation, it is rarely necessary to make adjustments to the lining up of this receiver except after changing a coil or a condenser in a tuned circuit.

If it becomes necessary to realign the set, the standard procedure for superheterodynes should be followed. An output meter and a good oscillator are absolutely necessary.

The intermediate frequency is 472.5 KC/s and the I.F. trimmers for adjusting to this frequency are located directly underneath the I.F. coils. To effect adjustments the receiver should be placed on a felt-covered surface with the right side of the cabinet downwards and the bottom facing the operator. After removing the sub panel, six cylindrical trimming condensers will be seen mounted on the wavechange switch-coil assembly. For the **Broadcast** band the RF grid trimmer is at the top right, the mixer grid trimmer is immediately to the left of this and the oscillator trimmer is at the bottom right corner of the

switch-coil assembly. The **Shortwave** trimmers are arranged in a vertical row at the left side of the opening. The top trimmer is for the R.F. grid, the middle trimmer for the mixer grid, and the bottom one is for the oscillator. The cylindrical type of trimmer can easily be adjusted with the fingers or, in the case of the oscillator trimmer, with a bakelite spanner after the sealing compound has been melted. It should be noted that the plate trimmers of the I.F. coils are alive with respect to the chassis. Always reseal trimmers after adjustments.

The padding condensers are visible through the bottom part of the opening in the cabinet base. The broadcast padder is to the right and the short-wave one to the left with the receiver in the position previously recommended for lining up. Adjustment of the padders is seldom necessary, but this can be accomplished by turning the padder screw with a pair of radio pliers.

Removal of Chassis.

For most service operations, including lining up, it is unnecessary to remove the chassis from the cabinet, as access to most parts is possible through the panel in the bottom of the cabinet. If for any reason, such as to replace a broken dial cord, it is necessary to remove the chassis, the following procedure is recommended.

Switch off and disconnect battery. Remove two base screws and cable plug from vibrator chassis and remove this unit. Unscrew the four woodscrews holding the volume and tone controls on the cabinet. Remove knobs and base bolts from chassis. The chassis can then be withdrawn from the cabinet to a certain extent but is still attached to the dial by means of the cables which drive the dial pointer. Most repairs can be undertaken without more dismantling if care is taken not to kink these cables. If it is necessary to remove the chassis further, the pointer driving cable should be detached from the condenser driving drum, thus allowing the complete cables and casings to be detached from the chassis. If care is taken to note the simple method of attachment of these cables, no difficulty will be experienced during reassembly.

All washers should be replaced in their original positions, otherwise in the case of some of the woodscrews there is a danger of the points coming through the cabinet front.

The vibrator unit which supplies the high tension for this receiver is the type P5, employing a synchronous vibrator cell type, SP506. The vibrator cell is mounted on the transformer and is easily accessible for service. The high voltage .004MF condenser, which is connected across the secondary of the transformer, is mounted underneath the vibrator socket. The core of the high tension smoothing choke is connected to B positive to prevent corrosion of the winding so that, during service operations, due regard must be paid to the fact that this choke is alive with respect to the vibrator chassis. Care must also be taken if the choke is being replaced that the insulation of the core from the chassis is preserved.

It is important for the proper operations of the receiver that all shielding cans should be properly replaced in their original positions.

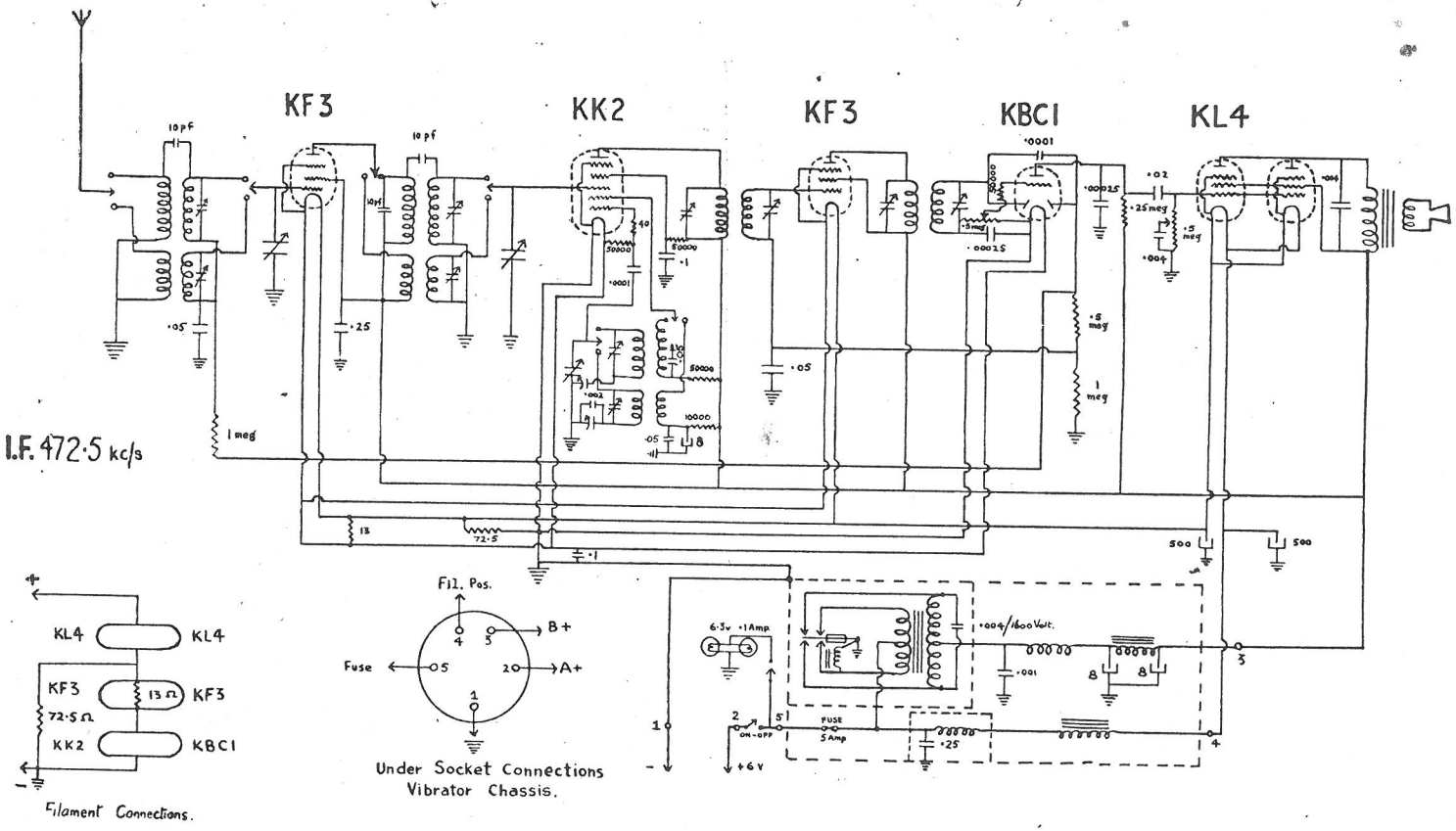
Precautions.

Always turn off the main switch before disconnecting the battery leads.

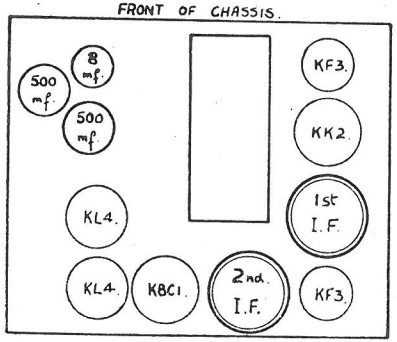
Make sure that the battery is connected with the right polarity, as a reversed connection will blow the fuse in the vibrator chassis.

Never remove a valve with the set switched on, as this may cause one of the other valves to burn out or at least will cause damage to the filament coating.

Always make sure that a good connection is made to the battery terminals or excessive hum and noise may result. A good earth is necessary for faultless operation of this receiver.



— VALVE LOCATION DIAGRAM —



VOLTAGE TABLE

	Plate	Screen	Osc. Plate	Filament
KF3 RF	135	135	—	2
KK2	135	50	BC53 SW100	2
KF3 IF	135	135	—	2
KBC1	27	—	—	2
KL4	125	135	—	2

The above voltages (with the exception of the filament) are taken on the 250-volt range of a voltmeter with a resistance of 1,000 ohms per volt. The use of a voltmeter with a different resistance will cause greatly different reading on the KK2 screen and oscillator plate, and the KBC1 plate. A run-down battery, of course, will result in much lower voltages.

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