

MODEL BZ 126A 4-Valve Superhetrodyne Receiver

Mains Supply—210-250 Volts, 50 C.P.S.

Tuning Range—535-1600 Kc/s.

Intermediate Frequency—455 Kc/s.

REMOVAL FROM CABINET:

The majority of service work may be carried out while the chassis is mounted in the cabinet by simply removing the perforated bottom cover. However, should it be necessary to remove the chassis from the cabinet, the following procedure should be adopted.

Remove the mains plug from the supply.

Remove the perforated bottom cover by removing the two self-tapping screws on the back of the chassis and the two 4mm screws threaded into the bottom of the cabinet. Unsolder the two speaker wires from the connecting lugs on the output transformer.

Loosen off the pointer clamping screw and release the drive cord from the pointer.

Remove the screw holding the internal plate aerial contact spring.

Remove the two push-on knobs.

Remove the two screws holding the chassis retaining clips and the chassis will slide out of the cabinet.

To replace the chassis reverse the above procedure, but see that the speaker wires are in the correct position before sliding the chassis forward in the grooves.

ALIGNMENT OF THE RECEIVER:

This receiver may be aligned in its cabinet, but if the chassis is already removed from the cabinet, it will be found easier to use an auxiliary scale and pointer.

The scale, which should have reference points 1500 Kc/s, 950 Kc/s, 600 Kc/s, and the maximum capacity of the tuning condenser accurately marked, should be fixed to the chassis in such a position that the auxiliary pointer may be attached to the drive cord.

The reference points may be plotted from the receiver dial in which case the short gap in the horizontal lines under the station calls, at the low frequency end of the scale, is the reference point for the pointer when the tuning condenser is at a maximum capacity.

Switch on the receiver and allow it to warm up for a few minutes. Turn the volume control to the maximum position, and the tuning condenser to maximum capacity.

Set the pointer to its correct position.

Apply a signal of 455 Kc/s modulated 30% through a capacity of 0.01 mfd to the control grid of the ECH 42.

Adjust the micro bandpass filters by means of the adjusting slugs on the top of the cans (see trimmer position diagram) in the order—

- 1—Diode Coil; 2—EAF 42 Plate Coil; 3—ECH 42 Plate Coil; 4—EAF 42 Grid Coil;

repeating the process until maximum output is achieved.

The input required from the attenuator for a power output of 50 milliwatts at the secondary of the output transformer should not exceed 125 microvolts.

Dis-connect the coupling condenser from the control grid of the ECH 42 and connect the signal generator through a standard dummy aerial to the aerial wire of the receiver.

Turn the pointer to the 1500 Kc/s reference point on the scale and apply a signal of 1500 Kc/s to the aerial.

Adjust the oscillator trimmer until the signal is heard and adjust the aerial trimmer for maximum output.

Turn the pointer to the 600 Kc/s reference point on the scale and apply a signal of 600 Kc/s to the aerial.

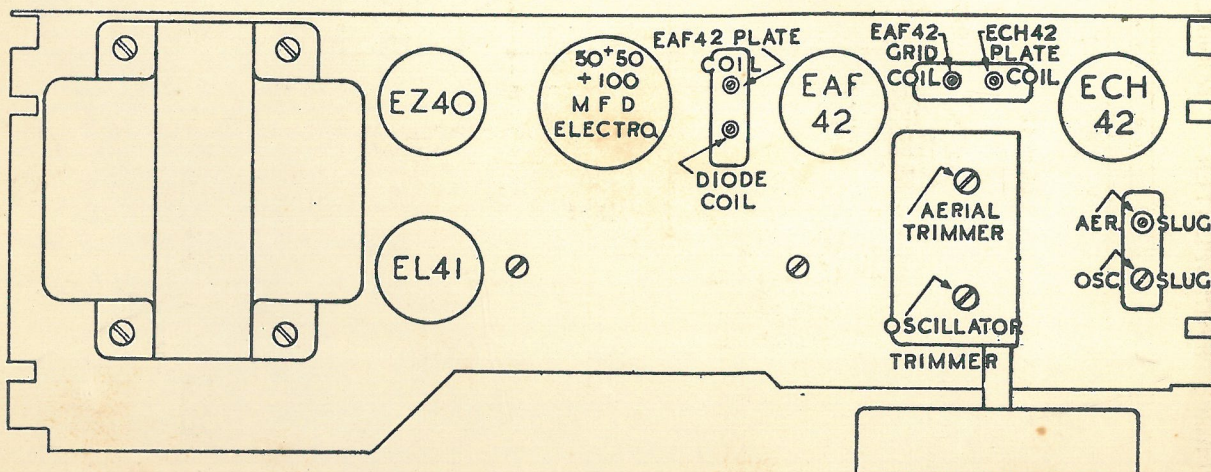
Adjust the oscillator inductance by means of the adjustable slug, accessible from the top of the oscillator coil until the signal is correctly tuned, and adjust the aerial inductance slug for maximum output.

Repeat the operations for 1500 Kc/s and 600 Kc/s and check the calibration and sensitivity at 950 Kc/s.

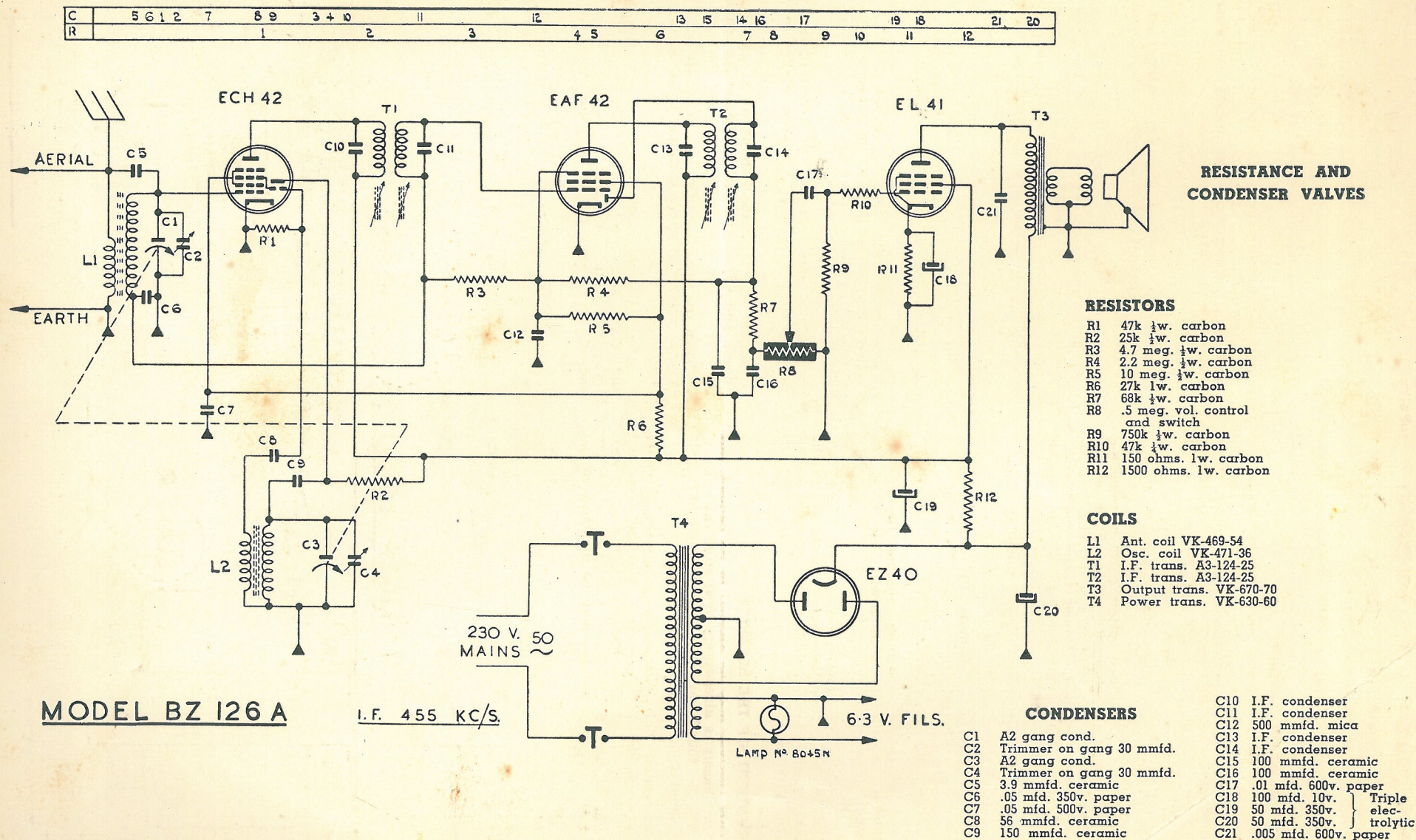
When correctly aligned the sensitivity should not exceed 35 microvolts at the three check points.

Seal the trimmers and adjusting slugs.

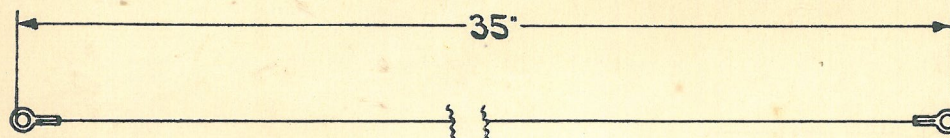
TRIMMER LOCATION DIAGRAM



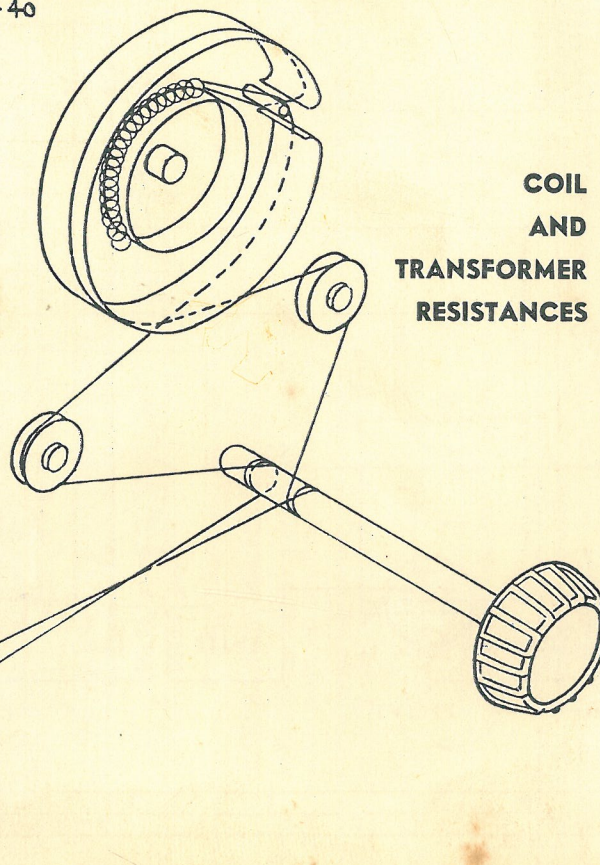
PHILIPS RADIOPLAYER : MINIPLAYER 126



PHILIPS RADIOPLAYER -- MINIPLAYER : MODEL BZ 126A (March 1952)



CORD CODE NO. 06 606-28
 CORD TAG VK 297-30
 ASSEMBLY VK 447-19
 SPRING A3 646-40



POINTER CORD

VALVE VOLTAGE TABLE

All readings taken with primary input of 230 volts 50 c.p.s.
 Full load primary current should not exceed 195 m/a.

Valve	Function	Fil	Plate	Screen	Cathode
ECH 42	Frequency convertor and oscillator	6.2V	Conv. Osc. 215 115	65	0
EAF 42	I.F. amplifier—Demodulator—Delayed AVC	6.2V	215	65	0
EL 41	Power Output	6.2V	230	215	5.5
EZ 40	Rectifier	6.2V	245V A.C. per plate	—	245
8045-N	Panel Lamp	6.2V			

The above voltages are measured between the points indicated and chassis with a meter having a movement of 20,000 ohms per volt on D.C. and 1,000 ohms per volt on A.C. Variations up to $\pm 10\%$ are permissible.

COIL AND TRANSFORMER RESISTANCES

VK-469-54	Aerial Coil	Primary	71 ohms
		Secondary	2.45 ohms
VK-471-36	Oscillator Coil	Feedback	4.7 ohms
		Tuned	11 ohms
A3-124-25	Microbandpass Filter	Each winding	12.5 ohms
VK-670-70	Output Transformer	Primary	320 ohms
		Secondary	0.57 ohms
VK-630-60	Power Transformer	Primary	55 ohms
		6.2V	0.11 ohms
		Secondary	305 } ohms*
			340 }

* In some transformers these figures will be 380 and 410.

REPLACING THE DRIVE CORD

Check the position of the gang drum and see that when the condenser is at maximum capacity, the cord opening in the drum is at 3 o'clock.

See that the drum is tight on the condenser shaft.

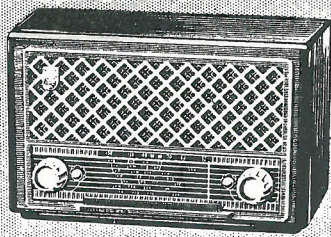
Place the drum spring over the tongue in the drum, and bend the tongue back so that it grips the spring. Thread the tag on one end of the cord onto the free end of the spring and bring the cord out of the cord opening in the drum and round the drum in a clockwise direction to 6 o'clock.

Place it over the left hand pulley on the pulley bracket, then over the driving shaft, making two and a half turns round the shaft with the cord progressing towards the chassis bearing of the shaft.

The cord is then fed up and under the pulley on the volume control shaft then over the drive shaft again making two complete turns round the shaft progressing towards the chassis.

It is then taken up and over the right hand pulley and onto the drum at 6 o'clock.

With a pair of pliers in the left hand, grip the spring and stretch round the brass drum, and at the same time, with the right hand, take up the slack in the cord. The spring should be stretched until the cord is long enough to go round the drum in a clockwise direction to 3 o'clock, then through the cord opening, round the brass capstan and over the end of the spring. Release the spring and position the cord on the drive shaft so that it does not bind in the bearings when the shaft is turned. Turn the drive shaft a few times so that the tension is equalised over the cord.



Left: **PHILIPS MINI-PLAYER 126**, a light and compact model that can be moved about from room to room . . . available at the very low price of £17/10/-

April 1952



Philips BZ126A. Photo: James Davidson

