

# H.A.C. Short Wave Receivers ..

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## Instructions for Constructing & Operating 1-Valve Model "DX."

Sole Manufacturers:  
"H.A.C." SHORT-WAVE PRODUCTS  
29 OLD BOND STREET, LONDON, W.1

### CONSTRUCTION

The "H.A.C." one-valve Short Wave receiver is very easy to construct, and, if the following points are carefully adhered to, no difficulty whatsoever should be encountered either in the construction or operation.

**The Chassis** is completely drilled for a 2-valve receiver, and therefore one valve holder should be left vacant at this juncture.

The diagram shows the wiring looking at the chassis from underneath. Mount the coil holder on the right hand side of the chassis as shown. The valve holder is then screwed into the centre hole. Screws are provided for these holes. A sheet of marked dials will be found in the bottom of the box and this should now have the holes cut for the spindles and be glued to the outside of the chassis before assembly is commenced. Mount the reaction condenser in the centre of the 3 holes and the tuning condenser as shown. We suggest that you leave the bandspread condenser at this juncture. If it is desired to fit a larger dial, an aluminium panel can be fixed to the front of the chassis. We shall be pleased to quote for a suitable panel, if you are unable to obtain one.

**Chassis Sockets.** Two pairs of sockets are provided and these should be fixed to the chassis side panel (rear). 6ba nuts and bolts are provided in the kit. One pair of sockets should be used for the headphones, and the other for aerial and earth.

**Wiring.** The diagram overleaf shows the connections to the components. The wiring is simple consisting of only eight main wires.

1. The earth lead which joins the moving plates of the variable condensers to the filament of the valve, coil tags 6 and 8, to HT and LT negative lead.
2. The aerial lead which connects to coil tag number 1.
3. The tuning lead—joining the fixed vanes of the tuning condenser to the fixed condenser and to coil tag 3.
4. The short grid lead—connecting grid of valve to grid leak resistor and other end of fixed condenser.
5. The reaction lead, connecting fixed vanes of reaction to coil tag 4.
6. The LT positive lead which connects the other filament of the valve to thence to the LT battery positive lead.
7. The anode lead, which joins the anode of the valve to coil tag 5 and to the 10k resistor thence to headphone socket.
8. The HT positive lead connects to the other headphone socket.

**IMPORTANT.** Keep the anode and grid leads as short as possible. The resistors and fixed condenser should be kept off the chassis supported by their stiff wire ends. All connections must be soldered, twisting wires alone will not suffice. We cannot stress too highly that all wiring on Short Wave receivers must be left as short as possible. If the wiring is left neat and direct your results will be twice as efficient.

**Variable Condensers.** On all variable condensers the terminal marked "F" on the diagram is the fixed vane connection. Moving vanes are marked "M," this is the terminal tag that also connects to the spindle, and this connection must be earthed. It is important to identify the correct connections. Solder to tags not the terminals.

**Valveholder.** Before wiring up the valve holder, you must locate the Anode pin, which is marked "A" on the diagram. When you look at the pins you will observe that one is offset (not quite in the circle). This offset pin is the Anode. It is essential that the valveholder is connected the correct way round, otherwise the valve filament will blow.

**Coil Holder.** Care should be taken that the correct pins are wired on the coil holder, it should be noted that these are numbered. Pins numbered 2 and 7 are not used. When inserting the coil in the coil holder, see that the spot on the coil goes between pins 1 and 8, which is the position of the slot in the holder.

### ACCESSORIES

**LT Battery.** A supply of 2 volts is required for the valve filament. This voltage can be supplied from a 3 volt dry battery, and the 6 ohm resistor in the the positive lead will drop the voltage to the correct 2 volts. A very suitable dry battery is the twin cell cycle lamp type 800. Alternatively for a