PYE TELEVISION RECEIVER

INSTRUCTIONS FOR OPERATING MODEL 817 FOR A.C. MAINS OPERATION

PYE LIMITED
Service Department
RADIO WORKS, CAMBRIDGE, ENGLAND
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INTRODUCTION

The 817 Model Television Receiver has been developed on new lines, its purpose being to provide the means for owners of radio receivers to supplement their existing radio equipment in the simplest and most inexpensive manner in order that they may receive television programmes.

The receiver can be used in conjunction with any existing radio receiver providing that A.C. mains are available. It can be linked to any radio receiver which is fitted or can be fitted with gramophone pick-up terminals. The screened lead from the sound output of the 817 television receiver is simply connected to the gramophone pick-up terminals of the radio set.

By producing the 817 model as a supplement to existing radio receiver equipment, we are able to offer up to date television entertainment at a price well within the reach of the majority of people.
TYPES OF PYE AERIALS AVAILABLE

A dipole Television aerial unit complete with reflector, pole and fixing brackets for wall mounting.

Fig. 1

A dipole Television aerial unit complete with reflector, pole and chimney mounting pieces for chimney mounting.

Fig. 2

The above alternate methods of Television aerial erection will cover the majority of aerial requirements. Elaborations may be necessary in difficult localities and simplifications possible where conditions are especially good.
BRIGHTNESS CONTROL & ON/OFF SWITCH

Fig. 3
NORMAL OPERATING
INSTRUCTIONS FOR THE USER.

1. Switch on the Brightness Control in a clockwise direction until the switch incorporated with this control operates and switches on the mains to the receiver.

2. Wait one minute to allow the valves and Cathode Ray tube to heat up, then turn the Brightness Control in a clockwise direction until the picture appears. The Brightness Control can be adjusted until the brightness of the picture is as desired. It should be remembered that too much brightness will spoil the contrast and definition of the picture.

3. Switch on the Radio Receiver and set the wave-range switch on the radio receiver to the “Gram” position.

4. Adjust the Radio Receiver Volume Control until the desired volume of sound is obtained.

NOTE. The installation engineer will always be pleased to demonstrate and explain more fully the operation of the minor controls located on the back of the Television Receiver. The function of these controls is explained on page 11.
Fig. 4

C.R. TUBE UNIT

TIME BASE
LINE HOLD
FRAME HOLD

VISION & SOUND UNIT
SOUND SENSITIVITY
VISION SENSITIVITY

POWER UNIT
FOCUS
VOLTAGE ADJUSTER
LINE & FRAME SYNCH. BIAS
CONTROL

AERIAL
SOUND OUTPUT
EARTH
MAINS PLUG

V.1 = E.F.C.
V.2 = E.F.C.
V.3 = E.F.C.
V.4 = T.C.D.
V.5 = T.C.D.
INSTRUCTIONS FOR INSTALLING THE MODEL
TELEVISION RECEIVER.

(Mainly for the guidance of installation Engineers.)

The Television Receiver Model 817 is an A.C. mains operated instrument intended for reception of high definition television transmissions as radiated from Alexandra Palace, London. The wavelength of the vision transmitter is 6.67 metres and the accompanying sound 7.23 metres.

The Cathode Ray tube has been arranged to permit direct viewing of the television image at as great a viewing angle as possible.

There are six controls

(1) **BRIGHTNESS CONTROL** AND **ON-OFF SWITCH** (see Fig. 3) Major control for regular use.

(2) **LINE HOLD CONTROL** (see Fig. 4) Minor controls for occasional use.

(3) **FRAME HOLD** (see Fig. 4)

(4) **VISION GAIN** (see Fig. 4)

(5) **FOCUS** (see Fig. 4)

(6) **SOUND GAIN** (see Fig. 4)

(1) Remove the back of the Television Receiver and carefully inspect it, making sure as far as possible that the valves are bedding correctly in their respective sockets (see Fig. 4) and that the appropriate flexible leads are connected to their top terminals (see Fig. 4).

(2) This Pye 817 Television Receiver is intended for use on Alternating Current of the voltage and frequency engraved on the voltage adjustor plate (see Fig. 4).

(3) The mains input adjustor tag will be found on the mains transformer (see Fig. 4). It will be noted that a brass screw on a flexible lead is provided which can be connected to the socket corresponding to the supply voltage. If this screw is not already in the correct socket, remove it and reinsert it in the correct one. Be sure to tighten the screw firmly.

(4) A mains lead complete with a wall socket plug is provided and this plug should be connected to a suitable power point or lighting point. If the power point or lighting point concerned is fitted with a switch, see that this is in the off position until the installation is finally completed.
(5) The screened lead and connexion provided should be connected to the sound output terminal (see Fig. 4) and the radio receiver pick-up plugs fitted at the free end of the lead. The pick-up plugs should then be inserted into the pick-up sockets of the radio receiver to be used for sound reproduction.

(6) Connect a good earth to the Television Receiver and plug in the aerial connector. Then replace the back cover.

IMPORTANT.—In no circumstances should the Television Receiver be operated with the back cover not in position.

(7) Switch on the mains to the instrument by turning the Brightness Control (see Fig. 3) in a clockwise direction. This control need not at first be turned to the fully clockwise position, but need simply be rotated to that position where the switch spring operates and switches on the mains to the receiver. Wait approximately one minute to allow the valves and Cathode Ray tube to heat up, then turn the Brightness Control in a clockwise direction until a faint illumination appears on the screen, then re-adjust the control until this just disappears.

(8) Adjust the Vision Gain Control until a reasonably contrasting pattern is obtained without excessive blacks or whites.

(9) Switch on the Radio Receiver and adjust the Wave Range Switch to the "Gram" position. Then adjust the Volume Control on the Radio Receiver until the sound is at the required level.

(10) With the warming up of the Television Receiver the preliminary pattern noticed on the screen will resolve into a picture and normally no further adjustments will be necessary, but slight variations of the minor pre-set controls may have occurred in transit, or local conditions demand special adjustment. Therefore the operation of each control is given in a later part of this booklet.

(11) The 817 Television Receiver is supplied with 8 valves, 2 diodes, 2 rectifiers and 1 Cathode Ray tube. The valve, diode and rectifier positions are as follows:

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<thead>
<tr>
<th>V1</th>
<th>V2</th>
<th>V3</th>
<th>V4</th>
<th>V5</th>
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<td>T6D</td>
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<th>V7</th>
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<td>T6D</td>
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<td>IW3</td>
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Cathode Ray Tube—Cathodeon Type 75250.
Good picture—Major and minor controls all set correctly.

Top of picture distorted—Line hold control needs slight re-adjustment.

Screen composed of black dashes—Line hold control needs adjusting.

Picture slipping in vertical direction—Frame hold control needs adjusting.

Weak and thin picture—Vision sensitivity control needs adjusting.

Strongly contrasted picture, no intermediate shades—Vision sensitivity control needs adjusting.

Picture out of focus—Focus control needs adjusting.
OPERATION AND FUNCTION OF THE MINOR CONTROLS.

LINE HOLD CONTROL.
The 405 horizontal lines which go to make up the picture must be in exact synchronisation with the line scanning at the transmitter. If they are not, the picture will be either badly distorted or take the form of just a complicated black and white pattern and slight correction of the Line Hold control will be needed. The two main effects are:

(a) Top of picture distorted in shape.

(b) Screen composed of numerous black dashes.

A slight adjustment of the Line Hold control in one or other direction will eliminate either of these effects.

FRAME HOLD CONTROL.
The picture frame is completely scanned 25 times per second. If this scanning is not dead in synchronisation with the frame scan at the transmitter, frame slipping will occur and will take the effect of the picture slipping in a vertical direction either upwards or downwards. The speed of this slip may be very slow or extremely fast. By adjustment of the frame hold control in one or other direction the picture will be made to hold steady in the correct position.

VISION SENSITIVITY CONTROL.
Insufficient gain will give a weak and thin picture with no contrast depth. Too much gain will give a picture with greatly contrasted black and white and no intermediate shades. Either of the above conditions will also affect the synchronisation of the picture. It will be found that in an intermediate position with a reasonably contrasting light and shade effect the synchronisation of the picture will be perfect.

FOCUS CONTROL.
The purpose of this control is to bring the Television image into sharp perspective. It should be adjusted so that by looking at the picture the black and white lines of which it is composed are sharply defined. If they are not, the outlines of the picture will appear blurred. A few degrees adjustment of the Focus Control in one or other direction will correct this.

SOUND SENSITIVITY CONTROL.
This is for adjustment of signal to noise ratio on the sound channel. This control should be adjusted until the interfering noise is at a minimum.
VALVE GUARANTEE IN THE BRITISH ISLES

The valves used in this Receiver are covered by the Valve Manufacturer's Guarantee, reprinted below.

BRITISH RADIO VALVE MANUFACTURERS' ASSOCIATION.

Guarantee

- The B.V.A. valves used in this receiver are guaranteed by the valve manufacturer for a period of three calendar months from the date of purchase. This guarantee is only given in respect of faulty workmanship and material and does not cover misuse or consequential damage.

- Claims under this guarantee will only be considered if the valve is returned to the valve manufacturer, preferably through the radio dealer from whom the set was purchased, supported by proof of the date of purchase of the set as issued by the Set Maker.

To ensure proper examination, the right is reserved to break open any valve, if necessary, without obligation to return or replace.

The Certificate of Guarantee received from the manufacturers should be returned with the valves, as proof of purchase date (or commencement of hire purchase). The Valve Manufacturers will return the Certificate of Guarantee, together with the replacement valves, where these are necessary.
CONDITIONS OF GUARANTEE

This is to certify that the Pye Television Receiver type _______ Serial No. _______ purchased on _______ is issued to _______ is guaranteed by Pye Limited called hereafter THE COMPANY in that should any defect in workmanship or material occur within twelve months from the date of purchase, the defective part or parts (with the exception of those parts expressly excluded by conditions printed below) will be replaced free of charge, or at the option of the Company, put into proper working order and returned to the purchaser carriage paid.

The Company will charge for the expense of removing or having removed the defective part or parts and of fitting or having fitted any new parts.

This Guarantee is subject to the following conditions:—

1. The Television Receiver must have been purchased from a bona fide Retailer at the price authorised by The Company at the date of the transaction. Second-hand Sets and Sets purchased below such price are expressly excluded.

2. The Television Receiver must have been worked under the conditions specified in the Television Receiver instruction book, particularly with regard to the replacement of Valves and Cathode Ray tubes.

3. The Guarantee does not apply to defects caused by accident, neglect, alteration, misuse, or wear and tear, nor to accessories that need to be replaced periodically, such as Valves, Lamps and Cathode Ray tubes (in respect of which the Purchaser may be referred to the Manufacturers thereof).

4. No responsibility is accepted by The Company for any charges made by its Service Agents or Retailers for fitting replacement parts supplied free of charge under the Guarantee by The Company, or for any other work. Such charges must be paid by the owner of the Television Receiver.

5. The Company will not be liable for any loss, damage or expense caused directly or indirectly by any fault developing in the Television Receiver or its accessories.

6. A purchaser of a Pye Television Receiver shall be deemed to have purchased it with full knowledge and approval of the Conditions of Guarantee as printed in the instruction book enclosed with the Television Receiver. No other warranty is to apply, whether expressed or implied.

7. The service instructions overleaf must have been carefully and completely carried out.