

**BAIRD TELEVISION LTD.**

**133, LONG ACRE, LONDON, W.C.2**

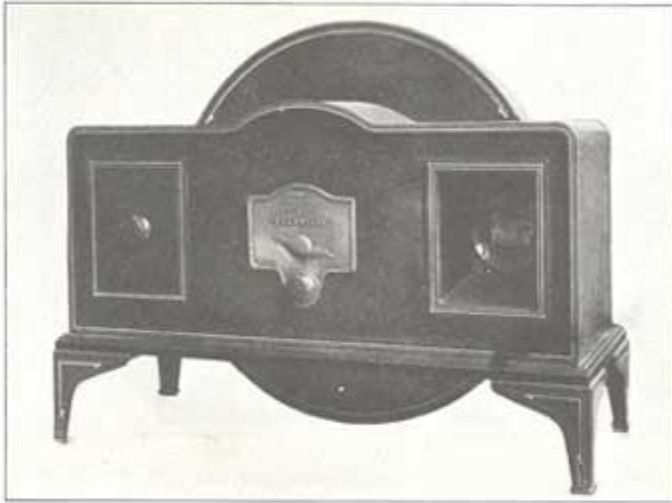
Telegrams: Televisor, Rand, London

Telephone: Temple Bar 5401

## THE BAIRD "TELEVISOR"

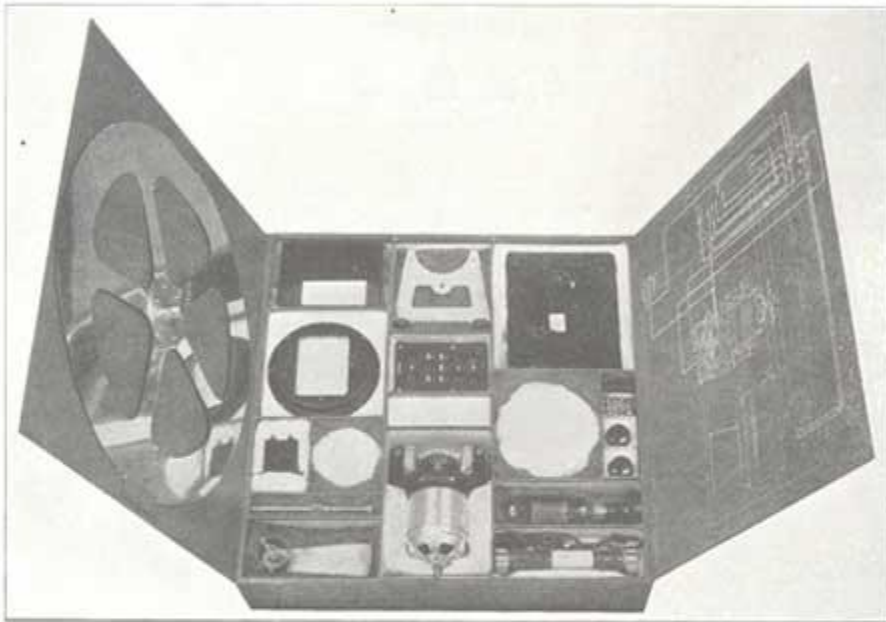
(DISC MODEL)

£18 . 18 . 0



This "Televisor" can be used in conjunction with any radio receiver capable of delivering good quality output of the order of 1½ watts on optimum load. Extreme selectivity is not necessary or desirable and any form of sharp tuning which tends to distort or reduce the upper frequencies of the signal should be avoided. Similarly, it is important to preserve as much as possible of the lower frequencies in the amplifier stages. We strongly recommend the use of resistance capacity low frequency coupling in preference to transformer or choke coupling. An effective volume control is very desirable, but this should not be in the form of reactions or any other method affecting the stability of the receiver.

# BAIRD "SENIOR" KIT



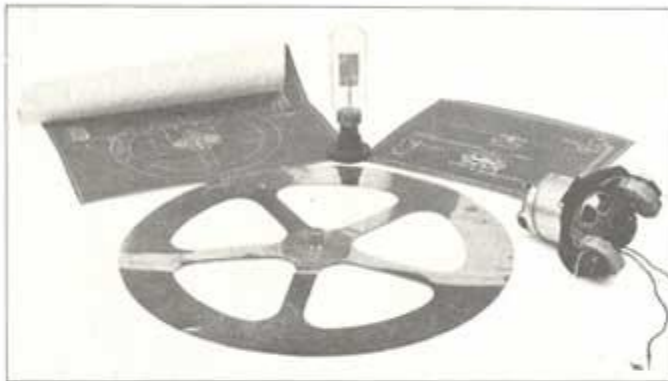
## PRICE LIST OF PARTS COMPRISING THE BAIRD "SENIOR" KIT

£ s. d.		£ s. d.	
MOTOR AND SYNCHRONISING		DISC .. .. .	1 1 0
GEAR .. .. .	5 5 0	ZENITE RESISTANCE AND	
MOTOR BRACKET, CLAMPING		SUPPORTS .. .. .	17 0
BOLTS AND NUTS .. .. .	1 0 0	RESISTANCE, WITH BRACKET	
LENS—LARGE .. .. .	13 6	AND CONTROL KNOB .. .. .	6 3
LENS—SMALL .. .. .	7 6	SPINDLE ASSEMBLY, WITH	
LENS BOX ASSEMBLY, WITH		CONTROL KNOB AND SCREWS	5 9
VIEWING TUNNEL (6 pieces)	1 0 0	CONDENSER .. .. .	2 0
NEON LAMP .. .. .	1 5 0	TERMINAL BOARD .. .. .	7 6
NEON LAMP HOLDER .. .. .	1 6		

PRICE COMPLETE, Packed in attractive Carton with Blueprint

£12 12 0

# BAIRD "JUNIOR" KIT



## PRICE LIST OF PARTS COMPRISING THE BAIRD "JUNIOR" KIT.

	£	s.	d.
MOTOR AND SYNCHRONISING GEAR .. .. .		5	5 0
DISC .. .. .		1	1 0
NEON LAMP .. .. .		1	5 0
NEON LAMP HOLDER .. .. .		1	6
<b>PRICE COMPLETE, with Two Blueprints .. .. .</b>		<b>7</b>	<b>12 6</b>

*The following components are not included in the kits of parts:*

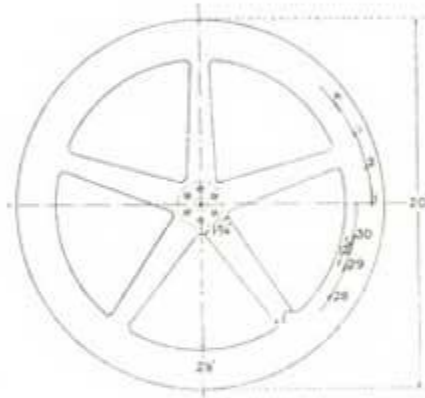
MAIN CASING .. .. .	3	12	6
WELL CASING .. .. .		15	0
NEON CASING .. .. .		2	6
TERMINAL CASING .. .. .		3	6
WOOD BASE .. .. .		15	0
FEET FOR BASE (FOUR) .. .. .		11	0
SCREWS, Etc. (VARIOUS) .. .. .		4	0
FLEXIBLE LEAD AND ADAPTOR .. .. .		2	6

ANY SINGLE COMPONENT MAY BE PURCHASED SEPARATELY.

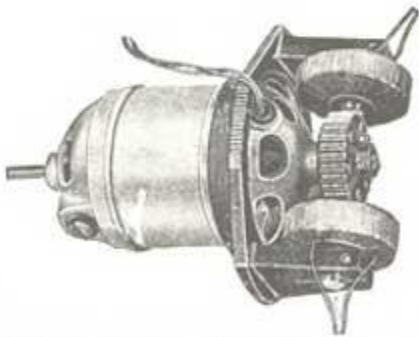
**ENSURE GOOD TELEVISION  
RECEPTION BY USING THESE  
ESSENTIAL PARTS**



Flat Electrode  
Neon Lamp  
£1 . 5 . 0  
Holder . 1/6



Baird  
Graduated  
Receiving  
Disc . . . . .  
£1 . 1 . 0



Baird Motor, complete with synchronising gear,  
Universal (for A.C. or D.C. mains) or 6-volt  
£5 . 5 . 0

# Instructions for Connecting and Operating

## THE BAIRD "TELEVISOR"

### (DISC MODEL)

The Baird "Televisor" (Disc Model) consists of four essential parts :—(1) The Scanning Disc ; (2) The Driving Motor ; (3) The Automatic Synchronising Gear ; (4) The Neon Lamp.

1. **THE BAIRD GRADUATED DISC** is shown in the Diagram Fig. 1. It is 20 inches in diameter, made of light aluminium and perforated with a series of 30 apertures, arranged in a spiral.

It will be noticed that the first three and the last three of these apertures are not squares but rectangles, the effect of this being to give an image with more detail in the centre than at the edges.

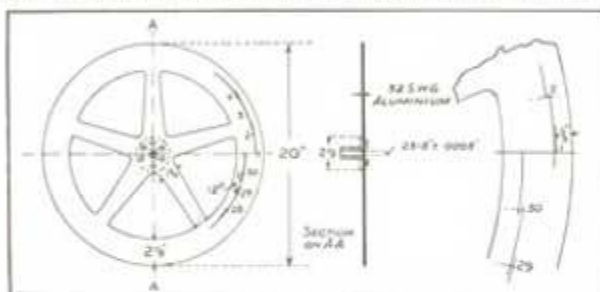


FIG. 1.

*Details of the Baird Graduated Disc showing how the 30 holes are arranged in a spiral.*

This effect, which is known as "graduated exploration," makes the most efficient use of the detail permitted by the 9-kilocycle sideband, which is all that can be transmitted through the B.B.C. stations at present. The ratio of the picture is 1 wide to 2.3 high.

2. **THE BAIRD MOTOR** is a universal one, designed to run at 750 r.p.m. on various supply mains voltages, either D.C. or 50 cycle A.C. A fixed resistance, with a variable resistance in series with it, is contained in the "Televisor" to drop the supply voltage to the required value. A motor suitable for running from a 6 volts accumulator can also be supplied.

3. **THE BAIRD AUTOMATIC SYNCHRONISING GEAR** makes use of the received signal to provide the synchronising impulses. These pulsations are fed to coils actuating two electro magnets placed diametrically opposite to one another and between which is a cogged wheel, mounted on the motor shaft, and having 30 teeth. In operation the received current passing through the coils of the magnets (assuming the disc has first been synchronised with the transmitting disc) creates a magnetic pull on the tooth passing the magnet face and so holds or checks the motor speed.

4. **THE NEON LAMP** is of the flat plate type and is designed especially for the Baird "Televisor." The striking voltage is approximately 200 volts.

#### THE COMPLETE "TELEVISOR."

##### HOW TO CONNECT UP

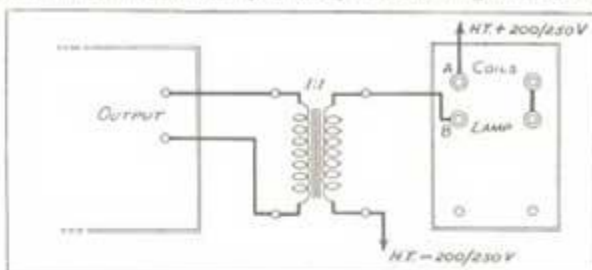
*Motor.*—A Terminal panel is incorporated in the back of the machine, and it will be seen that there are six terminals marked A, B, C, D, E, F, and a wandering lead. Assuming the "Televisor" is correct for your particular voltage supply (see plate at the back of the "Televisor"), by consulting the chart, which will be found with the machine, it can be ascertained to which terminal you should join the wandering lead in order to get the speed of the motor approximately correct, namely, 750 r.p.m.

The flex lead with a lamp adaptor being already connected to terminals marked "Mains," it is only necessary now to plug in the adaptor and "switch on." In order that the machine may be run off existing lighting mains a resistance system is provided inside the "Televisor" case, and the current consumed is approximately equal to that used by a 60 watt lamp.

Neon.—The Neon Lamp should be fitted to its socket in such a manner that the small (cylindrical) rod which lies horizontally behind the plate is nearest to you when you are standing at the back of the

FIG. 2.

*With receivers having direct or choke output the connections to the "Televisor" should be made in conjunction with an output transformer.*



"Televisor"; in other words, the plate should be facing the disc.

#### WIRING BETWEEN THE "TELEVISOR" AND THE WIRELESS RECEIVER

When connecting a Baird "Televisor" to a radio receiver it is important to know the output circuit of the receiver being used.

Commercial receivers to-day have one of three types of output, namely, Direct, Choke and Transformer.

(1) Sets in which the output circuit is either Direct or Choke:—

With output circuits of these types the Primary of a transformer should be connected across the output terminals of the receiver and the Secondary joined up to the "Televisor" as shown in Fig. 2.

The transformer should preferably be of the "output" type, and if desired, various ratios may be tried in this position.

(2) Sets in which the output circuit is Transformer:—

Connect the output terminals of the receiver to the "Televisor" as shown in Fig. 3.

It will be noticed that there is a connection between one of the terminals marked "coils" and one marked "lamp." This connection must be made for Cases (1) and (2), and joins the Neon Lamp and

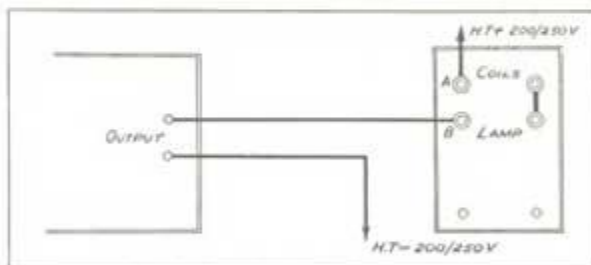


FIG. 3.

*If a transformer output is already included in the wireless receiver the connections to the vision apparatus are very simple.*

Synchronising Coils in series, unless it is desired to have separate synchronising, which entails a modification of the wireless set.

#### SEPARATE SYNCHRONISING.

This can only be achieved by inserting another output valve in the wireless receiver and generally speaking, means partly reconstructing the set.

The diagrams, Figs. 4 and 5, show how this can be done.

In these schemes valves X and Y should be capable of passing an anode current of 25 milliamps (under proper working conditions).

In the case of the wiring schemes outlined in Figs. 2, 3, 4 and 5, the H.T. applied to the "Televisor" terminals is rated at 200-250 volts. This H.T. supply to the Neon may be obtained either from the same source as that from which the radio set is fed, or from a separate supply. If this voltage is not available in the set it will be necessary to provide either a separate eliminator giving not less than 30 milliamps under normal conditions (or 60 milliamps when using a separate synchronising valve), or wet H.T. and even dry batteries provided they are of the high capacity type.

Having connected up your "Televisor" according to the diagram which suits your case, switch on the H.T. source to the Neon and notice how it lights or glows. It is essential that the plate should

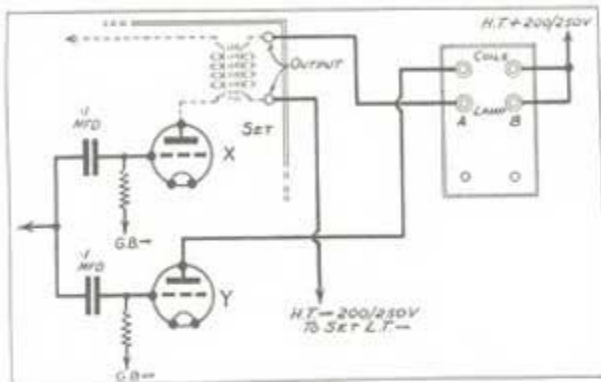


FIG. 4.

Indicating how an additional valve can be wired up for separate synchronizing.

glow evenly over the whole of its area, and assuming the plate is facing the disc, the connections are then correct. It may happen that the little bar will glow and not the plate. If this occurs reverse the leads on the "Televisor" terminals marked A and B in the diagrams.

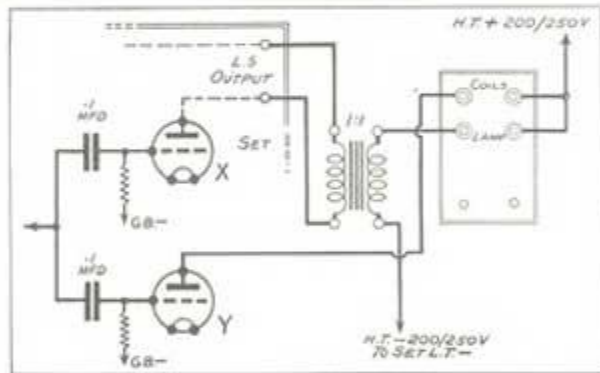


FIG. 5.

Using a separate synchronizing valve with sets incorporating an output transformer.

#### RECEIVING THE PICTURE

Tune in the radio station which is sending Television, in the same way as you would tune in for ordinary broadcast reception. The television note may be described as a high pitched steady note with another high pitched chirrup superimposed on it.

A loud speaker may be used for tuning purposes, and when the Television Signal is tuned in, disconnect your loud speaker leads and connect the "Televisor" leads to the output terminals, in accordance with the instructions on previous pages.

Start the motor and light the Neon: when the motor is up to speed you should see some form of image having a dull red background.

Variation of motor speed at this point is important. A series of black lines will appear and sweep upwards or downwards depending on whether the motor is running faster or slower than the transmitting motor. The motor speed regulating control is the knob on the left-hand side of the "Televisor."

The speed of the motor must be increased or decreased until the lines lie horizontally. When this state of affairs is reached, the "Televisor" is synchronised and the synchronising gear should now automatically maintain this condition; the picture by this time should be plainly visible. If one overshoots the mark, by increasing the motor speed too much, the lines will appear to sweep upwards a cross the lens. Always remember that lines sweeping downwards signify that the motor is running