

Television in Your Home

THE RECEIVERS YOU CAN BUY —A COMPLETE GUIDE

PICTURE SIZE:—18 INCHES TO 24 INCHES WIDE

| Maker. | Type. | Cabinet. | Price. | System. |
|-----------|-----------------------------------|----------|----------|-------------------------|
| Philips. | Television sound, all-wave radio. | Console. | £126 0 0 | Cathode-ray projection. |
| Scophony. | Sound and vision. | Console. | £231 0 0 | Mechanical. |

TELEVISION receivers that produce pictures of sizes larger than approximately 14 in. by 11 in., are of necessity special types. This is because it is a difficult matter to make cathode-ray tubes in large sizes owing to the enormous atmospheric pressure, which on the screen end alone may amount to more than half-a-ton. There are two solutions to the problem of the large picture—one is by the use of a special cathode-ray tube upon the screen of which an intensely bright, though small, picture is produced which is then projected on to an external screen by means of a special lens system and the other is by mechanical-optical methods in which a beam of ordinary light is caused to traverse the screen, its intensity being varied in accordance with the received vision signals. The results obtained with either system may be said to be equal and both have certain advantages.

The design of the cathode-ray projection receiver follows ordinary cathode-ray receiver practice except that in order to obtain a picture sufficiently bright for projection, comparatively high voltages are used. In the mechanical-optical receiver quite low voltages are employed, but there are mechanical moving parts. Both systems are entirely satisfactory, though there is necessarily a little more elaboration than there is in the case of the ordinary type of cathode-ray receiver such as is used in receivers providing pictures of sizes less than those mentioned above.

Philips Projection

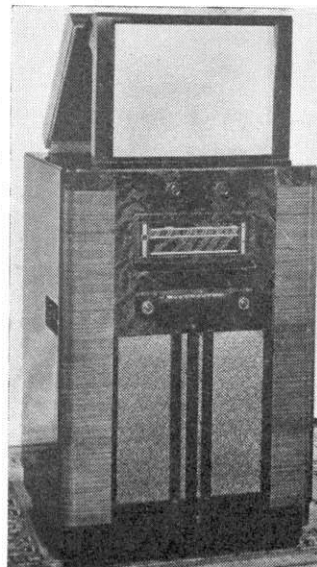
The projection screen of the Philips receiver automatically rises into its correct position when the lid of the cabinet is lifted. A slow motion device prevents damage to the glass screen and mirror by too rapid closing of the lid. The picture size is 18 in. by 14½ in., and the brilliance and definition are such that it can be viewed in comfort and under normal conditions. A Mullard 4-in. diameter projection type cathode-ray tube is employed and operates from a 25,000-volt supply.

Focusing and deflection are entirely magnetic. The

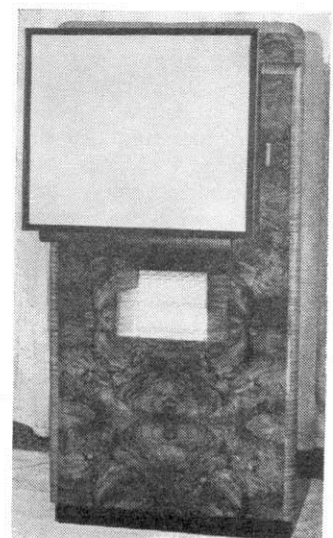
tube is mounted with the projection lens in a metal case provided with gimbals to facilitate optical centring of the picture on the projection screen. The 25,000-volt supply for the operation of the cathode-ray tube is obtained from a voltage doubling rectifier unit using two Mullard 1878 H.T. rectifiers. The whole extra high tension equipment is contained in an earthed steel case with interlocked switches and an earthing device on the door. Opening the door breaks the supply to the rectifier and automatically earths the extra high tension terminals, thus making the equipment completely shock proof.

The television and broadcast equipment consists of five units:—

1. Vision and sound receiver with synchronising separator.



The Philips projection receiver giving a picture size 18 ins. by 14½ ins.



Scophony mechanical-optical receiver. The screen measures 24 ins. by 20 ins.

2. Frame and line time bases and H.T. supply.
3. E.H.T. equipment.
4. Projection assembly containing the cathode-ray tube.
5. Broadcast chassis type 753A.

In addition to reception of the television programmes, normal broadcast reception is afforded by a high-fidelity all-wave receiving unit.

Scophony Mechanical-optical

The Scophony mechanical-optical receiver gives a picture 24 in. by 20 in. The colour is bluish-black and white on a flat screen. Operating voltages are low, in fact not much in excess of those in an ordinary broadcast receiver. The light source is a super-pressure mercury lamp. The receiver incorporates (1) the Scophony supersonic light relay which makes it possible to employ, in this type of receiver, nearly

200 elements of the picture simultaneously, and (2) the special optical invention of focusing in two distinct focal planes (split focus) which makes it possible to reduce the size of moving parts whilst retaining the fullest amount of light.

The total number of valves used is 39 including all rectifiers, and the mercury-lamp power supply. The total consumption of the receiver when working is 1,000 watts.

The controls are quite simple. Starting is by means of a delayed push-button switch. This switches on all filaments, power supplies and mercury lamp. There is one control for sound volume and one control for vision gain; this knob controls the contrast. Another control is provided for picture brightness.

On the scanners there is one speed control with synchronising locking switch and one for frame adjustment. A focus control knob is also provided, but this has to be seldom used.

PICTURE SIZE—12 INCHES TO 14 INCHES WIDE

| Maker. | Type. | Cabinet. | Price. | System. |
|---------|-----------------------------------|-----------------|----------|--------------------------------|
| Baird. | Television sound, all-wave radio. | Auto-radiogram. | £126 0 0 | Cathode-ray indirectly viewed. |
| Baird. | Television sound. | Console. | £63 0 0 | Cathode-ray directly viewed. |
| Cossor. | Television sound, all-wave radio. | Console. | £50 8 0 | Cathode-ray directly viewed. |

Baird

The Baird Console model T23 has been designed primarily for installation in hotels and clubs, for the size of the picture (13½ in. by 10¾ in.) enables a large number of people to view simultaneously. The T23, of course, is suitable for installation in the home where a large picture is desired. There are three main controls only, mounted on the front of the cabinet: picture contrast, brightness and sound volume. The power consumption is 200 watts.

A high-fidelity sound receiver is fitted and this is preset to receive television sound. The walnut cabinet measures approximately 43½ in. high (with lid closed), 25 in. wide, and 20 in. from back to front.

The "Cathovisor" cathode-ray tube is 15 in. in diameter and is mounted vertically and protected with a window of safety glass. The vision, sound and time-base generator chassis are mounted on a removable shelf above the H.T. and power units which are fitted at the base of the cabinet.

One power pack supplies current to the vision, sound and time-base generator. The other power pack feeds the anode voltage to the "Cathovisor" cathode-ray tube and five special resistor tappings supply variable bias for controlling picture brightness.

Baird Radiogram T14. An elaborate instrument designed to receive the television and also the radio broadcast programmes, and to act when required as a luxurious radiogramophone. This receiver provides a picture 13½ in. by 11 in., which is viewed in a hinged, part-mirrored lid. The gramophone is fitted with an auto-record changer which plays records of any size in any order. The superhet radio receiver covers the television waveband, and on the operation of a single switch three broadcast bands, as follows: short, 16.5 to 51 metres; medium 198 to 550 metres; long 850 to 2,000 metres.

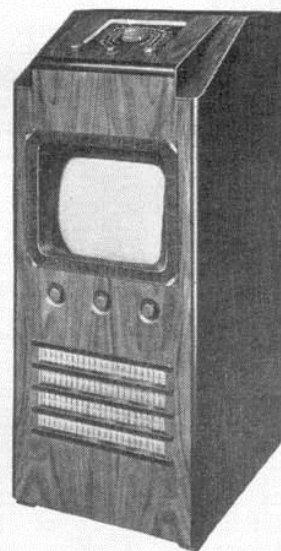
The power consumption is 250 watts and the cabinet measures 58 in. wide; 42 in. high and 20 in. back to front.

Cossor

This instrument, Model 1210, incorporates the latest type of Cossor giant tube (glass protected) giving a direct-vision black and white picture 12 in. by 9½ in. approximately. It is simple to use, there being only three television controls. Also included

Below: The Baird combined television receiver, radiogram and broadcast receiver. Picture size is 13½ ins. by 11 ins.

Right: The Cossor large picture (12½ ins. by 9½ ins.) console combined television and broadcast receiver.



in the cabinet (which is 48½ in. high, 20½ in. wide and 24½ in. deep) is a high-fidelity superhet radio receiver covering three wavebands, viz., 16-52 metres, 195-560 metres and 810-2,085 metres. This model has 21 valves and gives television reproduction up to approximately 20 miles from Alexandra Palace. The price is 48 gns.

Another model, 1210A, of the same type but with 24 valves, to give the extra power necessary for ranges over 20 miles and for exceptional conditions, is available for 51 gns.

10 $\frac{1}{4}$ INCHES BY 8 $\frac{1}{4}$ INCHES

| Maker. | Type. | Cabinet. | Price. | System. |
|--------|--------------------|----------|----------|-----------------------------|
| Ultra | Sound, and vision. | Console. | £39 18 0 | Cathode-ray directly viewed |

Ultra

The Ultra model T24 is a console instrument for sound and vision only and considering the picture size, is a remarkably compact instrument. The picture is directly viewed. A patented circuit reduces the number of valves required. Eight valves in a superheterodyne circuit receive both sound and vision signals. Double couplings give freedom from distortion and "cross modulation" troubles. The couplings in

the sound amplifier are designed to give a total band width of some 40 kilocycles, resulting in high standard of fidelity.

The power unit comprises two Mazda full-wave rectifiers, transformers, chokes and smoothing condensers. High tension for the cathode-ray tube is derived from a special transformer feeding a Mazda U21 slow-heating mercury rectifier, an arrangement which prevents surges and reduces breakdown possibilities. The cabinet is of particularly neat design.

10 INCHES BY 8 INCHES

| Maker. | Type. | Cabinet. | Price. | System. |
|---------------|------------------------------------|-----------------|-----------|--------------------------------|
| Baird. | Television sound, all-wave radio. | Radiogram. | £75 12 0 | Cathode-ray indirectly viewed. |
| Baird. | Television sound, all-wave radio. | Console. | £49 7 0 | Cathode-ray directly viewed. |
| Baird. | Television sound, all-wave radio. | Table. | £46 4 0 | Cathode-ray directly viewed. |
| Burndept. | Sound and vision. | Console. | £47 5 0 | Cathode-ray directly viewed. |
| Cossor. | Television sound, medium and long. | Auto-radiogram. | £94 10 0 | Cathode-ray directly viewed. |
| Cossor. | Television sound, medium and long. | Console. | £73 10 0 | Cathode-ray directly viewed. |
| Dynatron. | Television sound, all-wave radio. | Auto-radiogram. | £173 5 0 | Cathode-ray directly viewed. |
| Ekeo. | Sound and vision. | Console. | £51 9 0 | Cathode-ray directly viewed. |
| Ferranti. | Television sound, all-wave radio. | Console. | £63 0 0 | Cathode-ray directly viewed. |
| Ferranti. | Sound and vision. | Console. | £52 10 0 | Cathode-ray directly viewed. |
| G.E.C. | Sound and vision. | Console. | £38 17 0 | Cathode-ray directly viewed. |
| H.M.V. | Television sound, all-wave radio. | Auto-radiogram. | £126 0 0 | Cathode-ray indirectly viewed. |
| H.M.V. | Television sound, all-wave radio. | Console. | £84 0 0 | Cathode-ray indirectly viewed. |
| H.M.V. | Television sound, all-wave radio. | Console. | £63 0 0 | Cathode-ray indirectly viewed. |
| Marconiphone. | Television sound, all-wave radio. | Console. | £84 0 0 | Cathode-ray indirectly viewed. |
| Pilot. | Television sound, medium and long. | Radiogram. | £68 5 0 | T.65. |
| R.G.D. | Television sound, all-wave radio. | Auto-radiogram. | £136 10 0 | Cathode-ray indirectly viewed. |
| R.G.D. | Television sound, all-wave radio. | Console. | £94 10 0 | Cathode-ray indirectly viewed. |
| R.G.D. | Television sound, all-wave radio. | Console. | £78 15 0 | Cathode-ray indirectly viewed. |
| Tannoy. | Sound and vision. | Auto-radiogram. | £89 5 0 | Cathode-ray directly viewed. |
| Vidor. | Sound and vision. | Console. | £42 0 0 | Cathode-ray directly viewed. |

Baird

The Baird Radiogram T21 has, in addition to television and all-wave radio, the added attraction of a high-fidelity radiogramophone. A four waveband superhet receiver is fitted, covering the ultra-short television waveband and three additional bands for radio programmes: short, 16.5 to 51 metres; medium, 198 to 550 metres and long, 850 to 2,000 metres. The television sound may be received either with or without the picture by operating a switch incorporated with the picture contrast control. The picture (size 10 in. by 8 in.) is viewed in a hinged portion of the mirrored lid. The power consumption is 200 watts and the approximate dimensions of the cabinet are 33 in. high, 39 in. wide and 20 in. back to front.

Baird Table Model T18. This is a complete table television receiver combined with a very selective and high quality all-wave radio, yet the compact cabinet housing the complete equipment is little larger than the usual table radio. The sound receiver is a superheterodyne covering the television sound waveband and three bands for radio programmes (short: 16.5 to 51 metres; medium, 198 to 550 metres and long, 850 to 2,000 metres). It is possible to receive the sound on the television waveband either with or without the picture by means of a switch integral with the picture contrast control. The picture size is 10 in. by 8 in., viewed direct, and the power consumption 150 watts.

The cabinet measures approximately 25 in. high by 18 in. wide by 16 in. from back to front. It is attractively designed as illustrated, and is standard in walnut. The receiver is heavier than a radio set, and

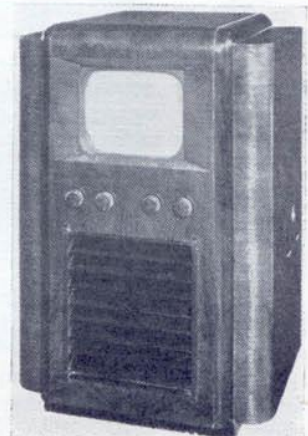
it may be found convenient to have a suitable stool to support and raise it to a comfortable height for viewing. For this purpose a special stool can be supplied at an additional cost.

Baird Console Model. The general specification of this console is similar to that of table model T18, described above. The cabinet is strongly made and attractively designed in walnut. It is made available



Left: Baird table model T20 giving a picture 10 ins. by 8 ins.

Below: The Burndept console television receiver. Picture size 10 ins. by 8 ins.



in this form for those who prefer to have one complete cabinet rather than a smaller cabinet with or without a stool to support it. The size of the console cabinet as illustrated is approximately 44 in. high, 20 in. wide and 16 in. from back to front.

Burndeft

Burndeft Limited have concentrated on one model of the console type providing vision and the accompanying sound. The brilliant black and white picture, size 10 in. by 8 in. is viewed directly. There are four controls in all, three for television and one for volume control of sound. A high fidelity speaker is incorporated, with undistorted output of 5 watts. It is housed in a handsome walnut cabinet of the console type, size 40 in. high, 26 in. wide, 22 in. deep.

Twenty-two valves are employed in the complete receiver. D.C. restoration is incorporated, ensuring that the general picture illumination follows faithfully that transmitted. A 12-in. cathode-ray tube with all-magnetic focusing and scanning is used, giving excellent definition. The vision receiver is of the super-heterodyne type embodying H.F., mixer, and oscillator stages, which are common to both sound and vision. Two vision I.F. stages are used, diode detector and video amplifier which are connected to the cathode-ray tube. On the sound side there is an I.F. amplifier (100 Kc. band width) followed by a double diode triode with pentode output to the speaker (5 watts output).

Cossor

The Cossor model 137T is a combined television and high-fidelity radio receiver with a 13½ in. diameter cathode-ray tube. The radio is for use on two wavebands: 200 to 550 metres and 800 to 1,980 metres. The viewing screen—which gives a picture 10 in. by 8 in.—and controls are protected by doors when not in use. The cabinet is 44½ in. long, 20½ in. high and 24 in. wide. Twenty-one valves are used.

Another model is the 237T, as described above, but with an additional upper section incorporating an electric gramophone of the latest type with record changer. The size of the cabinet is 51 in. high, 20½ in. wide and 24 in. deep. The price is 90 gns.

Ferranti

Two Ferranti receivers providing a picture 10 in. by 8 in. are available. One, the model T3, is designed for television and accompanying sound, and the other incorporates a sound broadcast receiver for all-wave reception in addition to the usual television circuit. This is known as Model T4. The prices of these receivers are 50 gns. and 60 gns. respectively. Use has been made of the new secondary emission type R.F. pentode for vision amplification. Scanning and synchronising has been achieved its simplest form, one valve being used for each deflection circuit and one valve only for synchronising.

The all-wave radio section in the T4 model is a sensitive superheterodyne receiver employing the same I.F. valve as the television sound receiver. This is effected by having 465 kC. I.F. coils for radio and 7 Mc. I.F. coils for television sound in series in each coil section.

The sound receiver audio-frequency amplification has negative feedback for high fidelity. The frequency

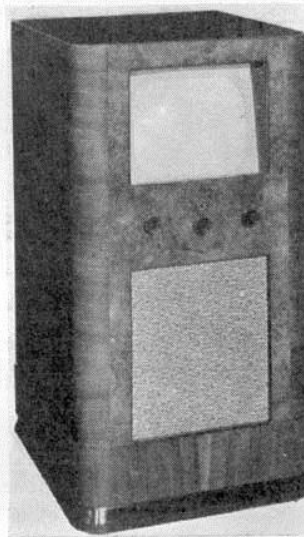
response is almost constant from 40 to 10,000 cycles.

The picture characteristics, television sound and vision circuits in both models T3 and T4 are identical. The brilliant black and white picture is viewed directly on a 12-in. Emiscope tube which employs magnetic scanning and electrostatic focusing.

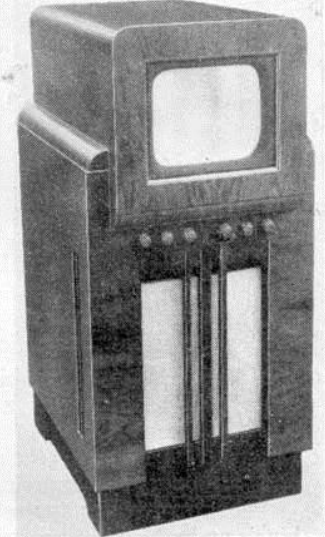
There are six controls, of which four require only very occasional adjustment, making the operation of the set very simple. An extra control is provided on the all-wave model T4. The cabinet in walnut finish is built so as to permit viewers to see the picture in comfort and from a wide angle.

G.E.C.

For the present and pending the development of a new range of models the General Electric Co., Ltd., are concentrating on what may be described as a real utility instrument for television and the accompanying



The G.E.C. console television receiver. A fine instrument giving a 10 ins. by 8 ins. picture.



The Ferranti 10 in. by 8 in. console television receiver.

sound. This receiver, a console, gives a 10-in. by 8-in. picture at the remarkably low price of 37 gns.

It is a direct-viewing model providing a true black and white picture with perfect focus and a remarkable degree of brightness, with every gradation of half-tone. Only three normal operating controls are required and the instrument is contained in a hand-polished figured walnut cabinet. The dimensions are, height 38 in., width, 20 in., depth 21 in., and the consumption is 200 watts.

H.M.V.

An H.M.V. model 901, giving a picture 10 in. by 8 in., is a console television receiver suitable for those who already possess a modern radio or radiogram and require a television sight and sound receiver only.

The picture is reflected from the end of the tube on to a mirror set at an angle of 45 degrees in the lid. Simplicity of operation is an outstanding feature of this model. The price is 60 gns.

Marconiphone

Model 902 is a complete home entertainer. Contained in a single cabinet of figured walnut is a tele-

vision sight and sound receiver, an all-world radio receiver and an automatic record-changing electrical gramophone.

The black and white picture is viewed through an optically corrected lens and 45-degree mirror. The 6-valve superhet radio receiver has four wavebands (16.7 to 53 metres, 46 to 141 metres, 185 to 560 metres and 750 to 2,250 metres) with an extra waveband for television sound reception. The electrically-reprodu-

Left: H.M.V. model 901 indirect 10 ins. by 8 ins. television receiver.
Below: The R.G.D. television receiver, model 382.



cing gramophone will play through eight records automatically without attention. The price is 120 gns.

Model 900 is a combined television and all-world radio receiver. It has a 6-valve superhet sound circuit with four wavebands (16.7 to 53 metres, 46 to 141 metres, 185 to 560 metres, 750 to 2,250 metres) and an energised moving-coil speaker. A separate waveband provides for television sound reception. The black and white picture, 10 in. by 8 in., is reflected into a special mirror in the lid, thus enabling a number of viewers at wide angles from the instrument to watch the programme comfortably and without distortion. Simple control for television and radio, sharply defined pictures, true-to-life tone, and a beautifully-figured walnut cabinet are features.

9 INCHES BY 7 INCHES

| Maker. | Type. |
|------------|-------------------|
| McMichael. | Sound and vision. |
| Murphy. | Sound and vision. |

| Cabinet. |
|----------|
| Console. |
| Console. |

| Price. |
|---------|
| £63 0 0 |
| £65 0 0 |

| System. |
|--------------------------------|
| Cathode-ray indirectly viewed. |
| Cathode-ray indirectly viewed. |

Murphy

Among the three Murphy models is the A42V for television programmes only, which has certain refinements which it is not possible to include in a cheaper model. The picture is indirectly viewed. The top of the cabinet inside the lid is covered with dull leather to prevent any stray reflections which might inter-

8 1/4 INCHES BY 6 1/2 INCHES

| Maker. | Type. |
|---------|-------------------|
| Cossor. | Sound and vision. |

| Cabinet. |
|----------|
| Table. |

| Price. |
|---------|
| £47 5 0 |

| System. |
|------------------------------|
| Cathode-ray directly viewed. |

Cossor

Cossor Table Model 437T. This is another table instrument which has been produced for those who already have a satisfactory receiver for broadcast radio reception. It is designed for receiving television

Marconiphone Model 705. This instrument consists of a television receiver with the sound accompaniment and a four-waveband radio receiver covering the following wavelength ranges: 16.7 to 53 metres, 46 to 140 metres, 185 to 560 metres and 750 to 2,200 metres. The vision equipment comprises the Emiscope tube unit which converts the electrical signal into a picture on the face of the tube. The vision receiver unit consists of a 6-valve T.R.F. receiver fixed-tuned to 45 megacycles (6.67 metres). A mirror supported in the cabinet lid, which, for television is held open at 45 degrees, reflects the picture. To facilitate tuning the lid may be raised into the higher position of 70 degrees.

The television controls are grouped to the left of the top board which masks the end of the Emiscope cathode-ray tube. The picture size is 10 in. by 8 in., and the mains consumption is 260 watts. The sound receiver unit is a normal broadcast chassis adapted to deal with the television sound broadcasting on 41.5 megacycles (7.23 metres) as well as the normal long-wave, medium-wave and two short-wave bands.

R.G.D.

Three entirely different models producing a 10 in. by 8 in. picture are made by Radio Gramophone Development Co., Ltd. These comprise a television receiver (with sound) only, Model 382, a television receiver all-wave radio receiver and auto-radiogramophone, Model 382 R.G., and a combined television and all-wave radio receiver, Model 382 R. The television features of these instruments are as follows: A 14-valve superhet circuit with H.F. stage, triode hexode frequency changer, two-channel I.F. amplifier, one having a band width of 4.5 megacycles for vision, the other having a band width of 20 K/c. for high fidelity reproduction of sound. Pre-set tuning of sound and vision. Triode portion of double diode triode valve as first audio stage, feeding output valve having an undistorted output of 3 1/2 watts.

An Ediswan type 12H cathode-ray tube, having a diameter of 12 in., and giving a clear picture 10 in. by 8 in. with electrostatic scanning of both frame and line is employed.

Forty valves are used in the autoradiogram and press-button tuning is incorporated for the radio receiver.

ferre with the picture on the screen. The picture size is larger than on the other Murphy models, being 9 in. by 7 in., giving a wider angle of vision, which enables more people to view the programme comfortably. Opening and closing of the lid automatically switches the set on and off. The dimensions are 34 1/2 in. high by 31 1/2 in. wide by 18 in. deep.

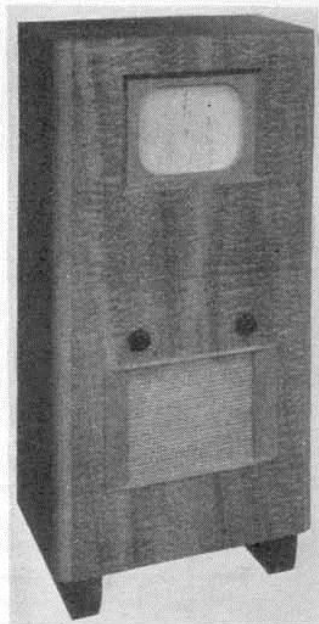
and its accompanying sound only. The picture (8 1/4 in. by 6 1/2 in.) is of ample size for home entertainment. The walnut-finished cabinet is 22 1/2 in. high, 14 1/2 in. wide and 25 in. deep. 20 valves in all are used and the price is 45 gns.

7½ INCHES BY 6¼ INCHES

| Maker. | Type. | Cabinet. | Price. | System. |
|------------|-----------------------------------|----------|----------|------------------------------|
| Baird. | Sound and vision. | Console. | £39 18 0 | Cathode-ray directly viewed. |
| Baird. | Sound and vision. | Table. | £36 15 0 | Cathode-ray directly viewed. |
| Ultra. | Sound and vision. | Table. | £29 8 0 | Cathode-ray directly viewed. |
| Beethoven. | Television sound, all-wave radio. | Console. | £50 8 0 | Cathode-ray directly viewed. |

Baird

The table and console models T20, have the same general specification and each consist of two main units: (1) the 9-in. diameter "Cathovisor" cathode-ray tube, time base generator and vision unit; (2)



Left: Baird T20 console model television receiver. A fine example of a simple and low-priced instrument.

Below: R.G.D. television receiver and auto-radio-gramophone. Model 382.



power pack and sound unit. The first unit forms a single compact chassis assembly which is easily accessible and is fitted in the top section of the cabinet. As in the case of the radio receiver, the vision is pre-set and requires no further adjustment. Current supplies

for both main units, including the high tension voltage to the "Cathovisor" cathode-ray tube, are fed from the power supply unit. The cabinet of the table model measures approximately 22 in. high, 18 in. wide and 13 in. from back to front. The size of the console cabinet is approximately 48 in. high, 18 in. wide and 13 in. from back to front.

Ultra

The Ultra model T22 is a table receiver for sound and vision only. The black and white picture, which is directly viewed, measures 7¼ in. by 6¼ in. The price is £29 8s.

Beethoven

The Beethoven receiver is a combined television sight and sound plus an all-wave radio receiver. The cabinet size is 38 in. high by 22¼ in. wide by 16 in. deep. The picture is provided on a slight incline for ease of viewing. There are only three controls for the television, which includes the on/off switch and these need only a very occasional adjustment.

The latest type Ediswan magnetic short cathode-ray tube is used and a total of 16 valves is employed in the television section. Positive synchronising is employed controlling both line and frame time bases. Each time base comprises a gas discharge relay followed by a single stage of amplification. The All-World Radio receiver incorporated is a Beethoven type A.C. 740 with certain switch modifications to meet the television requirements.

There are three wave ranges; short 16-50 metres, medium 200-500 metres and long 900-2,000 metres. The model TR20 is suitable for A.C. mains, 200-250 volts (adjustable) and the consumption is 250 watts.

7½ INCHES BY 6 INCHES

| Maker. | Type. | Cabinet. | Price. | System. |
|---------------|-----------------------------------|----------|---------|------------------------------|
| H.M.V. | Television sound, all-wave radio. | Console. | £47 5 0 | Cathode-ray directly viewed. |
| Marconiphone. | Television sound, all-wave radio. | Console. | £47 5 0 | Cathode-ray directly viewed. |
| Murphy. | Television sound, all-wave radio. | Console. | £45 0 0 | Cathode-ray directly viewed. |
| Murphy. | Sound and vision. | Console. | £30 0 0 | Cathode-ray directly viewed. |

H.M.V.

Model 907 is a combined television receiver and all-world radio receiver. Operation for both television and radio reception is extremely simple. A special super-het circuit is employed for the reception of television and sound, and a separate high-sensitivity chassis is incorporated for the reception of sound broadcasts between 13.5 to 50, 195 to 580 and 950 to 2,000 metres. The black and white picture size is 7½ in. by 6 in., and is viewed directly. The price is 45 gns.

The H.M.V. 903 is a console model for television sight and sound only housed in a figured walnut cabinet. The picture size is 7½ in. by 6 in., clearly defined in black and white and viewed directly on the end of the cathode-ray tube. The controls are grouped together on the front of the cabinet; the price of this model is £47 5s.

Marconiphone

Model 709 is a combined television and all-wave broadcast receiver. It incorporates an all-wave world broadcast receiver of the most up-to-date design and the picture is visible over a wide angle. The cabinet is attractively finished in light-coloured Australian walnut and is fitted with concealed easy-running castors. The picture size is 7½ in. by 6 in.

Murphy

The Murphy A56V for television programmes only is a very neat and compact receiver. The cabinet is of walnut with a sloping control panel of opaque plate glass to avoid reflections. The slope of the panel is designed to give comfortable viewing from a chair or when standing, and a wide angle of vision. The four controls grouped on this panel are volume control for

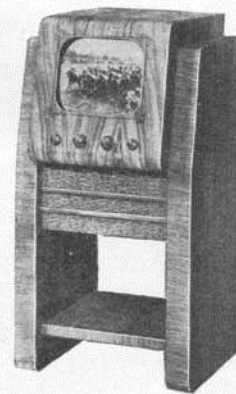
sound, combined with on-off switch, and focus, brightness and contrast for the picture.

The picture is a clear black and white, size 7½ in. by 6 in. Sound output is ample for all ordinary purposes. The compactness of the instrument is largely due to the use of a new short type of cathode-ray tube. Fifteen valves are used for the sound and vision, and synchronising with three rectifiers to deliver the high voltages necessary. By an ingenious design, the chassis can be lowered in its cabinet and is, therefore, accessible for service.

The cabinet dimensions are 34½ in. high, 18 in. wide, and 17½ in. deep.

Another Murphy model, the A58V, contains the same television equipment and gives the same size picture, but also included is an all-wave radio receiver, and the cabinet is wider. The price of this is £45.

Below : Murphy combined all-wave radio and television receiver.
Right : The Ultra T24 console television receiver.



7½ INCHES BY 5¾ INCHES

| Maker. | Type. | Cabinet. | Price. | System. |
|----------|------------------------------------|-----------------|----------|------------------------------|
| Invicta. | Sound and vision. | Table. | £32 11 0 | Cathode-ray directly viewed. |
| Pye. | Television sound, all-wave radio. | Auto-radiogram. | £68 5 0 | Cathode-ray directly viewed. |
| Pye. | Sound and vision. | Table. | £31 10 0 | Cathode-ray directly viewed. |
| Pye. | Television, sound, all-wave radio. | Console. | £52 10 0 | Directly-viewed. |
| Pye. | Television and sound. | Console. | £45 3 0 | Directly-viewed. |

Invicta

A particularly compact table model giving a directly-viewed picture 7½ in. by 5¾ in. is the Invicta TL5, the cabinet size being only 19 in. high by 17 in. wide by 14 in. deep and the consumption 150 watts.

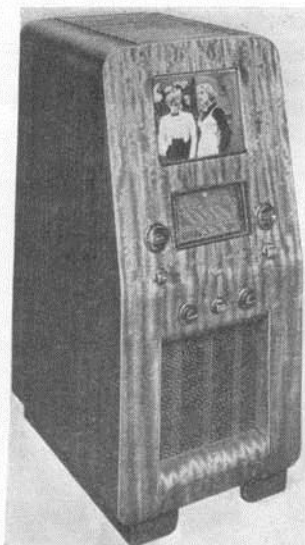
One combined chassis carries both sound and vision circuits, resulting in increased compactness and elec-

Pye

Four receivers giving a picture 7½ by 5¾ in. are manufactured by Pye, Limited, and these comprise a combined television receiver broadcast set and auto-radiogram in one cabinet, model 838, a table model 815, and two consoles, models 4046 and 843, the latter including all-wave radio with push-button tuning. The cabinet size of model 838 is 36½ in. high by 39½ in. wide by 19¾ in. deep, and the consumption 200 watts.

In the table model (815), which measures 19 in. high by 17 in. wide by 14 in. deep, only thirteen valves are used in a combined circuit. Only two controls are required.

The television pictures of the console models are



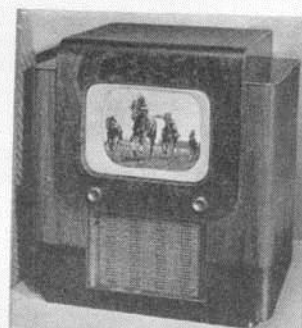
Marconiphone console, picture size 7½ ins. by 6 ins.



Pye combined all-wave and television receiver.



Pye all-wave radio and television table type receiver.



Invicta table television receiver.

trical efficiency. It can be tuned with perfect results by any member of the family, because there are only two principal controls—one for vision brightness and the other for volume and on/off switch.

the same, but the cabinet of the one incorporating all-wave radio is larger. It is interesting to note that a special model of either of these is available for use outside the ordinary accepted service area.

6¼ INCHES BY 5 INCHES

| Maker. | Type | Cabinet. | Price. | System. |
|---------------|-----------------------------------|----------|----------|------------------------------|
| Ekco | Sound and vision. | Table | £27 6 0 | |
| Ekco | Add-on vision Unit | Table | £23 2 0 | |
| H.M.V. | Television sound, all-wave radio. | Table. | £36 15 0 | Cathode-ray directly viewed. |
| Marconiphone. | Television sound, all-wave radio. | Table. | £36 15 0 | Cathode-ray directly viewed. |

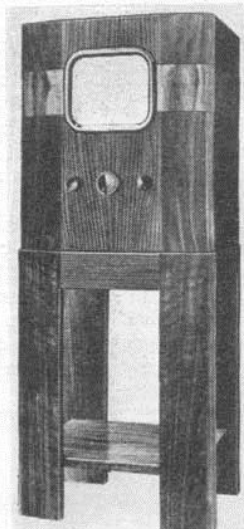
Ekco

Ekco receivers comprise two models at present, but

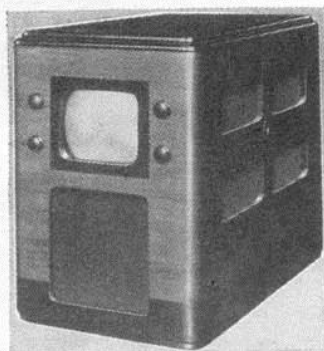
two more are in course of development and will be ready shortly. Model TS701 is for sound and vision,

with the following specification. Power pack (3 rectifiers), 7-metre sound and vision receiver (12 valves), timebase (3 valves, with flat-ended, all-magnetic tube. Picture size is 6½ in. by 5 in., the walnut cabinet 21½ in. by 17 in. by 16 in., and the sound output, 3 watts. The price is 26 guineas.

Model TA201 is an add-on unit for use in connection with A.C. radio sets fitted with pick-up sockets. This



Left: Ekco add-on vision unit.
Below: Cossor table model 54 giving a 5 in. by 4 in. picture.



5 INCHES BY 4 INCHES

| Maker. | Type. | Cabinet. | Price. | System. |
|---------------|-----------------------------------|----------|---------|------------------------------|
| Cossor. | Sound and vision. | Table. | £27 6 0 | Cathode-ray directly viewed. |
| Cossor. | Sound and vision. | Table. | £24 3 0 | Cathode-ray directly viewed. |
| H.M.V. | Television sound, all-wave radio. | Table. | £30 9 0 | Cathode-ray directly viewed. |
| Marconiphone. | Television sound, all-wave. | Table. | £30 9 0 | Cathode-ray directly viewed. |

Cossor

A picture size 5 in. by 4 in. is provided by the Cossor table models 54 and 54a. Simplicity of operation is a great feature, there being only two vision and two sound controls to operate. The cabinet, walnut finished, is 17½ in. high, 13 in. wide, and 20½ in. deep.

Model 54a is the same as model 54, but with extra amplifier (16 valves in all) for ranges over 20 miles and for exceptional conditions.

H.M.V.

H.M.V. model 904 is a combined television and all-world radio receiver for 29 guineas. The black and white picture, 4¾ in. by 4 in., is seen directly on the end of the cathode ray tube and gives clear vision over a

4 INCHES BY 3⅜ INCHES

| Maker. | Type. | Cabinet. | Price. | System. |
|----------|------------------------------------|----------|----------|------------------------------|
| Invicta. | Vision only. | Table. | £22 11 6 | Cathode-ray directly viewed. |
| Pye. | Television sound, medium and long. | Table. | £30 9 0 | Cathode-ray directly viewed. |
| Pye. | Vision only. | Table. | £22 1 0 | Cathode-ray directly viewed. |

Invicta

The Invicta table model TL4 is one of the smallest television receivers made, and the price is very low. It is a vision set with an adaptor, and specially designed for use in conjunction with any existing radio set having pick-up terminals and operating from A.C. mains to provide the sound. The picture, which measures 4 in. by 3⅜ in., and the cabinet size is 16 in. by 13 in. by 12 in. Consumption is 110 watts.

model, of course, does not include a sound output circuit and loudspeaker. The picture is 6½ in. by 5 in., and the cabinet measures 19½ by 17 in. by 16 in. Eighteen valves are used, and the price is 22 guineas.

The models in the course of development are a sound and vision console model with a 9-in. tube and a radio and television table model giving a 6½ in. by 5 in. picture.

H.M.V.

H.M.V. model 905, a combined television and all-world radio receiver, and is generally similar in appearance to model 904, described later. This instrument shows a black and white picture 6½ in. by 5 in. It also incorporates a 6-valve superhet sound receiver. The 3 waveband radio receiver brings in stations between 16.5 to 50, 200 to 570 and 725 to 2,000 metres. The price is 35 guineas.

Marconiphone

Marconiphone model 707 provides a picture 6½ in. by 5 in. It is a combined television and all-wave radio and the controls are no more complicated than those normally employed on many ordinary, broadcast receivers. The equipment consists of a single chassis carrying (a) the vision receiver with associated equipment; (b) the Emiscope receiving tube; (c) the all-wave broadcast receiver; and (d) the power supply units for both sections.

wide range. All main controls are grouped together on the front of the cabinet. The 6-valve radio receiver has the wavelength scale clearly marked with many station names and a vernier scale simplifies tuning. The wave-range cover 16.5 to 50, 200 to 570 and 725 to 2,000 metres.

Marconiphone

Marconiphone Model 706 combines an efficient television receiver giving a picture 4¾ by 4 in., with an all-wave radio receiver of the very latest design. In picture brilliance and detail it compares favourably with the more expensive instruments. The Emiscope receiving tube has a diameter of 5 in., and the picture colour is black and white.

Pye

The two Pye table models differ only in that one incorporates an all-wave push-button broadcast set, and the cabinet is necessarily larger. The small model (817) is intended for use in conjunction with an ordinary broadcast set for the provision of the television sound. The large model (819) is, of course, entirely self-contained. Current consumption is 150 and 110 watts respectively. Only one vision control is required in either case.