
Marconi 5 kW television transmitters for bands I and III

Already proved in service in many parts of the world

B 7101

for band I

B 7201

for band III

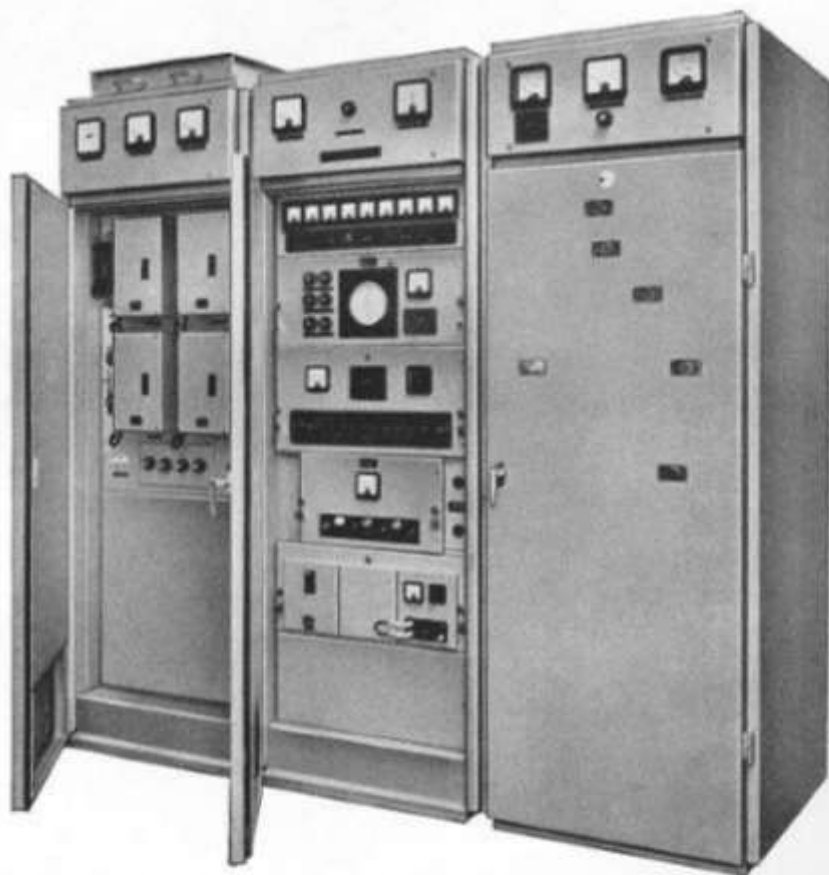
(Associated sound
transmitters available)

Suitable for parallel and
unattended operation with
remote control.

Simple installation. Built-in
air cooling. No floor
ducting needed.

Compact simple design gives
high reliability and
easy maintenance.

Suitable for Colour
transmissions and 525 or
625 line standards.



Marconi television systems

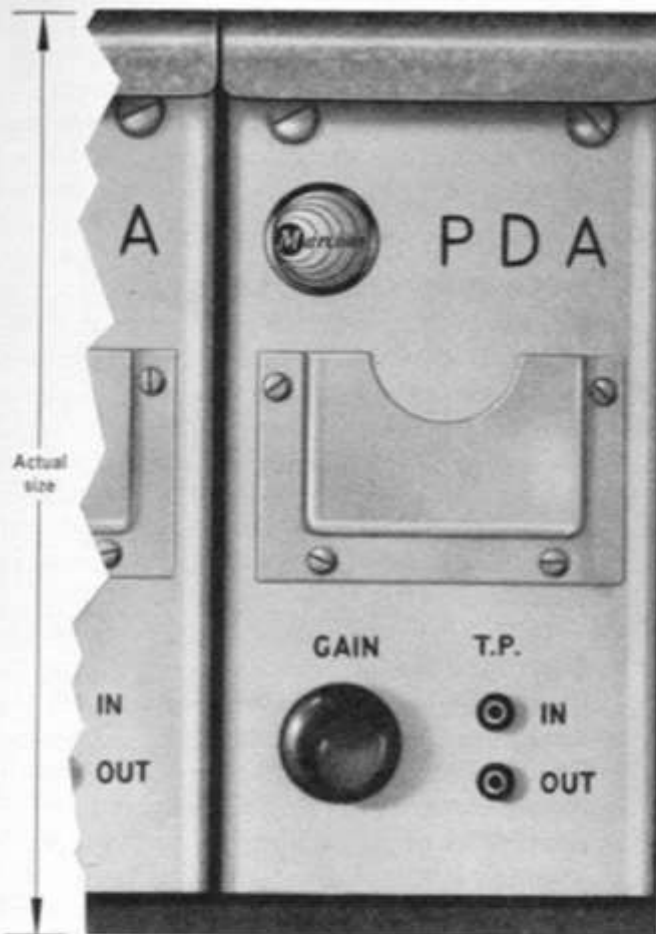
The Marconi Company Limited, Broadcasting Division, Chelmsford, Essex, England

LT0101

Years advertised:

S and V	1965
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Marconi pulse and vision distribution equipment



B4002

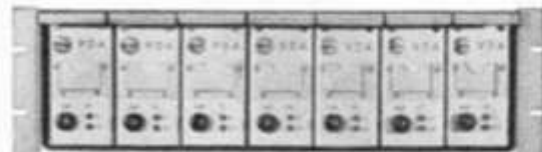
This equipment occupies only 5½ in. of rack height, and provides 35 Vision or 42 Pulse Output with high Input Isolation.

Fully transistorized

Integral regulated power supply in each amplifier

Fully colour specification

Seven amplifiers are mounted on a 5½ in. rackframe. Vision and pulse amplifiers may be intermixed.



Complete rack

Marconi television systems

The Marconi Company Limited, Broadcasting Division, Chelmsford, Essex, England

LTD/845

Years advertised:

S and V 1965

Marconi studio mixer

B 3713

a versatile
vision mixer

14 inputs and 6 outputs with complete flexibility of arrangements

Composite or non-composite signals on 405, 525 or 625 lines may be switched

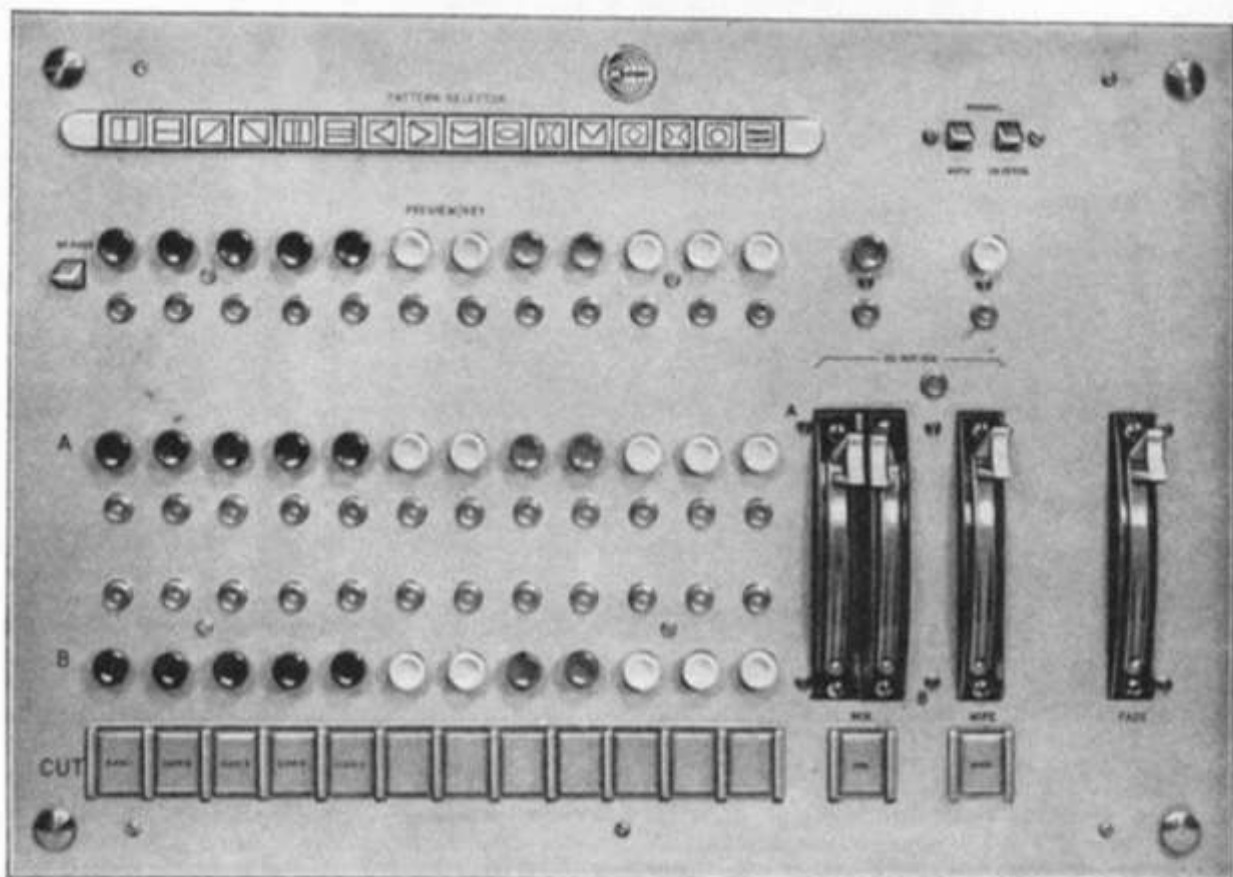
Based on IBM plug-in relays including contacts for cueing circuit

Sync. comparator unit detects non-synchronous sources

Crosstalk protection on a 5 Mc/s channel better than 50 dB

Reliability and ease of maintenance assured

Cutting in frame blanking can be provided.



Marconi television systems

The Marconi Company Limited, Broadcasting Division, Chelmsford, Essex, England

LYD/843

Years advertised:

S and V 1965

MAJOR TECHNICAL BREAKTHROUGH BY 'ENGLISH ELECTRIC' NEW TARGET MATERIAL EXTENDS TUBE LIFE



Resulting from a programme of intensive research and development *English Electric Valve Company* announce a *Major Breakthrough* with an entirely new target material for its *Image Orthicons* giving an operational life expectancy of at least 3 *TIMES* that experienced with normal tubes.

THE ELCON* TARGET ACHIEVES:

■ Guaranteed life of 750 hours ■ Complete lack of image retention—no sticking pictures ■ Stability of contrast reproduction—no matching problems ■ Sensitivity fall-off greatly reduced—sensitivity remains constant for life ■ Immediate switch-on—no warm-up delay.

Reports on pre-production samples of the new ELCON* Image Orthicons, from North America, show consist-

Write or telephone immediately for full information

ENGLISH ELECTRIC VALVE COMPANY LTD Chelmsford England AGENTS THROUGHOUT THE WORLD

TELEPHONE: CHELMSFORD 3491 EXTENSION 262 TELEX: 1913

ently that operational lives of between 3,000 and 5,000 hours are possible.

Another important EEV development incorporated in the ELCON* tube is that of complete absence of image induced microphony. This together with the Major Breakthrough development makes *News*.

In addition to this outstanding development in Image Orthicons, EEV introduce a range of high sensitivity, high resolution 1-inch vidicons featuring entirely new photo-surfaces and separate mesh electrode construction. Information on the complete range of EEV products may be obtained on request.

*ELCON is derived from the properties of the new EEV target—namely *ELectronic CONducting* as opposed to the familiar ionic conductors normally used.

Years advertised:

S and V 1965

Marconi transistorized synchronizing pulse unit

B 3600

Long-term reliable performance

Advanced design—two independent synchronizing generators, two automatic genlocks and two power units contained in one case.

Low power consumption—can operate from standby 12V battery if necessary.

Exclusive two-mode locking circuit gives a fast pull-in but slow following characteristic when in lock.

Suitable for 405, 525 or 625 standards.

Designed for rapid and easy maintenance.

Automatic genlock operation from six external sources selected by remote control panel, with automatic reversion to mains lock on loss of remote input signals.



*This case contains:
2 synchronizing generators
2 automatic genlocks
2 power units*

Marconi television systems

The Marconi Company Limited, Broadcasting Division, Chelmsford, Essex, England LTD/885

Years advertised:

S and V 1965

Marconi 50 kW m.f. high efficiency broadcast transmitter

B 6022

overall
efficiency
of more
than 60%



Final amplifier stage yields a conversion efficiency of over 90% with an anode voltage of only 8.5 kV and with an overall efficiency higher than 60%.

Particularly easy to install—made up of only two cubicles, transportable without dismantling—no floor ducts.

Compact design—ancillaries and regulators contained in cabinet with good accessibility.

Facilities for parallel operation available.

Remote operation facilities.

Suitable for unattended operation.

High audio performance and high level Class B modulation.

Marconi broadcasting systems

The Marconi Company Limited, Broadcasting Division, Chelmsford, Essex, England

LTD/BS1

47

Years advertised:

S and V	1965	1966
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— to make this unique probe

Size for size, this new oscilloscope probe represents as much development, as many new ideas and as much manufacturing know-how as a new scope.

It looks conventional—provides a prod or hooky connection to the circuit under test, and fits *any* scope with BNC connector (UHF/BNC adaptors are readily available). *But twist the nose* through 60° and the new Marconi Instruments probe switches from being a x1 'straight through' device to a 10:1 divider. In the x10 position, the probe has a passband of 50 Mc/s and presents a load of approximately 9 pF in parallel with 10 MΩ to the circuit under test. *Twist*

the nose to x1 and the circuit under test sees the oscilloscope input impedance direct with an additional shunt capacitance of about 55 pF due to the probe and cable.

The cable is as new as the probe (Provisional Patent 20955/64). Resistive cable inners usually take the form of very fine resistance wire which become open-circuit the first time they are jerked sufficiently to stretch the braiding. Not this cable. A silicone rubber outer sheath is fitted over the braiding, which is woven over a polythene tube. Braiding and tube determine the mechanical strength of the cable; and inside the tube the resistive inner conductor follows a sinuous path with only the peaks and troughs in contact with the tube. *Every point of contact is welded to the wall of the polythene tube by a patented manufacturing process*, and the result is a super-flexible cable of extremely low microphony, free from static build-up, resistant to accidental damage by hot soldering irons, docile and almost unbreakable in use.

There is no other oscilloscope probe like the new Marconi Instruments Type TM 8110. Please write or telephone for full technical and commercial information.

This new probe — and other oscilloscope accessories, are fully described in the latest issue of 'Marconi Instrumentation'. Are you on our mailing list for regular technical information?

TC 287

A GOOD NAME FOR GOOD MEASURE

**MARCONI
INSTRUMENTS**

MARCONI INSTRUMENTS LIMITED
ST. ALBANS · HERTFORDSHIRE · ENGLAND
TEL: ST. ALBANS 59292 · TELEX: 23350

Years advertised:

S and V 1965

The new Marconi



**The smallest, lightest 4½ in. Image Orthicon Camera in production
as simple to operate as an ordinary amateur photographic camera**

Years advertised:

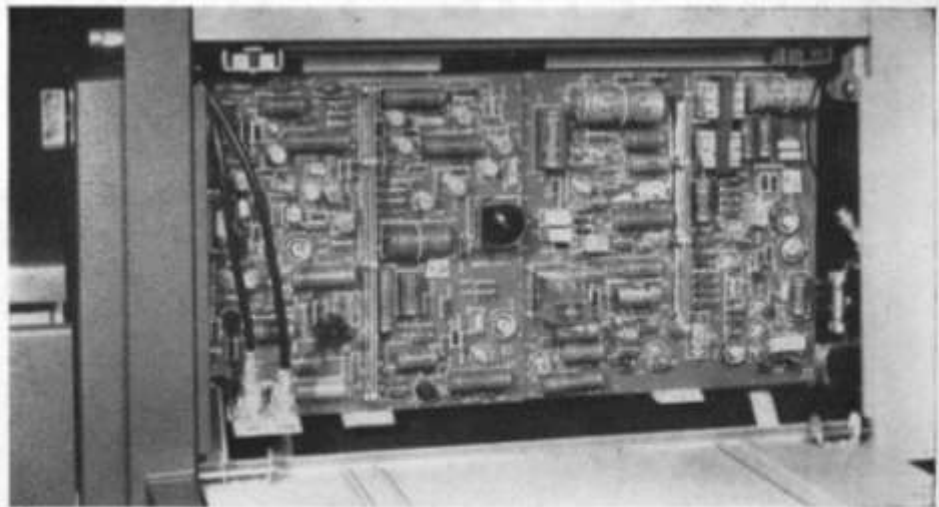
S and V 1966

MARK V solid-state television camera

The latest and most advanced in the line of 4½ in. Image Orthicon Cameras produced by Marconi's, who pioneered the use of this type of camera and have sold more than all other manufacturers put together.

ALL SOLID STATE

Silicon transistors used throughout the chain to give outstanding stability, and reliability. Constant output ensured despite mains variations, temperature changes or external fields. Easy access for tube changing. No image orthicon setting up controls



TILTING VIEWFINDER

Ensures most comfortable viewing position for all camera angles. Detachable up to 30 ft. from camera. Brilliant picture (200 ft.-Lamberts). Camera, external or mixed signals available at cameraman's choice.



OUTSTANDING PACKAGING

Single rack mounting camera control unit, control panel and power supply. Circuitry contained in seven plug-in printed wiring modules, giving easy front access for maintenance.



INTEGRATED ZOOM LENSES

Choice of servo or manually controlled zoom lenses gives infinitely variable focal length for exact picture framing. Simplified camera operation and improved programme continuity.



SIMPLE CONTROL

Simple compact control panel, four of which can be mounted on a console desk gives complete 'hands off' operation.

Marconi television systems

The Marconi Company Limited, Broadcasting Division, Chelmsford, Essex, England

LTD/944

Years advertised:

S and V 1966

THE FINEST PROMPTER mounted on THE FINEST CAMERA



Marconi Mk V

Autocue is used on over 3,000 television and film programmes annually in the U.K. and in twenty different countries
Distributed by the Marconi Company Limited, Chelmsford, England

Years advertised:

S and V 1966

Marconi Band IV/V television transmitters

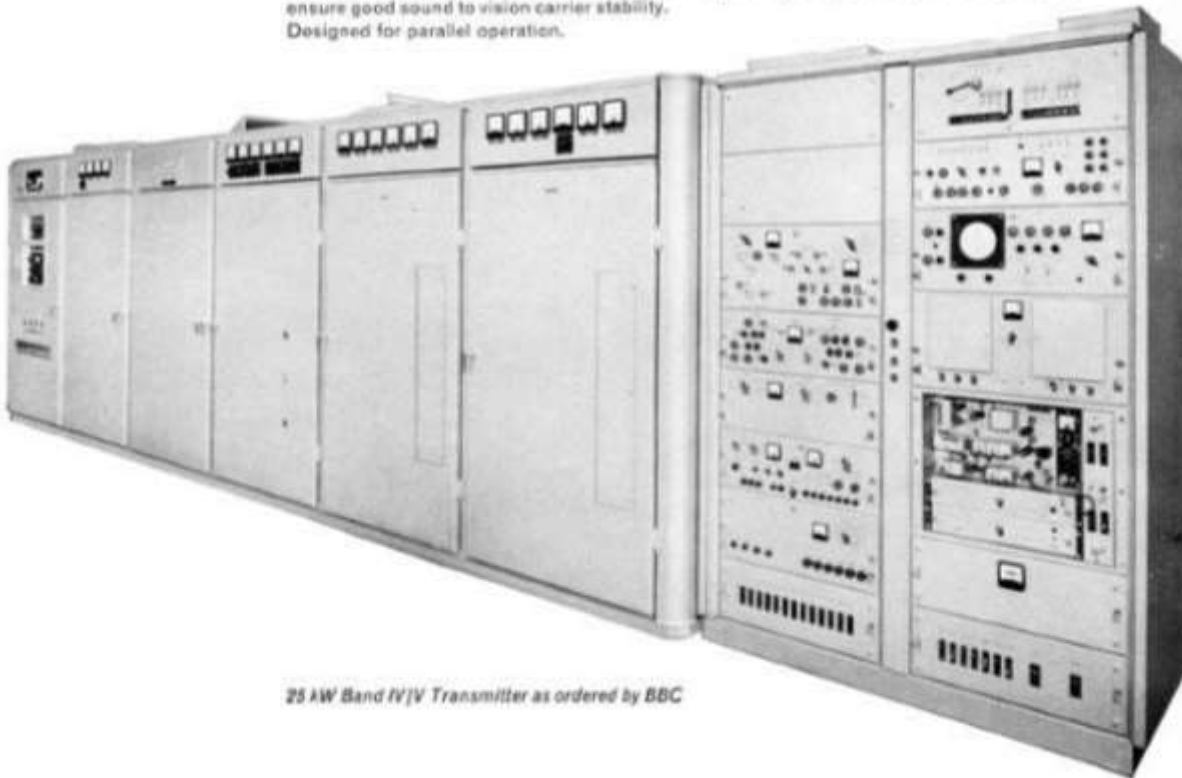
A universal drive transmitter and a range of amplifiers
up to 50 kW power rating

drive

Designed for colour with highly accurate independent adjustment of differential gain and phase.
Unique linear diode modulator operating on the absorption principle.
Sound and vision equipment integrated to ensure good sound to vision carrier stability.
Designed for parallel operation.

amplifier

Similar klystrons used for vision and sound amplifiers.
Air cooling employed up to 10 kW. Water cooled klystrons used for higher powers.
No back access required.
Specially designed for parallel operation.



25 kW Band IV/V Transmitter as ordered by BBC

Marconi television systems

The Marconi Company Limited, Broadcasting Division, Chelmsford, Essex, England

17D/830

Years advertised:

S and V	1966
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*Marconi Mark VII Colour Camera
equipment operating on hire to
T.V. Advisors (Racing) Ltd*

MARCONI COLOUR TELEVISION FOR HIRE

A complete studio and O.B. colour television service available including a team of fully trained and experienced engineers.

Fully operational Mark VII Colour Camera Channels—Colour Synchronizing Equipment—Colour Coders—Colour Switching—Colour Monitors—Colour Bar Generators—Grating Generators—Grey Scale Generators—Colour Pulse and Bar Generators—Video Tape Recorder.

Marconi's offer this hire service to assist television organizations to supplement existing services or equipment during periods of peak activity. Marconi service is also available to meet demonstration, installation, operational and maintenance needs.

The Marconi Company Limited
Broadcasting Division, Chelmsford, Essex, England

LTD 896

Years advertised:

S and V 1968

Marconi Mark VII
the 'hands-off' colour television camera
with the highest sensitivity



**OPTIMUM
OPERATIONAL FLEXIBILITY**

Ergonomically designed for optimum operational flexibility in studio and O.B. use.

Compact camera made from precision machined magnesium for light, rugged, rigid construction.

Lens package and viewfinder easily detachable for light carrying weight—ideal for difficult O.B. situations.

Sides hinge to give complete accessibility to all components.

Relay optics permit rapid lens change for maximum adaptability.

Highly manoeuvrable and adaptable to all cranes and dollies.

**Outstanding
Relay Optics**

Relay optics enable unique field lens to be fitted for high colour fidelity; the use of parallel yokes unaffected by extraneous magnetic fields; two independent filter wheels for control of light temperature and intensity; complete flexibility in choice of lenses.

**Highest
sensitivity**

Proved highest sensitivity. Optimum spectral distribution without need for electronic colour correction. Special

head amplifiers give high fidelity signal at source. Aperture correction applied to luminance channel for fine detail reproduction.

**Long term
'hands off'
stability**

Operates day-after-day with minimum adjustment. Rigid stability results from use of unique thin film circuits, and the highest quality components and most sophisticated circuitry. Unaffected by fluctuating magnetic fields of up to 10 gauss.



The Marconi Company Limited
Broadcasting Division,
Chelmsford, Essex, England

LTD/987

Years advertised:

S and V 1968

Marconi Mark VII the 'hands-off' colour television camera with the highest sensitivity



By courtesy of Teletape Productions, New York

OUTSTANDING RELAY OPTICS

Only *Relay Optics* enable unique Marconi field lens masks to be fitted. This cuts out stray light and scatter at the vital point, so that only light from the true image area falls on the tubes, giving higher fidelity colour.

Only *Relay Optics* allow light paths to be extended and directed to enable the use of more accurate and parallel yokes, giving better pictures unaffected by extraneous magnetic fields.

Only *Relay Optics* permit the use of lenses with short back conjugates, which give highest resolution throughout the system.

Only *Relay Optics* allow adequate space for the use of two independent filter wheels for control of light temperature and intensity.

Only *Relay Optics* give complete flexibility in choice of lenses.

Highest sensitivity

Proved highest sensitivity. Optimum spectral distribution without need for electronic colour correction. Special head amplifiers give high fidelity signal at source. Aperture correction applied to luminance channel for fine detail reproduction.

Long term 'hands off' stability

Operates day-after-day with minimum adjustment. Rigid stability results from use of unique thin film circuits, and

the highest quality components and most sophisticated circuitry. Unaffected by fluctuating magnetic fields of up to 10 gauss.

Optimum operational flexibility

Ergonomically designed for optimum operational flexibility in studio and O.B. use. Compact, rugged and light in machined magnesium. Easily detachable lens package. Highly manoeuvrable and adaptable to all cranes and dollies.



THE QUEEN'S AWARD TO INDUSTRY
1966 1967 1968

The Marconi Company Limited
Broadcasting Division,
Chelmsford, Essex, England

AN ENGLISH ELECTRIC COMPANY

LTD/9881

Years advertised:

S and V 1968

Marconi 4-channel vision mixer B3723

**A low-cost mixer ideal for
small studios and
O.B. units.**

- Suitable for colour
- Simple operation
- Cutting or cross-mixing
between 4 inputs with
fading
- Completely self-contained
in one small portable unit



Marconi television systems

The Marconi Company Limited, Broadcasting Division, Chelmsford, Essex, England

LTD:584

Years advertised:

S and V	1968
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Marconi Mark VII the 'hands-off' colour television camera with the highest sensitivity



By courtesy of BBC

HIGHEST SENSITIVITY

Proved to have the highest sensitivity of any colour camera available today.

Brilliant relay optical design gives optimum spectral distribution of light between the four tubes, eliminating the need for electronic colour correction, and consequent picture degradation.

Head amplifiers of advanced design, integral with the yoke, ensure high fidelity signal at source.

Horizontal and vertical aperture correction applied to luminance signal ensuring the reproduction of fine detail regardless of colour content.

Operated at f8 in 150 foot candles illumination with 60% scene reflectance, gives 42 dB signal to noise ratio.

Outstanding Relay Optics

Relay optics enable unique field lens to be fitted for high colour fidelity; the use of parallel yokes unaffected by extraneous magnetic fields; two independent filter wheels for control of light temperature and intensity; complete flexibility in choice of lenses.

Long term 'hands off' stability

Operates day-after-day with minimum adjustment. Rigid stability results from use of

unique thin film circuits, and the highest quality components and most sophisticated circuitry. Unaffected by fluctuating magnetic fields of up to 10 gauss.

Optimum operational flexibility

Ergonomically designed for optimum operational flexibility in studio and O.B. use. Compact, rugged and light in machined magnesium. Easily detachable lens package. Highly manoeuvrable and adaptable to all cranes and dollies.



THE QUEEN'S MAJESTY TO HER MAJESTY
1966 1967 1968

The Marconi Company Limited
Broadcasting Division,
Chelmsford, Essex, England

Member of GEC-
Marconi Electronics Limited

Years advertised:

S and V 1969

Mark of distinction

The Marconi Mark VII colour television camera

The Mark VII has been winning acclaim all over the world for its superb picture quality.

The Mark VII has won two awards—The Queen's Award for Industry (for technological innovation) and the Council of Industrial Design Award.

The Mark VII has achieved great export success—three quarters of all sales have

been overseas, to the value of more than £3M.

Austria	Mexico
Canada	Thailand
Denmark	USSR
E. Europe	USA
	United Nations

The Mark VII has been proving its superiority in both studio and outside broadcasts. Many of the outstanding colour pictures from the Olympic Games originated from the 20 Mark VII cameras used in Mexico.

The Mark VII has been given an even higher performance by the incorporation of F.E.Ts in the head amplifiers, new lightweight yokes, automatic light-scatter correction, and 2-D aperture correction.

High stability

Gives long-term 'hands-off' operation

Outstanding sensitivity

Operates at the same light level as ordinary black-and-white studios

Separate luminance

Gives crispest, clearest pictures

Brilliant optics

Give highest fidelity colour

Compact and lightweight

For great flexibility of operation



Top left: Mark VII in Moscow

Top right: Mark VII at Olympic Games

Above: Mark VII at WGBH Boston, USA



The Marconi Company Limited
Broadcasting Division, Chelmsford, Essex, England

Member of GEC-Marconi Electronics Limited

LTD/899

Years advertised:

S and V 1969

Marconi television cameras

Marconi pioneering in camera design has resulted in the production of a range of fine cameras, which have achieved outstanding success throughout the world. More than 2000 live broadcast camera chains have been sold to 50 countries.

Mark V 4½ inch image orthicon camera Type B3100

Marconi pioneered the use of the 4½ in image orthicon camera, the standard by which all other black-and-white cameras have come to be judged, and have sold nearly 1500, considerably more than any other manufacturer. The Mark V is the latest in the line of Marconi 4½ inch image orthicon cameras.

All solid state

Tilting highbrightness viewfinder

Servo or manual controlled integral zoom lens

Rigid stability



Left: Mark V camera in operation in Amman Studio of Jordan TV



*Below left: Mark VI in use in a studio
Below: Mark VII in operation at WGBH Boston, USA*

Mark VI photoconductive camera Type B3124

The Marconi Mark VI, designed to work with either vidicon or Plumbicon® can be used as a high-quality studio or outside broadcast camera; a manually or remotely controlled news and continuity camera, or a telecine camera.

High sensitivity

Excellent signal-to-noise ratio

All solid state

Lightweight modular construction

Mark VII 4-tube colour camera Type B3205

The Mark VII was the first successful four-Plumbicon® colour television camera in the world. It has earned a high reputation for excellent picture quality and high stability.

High stability

Outstanding sensitivity

Separate luminance

Brilliant optics

Compact and lightweight

**Registered trademark Philips Gloeilampenfabrieken*



The Marconi Company Limited
Broadcasting Division, Chelmsford, Essex, England

Member of GEC-Marconi Electronics Limited

LTD1093

Years advertised:

S and V 1969 1970

Marconi telecine

Colour and black and white

Full facilities telecine

Type B3402

Offers unrivalled facilities for the reproduction of colour and black-and-white 35mm and 16mm film and slides.

Correction for badly exposed films

Reproduction of *negative colour* film

Colour masking for improved colour reproduction

Automatic projector operation

Lamp-houses with automatic lamp-change

Reverse running

16mm telecine equipment

Type B3400

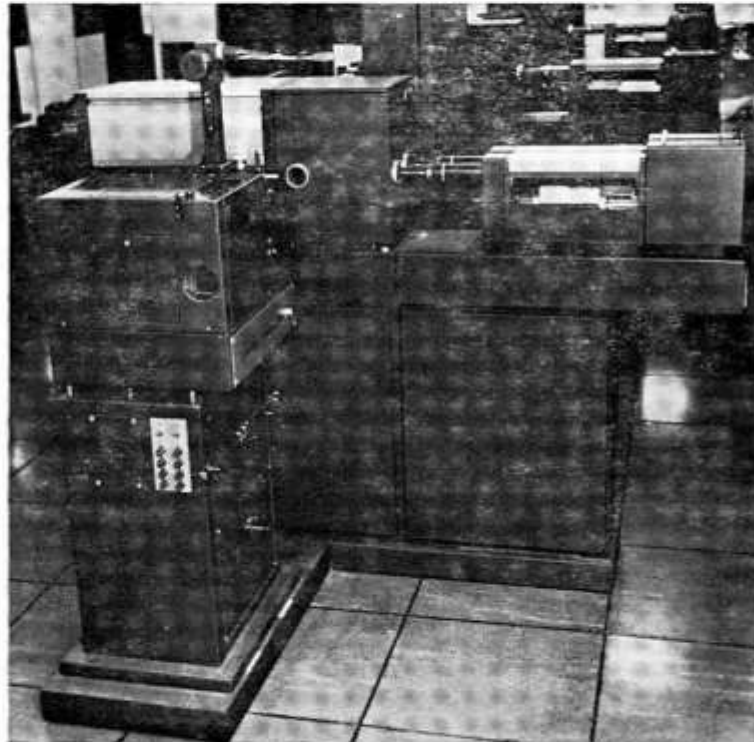
Provides ample facilities for the reproduction of black-and-white film and slides, and is an ideal equipment for the smaller station.

Remote control

Simple, highly reliable optical system

High quality reproduction

Positive and negative film reproduction



Right: Three Marconi B3402 full facilities telecine's at Yorkshire TV Studios, Leeds.



Above: Telecine Room at Channel 13 in Mexico City, with Marconi B3400 16mm telecine in the foreground and the B3402 full facilities telecine on the right.



The Marconi Company Limited
Broadcasting Division, Chelmsford, Essex, England
Member of GEC-Marconi Electronics Limited

LTD/894

Years advertised:

S and V 1969

Marconi complete television transmitting systems

BAND IV/V TRANSMITTERS

Television is rapidly expanding into the u.h.f. band. Marconi have produced a range of u.h.f. transmitter amplifiers from 10kW to 55kW, using a common solid-state drive.

5 or 10W band IV/V drive transmitter Type B7311

Completely solid-state to 5W;
Additional valve amplifier to 10W
High stability
Corrections extend into sync. region
Unique diode modulation gives optimum linearity for colour

55kW/40kW band IV/V television transmitter Type B7318

High gain integral 5-cavity klystrons
Double power by paralleling
No tubes except klystron

40kW Band IV/V television transmitter Type B7309

10kW band IV/V television transmitter Type B7315

Four-cavity vapour-cooled klystrons used in video and sound amplifiers
Easily paralleled

25kW band IV/V television transmitter Type 7301

Similar water-cooled 4-cavity klystrons used in video and sound amplifiers
Easily paralleled

U.H.F. combining unit system Type B8144 Series

For combining video and sound signals, r.f. power monitoring and coaxial switching

Multichannel U.H.F. combining unit Type B8145

Enables up to four separate u.h.f. television channels to combine into one transmission line to a single wideband aerial

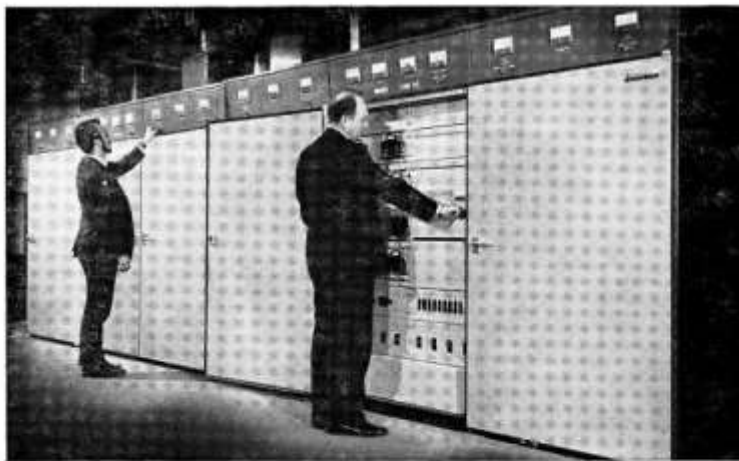
Wideband U.H.F. television aerial Type B8241

Accepts up to 4 channels simultaneously
Gains from 18 to 52 times
Virtually circular radiation pattern

COMPLETE V.H.F. TRANSMITTING SYSTEMS

Marconi also produces a complete range of Band I and III transmitting equipment, suitable for colour, which is giving reliable service in nearly 40 countries throughout the world

*Below: 40kW Band IV/V transmitter at Uddevalla
Bottom left: 10kW Band IV/V transmitter at Varberg
Bottom right: Two 55kW Band IV/V transmitters in parallel*



The Marconi Company Limited
Broadcasting Division, Chelmsford, Essex, England
Member of GEC-Marconi Electronics Limited

LTD/897

Years advertised:

S and V 1969 1970

Marconi studio planning

Marconi have a complete range of television studio equipment and the experience, based on hundreds of installations throughout the world, to plan and install large and small centres.

Complete television sound systems

Complete range of television cameras

Mark V Image Orthicon Camera

Mark VI Photoconductive Camera for

Studio, OB or telecine application

Mark VII Four-tube colour camera

Complete range of camera lenses and mountings

Black and white, and colour telecine for large and small studios

Complete range of colour, and black and white monitors

Vision mixers and switching systems including completely solid-state vision mixers

Special Effects equipment

Complete television studio communications systems

Synchronizing and auxiliary equipment



Top: Studio control room, Amman Studios of Jordan TV

Left: Master control room, Channel 13, Mexico City

Below: Granada Television control centre



The Marconi Company Limited,
Broadcasting Division, Chelmsford, Essex, England
Member of GEC-Marconi Electronics Limited

LTD/398

Years advertised:

S and V 1969