



# T.V.T. LTD. Presents

## The "Cambridge" Low Cost Television Installation

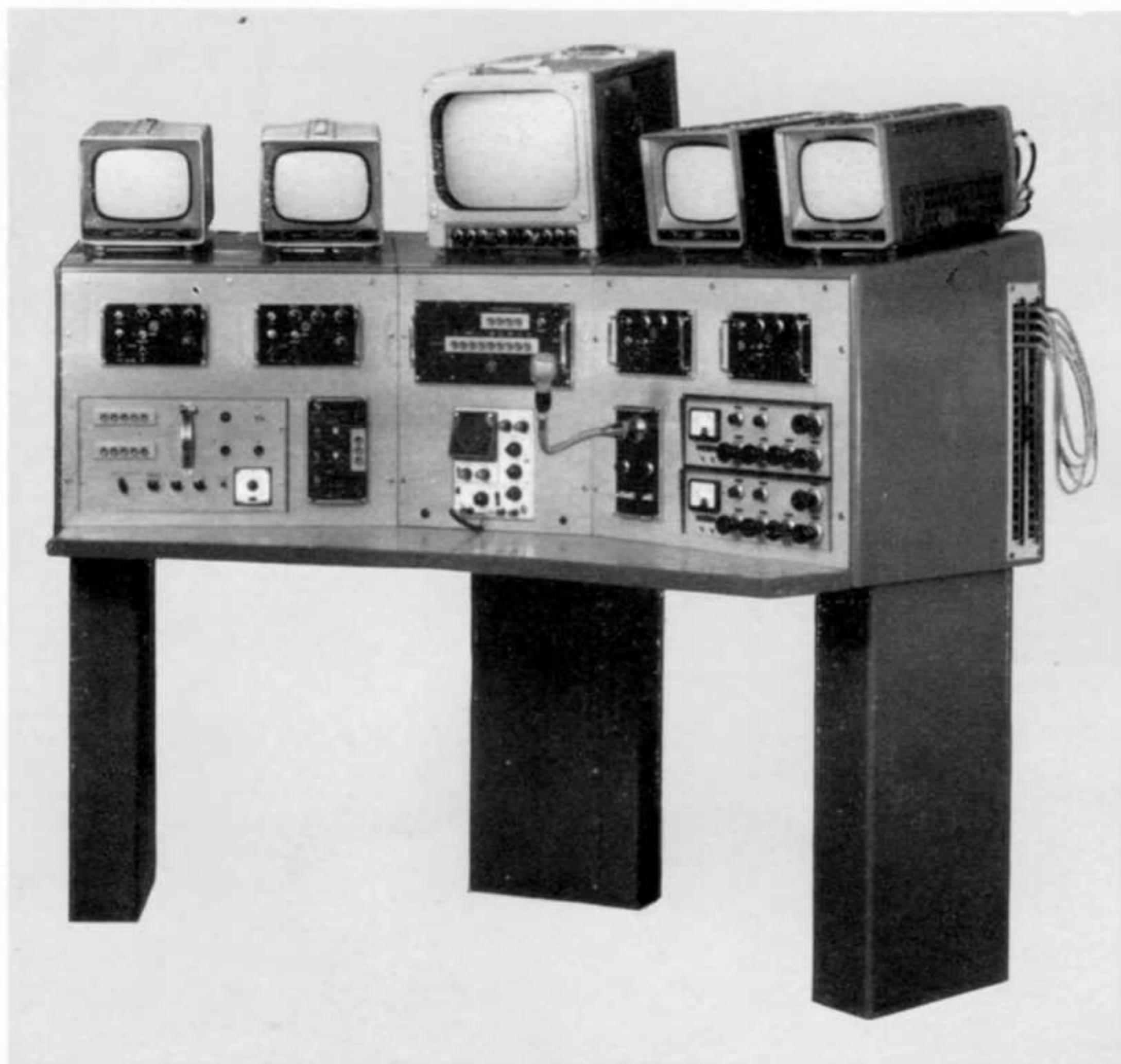


*View of control room and studio during transmission.*

### Features

- ★ May be installed either in special building of simple design or in suitable existing building.
- ★ Produces programmes from two-camera studio or from professional 16 mm sound film projectors.
- ★ Provision for use of Outside Broadcast or Network programmes.
- ★ Studio cameras equipped with electronic viewfinders, 4-lens turrets, transistorised talkback, etc.
- ★ Uses two high quality 35 mm slide projectors each with a magazine capacity of 30 slides.
- ★ Equipment is easy to operate and maintain.
- ★ Staticon camera tubes used in studio and teleciné cameras; hence low running costs.
- ★ Interchangeable units and standard components used.
- ★ Simple centralised system of programme control with mixing and monitoring facilities on sound and vision.
- ★ Employs electronic vision mixer with dual quadrant faders.
- ★ Sound system uses two interchangeable latest-type transistor 4-channel audio mixing units in flexible arrangement.
- ★ Twin synchronising pulse generators with emergency change-over facility.
- ★ Two professional transcription units provided giving high fidelity disc reproduction.
- ★ Lighting equipment for single set provided.
- ★ Full range electrostatic loudspeakers provided for use in control room and studio.





*Control Desk showing 14 inch Precision Monitor (centre) with studio camera and teleciné camera monitors on either side.*

- ★ Station will operate on either F.C.C. or C.C.I.R. systems.
- ★ Includes vision and sound transmitters and 100 ft. (30 metres) stayed mast complete with omni-directional radiator and feeders.
- ★ Service area adequate for large community or university centre.

#### GENERAL

Pye T.V.T. Limited, one of the world's leading manufacturers of television and sound broadcasting equipment have designed a simple, low-cost television installation for use where large-station-type equipment is not required.

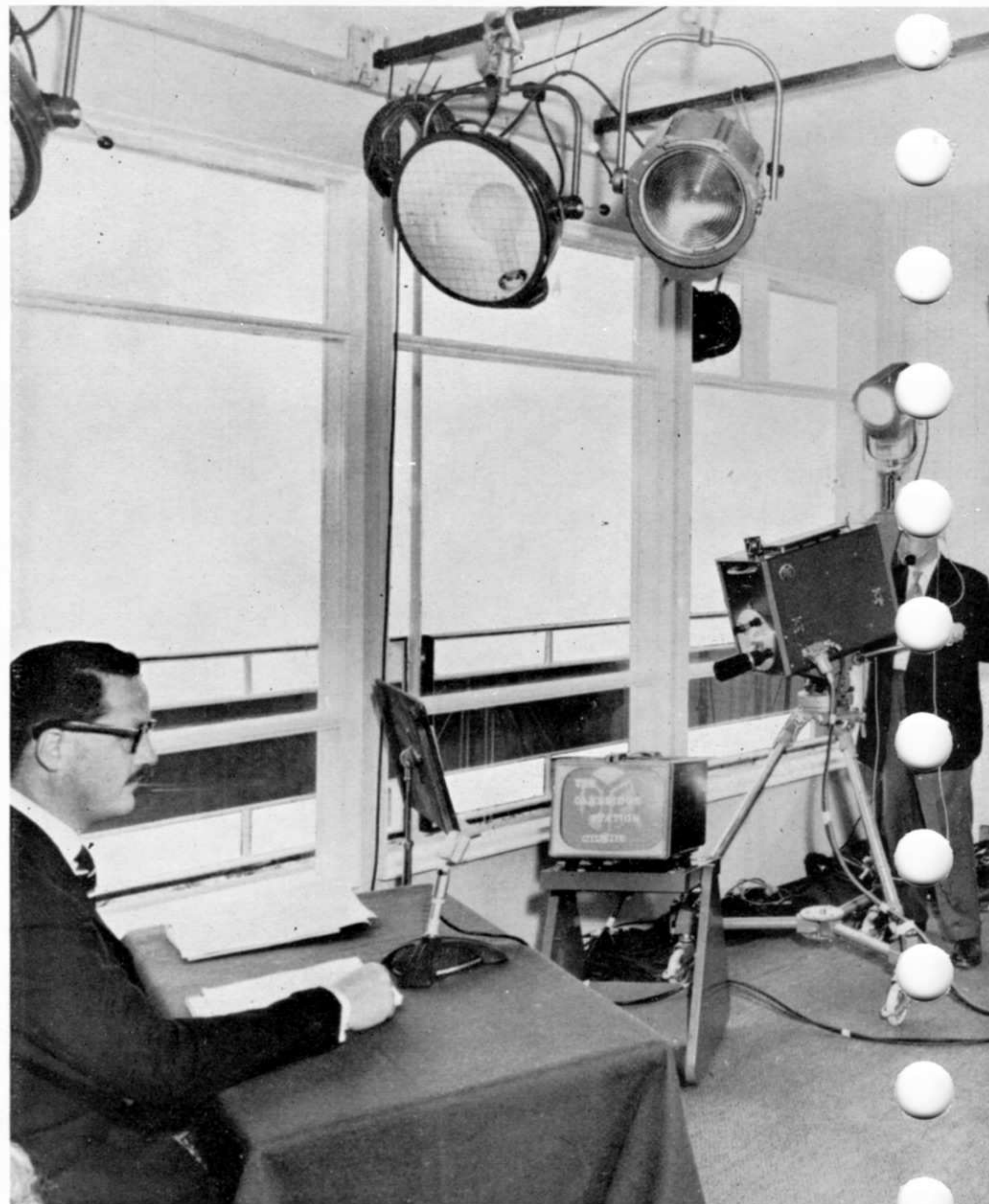
*Rear view of studio camera showing electronic viewfinder, focus and turret controls and talkback headset.*



The installation as planned is ideally suited for pioneering in the important new field of educational television broadcast development as it provides the basic technical facilities in their simplest and most reliable form.

The possibility of using remote sources of programme material has been envisaged and provision has been made for selecting these in the master control system.

Considerable attention has been given to keeping the operating costs at a minimum. For example, the control desk layout makes



*A typical studio arrangement during a station announcement. The camera right is preparing to transmit.*

it possible for one trained assistant to run the station during off-peak periods. Apart from production personnel, full programme presentation would not call for more than two camera operators and two control room assistants.

The equipment can be housed in a building of simple design, or alternatively may be installed in a suitable existing building. The control room should adjoin the studio and have a large double-glazed window in the separating wall. The height of the studio should be sufficient for the erection of the simple lighting system.

#### PROGRAMME SOURCES

1. Live from two studio cameras.
2. Film from two 16 mm teleciné projectors.
3. Slides from two 35 mm slide projectors.
4. Provision for switching to programme from Outside Broadcast Unit or distant station (Network).



5. Sound from four studio microphones.
6. Sound from one or two disc transcription units.
7. Background music, "effects" etc. may be played over wide range electrostatic studio loudspeaker.

#### PROGRAMME CONTROL

The equipment permits the following functions to be carried out by the control desk operator.



Camera on the left is lined up on a caption card while the camera on the right is on the picture of announcer.

#### Master Control Panel

The programme to be routed to the transmitter is selected by a 4-position switch as follows:—

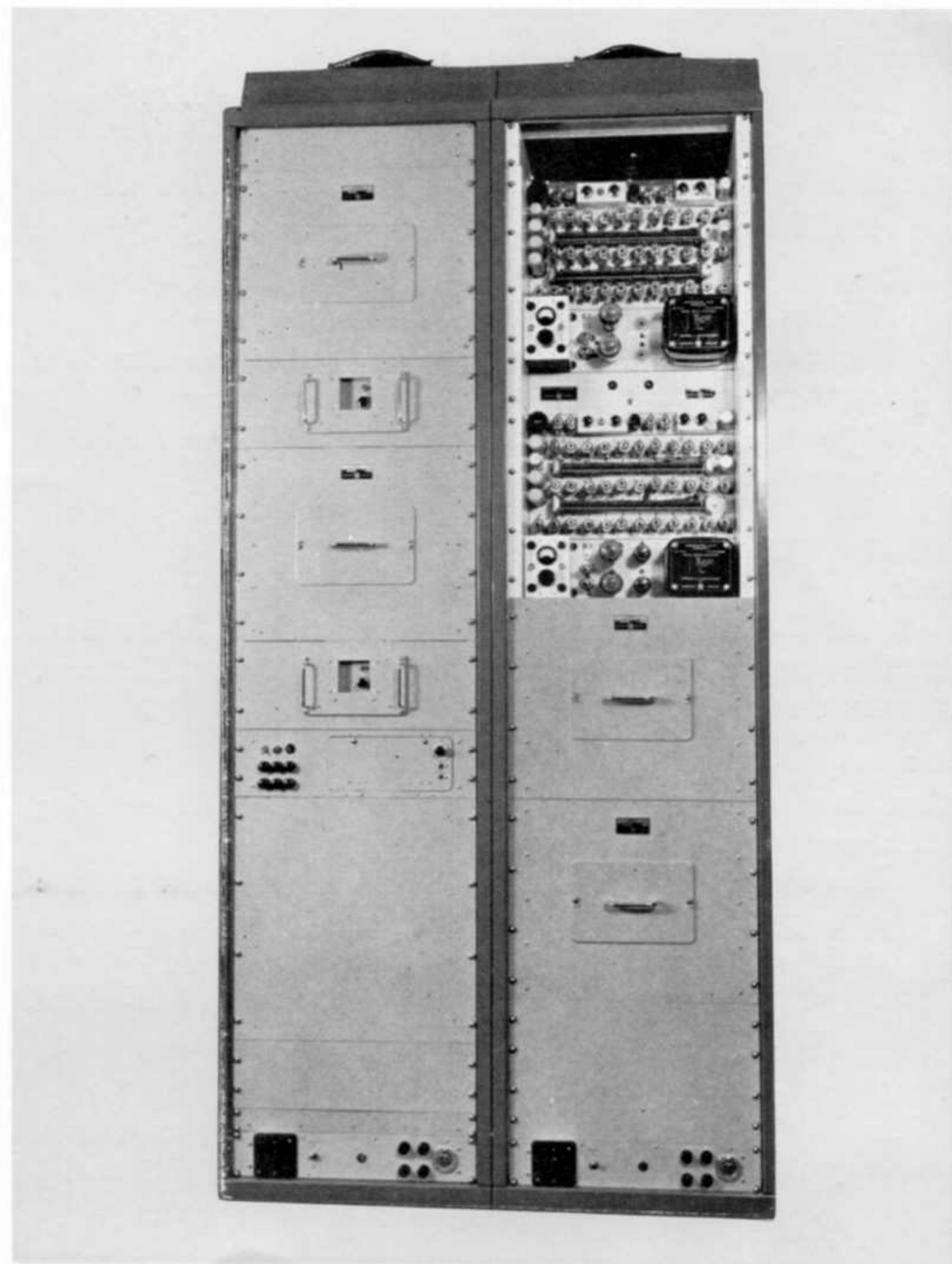
1. Off (no input), for Rehearsals.
2. Local (Any local programme source).
3. Remote (Outside Broadcast or Network).
4. Test Signal Generator (if provided).

#### Video Mixing Unit

The video mixing unit gives control over the local picture sources. It provides cutting and fading between any of the four inputs (Camera 1, Camera 2, Teleciné 1 and Teleciné 2). A facility is also provided for superimposing two pictures.

Cutting between sources is effected by two rows of push-button switches, and fading by two quadrant faders.

An emergency switching and sync mixing system is provided for use in the event of a failure of the mixer.



The twin cubicle assembly contains the synchronising pulse generators and four camera control units.

#### Teleciné Control Panel

1. Pushbuttons "Stop", "Show" and "Run" for each 16 mm projector.
2. Selection of output from either film projector.
3. Selection of output from either slide projector.
4. Slide changing may be forward or reverse.

Two transcription units similar to unit shown below are supplied.





## Audio

Sound signals are available from :

1. Four studio microphones selected either individually or combined as a group.
2. One or two transcription units with combined output.
3. Two teleciné sound sources (one for each projector).

## Facilities

Fading and mixing between 1-3 above.

Jackfield routing of audio signals provides alternative arrangements.

Interlocked vision and sound switching between teleciné projectors at changeover of reels.

## PROGRAMME VARIETY

### Studio

The possibilities include station announcements, interviews, discussion groups, panel games, "quizzes", plays, lectures, demonstrations, etc.

### Telecine

A wide range of material is available on 16 mm film covering entertainment and educational requirements.

The equipment will produce pictures from either positive or negative film (the latter facility saves processing expense when using locally produced material).

Sound is reproduced optically from either positive or negative film or from magnetic stripe sound film.

### Slides

Slides may be monochrome or coloured. Projector magazines have a capacity of 30 slides each.

## STATION RANGE

Factors affecting the service area are:—

Transmitter Power.

Height and gain of aerial.

Nature of terrain.

For a low power installation the service area may equal the horizon distance if the site is well situated on flat terrain. The equipment supplied is sufficient to serve a community, university centre or a small island. The standard aerial is omni-directional, but directional aerials may be supplied at extra cost to meet special conditions, e.g. station located on high ground at end of valley with service area extending in one direction, as river estuary community, etc.

## LOW INSTALLATION, RUNNING AND MAINTENANCE COSTS

Uses latest type fully developed staticon camera channels economically adapted for studio purposes.

Standard units are used where possible.

Equipment may be installed in suitable existing building if available.

Expensive testing and setting up equipment not required.

Factors contributing to low running costs are:—

Use of staticon camera tubes throughout.

Simple station running procedure—one operator may run station during off-peak periods.

Requires services of one technician only to supervise maintenance and training of assistants.

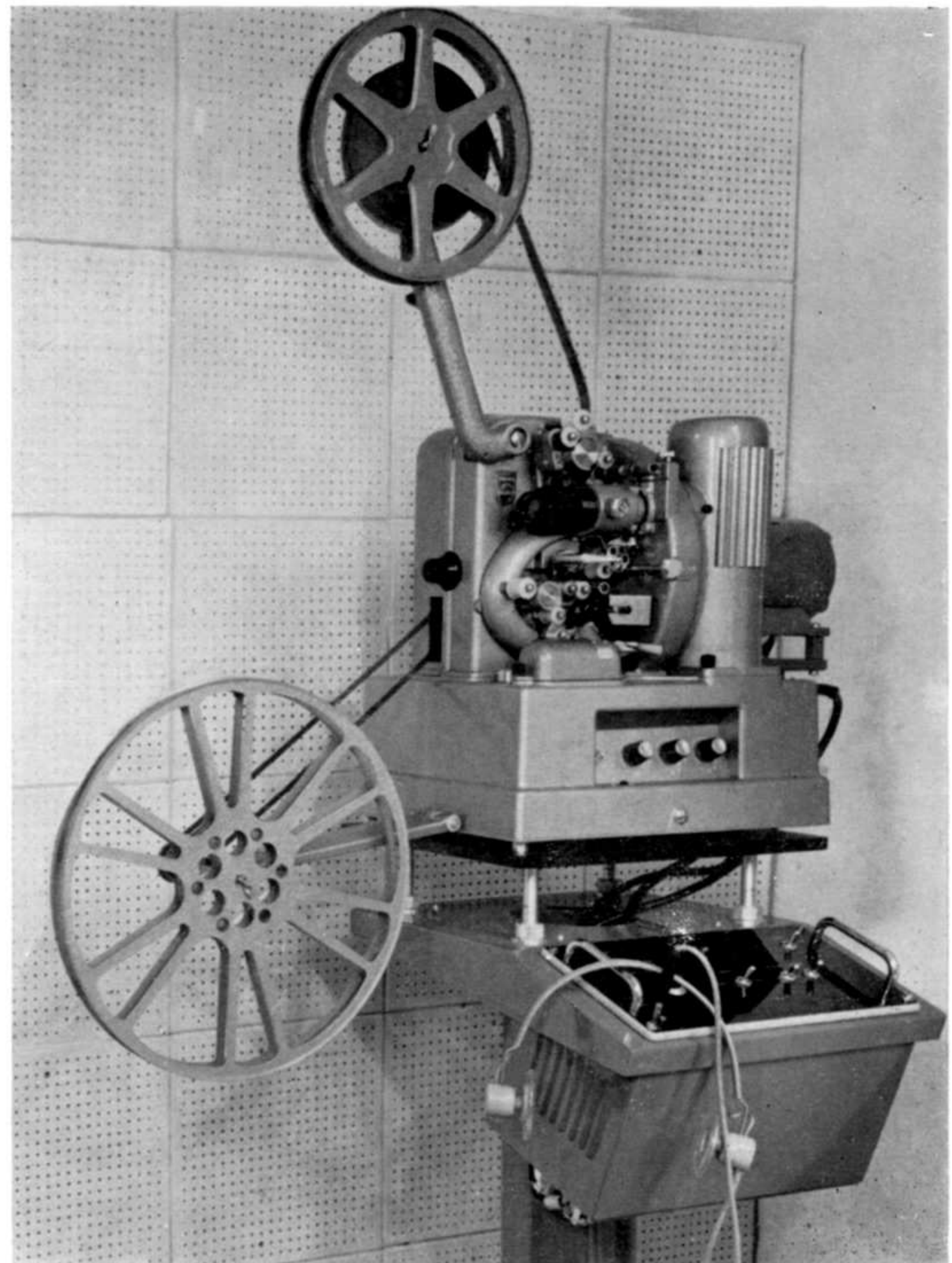
Low power demand from singlephase a.c. supply

6 kVA for equipment.

10 kVA for standard lighting.

Low maintenance costs due to:—

Use of developed and proved units, interchangeable



*Two complete teleciné sets are supplied each incorporating 'Staticon' camera units and the Philips 16 mm projector Type EL 5001/88 shown above.*

through plug and socket connections, e.g.

Standard 8½" monitors used as electronic viewfinders in studio cameras and also on control desk as channel monitors. Two standard transistor 4-channel audio amplifying and mixing units in flexible multi-channel system. Standard, readily available components used throughout.

## HIGH OPERATIONAL RELIABILITY

Essential station waveform generating equipment duplicated, with emergency changeover switch on control desk.

Standard camera heads used in studio and teleciné.

Twin projectors for film and slides.

Two identical disc reproducers.

Two identical transistor audio mixing units each incorporating a Programme Meter and integral tone and power unit.

Patching system for emergency re-routing of audio signals.

Electronic type vision mixer may be by-passed in the event of failure during programmes.

## EASE OF OPERATION

Specially designed for operation by non-specialists.

## MONITORING

Picture signals from all sources may be examined on precision picture monitor or on waveform monitor (both incorporated in control desk).

Picture or waveform check on transmitter output.

Remote input monitoring.

High quality full range electrostatic loudspeaker monitoring of transmitter input.

PYE T.V.T. LIMITED

CAMBRIDGE ENGLAND

Telegrams and Cables: TeeVeeTee Cambridge

Telephone: Cambridge 58985

Telex 81105