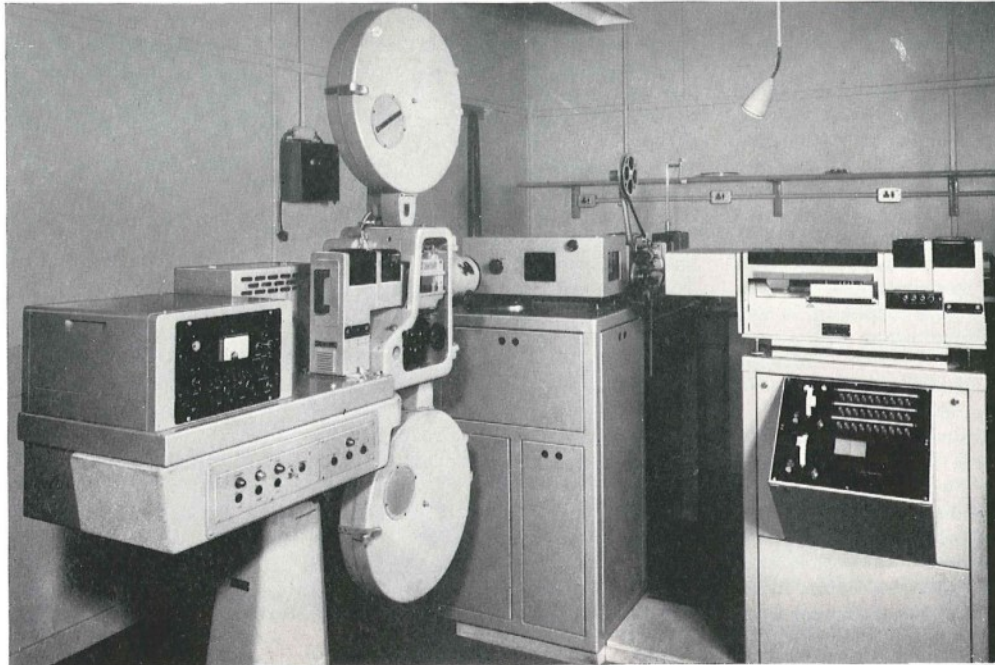




Vidicon Telecine Channel Type B 3451 (BD 922)



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TYPE B 3451 Telecine Channel is based on the use of a large-size pellicle multiplexer Type B 3412 and a Vidicon Camera Channel Type B 3097 (see page 66). The standard equipment uses the 16 mm Projector Type B 3420, the 35 mm Projector Type B 3430 (both described later) and a dual Slide Projector Type B 3440 (see page 78). However, as alternatives the 16 mm Projector Type B 3421 and Teloprojector Type B 3441 may be used with this system if required.

Features

Simple optical system of high efficiency.
Field lens image 6 in. (15.2 cm) diagonal.
Unique automatic light control.
Excellent operational facilities allowing control of several channels from one position. Full remote control available.
Compact layout, easy servicing and standardization of unit with studio cameras.
Facilities for sound interlock and automatic starting available.

Specially designed sound channels with optical and magnetic inputs. Automatic level and light control makes operation very simple.

EQUIPMENT

The standard B 3451 Telecine Channel comprises:

- One B 3412 Pellicle Optical Multiplexer with pedestal suitable to give a standard 48 in. optical centre height.
- One B 3097 Vidicon Camera Channel which comprises:
 - One camera head.
 - One regulated power supply.
 - One camera control unit.
 - One camera control panel*
 - One studio console.
 - One set of cables.
 - One camera cable, 20 ft, 90° socket.
 - One lens, 2 in. $f/1.9$ focus mounting.
- One 35 mm Projector Type B 3430 with 3000 ft spoolboxes optical and/or magnetic head, sound amplifier, local control panel and Marconi lamphouse.

One 16 mm Projector Type B 3420 with 4000 ft spool capacity, optical and magnetic heads, sound amplifier, local control panel and Marconi lamphouse.

One B 3440 Dual Slide Projector on special pedestal with local mains switching and fusing.

One 24 V Power Supply Unit Type B 4203.

Two studio consoles mounting:

- One Picture and Waveform Monitor.
- One Loudspeaker Switching Panel (only required if two or more telecine equipments are installed to be operated from one remote position).
- One Sound Control Panel.
- One Remote Control Panel.
- One set of connectors.
- One set of spare film reels, test film and slides, etc.

Optional additions include:

- Sound interlock (by addition of a Selsyn Motor).
- Automatic Sound Gain Control.
- Automatic light control.
- Interlock patching panels.



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B 3421 16 mm projector which can be supplied as an alternative to the B 3420 (see opposite).

6000 ft (35 mm) spoolboxes.
Caption attachment for 12×9 in. (30.5×23 cm) captions.

Second channel

The control of two complete telecine channels is arranged from three adjacent consoles suitable for operation by one technician. Ample panel space is available for talkback and other communication facilities.

The outer consoles carry the vidicon control panels and monitors while the central control mounts:

- One Loudspeaker Switching Panel.
- Two Sound Control Panels.
- Two Remote Control Panels.

16 mm Telecine Projector Type B 3420

This is a modified version of the Philips Type EL 5001 projector which is one of the few 16 mm projectors using an intermittent film drive. The projector is fitted with a Marconi lamphouse.

The standard projector has both a magnetic and an optical head and this latter can be focused rapidly to each side of the film to deal with normal or reversal film.

Marconi sound pre-amplifiers are used, one for optical and the other for magnetic sources. Each has an output of -20 dBm at 40% modulation and the required signal is selected by a switch at the projector

before being fed to the sound control panel for final amplification and processing.

The projector has a heavy metal base and is mounted on a substantial metal pedestal which contains the sound amplifier and local control panel. Spool capacity is 4000 ft (1220 m) (20.5 in. (52 cm) spool diameter) and provision is made for a test loop up to approximately 14 ft (4.3 m) long. The pedestal can also contain interlock motors when required.

35 mm Telecine Projector Type B 3430

This is a modified version of the Philips Type FP 7 projector with a Marconi lamphouse providing automatic light control. Drive control and sound channel are as for the 16 mm projector. Modifications are made to shutter, lens and mounting base for telecine operation.

A heavy cast pedestal supports the projector giving the standard lens centre height of 48 in. (122 cm). Spool capacity is 2000/3000 ft (610/915 m) as standard or 4000/6000 ft (1220/1380 m) to special order.

The Marconi Lamphouse

A special lamphouse is used on the projectors and has provision for automatic light control. This permits the lamp to be operated at a constant colour temperature while giving rapid control of the light level to compensate for changes in film density. A

unit is available as an extra facility which controls the associated shutters to maintain constant peak-white vision output.

16 mm Projector Type B 3421

The B 3421 Projector is available for operators who do not require the full facilities offered by the B 3420 Projector.

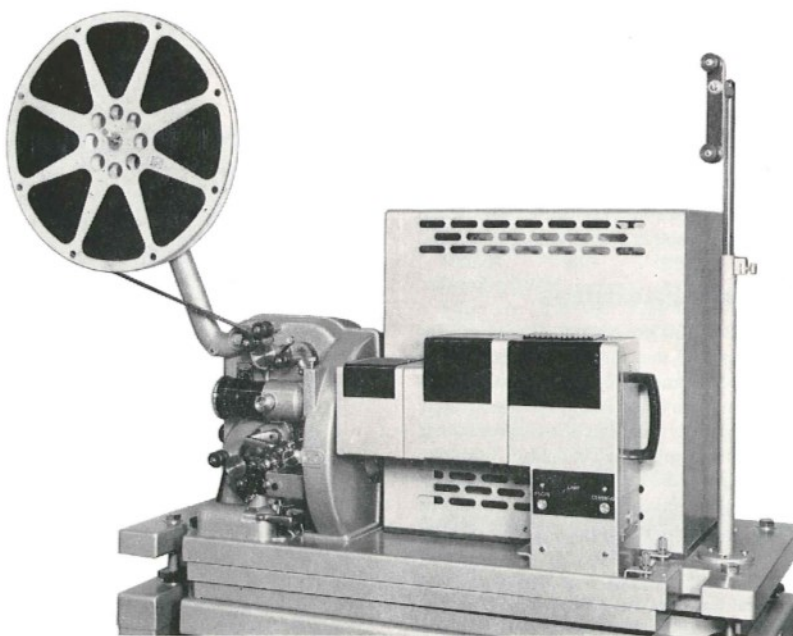
Although the two units have similar mechanisms, there are differences in the drive system, and the lamphouse and sound amplifiers are not included. The differences give a reduced performance when compared with the exceptionally good performance of the B 3420. In addition, automatic light control or Sepmag facilities are not provided.

Telojector Type B 3441

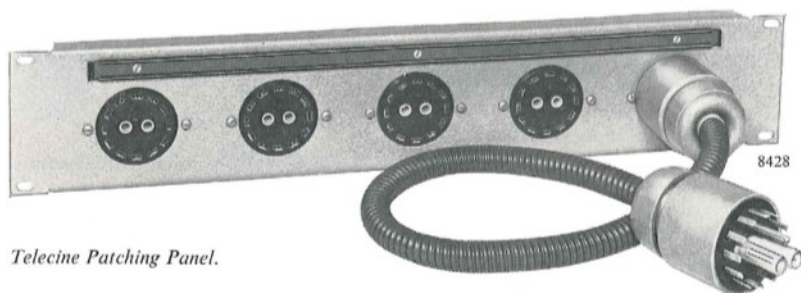
This slide projector is offered in place of the B 3440 Slide Projector where only limited slide facilities are required. It has a total capacity of twelve slides, six on each disc. The unit is mounted on a pedestal giving a lens height of 48 in. (122 cm). The unit does not use the Marconi Lamphouse, therefore target control of the vidicon camera must be used rather than light control.

Optical Multiplexer Type B 3412

This multiplexer employs two pellicle semi-mirrors and a fully-silvered mirror in a



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Telecine Patching Panel.

sealed box provided with silicagell desiccators. In the box is the field lens, windows being provided for the three inputs.

An external slide-holder close to the field lens carries a test pattern (normally MRI) and, with light from any projector, this may be used to set up the camera channel. The slide, 3.6 × 4.8 in. (9 × 12.2 cm), provides an accurate and simple means of standardizing scans and other camera controls.

This arrangement keeps a compact assembly in spite of long optical paths and avoids the use of an inefficient optical system.

Control System

Each machine has a panel giving local/remote switching and RUN, SHOW and OFF buttons and cue lamps.

The remote-control panel has two sets of RUN, SHOW, OFF buttons for the film projectors, and ON, OFF, CHANGE buttons for the slide projectors. Internal cue lamps indicate the present state of control. Remote control can be extended to studios, etc., by additional remote-control panels and a simple patching or switching system.

For interlock working, the control panel at each machine has INCH, ON, OFF buttons and a cue light showing when interlock is operating.

For interlock patching, the panel allows sound, interlock and control circuits to be patched in a single operation.

Sound Facilities

Identical sound pre-amplifiers are used for the 16 and 35 mm machines (Type B 3420 and B 3430 respectively). The selected output from these is fed into the sound control panel where it is amplified to standard level. This panel will accept inputs from two projectors and two associated sound followers at either -20 dBm or 0 dBm. The required signal is automatically selected with the projector. Equalization at 60 c/s and 10 kc/s can be switched-in at pre-selected levels up to ±10 dBm, and a gain control is provided. An automatic gain

control unit is available as an optional extra.

Sound monitoring can be done by either a v.u meter, a peak-programme meter and by headphones or an external amplifier and loudspeaker. When two or more systems are installed for operation at the same remote control point, a loudspeaker switching panel is required. This provides selection from four channels or a station output—a loudspeaker gain control and a loudspeaker dim switch.

Sound Follower

This is a Westrex 16 mm sprocketed tape machine fitted with a 20Y/20Y50 sync. interlock motor. It has spools of 1200 ft (360 m) capacity and occupies a single cabinet.

Marconi

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