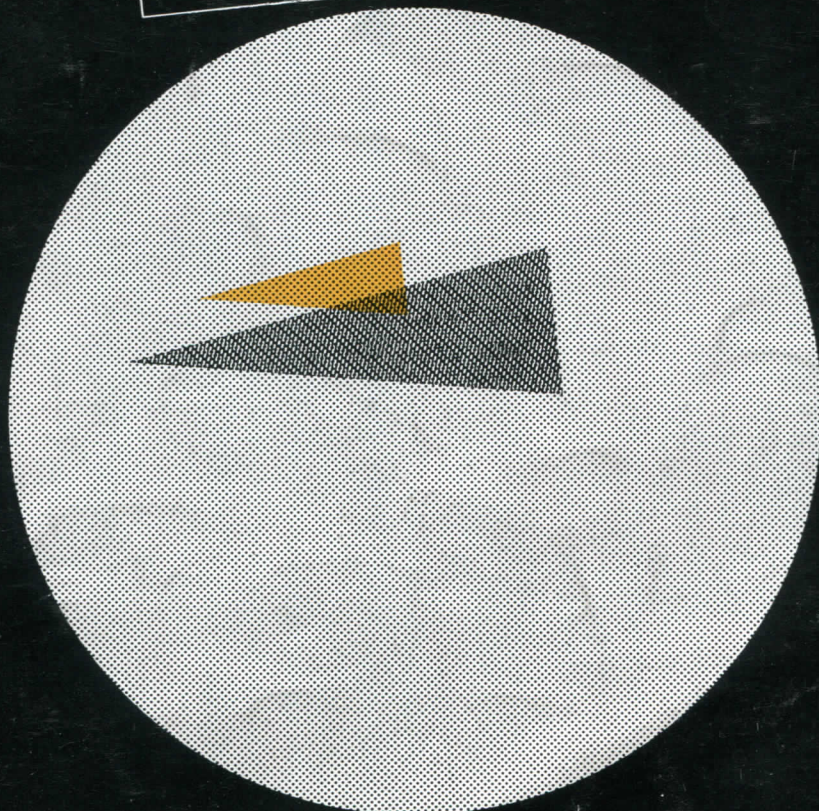


the
highest
standard
in

16 mm

BELL & HOWELL
FILMOARC
16 mm PROJECTOR 609

film
presentation



designed
for
theatre
-quality
performance

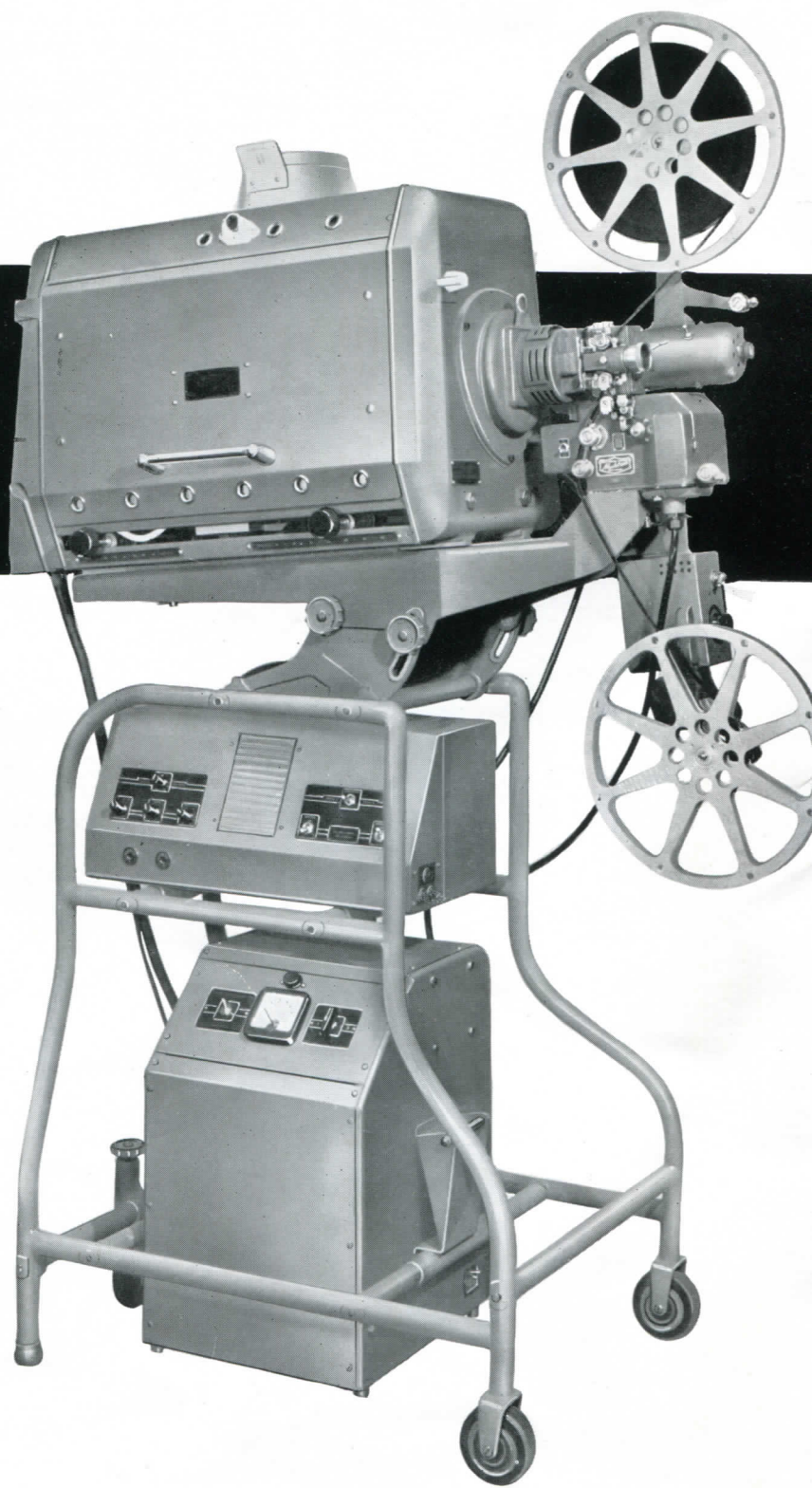
BELL & HOWELL
FILMOARC
16 mm PROJECTOR **609**

Universally acknowledged as the finest in its class, the Bell & Howell Filmoarc 609 sets a performance standard which is unequalled in the field of 16 mm. film projection. Engineered throughout as an arc projector, it combines operational simplicity with powerful, high-intensity arc or Xenon lamp illumination and superb, undistorted sound reproduction to accommodate the largest audience.

Operation of the Filmoarc is safe and straightforward—no specialised skill or knowledge is necessary and its many outstanding features ensure complete film protection, correct threading and ease of maintenance. For transportation the complete equipment is easily and quickly dismantled into several small units without the use of tools.

The brilliant design of the Filmoarc makes it the ideal installation for the static cinema, school, hospital, church hall, industrial establishment and for all locations where maximum picture and sound quality are the first essentials.

Made by the largest manufacturers of quality motion picture equipment in the world, the Filmoarc is built to the high standard of precision which is the hallmark of all Bell & Howell products—a standard that guarantees superior performance for years to come.

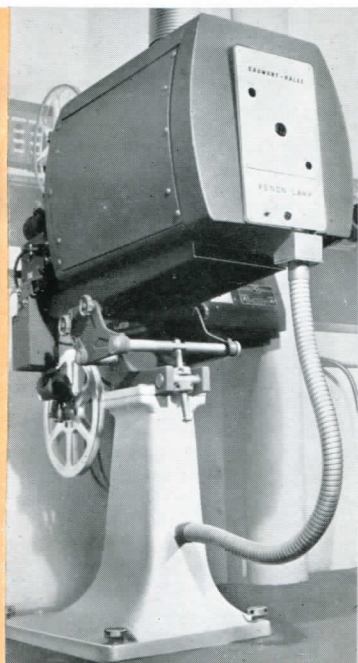




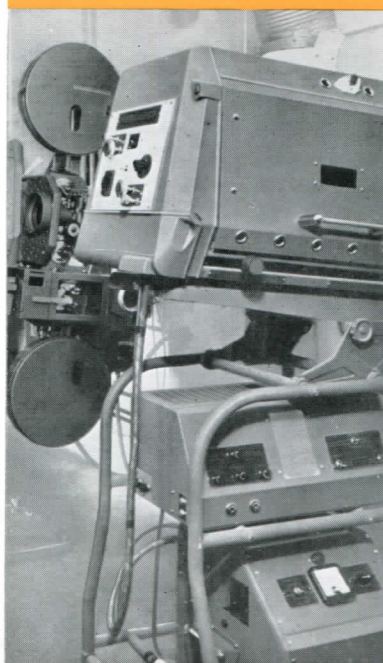
Installed at Leicester University (below)

The Percy Gee building at Leicester University uses the Filmoarc 609 in this magnificently appointed theatre/lecture hall. The entire installation was designed by Rank Precision Industries Limited to facilitate removal and dismantling of the seating and proscenium when the hall is required for other purposes.

Whitbread's Modern Cinema (above)



This comfortable, well-designed cinema in the basement of Whitbread's brewery in the city is equipped with the Filmoarc 609 for perfect presentation of 16 mm. films. The 35 mm. equipment was also supplied and installed by Rank Precision Industries Limited, who offer a comprehensive service in the design, supply and installation of everything for the theatre, lecture hall or church, including screens, seating, curtains, carpets, lighting and sound equipment.



House of Commons

British Broadcasting Corporation

Atomic Energy Research Establishment
at Risley

Imperial Chemical Industries Ltd.

National Physical Laboratory

Some prominent users of Rank Precision Industries' equipment include:

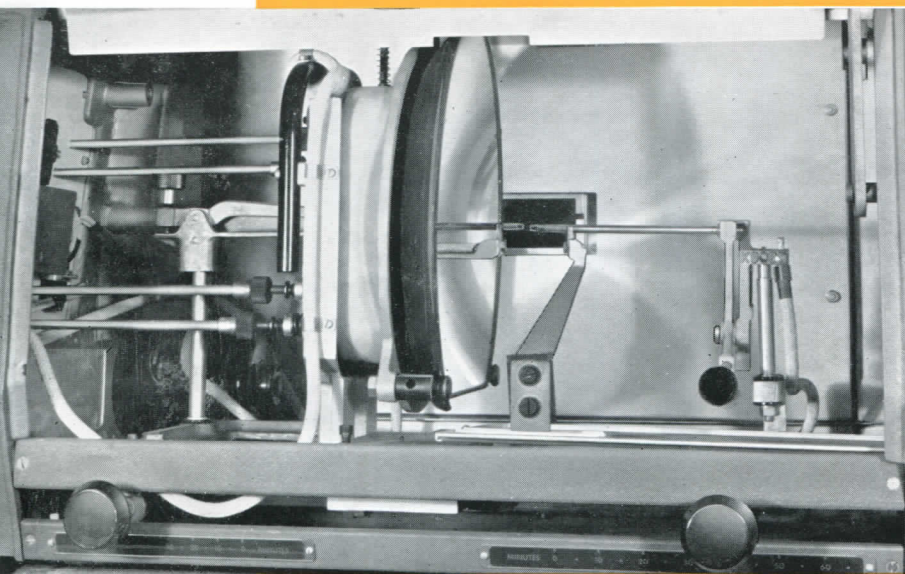
University of Cambridge

Esso Petroleum Co.

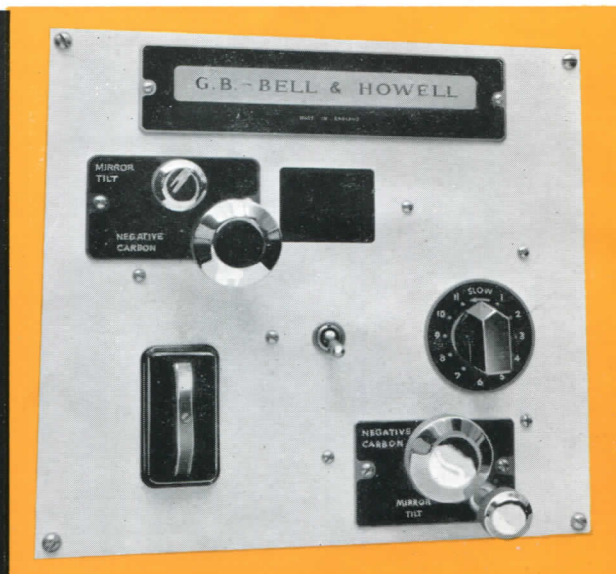
Pinewood Studios

' finest in 16mm '

1



2



only the
BELL & HOWELL
FILMO ARC
609

provides these
advanced features
for flawless
projection

1

HIGH INTENSITY ARC Gives nearly one hour of continuous projection with one pair of carbons burning at 30 amps. The arc is held to a uniform gap by the motor-driven carbon feed to maintain even illumination. Arc image is projected to a small screen above the lamp-house for visual monitoring. Quick release clips for inserting new carbons are incorporated.

2

ARC LAMP CONTROLS Conveniently grouped at rear of lamp-house. Separate controls provided for adjustment of negative carbon and mirror.

3



4

3

RECTIFIER Feeds 30 amps. D.C. to carbons. No valves or moving parts. All controls—On/Off switch, ammeter and current selector switch are located on the top panel.

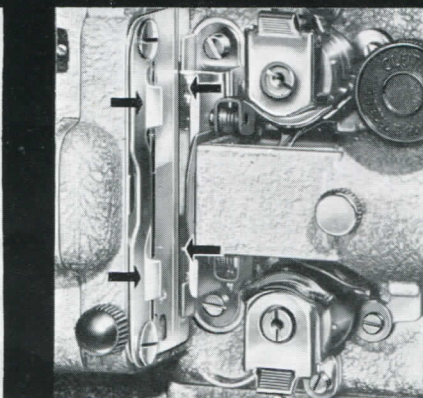
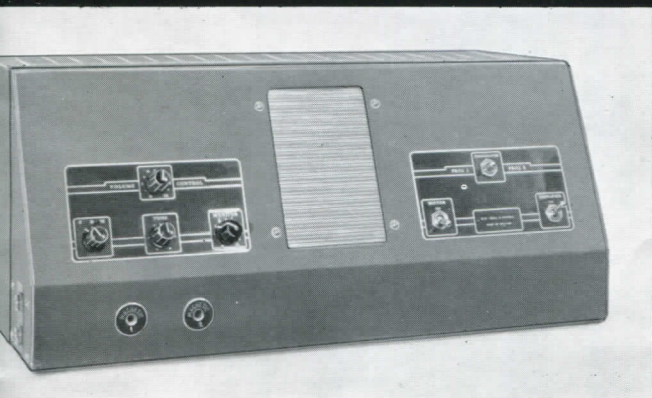
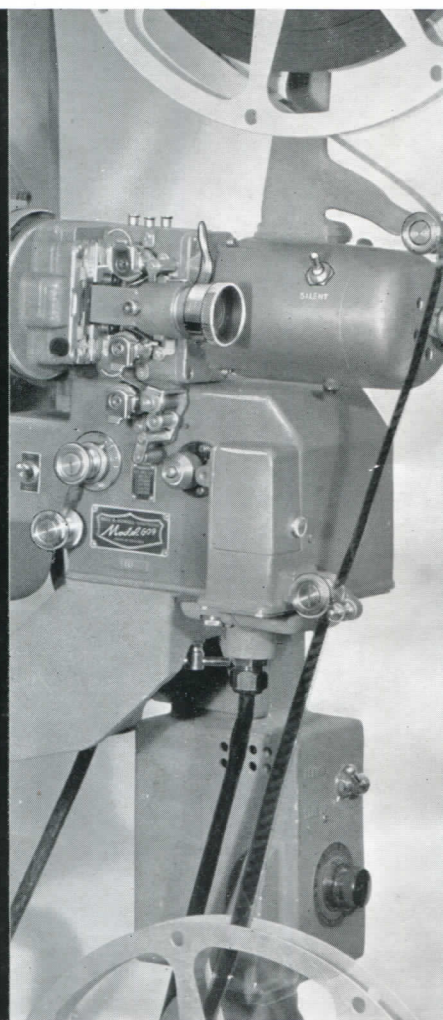
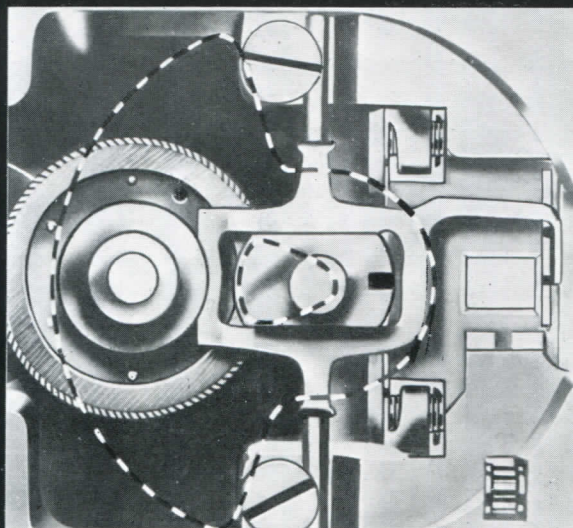
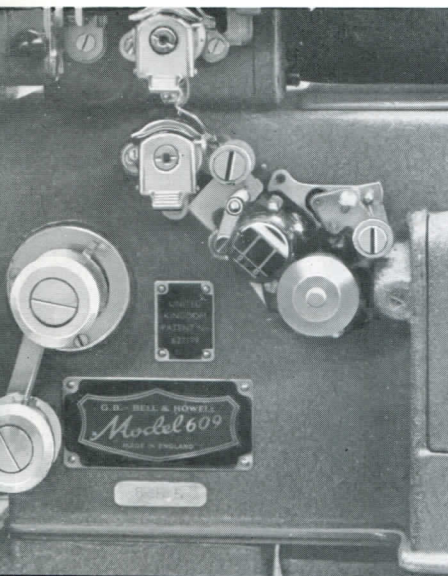


5

6

The Filmoarc 609 is available with either Rollaway or Pedestal stands. The Rollaway stand accommodates the entire equipment including rectifier and amplifier. Projector elevation is adjustable from the front of the stand and a control is incorporated which permits the rear legs to be raised from the floor when the complete unit may be freely moved on castors.

For the static installation the Pedestal stand can be supplied. In this case the amplifier and rectifier are mounted separately. Rapid and fine adjustment of elevation is achieved by operation of a control conveniently situated at the rear of the stand.



7

8

4

AMPLIFIER Re-designed, more powerful amplifier provides a full 25 watts undistorted output. Balanced tone control permits adjustment for varying acoustic conditions. FDM (Film, Disc, Microphone) switch on amplifier enables instantaneous selection of Film, non-sync. (record player) or microphone inputs.

5

STABILISED SOUND HEAD Brilliantly designed to provide perfect reproduction of standard optical sound tracks, or magnetic tracks on single or double-perforated film. Rotating sound drum and patented Bell & Howell oscillatory stabiliser combined with balanced flywheel and third sprocket effectively ensures absolute steadiness of reproduction.

6

FAST PULL-DOWN ACTION with the famous Bell & Howell intermittent movement of 9 to 1 ratio. Flickerless, rock-steady pictures assured.

7

INCREASED WEAR RESISTANCE to critical parts which would normally require frequent replacement. Sapphires bonded to the shuttle, guide rail and side tension clips in the film gate increase working life by 400%.

8

HIGH SPEED REWIND effected by motor-powered rewind system. Entirely safe in operation.

The Filmoarc XENON LANTERN

Newest important development in projector light sources, the Filmoarc Xenon Lamp provides brilliant illumination at the touch of a button.

Available as an alternative to the High Intensity Arc Lamp, its light output is balanced for perfect reproduction of 16mm. colour and black and white films.

Compact and easy to handle, the Lamp can be fitted in a matter of minutes. Once installed and initially focused, no further adjustments are necessary throughout the life of the Lamp. The Lamphouse is specially designed to utilise the full output of the Xenon Lamp and its deep 12" mirror ensures maximum light concentration and perfectly even distribution over the entire screen area.

Simplicity of operation is the keynote of this outstanding light source.

Controls are confined to the start button and mirror and lamp adjustments which are conveniently located at the rear of the Lamphouse, both mirror and lamp controls being used only at the initial setting-up stages.

As a safety precaution a built-in micro switch automatically disconnects the power supply immediately the Lamphouse door is opened.

The Xenon Lamp has a guaranteed life of 1000 hours when operated at the recommended maximum current condition, but this long life can be greatly extended by under-running. Due to this important feature, maintenance problems are practically non-existent. It is only necessary for occasional cleaning of the mirror to ensure consistent brilliance.

The following are some of the outstanding features of this revolutionary light source.

SIMPLE AND INSTANTANEOUS STARTING

Push button control—no 'warming-up' period.

COMPLETELY STEADY LIGHT ON SCREEN

Constant and independent of operator.

LIGHT SUITABLE FOR ALL FILMS

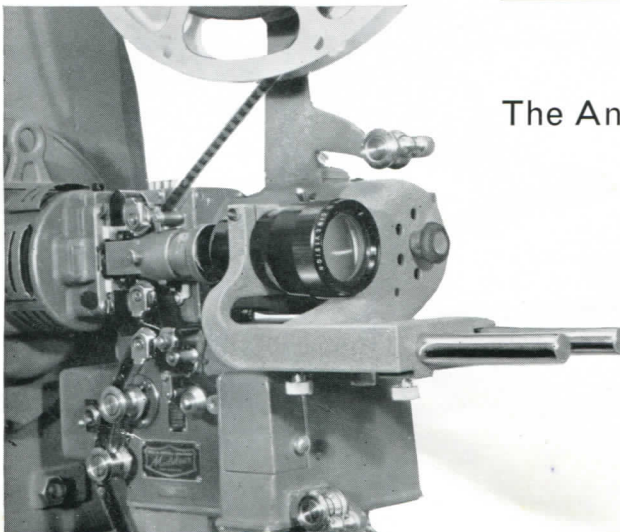
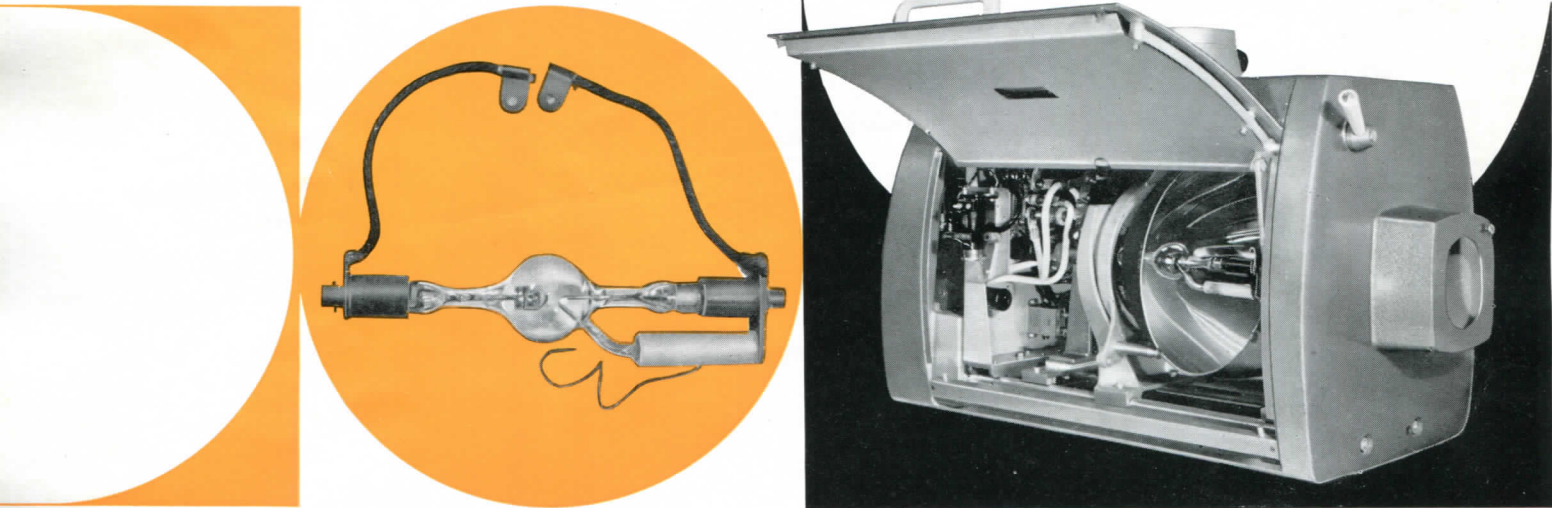
Similar in colour to sun-light. No change in colour with change in operating current.

SIMPLICITY OF OPERATING

Once initially focused no further adjustments are necessary.

NEGLECTIBLE MAINTENANCE

No continual re-conditioning of mirrors.



The Anamorphic Attachment

For use when screening standard 16 mm.

Cinemascope 'squeeze' prints, this attachment lens is quickly and easily fitted. It is only necessary to loosen two screws, remove the governor end cap from the motor housing, and replace with the attachment, which can, if required, be left in position and swivelled away from the normal lens when screening films of conventional ratio.

POWER SUPPLIES 200/250 volts 50 cycles. A.C. mains. Units also available for alternative electric supplies to meet special requirements.

STANDARD LENS Taylor Hobson 3" f 1.8 high resolution lens, colour-corrected and hard coated for improved light transmission and image contrast.

AUXILIARY LENSES Available in focal lengths of 1", 1½", 1¾", 2", 2¼", 2½", 3", 3½", 4" from the world-famous Taylor-Hobson range.

ILLUMINATION High Intensity Arc or Xenon lamp.

CARBON REPLACEMENT The high intensity arc lamp incorporates special quick-release clips for rapid renewal of carbons.

HEAT DISSIPATION Arc lamphouse and projector mechanism designed for maximum dissipation of heat. Mechanism head is fan cooled and special heat filter protects film.

GROUPED CONTROLS Rectifier, amplifier and projector controls conveniently situated for ease of operation.

FILMOARC 609 SPECIFICATION



THREADING Exclusive Bell & Howell safe-lock sprockets protect film and make threading error-proof. Film path is straightforward due to efficient design of the mechanism head.

FILM CAPACITY 2000 feet of standard single or double perforated 16 mm. film. One hour continuous projection at sound speed (24 f.p.s.).

FILM MOVEMENT Famous Bell & Howell intermittent movement of 9 to 1 ratio and sapphire-tipped shuttle ensure absolutely steady projection. Guide rails and side tension clips also sapphire-reinforced for increased life.

FILM GATE Recessed to prevent film wear. Removable pressure pad facilitates cleaning.

FILM TAKE-UP By independent motor drive with automatic compensation for varying reel-hub diameter.

FILM REWIND By motor-powered rewind system.

SOUND & SILENT SPEEDS Instantly selected by operation of a switch. Electro-mechanical governor maintains critical speed.

MULTI-RATIO PROJECTION Fingertip control adjusts a variable aperture plate to any picture ratio between 1.34/1 (Standard) and 1.85/1 (Wide screen and Vista-Vision).

ELEVATION CONTROL Projector can be quickly and easily adjusted to correct elevation by simple lock controls. Elevates to 16°—depresses to 25°.

METERED LUBRICATION Guards against excessive oiling. Feeds correct amount of lubricant necessary for smooth operation.

SOUND STABILISATION Sound drum with dynamically-balanced flywheel and patented Bell & Howell oscillatory stabiliser ensure perfect reproduction of sound track.

MAGNETIC HEAD In addition to its optical sound facility, plug-in, interchangeable magnetic playback heads permit high-fidelity reproduction of sound from magnetically recorded sound tracks.

AMPLIFIER Powerful 25 watts undistorted sound output. Incorporates special circuit for use with magnetic sound tracks in conjunction with the magnetic sound head.

AMPLIFIER CONTROL PANEL Sound and Picture Controls, conveniently situated on amplifier panel. Connections for microphone or disc inputs, built-in monitor speaker with separate volume control, full range tone control and independent switches for sound and motor changeover are incorporated.

EXCITER LAMP 4.5 volt, .75 amp from high frequency supply eliminates mains interference. Special pre-focus base for accurate and instant location.

SPEAKERS Two 12" high fidelity speakers supplied as standard. Alternative speakers are available.

PORTABILITY The equipment can be quickly dismantled without tools for easy transportation.

FINISH Grey crinkle with chromium plated metal parts.

OVERALL DIMENSIONS Height (including feed reel) 73" (no rake). Width (back to front) 44". Base (at floor level) 32" x 24".

SINGLE UNIT Includes Picture head fitted with 3" f 1.8" Taylor Hobson lens, Lamphouse, Rollaway or Pedestal Stand, Amplifier, Rectifier and 2 Speakers.

DUAL EQUIPMENT In addition to the equipment comprising a single unit, a second picture head with 3" lens, Lamphouse, Rollaway or Pedestal Stand and Rectifier is supplied.

TECHNICAL DATA

Xenon Lantern



LAMP TYPE	<i>Mazda XE U 27</i>
LAMP RATING	<i>2000 watts (nominal) 1000 watts (minimum)</i>
LAMP OPERATING CURRENT	<i>80 amps (max) 45 amps (min)</i>
ARC VOLTAGE	<i>27-29 volts</i>
SUPPLY VOLTAGE	<i>35 volts D.C. (min)</i>
SOURCE SIZE	<i>Arc width 4.0 mm. (approx) Arc length 8.5-9.0 mm. (approx)</i>
LIGHT OUTPUT	<i>1500 Lumens (approx)</i>
AVERAGE LAMP LIFE	<i>Approximately 1000 hours at normal rating from ripple-free D.C. supply. At lower lamp loadings, life is increased.</i>

High Intensity Arc Lamp



NORMAL OPERATING VOLTAGE

*with Standard Pairlux carbons-26½ volts
with Pairlux L.C.T. carbons-25 volts*

NORMAL OPERATING CURRENT

*with Standard Pairlux carbons-30 Amps
with Pairlux L.C.T. carbons-33 Amps*

DIAMETER OF CARBONS

*Positive-6 mm.
Negative-5.5 mm.*

CARBON BURNING RATE

*Positive-5" per hour (approx.)
Negative-3" per hour (approx)*

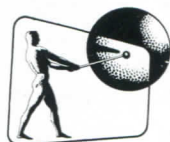
COLOUR TEMPERATURE

*Standard Pairlux carbons-4600° K (approx)
Pairlux L.C.T. carbons-3750° K (approx)*

LIGHT OUTPUT USING 2" f 1.6 PROJECTION LENS

*Standard Pairlux carbons-1200 lumens (approx)
Pairlux L.C.T. carbons-1100 lumens (approx)*

Further information may be obtained from your accredited Bell and Howell dealer or by writing to:



RANK PRECISION INDUSTRIES LTD

(Cine & Photographic Division)

37/41 MORTIMER STREET, LONDON, W.1.

Tel. MUSEum 5432