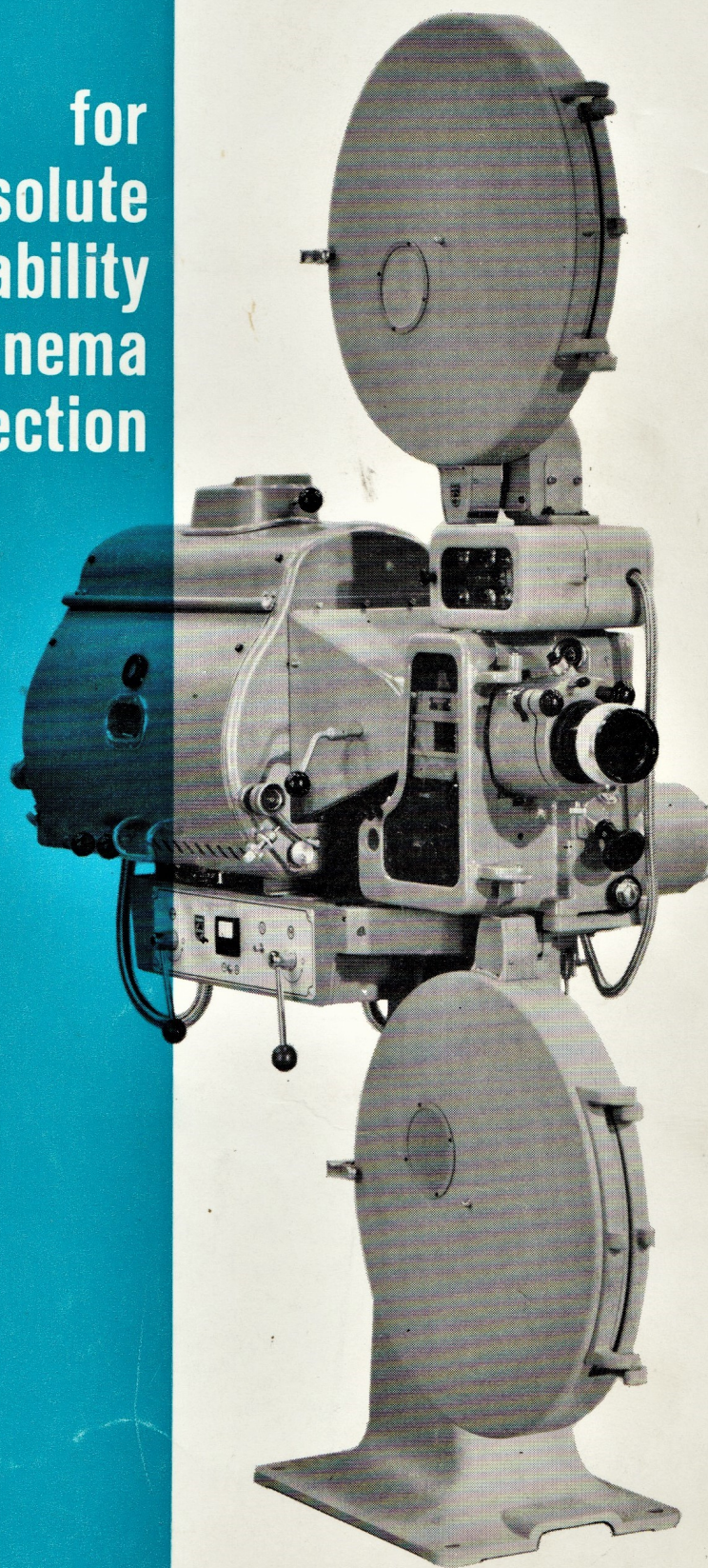


PHILIPS



for
**Absolute
Reliability
in Cinema
Projection**

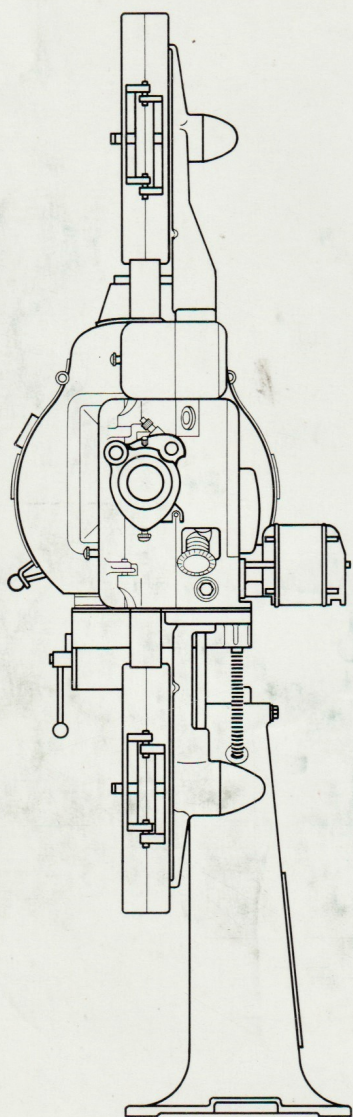


SUPER

FP

7

PROJECTOR



**At-a-glance
determination of the
PHILIPS Super FP7
projector**

- ★ 36% extra light gain
- ★ maximum reliability
- ★ simple operation
- ★ steady picture
- ★ excellent sound reproduction
- ★ easy maintenance
- ★ easy replacement of components
- ★ efficient film protection
- ★ universal application

SUPER

FP7

PROJECTOR

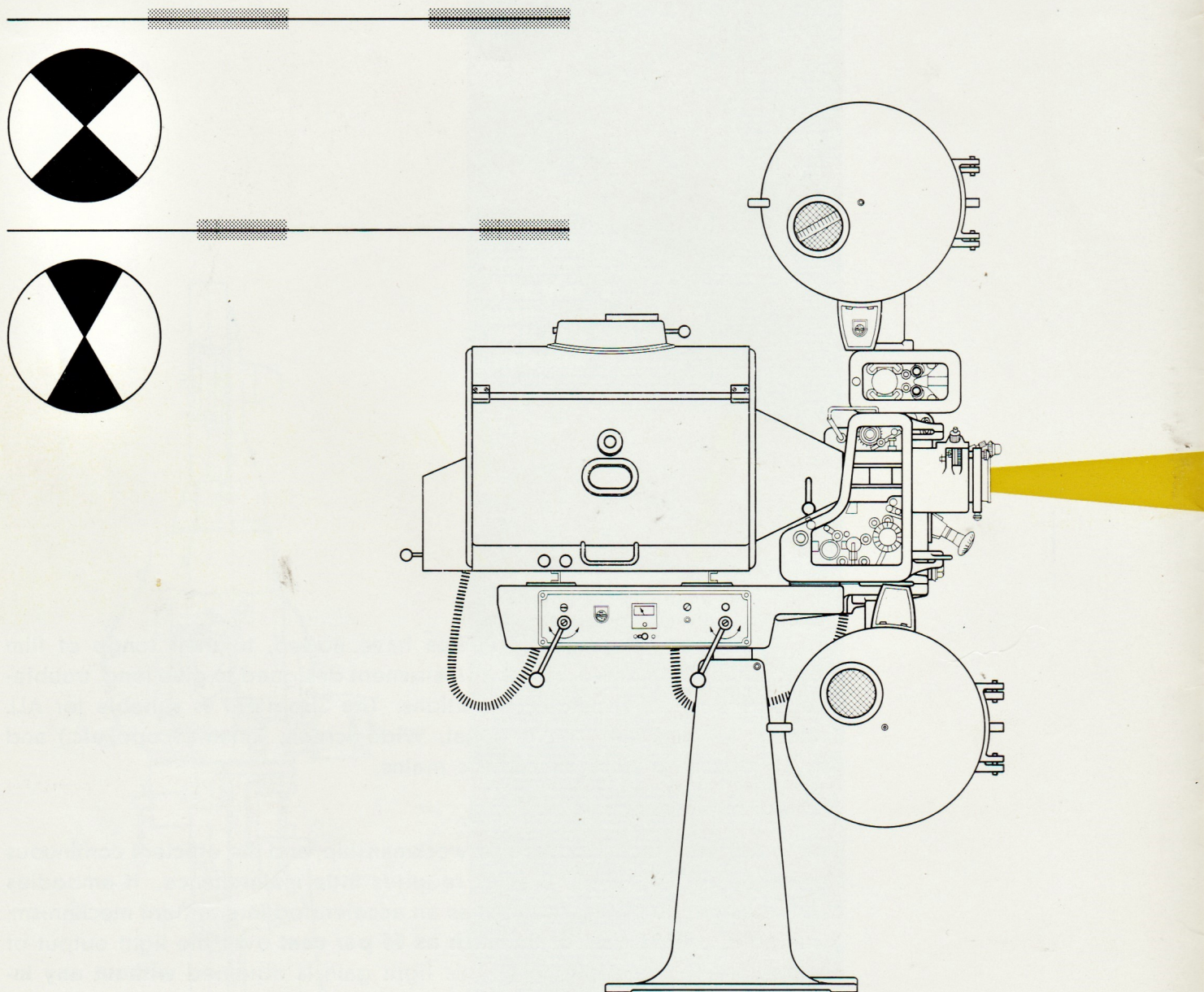
With the Super FP7 projector Philips have added, to their range of film projection equipment, a valuable instrument designed to give long, trouble-free performance under all conditions. The Super FP7 is suitable for ALL kinds of 35 mm film (conventional, Wide-Screen, CinemaScope etc.) and can be operated from all electric mains.

Due to the very high standard of workmanship, and the efficient continuous lubrication system, this projector requires little maintenance. It embodies such advanced technical features as an accelerated intermittent mechanism, resulting in a **light gain of as much as 36 per cent** over the light output of comparable 35-mm projectors. This light gain is obtained **without any increase in operating costs.**

A cursory glance at the Super FP7 projector will convince you of its meticulous finish. But lift the cover of the driving mechanism and you will see the many refinements of this superbly engineered piece of machinery, and note the thought that has gone into every detail to ensure reliable operation and perfect safety.

36 per cent extra light gain

The Super FP7 projector incorporates a new, **accelerated intermittent mechanism** with accelerated movement of the driving pin of the Maltese cross. With this new device, the film is moved within $1/144$ second instead of—as is usual—in $1/96$ second. Consequently, the total dark period caused by the two sectors of the shutter is only $1/72$ second instead of $1/48$ second, the film transport taking place within 60 degrees of a full rotation of the camshaft, instead of 90 degrees. In actual practice, measurements of the luminous flux have shown a light gain of 36 per cent. The shutter efficiency is then 68 per cent. For drive-in theatres the efficiency can be further increased to 73 per cent, which means that it is possible to illuminate a CinemaScope picture of 75 ft (23 m) in width with a simple 85-A H.I. arc lamp with an illumination of 5 ft-cd (drive-in standard)! With normal projectors a 130-A arc lamp would have to be used to obtain this result.



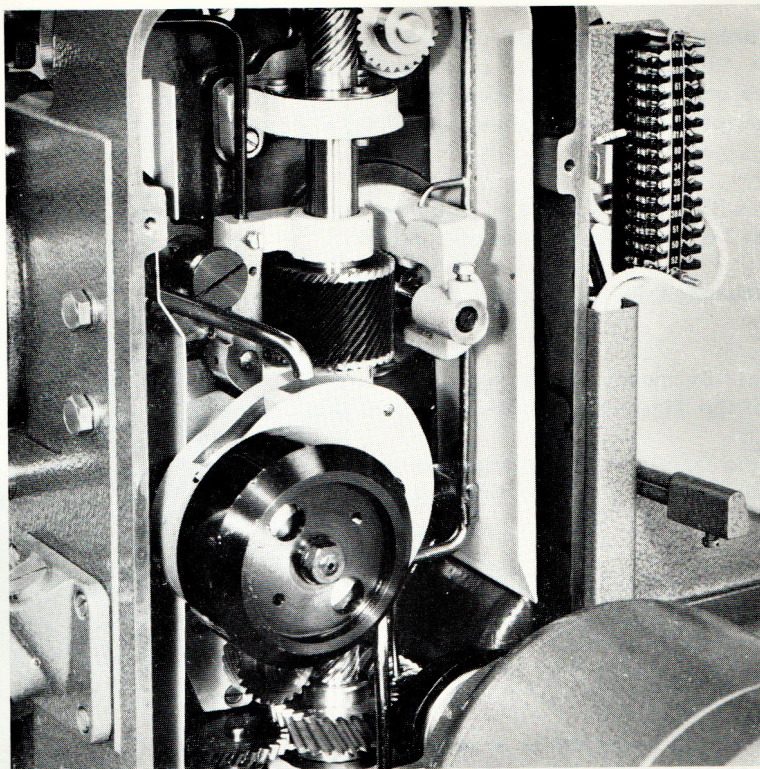
High light output

Thanks to the accelerated intermittent mechanism, a luminous flux on the screen of 12000 lm at 85 A is attained for indoor theatres. With standard projectors this light output can only be attained with 125-A arc lamps. The high light output not only makes for a better picture, it obviates the need for expensive arc lamps, rectifiers and carbons even in large cinemas, which means a considerable reduction investment and operating cost.

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Maximum reliability

As all moving parts are manufactured from high-grade materials and machined to very close tolerances, the Super FP7 Philips projector will give many years of trouble-free performance.

Being driven from a split-phase asynchronous motor, the main shaft ($\frac{13}{16}$ inch, 21 mm in diameter) revolves at only 360 r.p.m., thus precluding troublesome vibrations.

Lubrication is continuous, and assured by a very sturdy spur-gear type oil pump driven by the main shaft. The oil passes through two magnetic filters that remove all iron particles and through a gauze filter. Thus wear on the driving system is reduced and acidification of the oil minimised.

This lubrication system ensures excellent working and minimum wear of the projector mechanism, even in the case of very high and low temperatures.

Simple operation

Threading of the film is facilitated by the shape of the guide and pad rollers which are streamlined so that the film slides easily into position. A framing lamp behind the picture gate simplifies the threading.

Once the film has been threaded in the gate, the pad roller of the intermittent sprocket can be closed independently of the lens holder. If one forgets to close this roller, it will be closed automatically when the lens holder is pushed back. Being spring-loaded, the pressure roller on the sound drum automatically snaps back into the working position.

Flutter in sound reproduction, likely to occur in other constructions when this roller is left open, is thus eliminated.

The very robust **lens holder** is integral with the skate holder. The lens holder has a large diameter (4 inch, 101.6 mm). A sleeve of 4 inch/2.781" (101.6/70.6 mm) is supplied with each projector. One or more additional sleeves (e.g. for Wide-Screen or Cinema-Scope) as well as an adapter tube of 2.781/2.461 inch (70.6/62.5 mm) can be supplied on request.

Instantaneous focusing, without any backlash, is by means of a fine-focusing ring with scale. On request it can be supplied with remote control.

The lens is **easily interchangeable** for various projection systems and is then automatically in focus.

Easy film-loop adjustment. By means of the loop correctors on the upper and lower sprockets, the lengths of the film loops can be adjusted before or during operation.

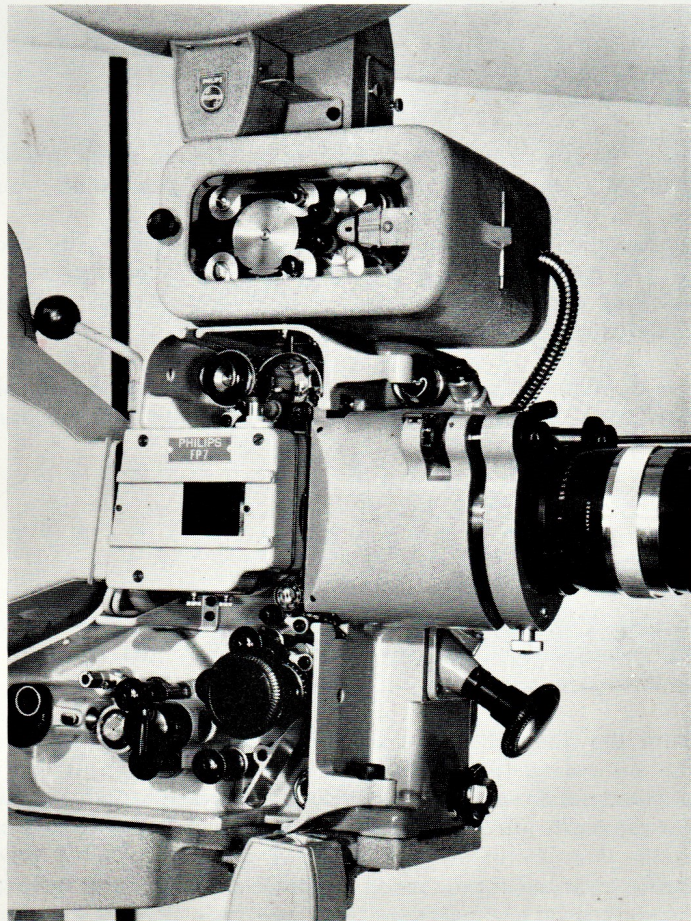
The framing knob is at the front of the projector and can be operated from either side. The frame position is indicated by a pointer fitted at the back of the upper oil-inspection glass.

Changing over picture and sound from one projector to another is effected by pushing a button.

Steady picture

Steadiness of the picture in the **horizontal** is ensured by lateral guide rollers at the top of the runner plate, and ceramic guide rails below the aperture.

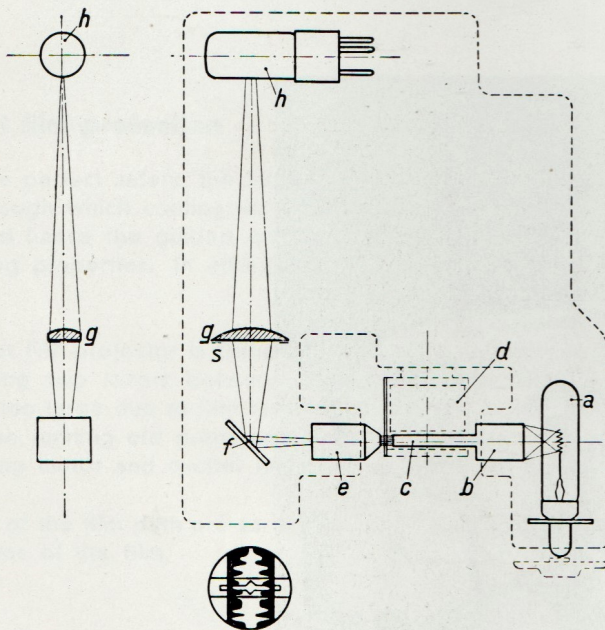
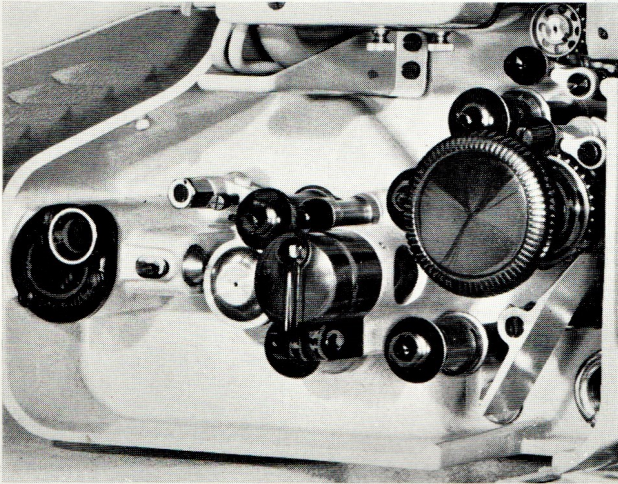
In the **vertical** steadiness is obtained by the intermittent shaft being supported almost entirely by a long bearing, so that any irregularity in the rotation of the intermittent sprocket is virtually eliminated.



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- a exciter lamp
- b condenser system
- c glass rod
- d sound drum
- e micro lens
- f mirror
- g condenser
- h photocell
- s screen with slit

Excellent sound reproduction

The soundhead for **optical sound** contains a rotary sound drum, driven by the film. Its starting time is only three seconds, and a very small pull suffices to keep the drum rotating at its rated velocity, enabling the film to form a slack loop that acts as a very light, inertia-free resilient element, resulting in flutter-free reproduction.

To adjust the position of the optical sound track with respect to the scanning slit, the Super FP7 projector features a knurled knob that displaces the pressure roller on the sound drum, causing the film to be shifted laterally. During this operation visible check on the sound track position remains possible.

The **magnetic sound head** which can be supplied on demand and mounted between the upper spool box and the projector housing is suitable for four-channel reproduction.

Irrespective of the regularity with which the film is taken from the upper spool, the length of film running through the soundhead is kept constant because one large sprocket is used both for feeding the film into the soundhead and for taking it off, thus ensuring flutter-free reproduction.

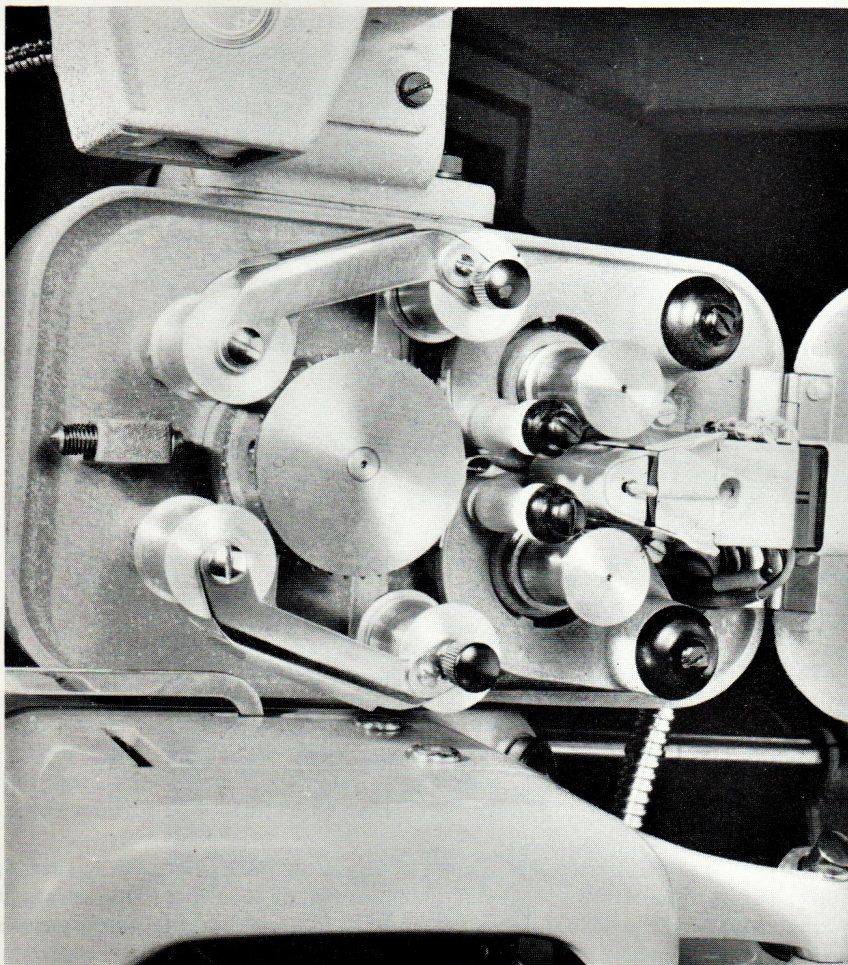
Easy maintenance and replacement of components

All parts are readily accessible for cleaning. Special care has been taken to ensure that all vital components can be easily replaced.

The entire film path is accessible through a large, glass-fronted cover.

Replacement of the exciter lamp is easy and takes only a few seconds. The lamp is equipped with a slotted centering flange which makes it impossible to insert it wrongly.

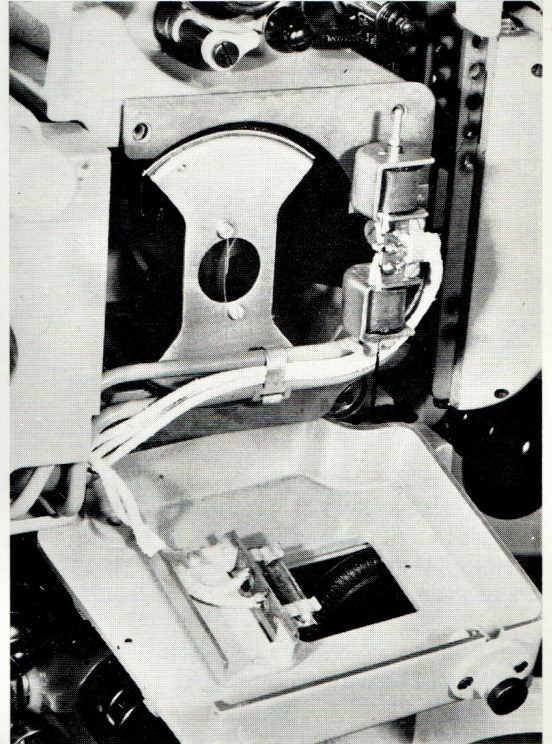
The photo-electric cell can be replaced after taking off the cap at the back. To do this, only the knurled fastening nut should be removed.



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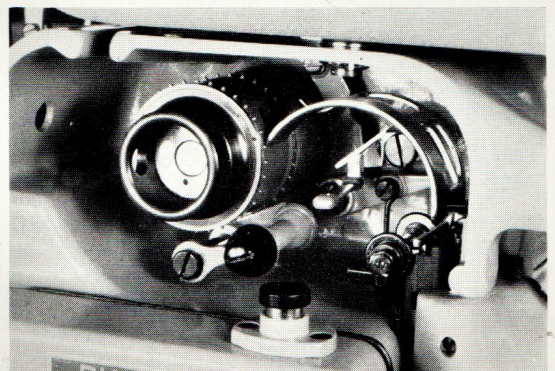


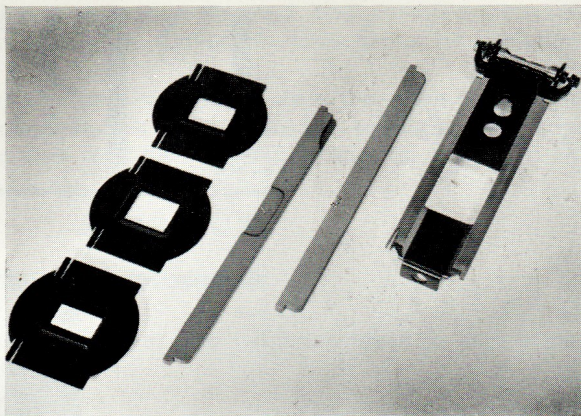
Efficient film protection

To ensure perfect safety, the Super FP7 projector is equipped with a hollow protective mask through which cooling water flows, so that the projector mechanism, the runner plate and hence the guided edges of the film remain cool, while the oil retains its full lubricating properties. In addition, an air compressor can be used to provide extra air cooling.

The Super FP7 projector is fitted with a double-acting, automatic film-rupture device incorporating two levers between which the upper film loop passes. Should the loop become too large due to film rupture in the gate, or too small because of poor film transport when running old prints with torn perforations, the light beam is intercepted and the driving motor and exciter lamp are switched off immediately.

All parts of the film path are so profiled that they cannot touch the picture and sound track areas of the film.





Universal application

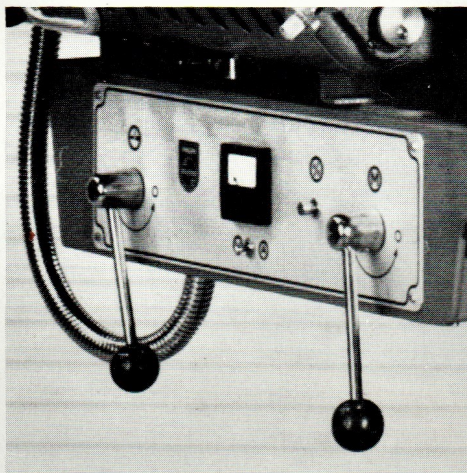
The Super FP7 projector is suitable for all 35 mm systems having the following screen aspect ratios: 1:1.37 (conventional), 1:1.85 (Wide-Screen) and 1:2.34 (CinemaScope) for which aperture plates are included in the standard set of accessories with each projector. Other aperture plates as well as an anamorphic lens attachment can be supplied on request.

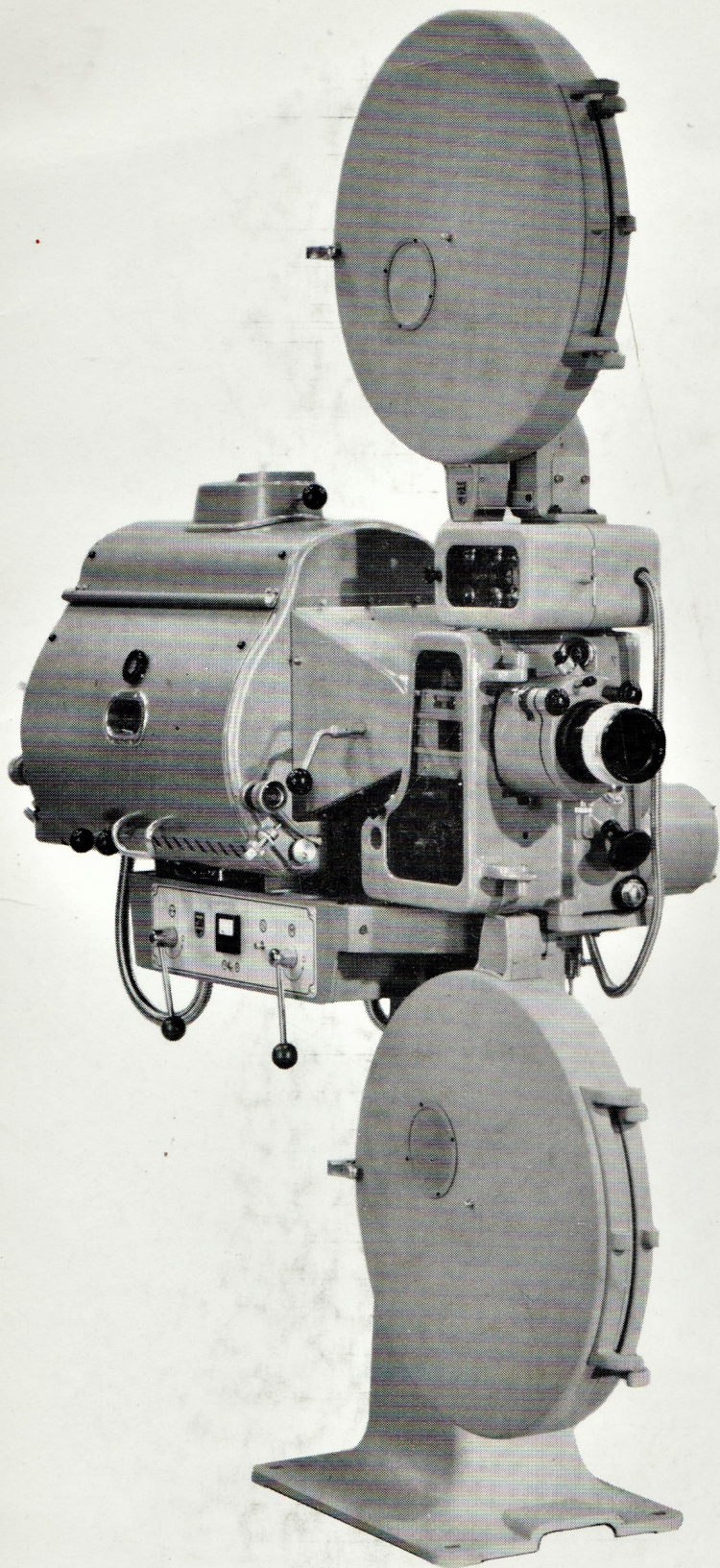
The Super FP7 Philips projector can be operated from practically all existing mains (110 V ac, 220 V ac, 50 or 60 c/s. It is suitable for use under tropical conditions.

Choice of spool boxes. Normally the projector is equipped with spool boxes for up to 3000 ft (900 m) of film. On request it can be supplied with spool boxes for film lengths of up to 6000 ft (1800 m).

The control panel includes:

- * motor switch
- * 100-A arc-lamp switch
- * meter indicating arc current and arc voltage
- * change-over push-button
- * transformer supplying 6 V for the pilot lamps





PHILIPS FOR PERFECTION IN SOUND AND PROJECTION



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