

PHILIPS



PROVISIONAL

Electro-acoustics division



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TV FILM PROJECTOR, TYPE FP 16 TV

The PHILIPS 16 mm TV Film projector FP 16 TV, which is derived from the wellknown 16 mm projector, type EL 5100, is specially designed for film scanning. It fulfils the high requirements for both black-and-white and colour television.

Life and reliability of the projector, quality of picture and sound are not the only outstanding features. Easy operation as well as simple maintenance are also found among them.

LONG LIFE AND GREAT RELIABILITY

- * "Grooved-disc" intermittent mechanism in closed oil bath.
- * 12-tooth intermittent sprocket, of which five teeth engage in the film perforations.
- * Only four gear wheels and one worm wheel of very robust construction.
- * Sturdy, self-starting synchronous motor with timing-belt transmission; no brushes; no speed control.
- * Fast starting and fast breaking device.
- * Picture and sound stability within one second, projector stops within four frames.
- * Rapidly replaceable, inexpensive runners in the film gate.
- * Solar cell, with practically unlimited life and great stability instead of a photocell.
- * Fully transistorised amplifier.

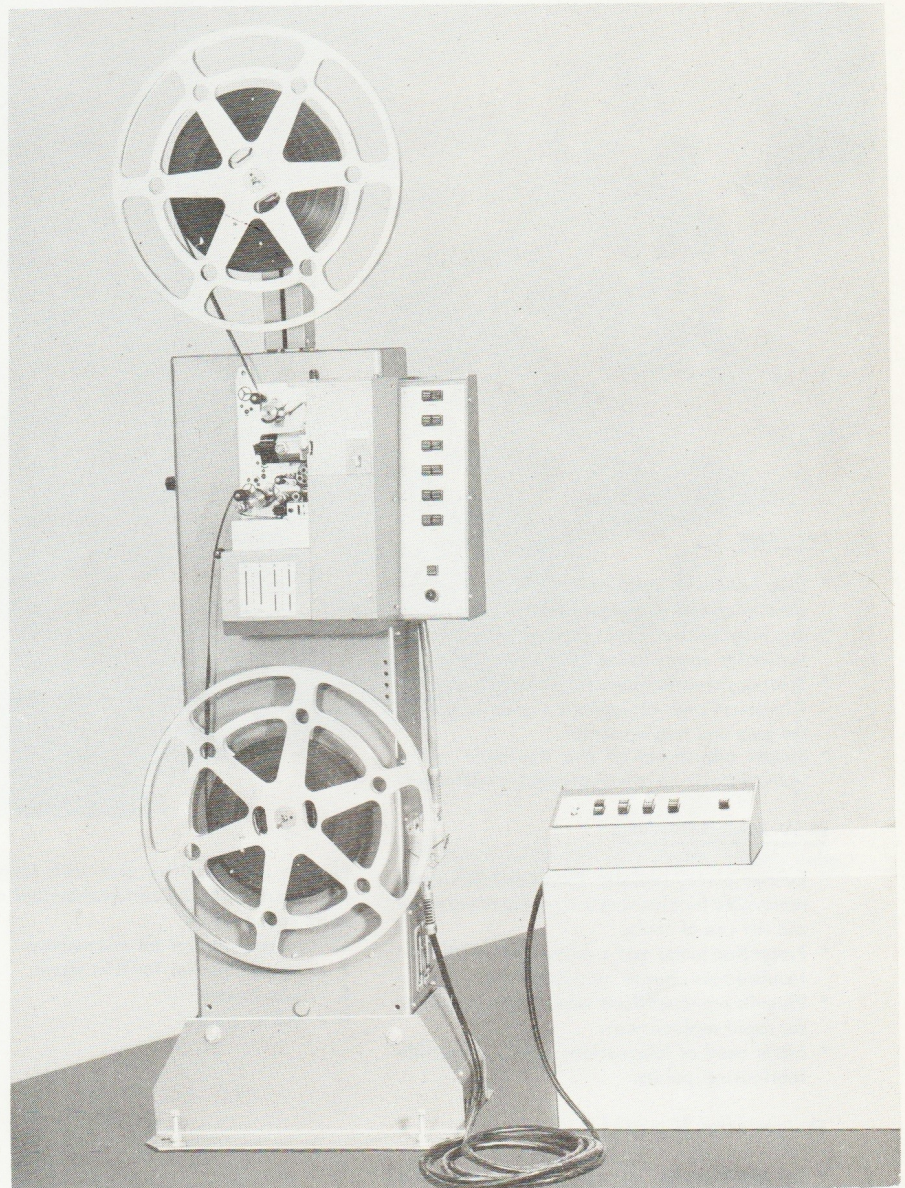
EXCELLENT PICTURE QUALITY

Excellent steadiness of the picture on account of:

- * the unique Philips "grooved-disc" mechanism with 12-tooth intermittent sprocket;
- * the curved runner plate;
- * the Delrin running surfaces which avoid dirt deposit;
- * excellent light equality, corner to centre distribution 95 %.

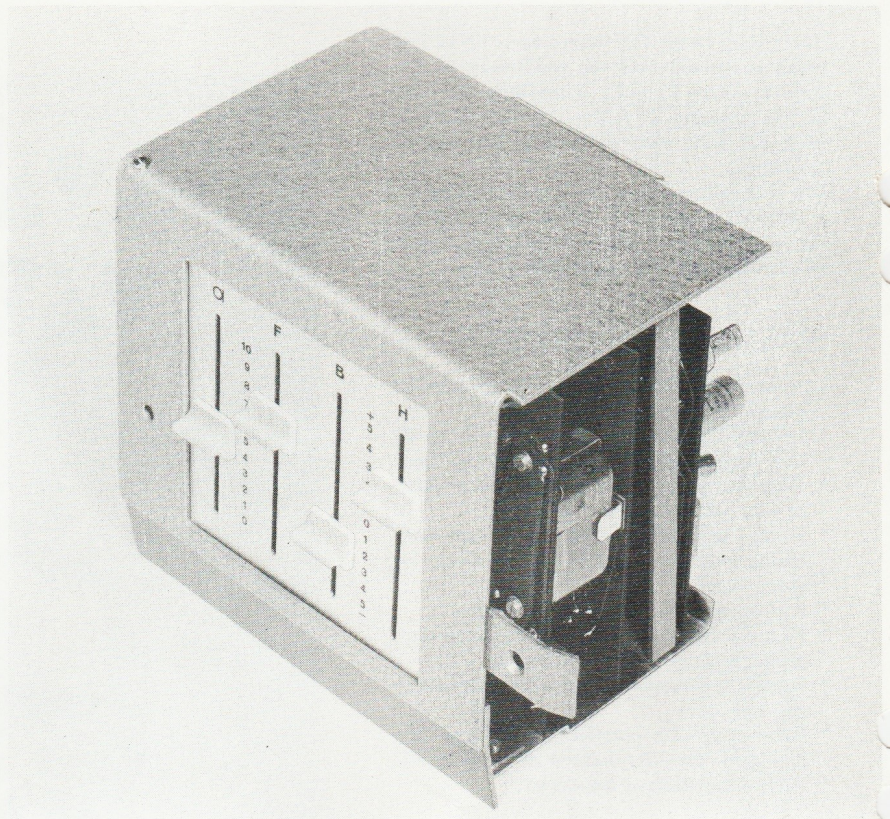
TRUE-TO-LIFE SOUND QUALITY

- * Low wow and flutter, owing to the rotary sound drum with pressure roller, fundamentally of the same construction as that of the Philips 35-mm and 70-mm projectors.
- * Optimum frequency-response curve thanks to the high-quality slit optical system with adjustment for standard and non-standard emulsions, the Solar cell and the fully transistorised amplifier.
- * Separate treble and bass controls for matching the reproduction to the properties of the sound track on the film.



- ### PUSH BUTTON OPERATION
- * Amplifier with very little distortion and low hum-and-noise level.
 - * Mixing facilities for film sound and microphone signals.
 - * The projector can be equipped with a line amplifier for matching with other amplifier systems.

- * Start-stop motor
- * On-off lamp
- * Forward-reverse motor
- * On-off sound
- * Optical-magnetic sound tracks
- * On-off aperture cleaner (by air pressure)



Facilities

- * One handle for opening the whole film path; the film can be kept taut when being threaded; loops of the correct size are formed automatically upon closing of the film path.
- * Sliding potentiometers for volume control of film sound and microphone signal as well as for bass and treble control.
- * Simple adjustment to the available mains voltage; built-in universal supply transformer.

EASY MAINTENANCE

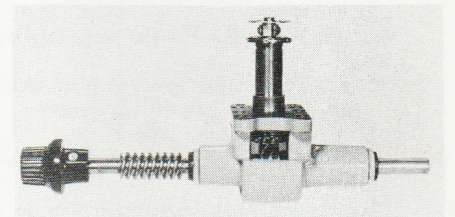
- * Runner plate, pressure skate and pad shoes removable for cleaning and replacement without the use of tools.
- * Projection lamps and exciter lamps with pre-focused base; hence no adjustment.
- * Plug-in pre-amplifiers and output amplifier for rapid replacement.
- * Little need of lubrication; easily accessible lubricating points.

The projector is available:

- * for reproduction of optical and magnetic sound tracks
- * with single phase synchronous motor for:
 - 50 Hz, 25 frames per second
 - 60 Hz, 24 frames per second
- * with double band system for 16 mm perforated tape, edge and centre tracks (shortly available)

Plug-in pre-amplifier unit with plug-in pre-amplifiers for reproduction of optical and magnetic sound tracks.

- Q = volume control for microphone
- F = volume control for film sound
- B = bass control
- H = treble control



"Grooved-disc" intermittent mechanism with oil bath cut open to show the interior.

TECHNICAL DATA

Mains voltages:

100 - 110 - 125 - 220 - 250 V

Power consumption:

500 W

Capacity of film spools: 1200 m
(4000 ft)

Projected image area:

9.6 x 7.2 mm (0.378 x 0.238 in)

Vertical and lateral movement of picture:

< 0.2 %

Projection lamp:

type 7158; 24 V, 150 W

Exciter lamp:

type 7210C; 6 V, 1 A

Solar cell:

type C1 420 98

Wow and flutter:

max. 0.2 %

Picture and sound stabilisation within one second

Lens holder diameter 42.5 mm (1.673")

Height optical axis 119 cm \pm 2.5 cm (47 \pm 1")

Built-in output amplifier:

power: 20 W

output voltage: 100 V

load impedance: 500 Ω

hum and noise:

for optical reproduction: < -60 dB

for magnetic reproduction: < -45 dB

distortion at 1000 Hz: < 1 %

exciter-lamp supply: 6 V, 1 A d-c

frequency response:

flat from 40 to 7000 Hz

filters:

treble notes continuously adjustable between

-7.5 to +14 dB at 10 000 Hz

bass notes continuously adjustable between

-7.5 to +14 dB at 40 Hz

sensitivity of microphone input at 20 W out-

0.6 mV

Line amplifier EL 5490/00:

output: 8 dBm

load impedance: 600 Ω

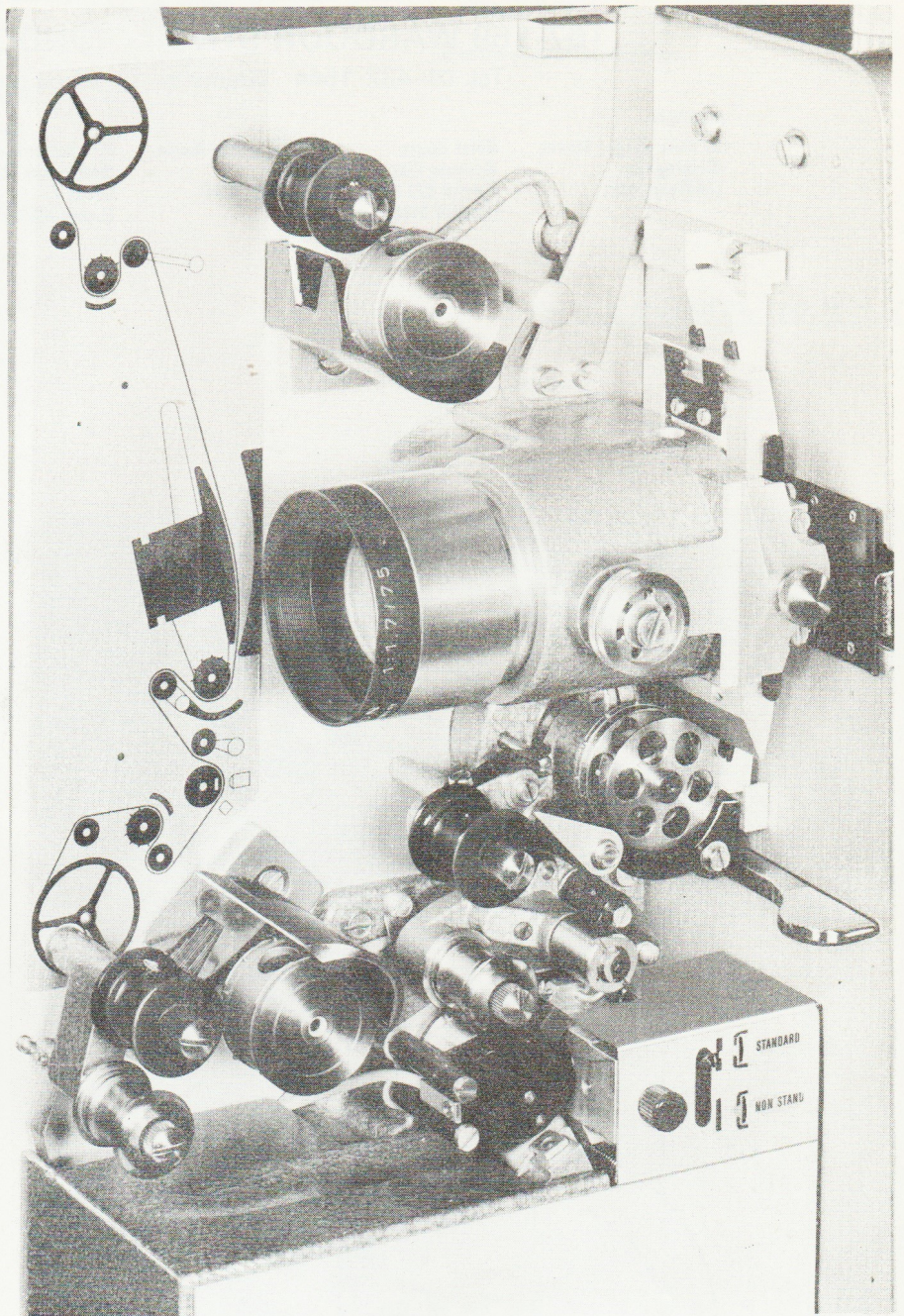
Optional item:

Automatic exposure control unit, type EL
8683/01

Signals needed from camera:

H-drive or clamping pulse 2 V

video signal 1 V



Projector mechanism with simple, clearly indicated film path.

Sole U.K. Distributors

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