

Laser-Scan The SWEEPNIK Film Measuring System



SWEEPNIK

Large Screen Version

SWEEPNIK

SWEEPNIK is operating successfully for many high energy physics groups throughout the world. Laser-Scan is now manufacturing this large screen version which accepts all current film types, including BEBC, Gargamelle



and Mirabelle. This flexibility has necessitated changes to the film stage and the film illumination, and a complete re-design of the operator console.

Film stage

SWEEPNIK now has an optional 70 mm system based on 11-inch open centre reels. Frame locating sprocket hole counters, which can be programmed by thumbwheel switches, are standard for 70 mm film. A

universal film guide kit is available for the 70 mm film stage which will permit the reading of 50 mm and 35 mm sprocketed or unsprocketed film. This facility employs Brenner mark detection only. 35/50 mm sprocket hole counters are not fitted.



The background photograph shows the main components of the large screen version of SWEEPNIK – the optics unit to the left, the system computer to the right, and in the centre the large screen operator console. To complete the system there is the small electronics rack which is not illustrated.

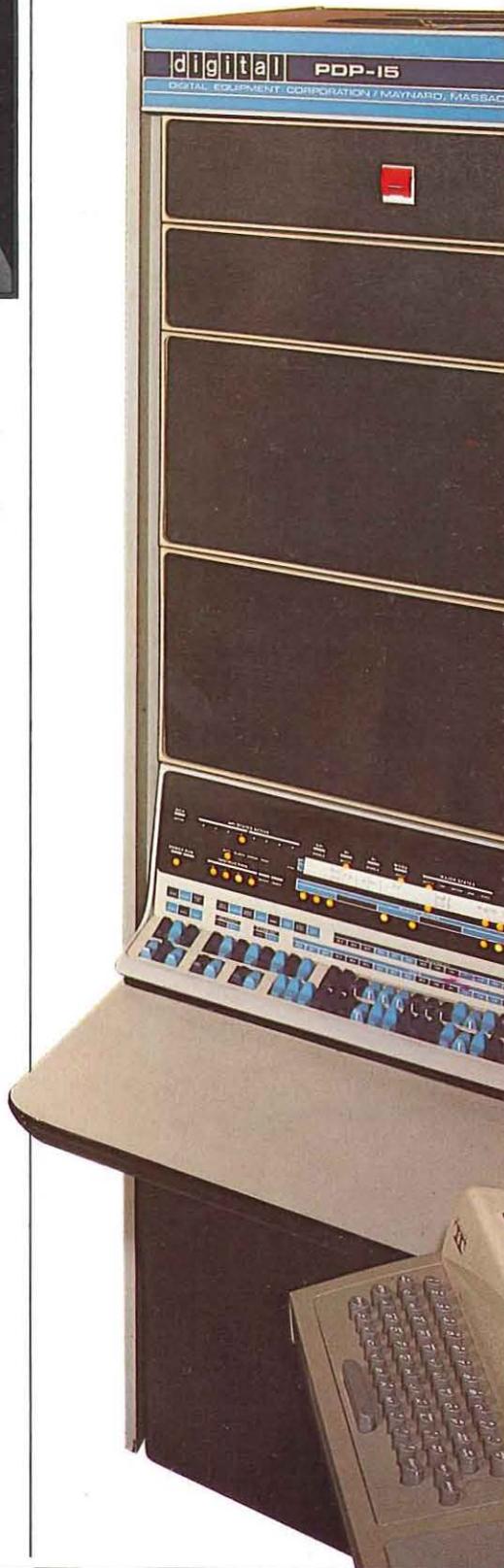


Large screen console

This new development provides the operator with a view of the complete frame of film. The overall dimensions of the screen, 0.98 metres x 1.20 metres, are optimized for the projection of BEBC type film at a magnification of approximately x14. The controls and subsidiary displays have been re-located to improve the ergonomic design of the console.

Film illumination

The projector lamp unit has been re-designed to ensure that the operator has a clear bright image on the screen. The new compact mercury iodide lamp, located in an entirely new lamphouse, gives five times more light than the standard unit.



Brief specification

Film Types

Standard 35 mm, 50 mm or 70 mm film, black on white or white on black, 3 view

Displays

Main Screen 0.98 metres x 1.20 metres
Full frame projection at a magnification of approximately x14

Television close-up of probe area centred to within 20 mm of probe (magnification x40)

Oscilloscope for process signals

Storage Display for graphical and alphanumeric data

Tracking Mode

Measurement of five fiducial marks in 15 seconds. Speed of tracking: minimum ionizing track at film plane is not less than 75 mm per second

Film Transport Speeds

Frame 2.5 seconds per 200 mm length

View Change 3 seconds

Fast Wind 1 metre/second

Supplies

Electrical 440 3-phase 50 Hz (5A/PL) or 380 3-phase 50 Hz (5A/PL)

or 208 3-phase 60 Hz (10A/PL)

Air 1 litre per second at a constant pressure 0.7 MN/m²

Environment

Temperature 20 ± 2°C

Humidity 50 ± 10% RH

Contamination Environmental air should be filtered to 20 microns

Computer

Digital Equipment Corporation's PDP15/XVM100 or PDP11/34 or equivalent with 24K words of memory and peripherals

Dimensions approximate

Optics Unit 1.5 x 1.0 x 1.5 LWH metres
Electronics Rack 1.0 x 0.7 x 1.8 LWH metres

Console 1.2 x 1.3 x 1.7 LWH metres

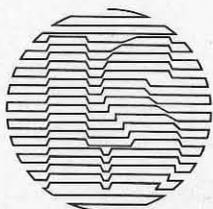
Floor Area

4.0 x 5.5 metres

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