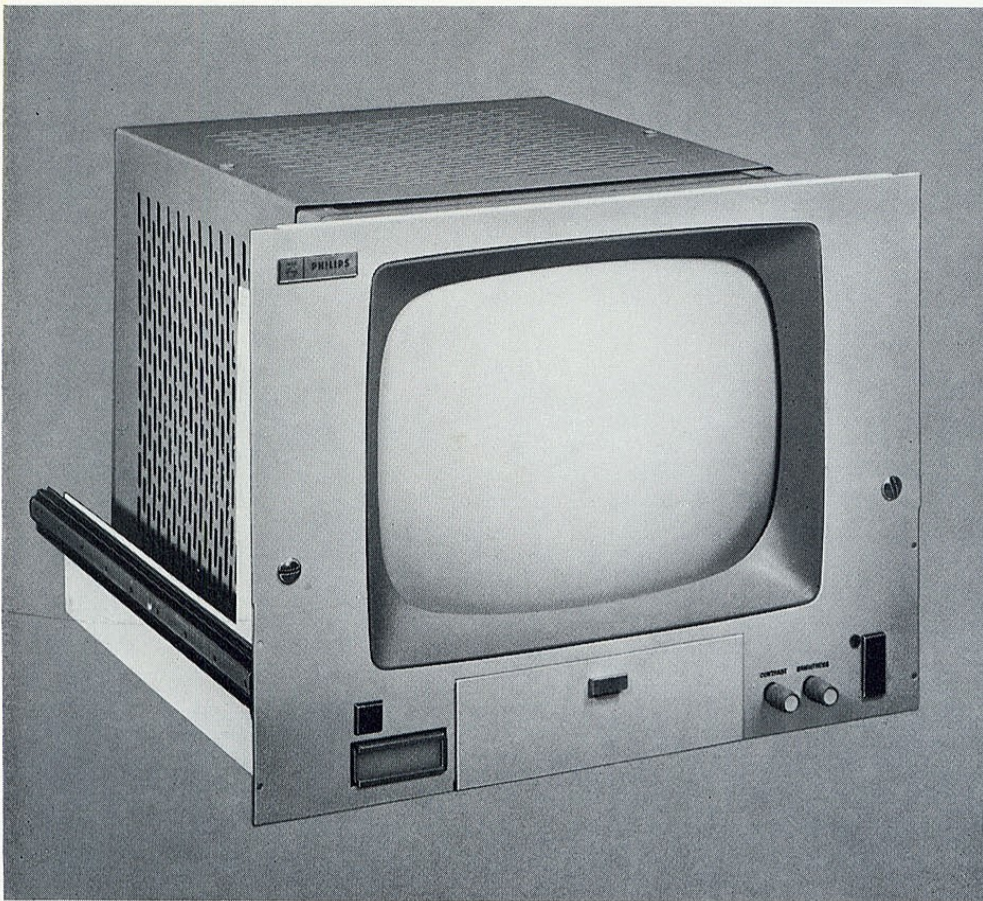




14-inch High Quality Monitor, Type LDH 2151



High-brightness picture

Optimum scanning geometry

Independently generated high tension

Two video inputs - minimum cross-talk

Technical and mains earths electrically isolated

Switchable picture size

Provision for remote control

The LDH 2151 monitor, which has been specifically designed for use in black-and-white and colour television studios, meets stringent requirements on picture quality, accuracy and stability. This special purpose monitor is a valuable supplement to the general purpose 11, 19 and 25 inch range of monitors.

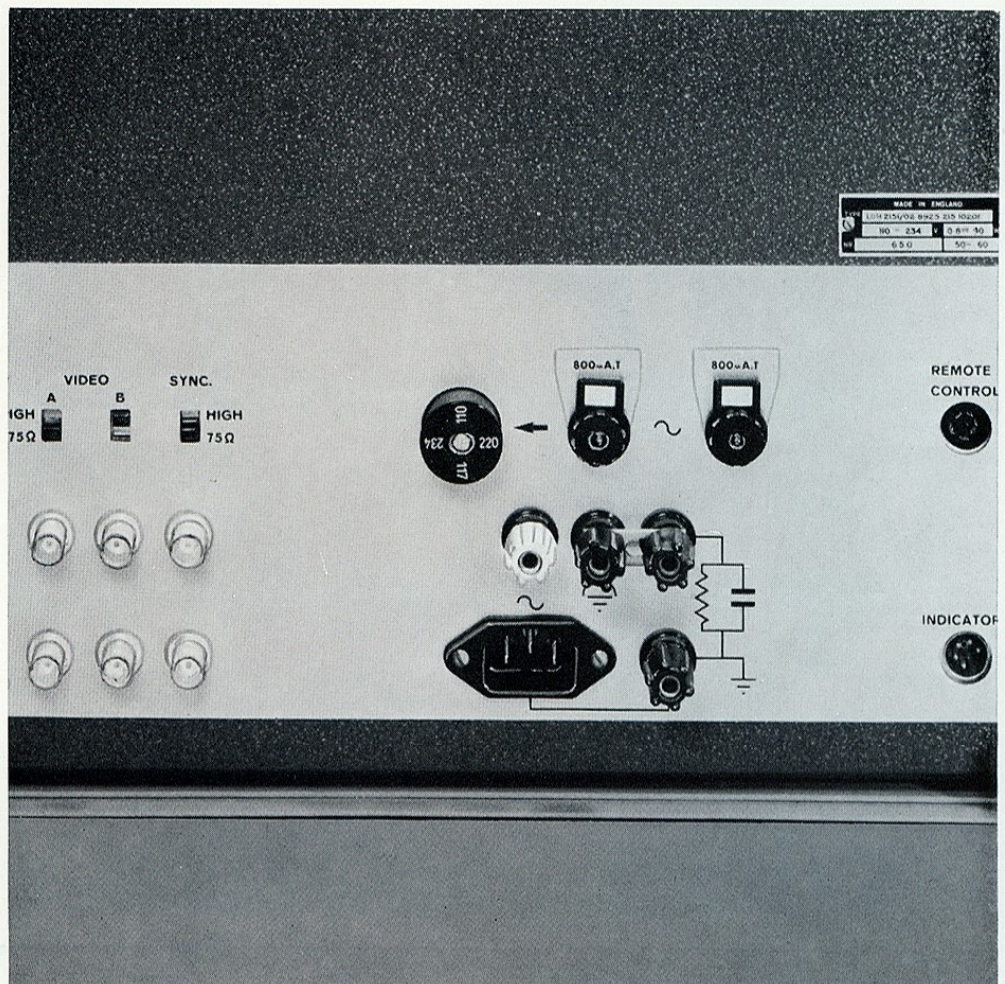
The monitor can be operated from the usual 50 and 60 Hz mains voltages. It can handle composite video signals (VBS or CVBS) as well as separate video and sync signals (VB + S), in accordance with CCIR and EIA scanning standards. By means of a selector or remote control, a choice can be made from two independent video signals applied to the monitor. Special attention has been paid to ensure an excellent cross-talk pro-

tection between these two signals, and even at a signal frequency of 5 MHz this damping is better than 50 dB.

Care has also been given to the vertical and horizontal time base circuits. The former has a free-running control from 48 to 62 Hz, adjustable by screwdriver setting, the interlace error being less than 55% : 45%. The free-running frequency of the horizontal time base is also adjustable by screwdriver setting, and has a wide pull-in and hold-in range. The horizontal time base is more-over switchable from 'flywheel' to 'direct lock' operation. In the former case, a selection can be made between a long flywheel time constant and a short one. An additional switch is provided for decreasing the horizontal and vertical deflection amplitudes in

such a way, that the picture corners become visible on the screen, so that checking the complete transmitted picture content is rendered possible.

The black-level is kept constant within 1% of the nominal white level by means of a highly stable feed-back clamping circuit, operating during the back porch. The time constant of the clamping circuit is switchable to two different values to ensure an optimum clamping function even under arduous signal conditions. The picture tube is an electrostatically focused special monitor tube of 14-inch screen diagonal, type M36-16 W. The high voltage of 16 kV is produced independently of the line output stage in a generator circuit with a low internal resistance not more than 300 k Ω ,



so that no mutual influences occur between picture brightness and raster size. The scanning beam is suppressed during the horizontal as well as vertical flyback period. In the event of a horizontal or vertical scan circuit failure the high tension is suppressed to prevent spot burn of the tube screen.

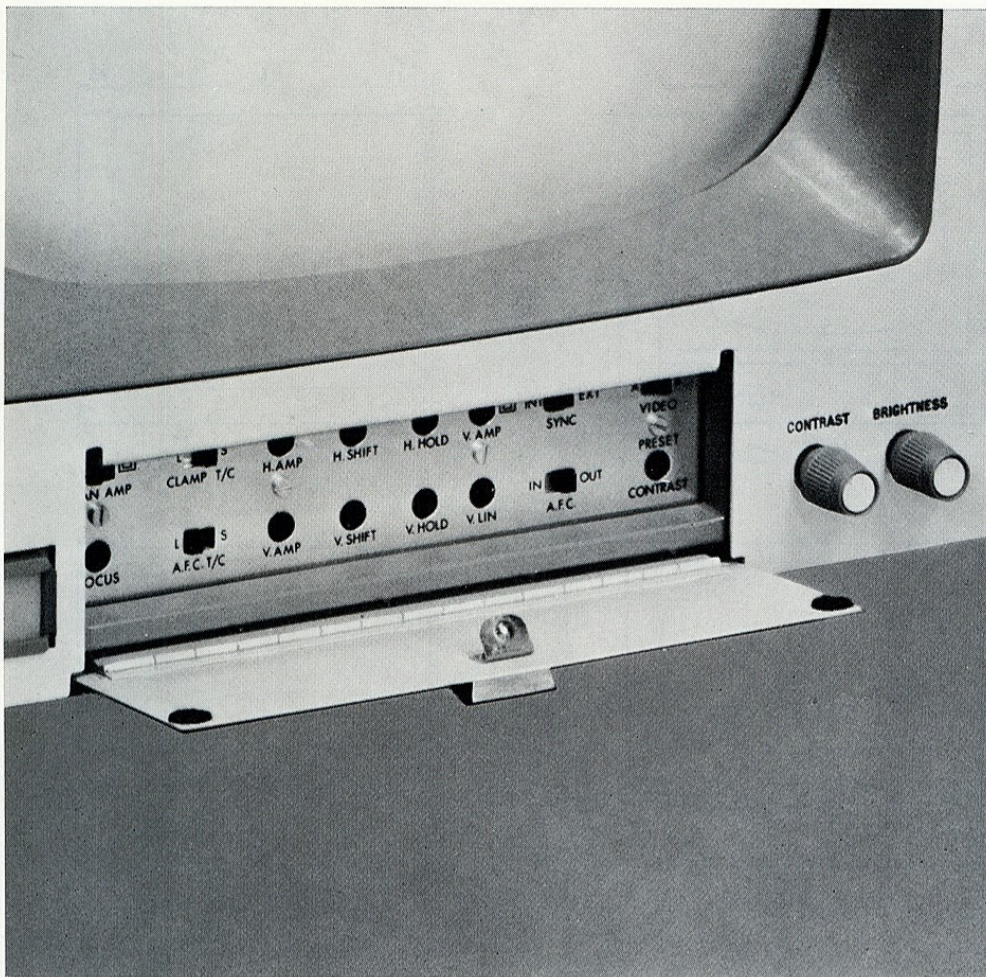
The monitor is available in table and 19-inch rack versions, the latter being fitted with telescopic rails, while the former may have the knobs removed from contrast and brightness controls.

The solid state circuitry, employing modern silicon transistors, is mounted on easily accessible printed boards with silk screened

component references. Mains earth is separated from technical earth. Most of the pre-set controls are executed as screwdriver controls and arranged behind a hinged cover at the front of the apparatus. Mains switch as well as the contrast and brightness controls are not covered. Remote control is possible for contrast, brightness and video signal selection. Cue-lamps on the monitor front can be connected to the studio signalling system to indicate the 'actual'-state and camera designation. All input signals can be looped through or terminated with $75\ \Omega$ by switches.

The CRT video-signal is moreover available for checking purposes at an internal test-point with an attenuation of $100:1$ at $75\ \Omega$.

The monitor is supplied with mains plug and lead together with a free plug for remote control connections and a free socket for connection of the indicators.



TECHNICAL DATA

Scanning systems:

CCIR 625-lines, 50 fields/s
and
EIA 525-lines, 60 fields/s

Power supply:

110, 117, 220 and 234 V \pm 10 %, adjustable by means of a voltage selector;
48 to 62 Hz

Power consumption:

90 W at Power Factor 0.8

Input signals:

either 2 x composite video signal (VBS), 0.5 to 2.0 V_{pp} positive going video; or 2 x non-composite picture signal (VB), 0.35 to 1.5 V_{pp}, positive going, plus a composite sync. signal (S), 0.5 to 6.0 V_{pp}, negative going; the video signal can be selected on the front panel or from a remote position; all input signals can be looped through or terminated with 75 Ω by means of a switch

Input impedance:

> 35 k Ω in parallel with 10 pF, with or without power applied to the monitor;
V.S.W.R. \leq 1.05 from 0 to 7 MHz

Frequency response:

within \pm 1/2 dB to 5 MHz and within \pm 1 dB to 10 MHz, with respect to 1 MHz
Tilt at 50 Hz < 2 %
'K' rating to 1 T pulse: 1 %

Differential gain: < 5 %

Resolution:

600 lines with a luminance of at least 80 nits (250 asb; 24 ft-Lambert) over the total picture area

Geometric distortion:

\pm 1 % of picture height at all points of the picture

Aspect ratio: 4 : 3

Positional hum:

Displacement of raster < 0.1 % of picture height

Line time base:

Range of free-running control at least 13 750 to 17 750 Hz
Pull-in range better than \pm 200 Hz (long

time constant), better than ± 500 Hz (short time constant)

Hold-in range better than ± 1000 Hz;

Time base can be switched to 'direct lock' or 'flywheel' operation; flywheel time constant can be switched to either 'long' or 'short'

Field time base:

Range of free-running control 48 Hz to 62 Hz

Free-running frequency drift less than 2 Hz

Interlace:

Better than 55 : 45 over the useful part of the hold range

Black level:

Stability versus signal conditions: 1 % of peak white level; clamp can be switched to long or short time constant

Maximum luminance:

More than 400 nits

(1250 asb; 120 ft-Lambert)

Contrast control:

Operational control on the front, ranging from nominally zero to pre-set maximum; pre-set control behind the front cover; remote control for gain reduction of 6 dB

Picture tube:

M 36-16 W, a 14-inch rectangular direct view tube with electrostatic focusing, magnetic deflection

High voltage:

16 kV, not derived from the line output stage; internal resistance of EHT source is 0.3 M Ω max.

Permissible ambient temperature:

from -10 to $+45$ °C

Temperature stability:

With any 20 °C temperature changing within the range from -10 to $+45$ °C, the black level will remain constant within ± 1 % of peak white signal level

Coaxial sockets: BNC type

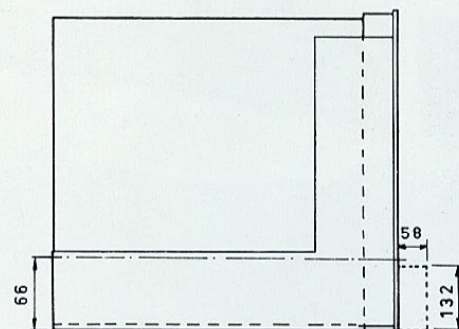
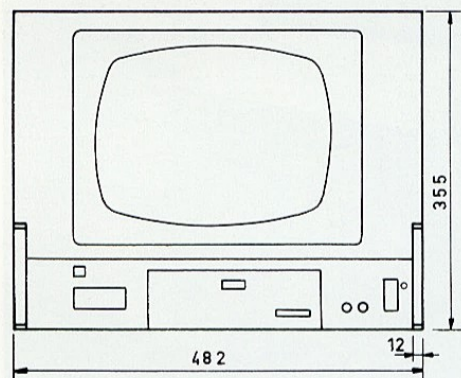
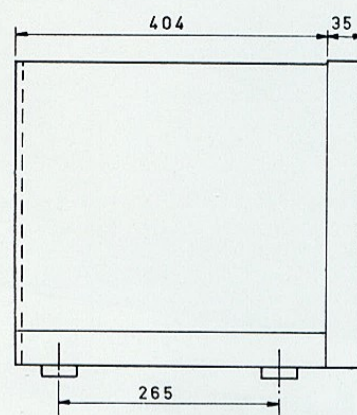
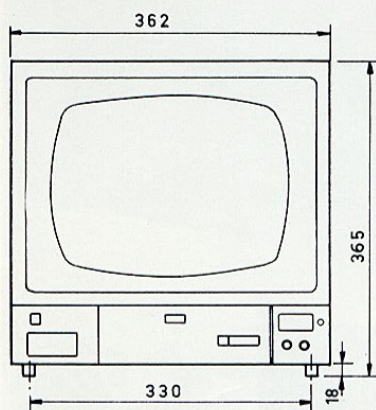
Dimensions: see dimensioned sketch

Weight:

table version: 26 kg

Rack-mounted version: 35 kg

3922 980 95242 ELA



All dimensions in mm

Data subject to change without notice

Printed in the Netherlands

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