

CAMERA TUBE TEST CHANNEL TYPE 107



The Camera Tube Test Channel type 107 enables the performance of camera tubes to be quickly and accurately assessed. Mounted within a self-contained console is all the equipment necessary for measuring the following tube parameters.

Decay and build up lag.

Long term image retention (stick).

Sensitivity.

Blemishes and shading.

Cathode emission.

Resolution.

Geometry.

R. G. B. Sensitivity.

Operating potentials.

The equipment includes a camera channel, a measuring oscilloscope, a picture monitor, automatic transparency changer, an optical bench assembly with lens and yoke, lag meter, a standardised light source and filters to measure performance in the three primary colours. All operational controls are brought out to a front panel which also incorporates digital metering for tube electrode voltages and current, alignment and focus coil currents.

A range of interchangeable camera heads complete with suitable lenses enables measurements to be carried on $1\frac{1}{4}$ " (30mm), 1" (25mm), $\frac{3}{4}$ " (18mm) and $\frac{1}{2}$ " (13mm) tubes.

An internal sync pulse generator is provided but the equipment may be driven from external mixed syncs and mixed blanking. It is suitable for both 625 and 525 lines.

For 30mm and 25mm tubes a filter slide is incorporated into the camera head unit and contains the R G B filters. For 18mm and 13mm tubes filters are fitted to the front of the lens when required for R G B measurements.

A wide range of 10" x 12" test cards is available; special test cards are provided for resolution and geometry measurement.

LINK
ELECTRONICS

LINK ELECTRONICS LTD.
North Way, Andover, Hants.
SP10 5AJ. England.

Telephone: Andover (0264) 61345
Telex: 47132 LINK G
Cables: LINKELEC ANDOVERHANTS

E. & O. E. Link Electronics reserves the right to alter specifications without notice.

SPECIFICATION

Power:	230V \pm 10% (115V \pm 10% option). 1000 Watts nominal.
Outputs:	
Video	1 Volt composite from 75 Ω .
Mixed Syncs, Line Drive, Field Drive, Mixed Blanking:	2 Volts negative going from 75 Ω .
Inputs:	
Mixed Syncs and Blanking:	2 Volts negative going from 75 Ω .
Frequency Response:	Within \pm 1/2dB up to 6MHz overall without gamma or aperture correction.
Signal/Noise:	RMS noise typically -45dB down on peak signal of 0.3 μ A with a bandwidth of 5.5MHz.
Geometry and Linearity:	Within 1% overall, no rapid changes.
Gamma Correction:	Switchable, linear, 0.5, or 0.3.
Aperture Correction:	Up to +10dB at 5MHz may be switched off for tube measurements.
Channel Gain:	A calibrated, switchable gain control is provided. Range 0.02 μ A to 1.5 μ A for peak white.
Shading:	From causes other than the tube less than 1% of peak white. Reference light source contributes less than 0.05%.
Non Linear Distortion:	Less than 1%.
L F Response:	Less than 1% tilt on a 50Hz square wave.
Operational Controls	
Wall Anode Voltage Range:	50V to 1000V by means of a 10 turn control.
Mesh Voltage Range:	50V to 1000V by means of a 10 turn control.
Limiter Voltage Range:	50V to 500V by means of a 10 turn control.
Target Voltage:	Switched, 45V, 25V or variable 0-150V.
Focus Current:	0-300mA by means of a 10 turn control. Suits low and high impedance coils.
Alignment Current:	X and Y coil current \pm 4mA.
Beam: (G, V)	0 to -150V with beam cut switch.
Heater Voltage:	A two position switch provides either a fixed voltage 6.3V AC heater supply or a variable voltage 0 - 10V DC supply. The supply is inhibited after tube changing if the heater voltage is set higher than 6V.
Function Switch:	3 position (1) normal, (2) 0.3 μ A sawtooth to head amp input, (3) normal, plus grille.
Lift:	Variable from below blanking level to peak white.
Line and Field Scan Shifts and Amplitudes:	Sufficient range to overscan target with 1000V applied to mesh and wall anode.
LP Filter:	Switched, 1.5MHz low pass filter to reduce noise at high gain.
Focus Rock:	Switched 1/2 field frequency squarewave modulation on to the focus current for alignment purposes.
Wide Blanking:	In 'wide' position blanks the tube for approximately half the active line time, used for dark current measurements.
Light Bias:	Variable control of brightness of bias light in camera head (option).
Test Transparency Selector:	Push button, random selection of transparency in rotating drum. Lamp on/off and brightness control.
Standard Lamp:	On/off and current preset for calibrated point light source. Used for sensitivity, shading, and blemish measurements.
Calibrated Gain Control:	20 position switch sets gain equivalent to 0.02 μ A to 1.5 μ A for 0.7V output.
Preset Controls	
Reverse Line Scan Shift	Line Linearity.
Line Scan Reverse Switch	Reverse Field Scan Shift.
Field Scan Reverse Switch	Sawtooth Amplitude.
White Clip	Black Level—positive picture.
Aperture Correction	Black Level—negative picture.
Sync Amplitude	3-position Gamma Switch,
Positive/Negative	Linear, 0.3 and 0.5.
Picture Switch	
Metering	
	3 Digit Digital Meters are used to measure all the tube potentials. Digital milliameters also used for limiter, heater, alignment, focus coil, and standard lamp currents. Break jacks and monitor points are provided to check meter calibration.