



1710B Waveform Monitor with carrying case and BP1 Battery Pack (carrying case & BP1 are optional accessories).

1710B Series Waveform Monitors

Cost Effective

Easy Operation

Burst Phase Indicator

Dual Filter Display

Half Rack Width

Bright CRT Display

Internal Graticule

Light Weight

Low Power Consumption

DC Operation Available

Available in NTSC, PAL and PAL-M Standards

The 1710B Series waveform monitors provide all of the commonly used display modes. In addition, the 1710B Series adds relative burst phase indication and dual filter display. All of this in a cost effective package for the user who wants high quality at a low price. These new monitors are mechanically compatible and retrofit into an existing system that uses half rack width, 5 1/4 inch waveform monitors.

Because of its extreme light weight, low power consumption, and dc operation (field installable kit) the 1710B Series is ideal for field production, mobile operations, and any other application where space, power consumption and/or portability are prime considerations.

Easy Operation

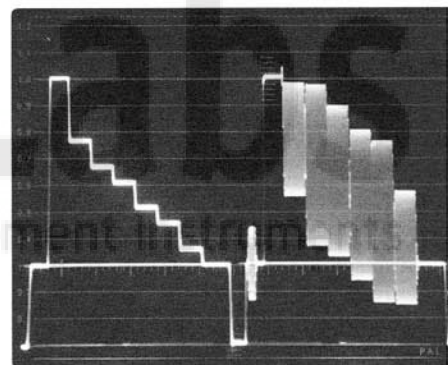
This monitor was also designed with the user in mind. Controls have clear nomenclature and are laid out in a logical order. This makes the operation of this powerful tool easier than one might expect.

Burst Phase Indication

The relative burst phase between inputs is displayed on the LED bar graph. The center green LEDs indicate the two signals are phase matched. The yellow ones warn the phase is slipping out of an acceptable range. Finally, the red LEDs flag an unacceptable amount of phasing error. This feature allows one instrument to do the complete job of timing and phasing in a basic television system.

Dual Filter Display

The dual filter display allows the user to view both the complete video signal and the luminance information at the same time using just one instrument. This eliminates the need for switching back and forth between filters and makes the instrument easier to operate. Ideal for camera setup.



1711B Waveform Monitor Dual Filter Display.

Bright CRT Display

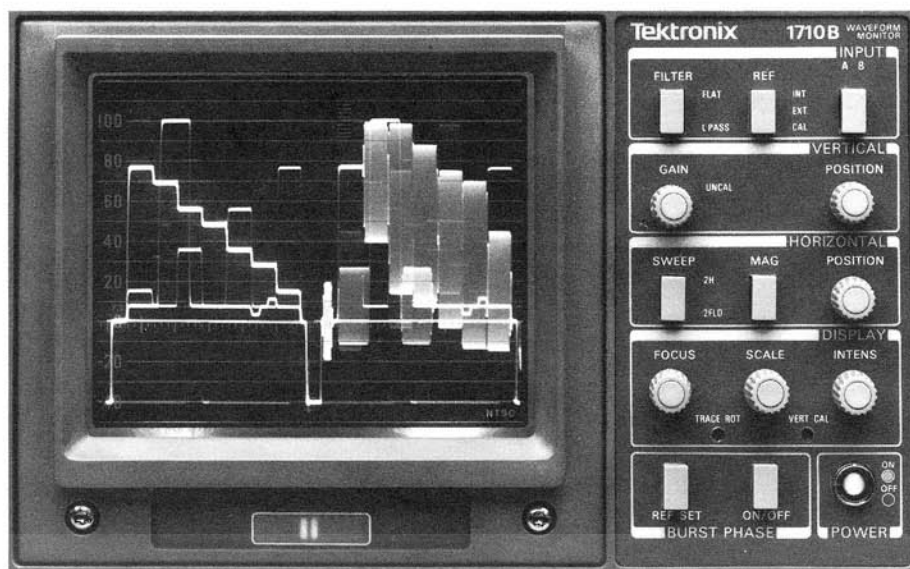
The bright CRT display permits use of the 1710B Series in high ambient light conditions. Brightness remains high in the magnified sweep modes enhancing the 1710B's use in system timing applications. The internal graticule is parallax-free to reduce errors and improve its monitoring and measuring capabilities.

NTSC and PAL Standards

The 1710B Series waveform monitors are available in both NTSC and PAL versions.

1710B	NTSC
1711B	PAL

PAL-M instruments are available as a modified product.



1710B Waveform Monitor Dual Filter Display.

CHARACTERISTICS

ELECTRICAL SPECIFICATIONS VERTICAL DEFLECTION SYSTEM

Frequency Response — Flat: Within 5% of the response at 50 kHz from 50 kHz to 6 MHz. The response at Fsc is within 2% of the response at 50 kHz. L PASS: At least 97% attenuation at Fsc.

Transient Response

Pulse to Bar Ratio — 0.99:1.00 to 1.01:1.00. Ringing: 2% or less. Overshoot: 2% or less. Tilt (Field Rate Square Wave, Vertical Window, or 25 μ s Bar): 1% or less of active video.

Gain Range — Input signals between 0.25 V and 2.0 V can be adjusted to 140 IRE (NTSC) or 1 V (PAL) display.

Maximum Absolute Input Level — ± 2 V (dc + peak ac).

Deflection Accuracy

1710B: 1 V input for 140 IRE display within 2%.
1711B: 1 V input displays 1 V within 2%.

Dc Restoration — Dc Restorer Clamp Time: Back Porch. Low Frequency Response at 50 Hz: Attenuation of 50 Hz on Input Signal 20% or less. Blanking Level Shift with 10% to 90% APL Change: 1% or less of 100% video. Blanking Level Shift Due to Presence or Absence of Burst: 1% or less of 100% video.

HORIZONTAL DEFLECTION SYSTEM

Sweep — Sweep will occur in all Horizontal mode settings with or without synchronization.

Synchronization — Sweep will synchronize to composite video 0.5 V p-p to 2.0 V p-p or to composite sync 143 mV p-p to 8 V p-p.

2FLD Sweep Repetition Rate — Equal to frame rate of applied video or external sync.

2H Sweep Repetition Rate — Equal to half line-rate of applied video or external sync.

Timing Accuracy — 1 μ s/div sweep within 2%.

Linearity (1 μ s/Division) — Within 2%.

Differential Linearity (1 μ s/Division) — Within 3% 0.1 div (0.5 minor div) or less compression or expansion of a center screen four division signal, when positioned anywhere horizontally.

POWER SOURCE

MAINS Voltage Ranges — 115 V (90 V to 132 V); 220 V (180 V to 250 V).

Power Consumption — 25 Watts (85.25 BTU/hour) maximum.

CALIBRATION SIGNAL

Frequency — 100 kHz ± 1 kHz.

Amplitude — 1 V within 1%.

BURST PHASE INDICATOR

Phase of selected input (A or B) relative to the stored reference phase is displayed.

ENVIRONMENTAL

Temperature — Operating: 0°C to +50°C. Nonoperating: -55°C to +75°C.

Altitude — Operating: To 4500 m, (15,000 ft). Nonoperating: To 15,000 m, (50,000 ft).

CERTIFICATION

Safety — UL-1244, CSA Bulletin 556B, IEC 348.

EMI Compatibility — FCC Rules Part 15 Subpart J, (Class A). VDE 0871.5 (Class B).

PHYSICAL CHARACTERISTICS

Dimensions	mm	in
Height	133	5.25
Width	214	8.42
Depth	429	16.88
Weight	kg	lb
Net	3.6	8.0

ORDERING INFORMATION

When ordering please use exact nomenclature given here. The **standard instruments are shipped without a case or handle**. If your application is for bench or portable use, please order the appropriate enclosure from the optional accessories list. The 1710B and 1711B are UL recognized components and meet the requirements for listing when used in the appropriate enclosure. These instruments are configured for rack-mounting and are shipped without cases or covers. Order appropriate optional accessories to configure for bench, rackmount or portable use.

1710B Waveform Monitor (NTSC System Applications).

Includes: Power cable assembly, instruction manual.

1711B Waveform Monitor (PAL System Applications).

Includes: Same as 1710B.

PAL-M instruments are available as a modified product.

"Basic Waveform Monitoring" videotape available. Request through the Business Reply Card in the back of the catalog.

OPTIONAL ACCESSORIES

Cabinet — Plain. Order 1700F00.

Cabinet — Portable. Order 1700F02.

Side-By-Side Rack Mount — For mounting two half-rack instruments in a standard 19 inch rack. Order 1700F05.

Blank Panel Adaptor — For the side-by-side rack mount. Order 1700F06.

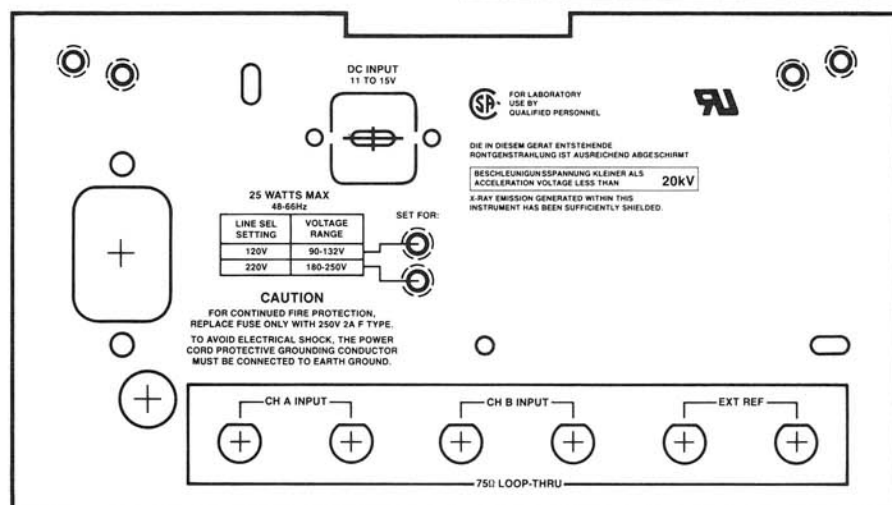
Viewing Hood — For high ambient light environments. Order 016-0475-00.

Dc Operation Kit — 12 VDC. Order 1700F10.

Camera — Order C-5C Option 02 (Regular) or C7 Option 03 (Automatic).

Battery Pack — Requires 1700F02 case to mount the BP1 to the 1710B or 1711B. Order BP1. (Battery charger not included.)

Snap Lock Power Cord Kit — North America. Order 040-1185-00. Universal Euro. Order 040-1186-00.



1710 Rear Panel.