The **Black Star 1410** is a microprocessor controlled video monitor tester, for aligning and testing computer and TV monitors, and video projectors. The comprehensive range of line and frame frequencies, together with the variety of rear panel outputs, ensure compatibility with the majority of commonly used computer monitors, including those used with IBM PC and compatible computers. The 1410 produces a wide range of test patterns, with the selected pattern, system, sync polarity, and line/frame frequencies, detailed on the LCD display. Alternate factory pre-programmed versions of the 1410 covering other systems are available at extra cost.

Specifications:

Systems (14 Types)

TV	Line 15.625kHz	Field 50Hz
TV 250 lines	Line 15.625kHz	Field 50Hz
CGA (Border)	Line 15.75kHz	Field 60Hz
CGA (No Border)	Line 15.75kHz	Field 60Hz
MDA Hercules	Line 18.432kHz	Field 50Hz
EGA	Line 21.85kHz	Field 60Hz
PGA 400 lines	Line 30.5kHz	Field 60Hz
PGA 480 lines	Line 30.5kHz	Field 60Hz
VGA 350 lines	Line 31.5kHz	Field 70Hz
VGA 400 lines	Line 31.5kHz	Field 70Hz
VGA 480 lines	Line 31.5kHz	Field 60Hz
SVGA 600 lines	Line 35.2kHz	Field 56Hz
8514A XGA 384lines	Line 35.5kHz	Field 87Hz
SVGA 768 lines	Line 48.5kHz	Field 60Hz

Test Patterns (8 Types)

Testcard	BorderRaster	Checker Board
Vertical Lines	Horizontal Lines	Grating
Dots	Colour Bars	Focus (Variable 4->20MHz)

Output Signals

Primary Red	All systems except MDA / Hercules
Primary Green	All systems except MDA / Hercules
Primary Blue	All systems (mono video on MDA / Hercules)
Secondary Red	EGA only
Secondary Green	EGA only
Secondary Blue	EGA only
Intensity	CGA and MDA / Hercules only
Horizontal syncs	Normal / inverted
Vertical syncs	Normal / inverted
Composite syncs	Normal / inverted
Mode(Picture size)	PGA only

Signal Amplitudes

Primary Red	TTL & Analog 1V, 0.7V (75R)outputs
Primary Green	TTL & Analog 1V, 0.7V (75R)outputs
Primary Blue	TTL & Analog 1V, 0.7V (75R)outputs
Secondary R.G.B	TTL only
Intensity and Syncs	TTL only
Mode	TTL only

Output Controls

Signal Level	
Analog R.G.B	0.7V / 1V

Red Video Controls

Primary Red	On / Off
Secondary Red	On / Off
Primary Red	Normal / Inverted
Analog Red	0% to 100% Variable Amplitude

Green Video Controls

Primary Green	On / Off
Secondary Green	On / Off
Primary Green	Normal / Inverted
Analog Green	Variable Amplitude 0% to 100%
Analog Green	0.3V Composite Sync on / off

Blue Video Controls

Primary Blue	On / Off
Secondary Blue	On / Off
Primary Blue	Normal / Inverted
Analog Blue	Variable Amplitude 0% to 100%

Ancillary Video Controls

Intensity	On / Off
Analog Ramp	RGB Video Vertical Ramp
Line Dot Width	Variable width (= 30ns to 150ns)
Focus Frequency	Variable 4MHz to >20MHz

Synchronisation Controls

Horizontal Sync	Normal / Inverted
Vertical Sync	Normal / Inverted
Composite Sync	Horizontal sync On / Off
Composite Sync	Vertical sync On / Off
Composite Sync	Normal / Inverted

Other Controls

System Select	Up / Down
Pattern Select	Up / Down
Power	On / Off

Rear Panel Connections

9 Pin "D"	Digital Outputs and Syncs
9 Pin "D"	Analog Outputs, Mode and Syncs
15 Pin "D"	Analog Outputs and Syncs
BNC	Analog Red
BNC	Analog Green
BNC	Analog Blue
BNC	Frame Sync
BNC	Composite Sync

IEC Mains Power input with fuse

General

Display	16 x 2 Character LCD Displays selected system, Pattern, Sync polarity and Line Frame Frequencies
Power Requirements	220,240Vac or 110,120Vac, 50 - 60Hz Selectable on rear panel
Case	Custom moulded ABS with Tilt stand
Weight	2Kg
Size	98 x 219 240mm (H x W x D)

Supplied Accessories Mains Lead, Instruction Manual, Spare fuse