USING THE VGA-SE10 TESTER

1) Connect the tester to the monitor or projector cable.
2) Allow the monitor or projector to warm up for a few minutes.
3) Rotate the selector dial and observe the displayed patterns.

Symptoms can usually be identified by the displayed pattern. If the pattern appears normal, then the problem may be in the computer or program, such as a defective video board or an incorrect video driver. A pattern that rolls up or down on the display screen signifies a vertical problem. A scrambled pattern that tears sideways may be a horizontal problem, or the monitor may not be compatible with the scan frequency. Missing or incorrect colors identify a video problem.

WHAT TO LOOK FOR

CONVERGENCE

The three separate electron guns in a color monitor must be perfectly aligned in order to generate crisp white lines without colored halos at the edges. Convergence describes the monitor's ability to produce images that lack halos across all parts of the screen. Poor convergence (or misconvergence) creates the effect of a poor 3D picture near the corners and edges of the screen, where the electron beams must bend the most to hit their intended paths.

LINEARITY

Linearity refers to a monitor's ability to display shapes such as squares or circles in various places without any stretching or distortion. Poor linearity causes onscreen objects to look flattened or squished.

BLANK RASTER

A black screen should produce no visible image, however, a background raster may be seen. If it is very noticeable, then adjust the brightness control until it just disappears.

COLOR BALANCE

A monitor uses three electron guns (one each for red, green and blue) to excite the phosphors that make up the pixels in an image. Color balance refers to the relative strength of the signal from each of the three guns. If the blue gun is turned up higher than the other two then you will see a bluish tint on the screen. Most monitors provide color adjustment controls which allow you to adjust the relative strength of the three electron guns to correct the problem.

Technicians will generally "eye-ball" the yellow and magenta bars for color balance. The yellow should be a lemon yellow without orange or green. And the magenta should not be red or purple.

XGA 1024 x 768
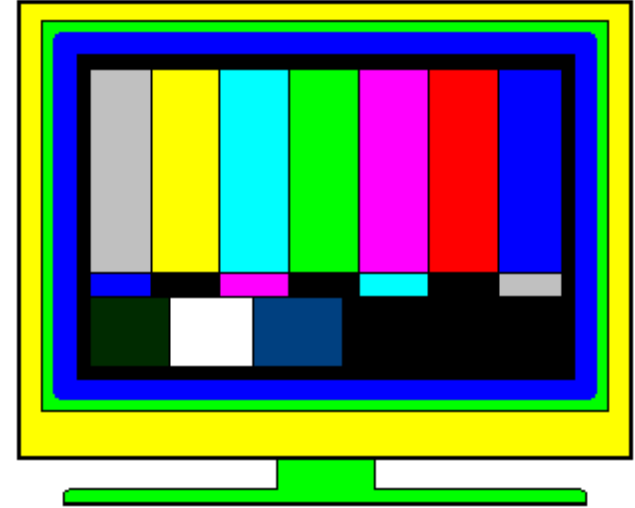
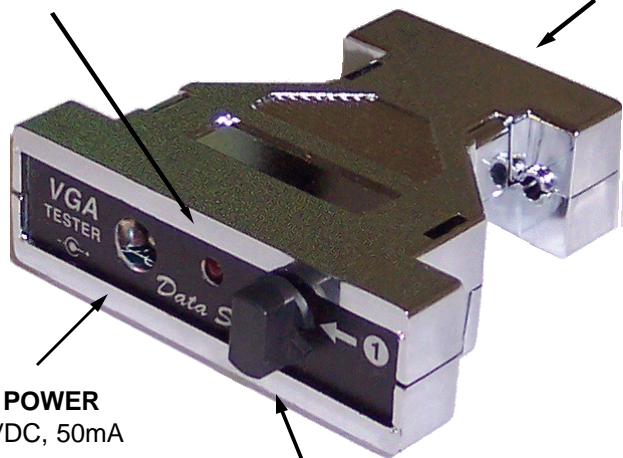# Operation Manual

VGA-SE10
XGA Monitor & Projector Tester

Data Sync Engineering
P.O Box 539, Footbridge Lane, Building 3
Blairstown, New Jersey 07825

TEL: (908) 362-6299
FAX: (908) 362-5889
http://www.datasynceng.com

LED DISPLAY
Indicates DC Power

TO MONITOR
15-Pin H.D. Female
D-Sub

VGA
TESTER

DC POWER
7-12VDC, 50mA

PATTERN SELECTOR
16 Position Rotary Switch

VGA-SE10 CONNECTOR PINOUT

Pin	Signal
6	Ground
Red 1	
11	
7	Ground
Green 2	
12	
8	Ground
Blue 3	
13	Horiz
9	
4	
14	Vert
10	Ground
Ground 5	
15	

VGA-SE10 VIDEO OUTPUT TIMING

Type	Pixels x Lines	H Freq (KHz)	V Freq (Hz)
XGA / VESA48K	1024 x 768	48.4	60.0

POSITION 1
Red Screen
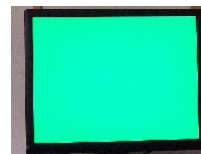
POSITION 2
Green Screen
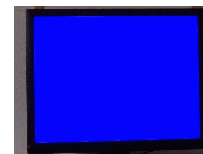
POSITION 3
Blue Screen
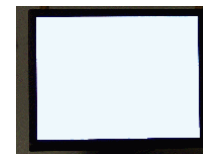
POSITION 4
White Screen

POSITION 5
Black Screen
(Blank Raster)

POSITION 6
White Outline
Border
Black Screen

POSITION 7
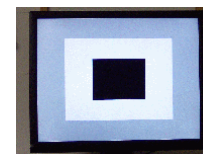Cyan Screen
(blue & green)

POSITION 8
Magenta Screen
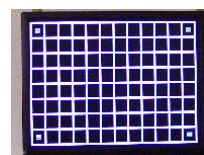(blue & red)

POSITION 9
Yellow Screen
(red & green)

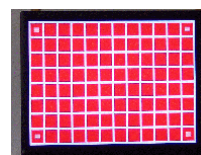**POSITION 10**
NTSC Style
Color Bars
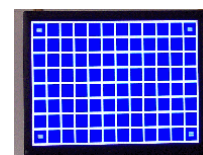
POSITION 11
Split Screen
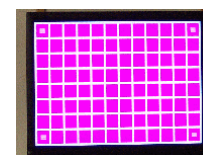Color Bars

POSITION 12
Gray
White
Black

POSITION 13
White Grid
Black Screen
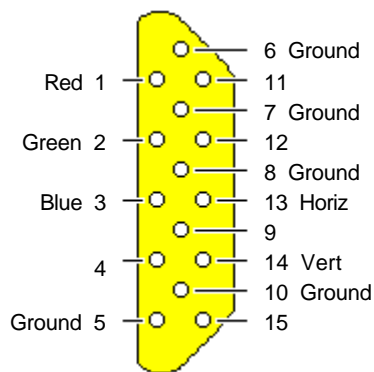Focus Corners

POSITION 14
White Grid
Red Screen
Focus Corners

POSITION 15
White Grid
Blue Screen
Focus Corners

POSITION 16
White Grid
Magenta Screen
Focus Corners