RGB, MDA, CGA, EGA to VGA converter - ID# 827

Operation Manual

CONVERTERS.TV

Introduction

RGB, MDA, CGA, EGA to VGA converter is a new multi-frequency scan converter, up-scaling to PC VGA and SVGA resolutions. The converter will auto-scan and accept horizontal scan frequencies from 12kHz ~ 40kHz with the vertical scan frequency unconstrained. Output horizontal resolution is unconstrained and the output vertical resolution is from 200 ~ 600 lines. Supports synchronization types of Separate, Combined (Composite) and Sync on Green. Full support for Monochrome, Grey scale and Colour analog and digital video formats.

With different styles of Industrial machinery using various combinations of horizontal/vertical frequencies and synchronizations, in formats ranging from MDA (single colour) to VGA (multi-colour), then the RGB, MDA, CGA, EGA to VGA converter is ideally suited for helping to replace defunct CRT monitors with newer model CRT and LCD screens. This means that it is no longer so costly to have to repair or replace old screens. Simply use the converter with any standard CRT or LCD panel that can be purchased in any store.

Compact, lightweight and robust, the RGB, MDA, CGA, EGA to VGA converter is a very simple solution to many seemingly expensive monitor replacement scenarios. Equipped with special cables for easy connection to source equipment.

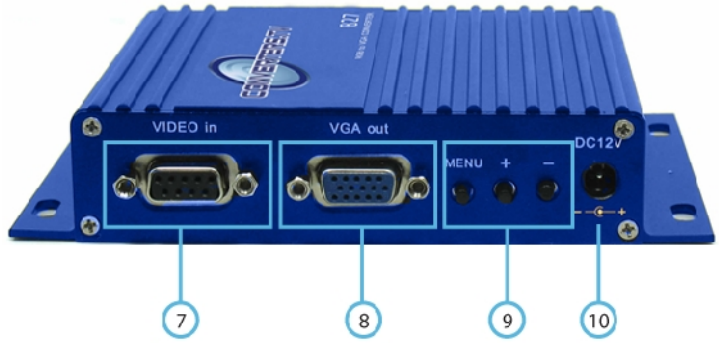
Features

- Wide ranging application for use with Industrial machinery
- Lightweight, black metal casing
- Convenient mounting holes in-built on casing
- Input / output connectors and OSD control buttons clearly labeled and accessible.
- Power on LED and 12vDC input plug and socket arrangement
- Input connection by 5 BNC or VGA D-sub 9 pin connectors (interface with 3,6,7,9,14,20,24 and 25 pin)
- Supports input RGB video signals using Separate Sync (RGBHV), Combined/Composite Sync (RGBH+V), Sync on Green (SoG/RGsB/RGBs) and YUV (YPbPr)
- Output connection via VGA D-sub 15 pin connector
- VGA (640*480) and SVGA (800*600) output
- Supports horizontal frequencies from 12kHz thru to 40kHz (MDA/CGA/EGA/VGA/YUV)
- Unconstrained vertical frequency support
- Auto scanning of frequencies makes signal detection easy
- Input Impedance selection (75ohm, 750ohm)
- Operates with 12vDC 1A power supply
- Supports digital and analog video signals (0.5-1.0v analog; TTL 3.5v digital)
- Supports Progressive and Interlaced scanning
- Easy to use OSD menu
- OSD menu does not require input signal to display on screen
- Last settings saved at switch off/on

Operating Functions and Controls

Front Panel

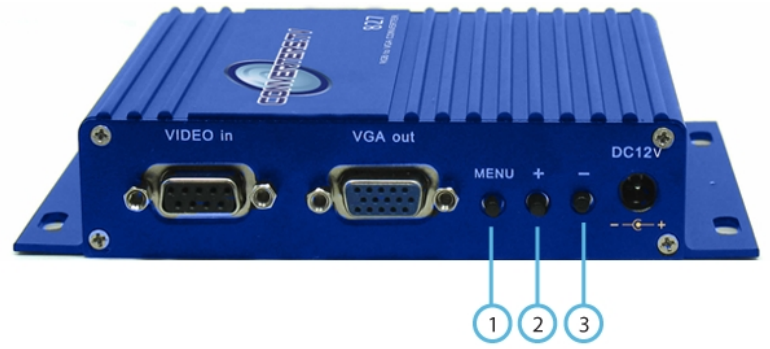
Rear Panel



No.	Description	Function	Notes
1	V	Vertical Scanning Frequency.	Input Channel 1
2	H/CS	Horizontal Scanning Frequency or composite sync	
3	R/Pr	Red signal input/ Pr signal input	
4	G/Y	Green signal input/ YPBPR -Y signal input	
5	B/Pb	Blue Signal input/YPBPR -Pb signal input	
6	Run	Power indicator LED	
7	Video In	To connect 9-pin interface of the input device	Input Channel 2
8	VGA Out	Standard sub-15p VGA female interface	Standard VGA/SVGA, 800*600/60hz, 640*480/60hz
9	Menu	To access OSD(OSD: On Screen Display) menu.	
	+/-	To adjust the OSD menu. Using the Screen Adjustment Menu	
10	DC12V	Power Supply input, DC 12V/1.0A.	

Note : ***Only one channel will be available at any one time. Please choose from either Channel Input 1 or Channel Input 2.***

Control Buttons



No.	Description	Function
1	Menu	-press it to enter into OSD menu -click it once to select and click again to exit the current line
2	+	-click it to move the cursor up -click it to add the value for certain item
3	-	-click it to move the cursor down -click it to deduct the value for certain item

Initial Setup

STEP 1 Connected to signal, no display or display color is not correct, adjust the Signal style (RGB(A) Analog/RGB(D) Digital TTL/YUV).

STEP 2 ID#827 can automatically identify the sync signal, if the display is distorted then manual adjustment of the sync signal is required. (Separate(H&V)/Composite(HV)/SOG,SOY)

STEP 3 If the picture is elongated, and overflows the screen or screen display is only half of the monitor, choose the scanning mode between progressive and interlaced to resolve picture.

STEP 4 Adjust the horizontal position, horizontal size, vertical position, vertical size of the displayed image to adjust the monitor properly.

STEP 5 Input impedance: Select the correct input impedance.

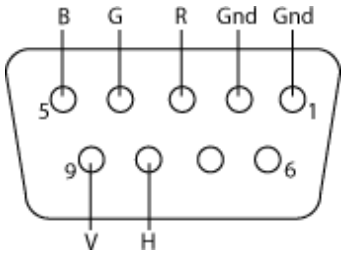
STEP 6 Adjust the phase setting until the display is clear.

STEP 7 Save and exit.

On Screen Display (OSD)

1. H Position Moves the position of the display area on the screen.
2. Width adjust the width of the menu.
3. V Position Moves the position of the display area on the screen vertically.
4. Height adjust the height of the menu.
5. Phase adjust the phase of the menu.
6. Signal style: RGB(A)Analog, RGB(D) Digital TTL, YUV
7. Signal Sync mode: Separate(H&V), Composite(HV), SOG, SOY. Automatically recognizes video input sync, or custom adjust video input sync
8. Input impedance: 75 ohm or 750 ohm.
9. Scanning: Interlaced or Progressive.
10. Exit & Save: Save and Exit.
11. No signal at input, the OSD menu will still display
12. After 15 seconds, the menu automatically closes.
13. **Advance Menu Display:** tum on the ID#827's power, press and hold the menu buttons simultaneously until the advanced menu displays, about 5 to 8 seconds.
14. Restore the factory defaults: tum off the converter power, press and hold the Menu buttons simultaneously until the converter powers on, about 3 to 5 seconds.

9 Pin D-SUB Female Connector Reference

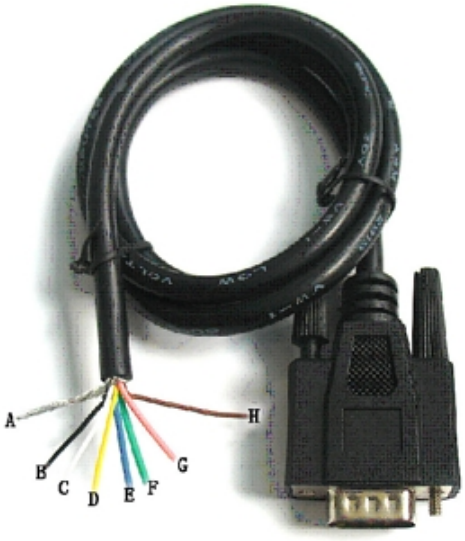


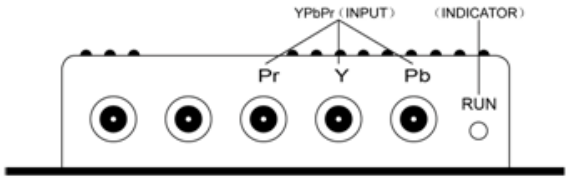
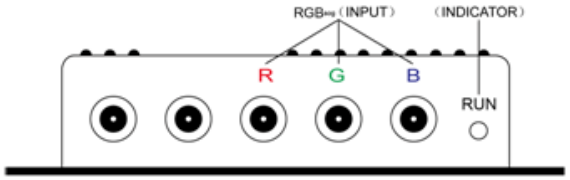
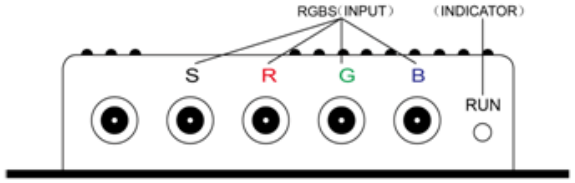
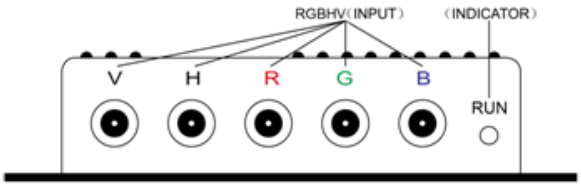
RGB DB9 Pin And Wire Colour Allocation:

Pin No.	Wire Colour	Function
Pin 1	Black	Connect to the ground
Pin 2	Black	Connect to the ground
Pin 3	Red	connect R(ed) interface of the input device
Pin 4	Green	connect G(reen) interface of the input device
Pin 5	Blue	connect B(lue) interface of the input device
Pin 6	N/C	Undefined(null)
Pin 7	N/C	Undefined(null)
Pin 8	Green	connect H(CS) interface of the input device
Pin 9	Blue	connect V interface of the input device
White	N/C	Undefined(null)
Brown	N/C	Undefined(null)
Grey	N/C	Undefined(null)
Shield	Multi Strand	Connect source end only if needed

Definition of 9 Pin cable

Name	Wire Colour	Signal
A	Silver web	Shield
B	Black	Ground
C	White	Vertical Freq Rate
D	Orange	Horizontal Freq Rate
E	Blue	Blue(B)
F	Green	Green(G)
G	Red	Red(R)
H	Brown	Undefined(null)



BNC	Input Signal	Connection Image
Pb/Y/Pr	YPbPr input signal (right image) Interface: three BNC slot, connected to the corresponding Pb, Y, Pr interface, then Y monochrome port.	 Analog 3BNC (YPBPR) Input
R/G/Bs	RGB Sog input signal (right image) Interface: three BNC slot, connected to the corresponding R, G, B slot, then G monochrome port	 Analog 3BNC (RGB Sog) Input
R/G/B/HV	RGBS CS Composite Sync (right image) Interfaces: 4 BNC slot, connected to the corresponding R, G, B, S, monochrome then G, S	 Analog 4BNC (RGBS Com Sync) Input
R/G/B/H+ V	RGBHV separate sync (right image) Interface: 5 BNC slot, connected to the corresponding R, G, B, H, V, monochrome then G, H, V	 Analog 4BNC (RGBS Sep Sync) Input

Note: ***9 Pin and BNC input signal, only one can be chosen***

Specifications

RGBH+V, RGBs, RGBHV, MDA, CGA, EGA, VGA, YUV Signal auto scan

Horizontal Scanning Frequency: 12K-40K

Vertical Scanning Frequency: Unconstrained

Vertical Resolution : 200-600 lines, auto scan.

Horizontal resolution: Unconstrained, auto scan.

Sync Supports: sync separation, CS composite sync, SOG green sync, auto scan.

Signal input: color, monochrome, Grey scale,.

Input Signal	Type	VGA, MDA, CGA, EGA, RGBs, RGBHV, RGBH+V, YpbPr
	Interface	9 PIN D-SUB, 5*BNC
	Parameter	Analog: 0.5-1.0v Digital: TTL: 3-5V Impedance: 75 ohm /750 ohm Scanning:Progressive/Interlaced
Output Signal	Type	Standard VGA: 640*480 60hz, SVGA: 800*600 60hz
	Interface	Standard 15Pin D-SUB
Power	DC 12V 1.0A	
Weight	900g	
Dimensions (cms)	(w)14.8 x (d)11.5 x (h)3.1	