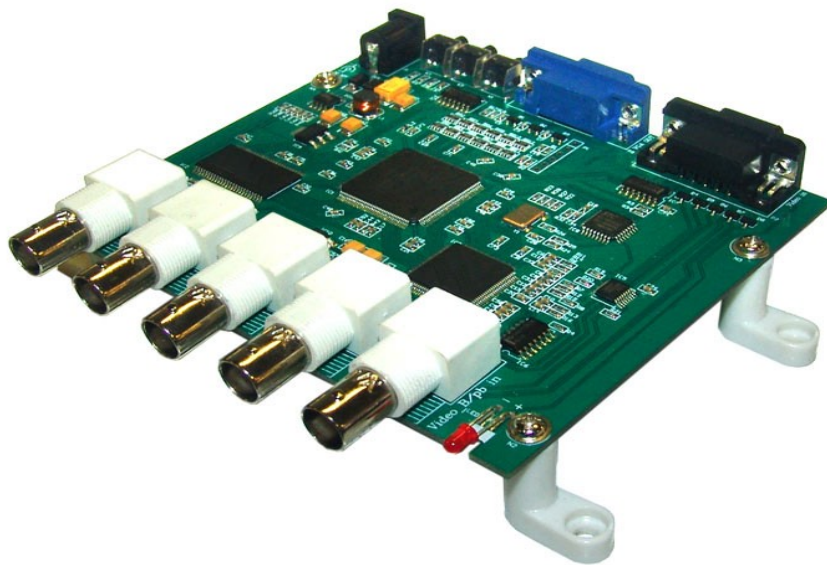# RGB, MDA, CGA, EGA to VGA converter   - ID# 827

Operation Manual

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

CONVERTERS.TV

(Note:9 Pin and BNC input signal, only one can be chosen)
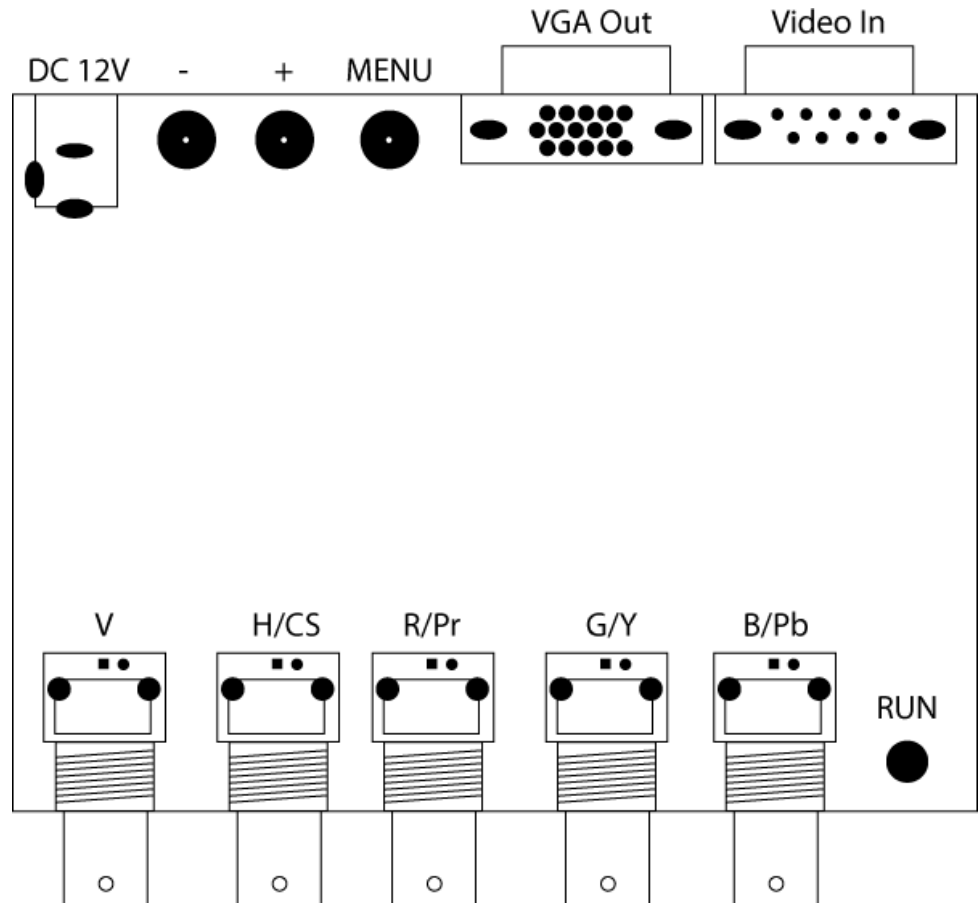
- DC12V Power Supply, DC 12V/1.0A.

- MENU To access OSD menu.

- + -: To adjust the OSD menu.
- VGA out: Standard VGA/SVGA,800*600/60hz, 640*480/60hz
- VIDEO in: 9 Pin D-SUB input

- V: Vertical Scanning Frequency.
- H/CS: Horizontal Scanning Frequency or composite sync.
- R/Pr: Red signal, or the color of the PR.
- GN Green signal, or chromatic aberration of Y.
- B/Pb Blue signal, or chromatic aberration of Pb.
-RUN: Power LED.

Control Buttons

(1) Menu: To access OSD menu.

(2) + - To adjust the OSD menu. Using the Screen Adjustment Menu (OSD: On Screen Display)

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.

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
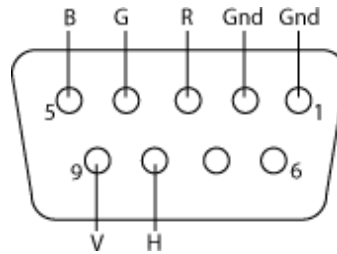
RGB DB9 Pin And Wire Colour Allocation:

- Pin No: -Wire Colour: -Function:
- Pin 1   -Black   -Earth
- Pin 2   "   "
- Pin 3   -Red   -Red Colour
- Pin 4   -Green   -Green Colour
- Pin 5   -Blue   -Blue Colour
- Pin 6   -N/C
- Pin 7   -N/C
- Pin 8   -Green   -Horizontal Sync
- Pin 9   -Blue   -Vertical Sync
- White   -N/C
- Brown   -N/C
- Grey   -N/C
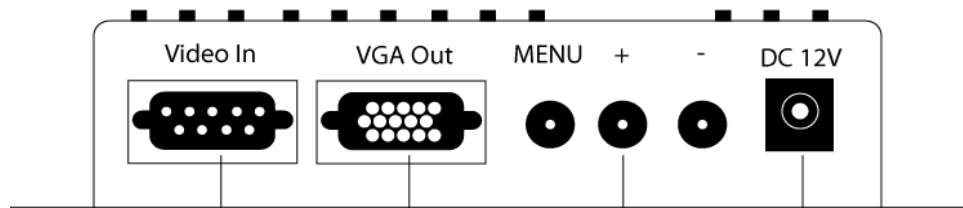- Shield   -Multi-strand   -Connect source end only if needed

RGBS CS Signal Input
VPbPr Signal Input
STATE

S   R   G   B   RUN
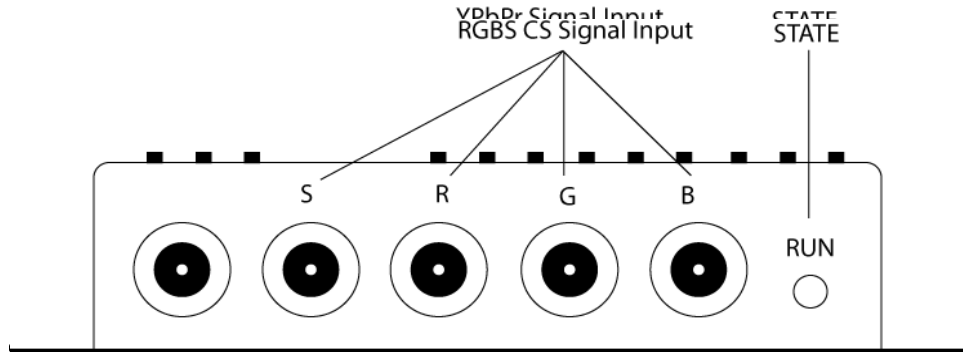
RGBS CS Signal Input
4 BNC Port Connection RGBS.   Monochrome Connection G S

RGBSHV Signal Input   STATE

V   H   R   G   B   RUN
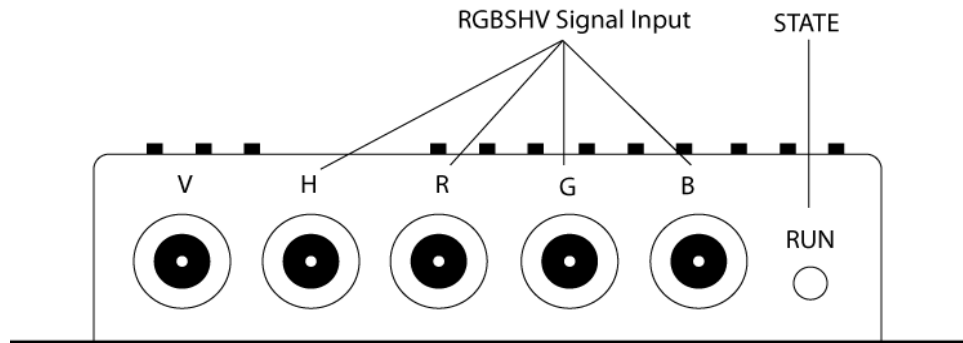
RGBSHV Signal Input
5 BNC Port Connection RGBHV.   Monochrome Connection G H V

Video In   VGA Out   MENU   +   −   DC 12V

9 Pin D-SUB Input   VGA Ouput   Control Button   DC Power Input

9 PIN, 3 PIN, 6 PIN, 7 PIN, 14 PIN, 20 PIN, 24 PIN, 25 PIN signal Input
Select RGBHV wire connection. Please follow 9 Pin D-SUB reference.

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

Specifications

RGB, RGB SOG, RGBS, RGBHV, MDA, CGA, EGA, 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.
- Supports sync separation, CS composite sync, SOG green sync, auto scan.
- Supports monochrome, Grey scale, color signal input.

Input Signal	Type	MDA, CGA, EGA, RGB SoG, RGBHV, RGBH&V, YpbPr, CV
	Interface	9 PIN, 6 PIN, 7 PIN, 15 PIN, 20 PIN, 24 PIN. 25 PIN
	Parameter	Analog: 0.5-1.0v Digital: TTL: 3-5V Impedence: 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	

CONVERTERS.TV