

**Dual PAL or NTSC Multi-system  
RGB Converter with 12V Relay  
Switch ID#236**



**Operation Manual**

## Introduction

This unit allows the user to upgrade their car's LCD screen or navigation system to allow the viewing of video such as DVD's, TV, Playstation 2, etc. This Plug & Play converter also has the capability to view a reverse camera on your car's LCD screen.

It contains 2 video inputs and will convert video signals from NTSC/PAL/SECAM into RGB/Sync or RGBsB (Sync On Green). This multi-system converter can convert from PAL input to NTSC output or NTSC input to PAL output. While a reversing camera can easily be used by simply connecting the 12V triggering switch to the reverse lights. This will turn display the reverse camera when the car is in reverse.

## Features

- Digital decoding and encoding ensures the best conversion quality.
- Converts NTSC/PAL/SECAM composite video to RGB/Sync or RGSB (Sync on Green).
- Video field conversion 50Hz to 60Hz selectable through SW2 switch on the PC Board.(ie, accept PAL input with NTSC output).
- 6MB field memory.
- Input System auto detection.
- RGSB input loop through.
- Sync polarity switchable between positive and negative.

## Operation Controls and Functions

### Front Panel



1. **RGBs/RGsB Switch-** This button is used to select between RGBs or RGsB (Sync On Green).

2. **9-Pin D Female Connector- RGB Out:** DB9 Pin configuration

<b>1) Gray:</b> Pin 1-GND	<b>7) Purple:</b> Pin 7- Blue out
<b>2) Brown:</b> Pin 2- Sync of source 1	<b>8) Orange:</b> Pin 8- Blue in from source 1
<b>3) Red:</b> Pin 3- RED out.	<b>9) Black:</b> Pin 9- Sync out
<b>4) Yellow:</b> Pin 4- RED in from source 1	<b>Source 1-</b> Loop through RGB/S input
<b>5) Green:</b> Pin 5- Green in from source 1	<b>Source 2-</b> Video input
<b>6) Blue:</b> Pin 6- Green out	

### 3. Toggle switch to switch between convert and RGB bypass- Procedure

Output	Select
Open	Convert
Short	Bypass

#### Procedure

- If 12V Trigger is activated then reverse camera (Video2) takes priority over both Video1 and Navigation.
- If 12V Trigger is not activated and the Toggle switch is ON, then DVD's (Video 1) is activated. (Convert)
- If 12V Trigger is not activated and Toggle switch is OFF, then Navigation Display is activated. (Bypass Mode)

#### Rear Panel



1. **DC Power supply input: DC 12V center positive.**
2. **Video input: V 1 input:** This input is converted to RGB output when the control wire (Blue/White pair) has no voltage and toggle switch is set to convert. Suitable for DVD and Playstation input.

**V2 input:** This input is selected and converted to RGB out when the control wires is set to high (12Volt) regardless of the setting of the toggle switch. It is suitable for reverse camera input.

**3. Relay (through 12V/GND control wires):** When this control wire is connected to 12Volt it forces Video 2 input to be converted to RGB output, regardless of the setting of the toggle switch. When this control wire has no voltage applied to it (Low), the setting of the toggle switch will dictate whether Video 1 or RGB bypass will output.

T.Switch/ Output/ C.Wire	12V	0V
Convert	Video 2	Video 1
Bypass	Video 2	RGB Bypass

**4. 60Hz/50Hz output switch:** The switch 2 on the PCB decides the vertical rate of the output to be 60Hz or 50Hz.

\* **Note:** The black wire is negative, the red is positive.

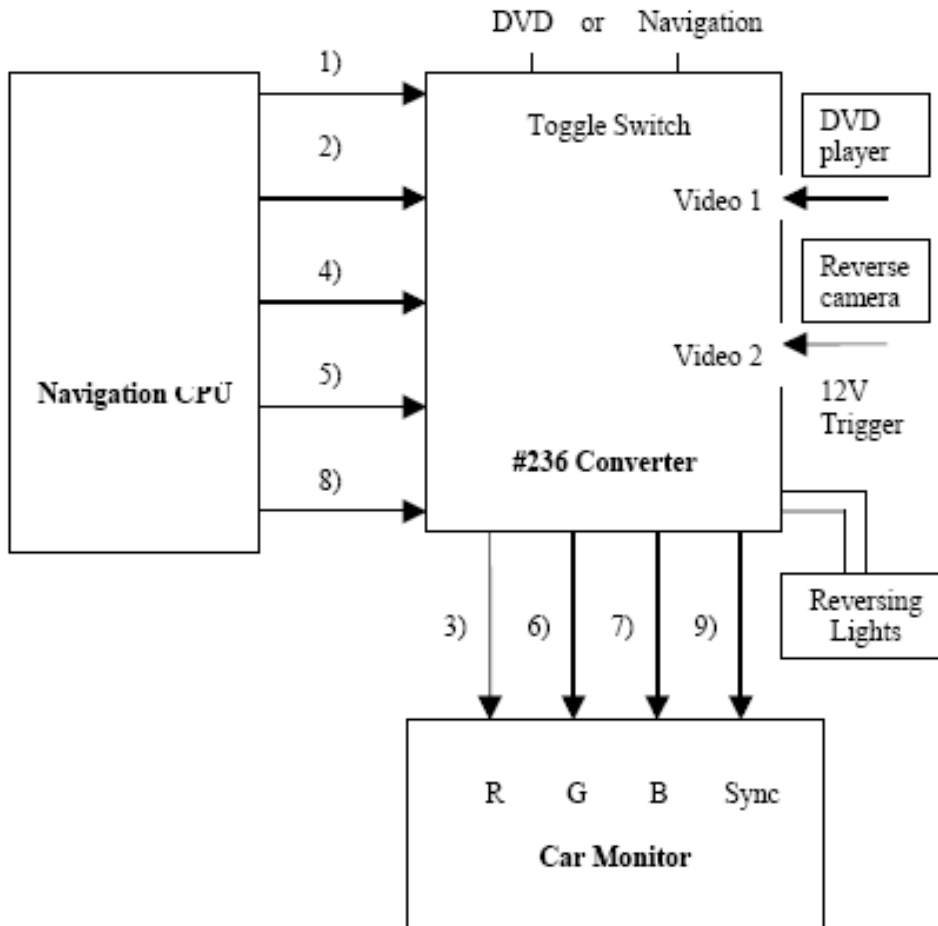
**The unit has an internal jumper used to switch the polarity of synchronization. The jumper is labeled 1 to 3 from top to bottom. If you have the jumper on 1 and 2 it will be set to "Negative Sync" and if the jumper is on 2 and 3 it will be set to "Positive Sync"**

## Precautions

1. Do not expose this product to direct sunlight.
2. Keep the unit away from radiator, heat sources and magnetic field.
3. Do not place it in very dusty or humid locations.
4. Use this unit in a horizontal position only.
5. Do not put heavy objects on top of the converter.
6. Put the unit in an open space that has good ventilation.
7. If the unit is acting abnormally keep the unit away from TV or other electronic equipment.
8. Unplug the unit from the power supply when it is not to be used for a long period of time

## Wiring Diagram

The Installer be required to know which wire is which from the Car navigation CPU in order to connect them to the converter. Please refer to **9-Pin D Female Connector Table**.



## Specifications

<b>Video Input</b>	1Vp-p 75 ohm RCA jack x 1
<b>RGBs Input</b>	Pass through
<b>RGB Output</b>	RGB: 0.7 Vp-p 75ohm 9-pin D female connector.
<b>Sync Output</b>	3 Vp-p positive or negative polarity.
<b>Power supply</b>	DC 12V center positive.
<b>Dimensions</b>	148 (D) x 77 (W) x 33 (H) mm.