

# NTSC to PAL to VGA Multisystem Converter ID#20



**Operation Manual**

## Introduction

This unit will convert NTSC/PAL or VGA signal into NTSC/PAL or VGA. It offers premium conversion quality. The converter has auto signal detection and 8-bit Broadcast Quality Colour Decoding. It can also receive the SECAM signal as an input.

## Features

- Converts any video system to any other video system and PC display system.
- When converting PAL (50Hz) to PC mode, its frame rate is converted to 60 Hz, this is to ensure vertical frequency is compatible with some 60 Hz-only LCD display monitors.
- Contains input video system auto detection.
- Digital conversion from input TV signals of NTSC 3.58, NTSC 4.43, PAL, PAL M, PAL N, SECAM to output signals of NTSC 3.58, NTSC 4.43, PAL, PAL M, PAL N, PC (640x480) 60Hz, (800x600) 60Hz, (1024x768) 60Hz.
- 8-bit Broadcast Quality Colour Decoding.
- Easy touch button for input and output system selection and picture adjustment.
- Digital comb filter for input system decoding.
- Built-in Time Base Correction (T.B.C.) function for signal synchronization.
- Built-in Automatic Gain Control (A.G.C.) function ensures 1 Vp-p output signal (Input level can range from 0.5Vp-p to 2Vp-p).
- Full digital decoding and encoding; highly integrated digital processing reduces the board size and ensures reliable quality.
- A colour-bar pattern will automatically appear on the TV screen when there is no video signal present on the input.
- TBC is active constantly, even in the bypass mode.
- Adjustable control on contrast, brightness, color, tint and horizontal/vertical phase.
- Innovative image processing circuitry ensures outstanding color, motion and picture detail.

## Operating Controls Front Panel



### **Video System Indicator: Auto, N3, N4, PAL, PAL M, PAL N, and SECAM:**

1. Illuminates when input auto detection mode is selected.
2. Illuminates when input system is set to NTSC 3.58.
3. Illuminates when input system is set to NTSC 4.43.
4. Illuminates when input system is set to PAL.
5. Illuminates when input system is set to PAL M.
6. Illuminates when input system is set to PAL N.
7. Illuminates when input system is set to SECAM.

**\* Note- When in auto detection mode one of the system indicators will also illuminate to show video system of the input.**

### **Output Video System Indicator:**

**Red LED illuminates when VIDEO mode is selected. N3, N4, PAL, PAL M, PAL N:**

1. Illuminates when output system is set to NTSC 3.58.
2. Illuminates when output system is set to NTSC 4.43.
3. Illuminates when output system is set to PAL (BDGIK).
4. Illuminates when output system is set to PAL M.
5. Illuminates when output system is set to PAL N.

**Green LED illuminates when VGA mode is selected**

1. Illuminates when output system is set to VGA 640 X 480.
2. Illuminates when output system is set to VGA 800 X 600.
3. Illuminates when output system is set to VGA 1024 X 768.

### **Input Auto Detection Button:**

Push the button to auto mode, in which the LED lights and the machine will automatically detect the system of the input. Push the button again to manual mode, in which the LED turns off, and the user has to manually select the input system of the input.

### **Input System Select Button:**

Each depression of the button steps through a series of video system and auto detection mode. The sequence of selection is: NTSC 3.58- NTSC 4.43- PAL (BDGIK)- PAL MPAL N- SECAM.

**VIDEO/VGA mode select button:**

- Press once to obtain the output signal in VIDEO mode.
- Press twice to obtain the output signal in VGA mode.

**A. In Video Mode:**

Each depression of the button steps through a series of video systems and auto detection mode. The sequence of selection is: NTSC 3.58- NTSC 4.43- PAL (BDGIK)- PAL MPAL N.

**B. In VGA Mode:**

Each depression of the button steps through a series of video systems and auto detection mode. The sequence of selection is: 640 X 480- 800 X 600- 1024 X 768.

**OVER/UNDER Indicator-** Illuminates when over scan or under scan function is selected on the VGA mode.

**OVER SCAN select button-** Over scan and under scan function could be selected on the VGA mode.

**Picture Adjustment Indicators- Picture Adjustment Indicators:**

1. **Contrast Indicator-** When it lights up, use the + and – buttons to adjust the picture contrast.
2. **Brightness Indicator-** When it lights up, use the + and – buttons to adjust the picture brightness.
3. **Colour Indicator-** When it lights up, use the + and – buttons to adjust the picture colour.
4. **Tint Indicator-** When it lights up, use the + and – buttons to adjust the picture tint.

**Picture Adjustment Controls:**

1. **Select-** Press this button repeatedly to choose what picture adjustment you wish to do. Each depression of the button will lead to a change on the controls as follows-  
Contrast- Brightness- Colour- Tint.
2. **+ Button-** Press the button for adding picture effect value.
3. **– Button-** Press the button for reducing picture effect value.
4. **+ And – Button-** Press + and – simultaneously, the setting of the selected control will be reset to its default value. Press + and – simultaneously for over 3 seconds, all controls will be reset to their default values.

## Rear Panel



- 1. Video Input-** This is the video input port. Use input selector on the front panel to select the wanted input. S-Video has the priority over Composite Video when both are connected. If S-Video is not connected, the Composite Video will take effect.
- 2. Video Output-** This is the video output port. There are three different output formats: Composite, S-VHS and VGA output.
- 3. DC 15V-** This is the AC adaptor port.
- 4. Power ON/OFF-** This is the button enables you to switch on or off your unit.

## Connection and Installation

The AC adaptor power unit should not be plugged into a wall outlet until all connections are complete.

- Using your connector cable connect the output port (Number 2 on the rear panel) to the output device (Video, TV). Output may either be Composite, S-VHS or VGA.
  - Using your connector cable connect the input port (Number 1 on the rear panel) to the input device (video, satellite receiver, camcorder). Input may either be Video or SVideo.
  - In order to switch the unit ON/OFF press the ON/OFF button (Number 4 on the rear panel).
  - Adjust the picture contrast, brightness, colour and tint to the desired level using the + and – buttons on the front panel.
- Once all connections are complete please connect the power supply provided to the power socket.

## Specifications

<b>Input Systems</b>	NTSC 3.58, NTSC 4.43, PAL, PAL M, PAL N, SECAM
<b>Output Systems</b>	NTSC 3.58, NTSC 4.43, PAL, PAL M, PAL N
<b>VGA Output System</b>	(640 x 480) 60Hz, (800 X 600) 60Hz, (1024 x 768) 60Hz
<b>Connection terminals</b>	1 Video Output, 1 S-Video Input, 1 VGA Input (for PC By-Pass), 1 Video Output, 1 S-Video Output, and 1 VGA Output.
<b>Sampling Frequency</b>	Y = 13.5MHz R-Y = 6.75MHz B-Y = 6.75MHz
<b>Digital Cord Bit</b>	Y = 8 bits R-Y = 8bits B-Y = 8bits
<b>Line Conversion</b>	Video: 525-625 lines VGA: 525-525, 628, 806 lines 625-525, 628, 806
<b>Field Conversion</b>	Video: 50-60 fields VGA: 50- 60 Hz 60-60 Hz
<b>Power Supply</b>	DC 15V 600mA Center negative
<b>Dimensions</b>	300 (W) X 242 (D) X 55 (H) mm
<b>Weight</b>	2.0 Kg
<b>Accessory</b>	One RCA cable, One S-VHS cable, One VGA cable, One DC adaptor.