Operation Manual

1T-PAL-NTSC and 1T-PAL-NTSC-GL
Standards Converters

Table of Contents

1.0   INTRODUCTION

Thanks for purchasing this One-Task 1T-PAL-NTSC or 1T-PAL-NTSC-GL Standards Converter from TV One. The 1T-PAL-NTSC series of Standards Converters are designed to convert any of the widely used world television standard signals to any other widely used television standard plus perform frame synchronization and time base corrections to these signals as required. Our professional video conversion products have been serving the industry for over twenty years. TV One offers a full line of high quality Seamless Switchers, Video Scalers, Up/Down/Cross Converters, Analog-Digital Converters (SD/HD-SDI, HDMI, DVI), Format Converters, Standards Converters, TBC/Frame Synchronizers, Matrix Routing Switchers, Signal Distribution Amplifiers and Cat.5 Transmission Systems.

1.1   Liability Statement

Every effort has been made to ensure that this product is free of errors. TV One cannot be held liable for the use of this hardware or any direct or indirect consequential damages arising from its use. It is the responsibility of the user of the hardware to check that it is suitable for his/her requirements and that it is installed correctly. All rights reserved. No parts of this manual may be reproduced or transmitted by any form or means electronic or mechanical, including photocopying, recording or by any information storage or retrieval system without the written consent of the publisher.

TV One reserves the right to revise any of its hardware and software following its policy to modify and/or improve its products where necessary or desirable. This statement does not affect the legal rights of the user in any way.

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1.2   Features

The 1T-PAL-NTSC series of Standards Converters have many features that enable them to perform in a superior manner. Among those features you will find:

- Converts between the World's widely used Television Standards
- Full Frame Time Base Corrector for all Input Signals
- Restores Distorted or Noisy Sync Signals
- Genlocks to System Reference (1T-PAL-NTSC-GL)
- Digital Comb Filtering for YC signals
- Built in AGC to Ensure 1 volt P/P outputs
- Full Control of Picture Elements such as Brightness and Color level

2.0   SPECIFICATIONS

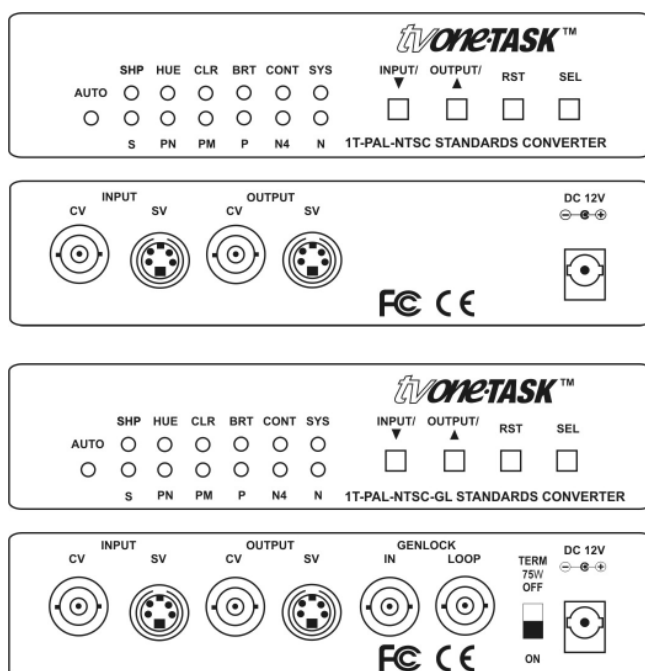| **Video Inputs/Outputs**	
Composite Video	1x via BNC Connector
YC (S-Video)	1x via 4-PIN Mini-DIN Connector
Genlock	via BNC (1T-PAL-NTSC-GL Only)
Genlock Loop-thru	with 75 Ω Termination Switch
Video Specifications	
Impedance	75Ω
Standards Supported	NTSC 3.58, NTSC 4.43, PAL-B, M, N, SECAM
System Memory	6Mb
Sampling Frequency	Y:13.50 Mhz, R-Y:6.75 Mhz, B-Y:6.75 Mhz
Signal Processing	8-bit
Line Conversion	525/625 lines (Either Direction)
Field Conversion	60/50 Fields (Either Direction)
Video Level Adjustment	Contrast, Brightness, Color, Hue (NTSC Only)
Frequency Response	400 TV Lines
S/N Ratio	50 db
Control Method	
Display	Front Panel LEDs
Front Panel Buttons	Up, Down, Reset, Select
Warranty	
Limited Warranty	3 Year parts and Labor
Mechanical	
Size (H-W-D)	32x135x91.5mm(1.25x5.3x3.6")
Weight (Net)	330 g (0.73 lbs)
Environmental	
Operating Temperature	0° to +50° C (+32° to +122° F)
Operating Humidity	10% to 90%, Non-condensing
Storage Temperature	-10° to +60° C(+14° to +140° F)
Storage Humidity	10% to 90%, Non-condensing
Power Requirements	
1x Power Adapter	12 VDC@1A
Regulatory Approvals	
Standards Converter	FCC, CE, RoHS
Power Supply	UL, CUL, CE, PSE, GS, RoHS
Accessories Included	
1 x Power Adapter	US, UK or Euro
Operations Manual	
Product Item Numbers	
1T-PAL-NTSC	Standards Converter
1T-PAL-NTSC-GL	Standards Converter w/Genlock

3.0   CHECKING PACKAGE CONTENTS

Before attempting to use this unit, please check the packaging and make certain the following items are contained in the shipping carton:

- 1x Standards Converter
- 1x AC to 12 VDC Power Adapter
- 1x Operations Manual

Note: Please retain the original packing material should the need ever arise to return the unit. If you find any items are missing, contact your reseller or TV One immediately. Have the Model Number, Serial Number and Invoice available for reference when you call.

4.0   CONNECTING THE HARDWARE

Please study the panel drawings below and become familiar with the signal input, outputs, power requirements/inputs plus any controls present.

Connect the AC to +12 VDC adapter to an AC source and then to the DC power input shown above. *(Note that there is no power switch. The unit will begin to work as soon as you have the AC to +12 VDC adapter plugged in and furnishing power).*
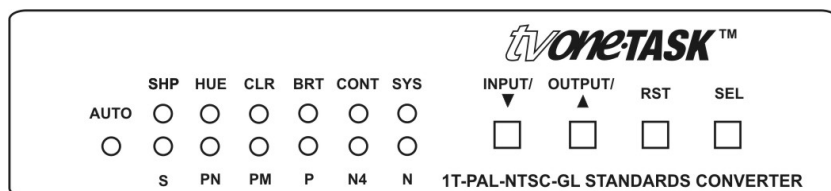
Next connect an input cable and an output cable to either the Composite Video or S-Video connectors. If the unit has power applied, it should begin to function as a Standards Converter/Full Frame Time Base Corrector.

5.0   OPERATING THE UNIT

The 1T-PAL-NTSC and 1T-PAL-NTSC-GL Standards Converters are identical with the exception of a genlock provision in the 1T-PAL-NTSC-GL version. (A discussion of the genlock capability is contained in section 5.7 below).

The 1T-PAL-NTSC and 1T-PAL-NTSC-GL are operated via selection buttons referenced to indicator LEDs.

Please refer to the drawing below for the discussion that follows.

5.1 Initial Power Up

When power is applied to the unit, it will default to the auto detect mode and also select the proper Television Standard. The letters on the panel above the bottom row of LEDS will indicate the standard selected:

A	Auto-Detect TV Standard
S	SECAM Standard
PN	PAL-N
PM	PAL-M
P	PAL
N4	NTSC 4.43 Mhz
N	NTSC 3.58 Mhz
S	Select System Mode

As an example of how the auto-detect works, if you live in the United States or Japan, the standard will be the NTSC 3.58 and the unit will light the "A" LED plus the "N" LED. In the United Kingdom, the standard will be PAL so the "A" LED will light as well as the "P" LED. Finally, in France, the "A" and "S" (for SECAM) LEDs will light.

5.2 System Button Function

If you press the Select button until the System LED is illuminated on the top row, you can gain access to the bottom row of functions. You can then either automatically or manually select the input Television Standard you wish to use.

Note: Pressing the Reset button toggles between automatic and manual selection of the desired standard. Although you can manually select the standard, it is generally best to allow the unit to make the standard selection.

To force a manual input selection of the desired standard, make certain the System LED is lighted and then press the Reset button, which places the input selection in the Manual mode. Next, press the DOWN arrow button (also labeled INPUT) button to step through the various standards. Pressing the Reset button a second time reverts back to automatic selection of the standard.

5.3   Selection of Output Type

Note: Although the top row of LEDs will be lighted when selecting the output type, they are not indicating a signal component parameter to adjust but rather are indicating the signal type being output. You should read the label under the bottom row of LEDs to determine the signal type you have selected. (Signal component adjustment is explained in section 5.4 below).

You have control over the output signal type. By pressing the UP arrow button (also labeled Output); you can step through the various types of outputs available. The top row of LEDs will glow in a continual manner, which is the indication that you should reference the Signal Type labels (lower row of labels) rather than the Signal Component labels.

In the USA, the top row LED to the extreme right will be lighted for NTSC, which is above the letter "N" on the lower row of labels. For the UK and much of Europe, the third LED from the extreme right (labeled P on the lower row of labels) will be lighted signifying the PAL standard is in use and so on.

5.4   Adjustment of Signal Parameters

Another user operation is the selection of a particular picture parameter you wish to change. For instance: If you wish to adjust the amount of color in the picture, press the Select button until the LED below the abbreviation "CLR" is flashing. Next press the UP and Down Arrow buttons to either increase or decrease the amount of color in the picture. Use the same procedure for Sharpness, Tint, Brightness and Contrast: Press the Select button until you have reached the picture variable you wish to change and then use the arrow buttons to make the actual adjustment.

5.6   Additional Reset Button Functions

Pressing the Reset Button while you have one of the adjustment parameters selected will cause the 1T-PAL-NTSC-GL or 1T-PAL-NTSC to revert to the default setting for that parameter. If you press and hold the Reset button for more than 3 seconds, ALL adjustment parameters will be reset to their default settings.

5.7　Using the Genlock Capability

The 1T-PAL-NTSC-GL model has the ability to lock its output to a reference signal. This allows the unit's output to be used in a studio environment as an input to a video switcher or special effects device requiring a timed video input source.

Additionally, the genlock capability also includes a loop through function. This allows one genlock signal to be cascaded from one 1T-PAL-NTSC-GL to another thereby providing multiple timed video sources if needed.

If you only intend to use a single 1T-PAL-NTSC-GL, set the switch on the back on the unit marked TERM 75Ω to the 'On' position. This will ensure that the impedance of the genlock source is properly terminated. Similarly, if you cascade several 1T-PAL-NTSC-GL genlock inputs using the loop through capability, also make certain you switch the termination of the last unit to 'On'.

6.0　TROUBLESHOOTING

Most problems with the 1T-PAL-NTSC-GL and 1T-PAL-NTSC are related to misuse of the buttons and signal adjustment controls. If you find that the picture is not acceptable, place the unit in the automatic detection mode and then press and hold the Reset button for 3 seconds to restore factory defaults. This should clear the problem. Another problem revolves around the cables. Inspect the cables for loose connectors or cable damage such as crushed cables or cables with cuts or nicks. Replace any cable exhibiting these problems.

You also must use the highest quality cables if you want to achieve the best results. Poor quality cables will cause poor quality signals.

After trying the above suggestions should the problem still persist, contact your dealer for additional suggestions before contacting TV One. Should the dealer's technical personnel be unable to assist you, contact TV One via our support website: ***http://tvone.crmdesk.com.*** Create a technical support request on the site and our support team will respond within a short period of time.

7.0　LIMITED WARRANTY

TV One warrants the original purchaser that the equipment it manufactures or sells will be free from defects in materials and workmanship for a fixed term from the date of purchase. The warranty term for specific product lines is defined below.

1. TV One branded products based on TV One's CORIO technology are warranted for a period of five years from the date of purchase. This includes products with the model number prefix of C2, 1T-C2, CX, A2 or S2.

2. TV One-task branded products, other than those based on TV One's CORIO technology mentioned above, are warranted for a period of three years from the date of purchase. This includes products with the model number prefix of 1T, with the exception of 1T-C2.

3. LCD Monitors are warranted for a period of three years from the date of purchase, with the exception of the LCD panels integrated into the monitors that are supplied by third parties. LCD panels are limited to the term and conditions of the warranty offered by the respective LCD panel manufacturer. Such specific LCD panel warranties are available upon request to TV One.

Should a product, in TV One's opinion, prove defective within this warranty period, TV One, at its option, will repair or replace this product without charge. Any defective parts replaced become the property of TV One. This warranty does not apply to those products which have been damaged due to accident, unauthorized alterations, improper repair, modifications, inadequate maintenance and care, or use in any manner for which the product was not originally intended.

If repairs are necessary under this warranty policy, the original purchaser must obtain a Return Authorization Number from TV One and return the product to a location designated by TV One, freight prepaid. After repairs are complete, the product will be returned, freight prepaid.

LIMITATIONS - All products sold are "as is" and the above Limited Warranty is in lieu of all other warranties for this product, expressed or implied, and is strictly limited to two years from the date of purchase. TV One assumes no liability to distributors, resellers or end-users or any third parties for any loss of use, revenue or profit.

TV One makes no other representation of warranty as to fitness for the purpose or merchantability or otherwise in respect of any of the products sold. The liability of TV One with respect to any defective products will be limited to the repair or replacement of such products. In no event shall TV One be responsible or liable for any damage arising from the use of such defective products whether such damages be direct, indirect, consequential or otherwise, and whether such damages are incurred by the reseller, end-user or any third party.

8.0   REGULATORY COMPLIANCE

The 1T-PAL-NTSC and 1T-PAL-NTSC-GL have been tested for compliance with appropriate FCC and CE rules and regulations. The Power Adaptor/Supplies have been tested for compliance with appropriate UL, CUL, CE, PSE, GS Rules, Regulations and/or Guidelines. These Products and Power Adapters are RoHS Compliant.

9.0   CONTACT INFORMATION

Should you have questions or require assistance with this product in areas not covered by this manual, please contact TV One at the appropriate location.

TV One USA
2791 Circleport Drive
Erlanger, KY 41018
USA
Tel 859-282-7303
Fax 859-282-8225
sales@tvone.com
www.tvone.com

TV One Europe
Continental Approach
Westwood Industrial Estate
Margate, Kent CT9 4JG, UK
Tel +44 (0)1843 873311
Fax +44 (0)1843 873312
sales.europe@tvone.com
www.tvone.eu

TV One Latin America
6991 NW 82 Avenue #8
Miami, FL 33166
USA
Tel 305-396-6275
Fax 305-418-9306
sales.latinoamerica@tvone.com
www.tvonela.com

TV One Mercosur
Av. Diaz Velez 3965 #PB
(1200) Capital Federal
Buenos Aires, Argentina
Tel +54 11 5917-2525
Fax +54 11 4032-0281
sales.mercosur@tvone.com
www.tvonela.com

TV One Asia
16F-4, NO.75, Sec. 1
Hsin Tai Wu Road, Hsichih
Taipei Hsien 22101
Taiwan R.O.C.
Tel +886 2 2698-2296
Fax +886 2 2698-2297
sales.asia@tvone.com
www.tvoneasia.com

TV One China
Rm. 1007, Golden Peach Bldg.
No. 1900 Shangcheng Road
Pudong, Shanghai
China 200120
Tel +86 21 5830-2960
Fax +86 21 5851-7949
Email: sales.china@tvone.com
www.tvonechina.com

End of Manual