
TLR300 / TLR400 Operation Manual

Video Titler

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Specifications

Input level	(Y, Video) 1 Vpp Composite, 75 Ω (RGB) 0.714Vpp Non-Comp, 1 Vpp Composite, 75 Ω (Chroma) 0.286 Vpp burst level, 75 Ω (S) 5.0 Vpp max 75 Ω
Output level	Same as respective inputs ±3% into 75 Ω
Connectors	(Video) BNC female, (S-Video) 4 pin mini-DIN female (RGBS) 9 pin D-Sub female (Keyboard) 6 pin Mini-DIN (PS/2)
Bandwidth	Greater than 20Mhz
Video System	NTSC/RS-170 or PAL/CCIR optional "P" models
Vertical Frequency	NTSC - 59.94Hz, PAL 50Hz
Horizontal Frequency	NTSC - 15.73426Khz, PAL 15.625Khz
Chroma Frequency	NTSC - 3.579545Mhz, PAL - N/A
Scan Lines	NTSC/RS-170 - 525 lines, PAL/CCIR - 625 lines
Character colors	8
Background colors	8 and transparent
Pixel size	81nS (H) x 1 scan line (V)
Character size	16 x 20 pixels
Characters	640 per page (32h by 20v)
Display pages	10 total
Front Panel Switches	2, power and Display on/off
Front Panel LEDs	2, power (green) and display (blue)
Non-Volatile Memory	EEPROM (for system settings)
Battery Back-up	10 year typical life (optional)
System Processor	16/32 bit
Display Controller	Custom MicroImage Video Integrated Display Controller
Keyboard Interface	PS/2, compatible with most AT type keyboards
Remote Interface	RS-232, Factory Optional
Temperature	
Operating	0E - 40E C (32E - 104E F)
Storage	-40E - 60E C (-40E - 140E F)
Humidity	
Operating	10% - 90% (non-condensing)
Storage	5% - 95% (non-condensing)
Power	
Voltage	+12VDC (10-20VDC)
Consumption	approximately mA at 12VDC
Size	" (W) x " (D) x " (H) mm (W) x mm (D) x mm (H)
Weight	lb, oz (g)

Manufactured in USA by MicroImage Video Systems

Unpacking

The Video Titler package includes the following items:

TLR300 or TLR400 Video Titler Unit
DPD120050 or DTS120150 (optional) power supply
This operation manual

Please inspect all items carefully and report damaged or missing items to your dealer or MicroImage Video Systems.

Connections

Power

The TLR300/TLR400 use an external +12VDC power supply. A 120VAC input adapter is included with the unit. An optional universal power supply is available that accepts an input from 120 to 230VAC (this is an extra cost option). Connect the power module to the Video Titler and to an appropriate power source.

Keyboard

Connect the keyboard to the connector labeled Keyboard on the rear of the TLR300/TLR400 unit. Note the correct orientation of the connector or damage can result. Do NOT connect or disconnect the keyboard while the power is on. Damage to either device may result. The TLR300 and TLR400 are compatible with most PS/2 style keyboards (those that have the smaller 6 pin Mini-DIN connector). It will also work with many AT style keyboards and an appropriate adapter, provided the keyboard does not draw too much current (many older types will).

Video

Connect the video source (i.e. video camera) to the appropriate INPUT connector on the rear of the Video Titler unit. Use the BNC connector for composite or B&W (TLR300), the 4 pin connector for S-Video (TLR300) and the 9 pin D-sub connector for RGB (TLR400).

Connect the OUTPUT signal from the Video Titler unit to the video

displays as required. Each output can only have a single 75 ohm termination. You must use the same signal type and connector for output that was used for input.

If the signal must drive multiple monitors or other devices, please see the documentation for those devices for multiple unit connections. A Video Distribution Amplifier may be required, especially for S-Video signals. MicroImage Video Systems offers a variety of units for these applications (VDA series).

Overview

The MicroImage Video Systems Video Titler is designed for video titling and captioning. It is particularly well suited to industrial, medical and scientific applications.

The TLR300 and TLR400 can each generate up to 10 pages of text with 32 (horizontal) by 20 rows of characters. Each character can be 1 of 8 colors and each can have 1 of 8 background colors or transparent.

The TLR300/400 may be configured either to insert text over a video signal (Overlay) or to operate as a text display without any incoming video source (Stand Alone). If no input signal is present, the unit will switch into Stand Alone mode until a valid video signal becomes available.

The Stand Alone mode of operation may be used to provide an easily updated display from a remote keyboard location, either for customer information, emergency instructions, advertisement, or current schedules or prices. Up to ten pages of color text and backgrounds may be created, then called up with simple key commands.

The TLR300 and TLR400 can be operated from a +12VDC (11-20V) power supply and each has a one year warranty.

Battery Backup Option

The TLR300/400 may be ordered with an optional Battery Backup

module (Option BB), which will remember all ten pages of text when power is turned off or in the case of accidental power loss.

The user may also create multiple pages of text, switch the unit off, and remove the keyboard. The unit can then operate without the keyboard, and be switched between the ten text messages by using the front panel Page Up and Page Down buttons as needed.

Operation

The Video Titler has four switches and two LEDs on the front panel. Most functions are set by use of the keyboard. Following is a brief description of each switch and its functions:

Power Switch

The power switch is used to turn the Video Titler unit on or off. When off, the unit draws minimal power. When on, the power light will illuminate (green) and the Video Titler will be ready to use.

Display Switch

The display switch is used to enable or disable the titler display. This will allow the video signal to pass through without the title display. The blue indicator next to this switch will illuminate when the display is enabled.

Page Up

The Page Up switch will display the previous page with each press until the first page is reached. For changing pages, this switch operates the same as the keyboard PgUp key. This switch is provided for applications where the keyboard may be disconnected from the main unit.

Page Down

The Page Down switch will display the next page with each press until the last page is reached. For changing pages, this switch operates the same as the keyboard PgDn key. This switch is provided for applications where the keyboard may be disconnected

from the main unit.

Keyboard Functions

Most functions of the Video Titler are controlled through the keyboard. See the next section on Using the Titler for additional information.

Using the Titler

TLR300/TLR400 Functions

The TLR300/400 Titler series has been engineered for a broad range of applications. A variety of options and features may be selected or changed either through the menu system or by way of a combination of keystrokes. This section describes the use of the function keys and menus. Most selections can be made either by pressing the appropriate number key or by using the up and down cursor arrows and then pressing the <ENTER> key. The <ESC> key can be used to exit most menus without changing the current settings.

Help Screen - <F1>

A HELP screen is available by pressing the <F1> function key on the attached keyboard. This screen lists many of the common key commands and function keys. You can switch to the second page of this list by pressing the down arrow key. Pressing the <ESC> key will return the unit to normal operation.

Color Options

Eight colors of text are available from the <F3> Foreground Color menu, and eight background color tiles may be selected from the <F4> Background menu. Any letters typed will appear on a contrasting background tile which surrounds the letter. The unit will not allow the user to select the same Foreground and Background color, which would make the letters unreadable. A transparent background is also available, which places the text characters directly onto the video image or underlying color page. If using a solid underlying page, the user can choose from eight

page colors.

The color of each character and its background tile may be set individually. Simple graphic shapes, outlines, and text boxes may be created using color background tiles with blank spaces instead of letters. The unit will remember the current foreground, background, and page color settings while switched off.

Foreground Color - <F3>

Pressing the <F3> function key calls up a menu of 8 color choices. Pressing the number key listed before each color will select that color. Any text typed after this will use the new color. The key combination of <SHIFT>+<F3> will change the current foreground color to the next one on the menu without bringing up this menu screen. Any text already typed will be unaffected by the changes.

Background Color - <F4>

Pressing the <F4> function key calls up a menu of 8 color choices, plus transparent. Any text typed after this will appear on a background tile of this color. If transparent is selected, any text typed after this will appear directly on the video image or solid color page. The key combination of <SHIFT>+<F4> will change the current background color to the next one on the menu without bringing up this menu screen. Any text already typed will be unaffected by the changes. Note that some combinations of text and background colors may appear ragged or blurred, particularly while using composite video, mainly due to the way in which colors are handled by the monitor.

Display Off - <F7>

Pressing the <F7> function key disables the text display overlay, showing the incoming video image with no obstructions.

Display on - <F8>

Pressing the <F8> function key enables the text display overlay, showing text and background color tiles in front of the video image.

Cursor Off - <F11>

Pressing the <F11> function key disables the flashing cursor for readability and aesthetics. The cursor may be set from the main menu to be either off or on whenever the TLR is powered up.

Cursor on - <F12>

Pressing the <F12> function key activates the flashing cursor to indicate where any newly typed text will appear. This cursor may be moved around the screen using the "arrow" or "cursor" keys on the keyboard. The cursor will also reappear any time new text is typed.

Main Menu - <F10>

The main system menu may be called up using the <F10> function key. This menu allows access to a series of screens which control the following functions of the TLR. Pressing the number key listed before each item will bring up that menu screen. Pressing either the <0> or <ESCAPE> keys will exit this menu and return the unit to normal operation.

Color Bars

The Color Bars screen allows the user to display a color bar test pattern instead of incoming video. This is useful for a basic systems test when a camera or other signal source is unavailable or inconvenient. Pressing the number <1> key while in the main menu will bring up this screen. The current state (ON or OFF) of the color bar display should appear highlighted. You may then either press <2> (ON) to display color bars, or <1> (OFF) to disable color bars and display the incoming video signal. Pressing <0> or the <ESCAPE> key will exit the menu system without changing any settings.

Operation Modes Sub Menu

The Operation Modes screen selects between Overlay and Stand Alone modes. Overlay operation places text over an incoming video signal, while Stand Alone is used to display text on a solid background with or without a separate video source. The first menu option allows the user to choose between the two modes. The second menu item, Page Color, offers 8 solid page colors for use in Stand Alone mode.

The TLR300/TLR400 may be configured either to insert text over a video signal (Overlay Mode) or to operate as a text display without any incoming video source (Stand Alone Mode). If the unit does not detect any input signal, it will automatically switch to Stand Alone Mode (with solid background color), regardless of the setting. As soon as a valid video signal is present, it will return to Overlay Mode if it had been set for that mode.

When used in Stand Alone Mode, the units will still accept a video input such as Black Burst to lock the unit to a specific time base. This will eliminate cross monitor flicker if more than one display is used side by side. This occurs automatically if an input is applied.

System Options Sub Menu

The System Options sub-menu brings up a list of other configuration screens.

Color/B&W Mode

The first of these is the Color/B&W Mode screen, which may be called up by pressing the number <1> key from the System Options sub-menu. When color mode is selected, text and backgrounds will appear using the colors selected by the FOREGROUND and BACKGROUND functions. B&W mode should be selected if the unit is to be used with a Black & White camera or monitor, since the effects of color information on a Black & White signal may be objectionable on some monitors. Colors selected using the Foreground and Background color menus will appear as shades of gray.

Power Up Cursor Mode

Pressing the number <2> key from the System Options sub-menu calls up the "Power Up Cursor Mode" screen. This determines whether or not the blinking cursor will be visible when the unit is switched on. In situations where the text is edited frequently, having the cursor visible may be convenient. Selecting "Power Up Cursor Off" provides a cleaner display for the viewer in the event of power loss or occasional shutdown. This menu will not affect the cursor until the next time the unit is powered up.

Power Up Clear Memory

This option is valid for units with option BB only.

Pressing the number <3> key from the System Options sub-menu activates the screen entitled "Power Up Clear Memory". When enabled, the titler will begin with a blank screen whenever it is powered up. All ten pages will be cleared.

When "Do Not Clear" is selected on a TLR300/400 which has the BB option installed, the unit will remember the text and colors in the event of power loss or shut down. This screen will not have any effect on units without the BB option, the screen will always be cleared on power up.

Position Adjust

Pressing the number <4> key from the System Options sub-menu selects the "Position Adjust" screen. While this screen is active, the text display may be repositioned slightly by using the cursor arrows on the keyboard. When the display is properly centered or positioned, pressing the <ENTER> key will save the location.

System Info

Pressing the number <5> key from the System Options sub-menu displays the "System Info" screen, which shows the current product software revision number and manufacturer. Pressing any key from this screen will exit the menu system and return the unit to normal operation.

System Defaults Sub Menu

The System Defaults sub-menu allows the user to restore the unit to factory default settings. Pressing <1> from this sub-menu brings up the option "Clear All Pages", which clears the contents of every page of the Character Generator text memory.

Pressing <2> from the System Defaults sub-menu calls up the "Reset Factory Defaults" screen, which replaces all unit settings with the original factory defaults. Both of these options have an additional screen to verify the change, to reduce the likelihood of accidental loss of user input or settings.

Quick Commands

Help Screen 1 - <F1>
Help Screen 2 - <F1>, <Down Arrow>
Text Color Menu - <F3>
Text Background Menu - <F4>
Next Text Color - <SHIFT>+<F3>
Next Background Color - <SHIFT>+<F4>
Display OFF - <F7>
Display ON - <F8>
Color Bars OFF - <F10>, <1>, <1>
Color Bars ON - <F10>, <1>, <2>
Cursor OFF - <F11>
Cursor ON - <F12> (or any letter or number key)

Cursor to top line - <CTRL>+<HOME>
Cursor to last line - <CTRL>+<END>
Previous Memory Page - <PgUp>
Next Memory Page - <PgDn>
First Memory Page - <CTRL>+<PgUp>
Last Memory Page - <CTRL>+<PgDn>
Memory Page 0 through 9 - <CTRL>+<'page #'>
Justify Text Left - <CTRL>+<L>
Justify Text Right - <CTRL>+<R>
Center Text -<CTRL>+<E>
Insert Line - <ALT>+<CTRL>+<I>
Delete Line - <ALT>+<CTRL>+<L>
Clear Page - <ALT>+<CTRL>+<S>
Lock out Keyboard - <PAUSE> - Prevents accidental changes
Unlock Keyboard - <ESC> - Disables Lockout

Factory Default Settings

The TLR300 and TLR400 Video Titler can be easily set to their factory default mode in one of two ways. Use the following procedures to reset the unit to the factory default mode.

1. Using the front panel: Turn the unit off. Depress and hold the Display Switch in while pressing the power switch. Hold the display switch in for at least two seconds then release. The unit should now be set to the factory settings.
2. Using the keyboard: With the unit turned on, press F10, then press the number 4 key, then press 2, then press 1. The unit will now reset with the factory default settings.

In Case of Difficulty

If you are experiencing problems with your MicroImage product, you can contact us in one of the following ways.

Mail	MicroImage Video Systems a division of World Video Sales Company, Inc. PO Box 331 Boyertown, PA 19512
Phone	610-754-6800
Fax	610-754-9766
Email	support@mivs.com
Web	www.mivs.com

Applications and Additional Information

Please visit the MicroImage Video Systems web site for applications information about this product line.

Warranty

MicroImage Video Systems warrants that each TLR300/TLR400 is free from defects due to faulty materials or improper workmanship for a period of one (1) year. MicroImage Video Systems further warrants that any part which proves defective in materials or workmanship within one (1) year, will be replaced or repaired at no cost to the user. Labor to replace defective parts will be done without charge, provided the equipment is returned to MicroImage Video Systems prepaid, insured and properly packaged. Prior return authorization must be obtained from MicroImage Video Systems.

NOTE

This warranty covers the MicroImage TLR300/TLR400 Video Titler only.

CONDITIONS

This warranty is void if the warranted part has been altered or subjected to abuse or misuse. Defective parts must be returned to MicroImage Video Systems.

SOLE WARRANTY

This Warranty is in lieu of all other warranties expressed or implied including, without limitation, any implied warranty or any implied warranty of fitness for a particular purpose. MicroImage Video Systems shall have the final right to determination as to the existence and cause of any defect and its appropriate adjustment in accordance with the terms of this warranty. In no event shall MicroImage Video Systems be liable for any consequential or collateral damages.

Returns

All returns MUST have an RMA number. Please call, fax or email for an RMA form. The RMA form will have the proper shipping address for returns.

Phone 610-754-6800
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