

Instruction Manual

LM-1042R
Dual 10.4" Color LCD Monitors

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1.0 INTRODUCTION

The LM-1042R is a high performance Dual 10.4" Color LCD Multimedia Monitor in a rack mount housing, occupying only 5 RU of vertical space. The Active Matrix Display features wide viewing angles, an excellent contrast ratio and high brightness. NTSC and PAL TV Standards are automatically detected. Each display has a looping Composite Video input on BNC connectors and a Computer input via HD15 that handles PC resolutions up to SVGA. A Universal AC Adapter is provided and is fitted with a Locking DC Plug for security of connection. 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.

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1.2 Features

The LM-1042R has many features that enable it to perform in a superior manner:

- Composite Video In on BNC connectors with Looping
- Dual 10.4" Color LCD Displays in a 19" Rackmount Package
- PC In - up to SVGA
- Optional Input Range Extension Modules
- High Brightness, Professional Grade LCD Panels
- Wide Viewing Angle
- Universal Power Adapter
- Locking DC Power Plug

2.0 SPECIFICATIONS

LCD Panels	
Number of Displays	2x
Display Element	Active Matrix TFT
Aspect Ratio	4:3
Display Size	2x 10.4" (26.4cm) Diagonal
Panel Resolution	800x600
Contrast Ratio	400:1
Brightness	230 cd/m2
Response Time	45ms
Left/Right View Angle	55°
Up/Down View Angle	40°
Inputs – Per Display	
Composite Video	1x via BNC Connector (Looping)
Computer	1x via HD-15F Connector
PC Input Range	
Maximum Resolution	800x600 (w/o Input Exp Module)
Vertical Freq Range	50-75Hz
Horizontal Freq Range	31-75KHz
Controls – Per Display	
Video Adjustments	Brightness, Contrast, Color
Source Selection	Composite or PC
Power	On/Off Switch
General	
TV Standards	NTSC - PAL Auto-detect
Vertical Frequency	NTSC:60Hz, PAL:50Hz
Horizontal Frequency	NTSC:15.75KHz, PAL:15.625KHz
Limited Warranty	
Unit, except LCD Panel	2 Year Parts and Labor
LCD Panel	Panel Manufacturer's Terms
Mechanical	
Size (H-W-D)	222x482x76mm (8.75"x19"x3")
Weight (Net)	4.3 kg (9.5 lbs)
Rackmount Type	5 RU - Fixed
Environmental	
Operating Temperature	+14° to +122° F (0° to +50° C)
Operating Humidity	Up to 85%, Non-condensing
Storage Temperature	-4° to +158° F (-20°to +60° C)
Power Requirement	
External Power Supply	12VDC@ 2A - Locking DC (Common PS for both Displays)
Regulatory Approvals	
Monitors	FCC, CE, RoHS
Power Supplies	UL, CUL, CE, PSE, GS, RoHS
Accessories Included	
1x Operations Manual	
4x Rackmount Screws	
1x AC Power Adapter	US, UK or Euro
1x PS Mounting Bracket	Mounts Power Adapter to Back of Unit

2.1 Supported Computer Resolutions

The LM-1042R monitors will accept and display any of eight computer resolutions via each of the two HD-15 connectors on the rear of the unit. Each monitor operates independently so you can display different resolutions on each monitor.

By adding optional Input Extension Modules, additional resolutions can be accommodated and totally different formats (such as DVI) can be viewed on the monitors. See discussion on page 8 for more information on how these modules can be used.

Supported (Native) Resolutions

ITEM	RESOLUTION	H Freq.(kHz)	V Freq.(Hz)	NOTE
1	640 x 480 @60	31.469	59.940	VESA
2	640 x 480 @66	35.000	66.667	MAC
3	640 x 480 @72	37.861	72.809	VESA
4	640 x 480 @75	37.500	75.000	VESA
5	800 x 600 @ 56	35.156	56.250	VESA
6	800 x 600 @ 60	37.879	60.317	VESA
7	800 x 600 @ 72	48.077	72.188	VESA
8	800 x 600 @ 75	46.875	75.000	VESA

3.0 CHECKING PACKAGE CONTENTS

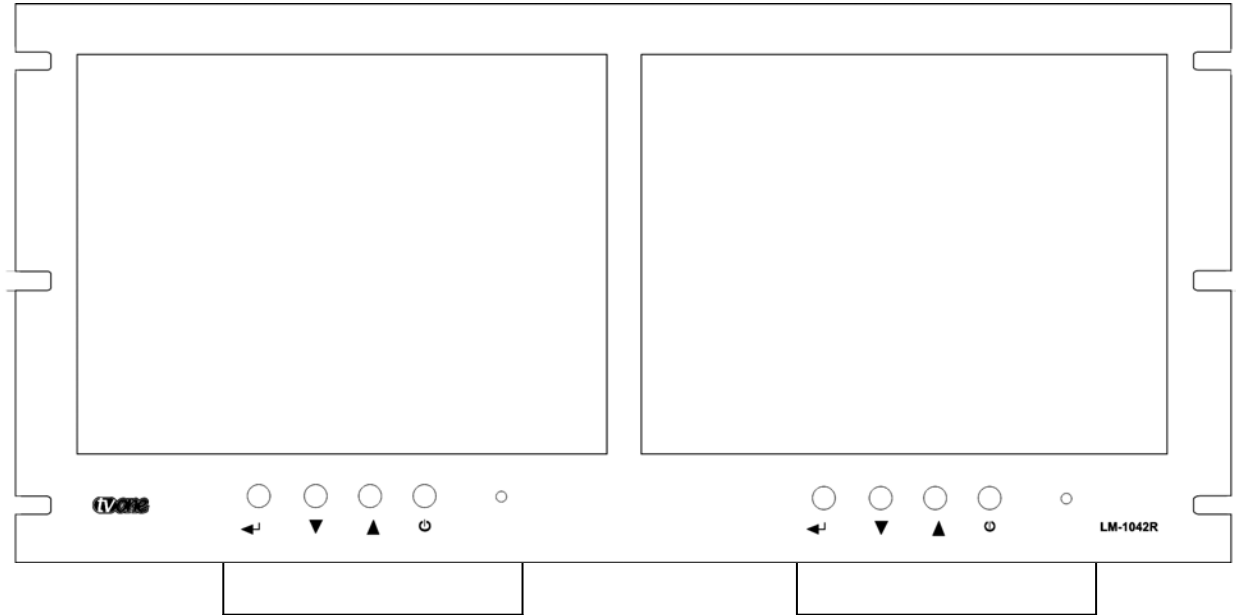
Before attempting to use this unit, please check the packaging and make certain the following items are contained in the shipping carton:

- 1x LM-1042R Dual 10.4" Color LCD Monitor
- 1x Operations Manual
- 4x Rackmount Screws
- 1x AC Power Adapter
- 1x PX Mounting Bracket

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.

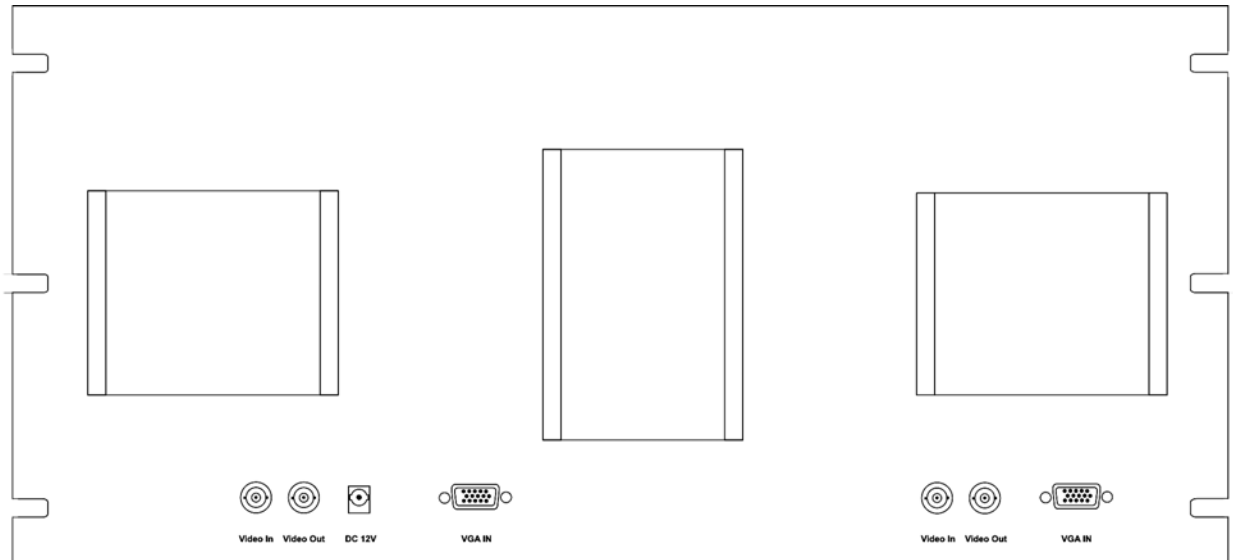
4.0 CONNECTING THE HARDWARE

Referring to the drawings below, connect the proper cables and then connect the AC power adaptor. The front view of the LM-1042R is shown below.



Control Operation (From Left to Right)

OSD (On Screen Display) Menu Select/Enter Button
Source Select or OSD Item Select or Decrease Value
Source Select or OSD Item Select or Increase Value
Power On (Off = Standby Low Power State)
Status LED



In this rear view of the LM-1042R, the Composite Video inputs can be seen for each display. These are looping inputs so that each video input can also be made to appear at another destination in addition to the LM-1042R. Each display also has an HD-15 VGA type connector for display of a PC video signal. There is also one 12 VDC connector which power both displays.

4.1 Optional Input Expansion Modules

Brackets are provided to hold accessories. The center bracket securely holds the furnished AC to DC adapter. The other two brackets are for use by the optional Input Expansion Modules. These Optional Input Expansion Modules provide greater input signal flexibility by increasing the range of PC resolutions, adding YPbPr HDTV or DVI inputs. The modules can be added to either or both displays. The modules automatically detect the input resolution and format and each has its own integral video processor to provide additional control over many signal parameters. The module's output is connected to either the monitor's PC input or the Composite Video input.

5.0 OPERATION OF THE LM-1042R

After mounting the LM-1042R in a rack and connecting the appropriate cables and accessories, all that remains is to turn the monitors on by pressing the power buttons. If Composite Video is present, the unit will select it and if you've connected analog (PC) signals, they will be displayed. Note that you can place Composite Video on one monitor and Analog Video (PC video) on the other monitor. It is not necessary that both monitors display the same type of signals.

Beyond this simple use of the monitors, users should acquaint themselves with the On Screen Display (OSD). Within this functionality the user can fine tune the operation of the unit and often make improvements to the appearance of the displayed image.

5.1 Using the On Screen Display Menus

You will need to become familiar with the OSD (On Screen Display) menu structure if you wish to take full advantage of the capability of the LM-1042R. Using the OSD menu is not difficult and allows you to fine tune the picture quality of each monitor independent of the other monitor.

5.1.1 Menu Navigation:

Pressing the left most buttons on the Front Panel brings up the On Screen Display (OSD) for the monitor directly above the button. Once the OSD is visible, the same button functions as the Enter function. The up arrow and down arrow buttons, along with the OSD Menu/Enter button allows you to navigate the menu structure.

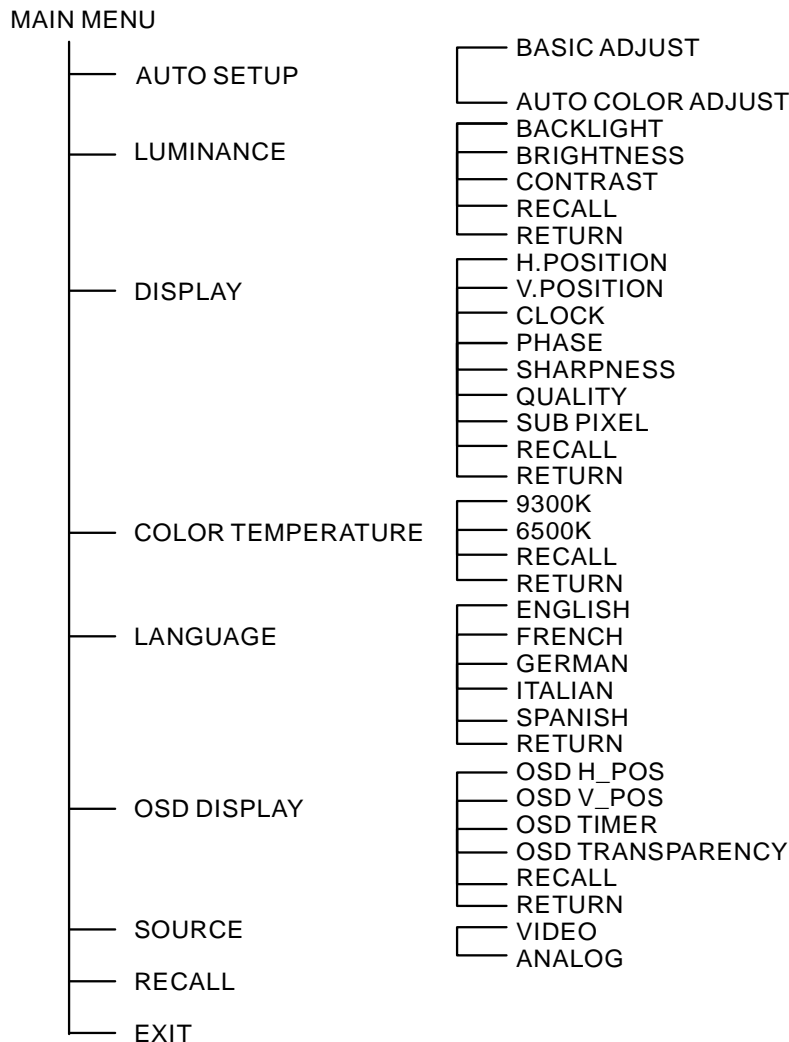
Push the OSD (left most) button to bring up the menu. Navigate to the area you wish to adjust or change using the up and down arrow buttons and press the OSD switch again.

(The OSD button has become the Enter button once the OSD is visible and you use it to select the item to be adjusted or changed once you've navigated to it with the up and down arrow buttons.) As soon as you select the item from the menu, the up and down arrow buttons become the adjustment or change controls and you use them to increase, decrease or set the selected item to the value you desire. Once the change has been made, press the OSD/Enter button again to save your adjustment, navigate to the word "Exit" using the arrow buttons and press the OSD/Enter switch to exit from the OSD.

5.1.2 Main Menu Structure

The main menu structure is a two tier structure. Unless you wish to make adjustments to the Composite Video signal, your adjustments will normally be made from the top tier OSD list.

Below, the top tier menu structure is displayed and information is provided about the parameters that are available for adjustment or change. After the top tier menu is explained, an auxiliary menu (Composite Video) structure will be explained.



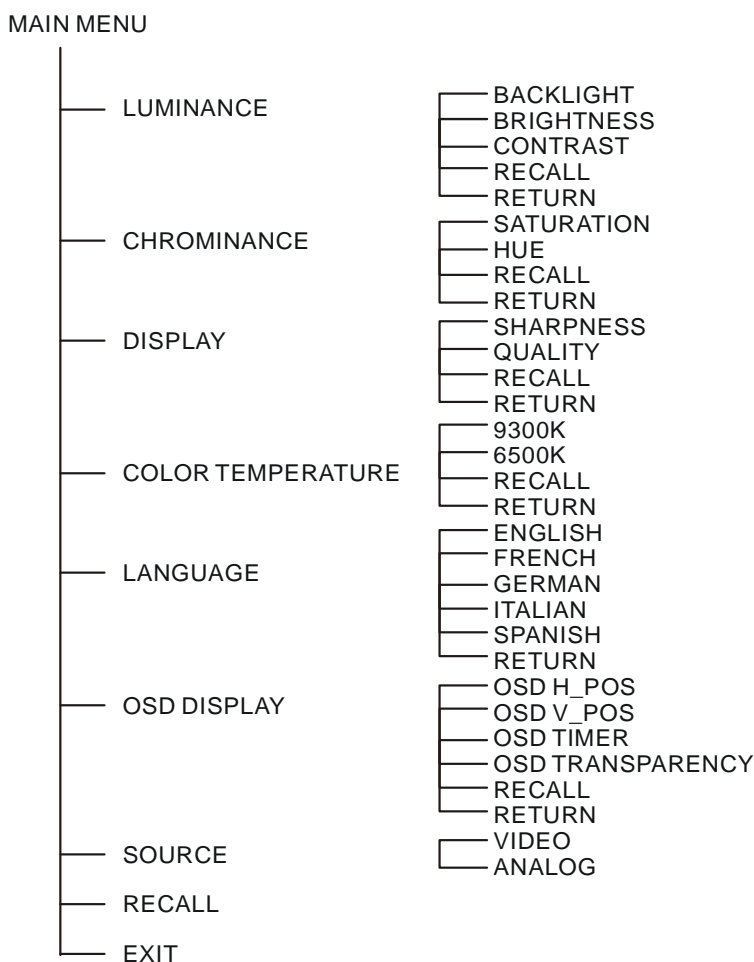
When you bring up the OSD the menu structure shown above will appear. The menu items on the left are the top tier menu items and the items on the right are the secondary menu items. Move vertically on the top tier menu using the up and down arrow buttons until you reach the area you want to enter to make an adjustment and press the left most button (which is now the Enter button) to select that item. Next, move vertically—again using the up and down arrow buttons—within the secondary items until you reach the parameter you wish to adjust and press the Enter button to select it. Using the arrow buttons, increase or decrease the parameter’s level or select a different state (e.g. On, Off) using the arrow buttons. Once you’ve made the adjustment or state selection, press the Enter button to save your changes. You can now either go to another parameter or you can navigate to the Exit selection on the menu, press the Enter key one last time and the OSD will disappear. The following list explains the items in the main OSD menu structure and their functions:

Top Tier	Second Tier	Adjustment
Auto Setup	Basic Adjust	The function allows auto detect of picture detail data clock. Use ▲▼ buttons to enabled/disable function.
	Advance Adj.	The function allows auto detect of picture detail data clock phase. Use ▲▼ buttons to enabled/disable function.
Luminance	Backlight	The function supports the adjustment of display backlight. Use ▲▼ buttons to increase/decrease the value.
	Brightness	The function supports the adjustment of picture brightness. Use ▲▼ buttons to increase/decrease the value.
	Contrast	The function supports the adjustment of picture contrast. Use ▲▼ buttons to increase/decrease the value.
Display	H-Position	Controls picture’s horiz. position, use ▲▼ buttons to move.
	V-Position	Controls picture’s vertical position, use ▲▼ buttons to move.
	Clock	The function allows the adjustment of the LCD panel’s data rate clock. Use ▲▼ buttons to increase / decrease the value. (Note: improper adjustment will cause image failure.)
	Phase	The function allows the adjustment of the LCD panel’s data clock phase. Use ▲▼ buttons to increase/decrease the value. (Note: improper adjustment will cause image failure.)
	Sharpness	The function allows adjustment of the overall picture sharpness. Use ▲▼ buttons to increase/decrease value.
	Quality	The function supports the adjustment of the overall picture quality. Use ▲▼ buttons to increase / decrease the value.
	Sub-pixel	Sub pixel adjustment. Use ▲▼ buttons to enable/disable.
Color Temp.	Color Temp.	User can select 9300 or 6500 color temperature for display. Use ▲▼ buttons to change.
Language	Language	Change language used on OSD, use ▲▼ buttons to change.
OSD Display	H-Position	Use ▲▼ buttons to change.
	V-Position	Use ▲▼ buttons to change.
	Timer	Use ▲▼ buttons to change.
	Transparency	Use ▲▼ buttons to change.
Source	Analog or Video Select	Use ▲▼ buttons to change. <i>Note: Selecting Video Reveals another Menu Structure. See next page for details.</i>
Recall	Recall	Allows reset of all parameters to factory default settings.

Note: Some secondary menus have a recall and/or return function. Selecting these will either revert to previous settings or return to the top tier menu items.

5.1.3 Video Menu Structure.

Selecting “Video” as the source on the main menu will reveal a new secondary menu item called “Chrominance” because Video signals have some different picture elements from analog (PC) signals. Once within the Video menu structure, the individual items that have the same name as shown on the main menu are adjusted using the same procedures as previously explained. Other than the Chrominance secondary tier items, the remaining menu items are adjusted/selected in the same manner as previously explained. *Note: Analog specific menu items (such as “Auto Adjust” and several items under the top tier heading “Display”) can only be reached after selecting the Analog item in the Video Menu structure since they do not apply to Video signals.*



Note: Some secondary menus have a recall and/or return function. Selecting these will either revert to previous settings with the selected group or return to the top tier menu items.

TOP TIER	SECONDARY TIER	ADJUSTMENT
Chrominance	Saturation	The function allows adjustment of color saturation or level. Use ▲ ▼ buttons to increase/decrease the value.
	Hue	The function supports the adjustment of picture's color tint or Hue. Use ▲ ▼ buttons to increase/decrease the value.

6.0 TROUBLESHOOTING

If the LM-1042R Dual 10.3" LCD Monitors do not appear to be functioning, be certain that the source and all other devices connected to the unit are functioning correctly by connecting each device currently connected to the LM-1042R's inputs to another monitor. (In other words, bypass the LM-1042R to insure that the problem is not with the source devices.) If the signal is present under those conditions, make certain that the power is present on the LM-1042R. If it is, check all cables for damage. Cables should be undamaged, as short as possible and should be premium quality. *Note: It is strongly recommended that you use premium cables in order to achieve maximum distance cable runs and the best performance possible.*

As a final step before contacting technical support, using the OSD, execute the Recall function on the main menu to return the unit to the default settings. 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 staff 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

LIMITED WARRANTY – With the exceptions noted in the next paragraph, TV One warrants the original purchaser that the equipment it manufactures or sells will be free from defects in materials and workmanship for a period of two years from the date of purchase. Should this 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.

Items integrated into TV One products that are made by other manufacturers, notably computer hard drives and liquid crystal display panels, are limited to the term of the warranty offered by the respective manufacturers. Such specific warranties are available upon request to TV One. 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 LM-1042R has been tested for compliance with appropriate FCC and CE rules and regulations. The Power Adaptor/Supply has been tested for compliance with appropriate UL, CUL, CE, PSE, GS Rules, Regulations and/or Guidelines. This Product and Power Adapter is 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.

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End of Manual