



Instruction Manual

LM-1520R and LM-1920R
Color LCD Rackmount Monitors

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1.0 INTRODUCTION

Thanks for purchasing this LM-1520R or LM-1920R LCD Monitor from TV One. The LM-1520R and LM-1920R LCD Monitors are designed to provide superior image displays under a variety of conditions and operate as either rack mount or desk top devices.

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.

All third party trademarks and copyrights are recognised. The TV One logo, AV Toolbox logo, TV One-task and CORIO are the registered Trademarks of TV One. All other trademarks are the property of their respective holders.

1.2 Features

The LM-1520R and LM-1920R Color LCD Monitors have many features that enable them to perform in a superior manner. Among those features you will find:

- High Resolution Computer Images Support
- VGA or DVI-D Inputs
- 3D Comb Filter & 3D De-interlacing
- 6500k or 9300k color temperature
- Stereo PC Audio Input
- Two Composite Video Inputs with Looping Outputs
- S-Video Input
- Stereo Line Audio In/Out
- Rack Mount or VESA Standard Mount
- Built-In Stereo Speakers

2.0 IMPORTANT SAFETY INSTRUCTIONS

To insure the best from this product, please read this manual carefully. Keep it in a safe place for future reference. To reduce the risk of electric shock, do not remove the cover from the unit. No user serviceable parts inside. Refer servicing to qualified personnel.

2.1 Power and Connections

This unit is not disconnected from the AC power source as long as it is connected to the wall outlet. The off state for this unit is called standby mode. In standby mode the unit is designed to consume a reduced quantity of power compared to normal operating modes. When not using the unit for a long period of time, insure that the AC power cord is disconnected from the wall outlet. The AC wall outlet should be installed near to the unit and be easily accessible. Do not plug in or attempt to operate an obviously damaged unit.

2.2 Water and Moisture

To reduce the risk of fire, do not expose the unit to rain, water or excessive moisture.

2.3 General Care

Do not force switches or external connections.

When moving the unit, disconnect the serial port connections first then the power cable and finally the interconnecting cables to other devices. Do not attempt to clean the unit with chemical solvents or aerosol cleaners, as this may damage the unit. Use a clean dry cloth.

2.4 Location

Installation of this unit should be in a cool dry place, away from sources of excessive heat, vibration, dust, moisture and cold.

2.5 Ventilation

Slots and openings in the sides of the unit are provided for ventilation. To insure reliable operation, avoid obstruction of these openings and insure the unit is installed in a well-ventilated area.

3.0 INTELLECTUAL PROPERTY

Some IC chips in this product include confidential and/or trade secret property. Therefore you may not copy, modify, adapt, translate, distribute, reverse engineer, reverse assemble, or decompile the contents thereof.

4.0 SPECIFICATIONS

| LCD Panel | LM-1920R | LM-1520R |
|----------------------------------|----------------------------------|--------------------|
| Display Size - Diagonal | 48.2cm (19") | 38.1cm (15") |
| Panel Resolution | 1280x1024 | 1024x768 |
| Contrast Ratio | 800:1 | 500:1 |
| Brightness | 250 cd/m2 | 250 cd/m2 |
| Left/Right View Angle | 170° | 140° |
| Up/Down View Angle | 160° | 125° |
| PC Input Range | | |
| Maximum Resolution | 1280x1024 | 1024x768 |
| Vertical Freq Range | 60, 75Hz | 60, 70, 75Hz |
| Horizontal Freq Range | 31.5-80KHz | 31.5-80KHz |
| Video Input Range | | |
| Vertical Frequency | 60Hz/50Hz | 60Hz/50Hz |
| Horizontal Frequency | 15.75KHz/15.625KHz | 15.75KHz/15.625KHz |
| Inputs | | |
| Composite Video | 2x via Looping BNC Connectors | |
| S-Video | 1x via 4-Pin Mini-DIN Connector | |
| Stereo Audio | 2x via 3.5mm Mini-Stereo Jack | |
| Computer | 1x HD-15, 1x DVI-D | |
| Computer Stereo Audio | 1x via 3.5mm Mini-Stereo Jack | |
| General | | |
| Aspect Ratio | 5:4 | 4:3 |
| Display Element | Active Matrix TFT | |
| Video Adjustments | Brightness, Contrast, Color, Hue | |
| Speakers | Internal – Right & Left Channel | |
| TV Standards | NTSC/ PAL Auto-detect | |
| Front Panel Controls | | |
| Left, Right Buttons | Menu Navigation and Control | |
| Audio Volume | Decrease/Increase | |
| Source Select Button | Toggle thru inputs | |
| Power Button | On/Off Switch | |
| Limited Warranty | | |
| Unit, except LCD Panel | 3 Years Parts and Labor | |
| LCD Panel | Panel Manufacturer's Terms | |
| Mechanical – In Rackmount | | |
| LM-1920R Size (H-W-D) | 396x482x65mm (15.6"x19"x2.5") | |
| Weight (Net) | 6.6 kg (14.5 lbs) | |
| Rackmount | 9RU - Tilt Up/Down | |
| LM-1520R Size (H-W-D) | 355x482x63mm (14"x19"x2.5") | |
| Weight (Net) | 5.1 kg (11.2 lbs) | |
| Rackmount | 8 RU - Tilt Up/Down | |

SPECIFICATIONS – Continued

| | |
|-----------------------------------|--------------------------------------|
| Mechanical – W/O Rackmount | |
| LM-1920R Size (H-W-D) | 396x425x58mm (15.6"x16.7"x2.3") |
| Weight (Net) | 5.6 kg (12.3 lbs) |
| Wall Mount | VESA Standard |
| LM-1520R Size (H-W-D) | 355x390x57mm (14"x15.4"x2.3") |
| Weight (Net) | 4.2 kg (9.2 lbs) |
| Wall Mount | VESA Standard |
| Environmental | |
| Operating Temperature | 0° to +50° C (+32° to +122° F) |
| Operating Humidity | Up to 80%, Non-condensing |
| Storage Temperature | -10° to +60° C (+25° to +140° F) |
| Storage Humidity | Up to 80%, Non-condensing |
| Power Requirement | |
| AC Adaptor | 90-240 VAC, 50~60Hz |
| DC Voltage | 12VDC@5A |
| Regulatory Approvals | |
| Monitors | FCC, CE, RoHS |
| Power Supplies | UL, CUL, CE, PSE, GS, RoHS |
| Accessories Included | |
| 1x Operations Manual | |
| 1x Rackmount Ears | Note: Rackmount Ears Provide Up/Down |
| 10x Screws | Tilting |

5.0 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:

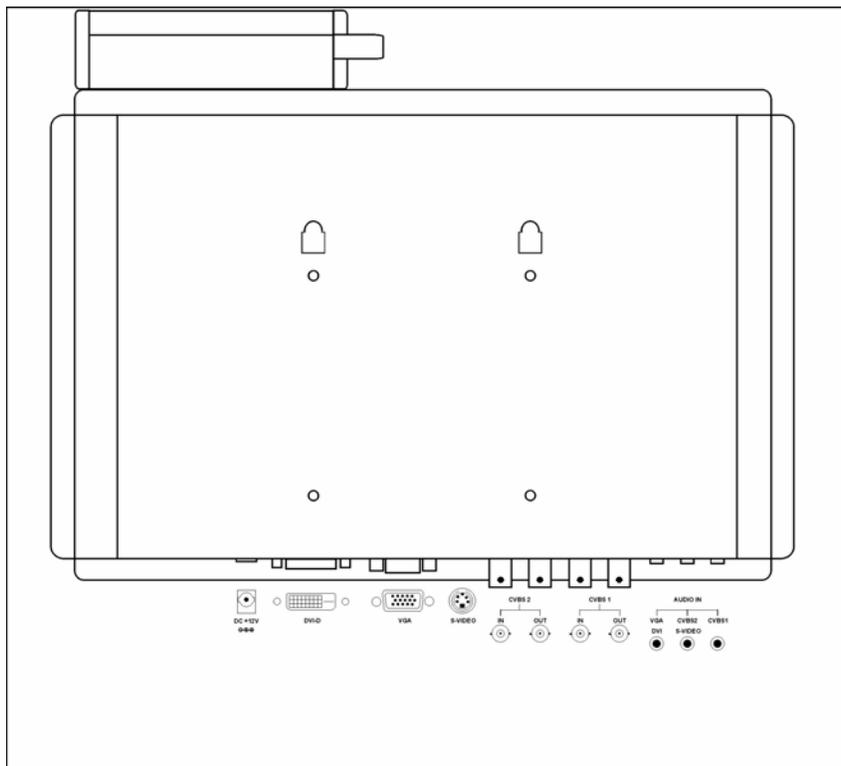
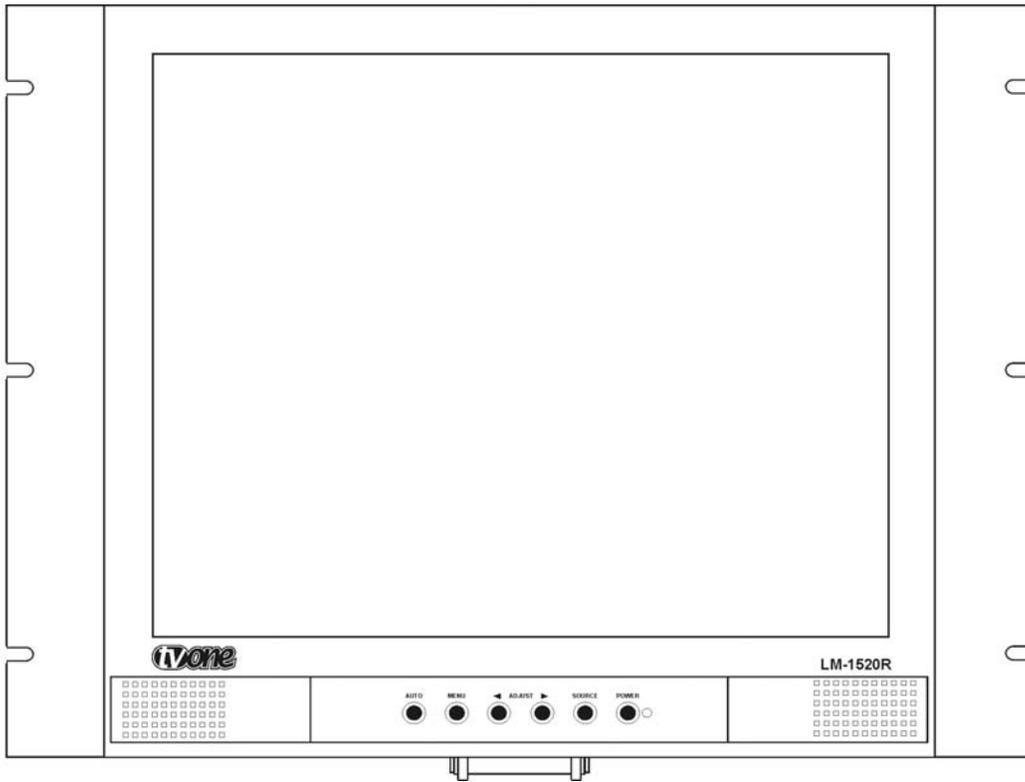
- 1x LCD Color Monitor
- 1x AC Power Adapter and AC Cord
- 1x Instruction Manual
- 1x Set of Rack Mount Ears
- 1x Power Adapter Mounting Bracket
- 8x Rack Mount Screws
- 2x Screws for Adapter Bracket
- 1x RCA audio cord
- 1x PC audio cord
- 1x VGA cord

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.

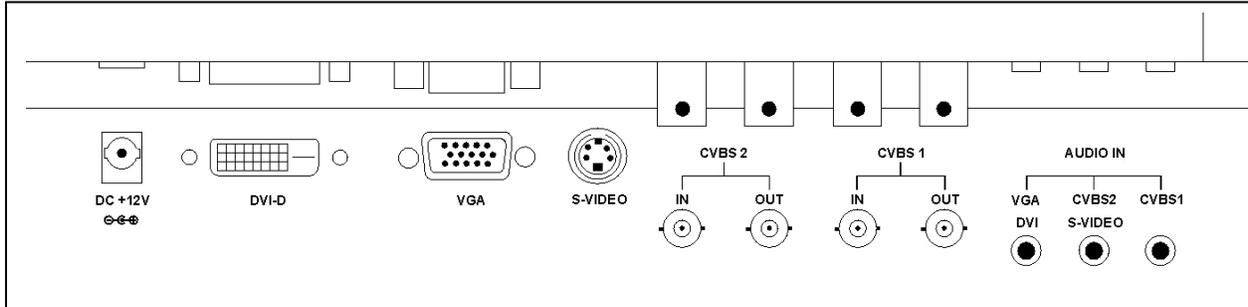
6.0 CONNECTING THE HARDWARE

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

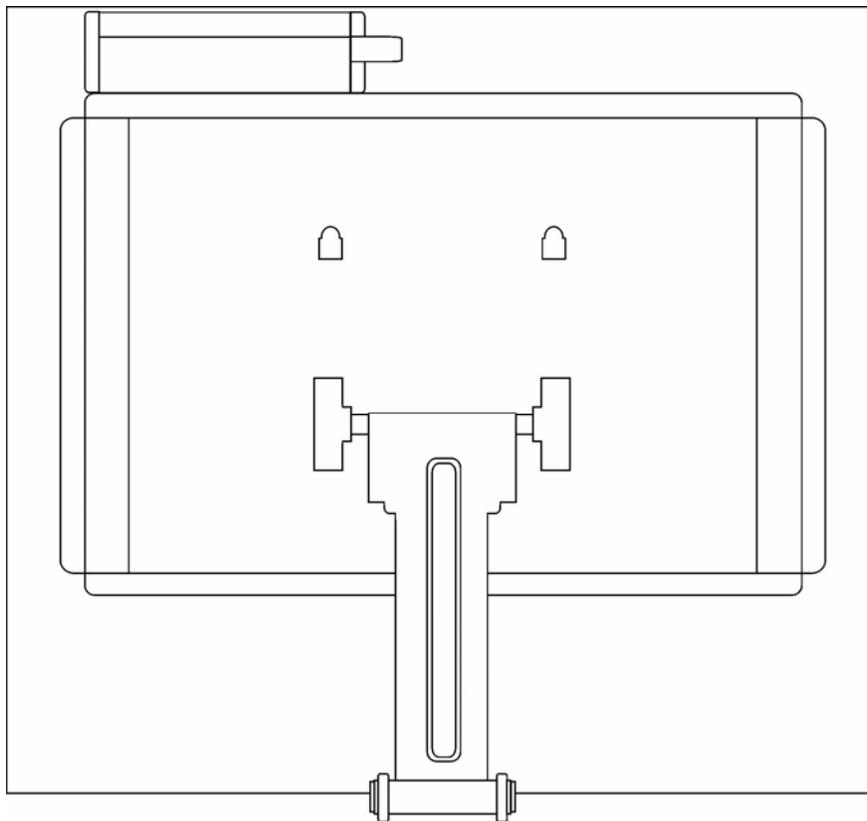
LM-1520R Front and Rear Drawings



Connector Detail:



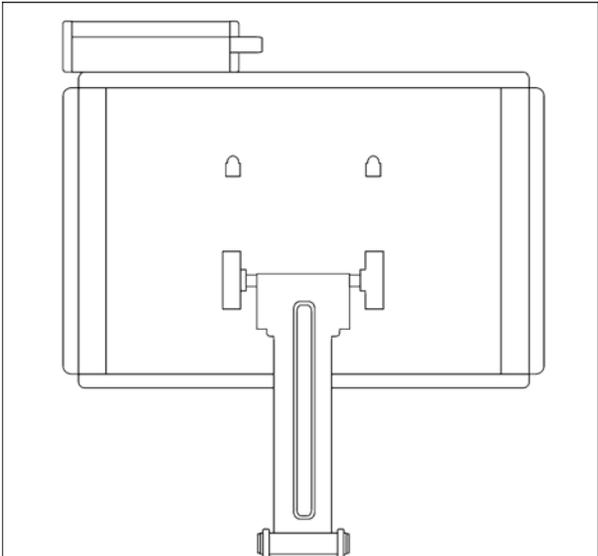
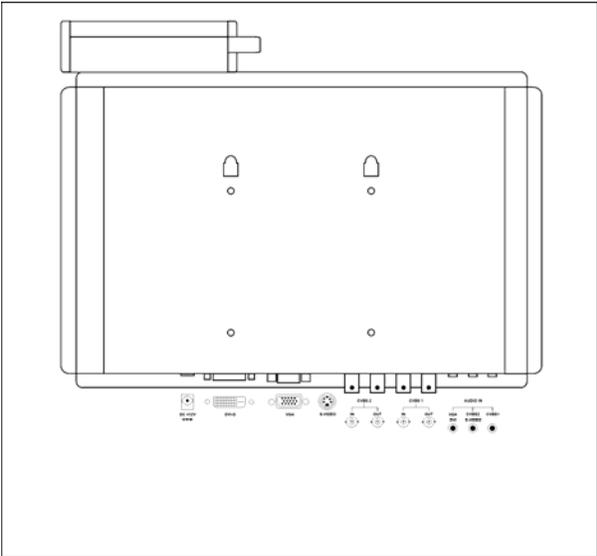
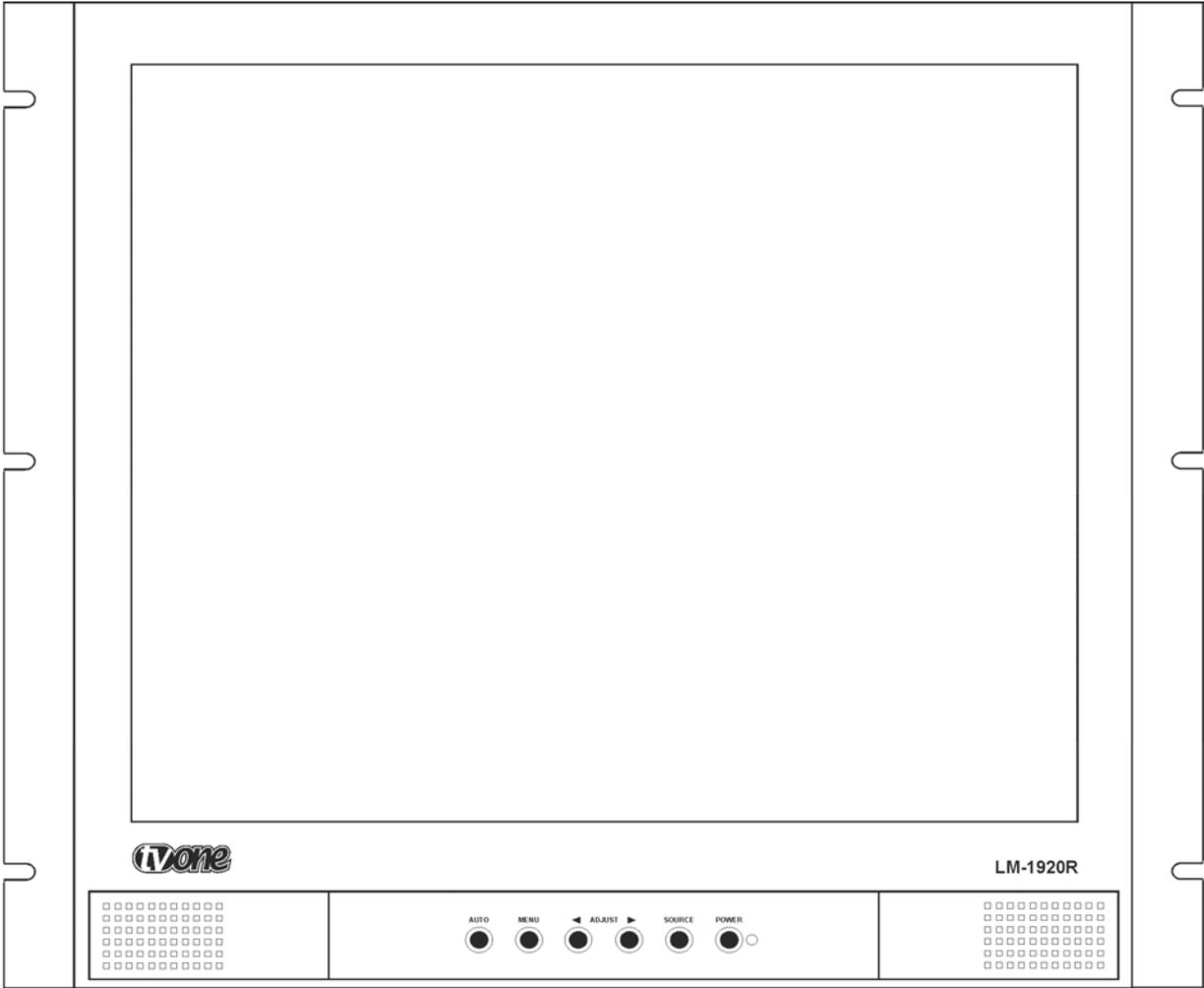
Tilt Stand Detail



Note:

Installation of the tilt stand is optional and may be omitted if the monitor is to be rack mounted or secured to a wall or other sturdy vertical object using the VESA mount.

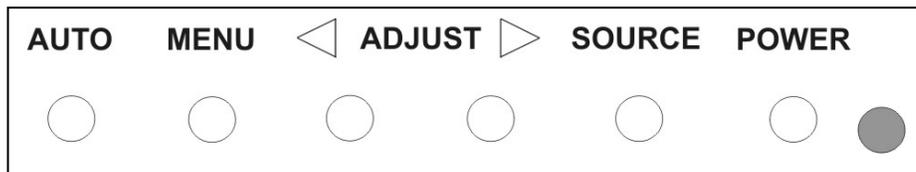
LM-1920R Monitor



An AC Adapter is included with each unit. Insert it into the holder located at the top, rear of the unit. Connect its DC cable to the connector labeled **DC +12** and then connect the included AC cable to the AC Adapter. Connect all input cables to the unit and lastly connect the other end of the AC cable to the AC power source.

7.0 OPERATING THE UNIT

The LM-1520R and LM-1920R monitors are operated using front panel controls and an On Screen Display (OSD). The controls consist of a group of six buttons located on the lower center of the front panel. Please refer to illustration below and the discussion that follows.



Power Switch: Pressing the button labeled 'POWER' will cause the LED at the extreme right of the control panel to change color from Red to Green and power will be applied to the monitor's circuitry. Pressing the button again will cause the LED to glow with a Red color and the power will be removed from the monitor's circuitry.

Source Switch: Pressing the button labeled 'SOURCE' will step the inputs through all possible signal input selections. Repeatedly press the button until you arrive at the desired input.

Auto Switch: Pressing the button labeled 'AUTO' will cause the monitor to optimize the picture any time a VGA source is present and selected. This function is only used when VGA video is the selected signal.

Menu Switch: Pressing the 'MENU' button will cause the OSD menus to appear. When an OSD Menu is active, the two adjust buttons become the controls for selecting individual functions on the OSD and also are used to adjust functions once they are selected.

Operationally, the Menu button is pressed and a menu item is selected by using the **Adjust switches** (arrow keys) to move a cursor until it is over the desired menu item. Once the cursor is over the menu item you want, pressing the Menu button again selects the item. The adjust buttons are then used to make an adjustment or turn a function on or off as appropriate.

There are several menus to choose from but the method of accessing and changing menu items is always the same: Press the Menu button to begin the selection process, move the cursor using the adjust buttons, press the menu button again to select the desired activity or sub menu. Once you are at the desired menu item, use the adjust

buttons to make the adjustment. When you are through making adjustments, press the menu key again and move the cursor to the Exit selection. Press the menu button to select 'Exit'.

Adjust Switches: Adjust Switches (Adjust Buttons) are used to set the audio volume level anytime the OSD is inactive. When the Menu button is pressed, the adjust buttons function as described above.

7.1 Menu Structure

There are four sub-menus that are used to make adjustments to the monitor via the On Screen Display (OSD) should monitor performance need improvement.

Pressing the Menu button begins the selection process. Move the cursor using the adjust buttons and then press the menu button to select the desired sub-menu. Once in the sub-menu, use the adjust buttons to move to the desired activity and press the Menu button again to select the individual function you wish to change. Use the adjust buttons to actually make the change. When you are through making adjustments, press the menu key again to save the adjustment. Move back to the main menu and to another sub-menu via the Adjust buttons. After a period of time determined by the OSD Timeout parameter in the System Sub-menu, the OSD display will disappear.

7.1.1. Sub Menu Structure

| <i>IMAGE</i> | <i>PIP</i> | <i>SYSTEM</i> | <i>VGA</i> |
|--------------|------------|---------------|------------|
| Brightness | | < 55 > | |
| Contrast | | < 50 > | |
| Color Temp | | < 6500 > | |
| Saturation | | < 50 > | |
| Hue | | < 50 > | |
| Scan Mode | | < FULL > | |
| Sharpness | | < 10 > | |
| 3D Filter | | < ON > | |

- Brightness:** Picture brightness adjustment.
Min. ~ Max.:0~100 / Default=55
- Contrast:** Picture Contrast adjustment.
Min. ~ Max.:0~100 / Default=50
- Color Temp:** Selects color temperature to 6500°K or 9300°K.
- Saturation:** Picture Saturation adjustment.
Min. ~ Max.:0~100 / Default=50
- Hue:** To adjust the color tint value.
Min. ~ Max.:0~100 / Default=50

Sharpness: Sets the desired enhancement value for picture.
Min. ~ Max.:0~20 / Default=5

Scan Mode: Changes the display scan value: Full/Under/Over.

3D Filter: Turn 3D comb filter On/Off.

| <i>IMAGE</i> | <i>PIP</i> | <i>SYSTEM</i> | <i>VGA</i> |
|-----------------|------------|---------------|------------|
| PIP Mode | | < None > | |
| PIP Source | | < CVBS2 > | |
| PIP H. Position | | < 0 > | |
| PIP V. Position | | < 0 > | |
| PIP Swap | | > | |

PIP Mode: Allows the PIP mode to be selected.

PIP Source: Allows the PIP Sub source to be selected.

PIP H. Position: Picture in picture window horizontal position.

PIP V. Position: Picture in picture window vertical position.

PIP Swap: Enables PIP sources switching.

| <i>IMAGE</i> | <i>PIP</i> | <i>SYSTEM</i> | <i>VGA</i> |
|-----------------|------------|---------------|------------|
| OSD Timeout | | < 30 > | |
| OSD H. Position | | < 0 > | |
| OSD V. Position | | < 0 > | |
| Mute | | < OFF > | |
| Channel Display | | < ON > | |
| Auto Source | | < OFF > | |
| Key Lock | | < OFF > | |
| Reset | | > | |

OSD Timer: Determines the time menu will show on the screen after the last button press. Default=30 (seconds).

OSD H. Position: OSD horizontal position.

OSD V. Position: OSD vertical position.

Mute: Disable the audio function. Default=OFF.

Channel Display: Select ON/OFF. Default=ON.

Auto Source: Monitor will auto detect the video source type.
Select ON / OFF. Default=OFF

Key Lock: Administrator control to protect monitor setting.
Press MENU + AUTO to unlock.

Reset: Restore all settings to Factory default.

| IMAGE | PIP | SYSTEM | VGA |
|-------------|-----|--------|-----|
| H Position | | < 51 > | |
| V Position | | < 39 > | |
| Phase | | < 6 > | |
| Clock | | < 40 > | |
| Auto Adjust | | > | |

H-position: Allows adjustment for horizontal position.

V-position: Allows adjustment for vertical position.

Phase: Used to adjust for the best picture quality. It adjusts the sampling phase across one pixel at a time. When the phase is not adjusted properly, the picture will be unclear. Therefore this value should be carefully adjusted.

Note: improper adjustment will cause image failure.

Clock: Used to adjust for the best picture quality. It adjusts the numbers of the pixel clock across one line at a time. Therefore it can affect the picture position and size.

Note: improper adjustment will cause image failure.

Auto Adjust: Enables auto detection of data such as clock and phase.

8.0 TROUBLESHOOTING

The major cause of difficulty with the LM-1520R and LM-1920R monitors is use of faulty or low quality cables, attempting to use cables over to long a distance and selecting the wrong source for what is actually connected to the monitor.

A second problem is misadjusting the monitor through improper use of the various setup menus. Before contacting TV One's technical support personnel, please make certain that your problem is not due to one of the above issues.

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.

9.0 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.

10.0 REGULATORY COMPLIANCE

The LM-1520R and LM-1920R monitors have 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.

11.0 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