

# datavideo



## 17.3" 3G-SDI TFT LCD MONITOR TLM-170L / TLM-170LM / TLM-170LR

# Instruction Manual

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## Table of Contents

<b>FCC COMPLIANCE STATEMENT .....</b>	<b>3</b>
<b>WARNINGS AND PRECAUTIONS .....</b>	<b>3</b>
<b>WARRANTY .....</b>	<b>4</b>
STANDARD WARRANTY .....	4
THREE YEAR WARRANTY .....	4
<b>DISPOSAL .....</b>	<b>4</b>
<b>1. INTRODUCTION .....</b>	<b>5</b>
FEATURES .....	5
TLM-170L MODEL TYPES .....	5
COMPATIBLE RESOLUTIONS AND FORMATS.....	5
<b>2. CONNECTIONS AND CONTROLS .....</b>	<b>7</b>
FRONT PANEL .....	7
REAR PANEL .....	9
<b>3. OSD MENU .....</b>	<b>10</b>
<b>4. FIRMWARE UPDATE PROCEDURE .....</b>	<b>11</b>
<b>5. TLM-170LR: FITTING THE 19" RACK EARS TO THE TLM-170L .....</b>	<b>12</b>
<b>6. TLM-170LM: FITTING THE MONITOR TO A 19" RACK.....</b>	<b>13</b>
<b>7. DIMENSIONS .....</b>	<b>14</b>
VESA MOUNTING INTERFACE STANDARD (MIS).....	15
<b>8. SPECIFICATIONS .....</b>	<b>16</b>
<b>SERVICE AND SUPPORT .....</b>	<b>17</b>

### **Disclaimer of Product and Services**

The information offered in this instruction manual is intended as a guide only. At all times, Datavideo Technologies will try to give correct, complete and suitable information. However, Datavideo Technologies cannot exclude that some information in this manual, from time to time, may not be correct or may be incomplete. This manual may contain typing errors, omissions or incorrect information. Datavideo Technologies always recommend that you double check the information in this document for accuracy before making any purchase decision or using the product. Datavideo Technologies is not responsible for any omissions or errors, or for any subsequent loss or damage caused by using the information contained within this manual. Further advice on the content of this manual or on the product can be obtained by contacting your local Datavideo Office or dealer.

## FCC Compliance Statement

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

## Warnings and Precautions

1. Read all of these warnings and save them for later reference.
2. Follow all warnings and instructions marked on this unit.
3. Unplug this unit from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.
4. Do not use this unit in or near water.
5. Do not place this unit on an unstable cart, stand, or table. The unit may fall, causing serious damage.
6. Slots and openings on the cabinet top, back, and bottom are provided for ventilation. To ensure safe and reliable operation of this unit, and to protect it from overheating, do not block or cover these openings. Do not place this unit on a bed, sofa, rug, or similar surface, as the ventilation openings on the bottom of the cabinet will be blocked. This unit should never be placed near or over a heat register or radiator. This unit should not be placed in a built-in installation unless proper ventilation is provided.
7. This product should only be operated from the type of power source indicated on the marking label of the AC adapter. If you are not sure of the type of power available, consult your Datavideo dealer or your local power company.
8. Do not allow anything to rest on the power cord. Do not locate this unit where the power cord will be walked on, rolled over, or otherwise stressed.
9. If an extension cord must be used with this unit, make sure that the total of the ampere ratings on the products plugged into the extension cord do not exceed the extension cord rating.
10. Make sure that the total amperes of all the units that are plugged into a single wall outlet do not exceed 15 amperes.
11. Never push objects of any kind into this unit through the cabinet ventilation slots, as they may touch dangerous voltage points or short out parts that could result in risk of fire or electric shock. Never spill liquid of any kind onto or into this unit.
12. Except as specifically explained elsewhere in this manual, do not attempt to service this product yourself. Opening or removing covers that are marked "Do Not Remove" may expose you to dangerous voltage points or other risks, and will void your warranty. Refer all service issues to qualified service personnel.
13. Unplug this product from the wall outlet and refer to qualified service personnel under the following conditions:
  - a. When the power cord is damaged or frayed;
  - b. When liquid has spilled into the unit;
  - c. When the product has been exposed to rain or water;
  - d. When the product does not operate normally under normal operating conditions. Adjust only those controls that are covered by the operating instructions in this manual; improper adjustment of other controls may result in damage to the unit and may often require extensive work by a qualified technician to restore the unit to normal operation;
  - e. When the product has been dropped or the cabinet has been damaged;
  - f. When the product exhibits a distinct change in performance, indicating a need for service.

## Warranty

### Standard Warranty

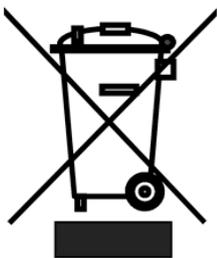
- Datavideo equipment are guaranteed against any manufacturing defects for one year from the date of purchase.
- The original purchase invoice or other documentary evidence should be supplied at the time of any request for repair under warranty.
- The product warranty period begins on the purchase date. If the purchase date is unknown, the product warranty period begins on the thirtieth day after shipment from a Datavideo office.
- Damage caused by accident, misuse, unauthorized repairs, sand, grit or water is not covered under warranty.
- Viruses and malware infections on the computer systems are not covered under warranty.
- Any errors that are caused by unauthorized third-party software installations, which are not required by our computer systems, are not covered under warranty.
- All mail or transportation costs including insurance are at the expense of the owner.
- All other claims of any nature are not covered.
- Cables and batteries are not covered under warranty.
- Warranty only valid in the country or region of purchase.
- Your statutory rights are not affected.

### Three Year Warranty

- All Datavideo products purchased after July 1st, 2017 are qualified for a free two years extension to the standard warranty, providing the product is registered with Datavideo within 30 days of purchase.
- Certain parts with limited lifetime expectancy such as LCD panels, DVD drives, Hard Drive, Solid State Drive, SD Card, USB Thumb Drive, Lighting, Camera module, PCIe Card are covered for 1 year.
- The three-year warranty must be registered on Datavideo's official website or with your local Datavideo office or one of its authorized distributors within 30 days of purchase.



## Disposal



### For EU Customers only - WEEE Marking

This symbol on the product or on its packaging indicates that this product must not be disposed of with your other household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or the shop where you purchased the product.



**CE Marking** is the symbol as shown on the left of this page. The letters "CE" are the abbreviation of French phrase "Conformité Européene" which literally means "European Conformity". The term initially used was "EC Mark" and it was officially replaced by "CE Marking" in the Directive 93/68/EEC in 1993. "CE Marking" is now used in all EU official documents.

## 1. Introduction

The Datavideo TLM-170L monitor is designed for superior performance. Whether your application is in a live production gallery, 19" rack monitoring, OB Van or a video editing suite the TLM-170L will help you confidently monitor the pictures within your chosen workflow.

To get more value out of this equipment please take a few minutes to read this manual thoroughly as this will help you familiarise yourself with all aspects of the TLM-170L monitor.

### Features

- 1920 x 1080P Panel resolution
- Supports 3G-SDI video input with loop-through output
- Supports two HDMI inputs
- Independent adjustment of Brightness, Contrast, Color Saturation and LED Backlight Level on the monitor
- Monitor Underscan and Overscan mode selection.
- User selectable color temperature
- Headphone Jacks on the Front panel
- Bi-colour Tally light and 3.5mm Jack Tally input socket.
- Safe area
- Blue Only
- Supports embedded audio on SDI & HDMI (ver 1.3)
- Image Zoom (HD only)
- USB for FW upgrade

### TLM-170L Model Types

Model	TLM-170L	TLM-170LR	TLM-170LM
Image			
System	Desktop	7U Rack Mount	1U Mobile Tray Rack Mount

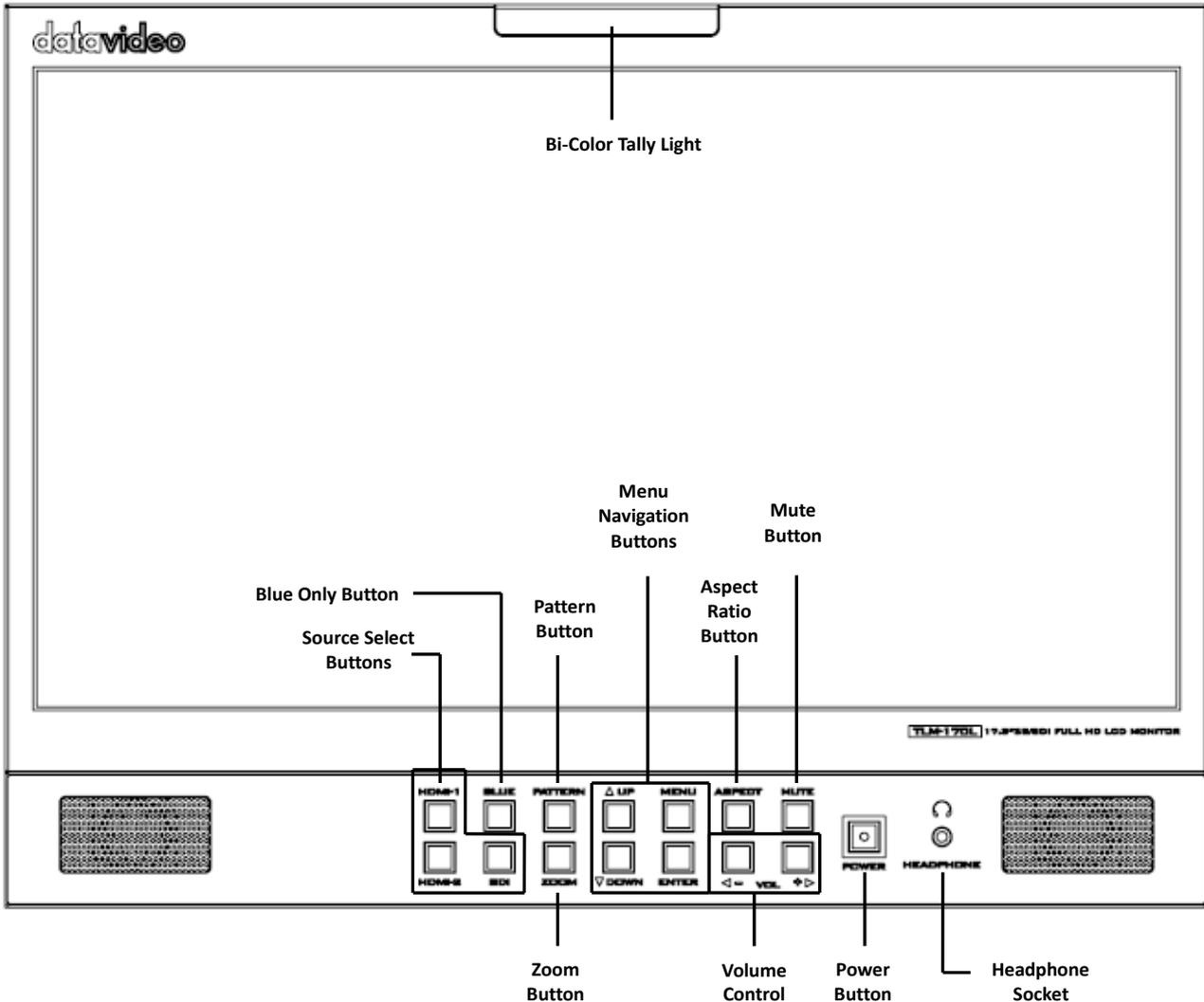
### Compatible Resolutions and Formats

Format	TLM-170L Interface	
	HDMI	SDI
1920x1080P @ 59.94	Support	Support
1920x1080P @ 60	Support	Support
1920x1080P @ 50	Support	Support
1920x1080P @ 29.97	Support	Support
1920x1080P @ 25	Support	Support
1920x1080P @ 30	Support	Support
1920x1080P @ 23.98	Support	Support

1920x1080P @ 24	Support	Support
1920x1080i @ 59.94	Support	Support
1920x1080i @ 60	Support	Support
1920x1080i @ 50	Support	Support
1280x720P @ 59.94	Support	Support
1280x720P @ 60	Support	Support
1280x720P @ 50	Support	Support
1280x720P @ 23.98	x	x
1280x720P @ 24	x	x
720 x 480i (NTSC)	Support	Support
720 x 576i (PAL)	Support	Support

## 2. Connections and Controls

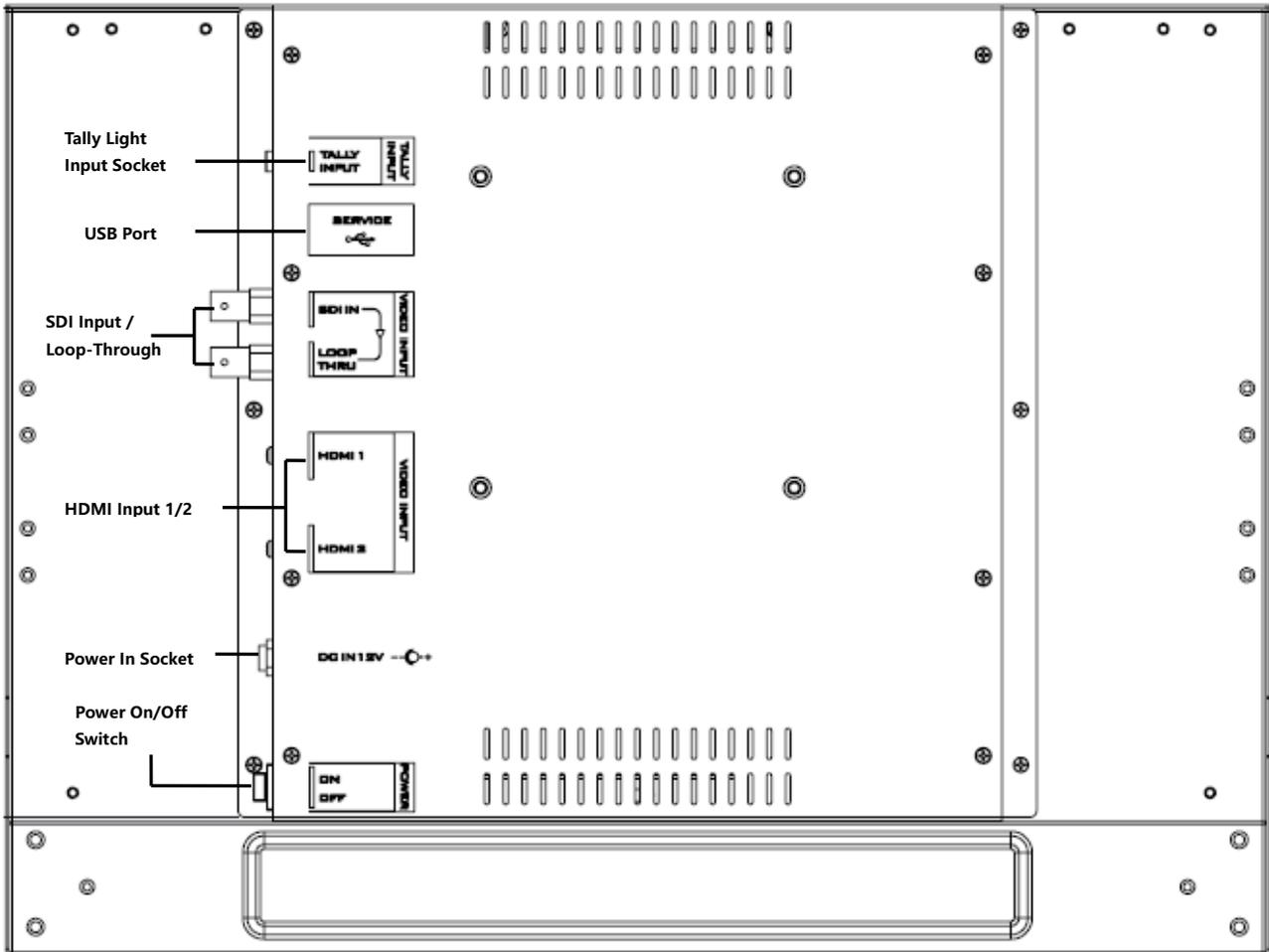
### Front Panel



Buttons	Descriptions
<b>Bi-Colour Tally Light</b>	Can be used to indicate Live (Red).
<b>Source Select Buttons</b>	Select the type of input you are using. The available interfaces are SDI and HDMI. The active input will be indicated by a red LED on the Source Button.
<b>BLUE</b>	Press this button to eliminate the red and green component of input signals. Only the blue component of an input is displayed on the screen.
<b>Pattern Button</b>	When pressed displays internally generated SMPTE 75% Colour Bars. Press again to return to the previously selected video input.
<b>Menu Navigation Buttons</b>	Display and navigate the set up menus - See <a href="#">OSD Menu Section</a> for more details.
<b>Aspect Ratio Button</b>	Sets the Aspect Ratio to 16:9 / 4:3
<b>Mute Button</b>	Mutes the audio from the internal speakers or headphone socket.

<b>Zoom Button</b>	<p><b>This feature is designed for use with HD-SDI and HDMI sources above 720p resolution.</b> Press this button to zoom in to the video on the display. This is strictly a zooming function and does not alter the native aspect ratio of the source pixels to fill the screen.</p> <p>The <b>ZOOM</b> button allows you to toggle the Pixel Zoom feature between <b>zoom x1, x2, x4</b> and <b>x8</b>.</p> <p>When turned ON the zoomed display may be moved left or right using the <b>VOL + /-</b> keys and up or down using the <b>up/down</b> keys.</p> <p>A Flashing <b>ZOOM button light</b> will be activated whenever you are in a zoomed mode as a reminder/warning that the entire incoming signal is not being shown on the monitor.</p> <p>To exit zoomed mode, simply press down on the MENU key.</p>
<b>Volume Control</b>	Adjusts the speaker / headphone volume up / down.
<b>Power Button</b>	<p>Press to turn ON / OFF the monitor.</p> <p><b>Note: Main Power On/Off switch is located on the rear of the TLM-170L.</b></p>
<b>Headphone Socket</b>	3.5mm headphone socket; internal speaker circuit will automatically mute when headphones are connected.

## Rear Panel



Ports	Descriptions
<b>3.5mm Tally Light Input</b>	Tally light information can be supplied to the TLM-170L from the Datavideo RMC-140, TB-5 or TB-10 or the ITC-100SL / ITC-200B/E via this socket.
<b>USB 2.0 Port</b>	For firmware updates only. See <a href="#">Firmware Update section</a> for more details.
<b>SDI Input &amp; Loop Through</b>	BNC Input for HD / SD SDI with a loop through output.
<b>HDMI Input</b>	Video and Audio input from an HDMI device.
<b>DC In Socket</b>	DC In Socket for connecting 12V / 30W power supply. The connection can be secured by screwing the outer fastening ring of the DC In plug to the socket.
<b>On / Off Switch</b>	Main on / off switch to switch the TLM-170L on and off.

### 3. OSD Menu

The TLM-170L can be set up using an OSD menu system. To display the OSD menu press the MENU button. This menu system is navigated using the Up / Down buttons to change a value or to highlight a menu option. Press the Enter button to select an option or confirm a value.

Main Options	Sub Options	Parameters	Parameters
MAIN ADJUST	BRIGHTNESS	0~100	
	CONTRAST	0~100	
	SHARPNESS	0~100	
	SATURATION	0~100	
	TINT	0~100	
	BACKLIGHT	0~100	
	NR	HIGH / MID / LOW / OFF	
	DLC	ENABLE / DISABLE	
	VOLUME	0~100	
	EXIT		
COLOR	6500		
	9300		
	7500		
	USER COLOR	RED	0~100
		GREEN	0~100
		BLUE	0~100
EXIT			
SCAN SETTING	UNDER SCAN	Full Image	
	OVER SCAN	Cropped Image	
INFORMATION	H. FREQUENCY		
	V. FREQUENCY		
	RESOLUTION		
	VER.		
LANGUAGE	English [default]		
	Francis		
	Deutsch		
	Español		
	Italiano		
	Dutch		
	Português		
	Russian		
	EXIT		
SPECIAL FUNCTION	OSD TIMOUT	5-120 SEC	
	FRAME RATIO	80 / 90 / OFF	
	4:3 MARK LINE	ON / OFF	
	CENTRAL MARK	ON / OFF	
	CINEMA ZONE MARK	ON / OFF	
	AUDIO CHANNEL L		
	AUDIO CHANNEL R		
	EXIT		
FACTORY RESET			
EXIT			

## 4. Firmware update procedure

From time to time Datavideo may release new firmware to either add new features or to fix reported bugs in the current TLM-170L firmware. Customers can update the firmware themselves if they wish or they can contact their local dealer or reseller for assistance should they prefer this method.

This page describes the firmware update process and it should take ***approximately 15 minutes total time to complete.***

**As well as a working TLM-170L you will need:**

- The latest firmware update for the TLM-170L *monitor*.  
This firmware file can be obtained from your local Datavideo office or dealer.
- USB 2.0 pen drive 128MB or larger with a USB A connector.

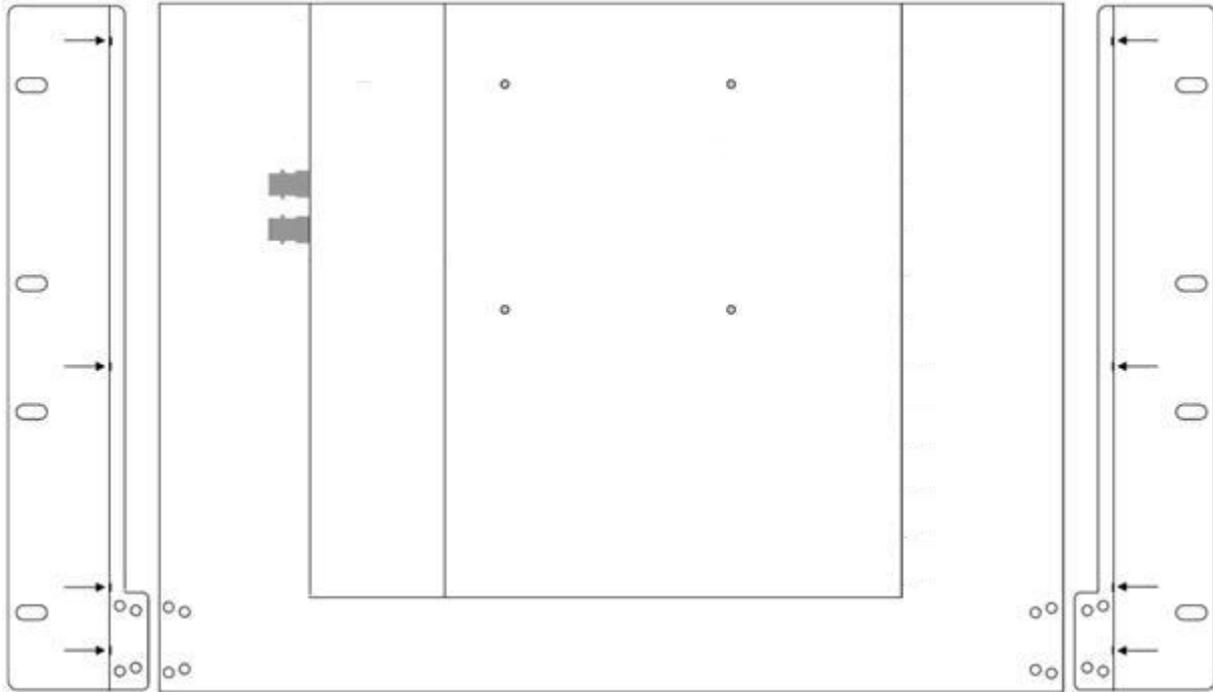
Once started ***the update process should not be interrupted in any way*** as this could result in a non-responsive unit.

**How to update the firmware**

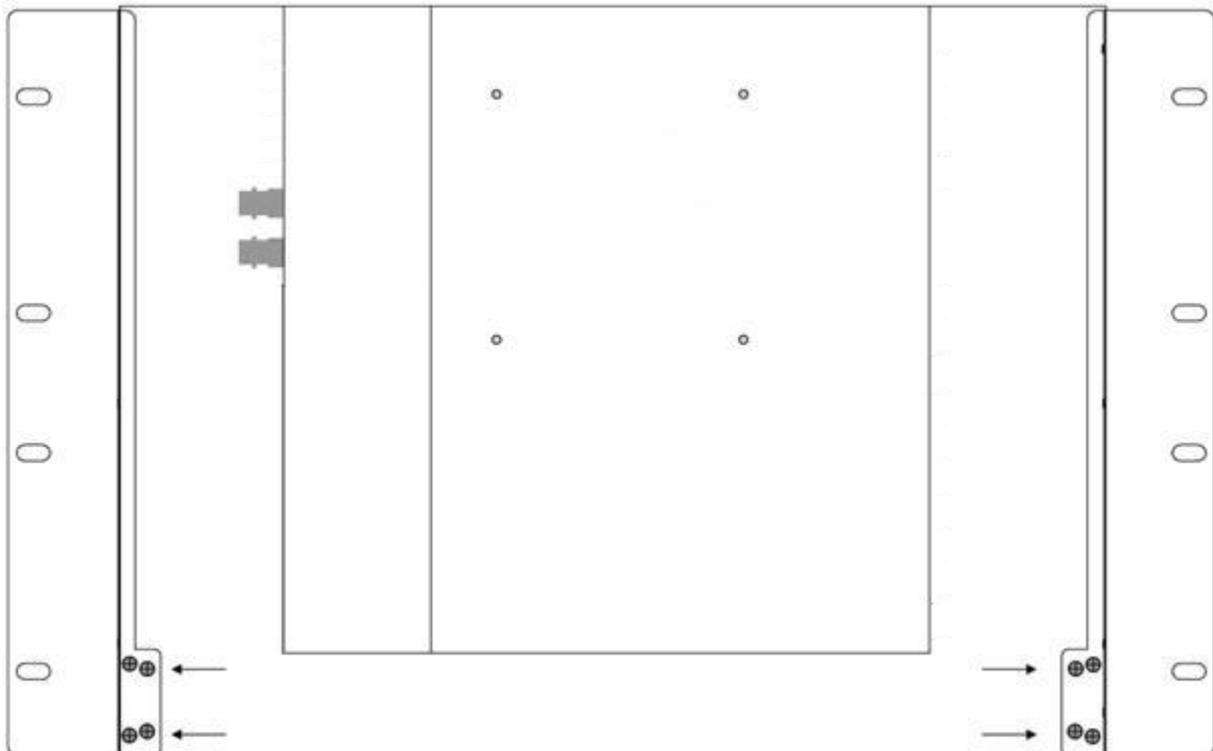
1. Unzip / extract the supplied zipped archive or rar folder.
2. Wipe the contents of the USB 2.0 pen drive so it is empty.
3. Transfer / copy the unzipped / extracted file to the USB 2.0 pen drive; make sure the file name is renamed to MSTFLASH.bin.
4. Plug the USB 2.0 pen drive into the USB 2.0 port labelled **MAINTENANCE** on the back of the monitor.
5. Reboot **TLM-170L** and the update will be automatically in progress.
6. The **TLM-170L Monitor** will reboot itself at the end of the process.

## 5. TLM-170LR: Fitting the 19" Rack Ears to the TLM-170L

The TLM-170LR is supplied with 19" Rack Ears which allow the monitor to be rack mounted (19" 7U).



Use the supplied screws to attach the left and right rack ears. You will see there are four screws on either side, as illustrated above, plus additional screws at the base of each rack ear, as illustrated below.

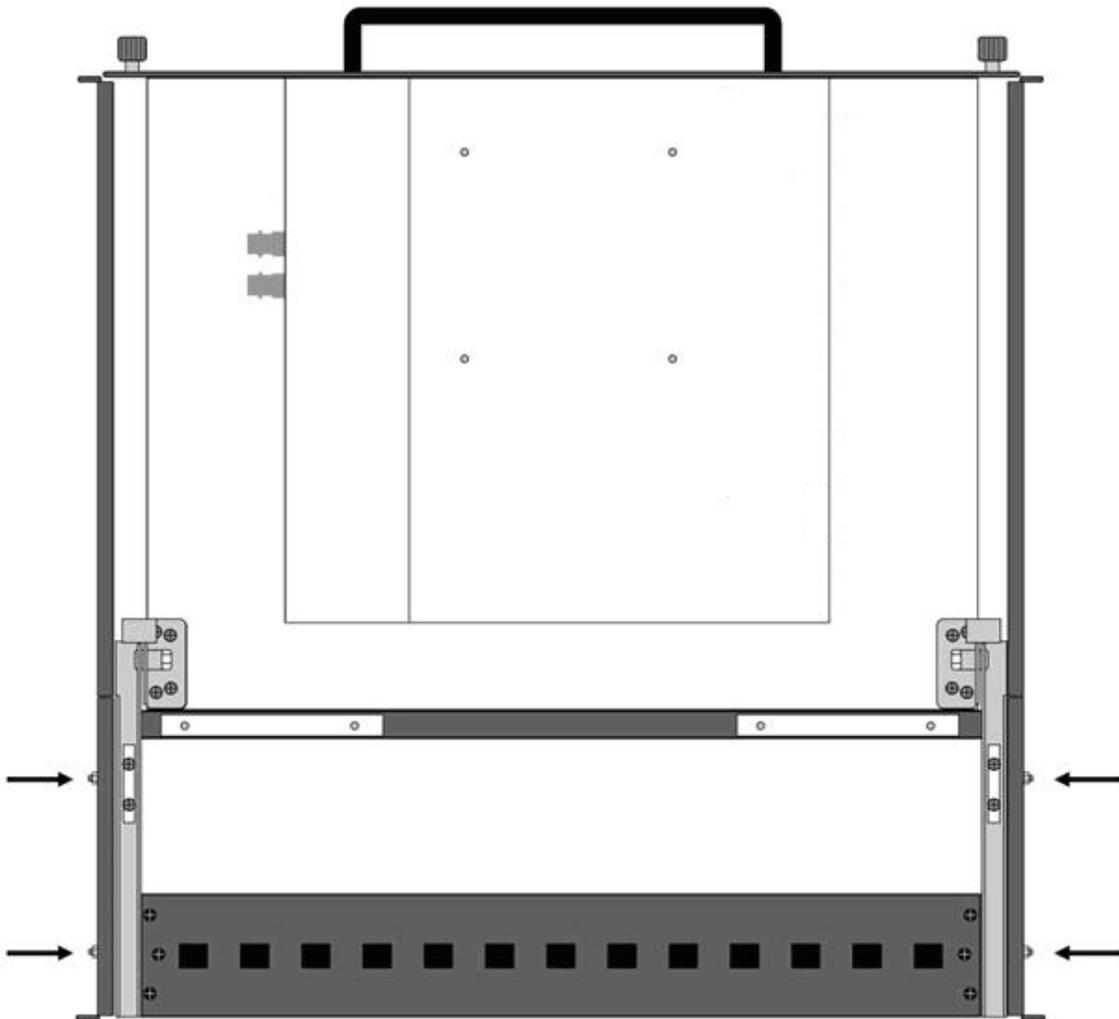


## 6. TLM-170LM: Fitting the monitor to a 19" Rack

The TLM-170LM is designed to rack mount. When folded away it is 1U high, please bear in mind that when opened for operation the monitor is 7U high, so leave adequate room above for this.

The monitor arrives already fitted with sliding rack rails, these have a length adjustment at the rear to suit the distance between the front and rear rack rails of your cabinet.

To adjust the length loosen the four adjustment nuts as illustrated below, and pull the side rails back as far as is required. Then re-tighten the nuts.



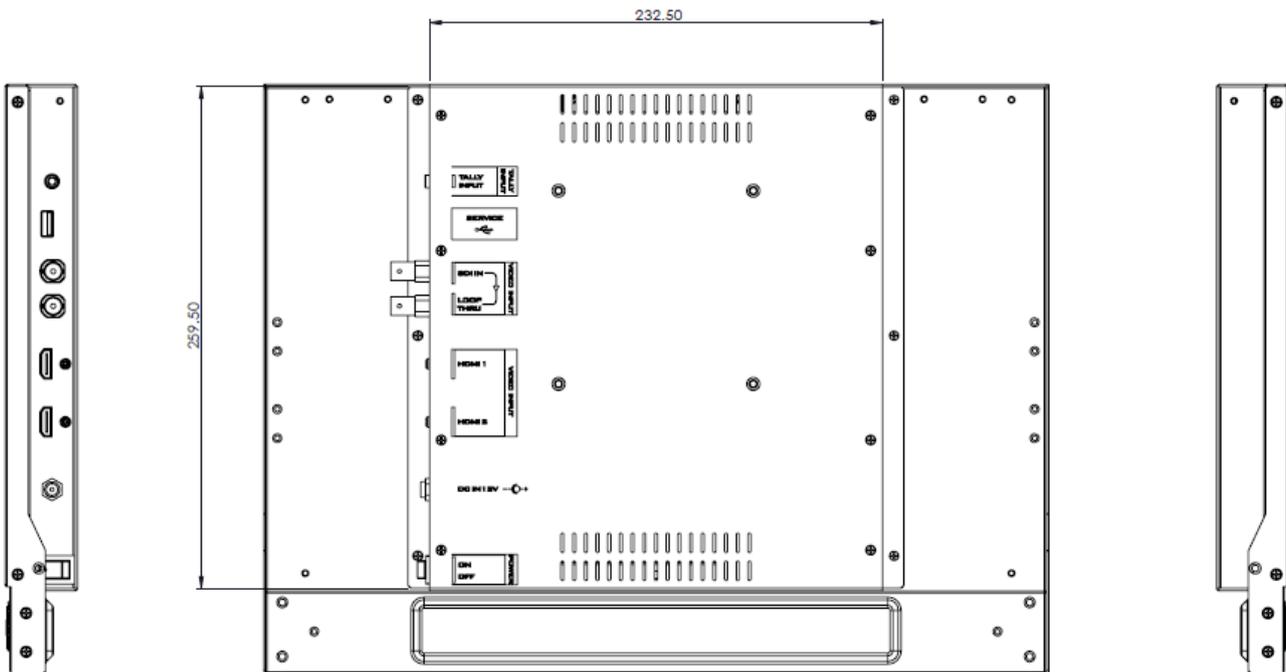
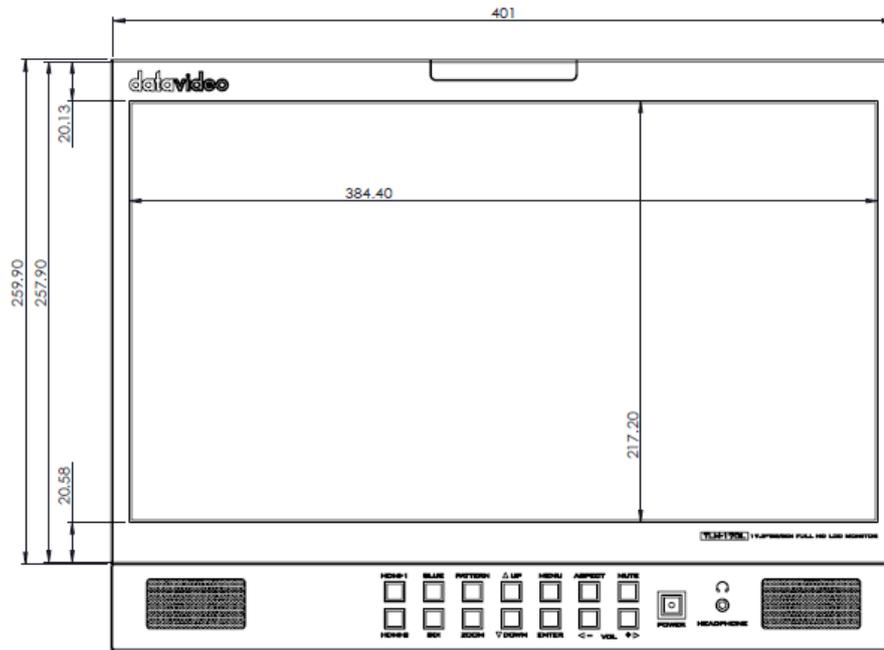
Mount the monitor in your rack with the rear panel facing upwards. Ensure the rack mounting screws are secured both front and rear.

Once mounted and secure to the rack, unscrew the two locking screws on either side of the front panel, and pull the monitor forward using the handle. Once the monitor is fully forward simply hinge it up into a vertical position.

To fold away, pull the top of the monitor forward, so that it hinges down to a horizontal position, then push it back into the rack until you are able to screw in the locking screws.

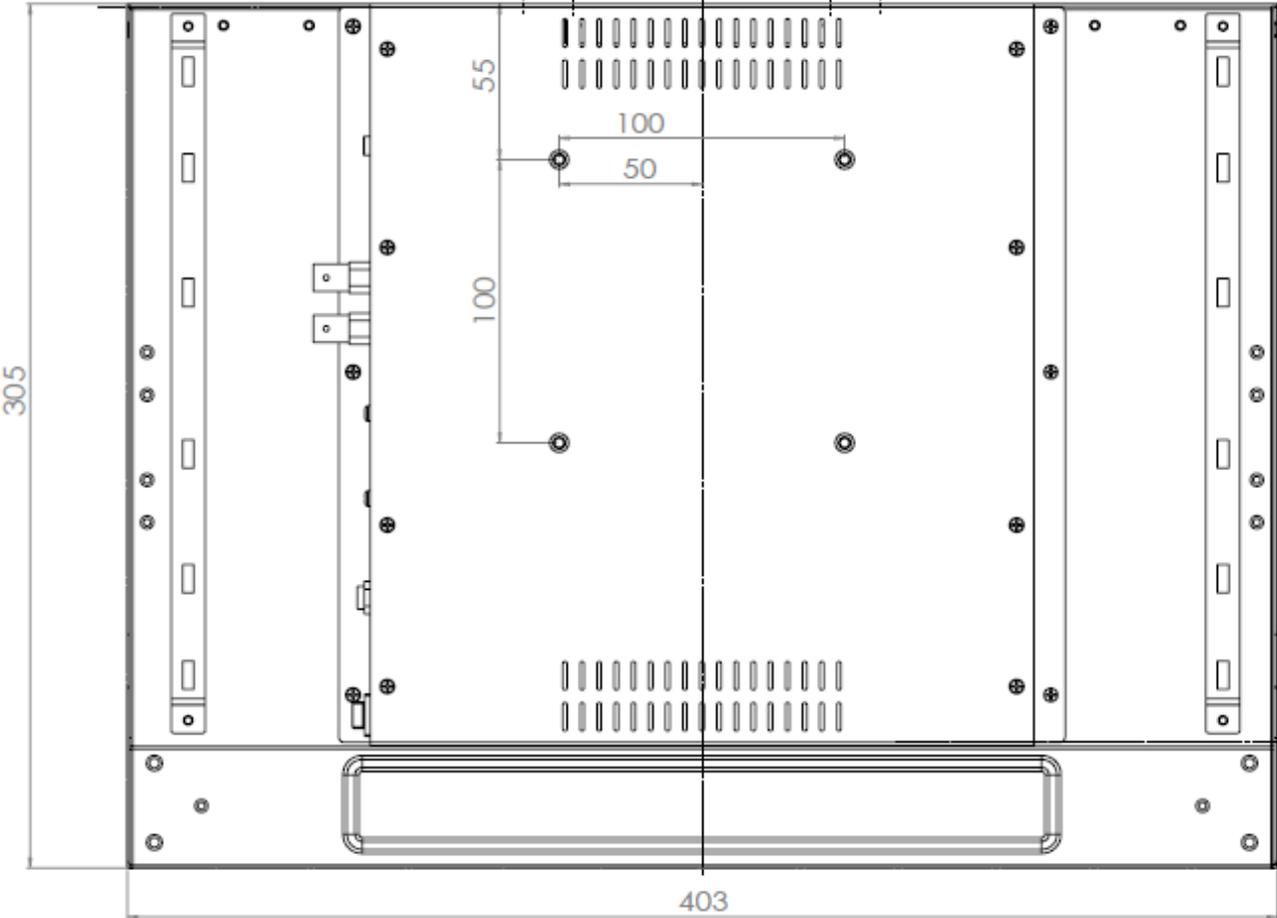
**Note:** When folding the monitor away be careful not to trap your fingers or scrape your hand on the rack cabinet.

## 7. Dimensions



All measurements in millimetres (mm)

# VESA Mounting Interface Standard (MIS)



All measurements in millimetres (mm)

## 8. Specifications

<b>LCD</b>	Size	17.3"
	Resolution	1920 x 1080
	View Angle	Top: 60 deg Bottom: 60 deg Left: 70 deg Right: 70 deg
	White Luminance	300cd
	Contrast	400
	VESA Mounting Interface Standard (MIS)	100mm x 100mm
<b>Video INPUT</b>	HDMI x 2	HDMI Ver. 1.3
	BNC x 1	3Gbps/HD/SD-SDI
<b>Video OUTPUT</b>	BNC x 1 (Loop-Through)	3Gbps/HD/SD-SDI
<b>SDI Signal Format</b>	1920 x 1080p 60/59.94/50 1920 x 1080p 30/29.97/25/24/23.98 1920 x 1080i 60/59.94/50 1280 x 720p 60/59.94/50 720 x 480i (NTSC), 720 x 576i (PAL)	
<b>VESA Timing</b>	1680 x 1050 (16:10) 1360 x 768 (16:9) 1280 x 1024 (5:4) 1280 x 1024 (4:3) 1280 x 960 (4:3) 1280 x 768 (4:3) 1152 x 864 (4:3) 1024 x 768 (4:3) 800 x 600 (4:3)	
<b>Audio Input</b>	Supports 3G/HD/SD-SDI embedded audio Supports HDMI embedded audio (Ver.1.3)	
<b>Audio Input</b>	Internal Speaker	
	3.5mm Headphone Socket	Internal speaker circuit will automatically mute when headphones are connected.
<b>Tally</b>	Tally Port x 1	
<b>Bi-Color Tally Light</b>	Can be used to indicate Live (Red) or Cued (Green) Source.	
<b>Service</b>	USB x 1	USB 2.0 FW Auto Upgrade
<b>Power</b>	DC 12V	
<b>Operating Temperature</b>	0 °C to 45 °C	
<b>Storage Temperature</b>	-10 °C to 60 °C	
<b>Weight</b>	4.1 Kg	

# Service & Support

It is our goal to make owning and using Datavideo products a satisfying experience. Our support staff is available to assist you to set up and operate your system. Contact your local office for specific support requests. Plus, please visit [www.datavideo.com](http://www.datavideo.com) to access our FAQ section.

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