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17.3" 3G-SDI TFT LCD MONITOR TLM-170G/TLM-170GM /TLM-170GR

Instruction manual

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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's 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

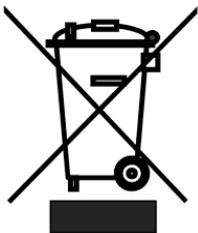
- Datavideo equipment are guaranteed against any manufacturing defects for one year from the date of purchase.
- The original purchase invoice or other documentary evidence should be supplied at the time of any request for repair under warranty.
- The product warranty period begins on the purchase date. If the purchase date is unknown, the product warranty period begins on the thirtieth day after shipment from a Datavideo office.
- All non-Datavideo manufactured products (product without Datavideo logo) have only one year warranty from the date of purchase.
- 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.
- All accessories including headphones, 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.



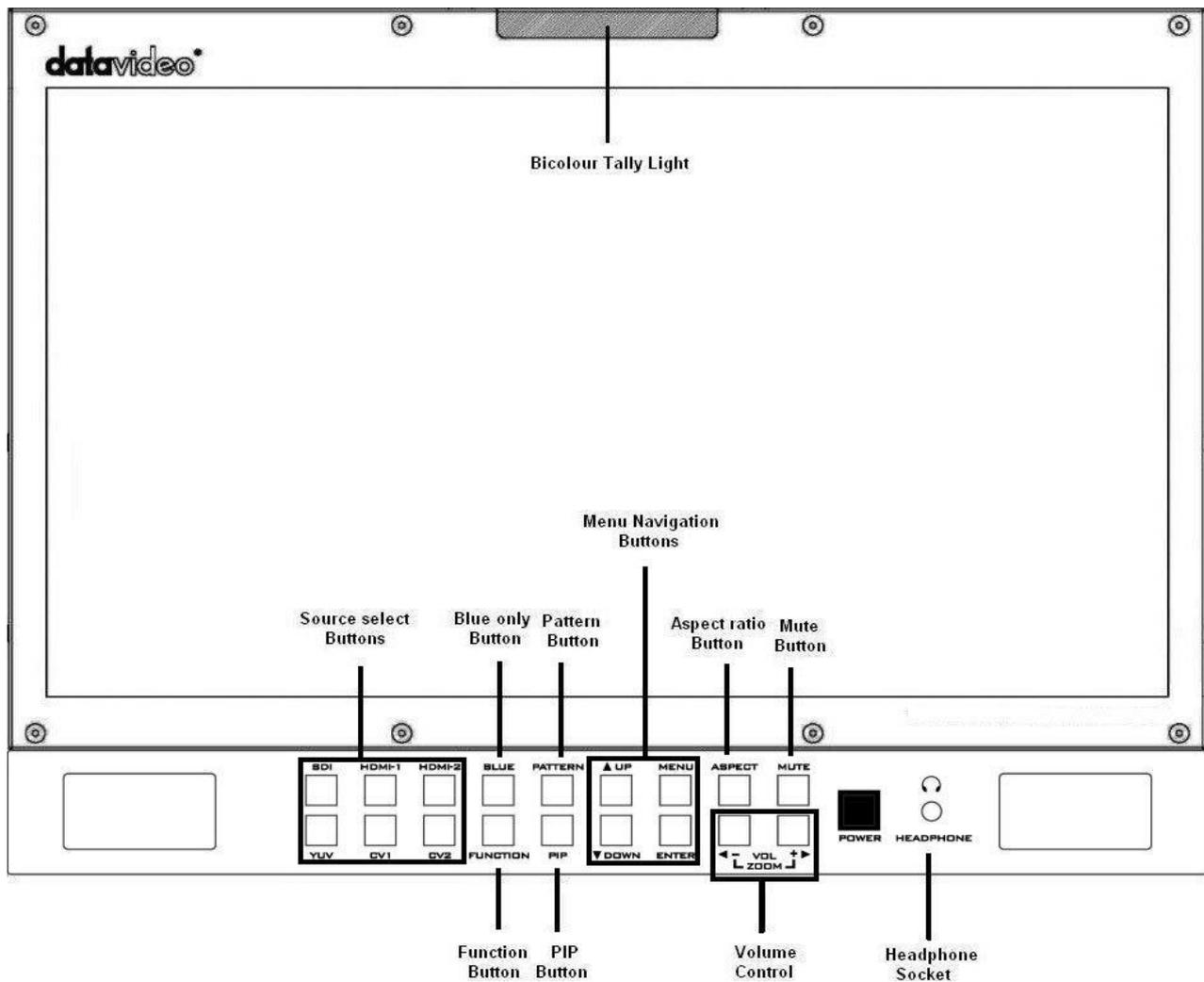
CE Marking is the symbol as shown on the left of this page. The letters "CE" are the abbreviation of French phrase "Conformité Européene" which literally means "European Conformity". The term initially used was "EC Mark" and it was officially replaced by "CE Marking" in the Directive 93/68/EEC in 1993.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

Marking" is now used in all EU official documents.

TLM-170G Model Types

Model	TLM-170G	TLM-170GR	TLM-170GM
Image			
System	Desktop	7U Rack Mount	1U Mobile Tray Rack Mount

Front Panel



Name	Descriptions
Bi-Colour Tally Light	To indicate Live (Red) or Cued (Amber) source.
Source Select Buttons	Select SDI, HDMI, YUV or CV; the active input will be indicated by a red LED on the Source Button.

BLUE	Blue only: remove red and green components of input signals. This allows chroma and phase adjustments. (Phase adjustment is effective with NTSC signals).
Function	Zoom the SDI-HD video source. - See Pixel ZOOM for more details.
Pattern Button	Display SMPTE 75% Colour Bars.
PIP Button	Activates Picture in Picture Mode.
Menu Navigation Buttons	Display and navigate setup menus. - See Menu Options for more details.
Aspect Ratio Button	Sets the Aspect Ratio to 16:9 / 4:3
Mute Button	Mutes the audio from the internal speakers or headphone socket.
Volume Control	Adjusts the speaker / headphone volume up / down.
Headphone Socket	3.5mm headphone socket; internal speaker circuit will automatically mute when headphones are connected.
<i>N.B. Main Power On/Off switch is located on the rear of the TLM-170G.</i>	

Pixel ZOOM

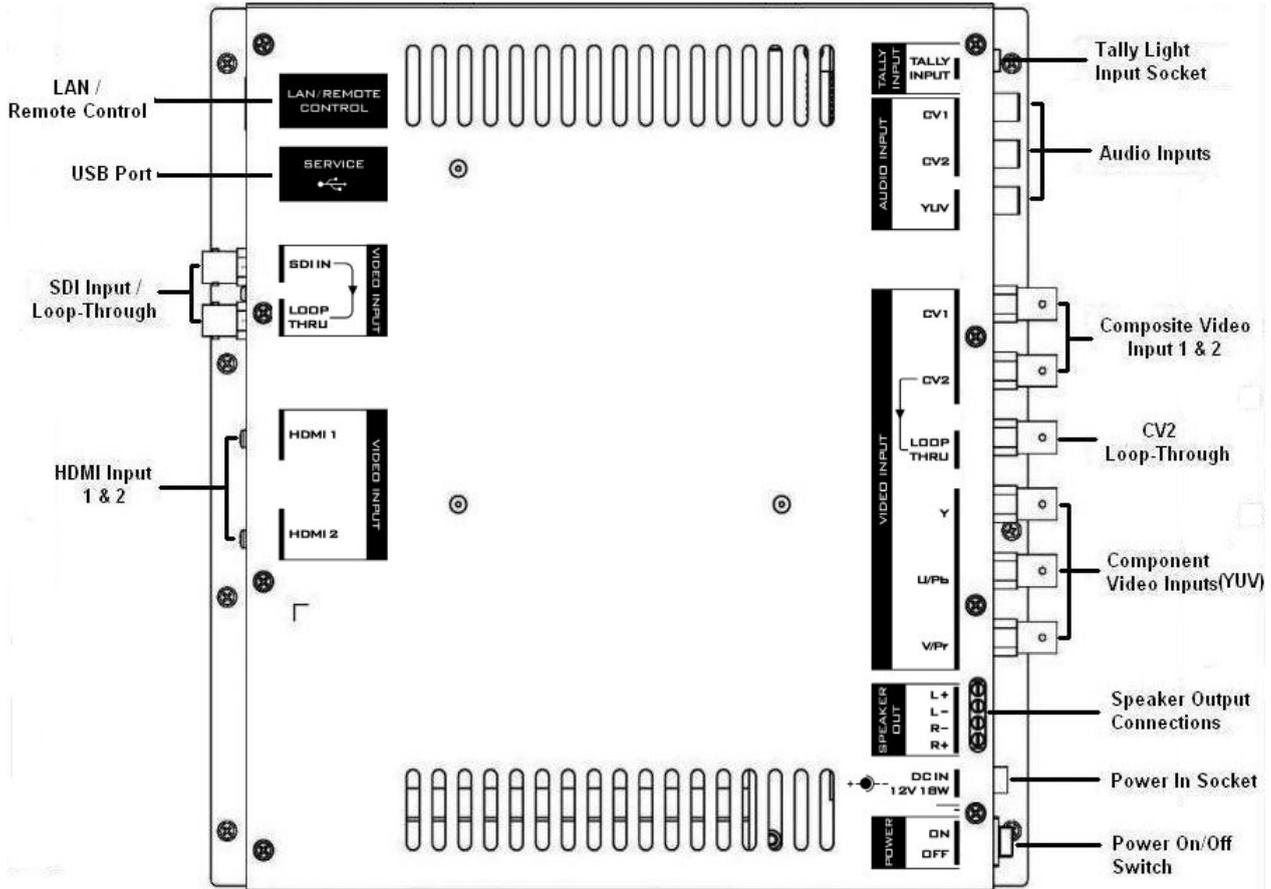
This function magnifies the incoming source to fill the screen. This is strictly a ZOOM function and does not alter the native aspect ratio of the source to fill the screen. When viewing a 4:3 source in ZOOM mode on a 16:9 display, the aspect ratio of the visible video will remain 4:3 though the entire 16:9 screen will be filled.

In order to activate the ZOOM feature, the video source must be in HD mode (resolution above 720p).

Once assigned to the **FUNCTION** button, this feature allows you to toggle the Pixel ZOOM feature ON/OFF in OSD. When turned on this feature generates a positionable and resizable rectangle on screen. The rectangle may be moved left or right using the **VOL + /- (ZOOM)** key and up or down using the up/down key. The **FUNCTION** key can be used to change the size of the onscreen rectangle.

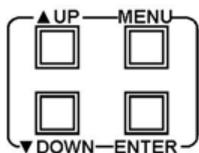
Using these adjustment keys you can thus select any area on screen and then press the **ENTER** key to zoom to the selected area. This **Pixel ZOOM** feature is designed to work with any **HD / SD** signal. A Flashing Tally light or the **FUNCTION** button's light will be activated on your monitor whenever you are in a ZOOM mode. To exit the mode, simply press the **MENU** button. To exit the **Pixel ZOOM** feature entirely, simply press the **MENU** button again to exit this feature.

Rear Panel



Name	Description
LAN Remote Control	Use a crossover Ethernet cable for direct connection between TLM-170G and the PC RJ-45 port.
USB Port	For firmware update only. See Firmware Update for more details.
SDI Input & Loop Through	BNC Input for HD / SD-SDI with a loop through output.
HDMI Input	Video and Audio input from HDMI device.
3.5mm Tally Light Input	Tally light information can be supplied to the TLM-170G from the Datavideo RMC-140, TB-5 or TB-10 via this socket.
Analog Audio Inputs	Mono audio inputs to correspond to the analog video inputs (CV 1 & CV 2).
Composite Video Inputs 1 & 2	BNC ports for composite video with one loop through output.
Component Video Input	BNC port for Component (YUV (Y/R-Y/B-Y)) Video.
Speaker Output Connections	Max 5V _{p-p} (2W)
DC In Socket	DC In Socket for connecting 12V / 18W power supply. The connection can be secured by screwing the outer fastening ring of the DC In plug to the socket.
Power On / Off Switch	This switch turns the TLM-170G ON and OFF.

Menu Options



- The TLM-170G is set up via on-screen menus. To display the on-screen menu, press the MENU button.
- The menus are navigated using the Up / Down buttons.
- Press **Enter** button to enter or exit the setting mode.

MAIN ADJUST

BRIGHTNESS	0~100
CONTRAST	0~100
SHARPNESS	0~100
SATURATION	0~100
TINT	0~100
BACK LIGHT	0~100
3D COMB	DISABLE / ENABLE
NR	HIGH / MID / LOW / OFF
MPEG NR	HIGH / LOW / OFF
DLC	DISABLE / ENABLE
VOLUME	0~100
EXIT	

3D COMB is for video noise suppression.

NR is for video noise reduction.

MPEG NR is for MPEG format noise reduction.

DLC is for Dynamic luminance control

COLOR ADJUST

6500	
9300	
7500	
USER COLOR	RED
	GREEN
	BLUE
	EXIT

SCAN SETTING

UNDER SCAN
OVER SCAN

INFORMATION

H. FREQUENCY
V. FREQUENCY
RESOLUTION

This mode will display the video resolution.

PIP SETTING

PIP	PIP / OFF
SOURCE	YUV / CVBS 1 / CVBSI 2
POSITION	LF-TOP / RT-TOP / RT-BOT / LF-BOT
SIZE	LARGE / SMALL / MID

SWAP

EXIT

LANGUAGE

English
Español
Deutsch
Español
Italiano
Dutch
Português
Russian
EXIT

SETUP MENU

OSD TIMEOUT 5~120 sec
EXIT

SPECIAL FUNCTION I

FRAME RATIO 80 / 90 / OFF
4:3 MARK LINE ON / OFF
CENTRAL MARK ON / OFF
CINEMA ZONE MARK ON / OFF
MARK TYPE OVERLAY / TRANSPARENT
EXIT

SPECIAL FUNCTION II

TIMECODE SETUP (VALID FOR SDI ONLY)
TITLE EDIT TITLE DISPLAY ON / OFF
TITLE POSITION MID-TOP / MID-BOT
FONT SIZE SMALL / LARGE
FONT COLOR RED / GREEN / ORANGE / WHITE
EDIT TITLE A~Z
EXIT

SETUP NETWORK

DHCP	ON / OFF	User's choice
IP	127.127.127.127.	User defined / assigned by DHCP server if DHCP=ON
MASK	255.255.255.255.	User defined / assigned by DHCP server if DHCP=ON
GATEWAY	127.127.127.127.	User defined / assigned by DHCP server if DHCP=ON
MAC	xx.xx.xx.xx.xx.xx	Unique to monitor so MAC cannot be changed.

EXIT

See [Remote Control Setup](#) for more details.

UPDATE F.W.

UPDATE SCALER F.W.
SCALER VER:
UPDATE FPGA F.W.
FPGA VER:

EXIT

Datavideo QA recommends using the four USB dongles listed below for firmware upgrade:

- Sony 8G (Micro Vault USB flash drive)
- SanDisk 8G (Cruzer Glide USB flash drive)
- Transcend (Jet Flash 16G)
- Kingston (DT101 G2 8GB)

FACTORY RESET

Once in this option, press **ENTER** button to reset the TLM-170G to factory default settings.

AUDIO CONTROL

INTERNAL AUDIO	ON / MUTE CONTROL / OFF
EXTERNAL AUDIO	ON / MUTE CONTROL /
AUDIO INDICATOR	ON / OFF
AUDIO CHANNEL L	1
AUDIO CHANNEL R	2
EXIT	

Firmware update procedure

From time to time Datavideo may release new firmware to either add new features or fix reported bugs in the current TLM-170G firmware. Customers can update the DAC-70 firmware themselves or contact their local dealer for assistance.

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

A working TLM-170G requires the following:

- The latest firmware file for the TLM-170G monitor. This can be obtained from your local Datavideo office or dealer.
- A 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 Scaler firmware

1. Unzip / extract the supplied zipped archive or rar file.
2. Erase the contents of the USB 2.0 pen drive.
3. Transfer / copy the unzipped / extracted file to the USB 2.0 pen drive.
4. Plug the USB 2.0 pen drive into the USB 2.0 port labelled MAINTENANCE located on the rear panel of the TLM-170G monitor.
5. Power on the monitor and press the MENU button to display the OSD Main Menu.
6. Use the OSD Menu buttons [UP, DOWN & ENTER] to select the SETUP F.W. option.
7. Use the OSD Menu buttons [UP, DOWN & ENTER] to select UPDATE SCALER F.W.
8. The TLM-170G tally light will flash different colours whilst the update is in progress.
9. The TLM-170G monitor reboots itself at the end of the process.

How to update the FPGA firmware

1. Unzip / extract the supplied zipped archive or rar file.
2. Erase the contents of the USB 2.0 pen drive.
3. Transfer / copy the unzipped / extracted file to the USB 2.0 pen drive.
4. Plug the USB 2.0 pen drive into the USB 2.0 port labelled MAINTENANCE located on the rear panel of the TLM-170G monitor.
5. Power on the monitor and press the MENU button to display the OSD Main Menu.
6. Use the OSD Menu buttons [UP, DOWN & ENTER] to select the SETUP F.W. option.
7. Use the OSD Menu buttons [UP, DOWN & ENTER] to select UPDATE FPGA F.W.
8. The TLM-170G tally light will flash different colours whilst the update is in progress.
9. The TLM-170G monitor reboots itself at the end of the process.

Remote Setup using an existing DHCP Network

The TLM-170G can be remotely set up using a computer web browser and the existing DHCP LAN. In this way a gallery of TLM-170G monitors can be set up from one computer if enough network connections exist.

1. Use a normal Ethernet RJ-45 patch cable, straight through, to connect TLM-170G to an existing LAN wall socket/switch.
2. Power on the TLM-170G monitor and press the MENU button to display the OSD menu.
3. Using the Up / Down buttons highlight SETUP NETWORK and press ENTER.
4. Set the menu option DHCP to "ON" and press ENTER.
The same OSD menu screen will now show the IP address given by the network to the TLM-170G monitor. Make a note of this displayed IP address.
5. From a computer on the same DHCP LAN network open a web browser such as Internet Explorer or Google Chrome. Delete the contents of the address bar at the top of the browser window and enter the IP address of the TLM-170G that you just made a note of earlier and press ENTER.
6. The TLM-170G REMOTE SET UP interface should now be displayed in the web browser.
7. You can now use the computer's mouse and keyboard to change the monitor's settings.

Once the above steps have been completed the next time you want to change settings remotely you can re-start from step 5.

The screenshot displays the 'datavideo' remote setup web interface. At the top, there is a navigation bar with the following links: [AV Setting](#) | [PIP](#) | [MarkLine](#) | [NetWork](#). The main content area is divided into two columns: 'Image Setting' on the left and 'Audio Setting' on the right.

Image Setting

Main Adjust

Brightness	225	+	-
Contrast	177	+	-
Sharpness	35	+	-
Saturation	230	+	-

Set

Color Temperature

6500K 9300K User Define

RED	225	+	-
GREEN	180	+	-
BLUE	196	+	-

Set Color Tempature

Audio Setting

Internal Audio: ON OFF

External Audio: ON OFF

Indicator: ON OFF

Volume Control: 57

Remote Setup using a direction computer connection

The TLM-170G can be remotely set up using a computer web browser and an Ethernet crossover cable. No existing computer network is used. The Ethernet crossover cable is connected to the TLM-170G monitor and the computer/laptop being used.

1. Use an Ethernet RJ-45 **crossover cable** to connect the TLM-170G directly to the computer being used.
2. Power on the TLM-170G monitor and press the MENU button to display the OSD menu.
3. Using the Up / Down buttons highlight SETUP NETWORK and press ENTER.
4. Set the menu option DHCP to "OFF" and press ENTER.
5. Then enter into the **TLM-170G** ...

IP Address: 192.168.0.210

Subnet Mask: 255.255.255.0

Gateway: 192.168.0.1

6. Now open the Network and Sharing Center window on the Windows computer. Open the Local Area Network Properties window and make a note of any displayed IP address or settings so you can return the computer back to its original settings later if necessary.
7. Now change the Computer's TCP/IP property settings as shown below.

Select '**Use the following IP Address**' radio button.

Then enter into the **computer** ...

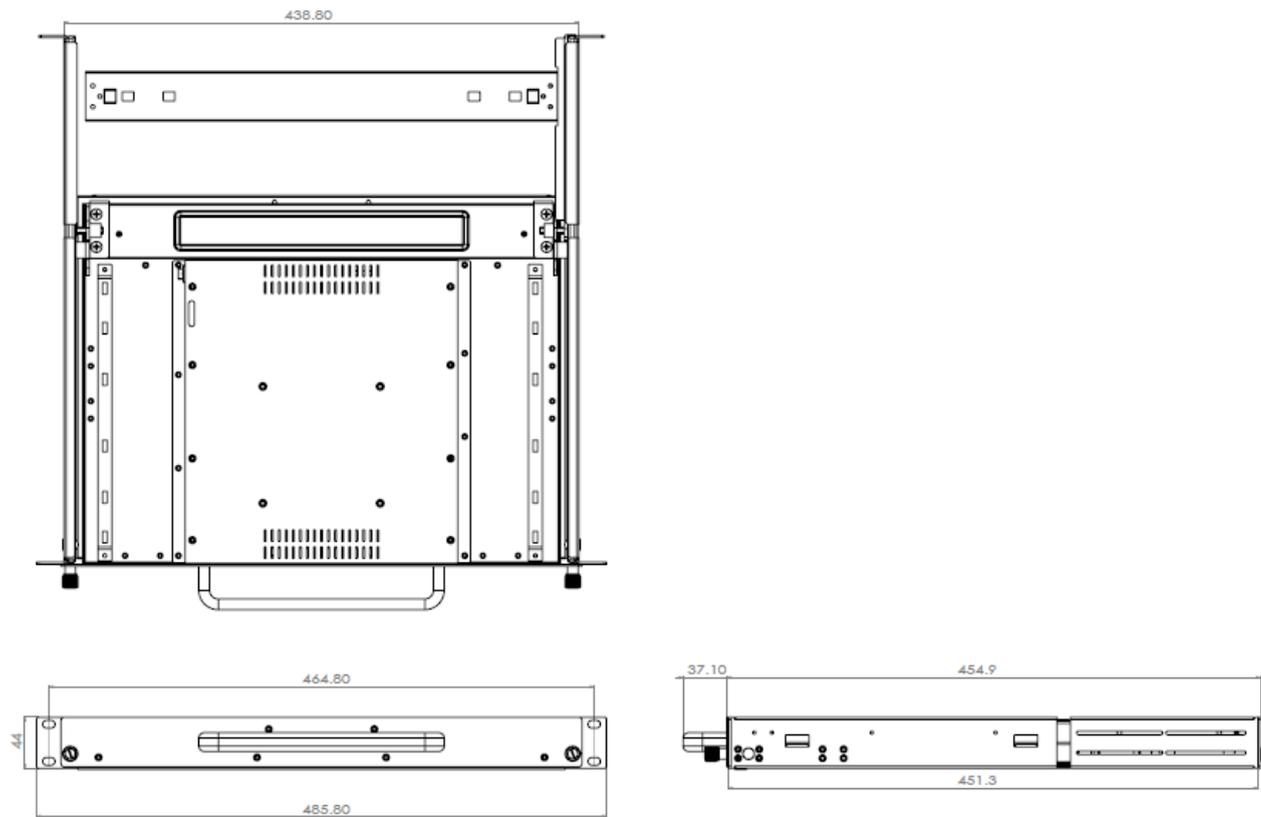
IP Address: 192.168.0.205

Subnet Mask: 255.255.255.0

Gateway: 192.168.0.1

8. Now save and close any open network related windows on the computer.
9. From the computer desktop open a web browser such as Internet Explorer or Google Chrome.
10. Delete the contents of the address bar at the top of the browser window and enter the IP address of the TLM-170G which should be **192.168.0.210** if you are following the example here.
11. When you enter the IP address in the web browser, the TLM-170G's remote settings interface should be displayed in the browser window.

Dimensions



All measurements in millimetres (mm)

Specifications

LCD	<p>Panel Size: 17.3" Contrast: 650 Resolution: 1600 x 900 White Luminance: 220cd View Angle: Top: 20 Bottom: 45 Left: 45 Right: 45</p>
Video Input	<p>HDMI x 2 (Ver 1.3) HD/SD SDI x 1 Component x 1 (3 BNC) Composite x 2</p>
Video Loop Thru Out	<p>SDI Loop Thru x 1 Composite x 1</p>
SDI Signal Format	<p>SMPTE-425M - 1080p (60/59.94/50/30/25/24) 1080i (60/59.94/50) SMPTE-296M - 1080P(60/59.94/50) SMPTE-125M - 480I(59.94) ITU-R BT.656 - 576I(50)</p>
Audio Input	<p>Composite x 2 YUV x 1</p>
Audio Output	<p>Speaker cable output connections (L-, L+, R-, R+) Max 5v p - p (2w) Speaker Output connections Max 5v p - p (2w)</p>
Tally	<p>Tally input x 1</p>
Service	<p>F/W Upgrade - USB 2.0 x 1</p>
Network	<p>Remote Control - LAN (RJ-45) x 1</p>
Functions	<p>Support SDI audio embedded Support HDMI audio embedded Audio Indicator: SDI / 8 CH HDMI / 2 CH CV/YUV 2CH Temperature Selection: 6500K, 9300K, User-Defined On Screen Time Code Safe Area Blue Only PIP Pixel Zoom up to 8x Under scan / Over scan selection</p>

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 to access our FAQ section.

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