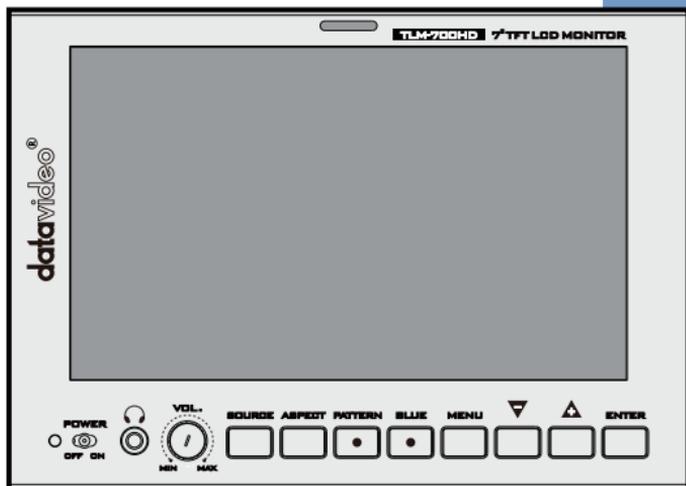


# datavideo



## 7" HD/SD TFT LCD MONITOR TLM-700HD Instruction Manual

[www.datavideo.com](http://www.datavideo.com)

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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 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 indicates that it should not be treated as household waste. It must be handed over to the applicable take-back scheme for the recycling of Waste Electrical and Electronic Equipment. For more detailed information about the recycling of this product, please contact your local Datavideo office.



**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-700HD is a 7 Inch monitor designed for use in the field or in a studio. The TLM-700HD can be powered from a standard V-Mount battery connection or by mains power. It is rugged and easy to carry with a variety of professional features and connections that make it easy for set up and intuitive to use.

## 1.1 Features

- 7" 16:9 Wide Screen Panel
- Resolution: 800 x 480 dots
- View Angle (V)+60/-40°, (H)+60/-60°
- HD/SD-SDI, YUV, HD-YUV, HDMI & CV Input
- Internal colour bar
- Blue only function
- Audio indicator for SDI, HDMI
- Safe Area indicator
- VITC time code display
- Dual colour tally light indicator
- Brightness, Contrast, Colour, Tint Adjustable
- Colour Temp\* adjustable
- Audio Level indicators
- NTSC / PAL Auto Switching
- 4:3 / 15:9 / 16:9 switchable

*\*can be set to 9300, 7500, 6500, 5400 or USER RGB values.*

## 1.2 Supported Formats

### HDMI YUV

720 x 576i x 50 Hz  
720 x 480i x 60 Hz  
1280 x 720p x 50 Hz  
1280 x 720p x 60 Hz  
1920 x 1080i x 50 Hz  
1920 x 1080i x 60 Hz

### HDMI RGB

720 x 576i x 50 Hz  
720 x 480i x 60 Hz

### SDI

720 x 576i / 50 Hz  
720 x 480i / 60 Hz  
1280 x 720p / 60 Hz  
1280 x 720p / 50 Hz  
1920 x 1080i / 50 Hz  
1920 x 1080i / 60 Hz

### YUV

720 x 576i x 50 Hz  
720 x 480i x 60 Hz

### CV

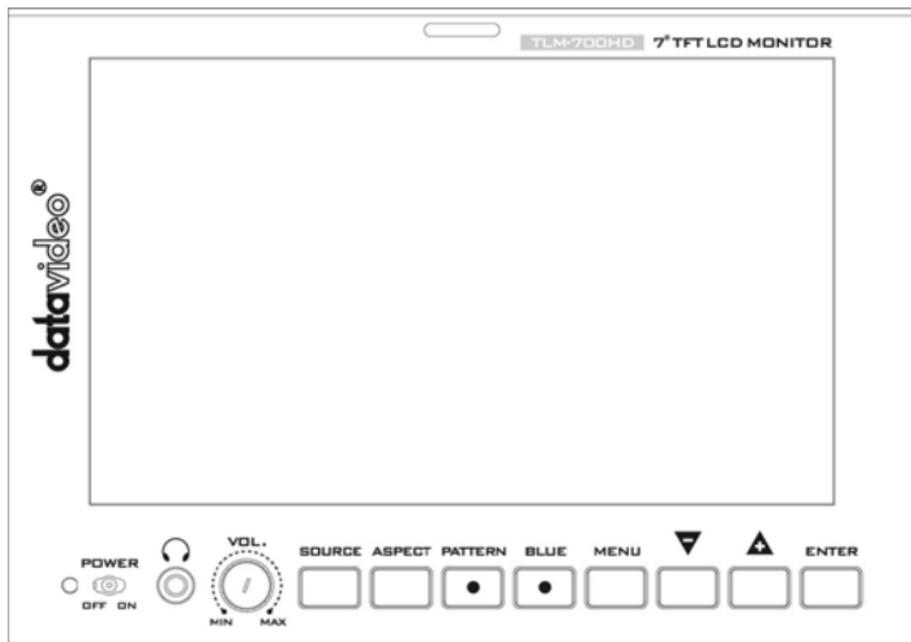
720 x 576i (PAL)  
720 x 480i (NTSC)

1280 x 720p x 50 Hz  
1280 x 720p x 60 Hz  
1920 x 1080i x 50 Hz  
1920 x 1080i x 60 Hz

1280 x 720p x 50 Hz  
1280 x 720p x 60 Hz  
1920 x 1080i x 50 Hz  
1920 x 1080i x 60 Hz

## 2. Connections and Controls

### 2.1 Front Panel



#### Power Switch

Switches the power ON / OFF.



### **Stereo Headphone Mini Jack Socket**

The level is adjusted by headphone volume control.  
Listen to embedded audio from HDMI or SDI sources.



### **Headphone Volume Control**

Allows you to adjust the headphone volume.

### **SOURCE**



### **Source Button**

Selects input from SDI, YPbPr, CVBS, and HDMI.

### **ASPECT**



### **Aspect Ratio Button**

Selects from 4:3, 15:9 or 16:9

### **PATTERN**



### **Pattern**

Generate colour bars

### **BLUE**



### **Blue**

For blue only display to allow accurate chroma and phase adjustments with NTSC signals.

### **MENU**



### **Menu**

Calls up the on-screen adjustment menu (See menu options section for more details)



### **Up / Down**

Menu navigation controls

### **ENTER**



### **Enter**

Confirms new settings or returns to the default.

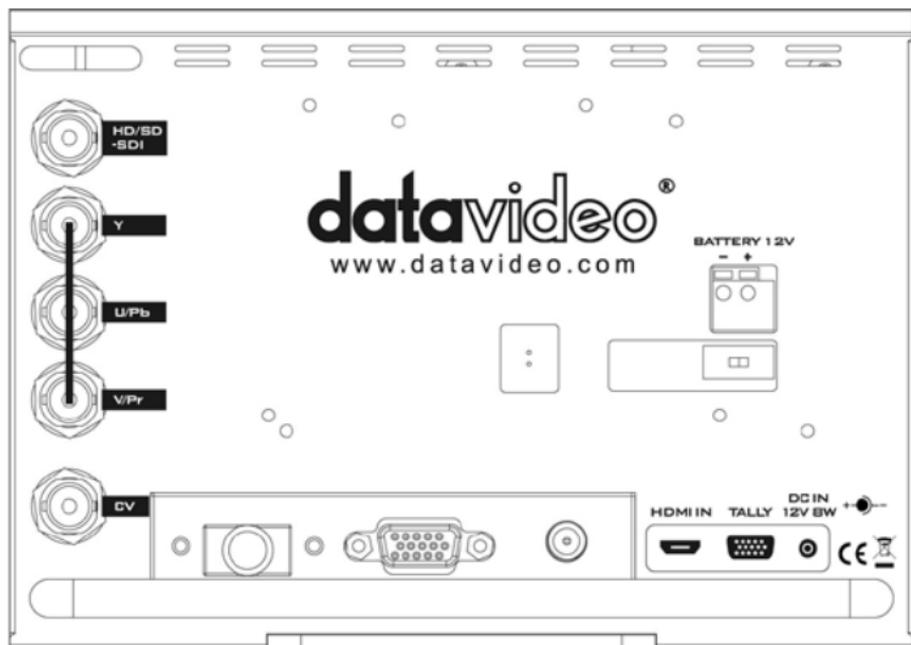


### **Tally Light**

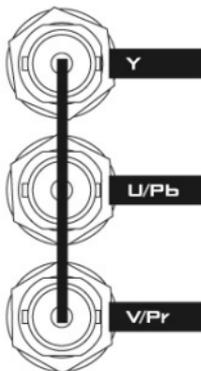
Red = Live

Amber = Standby

## 2.2 Rear Panel



**HD / SD – SDI Input**  
BNC connector for SDI Input.



### YUV Input

BNC connectors for analogue (component) video inputs.



### Composite Video Input

BNC connector for analogue (composite) video input.



### HDMI IN Interface

Supports HDMI 1.1



### Tally IN

Sends in red and amber colour tally signal to tally LED. Red means on-air, amber means standby.

DC IN  
12V 8W



### DC IN Socket

Connects the supplied 12V 1A PSU to this socket. The connection can be secured by screwing the outer fastening ring of the DC IN plug to the socket.

## 3. Menu Options

### 3.1 Picture (Screen Setup)

#### Picture Setting

- Press the **MENU** button once to display the Picture setting menu.

- Press the **ENTER** button to highlight the Brightness setting.
- Press the **UP** or **DOWN** button to highlight the setting that needs to be adjusted.

### Brightness

- Press **ENTER** button to select the Brightness setting.
- Press the **UP** or **DOWN** button to adjust the Brightness value between 0 and 100.
- Press **ENTER** button again to save and return to the Picture setting menu; now highlight another Picture setting to be adjusted. To select a different setting (**Contrast, Saturation, Tint, Color Temp\***) use the **UP** / **DOWN** buttons. Follow the same procedure to set the other values.
- Keep pressing the **MENU** button to cycle through the main menu options.
- Press the **SOURCE** button to exit the menu mode.

*\* N.B.: Color Temp can be set to 9300, 7500, 6500, 5400 or USER RGB values.*

### 3.2 Audio (Audio Indicator)

- Press the **MENU** button twice to display the Audio setting menu.
- Press the **ENTER** button to highlight the Indicator setting.
- Press the **ENTER** button again to toggle the on screen audio indicator ON/OFF.
- Keep pressing the **MENU** button to cycle through the main menu options.
- Press the **SOURCE** button to exit the menu mode.

### 3.3 Function (Center Mark, Safety Zone)

- Press the **MENU** button three times to display the Function setting menu.

#### Center Mark

- Press the **ENTER** button to highlight the Center Mark setting.
- Press the **ENTER** button to toggle the on screen Center Mark ON/OFF.

#### Safety Zone

- Press the **UP** or **DOWN** button to highlight the Safety Zone setting.
- Keep pressing the **ENTER** button to cycle through the values **80%**, **90%** or **OFF**.
- Press the **UP** or **DOWN** button to exit the Safety Zone setting. To select a different setting (**4:3 Screen, Cinema Zone**) use the **UP** or **DOWN** buttons. Follow the same procedure to set the next setting.
- Keep pressing the **MENU** button to cycle through the main menu options.
- Press the **SOURCE** button to exit the menu mode.

### 3.4 Setup (On Screen Display, Time Code)

- Press the **MENU** button four times to display the Setup setting menu.

#### OSD Timer

- Press the **ENTER** button to highlight the OSD Timer setting.  
*\* N.B.: OSD Timer sets how long the setting menus will stay on screen.*
- Press the **ENTER** button again to display the OSD Timer setting position.
- Press the **UP** or **DOWN** button to set the OSD value between 5 to 60 SEC.
- Press **ENTER** button to save the OSD value.

#### OSD Blending

- Press the **UP** or **DOWN** button to highlight the OSD Blending setting.  
*\* N.B.: OSD Blending sets how transparent the setting menus will be on screen.*
- Press the **ENTER** button to display the OSD Blending setting position.
- Press the **UP** or **DOWN** button to select the OSD blending value (from 0~7).  
*\* N.B.: OSD Blending value 0 = Min transparency 7 = Max transparency*
- Press the **ENTER** button to save the OSD blending value.

#### Time Code

- Press the **UP** or **DOWN** button to highlight the Time Code setting.
- Press the **ENTER** button to toggle the on screen Time Code display ON / OFF.

#### TC Position

- Press the **UP** or **DOWN** button to highlight the TC Position setting.  
*\* N.B.: TC Position is used to set where on the monitor Time Code will be shown.*
- Press the **ENTER** button to cycle through the possible Time Code
- Positions on the monitor (Left/Up, Middle/Down, Right/Down, Right/Up)

#### TC HD Line

- Press the **UP** or **DOWN** button to highlight the TC HD Line setting.
- Press **ENTER** button to cycle through the possible HD time code lines (8~20).

#### TC SD Line

- Press the **UP** or **DOWN** button to highlight the TC SD Line setting.
- Press **ENTER** button to cycle through the possible SD time code lines (10~21).

#### TC Font Size

- Press the **UP** or **DOWN** button to highlight the TC Font Size setting.
- Press **ENTER** button to cycle through the possible time code font sizes on the screen (Large or Small).
- Keep pressing the **MENU** button to cycle through the main menu options.
- Press the **SOURCE** button to exit the menu mode.

### 3.5 Advance (LCD Display, Reset Firmware Version)

- Press the **MENU** button five times to display the Advance setting menu.

#### LCD L/R Scan

- Press the **ENTER** button to highlight the LCD L/R Scan setting.  
*\* N.B.: The LCD L/R Scan will reverse the image displayed horizontally.*
- Press the **ENTER** button, the screen image will be reversed (Left to Right).
- Press the **ENTER** button again, the screen image will return to normal view.

#### LCD U/D Scan

- Press **UP** / **DOWN** button to highlight the LCD U/D Scan setting.  
*\* N.B.: The LCD U/D Scan will reverse the image displayed vertically.*

- Press the ENTER button, the screen image will be reversed (Top to Bottom).
- Press the ENTER button again, the screen image will return to normal view.

## Reset

- Press **UP** / **DOWN** button to highlight the Reset option.  
**\*N.B.: This option will return the monitor to the factory default settings.**
- Press the **ENTER** button to re-start the monitor with the factory default settings.

## Version

- Press **UP** / **DOWN** button to highlight the Version setting.
- Press the **ENTER** button, the firmware version will be displayed on screen.
- Keep pressing the **MENU** button to cycle through the main menu options.
- Press the **SOURCE** button to exit the menu mode.

## 4. Calibrating Datavideo Monitors

Calibrating professional monitors is crucial. For guidance on how to calibrate a Datavideo Monitor using SMPTE colour bars please visit our website

[http://www.datavideo.info/specs/Datavideo\\_Calibrating\\_Monitors.pdf](http://www.datavideo.info/specs/Datavideo_Calibrating_Monitors.pdf).

## 5. Tally Light Indication

The TLM-700HD has a tally input connector on the rear panel; many digital video switchers can provide tally light signals to this connector. The Datavideo range of intercom systems can also be used to pass on these tally signals.



### Tally IN

15-PIN D-Sub type connector



### Tally Light

Red = Live

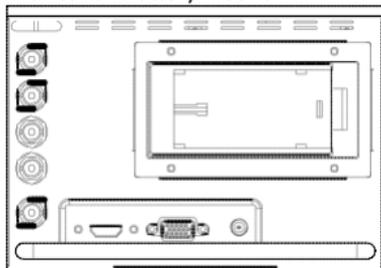
Amber = Standby

<b>PIN 1</b>	Tally RED	LED ON/OFF
<b>PIN 3</b>	Tally Yellow	LED ON/OFF
<b>PIN 4 / 10</b>	GND	
<b>PIN 2 / 5 / 6 / 7 / 8 / 9 / 11 / 13 / 14</b>	Not Used	
<b>PIN 12 / 15</b>	Reserved – Service Only	

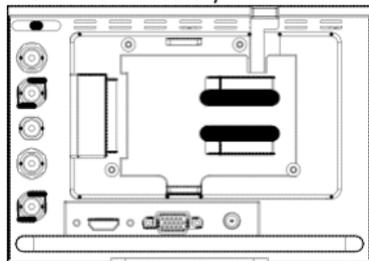
## 6. TLM-700HD Model & Battery Plate Variations

There are several versions of TLM-700HD monitor with different battery connection plates.

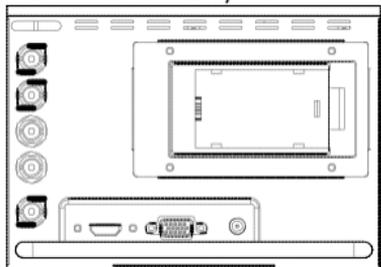
**TLM-700HD-C**  
with Canon Battery Mount



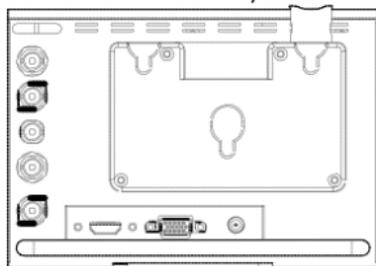
**TLM-700HD**  
with V-mount Battery Plate



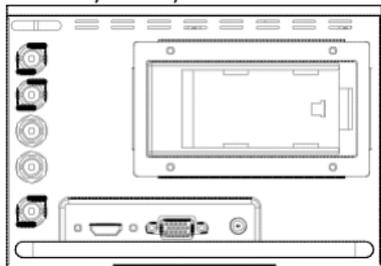
**TLM-700HD-P**  
with Panasonic Battery Mount



**TLM-700HD-A**  
with Anton Bauer Battery Mount



**TLM-700HD-S1 & S2**  
with Sony Battery Mount



## 7. Specifications

<b>Interface</b>	1x HD/SD-SDI input (SMPTE 272M-C 1.5Gbps, 270Mbps with Embedded Audio) 1x Component Y.U.V Sony Betacam Spec 1x CV input 1x HDMI input 1x D-Sub 15 Pin Plug (Tally Light Signal)	
<b>HD/SD-SDI Spec</b>	SDI/HD-SDI Specifications	
	Standard	SMPTE 259M-C (270Mbps - 525/625 Component Video) and SMPTE 292M (1.485/1.001 Gbps)
	Connector	BNC (IEC 169-8)
	Impedance	75 $\Omega$
	Return Loss	HD > 15 dB (5 MHz to 750 MHz) > 10 dB (750 MHz to 1.5 GHz) SD > 15 dB (5 MHz to 270 MHz)
	Equalization 200 m Belden 8281 cable at 270 Mbps; 100 m (typical) of Belden 1694A at 1.485 Gbps	
<b>CV Spec</b>	Bandwidth: > 5.0MHz Differential of Gain (DG) < 3% Differential of Phase (DP) < 3° S/N: > 50 dB	
<b>YUV Spec</b>	Bandwidth: > 5.2MHz Differential of Gain (DG) < 3% S/N: > 50 dB	
<b>HDMI</b>	Supports HDMI 1.1	
<b>Operating Temperature</b>	0°C to 40°C (32°F to 102°F)	
<b>Humidity</b>	10% to 90% (non condensing)	
<b>Dimensions &amp; Weight</b>	187mm (W) x 132mm (H) x 72mm (D) / 1.2Kgs	
<b>Power</b>	DC 12V / 1A (8W)	

# Service & Support

It is our goal to make your products ownership a satisfying experience. Our supporting staff is available to assist you in setting up and operating your system. Please refer to our web site [www.datavideo.com](http://www.datavideo.com) for answers to common questions, support requests or contact your local office below.

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Jan-18, 2018

Version : E10