transvideo

CineMonitor HD 3DView Evolution

Operator Manual

Rev 3.5
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ABOUT

This Operator Manual describes the use of the Transvideo CineMonitorHD 3DView Evolution family.

The first CineMonitor has been introduced to the Film Industry during year 1995.
The CineMonitorHD 3DView Evolution is our contribution to the 3D Stereoscopic world, including advanced decision tools for the S3D world.

The CineMonitorHD 3DView Evolution family includes the following products:

CineMonitorHD8 3DView Evolution	8” 3DView Monitor
CineMonitorHD10 3DView Evolution	10” 3DView Monitor
CineMonitorHD12 3DView Evolution	12” 3DView Monitor
CineMonitorHD15 3DView Evolution	15” 3DView Monitor

If the physical, electrical and optical characteristics of the products are different, the user interface is the same.

Several configurations are optionally available for this family of products.
There is the choice at the order between several input boards, which gives different functionalities described in this document. Some options can be not implemented in your monitor.

This manual describes CineMonitorHD 3DView Evolution with Software 7.23e (and up).

Depending of the hardware, it is possible to upgrade the CineMonitorHD 3DView Evolution. For that, contact us or your local Transvideo representative.

The products described in this manual are professional equipment. Utilization of these products implies knowledge of basics in video signal management, S3D and film making concept.

WARNING & CAUTION

WARNING:
There is very high voltage inside of the component. Risk of injury or death.

WARNING:
This product must be used in a correct grounded electrical environment; ground defects can create severe problems to the equipment, the picture quality and even cause danger for the user.

WARNING:
Copyright law and international treaties protect this product, its design and its software. One or several international patents apply to the CineMonitorHD 3DView Evolution.
Unauthorized reproduction or distribution of this product or its design or its software or any portion of them, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under the law.

CAUTION:
Warranty is void is the product is opened. The unit contains electrostatic sensitive devices, which can be damaged or destroyed if you touch them. Very high voltage is present in the product and there is some risk of electric shock if opened by a non-accredited technician. Standard ESD procedures must be strictly followed during disassembly/re-assembly of the unit.
The user and/or technician assume full responsibility or any risk of bodily injury, death or property damage arising out of the use or disassembly or repair of this equipment. In no event shall Transvideo S.A. or its local representatives be liable to a user, technician or third party for any loss of income or any damage of any kind resulting from the use of or work on the said equipment.

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INTRODUCTION

Unpacking

Packing list
Control the content of the package accordingly to the packing list.

Transportation
The CineMonitorHD is delivered in a rugged waterproof case. Use this case for storage and transportation.

2 years warranty
All CineMonitorHD are covered by a 2 years limited warranty unless otherwise noted.
Get a **3rd year for free** by registering your product online within the first month of the purchase.
http://www.hd4dp.com/register-my-product

General safety instructions

IMPORTANT:
Do not use damaged cables with this equipment.
Damaged connectors may seriously damage this equipment.
Never seal the monitor in a plastic bag.
Never use the monitor in full sun with a Raincover.

Before using the monitor make sure that the product is not damaged, that the protective glass is not broken and that the connector do not have missing pins, foreign objects inside the housing.

The CineMonitorHD needs to be in a ventilated area for a proper cooling. Prolonged use in confined environment without ventilation can damage the monitor.

Cables
The cables must be in good condition and adapted to the environment where you are working. A bad quality or wrong-wired cable may damage this equipment or other equipment attached to it and/or create interferences.

The video cable must be adapted for carrying HD SDI signals. Proper 75 Ω connectors must be used. Always check the connector before plugging a cable to your monitor.

Transvideo offers high quality cables for cameras, power supplies and other equipment. Contact Transvideo S.A. or its local representative in case of need.

Installation
The CineMonitorHD must be securely mounted on the camera or on its location of use. Several mounting points with ¼-20” nut are present on this equipment for a secured professional use.

Do not use the monitor with loose fixation or damaged brackets for your own safety and that of others working with you.

Transvideo manufactures high quality brackets and accessories for the comfort of use and security for the equipment and user. Please contact Transvideo S.A. or its local representative in case of need or visit http://www.hd4dp.com.

Power requirements

Only DC Voltage powers this product.
AC voltage can be used with an appropriate AC/DC converter

Recommended AC power adaptors:

CineMonitorHD8 3DView Evolution	Transvideo AL30
CineMonitorHD10 3DView Evolution	Transvideo AL63
CineMonitorHD12 3DView Evolution	Transvideo AL63
CineMonitorHD15 3DView Evolution	Transvideo AL63

The input power voltage range is extremely wide from 10 to 36 V DC (except specified differently).

Power instructions
The power consumption slightly varies with the input voltage, the operating temperature and the equipment configuration. The internal power supply is protected against reverse polarity. Over voltage may cause severe damages to the equipment and/or to other equipment connected to it. This product must be used in a properly grounded electrical environment. Ground defects can create severe problems to the equipment and/or picture quality and may even cause danger for the user.

Turning power On/Off
The ON/OFF Switch is on the back side of the monitor.
The product needs a certain time to reach its nominal brightness.
This time can vary with the temperature.
In OFF position, the power consumption is null.

Galvanic insulation
For safety of use the CineMonitorHD family feature a galvanic insulation of the DC input. Do not connect the power ground to the chassis of the monitor or to the metallic body of the power connector in order to keep the galvanic insulation. The galvanic insulation is rated at 1000VDC. The chassis of the monitor is connected to the video ground.

Anton-Bauer batteries / FuelReader™
Transvideo Labs engineer's integrated communication between the fuel computer of Logic Series Digital batteries from Anton-Bauer and CineMonitorHD 3DView Evolution. The FuelReader™ gives to the user a view of the remaining available percentage of the battery and the time to run.

On 8” CineMonitorHD, you need to use the battery socket from Transvideo (P/N 918TS0202-AB) to enjoy the benefits of the FuelReader™. On 10”, 12”, and 15” CineMonitorHD 3DView Evolution you need to order the monitor with the Anton-Bauer Gold Mount socket.

WARNING RISK OF FIRE:
It is always recommended to remove the power source from the monitor when you do not use it and/or when you travel. Especially if you place the monitor in a closed environment (bag, box, …).

Start-up

① Connect an appropriate power supply to the XLR4 connector or a battery if any socket is available.

② Connect a video source (SDI, HDMI) to the corresponding input

③ Set the power switch to ON

④ Select the correct input with "Inputs" key

PRODUCT OVERVIEW

Parts identification

All connectors are on the back of the monitor. Depending on the size of the monitor, the connectors and their location may differ.

10" to 15" HD 3DView monitors provide the same connector panel, including 2 x HD/SD SDI and 2 x mini HDMI inputs. They also provide a power out connector and a battery plate. The 8" HD 3DView monitor provides a different connector panel, including 2 X HD-SD SDI inputs. Refer to chapter "SPECIFICATIONS" for complete description.

Figure 1 to 2 show the backs of a 10" and a 8" CineMonitorHD 3DView Evolution.

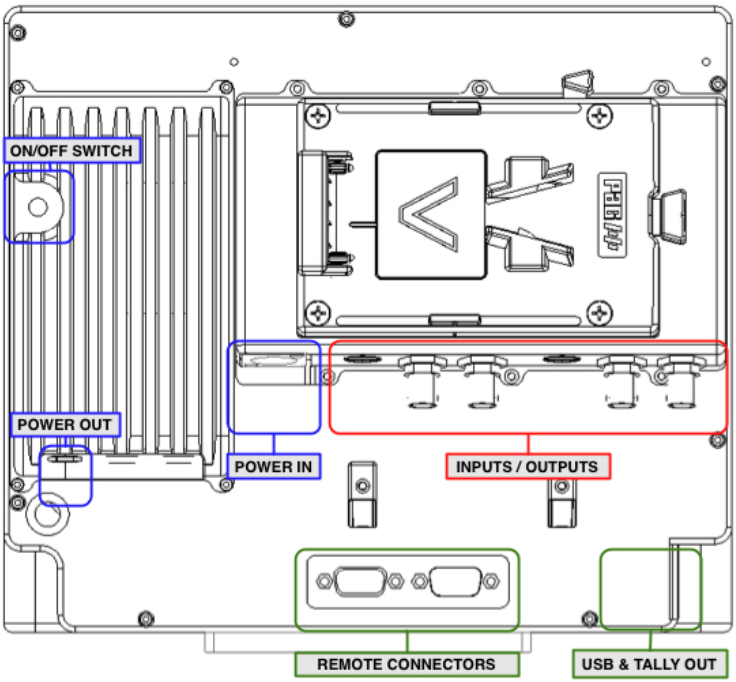


Figure 1: CineMonitorHD10 3DView Evolution back

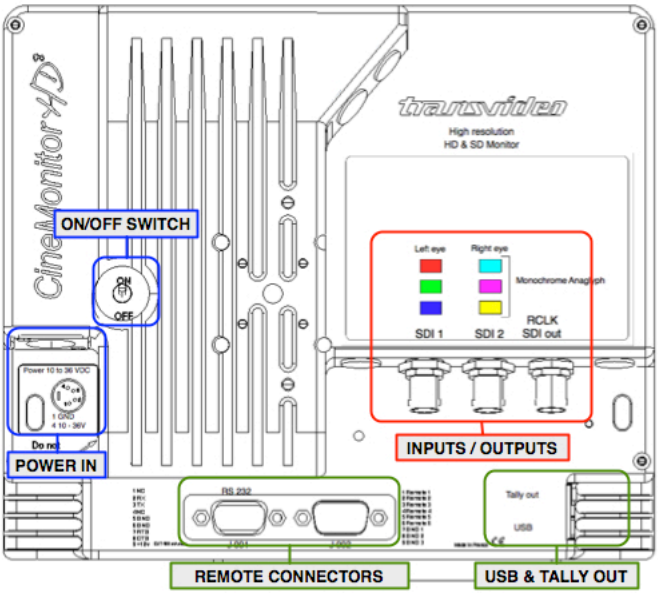


Figure 2: CineMonitorHD8 3DView Evolution back

User interface

The CineMonitorHD 3DView Evolution family offers a user interface common to all sizes. Some functions are directly accessible from the "direct functions" keypad, others from the menu with use of the rotating knob.

The CineMonitorHD screen is partitioned in two areas:
① The picture zone displays the picture from the camera in 16/9 format
② The tools zone displays tools and measurements in the remaining area of the screen.

Figure 3 show the front of a 8” CineMonitorHD 3DView Evolution.

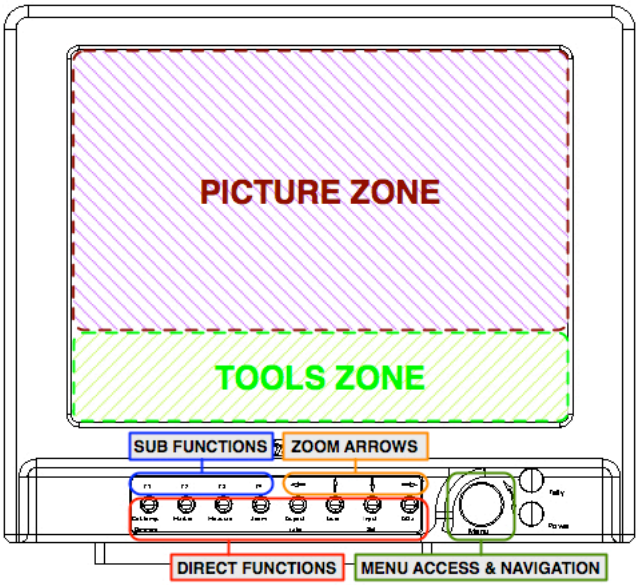


Figure 3: CineMonitorHD8 3DView Evolution front

Direct functions

Several direct functions are available from the keypad.

One short press on a key gives access to the function.

One long press (more than 2 seconds) on a key gives access to the sub functions of the related function (if any). Pressing F1…F4 enables to adjust those sub functions.

Depending of the function, options and environment, the content of F1…F4 may differ. Pressing a key will activate or deactivate the sub function. An activated sub function is highlighted by an orange text while an inactivated function prompts in white.
In some specific case, F4 may extend the selection to a second page of sub menu.

Rotating knob

The menu knob is a rotating encoder with a push function. It is used to access and navigate in the menus, adjust some parameter values, validate and exit functions by turning or pushing it.

One sort press on the knob gives access to the menu. Rotating the knob enables to navigate between the menu items. Pushing the knob gives access to the sub menu of the highlighted menu item.

Selecting EXIT exits from the current menu level to the previous (if any). A long push on the knob exits from the menu. Exiting the menu is also possible by automatic temporization, adjustable in MENU / TECHNICAL.

3DView specificity

To use the 3D mode the 2 signals must be synchronized. A phase analyzer (Phasemeter) gives to the user the pixel and line phases between the 2 signals (not available on 8" HD 3DView monitor).

The 3D menu is available only when a 3D input (SDI 3D or HDMI 3D) is selected.

The measurement tools display the 2 signals analysis simultaneously. Each spot uses a specific color (adjustable in MENU / 3D / COLOR).

Supported standards may differ with monitor configuration and selected input. E.g. on 8" HD 3DView monitors the 3D functions are not available with 1080p even if it is possible to visualize independently the 2 video signals. More details in chapter "SPECIFICATIONS" section "List of Standard per Input".

USING THE DIRECT FUNCTIONS

Color Temperature & Dimming

Short push on ***Col. Temp. Dimming*** – toggles calibration modes:

FULL BRIGHT: maximum brightness and power consumption, the color calibration is deactivated

STANDARD CALIBRATED: standard mode, the brightness (200Nits) and white point are calibrated according to the settings of MENU / COLORIMETRY

USER SET: turning the rotating knob adjusts the brightness from 10 to 100% while color calibration is preserved. Allows having a reduced power mode between two takes.

Long push on ***Col. Temp. Dimming*** – accesses the settings of the Standard Calibrated mode

Press F1 to choose D56 calibration

Press F2 to choose D65 calibration

Press F3 to choose manual calibration (Adjustable in MENU / COLORIMETRY)

It is necessary to wait a few seconds after pressing the key before loading of the correct lookup table.

Markers

Short push on ***Marker*** – activates or deactivates the selected marker(s).

Long push on Marker to select the markers to display.

Not active when ZOOM or FORMAT 2.40:1 are selected.

Long push on ***Marker*** – marker(s) selection

First page	*Second page*
Press F1 to activate / deactivate 4:3 marker	Press F1 to activate / deactivate safe area
Press F2 to activate / deactivate 14/9 marker	Press F2 to activate / deactivate Derobe's grid
Press F3 to activate / deactivate 16/9 marker	
Press F4 to access next page	Press F4 to access previous page

This menu is contextual; some functions can be unavailable depending of the video standard.

When SAFE AREA is selected in the sub menu, one short press on the Marker key displays "TURN TO ADJUST SAFE AREA". Rotating the knob makes it possible to adjust the safe area on the picture from 10 to 99%. SAFE AREA is selected by default at start-up or after a reset and with a value of 90%.

When DEROBE'S GRID is selected in the sub menu,

① one short press on the Marker key displays "TURN TO ADJUST GRID OFFSET". Rotating the knob makes it possible to adjust the grid offset of plus or minus half of the step of the grid.

② one long press (more than 3 seconds) on the Marker key displays "TURN TO ADJUST GRID". Rotating the knob makes it possible to modify the step of the grid from 6 to 122 pixels.

** Derobe's Grid is available in 3D mode and is a specific tool for stereographic work. Refer to Chapter "MENU FUNCTIONS" section "3D / DEROBE'S GRID".*

Measurements

Short push on ***Measure*** – toggles the different views of the selected measurement

Long push on Measure to select the measurement to display.

Long push on ***Measure*** – measuremet selection

Press F1 to select Waveform

Press F2 to select Luminance histogram

Press F3 to select Vectorscope

The brightness of the reticule and of the spot as well as the background transparency in overlay mode (for waveform and vectoscope) can be adjusted in MENU / TOOLS / MEASUREMENT. White and black clipping alert can be configured in MENU / TOOLS / LIMITS. The same limits are used for the waveform and the histogram. Setting these limits is useful to have a visual alert on the measurement tools if there is a risk of overexposure or of loss of black details.

When using the 3D mode the measurement tools display the two inputs simultaneously. It is valid for the Waveform, Histogram and Vectorscope. To identify clearly the source each spot uses a specific color. The colors used are the same as those used for the 3D representation. Selection is done in MENU / 3D / COLOR, i.e.:

① using the histogram with RED/CYAN colors will display input 1 in RED and input 2 in CYAN. The common values of the histogram will be displayed in white, the differences in RED or CYAN.

② using the histogram with RED/BLUE colors will display input 1 in RED and input 2 in BLUE. The common values of the histogram will be displayed in MAGENTA, the differences in RED or BLUE.

Waveform

Selecting "F1: WAVE" gives access to the selection of the waveform modes.

Press F1 to display the waveform in line mode

Press F2 to display the waveform in parade mode

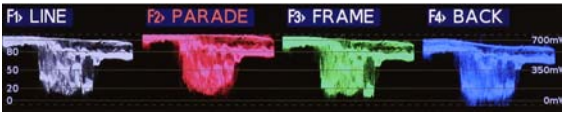
Press F3 to display the waveform in frame mode

Press rotating knob to exit from menu.

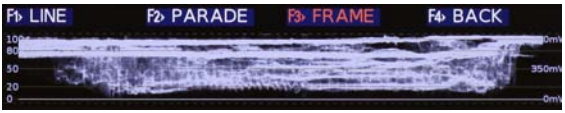
Then a short push on Measure toggles the different views of the selected waveform mode (if any). It also gives the possibility to adjust the size of the waveform by using the rotating knob (3 sizes available)

LINE Displays one single spot (Y, Red, Green or Blue)

PARADE Displays Y, R, G, B, Cr & Cb in parade mode.
Available modes: YRGB / YGBR / RGB / GBR / YCrCb



FRAME Displays Y, R, G, B in frame mode (or sweep mode).
The content of one frame/picture is displayed.



Histogram

Selecting "F2: HISTO" displays the histogram.

Press rotating knob to exit from menu.

Then a short push on Measure gives the possibility to adjust the scale of the histogram by using the rotating knob

Vectorscope

Selecting "F3: VECTOR" displays the vectorscope.

Press rotating knob to exit from menu.

Zoom

Short push on ***Zoom*** – toggles between different zoom modes.

OFF / 1.33x zoom / Pix to pix zoom

When activating the zoom, a pictogram showing the relative position of the magnified zone is displayed.

Arrows move the picture on Top/Bottom, Left/Right positions. Moving increments are proportional to 1/8 of the video standard. Fine adjustment can be made by rotating the rotating knob.

A long push on the Zoom key centers the picture, the next push sends back to the full picture display.

Zoom pixel to pixel

Displays the picture in full resolution mode (pixel to pixel or 1:1).
Beyond the native resolution of the picture, magnify implies to create pixels that doesn't exist. This is why the pixel to pixel mode (1:1 zoom) is the higher magnification ratio in a Transvideo monitor.

1.33x zoom

The 1.33x zoom mode magnifies the active 16/9 area of the picture output by the Arri Alexa in 4:3 mode.

Zoom in SD

In SD, the picture is displayed in full screen. In this case there is an important magnification ratio applied to the original picture. The resultant picture includes created pixels and lines and cannot be considered as a proof. In this mode the waveform will be superimposed to the picture.

Aspect Ratio

Short push on ***Aspect ratio*** – toggles aspect ratio:

1.33:1	4/3	SD only
1.78:1	16/9	HD & SD
2.40:1		HD & SD
3.20:1		HD & SD (2.40 anamorphic lens on a 1.78 sensor)

No sub functions in Aspect Ratio

Assign user key

*Short push on **User*** – activates or deactivates selected user function.

Long push on User to select the user function.

*Long push on **User*** – user function selection

First page

Press F1 to select **STATUS** as the user function
Displays the status of the monitor and the input voltage from the power supply or the battery.

Press F2 to select **FOCUS** helper as the user function
Activates the Focus Helper function as programmed in MENU / TOOLS / FOCUS HELPER.

Press F3 to select **EXPO**sure control as the user function
Gives access to the Exposure Control as configured in MENU / TOOLS / LIMITS.

FOCUS and EXPO may be selected simultaneously. If both are activated, pressing User key set up:
a. FOCUS + EXPO / b. FOCUS / c. EXPO / d. nothing

Press F4 to access next page

Second page

Press F1 to select **High/Low** (high- or low- light details) as the user function
In high mode, the 50%-100% grey scale is shifted to 0-50% to enhance the high-light details.
In low mode, the 0-50% grey scale is shifted to 50%-100% to enhance the low-light details.

Press F2 to select **3D** or **HORIZON** as the user function
When a 3D input is active, gives access to the 3D menu.
Else, activates or deactivates the horizon as programmed in MENU / TOOLS / HORIZON.

Press F3 to select **ZONE** as the user function
Adjusts the acquisition zone for the waveform and vectorscope.
Active when "1 LINE" or "12 LINE" are selected in MENU / TOOLS / MEASUREMENT.

Press F4 to access previous page

Input Selection

Short push on ***Input Sel*** – toggles video inputs.

Long push on Input Sel to select the active video inputs.

Long push on ***Input Sel*** – selection of the active video inputs

First page	*Second page* *
Press F1 to activate or deactivate SDI 1	Press F1 to activate or deactivate HDMI 1
Press F2 to activate or deactivate SDI 2	Press F2 to activate or deactivate HDMI 2
Press F3 to activate or deactivate SDI 3D	Press F3 to activate or deactivate HDMI 3D
Press F4 to access next page	Press F4 to access previous page

** not available on the 8" 3DView monitor.*

Display adjustments

Short push on ***ADJ*** – toggles parameters to adjust:

Brightness, Contrast, Saturation, Hue (NTCS only)

Adjust the value by rotating the knob.

Validate by pushing the knob.

IMPORTANT:
The settings are different for each input. All settings are stored in setup memories. There is one memory per input. That means you can setup the SDI 1 and SDI 2 inputs differently of the SDI 3D input.

MENU FUNCTIONS

HELP

Gives access to maintenance menu.

MONITOR INFO
Gives software (SW) and firmware (FW) versions of all electronic boards of the monitor.

Main Board soft1:	main board main SW version
Main Board soft2:	main board secondary SW version
Main Board firm1:	main board FW version
HDMI soft:	input board 1 SW version
HDMI firm:	input board 1 FW version
HDMI soft2:	input board 2 SW version
HDMI firm2:	input board 2 FW version

UPDATE
Allows the SW and FW updates of all electronic boards of the monitor.
To update a CineMonitorHD 3DView Evolution, refer to chapter "SERVICE & MAINTENANCE", section "Updating your CineMonitorHD 3DView Evolution".

ADVANCED UPDATE
Gives access to advanced functions for monitor updates.
For experts only.

DISPLAY MODE

Gives access to 3 display modes: COLOR, GREEN and B/W
In 3D mode, DISPLAY MODE menu is not available. Display settings are done in MENU / 3D / MODE menu.

COLOR
Standard mode, displays the picture with 16 million colors, 256 gray levels.

GREEN
Display the picture in green color only.
TINT and SATURATION are not working in this mode.
This mode has been invented by Transvideo in 1990 and is used since this time in Film & Night Vision systems.

B/W
Displays the picture with 256 gray levels.
TINT and SATURATION are not working in this mode.

BLUE CHECK

Sets the monitor in BLUE ONLY mode.
This mode is used to calibrate the monitor with an incident color bar.

COLORIMETRY

MANUAL
Allows the manual adjustment of RGB gain (from 0 to 2, nominal 1.00) and offset of the black (-127mV to + 126mV, nominal 0 mV).
The nominal value in manual mode corresponds to the D65 setup.

> ***IMPORTANT:***
> In MANUAL there is a risk of displaying wrong colors; this option must be used carefully.

D56 CALIBRATED
Sets the monitor for a white point DAYLIGHT 5600
CIE 1931 Coordinates: x: 0.3310 y: 0.3460

D65 CALIBRATED
Sets the monitor for a white point DAYLIGHT 6500
CIE 1931 Coordinates: x: 0.3127 y: 0.3290

INPUT PROFILE

LINEAR

Adjusts the response of the monitor with a linear gamma correction.

REC709

Adjusts the response of the monitor to a video signal using REC709 encoding.

S-LOG

Adjusts the response of the monitor to a video signal using S-Log encoding.

S-LOG2

Adjusts the response of the monitor to a video signal using S-Log2 encoding.

CANON-LOG

Adjusts the response of the monitor to a video signal using Canon-Log encoding.

LOG-C

Adjusts the response of the monitor to a video signal using Log C encoding. It is possible to adjust the EI (Exposure Index) to 100, 125, 160, 200, 250, 320, 400, 500, 640, 800.

BLACK LEVEL

IP/BL DISPLAY: ON/OFF
Activates or deactivates the display of Input Profile and Black Level information.

STANDARD
Sets the black level of the video signal to 64 / 0 IRE

EXTENDED
Sets the black level of the video signal to 4 / -7 IRE

ADJUST
Intermediary and adjustable black level, from 4 to 64 (-7 to 0 IRE).

LOCK

The lock function prevents errors after configuration and calibration of the monitor.
When the function is activated, “LOCK” is displayed on the screen at each attempt to enter in the menu or to access a direct function.

Pressing the rotating knob for more than 5 seconds gives the user access to the menu where she/he will be able to deselect LOCK.

> ***IMPORTANT:***
> Input Sel key is never locked.

TOOLS

BLUETOOTH

Bluetooth activation and device selection. Available only if the monitor is equipped with a Bluetooth module. Contact us for more information.

BLUETOOTH: ON/OFF
Activates or deactivates the function.

UPDATE DEVICE
Detects all Bluetooth devices near the monitor location.

SELECT DEVICE NO. #
Connects the monitor to the Bluetooth device number “#” given by menu “UPDATE DEVICE”.

> ***ABOUT WIRELESS HORIZON (VirtualHorizon3):***
> If a VirtualHorizon3 has already been connected to the monitor, the monitor will automatically connect to this VirtualHorizon3.

AUDIO

Displays the SDI embedded audio presence and a bargraph showing one audio pair on the 8 possible pairs.

AUDIO: ON/OFF
Activates or deactivates the function.

CHANNEL PAIR: X
Selection of the pair displayed on the bargraph with the rotating knob.

POSITION
Allows the user to place the tool in different position of the screen.
When USER is selected, use arrows and the rotating knob to move the tools.
DEFAULT replaces the tool at the factory preset.

TIMECODE

Displays the embedded VITC 1 or 2 or LTC Timecode.

TIMECODE: ON/OFF
Activates or deactivates the function

ATC: AUTO, LTC, VITC1, VITC2
Selection of the displayed ATC. When AUTO is selected the first time code present is displayed (1: LTC, 2: VITC1, 3: VITC2)

POSITION
Allows the user to place the tool in different position of the screen.
When USER is selected, use arrows and the rotating knob to move the tools.
DEFAULT replaces the tool at the factory preset.

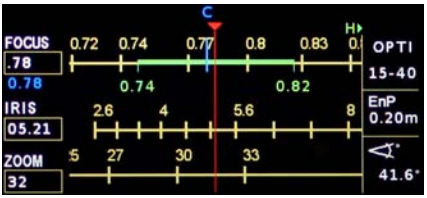
LENS READER

The LensReader from Transvideo reads the metadata from **/i** and **LDS** lenses to display in real time the iris, focus and zoom on an intuitive graphic representation. The LensReader also displays the depth of filed and the hyperfocal point.

The CineMonitorHD 3DView Evolution only recognizes lenses connected through RS232 or through its **SDI1** input.

Two graphics are available: Mobile where the scales are moving as on a real lens; static where the markers are moving on the scales.

When a Cine Tape Measure from Cinematography Electronics is connected via RS232 (HR25) to the monitor, a blue marker “C” showing the measuring distance appears on the focus ring. The distance to the object is also given as numerical value.



Supported lenses	
Angénieux Optimo DP 25-250	*connected to the monitor through RS232*
Arri/Zeiss Ultra Prime LDS Arri/Zeiss Master Prime Arri/Zeiss Master Anamorphic Arri/Fujinon Alura lightweight zoom	*through the SDI outputs of Arri Alexa SUP 7 (and up)*
Cooke 5/i Cooke S4/i Cooke mini S4/i Cooke Anamorphic /i	*through the SDI outputs of Arri Alexa SUP 8.1 (and up), or Sony PMW- F3/F5/F55/F65 (hardware & firmware dependent)* *5/I & S4/I can also be connected to the monitor through RS232*
Fujinon Cabrio series	*through the SDI outputs of Arri Alexa SUP 8.1 (and up), or Sony PMW- F3/F5/F55/F65 (hardware & firmware dependent)*

MODULE: ON/OFF
Activates or deactivates the function

RING: MOBILE/STATIC
Toggles between mobile and static rings display.

IRIS: DECIMAL/FRACTIONS
Toggles the iris value between decimal and fraction values.

ZONE: OP+ASSIT / ASSIST / OFF
Available only if a Cooke 5/i is connected to the monitor. The COOKE 5/i is able to light the focus and iris scales on the operator and/or the assistant side.
Selection of the lighted zones OPERATOR + ASSISTANT or ASSISTANT ONLY

BRIGHTNESS
Adjusts the brightness of the LEDs on a COOKE 5/i lens.

UNIT
Selection of METRIC or IMPERIAL unit.

FILM
Selection of 16mm or 35mm

FOCUS HELPER

Activates a precise focus helper displaying in-focus zones with colored dots. The focus helper is based on a complex multidimensional digital filter.

When 3D mode is activated the in-focus zone of each camera is displayed with a specific color. The colors used are the same as those used for the 3D representation. Selection is done in MENU / 3D / COLOR.

The focus helper can be remoted by the User key. The settings must have been previously configured (Press long time User key, then set the function with F1…F4).

COLOR
Selection of the in-focus zone color.
Red, Green, Blue, Yellow, Magenta, Cyan, Black or White.

LEVEL
Adjustment of the selectivity of the filter.
OFF, 1 to 9 (9 gives the highest effect)

FRAMELINE

Enables to displays one locating cross and up to 3 programmable frames with or without center marker and a matting generator.

CROSS

CROSS ON/OFF	Activation of the cross
COLOR	Selection of the color of the lines
WIDTH	Selection of the width of the lines
V POS	Vertical position of the cross
H POS	Horizontal position of the cross

FRAME 1…3

FRAME 1…3 ON/OFF	Activation of the frame
CENTER ON/OFF	Activation of the center cross
COLOR	Modification of the color of the frame
DOT	Modification of the structure of the frame
SEND TO CENTER	Sends the frame to the center of the screen.
V SIZE	Size of the frame (bottom part is moving)
H SIZE	Size of the frame (right part is moving)
V POS	Vertical position of the frame
H POS	Horizontal position of the frame
V ZOOM	Vertical homothetic modification of the frame
H ZOOM	Horizontal homothetic modification of the frame

SEND ALL TO CENTER
Sends all frames to the center of the screen.

BCKGND COLOR (Matting Generator)
Selects the background color outside of the frames.

HORIZON

Displays a color coded electronic leveler on screen.

SENSOR

Toggles between internal and external sensors

HORIZON	Internal sensor
HORIZON 2 (1)	Internal sensor with compensation of acceleration and shocks (gyro)
WIRELESS HORIZON (2)	Uses the wireless Transvideo VirtualHorizon3™
BETZ (3)	Uses external electronic bubble designed by BETZ Tools

DISPLAY: NORMAL / REVERSE (4)

Toggles the action of the horizon, normal or reversed.

RANGE (4)

Sets the range of the horizon

HORIZON	+/-5°, +/-10°, +/-22°, +/-45°, +/-90°
HORIZON 2	+/-2°, +/-5°, +/-10°, +/-22°, +/-45°, +/-90°
WIRELESS HORIZON	+/-2°, +/-5°, +/-10°, +/-22°, +/-45°, +/-90°

STYLE

Displays the Horizon on the monitor and selects the style of the virtual horizon (6 different models).

0 CAL (4)

Sets the horizon to 0. A temporization of 5 seconds allows the user to stabilize the position of the system. Pushing the rotating knob during calibration exits from the timing.

0 CAL ON TAP: ON/OFF (4)

Activates or deactivates the Cal-on-Tap functionality.
When activated, tap on screen or on Transvideo logo to zero calibrate the horizon.

0 CAL ON TAP THRESHOLD (4)

Adjust the threshold level of the Cal-on-Tap.
Level 4 requests a tough tap to trigger the 0 CAL, while level 1 requests a soft tap.

POSITION

Allows the user to place the tool in different position of the screen.
When USER is selected, use arrows and the rotating knob to move the tools.
DEFAULT replaces the tool at the factory preset.

(1) Available only if VirtualHorizon2™ option is implemented in the monitor. VirtualHorizon2 is an optional feature. It can be ordered with the monitor or implemented through an upgrade. Contact us for more information.

(2) Available only if external bubble VirtualHorizon3™ is connected to the monitor via Bluetooth. The monitor needs to be equipped with a Bluetooth module (option). Contact us for more information.

(3) The BETZ sensor is an external electronic bubble designed by Betz-Tools. It needs to be connected to the monitor through J001 connector with a specific cable. Transvideo does not support this third party equipment.

(4) Not applicable with BETZ sensor.

LIMITS

Safety levels can be displayed as false colors in the picture. These levels and clippings are set in this menu.

Safety levels can also be displayed in the measurement tools, activated in MENU / TOOLS / MEASUREMENTS.

MAX LEVEL
Sets the maximum level (White). Adjustment goes from 100 IRE to 109 IRE
All information over the limit will be displayed in **red** on measurement tools and/or on the picture.

WHITE CLIPPING
Sets the top clipping level (White). Adjustment goes from 70 IRE to 109 IRE
The upper value is limited by the MAX LEVEL setting.
All information over the limit will be displayed in **orange** on measurement tools and/or on the picture.

BLACK CLIPPING
Sets the low clipping level (Black). Adjustment goes from -6.9 IRE to 36 IRE
The lower value is limited by the MIN LEVEL setting.
All information below the limit will be displayed in **blue** on measurement tools and/or on the picture.

MIN LEVEL
Sets up the minimum level (Black). Adjustment goes from -6.9 IRE to 36 IRE
All information below the limit will be displayed in **violet** on measurement tools and/or on the picture.

SORIN's MARKER
Adjusts the central value of the marker in IRE.

SORIN's MARKER WIDTH
Adjusts symmetrically the thickness of the marker within the limits of the white and black clipping values.
All information within the Sorin's marker limits will be displayed in **green** on measurement tools and/or on the picture.

OVEREXPOSURE: ON/OFF
Activates or deactivates the overexposure control on the picture.
The MAX LEVEL and the WHITE CLIPPING are displayed in false colors when activated.

SORIN'S MARKER: ON/OFF
Activates or deactivates the Sorin's Marker on the picture.
The Sorin's area is displayed in false colors when activated.

BLACK LIMITS: ON/OFF
Activates or deactivates the black limits control on the picture.
The MIN LEVEL and the BLACK CLIPPING are displayed in false colors when activated.

About the Sorin's marker:
Sorin Dragoi RSC is a famous Romanian Director of Photography. He suggested this tool, which he is using mainly to check the exposure on skin tone. The Sorin's marker is used to see all light equivalent zones, i.e. to see the 0 stop zone of the picture.

MEASUREMENTS

Allows different settings for the video measurement tools.
The settings apply to all video measurement tools except the histogram, which represents always the full picture.

SIGNAL UNIT
Selects the signal measurement unit.
IRE (default unit) or BINARY

SIGNAL ANALYSIS
Selects 8 bits if the SIGNAL is 8 bits.
Default value: 10 bits

OVEREXPOSURE: ON/OFF
Activates or deactivates the overexposure zoning on the measurement tools.

SORIN: ON/OFF
Activates or deactivates the Sorin's Marker zoning on the measurement tools.

BLACK LIMITS: ON/OFF
Activates or deactivates the black limits zoning on the measurement tools.

1 LINE
Displays the measurement of one line selected with the rotating knob.

12 LINES
Displays the measurement of a group of 12 lines.
The first line is selected with the rotating knob.

ALL LINES
Displays the measurement of the whole picture.

BACKGROUNG INTENSITY
Adjusts the overlay transparency behind the measurement tools (when displayed in front of the picture).

SPOT INTENSITY
Adjusts the brightness of the waveform spot.

RETICULE INTENSITY
Adjusts the brightness of the waveform reticule.

About 1 - 12 Lines selection:
The selection of the acquisition zone can be allocated to the "User" key (see chapter "DIRECT FUNCTIONS" section "User").

TALLY

Tally can be activated via the GPI Sub-D9 or via the camera REC/STOP trigger embedded in the SDI (if any).

Several Tally signals can be used at the same time.

When Tally is connected to the GPI Sub-D9 connector,
- the Tally color (red/green) is adjustable in MENU / TECHNICAL / GPI > FUNCTION #;
- the Tally trigger condition is adjustable in MENU / TECHNICAL / GPI > CONDITION #.

TALLY GPI
Assigns a specific Tally mode for the GPI Sub-D9 connector.
Possible configurations: OFF – CUSTOM MODE

TALLY SDI
Assigns a specific Tally mode for the SDI embedded Tally signal.
Possible configurations: OFF – REC MODE – ON AIR MODE – CUSTOM MODE

CUSTOM MODE
Custom Tally mode selection.
Includes RED DOT, SQUARE, DUAL SQUARE and FRAME* styles.

REC MODE POSITION
Allows the user to place the tool in different position of the screen.
When USER is selected, use arrows and the rotating knob to move the tools.
DEFAULT replaces the tool at the factory preset.

LED ON/OFF
Activates or deactivates the TALLY LED on the front panel.

* *FRAME is active on “FRAME3” of the frameline.*

PICTURE FX

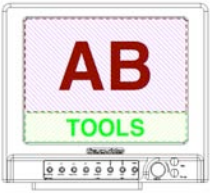
NORMAL
Restores the standard display

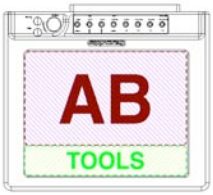
VERTICAL FLIP
Returns the picture vertically

HORIZONTAL FLIP
Returns the picture horizontally

PICTURE REVERSE
Returns the picture horizontally and vertically (180° rotation of the picture)

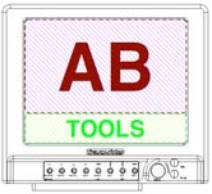
AUTO REVERSE
Makes a MONITOR REVERSE automatically if the monitor is up side down

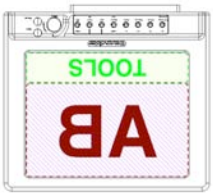




MONITOR REVERSE
Returns the picture, tools and menus horizontally and vertically

AUTO FLIP REVERSE
Returns the picture automatically (vertical axis only) if the monitor is up side down





3D

This menu is visible when 3DVIEW input is selected.

> ***IMPORTANT:***
> In the following description we assume that the left eye camera is always wired on SDI1 or HDMI1 (IN1) and the right eye camera on SDI2 or HDMI2 (IN2).

PHASEMETER

Activates or deactivates the phasemeter.
This tool is not available on an 8" 3DView monitor.
The phasemeter is a phase analyzer. It provides pixels and lines phase information between the 2 signals.

When the 2 cameras are genlocked and phased, the phasemeter remains fixed and shows a zero phase difference (0 lines and 0 pixels).
When the 2 cameras are genlocked but not phased, the phasemeter remains fixed but shows a non-zero phase difference.
When the 2 cameras are not genlocked, then the phasemeter slides in line and/or pixels.

DEROBE'S GRID

The Derobe's grid is mainly used to adjust infinity parallax to the target screen size. It is a parallel grid with adjustable width between the lines.

In zoom mode the grid is sized to the native resolution.
When SAFE AREA is active, the grid appears only in the safe area (eventually resized depending of the settings).

GRID: ON/OFF
Activates or deactivates the grid. It can also be activated directly through the Marker key.

WIDTH
Adjusts the separation between the vertical lines from 6 to 122 pixels. Corresponding value in % is also given. The number of corresponds to the incident picture pixels, not to the screen pixels (except in ZOOM mode in which the picture is displayed in full resolution, pixel to pixel).

OFFSET
Shifts the grid left or right of half of the WIDTH value.

COLOR
Sets the color of the grid

AREA
Displays a safe area on the center of the grid in order to only see the picture. From 100% where the picture is fully covered to 5% where only the borders are covered.

INTENSITY
Sets the brightness of the grid

DENSITY
Sets the density of the lines from dots to solid.

About Derobe's Grid:
The grid is a specific tool for stereographic work that has been developed in cooperation with Alain Derobe AFC, stereographer and 3D consultant.

MODE

Several possibilities are available by turning and pressing the rotating knob when the line is highlighted.

SHUTTER GLASSES
The 2 pictures are displayed alternatively.
The optional Shutter Glasses interface synchronizes the shutter glasses.

COLOR
The left camera and right camera are displayed in full color.

BW
The left camera and right camera are displayed in black and white.

ANAGLYPH
Only the selected monochromatic component of left camera and the complementary components of right camera are displayed.
The pictures are interleaved.
To visualize the 3D effect, it is necessary to use specific glasses.
The colors used in this mode depend of the settings of 3D / COLOR.

MONOCHROME
The left camera and right camera are displayed in monochrome.
The colors used in this mode depend of the settings of 3D / COLOR.
This mode is useful to visualize the fringes between the 2 pictures.

COLOR

4 modes are available

	Left Camera	*Right Camera*
Mode 1	RED	CYAN
Mode 2	GREEN	MAGENTA
Mode 3	BLUE	YELLOW
Mode 4	RED	BLUE

To visualize correctly the 3D effect in ANAGLYPH, it is necessary to use the color-coded glasses accordingly to the selected mode.

FLOP

The FLOP is a vertical inversion of the picture.
When the line is highlighted turning and pressing the rotating knob activates or deactivates the FLOP of the left camera, right camera or both cameras.

FLIP

The FLIP is a horizontal inversion of the picture (mirror effect).
When the line is highlighted turning and pressing the rotating knob activates or deactivates the FLIP of the left camera, right camera or both cameras.

It is possible to activate simultaneously the FLIP and the FLOP

HORIZONTAL SHIFT

Turning the rotating knob when the line is highlighted allows shifting the right picture of ±100 pixels. When a value different than “0” is applied a pictogram with the direction and the value of the shift appears on the screen.

> ***IMPORTANT:***
> This function shall be used carefully as misinterpretation on the result may occur.

ROTARY KNOB FUNCTION

Allocates a function to the rotary know when the menus are not activated.

NONE	no function activated
HORIZ. SHIFT	adjusts the picture shift
GRID OFFSET	adjusts the grid offset
MODE	toggles the 3D display modes

TECHNICAL

HDMI MODE: CANON/NORMAL

Available when HDMI input is selected
Improves the video standard switching when shooting with a Canon DSLR.

GPI

Assigns functions and trigger conditions to the 4 GPIs.

FUNCTION #
Assigns a function to the pin # of the GPI connector (J002)
Available functions: NONE, TALLY RED, TALLY GREEN, ZOOM, HORIZON, SWITCH INPUT, FOCUS HELPER, EXPOSURE

CONDITION #
Sets the trigger condition of the function #
Available conditions (depending on the function): NOT ACTIVE, FALLING EDGE, RISING EDGE, LOW STATE, HIGH STATE, LIGHT SENSOR *

* *LIGHT SENSOR is a special trigger for Tally activated though a light sensor placed in front of the camera Tally light. LIGHT SENSOR trigger is set to 1.9v DC*

VOLTAGE ALARM

VOLTAGE DISPLAY: ON/OFF
ANTON BAUER Fuel Reader: ON/OFF
Displays constantly the input voltage from the power supply or the battery.
When a Logic Series Digital battery from AntonBauer is detected, the Fuel Reader also gives to the user the remaining percentage of the battery and the time to run (see page 8).

UNIT
Toggles between Volts, Percent and Minutes (percent and and minutes only available with the FuelReader).

ALARM
When activated the battery pictogram is displayed in red if the voltage of the power supply goes under the threshold setting.

ALARM THRESHOLD
Sets the threshold value.
Under this value a security alert can inform the user when it is time to swap the battery on the monitor.

POSITION
Allows the user to place the tool in different position of the screen by using arrows and the rotating knob when USER is selected in POSITION sub menu. DEFAULT replaces the tool at the factory preset.

REVERSE SCROLLING

Reverses the scrolling direction in the menus.

EXIT TEMPO

Sets of the automatic exit temporization from SLOW to FAST

LIGHTS

KEYBOARD
Activates or deactivates the keyboard light (if available on the monitor). In AUTO, the keyboard light turns automatically on when a key is pressed.

KEY DIMMER
Dimming of the brightness of the keyboard light.
It is possible to switch off completely light.

LED DIMMER
Dimming of the brightness of the power led.
It is possible to switch off completely the led.

MEMORY

MEM 1 … MEM 4

4 user memories per input are available to save user's configurations.

SAVE
Saves the current user set-up in the memory.
All configuration except INPUT SEL is stored in the memory, including picture and tools settings.

RECALL
Recalls the settings stored in the memory.
The standard settings a factory loaded in this memory, they will be replaced at the first SAVE from the user.

PRESET

Sets the default values in the setting registers.
PRESET does not erase the user presets.

PRESET ALL INPUTS
Presets the active input and other inputs of the monitor.

PRESET SELECTED INPUT
Presets the active input only

SERVICE & MAINTENANCE

General

Please read carefully the chapter "TRANSVIDEO EQUIPMENT LIMITED WARRANTY" about the Transvideo S.A. warranty on the equipment described in this manual.

For repairs contact Transvideo S.A. or its local representative or use the RAN procedure in the chapter "SERVICE & MAINTENANCE", section "Product Return".

Useful tips

Cleaning

The painting of the CineMonitorHD is resistant to general cleaners and solvents. Do not use abrasive products to clean your product.

The front glass is a high quality optical part. A metallic multi-layers vacuum deposit makes the anti-reflection coating. Do not use abrasive or acid cleaners. The microfiber cloth delivered with the CineMonitorHD is strongly recommended to clean the glass. Remove dust and particles of the glass before using the cloth. No liquid is normally necessary. If there is some dirt on the screen, it is possible to remove it with clean warm water.

The microfiber cloth collects grease particle in its structure. It is necessary to wash it when necessary with water and soap.

The microfiber cloth is orderable as spare part (refer to your local Transvideo dealer in case of need).

Full reset

If needed, a full reset of the monitor may be performed as follows:

① Connect the monitor to a power source (monitor off).
② Press the adjust (ADJ) key
③ Switch on the monitor while keeping pressed the “adjust” key until the display shows “FULL RESET”

The monitor is back to its factory default settings. This procedure totally erases all user setup in the memories.

Hardware, Software and Firmware

Basic monitor information is indicated during the startup on the display:

SOFT	main board software version (microcontroller #1)
FIRMWARE	main board firmware version
HARDAWARE	main board hardware version
LOGO	graphical user interface version
LOAD MATRIX	colorimetry version

This information is useful to write down if trouble-shooting becomes necessary.

The complete list of software and firmware versions of all electronic boards may be found in MENU / HELP / MONITOR INFO.

Updating your CineMonitorHD 3DView Evolution

All software and firmware updates are possible by the sole use of a USB key.
The following procedure sets how to proceed to update your monitor.

For CineMonitorHD 3DView Evolution with Hardware 3.xx and Software 7.xx only.

Step 1
Get the last software update package for your CineMonitorHD 3DView Evolution.
An update package is a .zip file that contains softwares and firmwares that are compatible each other. It can be downloaded on our website for registered users by visiting www.transvideo.eu/support. You can also ask it directly to your local Transvideo representative.

Step 2
Uncompress the .zip using your archive utility software. Then paste **all** the files **at the root** of the USB key.

Step 3
Plug in the USB key in the monitor by using the mini USB adapter (included with your product) and turn on the monitor.

Step 4
Go to MENU / HELP and select UPDATE

Step 5
The update starts. Do not turn off the monitor neither remove the USB key until the update ends. Follow the instructions on the screen.

Step 6
Wait for 2 green leds and restart the monitor.

Step 7
Go to MENU / HELP / MONITOR INFO and verify that the software and firmware versions match with the update package.

Comments
The update duration may vary between 3 minutes and 6 minutes depending of your hardware and files present on the USB key.
During the first startup following an update, the monitor automatically performs a backup of all firmwares and a full reset. It can take several seconds before your monitor reach its normal operation.
You can visit our support section on our website for more information regarding monitor updates (registered users only).

Precaution
We advise you to format your USB key before an update to avoid hidden files problems.
Do not rename files on the USB key.

Calibration

The white point of the monitor is individually calibrated in factory for D65 and D56.
The calibration doesn't need to be performed except after some specific service operation as the replacement of the backlight unit or if you need to match a large inventory of your RainbowHD after hundreds hours of use.
To perform the calibration, you need to send the product to the factory. Fees may apply if needed.

Product Return

For repairs and technical operation you may return the product to the factory. Please use the following procedure:

① Ask for a RAN (Return Authorization Number)

Log in to our website using your user account and visit the Support section
www.transvideo.eu/support

Or contact us by:
Email service@transvideo.eu
Fax +33 2 3260 1479
Tel +33 2 3232 2761

You will need to provide part number & serial number (found on the back of your product) and to briefly describe the reason for the return.

② Then send the product to the following address:

TRANSVIDEO
ZI - Rue Francois Arago
27130 Verneuil sur Avre
France

User is responsible for shipping and insurance of the equipment as well as for any damage that may occur during transit.
It is strongly recommended to inform us of the Tracking Number of your shipment and the RAN so we may track your return while in transit.

SPECIFICATIONS

Common Characteristics

Inputs / outputs *	2 x HD/SD SDI in (BNC) 1 x HD/SD SDI Rclk out (BNC)	
Inputs / outputs **	2 x HD/SD SDI in (BNC) 2 x HD /SD SDI Rclk out (BNC) 2 x mini HDMI in	
Display type	AMLCD	
Pixels	Picture zone 1024 x 560	
Latency	Less than 1 frame in 1080i and psf, SD. Less than 1 image in 720p and 1080p	
Color calibration	D65 ITU-R BT.709-5 D56	
Color space	Rec. ITU-R BT.709-5	
Power In / XLR4	XLR4 connector (-1, +4) 10 – 36 VDC	
Power Out / Phoenix 3pts (except 6" and 8" monitors)	1 GND	3 +12V out (500mA max) 4 Connect to GND
J001 / RS232	1 NC 2 RX 3 TX 4 NC 5 GND	6 GND 7 RTS 8 CTS 9 +12V out
J002 / GPI	1 to 4 Input (0 – 18v DC) low<2v DC, high>4,2v DC 7 to 9 GND	
J003 / Hirose HR25	1 RX+ (RS422) / RX (RS232) 2 RX- / CTS 3 TX+ / RTS	4 TX- / TX 5 GND 6 +12V out
Storage temperature **Operating temperature**	-40°C +80°C -20°C + 55°C	

* *8" HD 3DView monitor only*
** *10" to 15" HD 3DView monitors only*

List of Standards per Input

HD SDI (SMPTE 292M)	1280x720p @ 24, 25, 29.97, 30 Hz (SMPTE 296M) *** 1280x720p @ 50, 59.94, 60 Hz (SMPTE 296M) 1920x1080i @ 50, 59.94, 60 Hz (SMPTE 274M) 1920x1080psf @ 23.98, 24, 25, 29.97, 30 Hz (SMPTE 274M) 1920x1080p @ 23.97, 24, 25, 29.94, 30 Hz (SMPTE 274M) **
SD SDI *** (SMPTE 259M-C)	720x487i @ 60 Hz (SD SDI 525 - SMPTE 125M) 720x576i @ 50 Hz (SD SDI 625 - ITU-R BT.601)
HDMI **	720x480i @ 59.94, 60 Hz *** 720x576i @ 50Hz *** 720x480p @ 59.94, 60 Hz 720x576p @ 50Hz 1280x720p @ 50, 59.94, 60 Hz 1920x1080i @ 50, 59.94, 60 Hz 1920x1080psf @ 25, 29.97, 30 Hz 1920x1080p @ 23.97, 24, 25, 29.94, 30 Hz

* *8" HD 3DView monitor only*
** *10" to 15" HD 3DView monitors only*
*** *not available in 3D mode*

Specific Characteristics

8" 3DView Monitor	
Dimensions (l x h x d)	215 x 190 x 60 mm 8.5 x 7.5 x 2.3 inches
Weight	1635g, 3.6lbs
Power Consumption	19W
Contrast ration Viewing angle Brightness	900:1 ±80° H, +60/-80° V 1000Nits in 2D mode

10" 3DView Monitor	
Dimensions (l x h x d)	256 x 227 x 90 mm 10.1 x 9.0 x 3.5 inches
Weight	2725g, 6.0lbs
Power Consumption	35W
Contrast ration Viewing angle Brightness	Max 600:1 ±80° H, ±65° V 1000Nits in 2D mode

12" 3DView Monitor	
Dimensions (l x h x d)	298 x 255 x 90 mm 11.7 x 10.0 x 3.4 inches
Weight	3550g, 7.8lbs
Power Consumption	40W
Contrast ration Viewing angle Brightness	Max 600:1 ±80° H, +60/-80° V 1000Nits in 2D mode

15" 3DView Monitor	
Dimensions (l x h x d)	344 x 310 x 91 mm 13.5 x 12.2 x 3.6 inches
Weight	4195g, 9.2lbs
Power Consumption	57,5W
Contrast ration Viewing angle Brightness	Max 700:1 ±80° H& V 1000Nits in 2D mode