

*High-Definition Serial Digital Interface
High Bright / 2-Way Cross-Conversion Monitor*

BVB07 User Manual



BVB07, BVB07a, BVB07b

CAUTION	4
FEATURES	6
CONTROLS, INDICATORS AND CONNECTIONS	7
<i>BVB7 FRONT</i>	7
<i>BVB7 REAR</i>	7
<i>FRONT KEYS OPERATIONS</i>	8
<i>REAR PANEL</i>	9
MENU BASIC OPERATION	10
<i>TO SHOW AND REMOVE THE MENU</i>	10
<i>TO GO TO THE NEXT LEVEL</i>	10
<i>TO GO BACK TO THE PREVIOUS LEVEL</i>	10
<i>TYPICAL MENU OPERATION</i>	10
<i>TURNING ON THE MONITOR</i>	10
<i>VOLUME ADJUSTMENT</i>	10
<i>ON SCREEN MENUS LANGUAGE SELECTION</i>	11
<i>HOW TO SELECT VIDEO SOURCE BY OSD</i>	11
PICTURE MENU	12
<i>VIDEO MENUS OF EACH INPUT MODES</i>	12
<i>ADJUST</i>	12
<i>COLOR TEMPERATURE CONTROL</i>	12
<i>SCAN</i>	12
<i>ASPECT RATIO</i>	13
<i>ZOOM</i>	13
<i>PICTURE OPTION</i>	13
<i>PIP (PICTURE IN PICTURE)</i>	14
<i>DUAL LINK MODE (SDI ONLY)</i>	15
<i>PEAKING FILTER</i>	15
<i>MAX BRIGHTNESS</i>	15
<i>BACK LIGHT</i>	15
AUDIO MENU	16
<i>AUDIO OUTPUT</i>	16
<i>AUDIO SELECTION</i>	16
<i>SDI OUT</i>	16
<i>VOLUME</i>	16
DISPLAY MENU	17
<i>MARKER</i>	17
<i>WAVEFORM</i>	17
<i>LEVEL METER</i>	17
<i>TIME CODE</i>	18
<i>CAPTION</i>	18
<i>OSD SET</i>	18
<i>U.M.D</i>	19
<i>INPUT I.D</i>	19
<i>VIDEO RANGE</i>	19
REMOTE MENU	20
<i>GPI CONTROL & GPI #</i>	20

SETUP MENU	21
SETUP LOAD & SETUP SAVE.....	21
FUNCTION SWITCH.....	21
CONTROL.....	21
COMMUNICATION.....	22
IP CONFIG.....	22
SCREEN SAVER.....	22
SYNC CHECK PERIOD.....	22
SDI OUT / HDMI OUT.....	22
INFO MENU	23
INPUT SUPPORT MODE	23
SUPPORT SIGNALS.....	23
SUPPORT TIMINGS	23
MECHANICAL DIMENSION	24
BVB7.....	24

Caution

Before operating the set, please read this manual carefully.

WARNING:

To reduce the risk of electric shock does not remove cover (or back). No user serviceable parts inside. Refer servicing to qualified service personnel. To prevent fire or shock hazard, do not expose the rear of the set to rain or moisture. Do not rub or strike the Active Matrix LCD with anything hard as this may scratch, mark, or damage the Active Matrix LCD permanently.

Unauthorized tampering with the inside of the monitor invalidates the warranty.

The manufacturer shall not warrant for any damage caused by improper maintenance and/or repair. Work by third parties.

Important safeguards for you and your new product:

Your product has been manufactured and tested with your safety in mind. However, improper use can result in potential electrical shock or fire hazards. To avoid defeating the safeguards that have been built into your new product, please read and observe the following safety points when installing and using your new product and save them for future reference.

Read Instructions

Follow Instructions

All operating and use instructions should be followed.

Retain Instructions

The safety and operating instructions should be retained for future reference.

Heed Warnings

All warnings on the product and in the operating instructions should be adhered to.

Cleaning

Disconnect the unit from the electricity supply before cleaning. Do not use abrasive cleaners. Use a damp cloth for cleaning.

Water and Moisture

Do not use this apparatus near water.

Transporting Product

A product and cart combination should be moved with care. Quick stops, excessive force and uneven surfaces may cause the product and cart combination to overturn.

Attachments

Do not use attachments not recommended by **Boland** as they may cause hazards.

Ventilation

Do not block any of the ventilation openings.

Install in accordance with the manufacturer's instructions.

Power Sources

This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your supplying dealer.

Power Lead Polarization

This product is equipped with a three-wire grounding-type cord. This is a safety feature. Do not defeat the safety purpose of the grounding-type cord.

Power Cord Protection

Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles and the point where they exit from the product.

Outdoor Cable Grounding

Caution

If an outside antenna or cable system is connected to the product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. A “face plate” also needs to be installed with an isolating capacitor to prevent any damage from static.

Lightning

For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent possible damage to the product due to lightning and power-line surges.

Power Lines

An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to avoid contact with such power lines or circuits, as contact with them might be fatal.

Earthing the product

This product must be earthed properly to comply with the safety regulations in the country of use. If you are unsure of these regulations, please consult a qualified electrician.

Servicing

Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltages or other hazards. Refer all servicing to qualified service personnel. If the Set does not operate properly, switch it off and call your dealer.

Damage Requiring Service

Isolate this product from the mains supply and refer servicing to qualified service personnel under the following conditions:

If the power-supply cord or plug is damaged.

If the glass front has been damaged.

If there is ingress of water between the glass and the LCD screen.

If the product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to its normal operation.

If the product has been dropped or the cabinet has been damaged.

If the product exhibits a distinct change in performance.

Safety Check

Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition and the front seal is intact.

Mounting

The product should be mounted on a wall only as recommended in the instructions.

Power

This set operates on a DC supply; the voltage is as indicated on the label on the Monitor.

Features

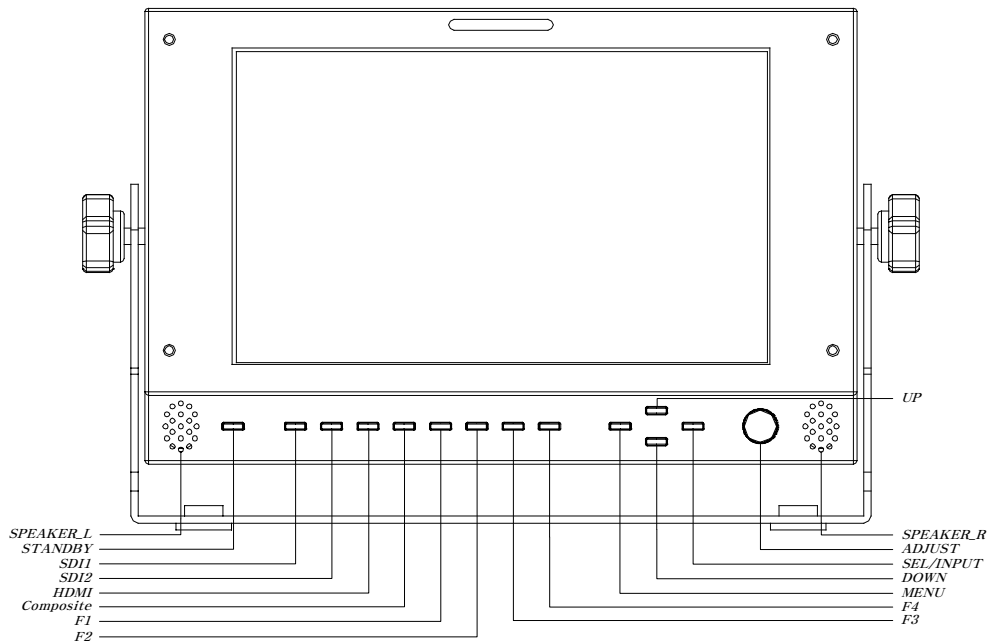
This product is the multi-format Digital LCD Panel to display various kinds of digital video input signal as HD/SD-SDI/DVI/HDMI Digital and analog signal such as Composite/S-Video/RGB/PC-RGB/ Component.

This is also High Definition Broadcasting Monitor which can make it available to do output of stable video signal with the menu of considering convenient user interface and the easy control for brightness and color, and by EQ function of HD-SDI input part.

- 3G/HD/SD SDI 2 Inputs / 1 Output.
- 2-Way Cross Conversion (SDI to HDMI / HDMI to SDI)
- High Brightness LCD Panel (LED backlight)
- WAVEFORM (Y.Cb.Cr / G.B.R Parade) & Vector Scope & Histogram (SDI/HDMI Only).
- 16 ch Audio Level Meter Display. (SDI only)
- Analog & Digital Signal Audio Level Meter Display.
- Lever Meter Position/Scale display selectable
- Dual Link MODE & 1080p 60 Compatible
- Closed caption. (CEA608 & 708, SDI Only)
- H/V Delay.
- Audio Disembedder & Internal Speaker & Monitor out
- Color Temperature – User, VAR, 9300K, 6500K, 5400K, 3200K
- Over Scan/Zero Scan/Under Scan/Pixel to Pixel
- PIP (Picture In Picture)/PIP Blend
- Tally LED function (Green/Red/AMBER)
- HDMI (HDCP) function.
- Single board is suitable for mounting behind an LCD panel.
- Supported RS-232C.
- Supported External GPI Control (RJ-45).
- OSD: Graphic based OSD, 6 Languages (UNICODE System).
- LCD Dimming Control
- Manual Dimming Level Control.
- UMD
- Auto Calibration: CA-310 (Minolta), K-10 (Klein)
- 10bits 3D LUT Color Calibration (BT.709, SMPTE-C, EBU, NTSC, D-Cinema) (optional)
- ETHERNET: Network System Controller / Update
- Time code Display.
- Marker Display.
- Peaking Filter/Zoom function/False Color

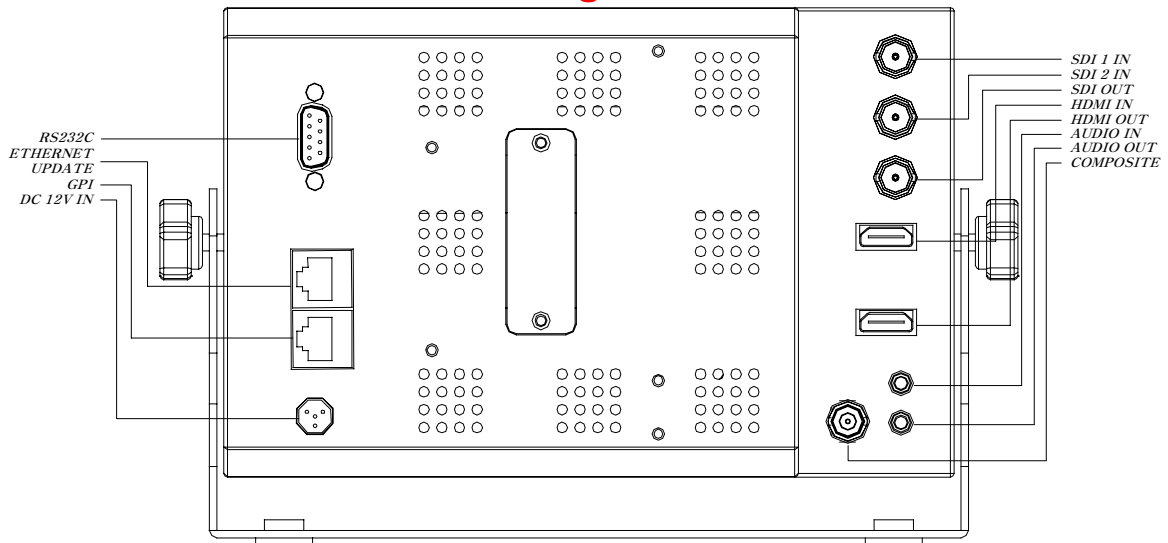
Controls, Indicators and Connections

BVB7 Front



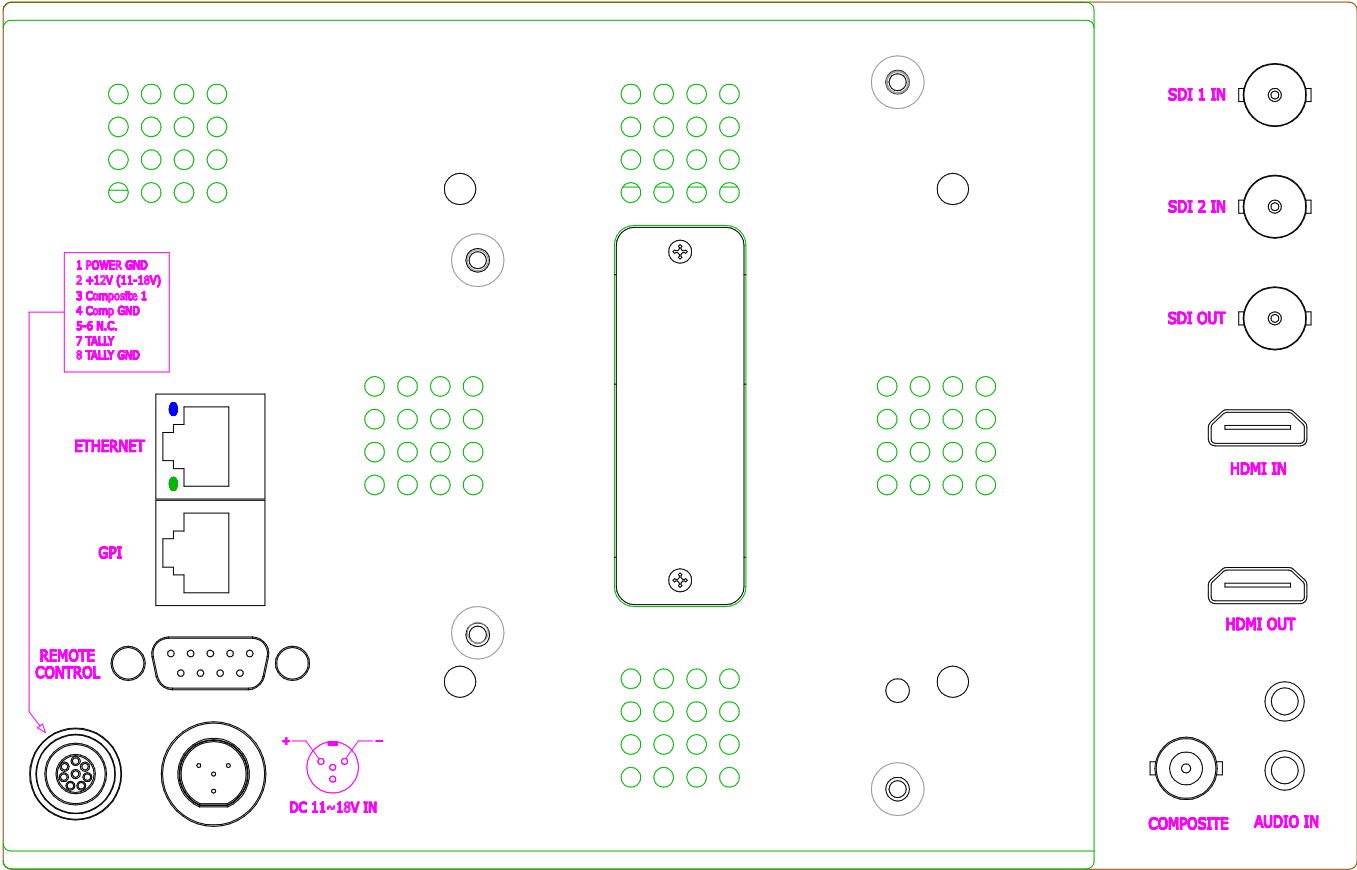
BVB7 Rear

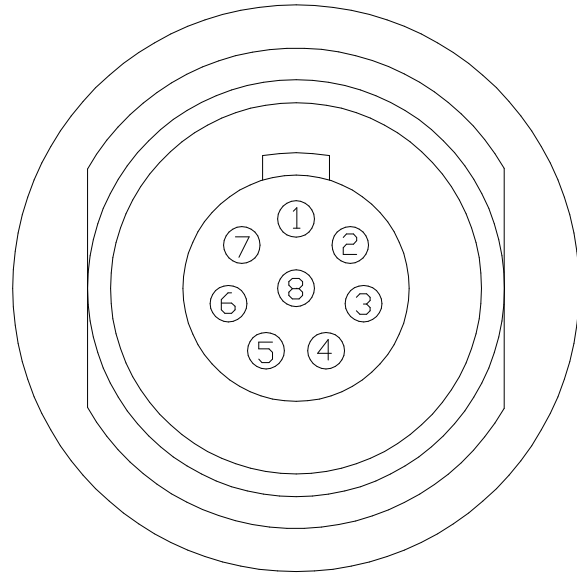
See Next Pages >>



- 1 POWER GND
- 2 +12V (11-18V)
- 3 Composite 1
- 4 Comp GND
- 5-6 N.C.
- 7 TALLY
- 8 TALLY GND

- 1 POWER GND
- 2 +12V (11-18V)
- 3 Composite 1
- 4 Comp GND
- 5-6 N.C.
- 7 TALLY
- 8 TALLY GND






PIN #	DESCRIPTION
1	POWER GND
2	POWER 12 VOLTS (11-18v)
3	COMPOSITE IN
4	VIDEO GROUND
5	N.C.
6	N.C.
7	TALLY
8	TALLY GND

REAR VIEW CHASSIS CONNECTOR,
 EGG.1B.308.CLL (FEMALE) -OR-
 EHG.1B.308.CLL (SHALLOW FEMALE)
 (MATE: FGG.1B.308.CLAD72, MALE CORD)

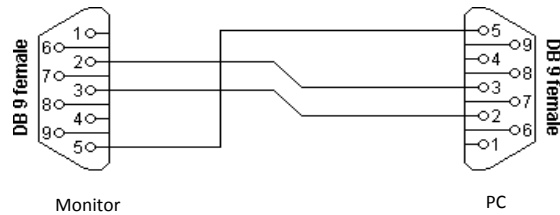
B1	ADD P/Ns, UPDATE PIN Nos. FOR CINE-LIVE SLED	mb	1/24/14
A1	DRAWN	io	10/06/09
REV	DESCRIPTION	BY	DATE

 BOLAND COMMUNICATIONS (949) 465-9911			
TITLE		LEMO EGG.1B.308.CLL	
USED ON	SIZE	DOCUMENT NUMBER	REV
	A	(M=2701)	2701 B1
DATE: 10/6/09	BY: io	DO NOT SCALE DRAWING	SHEET: 1 OF 1

RS-232 / GPI / RS-422 PIN Assignment

1. RS-232 Connector

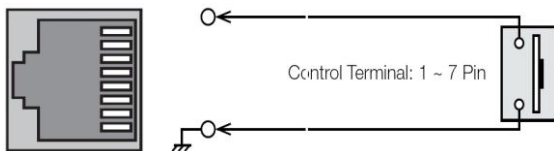
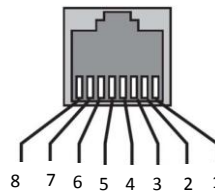
D-sub 9P MALE		
Pin	Signal	Description
1		
2	RX	Rx(PC to Monitor)
3	TX	Tx(Monitor to PC)
4		
5	GND	SIGNAL GROUND
6		
7		
8		
9		



RS-232 SERIAL CONTROL PC CONNECTION

2. GPI Connector (Contact Closure to Ground)

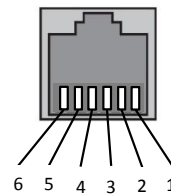
RJ-45 8P MALE		
Pin	Signal	Description
1	GPI 1 PORT	GPI 1 Control (Menu Selected)
2	GPI 2 PORT	GPI 2 Control (Menu Selected)
3	GPI 3 PORT	GPI 3 Control (Menu Selected)
4	GPI 4 PORT	GPI 4 Control (Menu Selected)
5	GPI 5 PORT	GPI 5 Control (Menu Selected)
6	GPI 6 PORT	GPI 6 Control (Menu Selected)
7	GPI 7 PORT	Power On/Off Only (Fixed)
8	GND	COMMON(GND)

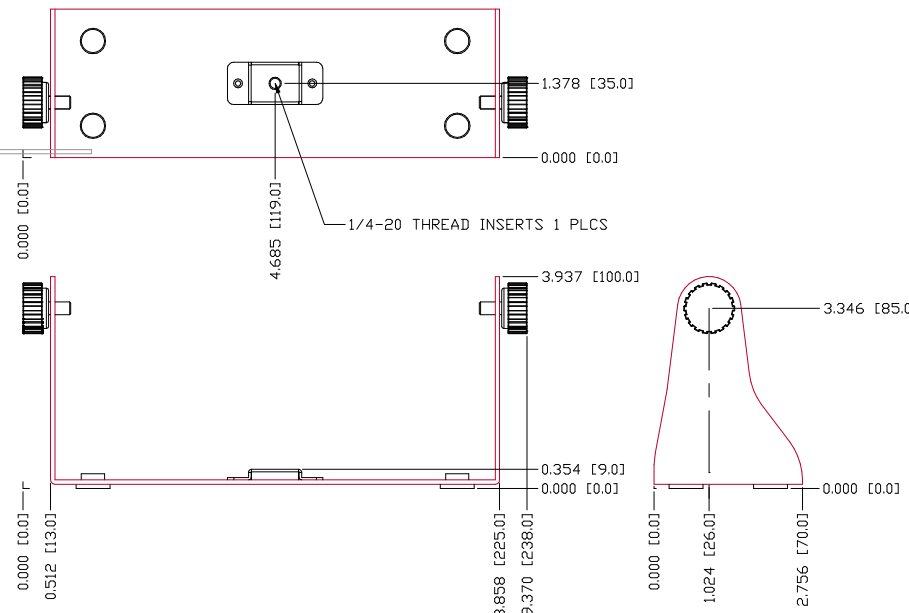
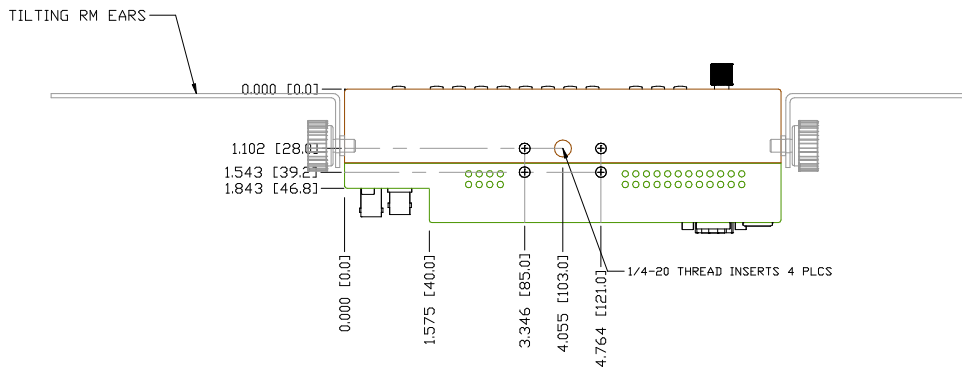
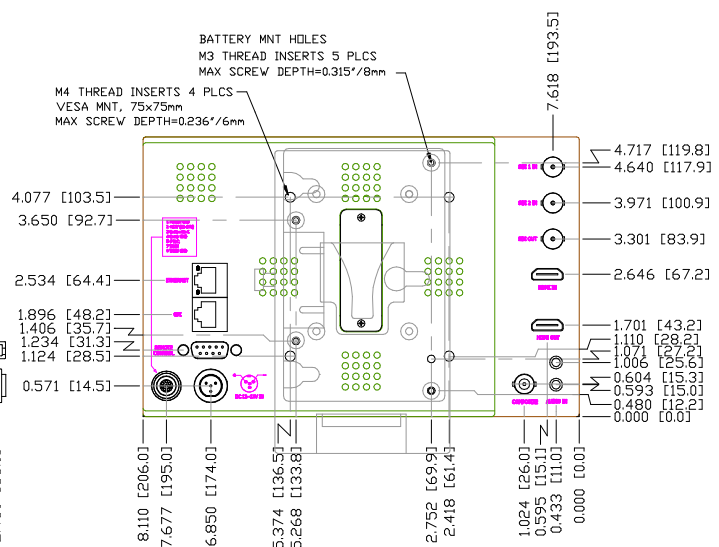
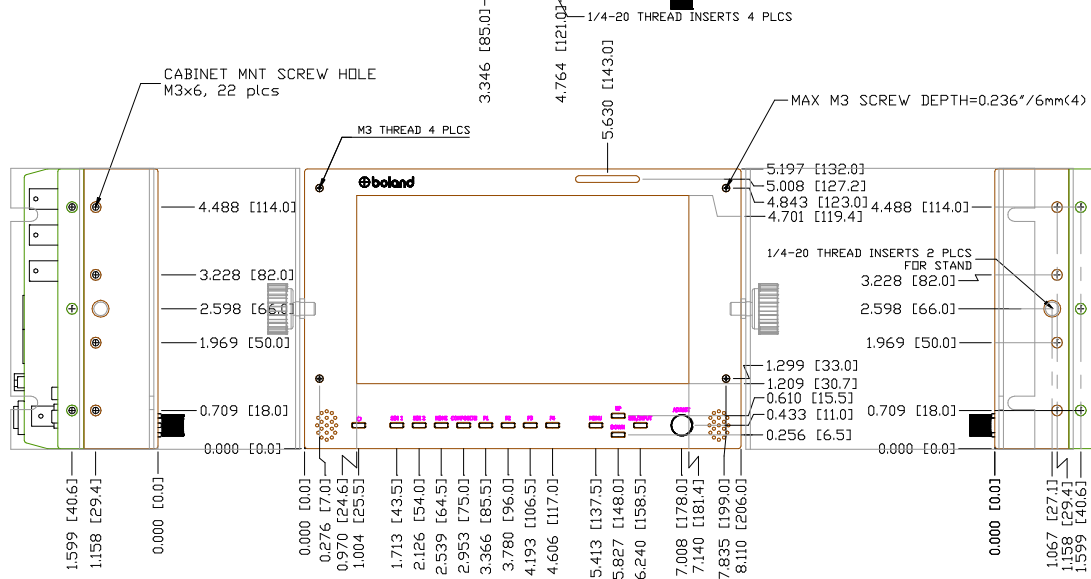
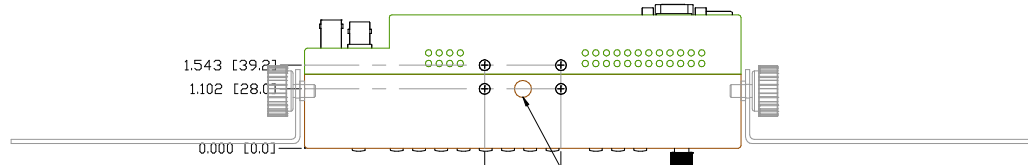



Contact Point Switch
It is possible to attach pin one by one.

3. RS-422 Connector (UMD/IMD)

RJ-11 6P MALE		
Pin	Signal	Description
1	TxD-	TxD- (Monitor to Controller, Not Used)
2	GND	SIGNAL GROUND
3	RxD+	RxD+ (Controller to Monitor)
4	RxD-	RxD- (Controller to Monitor)
5	-	
6	TxD+	TxD+ (Monitor to Controller, Not Used)





 BOLAND COMMUNICATIONS (949) 465-9911			
TITLE OUTLINE DIAGRAM, BVB07b			
USED ON	SIZE	DOCUMENT NUMBER	REV
7"	A	(5790.dwg)	5798 B4
DATE: 1/28/15	BY: IO	DO NOT SCALE DRAWING	SHEET: 1 OF 1

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

Controls, Indicators and Connections

Front Keys Operations

- **STANDBY**

Power On/Off Button. This button is operated after being pressed about 3 seconds.

- **SDI 1 / SDI 2**

Select SDI 1/ SDI 2 source directly

- **HDMI**

Select HDMI source directly

- **Composite**

Select ANALOG source directly

- **FUNCTION 1 ~ 4**

Executes functions of user selected

(Undefined, Scan, Marker, Level Meter, Waveform, Aspect, Time Code, Color Only, Audio Group, Audio Channel, Audio mute, Still image, Caption, False Color, Aspect/Area Marker, PIP func & Input, Zoom, Gamma Select, WFM Line Select, Peaking Filter, Max Brightness)

- **MENU**

Activates main OSD menu

Navigates higher menu in main OSD menu

Exits OSD menu

- **DOWN**

Decreases sound volume of speaker

Decreases values of user menu in main OSD menu

Executes function (by OSD help commands) in main OSD menu

- **UP**

Increases sound volume of speaker.

Increases values of user menu in main OSD menu

Executes function (by OSD help commands) in main OSD menu

- **SEL/INPUT**

Activates OSD menu of input source selecting

Changes input source by selecting

Executes functions (by OSD help commands) in main OSD menu

Activates child menu

- **ADJUST**

Adjust Picture Menu (Volume ->Brightness -> Contrast -> Color -> Sharpness->Phase & Tint->Backlight Adjust ->Max Brightness)

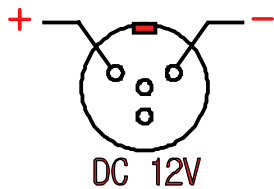
Turn Right (with 'UP' button is same)

Turn Left (with 'DOWN' button is same)

Controls, Indicators and Connections

Rear Panel

- SDI 1/SDI 2 IN
3G / HD / SD SDI Input
- SDI OUT
SDI to SDI Out / HDMI to SDI Out
- RS-232C IN
Update /Auto color calibration
- HDMI
High Definition Multimedia Input
- CVBS1 In
CVBS1 Input
- AUDIO IN
CVBS1 Sound Input
- AUDIO OUT
AUDIO MONITOR OUT
- ETHERNET
Network System Control/ Firmware Upgrade
- GPI
GPI 1 ~ 7 Control Port
- DC 12V IN



PIN NO	Description
1	+ 12V
2	GND
3,4	+ 12V

LEMO 8 PIN

DC 12v Power, Composite Video, Tally* (Tri-State**, Hi or Lo = ON)

*Tally: Red LED light at top of screen.

**Tri-State: The tally pin on the Lemo rests at +1.7 volts (open circuit). Exerting either a Gnd or +5v onto the pin causes the Tally to light. The Lemo's pin assignments are marked on the back of the cabinet. Experiment on one of the monitors.

MENU Basic Operation

In this menu system, there are several ways to customize the menu settings provided.

Most menus consist of three levels to set up the options, but some require greater depth for the variety of settings. If you press the **MENU** button, only the first and second level of the menu system will appear on the monitor screen. The third level can be displayed by pressing **SEL/INPUT**. If a menu has more than three levels, the pop-up dialogue box will be displayed as the fourth or fifth level.

To show and remove the Menu

Press the **MENU** button to display the menu. A second press of the **MENU** button will take you back to monitor viewing.

To go to the next level

Press **SEL/INPUT** button.

To go back to the previous level

Press **MENU** button



Typical Menu Operation

1. Press **MENU** button: The main menu will appear.
2. Use **UP/DOWN** button to select the desired menu option (icon).
3. While the desired menu option is selected, press **SEL/INPUT** to move to the second level.
4. Use **UP/DOWN** button to select the second menu option.
5. Press **SEL/INPUT** to move to the third level: Some menu options require additional steps.
6. Press **MENU** to return to the previous menu to return to monitor viewing.

Turning On the Monitor

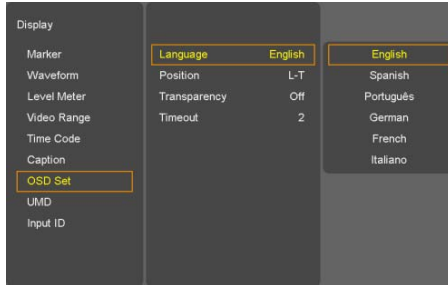
1. First, connect power cord correctly. At this moment, the monitor switches to standby or power on mode. In standby mode, in order to turn monitor on, press the **ST-BY** button.
2. Select the viewing source by using **SEL/INPUT** button on Keypad in front of monitor

Volume Adjustment

1. Press the **Adjust** button on Keypad. (Turn Right / Turn Left)
2. If you want to switch the sound off, press the **FUNCTION (Audio mute)** button.
3. You can cancel this function by pressing the **FUNCTION (Audio mute)** or volume control button.

MENU Basic Operation

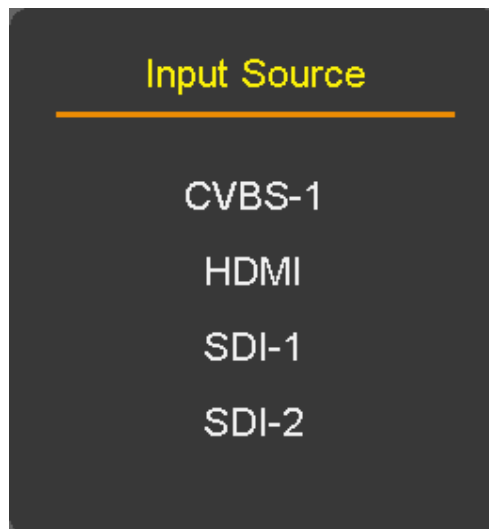
On Screen Menus Language Selection



- Display -> OSD Set -> Language
- The menus can be shown on the screen in the selected language.
- Supported Language: English, Spanish, Portuguese, German, French, Italiano

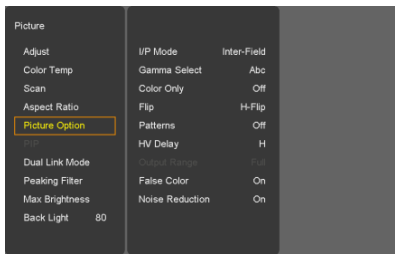
How to Select Video Source by OSD

1. Press the **SET/INPUT** button and then **UP/DOWN** button to select each video source.
2. Press the **SET/INPUT** button to go to desired video source.
3. If Input Name is enabled, The **SET/INPUT** button goes into input name edit mode instead of selecting source.

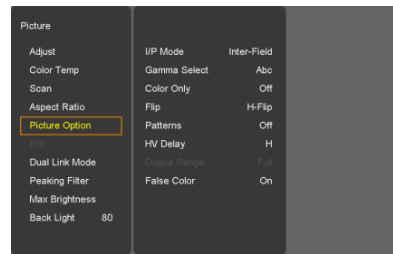


PICTURE MENU

Video Menus of each Input modes

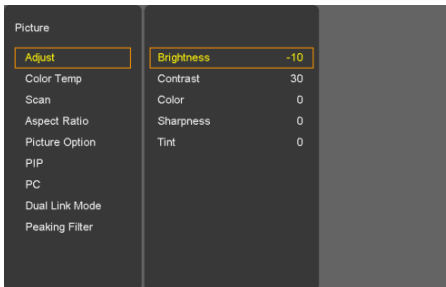


< Video (NTSC) Picture menu >



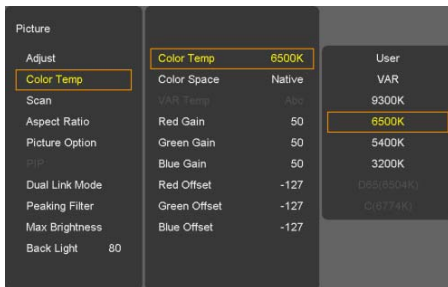
< SDI, HDMI Picture menu >

Adjust



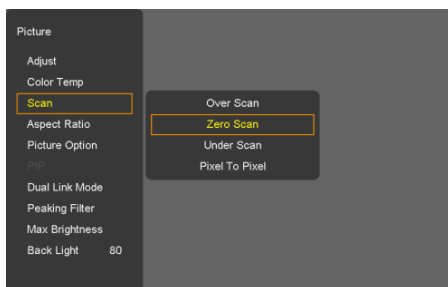
- Adjust the values of Brightness, Contrast, Color, Tint and Sharpness directly from -50 to 50
- Brightness, Contrast, Color, Sharpness, Tint

Color Temperature Control



- For Setting the Color temperature or adjusting RGB Gain/Offset value directly
- User (User setting RGB gain value), VAR(3200K ~ 11000K), Often used value(11000K, 9300K, 6500K, 5400K, 3200K) and 3D LUT Calibration value(D65 – 6504K/C-6774K/D-Cinema 6302K)
- Color Space: Native

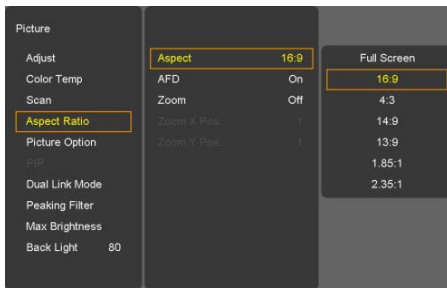
SCAN



1. Over Scan – 95% input size and fit the selected display size
2. Zero Scan – 100% Input size and fit the selected display size
3. Under Scan – 105% Input size and fit the selected display size
4. Pixel to Pixel – Display size is an input size. If input resolution is bigger than panel size, fit the panel size

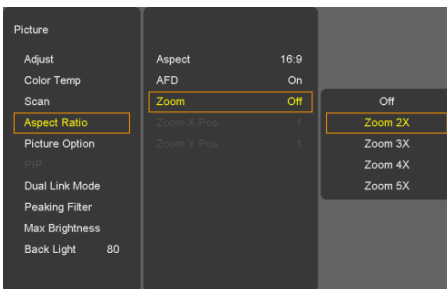
PICTURE MENU

Aspect Ratio



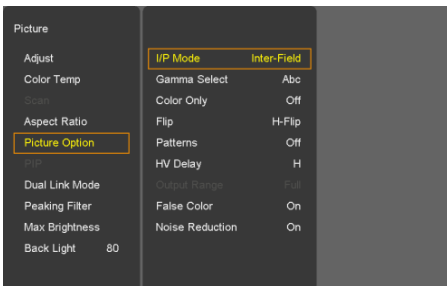
- For setting the aspect ratio.
- Full Screen: The images are displayed with a panel size.
- Full Screen, 16:9, 4:3, 14:9, 13:9, 1.85:1, 2.35:1: The images are displayed with each aspect ratio.
- Function-key operate Rotation, Full Screen, 16:9, 4:3, 14:9, 13:9, 1.85:1, 2.35:1
- AFD function Added

Zoom



- Can see the enlarged picture by (2X, 3X, 4X, 5X) ratios.
- If user select the Zoom 2X, can see the below yellow box in picture.
- Press Select or Enter button, user can see the enlarged picture.
- Menu key escape the zoom mode.

Picture Option



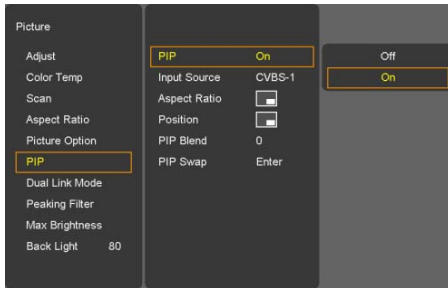
- **I/P Mode**
→ Line Doubler/inter-Field/Field Merge function on/off
- **Gamma Select**
→ Gamma Level Select (0.8 ~ 3.0)
- **Color Only**
→ Mono Color/Blue only Function on/off
- Mono color: For selecting monochrome images.
- Blue Only: Images have only blue color expect red and green color
- **Flip**
→ H Flip on/off
- **Patterns**
→ Auto Run, 100% Color Bars, 75% Color Bars, Luma, RGB, White, Black, RED, Blue, Green
- **HV Delay**
→ Off// H / V / H+V
- **Output Range**
→ Normal (16~235)/Full (0~255)
- **False Color**
→ False Color on/off
- **Noise Reduction**
→ Noise Reduction on/off. (NR is for Video signal (HD-SDI, CVBS) & DTV timing.

PICTURE MENU

PIP (Picture IN Picture)

- Watch two programs or source at the same time. And set up PIP size and position.

- **PIP on/off**



- Control PIP function On/Off.

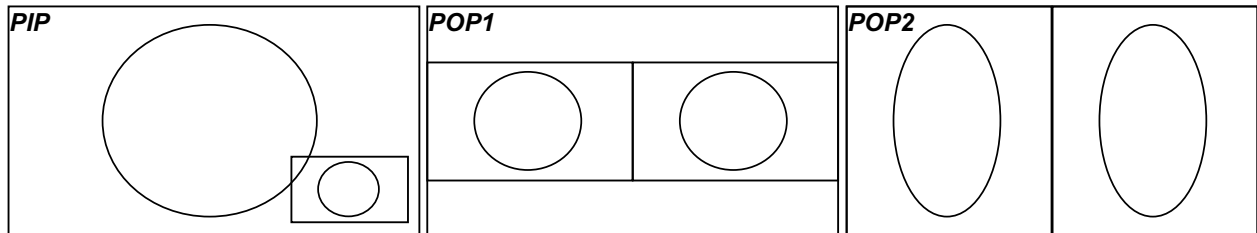
- **Input Source**

- PIP input Source can operate with different signal and type.
- Analog (CVBS 1) inputs + Digital (HDMI) + SDI (SDI1, SDI2) inputs
- SDI + SDI input PIP
- PIP MATRIX TABLE

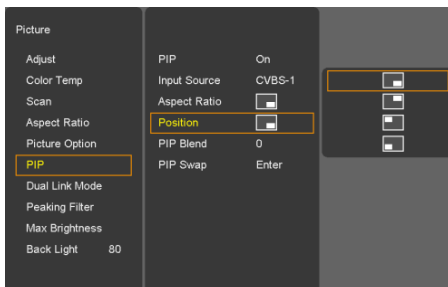
	SDI 1	SDI 2	HDMI	CVBS1
SDI 1	X	O	O	O
SDI 2	O	X	O	O
HDMI	O	O	X	O
CVBS1	O	O	O	X

- **Aspect Ratio**

- Choose PIP size of Small/POP1/POP2



- **Position**



- Choose the pip position on the each corner of the pane

- **PIP Blend**

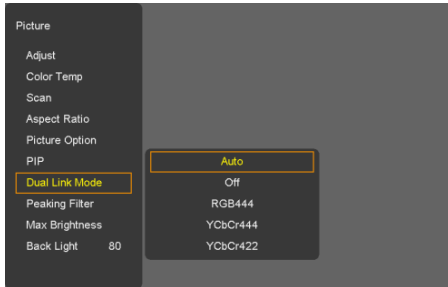
-Blend to PIP size of Small. (0~100)

- **PIP Swap**

- Using Swap option, you can exchange two programs or source at the same time.

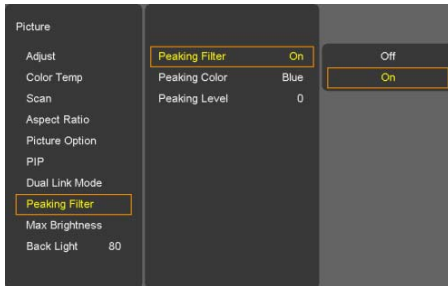
PICTURE MENU

Dual Link Mode (SDI only)



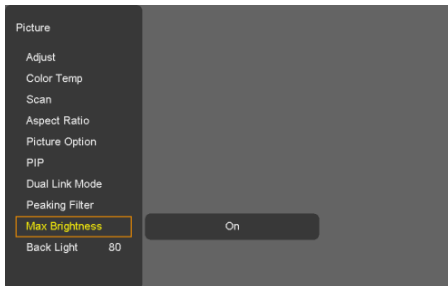
-Dual Link Mode select.
(Auto/Off/RGB444/YCbCr444/YCbCr422)

Peaking Filter



-Peaking Filter: Peaking Filter On/Off.
-Peaking Color: Red/Blue/White/Violet.
-Peaking Level: 0~100.

Max Brightness



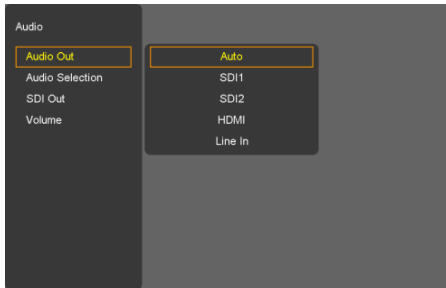
-Max Brightness On/Off.

Back Light

-Inverter dimming Level select (0~100)

AUDIO MENU

Audio Output



- Select Internal Speaker out. (Auto/SDI1/SDI2/HDMI/Line in)

Audio Selection

-PIP & W/F Double mode only. Select the Main or Sub.

SDI out



-SDI Audio output Group & Channel source select

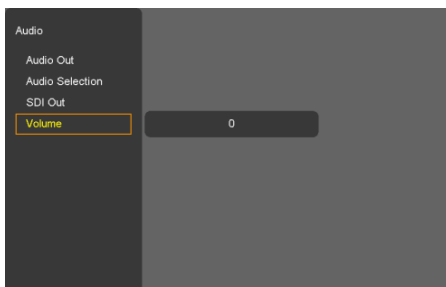
- **SDI Gr/Ch**

- Audio output Group source select. (Group1, 2, 3, 4)
- Audio output Channel source select. (Channel1~16, Channel1/2,3/4,5/6,7/8,9/10,11/12,13/14,15/16 off)

- **SD2 Gr/Ch**

- Audio output Group source select. (Group1, 2, 3, 4)
- Audio output Channel source select. (Channel1~16, Channel1/2,3/4,5/6,7/8,9/10,11/12,13/14,15/16 off)

Volume



- Adjust the speaker or headphone Volume level.

DISPLAY MENU

- **Type**

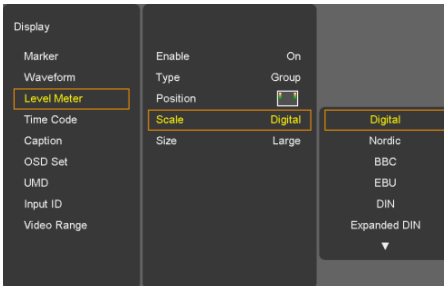
-Pair: Respectively Channel with right and left display

-Group: Respectively group display

- **Position**

- Level Meter Position selects. ()

- **Scale**



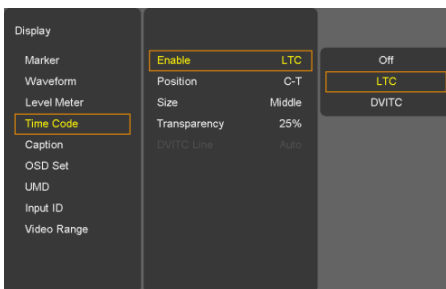
- Level Meter Scale mode selects.

(Digital/Nordic/BBC/EBU/DIN/Expanded DIN/SMPTE VU/EBU VU/France VU)

- **Size**

-Small or Large

Time code



- **Enable**

- Time code Display (off/LTC/DVITC, SDI only)

- **Position**

- Time code display position selects (L-T, C-T, R-T, L-B, C-B, R-B)

- **Size**

-Time code size select. (Small, Middle, Large)

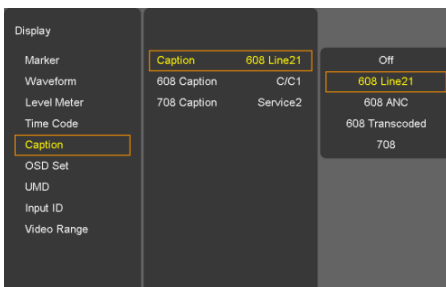
- **Transparency**

- Disable blending Time code background with video image. (0%, 25%, 50%, 75%, 100%)

- **DVITC Line**

-Auto, Line 1 ~ 31

Caption



- **Caption**

-608 Line21, 608 ANC, 608 Transcoded, 708 mode Select

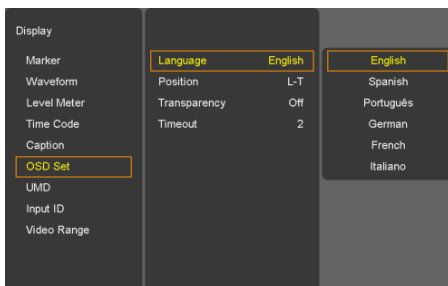
- **608 Caption**

-608 Caption mode Select. (C/C1, C/C2, C/C3, C/C4, TEXT1, TEXT2, TEXT3, TEXT4, OFF)

- **708 Caption**

-708 Service mode Select. (Service 1/Service 2)

OSD Set



- **Language**

-Select a language for the menus to appear in. (English, Spanish, Portuguese, German, French, Italiano)

- **Position**

- L-T, R-T, C, L-B, R-B

- **Transparency**

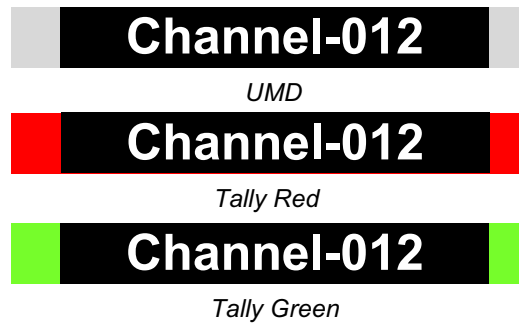
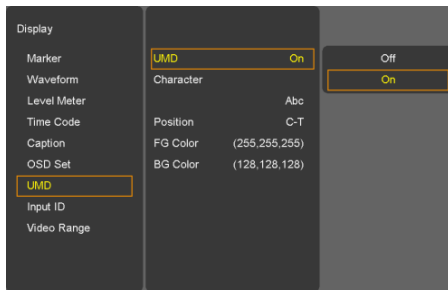
- Disable blending OSD background with video image.

- **Timeout**

- OSD gone time setting. (3~200)

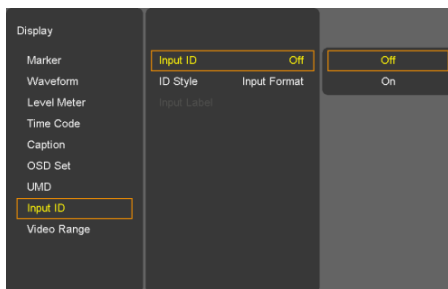
DISPLAY MENU

U.M.D



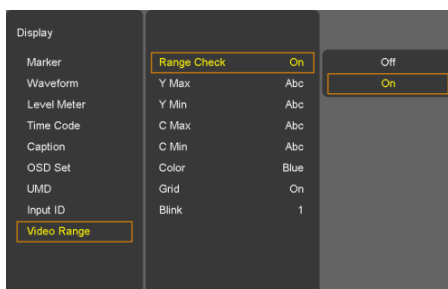
- **UMD**
 - UMD display on/off
- **Character**
 - UMD Character Select
- **Position**
 - UMD display position select. (L-T, C-T, R-T, L-B, C-B, R-B)
- **FG Color**
 - UMD Character color Select (RGB_255_192_128_0_Transparent)
- **BG Color**
 - UMD BG color Select (RGB_255_192_128_0_Transparent)

Input I.D.



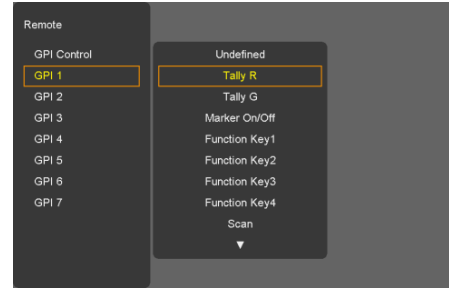
- **Input ID**
 - source Message display.
- **ID Style**
 - select "Input Format"/"Custom Label"
- **Input Label**
 - Display user made name instead of input source name on source OSD and message OSD.

Video Range



- Range Check: Range Check on/off.
- Y Max: Maximum luminance level.
- Y Min: Minimum luminance level.
- C Max: Maximum chroma level.
- C Min: Minimum chroma level.
- Color: Black/Blue/Red/Green
- Grid: Grid line on/off
- Blink: Y/C Min-Max to blink. (0~7)

REMOTE MENU



GPI Control & GPI

- For allocating functions to particular GPI pins.
- When remote control operations are to be performed using the GPI Controller.
- GPI Control: GPI function Enable/Disable
- GPI 1 ~ 7

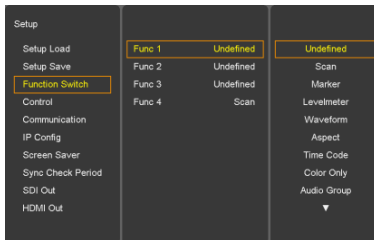
GPI Function	Description
Undefined	Not set (no function allocated)
Tally R, Tally G	For lighting up the Red or Green tally lamp.
Marker On/Off	Displays the marker.
Function 1~4	Activates FUNCTION 1~4 buttons
Scan	Over Scan/Zero Scan/Under Scan/ Pixel to Pixel
Aspect	Sets the aspect ratio of the images
Waveform	Activates WAVRFORM & Vector Scope (SDI & HDMI Only)
Aspect Marker	Marker size Select.
Area Marker	Area Marker size Select.
Center Marker	Displays the center marker.
Input CVBS 1, Input SDI1, Input SDI 2, Input HDMI	Switches the input source.
Menu Key, Enter Key, Up Key, Down Key, Left Key, Right Key	Use the key function by GPI.
GPI 7 : Power Key(Fixed)	

SETUP MENU

Setup Load & Setup Save

- Setup Load: Load user saved values or default value
- Setup Save: Save user setting values at user 1, 2, 3.

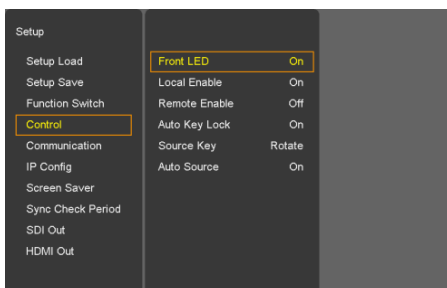
Function Switch



- Function 1~4: Select the function to be allocated to the FUNCTION 1~4 buttons

Function1~4 button	Description
Undefined	Not set (no function allocated)
Scan	Over Scan/Zero Scan/Under Scan/ Pixel to Pixel
Marker	Marker on/off
Level Meter	Level Meter on/off
Waveform	Waveform on/off
Aspect	Sets the aspect ratio of the images
Time Code	Time Code on/off.
Color Only	Execute Mono color or Blue Only
Audio Group	Select the extract the embedded audio group in SDI input.
Audio Channel	Select the extract the embedded audio channel in SDI input.
Audio Mute	Toggles sound status of speaker/headphone in mute.
Still image	Toggles picture status between motion and still image.
Caption	Caption on/off.
False Color	False Color on/off
Aspect / Area Marker	Aspect/ Area Marker Select
PIP func & Input	PIP func & input Select
Zoom	Zoom function on/off
Gamma Select	Gamma Select
WFM Line Select	WFM Line select function on/off
Peaking Filter	Peaking Filter on/off
Max Brightness	Max Brightness on/off

Control



- **Front LED**

- Front LED on/off

- **Local Enable**

- Power, up and down key is only worked, if Local enable is off.

- **Remote Enable**

- Select the controller of local or remote. If remote controller is selected, both local (front key) and remote are worked. However select local, local key only operated.

- **Auto Key Lock**

- If it does not work 10 minutes to lock automatically. Key button is operated after being pressed about 2 seconds

SETUP MENU

- **Source Key (Front “Input” Button/ Remote Controller “Source” Button)**

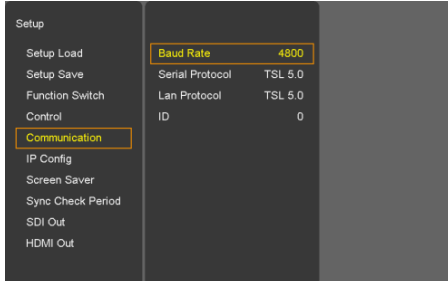
-Menu: Select the input signals to the input menu OSD.

-Rotate: Press Button to rotate the input source.

- **Auto Source**

- When there is no input signal, Auto Source change.

Communication



- **Baud Rate _ 422 Baud Rate**

- 2400/4800/9600/19200/38400/57600/115200

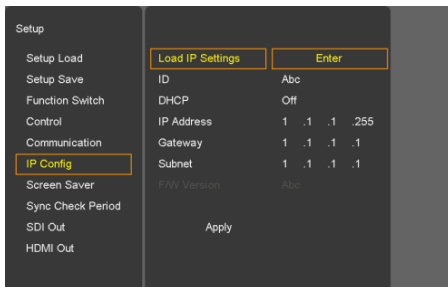
- **Serial Protocol / Lan Protocol**

-Basic / TSL 5.0 / TSL 4.0 / RDU/ Extension

- **ID (01~99)**

- If control each Board, must set ID numbers of each Board]

IP Config



- **Load Network Settings**

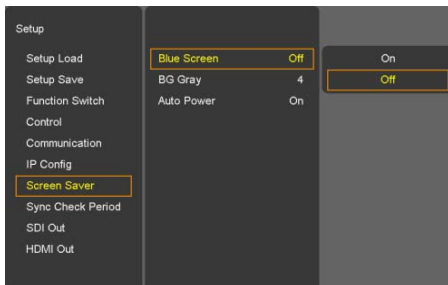
-ETHERNET cable connected after “Enter”. (ID/IP Address/Gateway/Subnet Load)

- **DHCP**

-DHCP on/off (Manual IP settings – DHCP on)

* “Apply” enter all settings after.

Screen Saver



- **Blue Screen**

- Enables screen saver functions to avoid panel burning.

- **BG Gray**

- Select gray level on besides display picture. (0~7)

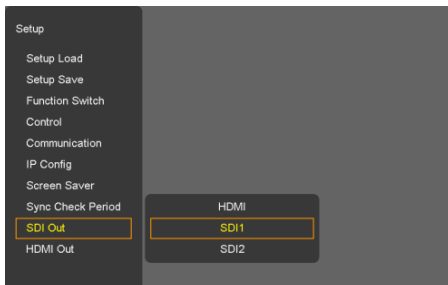
- **Power Save**

- DPMS (Display Power Management Signaling) Power Save Mode.

Sync Check Period

- Sync Check Period at when switching the input signal (10 ~ 300 ms)

SDI Out / HDMI Out



- **SDI Out**

-SDI Output signal select. (HDMI, SDI1, SDI2)

- **HDMI Out**

-HDMI Output signal select. (HDMI, SDI1, SDI2)

INFO MENU

Info	
Model	Abc
H/W Version	Abc
FPGA	Abc
F/W Release	Abc
Operating Time	Abc
Cal. ID	Abc

- Model, H/W Version, FPGA, F/W Release, Operating Time, Cal. ID

Input Support Mode

Support Signals

Items		Specifications
Supported Signals	Serial Digital Interface	HD SDI- 2.970Gbps
		SD HDI- 270Mbps
	HDMI	H Frequency Range : 20~82 kHz
		V Frequency Range : 55 ~ 90 Hz
		Maximum resolution : 1920x1080 60Hz
		Maximum pixel rate : 162 MHz
		DTV mode support : 720P, 1080i, 1080p
	CVBS	NTSC/PAL/SECAM

Support Timings

- SDI Input

SMPTE-428.1M	2048x1080P(24/25)
SMPTE-425M(3G)	1920x1080P(50/60)
SMPTE-260M	1920x1035i(60/59.94)
SMPTE-259M	1920x1080i(50)
SMPTE-274M	1920x1080i (50/59.94/60)
	1920x1080P (30Psf/25Psf/24Psf/30/25/24)
SMPTE-296M	1280x720P (24/25/30/50/59.94/60)
SMPTE-125M	480i(59.94)
ITU-R BT.601	576i(50)

