



## PBM-3G-V2

"QC & ENGINEERING" 3G Series

PBM-317-3G-V2

PBM-317-3G-10-V2

PBM-221-3G-V2

PBM-224-3G-V2

PBM-224-3G-10-V2



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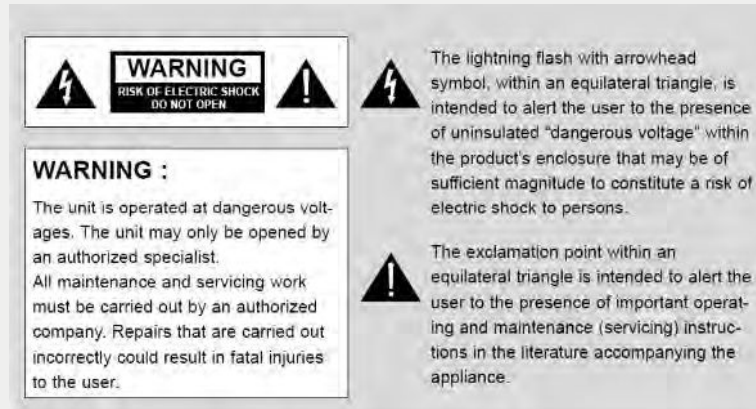


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## • PRECAUTION

*Before operating this unit, please read this manual carefully.*



### **WARNING:**

To reduce the risk of any electric shock, please do not remove the back cover. No user serviceable parts inside. Refer any service matters 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, clean or hit the Active Matrix LCD with object that may scratch, mark, or damage the Active Matrix LCD permanently.

### **CAUTION:**

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 or 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. Please read and observe the following safety points when installing and using your new product and save them for future reference.

1. **Read Instructions**
2. **Follow Instructions**  
*All operating and use instructions should be followed.*
3. **Retain Instructions**  
*The safety and operating instructions should be retained for future reference.*
4. **Notice Warnings**  
*All warnings on the product and in the operating instructions should be adhered to.*
5. **Cleaning**  
*Disconnect the unit from the mains before cleaning the unit. Do not use abrasive cleaners. Use a damp cloth ONLY for cleaning.*
6. **Water and Moisture**



*Do not use this product near water surface.*

**7. Transporting Product**

*This product should be moved with care. Quick stops, excessive force and uneven surfaces may cause the product damages.*

**8. Accessories**

*Do not use accessories not recommended by PLURA Inc. as they may cause hazards.*

**9. Ventilation**

*Do not block any of the ventilation openings.*

*Install in accordance with the manufacturer's instructions.*

**10. 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, consult your power supply company.*

**11. Power Lead Polarization**

*This product is equipped with a three-wire grounding-type cord. This is a safety feature. Do not use any other type power cord.*

**12. Power Cord Protection**

*Power-supply cords should be dressed so that they are not likely to be pulled or pinched by items placed upon or against them.*

**13. 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. This will prevent possible damage to the product due to lightning and power-line surges.*

**14. Grounding the product**

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

**15. Servicing**

*Do not attempt to service this product by yourself as opening or removing covers may expose you to dangerous voltages or other hazards. Refer all servicing to qualified service personnel.*

**16. Damage Service Required**

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

- A. *If the power-supply cord or plug is damaged.*
- B. *If the front LCD front has been damaged.*
- C. *If the product does not operate correctly by following the operating instructions. Use only the user control buttons any 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.*
- D. *If the product has been dropped.*



E. *If the product exhibits a distinct change in performance.*

**17. Safety Check**

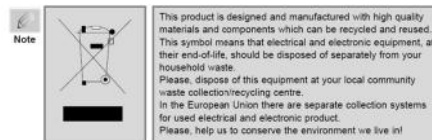
*Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition and the warranty seal is provided.*

**18. Mounting**

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

**19. Power**

*This set operates on an AC supply; the voltage is as indicated on the label on the Manual. This appliance must be earthed at all times through the chassis as well as through the power lead.*



## 1. OVERVIEW

PBM-3G-V2, Portable & Rack-mountable enhanced V2 monitor series consists of high-quality portable LCD panel, specifically designed for multiple video server inputs program & preview monitoring, camera output & return feed side by side and multiple camera preview wall monitoring. PBM-3G series designed for every possible broadcast mobile environment ensuring accurate color reproduction in accordance with SMPTE, EBU, REC 709 Broadcast Standards.

The standard calibration feature enables gamma, color temperature and white luminance level adjustments to meet all Broadcast standards. The PBM-3G is compatible with Plura (ICAC) calibration tool and provides 10 bit look up table (LUT) (1024 steps of grayscale).

It features

- LKFS AUDIO Measurement – Digital Loudness Audio Metering with selected channel measurement in LKFS scale.
- Dual Display with Dual Waveform / Vector measurement.
- Intelligent connection for Calibration & Alignment and Adjustable Colorimetry and Gamma Correction.
- As an optional feature the PBM-3G series offers Ember+ compliant control system capabilities, i.e., can be controlled by Lawo-VSM, BFE-Core or any other Ember+ compliant control system.





## 2. Advanced FEATURES

- PBM-317-3G-V2, 17" Portable & Rack-mountable Monitor - Enhanced Version
- 3Gb/s - 1080/60P
- 2 x Auto-detect HD-SDI, SDI with active loops (3Gb/s / 1.485Gb/s / 270Mb/s)
- Dual HD SDI YPbPr 4:2:2 - Dual HD SDI YPbPr/RGB 4:4:4 & 2K
- HDMI 1.4 HDCP 1.2, DVI, RGB, YUV, Y/C, Composite, UXGA
- Complies with EBU-3320 TECH, SMPTE-C and ITU-R BT.709 Standards
- LKFS Audio Measurement - Digital Loudness Audio metering in LKFS scale (ICAC) - Plura Intelligent Connection for Alignment & Calibration
- 3D LUT & Wide range of Gamma selection (0.8 - 3.0)
- ColourSpace PRO integration for advanced and accurate display profiling and calibration functionalities †
- HDR (High Dynamic Range) capabilities
- PQ (SMPTE ST 2084) & HLG (Hybrid Log Gamma)
- Closed Caption (608/708) - North American Market
- Teletext 801 & Subtitle OP-47 - Australia & NZ Market
- Cutting edge De-interlacing and Scaling Technology
- Ethernet & RS232 Remote Control
- TSL 5.0 UMD Support
- Internal Monitor Display (IMD)
- Ember+ compliant control system capabilities †
- Fast Response Time for high motion video
- RGB 12 Bit Digital Signal Processing
- Underscan/ Overscan/ Normal / Zoom
- Pixel to Pixel Mode, Tally, DC Operation
- False Color and Peaking Filter / Focus Assist
- Video Range Test with adjustable Y & C values
- Display LTC & DVITC time code with line select
- Internal Pattern Generator and Wall Control System
- Built In Stereo Speaker, 16 CH Audio Metering Display
- Analog & Embedded Audio Input, Digital Audio Decoding
- Color Temperature - User, VAR, Adjustable (9300K TO 3200K)
- Various and User defined Markers Display, Safe Area in HD & SD
- Picture and Picture (PaP), Picture in Picture (PiP) display / Blend
- Dual display modes with dual Wfm & Vect
- Display Advanced Waveform & Vector Scope simultaneously with line select
- Programmable Front Pushbutton Controls & GPI
- Intuitive OSD Display and Graphic based system
- More Plura Products information [click here](#)
- OPTIONS: Rackmount, Battery Mount, Carry Case

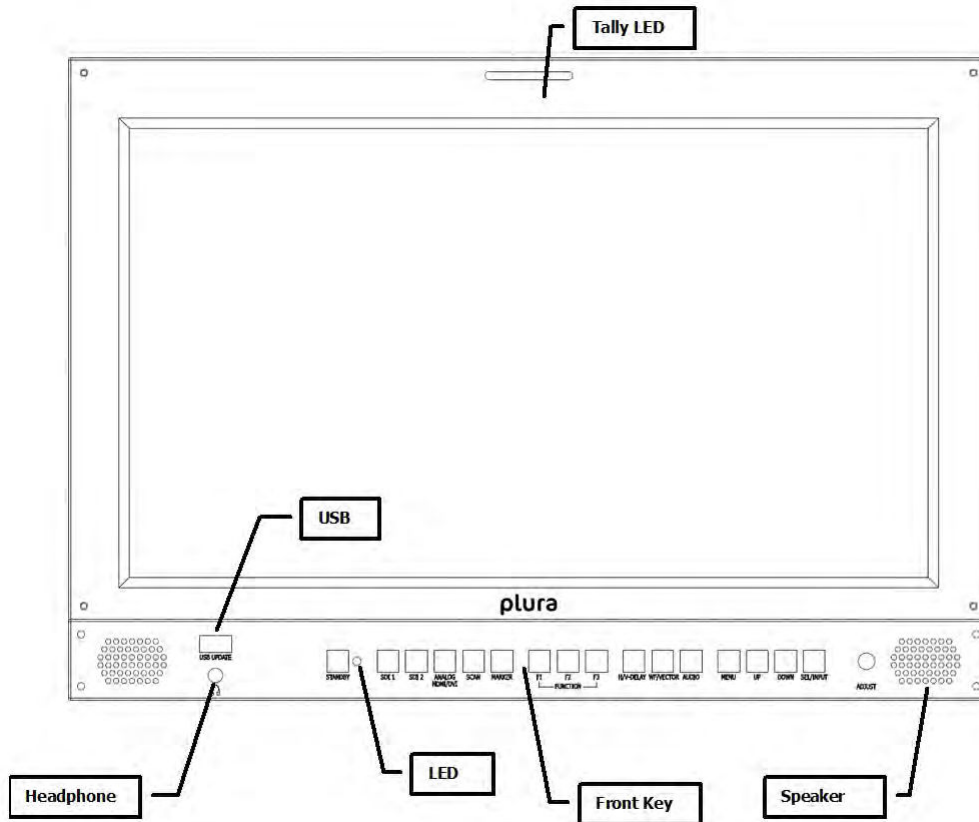
† Optional license



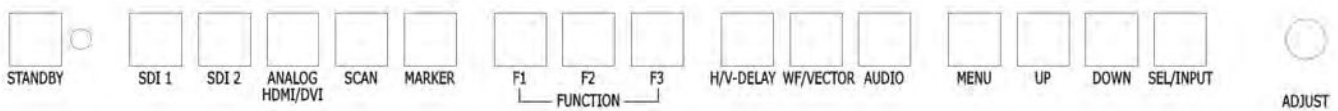
### 3. Functional explanation of each part

#### 1. Front Panel

- PBM-224-3G-V2



#### • Front Keys Arrangements



#### • Front Keys Operations

Key Name	Operation
Stand By	Power on/off Button. This button is operated after being pressed about 3 seconds.
SDI1	Select SDI 1 source
SDI2	Select SDI 2 source
Analog HDMI/DVI	Select analog source directly ('composite1' -> 'composite2' -> 'composite3' -> 'S-video' -> 'G.B.R' -> 'Y.Pb.Pr' -> 'Pc' -> 'HDMI' -> 'DVI')
Scan	executes Scan function (over-Scan -> Zero-Scan -> under Scan-> Pixel to Pixel)
Marker	Draw Marker on Screen (off -> 16:9 -> 4:3 ... -> 2.35:1)
Function 1	Executes functions as programmed
Function 2	Executes functions as programmed



Function 3	Executes functions as programmed
H/V-DeLay	Activates 'H & V' blanking display 'H DeLay' -> 'V DeLay' -> 'HV DeLay' -> off
WF/Vector	Activates Waveform & Vector Scope (SDI only) SETUP Menu Waveform format selection
Audio	Activates Audio Level Meter
Menu	Activates main OSD menu. Navigates higher menu in main OSD menu. Stops auto frequency searching. Exits OSD menu.
UP	Increases Audio volume of speaker. Increases values of user menu in main OSD menu. Executes function (by OSD help commands) in main OSD menu.
Down	Decreases Audio volume of speaker. Decreases 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. Executes functions (by OSD help commands) in main OSD menu.

- USB Port**

Utilized for Firmware and FPGA update

- Front Panel Operations**

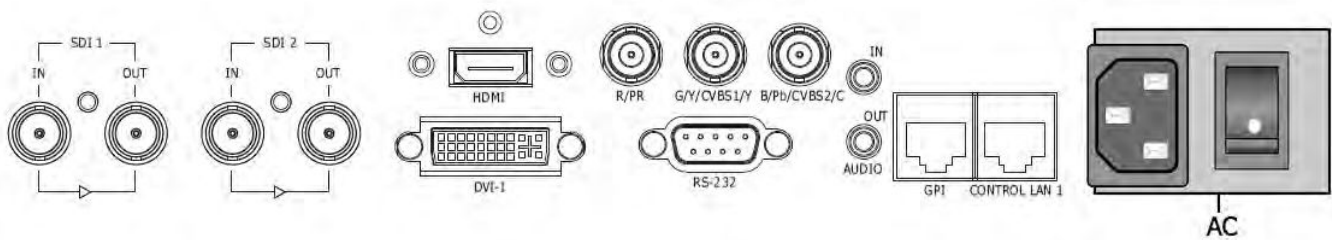
GREEN Led is ON when any LED button is selected or Power is ON  
RED led is ON when monitor is in stand-by mode

- Speaker Out**

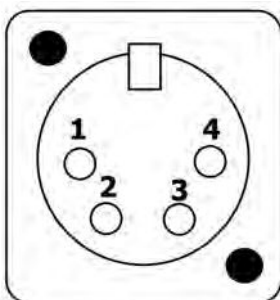
Speaker R out	8 ohms315%, Max 2W + 2W
Speaker L out	

## 2. Rear Panel

- Connection Details**

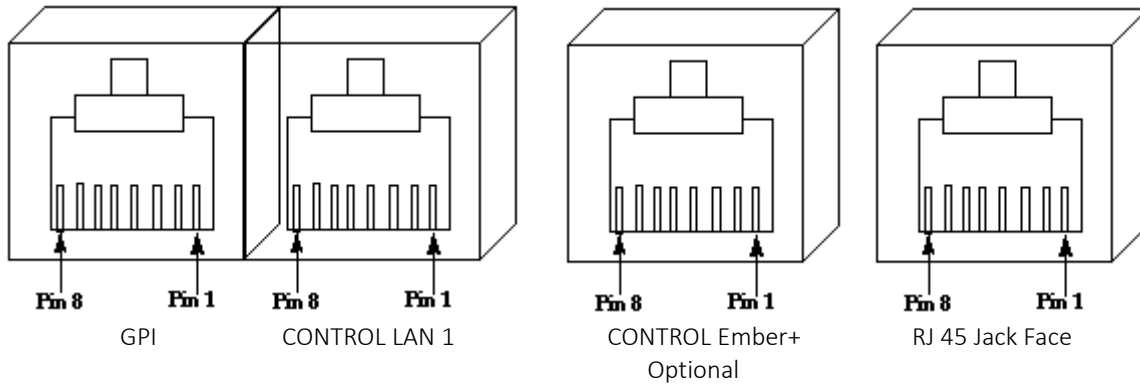


- DC Battery IN**



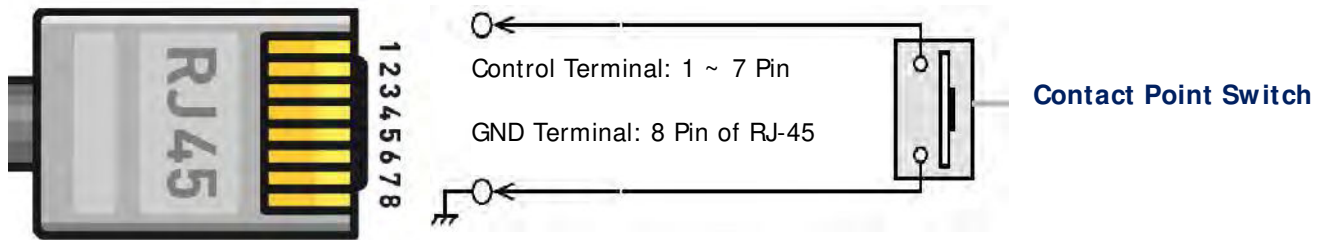
PIN No.	Description
1	GND
2, 3	N/A
4	+ 12V

• **RJ-45 - GPI, Control LAN (Ember+-OPTIONAL)**



**Remote PIN Assignment**

8 Pin	Common (GND)	4 Pin	GPI 4 Port
7 Pin	GPI 7 Port- (Power on/off)	3 Pin	GPI 3 Port
6 Pin	GPI 6 Port	2 Pin	GPI 2 Port
5 Pin	GPI 5 Port	1 Pin	GPI 1 Port



• **Interface description**

Interface	Description
SDI 1 IN SDI 2 IN	HD SDI / SD SDI input
SDI 1 OUT SDI 2 OUT	SDI 1, SDI 2 Loop out
RS-232 IN	update/Multi control/auto color calibration
RS-232 OUT	Multi control out
HDMI	High-Definition Multimedia input
DVI-I	DVI-I type Digital / analog Pc-RGB Video input High-Definition Multimedia input compatible
CVBS1/Pr/G IN CVBS2/Y/R IN CVBS3/Pb/B IN	GBr (SoG sync) input Y, Pb, Pr component Video input CVBS / composite input
Audio IN	DVI-I/component/GBR/composite Audio input



Audio OUT	Audio Monitor out
AC IN	AC 90V ~ 240V, 50Hz/60Hz
DC IN	DC 11V ~ 17V
CONTROL LAN 1	Network System Control
CONTROL LAN2	EMBER+ OPTIONAL
GPI	GPI 1 ~ 7 control Port

## 4. MENU OVERVIEW

In this system menu, there are several ways to maneuver the menu settings. Most menus consist of three levels to select the necessary option, but some settings require greater depth. If you press the **MENU** button, 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.

### 1. To show and remove the Menu

Press the **MENU** button to display the menu. Press the **MENU** button again to hide the menu.

### 2. To go to the next level

Press **SEL/INPUT** button.

### 3. To go back to the previous level

Press **MENU** button



### 4. 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.

## 5. BASIC OPERATION

### 1. Turning On the Monitor

1. Firstly, make sure you have connected the AC power cord or DC XLR connector. The monitor will switch to standby or power on mode. If the monitor is in standby mode, press the ST-BY button to



turn on the monitor.

2. Select the source by using **SEL/INPUT** button on Keypad in front of monitor

## 2. Volume Adjustment

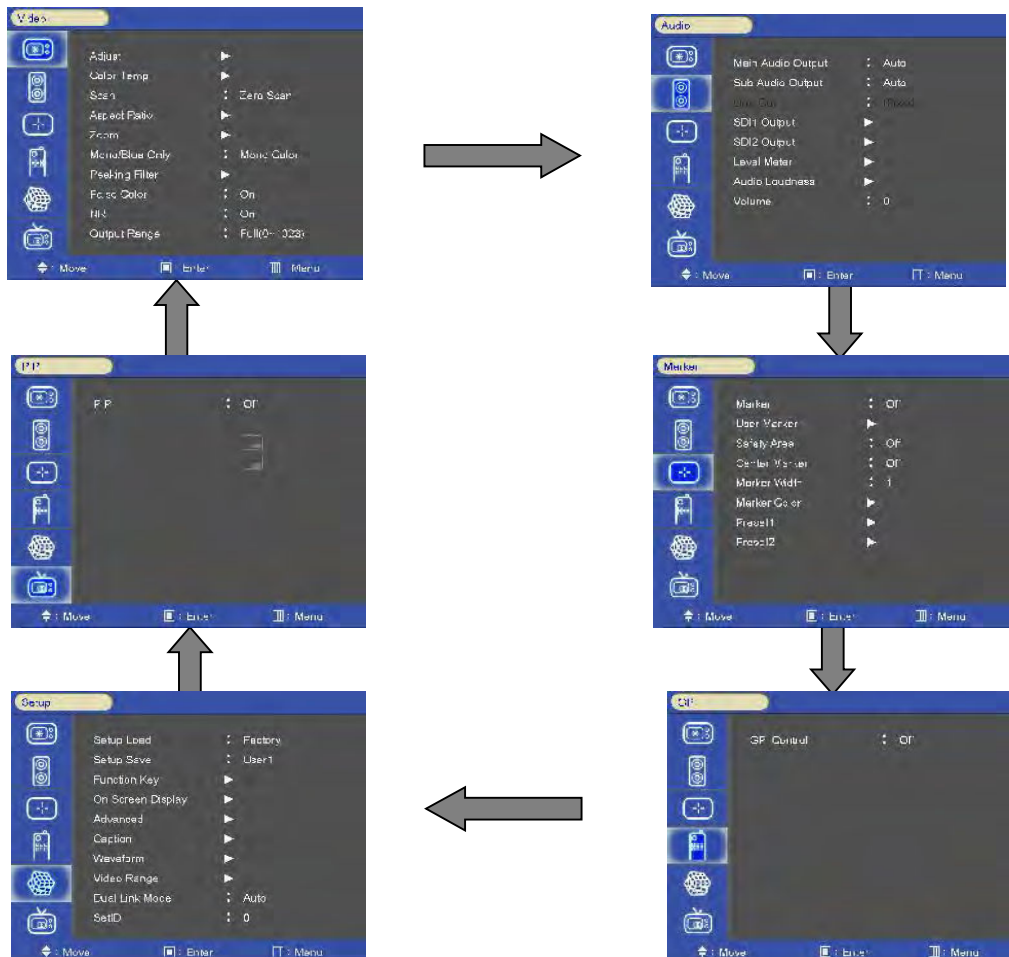
1. Press the **ADJUST** button on Keypad.
2. Press the **MENU** button on Keypad.  
- OSD Audio menu -> Volume menu.



# 6. On Screen Menus Selection and Adjustment

## 1. How to adjust the OSD screen

1. Press the **MENU** button and then **UP/DOWN** button to select each menu.
2. Press the **SEL/INPUT** button and then use **UP/DOWN (SEL/INPUT)/MENU** button to display the available menu.



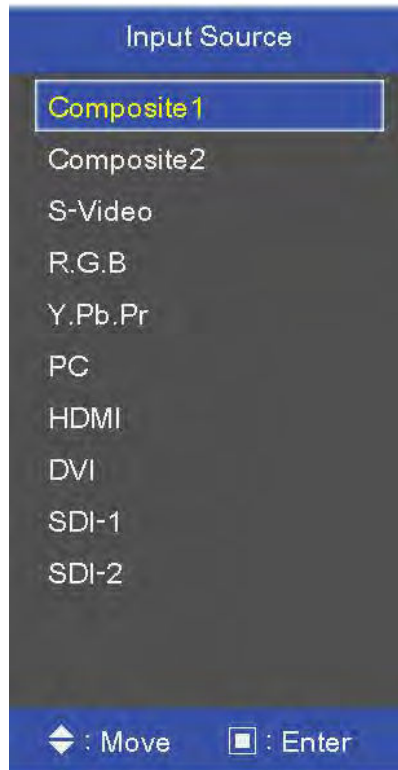
- The monitor's OSD (On Screen Display) may differ slightly from what is shown in this manual.



## 7. SELECT VIDEO INPUT

### 1. How to Select Video Source by OSD

1. Press the **SET/INPUT** button and then **UP/DOWN** button to select the required video source.
2. Press the **SET/INPUT** button to go to select the desired video source.
3. If Input Name is enabled, The **SET/INPUT** button will show the input name previously programmed instead of the source name.



## 8. VIDEO MENU OPTIONS

### 1. Adjust

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



## 2. Color Temperature & Color Space Control

- For Setting the Color temperature or adjusting RGB gain value
- User (User setting RGB gain value), VAR (3200K - 9300K), Often used value (9300K, 6500K, 5400K,3200K)



Color Space: BT.709/D-Cinema/User1/User2/User3

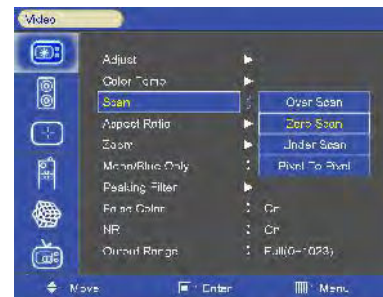
- Users 1-3 are predefined Cal files that can be imported Using the import users 1-3 selections.
- Users 1-3 Cal files can be generated with ColourSpace PRO calibration system or any other third-party display profiling and calibration solution.

Please note: - when utilizing User1-3 preset, gamma, CameraLog and HDR settings will be unavailable.



## 3. Scan

- Select desired scan mode.
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 - Video input will match the video display resolution (NO Scaling).



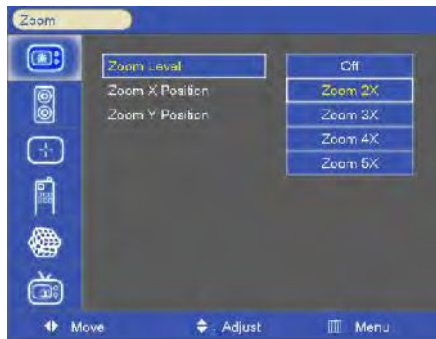
## 4. Aspect Ratio

- For setting the aspect ratio.
1. Full Screen; The video input will be scaled to the max panel resolution.
  2. Full Screen, 16:9, 4:3, 14:9, 13:9, 1.85:1: The video will be displayed based on the selected aspect ratio.
  3. Function key can be assigned to the aspect ratio and will be rotating through this sequence, Pixel to Pixel, Full Screen, 16:9, 4:3, 14:9, 13:9, 1.85:1, 2.35:1





## 5. Zoom



- Can see the enlarged video by (2X, 3X, 4X, 5X) ratios.
- If user select the Zoom 2X, as shown in this example yellow box in picture.
- Press Select or enter button, user can see the enlarged picture.
- Menu key or exit key escape the zoom mode.
- Example (3X3)
- Zoom X position: coordinate of video image's column position.
- Zoom y position: coordinate of video image's row position.

## 6. Mono/Blue Only

- Mono color: For selecting monochrome images.
- Blue Only: Blue Video channel is enabled



## 7. Peaking Filter

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





### 8. False Color

- False Color on/off



### 9. NR (Noise Reduction)

- Noise reduction on/off. (Noise Reduction on/off (NR applies to Video signal HD-SDI, Composite, S-Video, Y/Pb/Pr)



## 10. Output Range

- Video output range.
- Full RGB means the ability to show 0-1023, or the full range which is ideal for PC sources.
- Limited RGB has a range of 16-940 which is ideal for video sources.

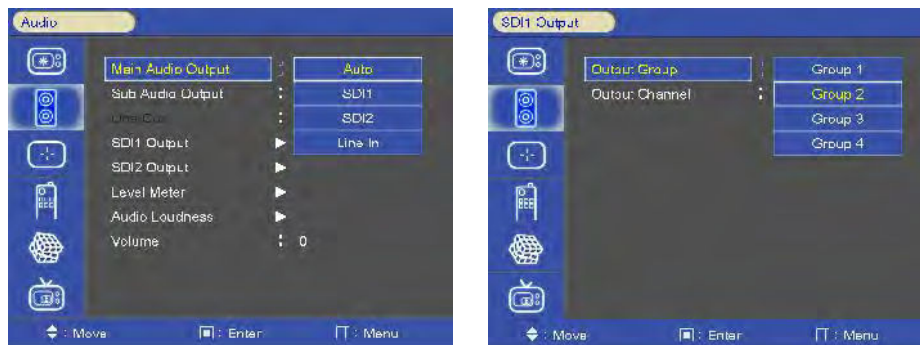


## 9. AUDIO MENU OPTIONS



### 1. SDI 1/ SDI 2 Audio Group

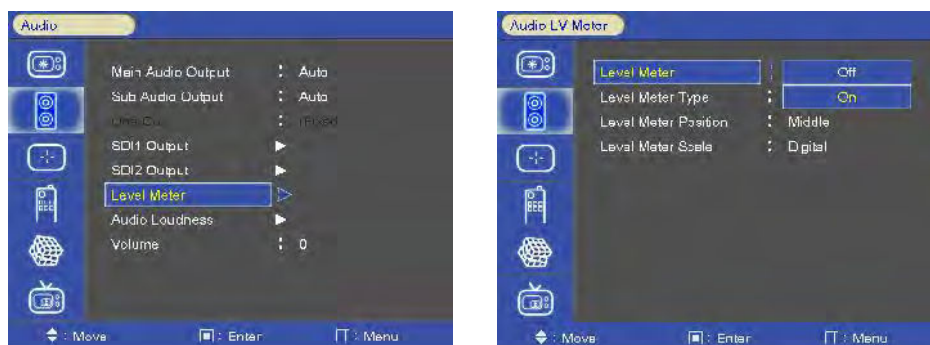
- Select primary or secondary Audio group to extract. (Group 1-4)



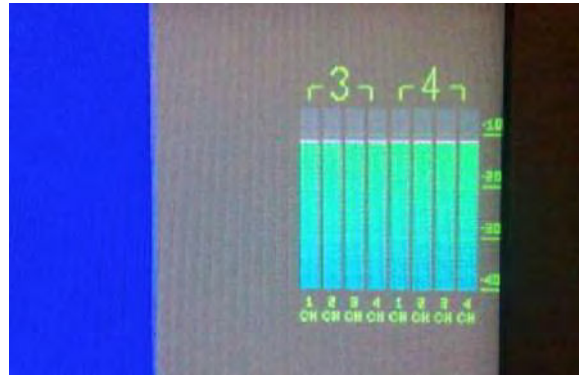
### 2. SDI 1/ SDI 2 Audio Output Channel

- Audio output channel source select. (channel1-4, channel1/2, channel3/4, off)

### 3. Level Meter



- Display the Audio level meter on screen in SDI input.
- Audio level meter cannot be displayed with OSD.
- SDI input can support 16 CH embedded Audio, other inputs can only support 2 CH Audio



#### 4. Level Meter Type

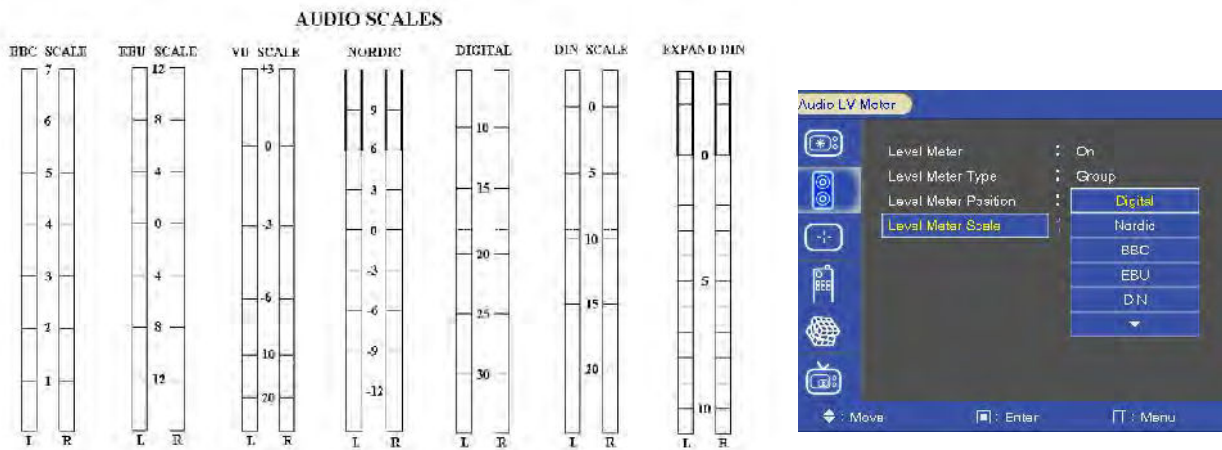
- Pair: respectively channel with right and left display
- Group: respectively group display

#### 5. Level Meter Position

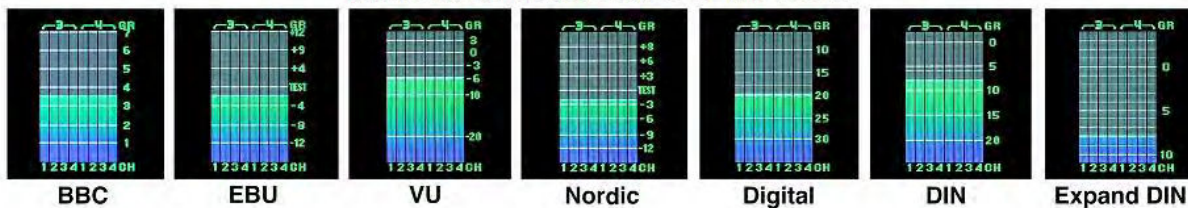
- Level Meter Position selects. (TOP/Middle/Bottom)

#### 6. Level Scale

- Level Meter Scale mode selects. (BBC / EBU / VU / NORDIC / DIGITAL / DIN / EXPAND DIN)

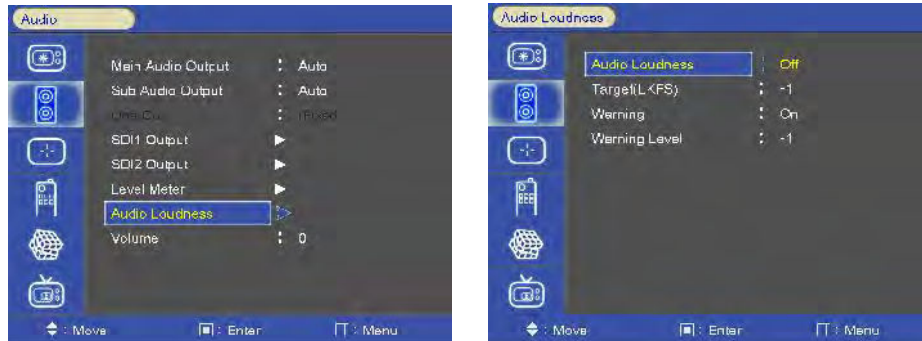


Audio Level Meter Scales : PBM-3G-V2



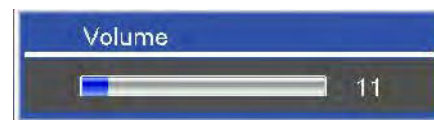
## 7. Audio Loudness

- Audio Loudness setting on/off & set target LKFS



## 8. Volume

- Adjust the speaker or headphone Volume level (0-32)



# 10. Marker MENU OPTIONS



## 1. Marker & User Marker

- Marker: 16:9, 4:3, 14:9, 13:9, 1.85:1, 2.35:1, 1.85:1&4:3, User1, User2, User3 (Customized markers).
- User Marker: The user defined Marker size setting.



## 2. Safety Area



- Safety Area: Draw dotted line Marker on screen.
- (16:9 95/93/90/88/80%,
- 4:3 95/93/90/88/80%,
- EBU Action 16:9/14:9/4:3,
- EBU Graphic 16:9/14:9/4:3)

## 3. Center Maker

- “+” Marker on center of screen



#### 4. Marker Width

- Marker line thickness setting. (0~10)



#### 5. Marker Color

- Marker Line Color: Select Marker line color (White, Yellow, Blue, RED, Black)
- Safety Line Color: Select Safety line color (White, Yellow, Blue, RED, Black)
- Marker Back Color: Select Marker Back Color. (None, Gray, White, Blue, Black)
- Safety Back Color: Select Safety Back Color. (None, Gray, White, Blue, Black)
- Marker BK Blend Color: Select Marker blending level. (0 ~ 5)
- Safety BK Blend Color: Select Safety blending level. (0 ~ 5)



#### 6. Preset1 & Preset2

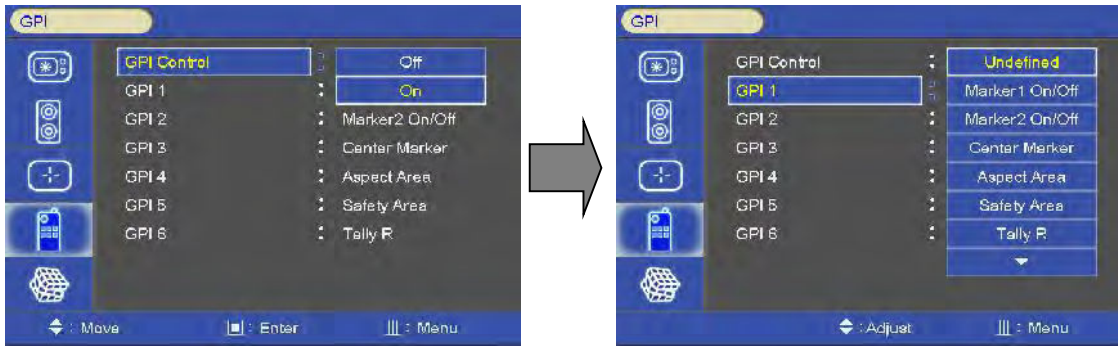
- Markers can be set as preset 1 & 2 and be triggered by GPI controller.
- GPI preset markers can only be utilized by GPI controller.





# 11. GPI MENU OPTIONS

## 1. GPI Control & GPI#



- For programming selected functions to particular GPI ports.
- GPI Controller can be utilized to remotely control the monitor.
- GPI Control: GPI function Enable/Disable
- GPI 1 ~ 7

GPI Function	Description
Undefined	Not set (no function allocated)
Marker1 On/Off, Marker2 On/Off	Displays the markers which have been set by the GPI PRESET1, 2 items.
Center Marker	Displays the center marker.
Aspect Area	For setting the aspect ratio.
Safety Area	Displays the Safety Area.
Tally R, Tally G	For displaying the Red, Green or Amber* tally LED. *(when you select R & G at the same time)
Input SDI1, SDI2, SFP, HDMI	Switches the input source.
Menu Key, Enter Key, Up Key, Down Key Left Key, Right Key	Use the key function by GPI.
Function key1 ~ 3	Function key1 ~ 3
H/V delay	H delay, V delay, HV delay, Off
Aspect	Full Screen, 16:9, 4:3, 14:9, 13:9, 1.85:1, 2.35:1
GPI 7: Power Key (Fixed)	



## 12. SETUP MENU OPTIONS

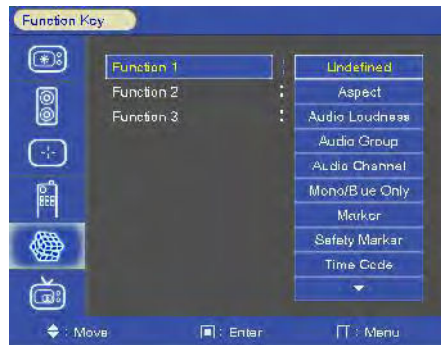


### 1. Factory Default

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

### 2. Function 1~3

- Function 1-3: Select the required function to be allocated to the FUNCTION Keys 1, 2, 3.



Function1~3 button	Description
UNDEF	Not set (no function allocated)
Aspect	Sets the aspect ratio
Audio LV Meter	Audio LV Meter On / Off
Audio Group	Select the embedded audio Group in SDI input.
Audio Channel	Select the embedded audio channel in SDI input.
Audio mute	Toggles between mute & un-mute speaker/headphone.
H/V delay	H delay, V delay, HV delay, Off
Mono/Blue Only	Execute Mono color or Blue Only
Gamma Select	Select Gamma curve.
Marker size	Select Marker size



Safety Marker size	Select Safety Marker size
Marker Prese1/2	Marker Preset 1/2 on/off
Waveform	Waveform on/off
Peaking	Peaking on/off
False Color	False Color on/off
UMD	UMD on/off
Caption	Caption on/off
HDR	HDR on/off (Available in selected models ONLY)
Time Code	Time Code on/off

### 3. On Screen Display

- **OSD Option**

- OSD Transparency: Disable blending OSD background with video image.
- OSD Time out: OSD desertion time setting. (3-200)
- OSD Position: L-T, R-T, C, L-B, R-B



- **Time code**

- Time code Enable: Time code Display (off/LTC/DVITC, SDI only)
- Time code size: Time code size select. (Small, Middle, Large)
- Time code Position: Time code display position selects (L-T, C-T, R-T, L-B, C-B, R-B)
- Time code Transparency: Disable blending Timecode background with video image. (0%, 25%, 50%, 75%, 100%)



- **Under Monitor Display (color: Tally R/G mode action)**

**Channel-12**

**Channel-12**

**Channel-12**

**UMD**

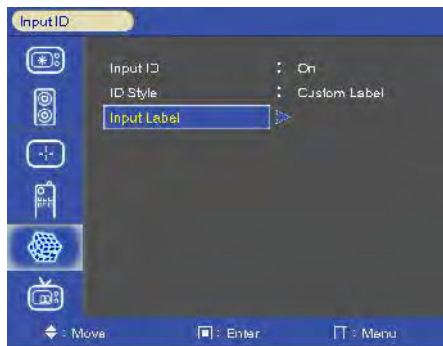
**Tally Red**

**Tally Green**

- UMD: UMD display on/off
- UMD Character: UMD Character Select
- UMD Position: UMD display positions select (L-T, C-T, R-T, L-B, C-B, R-B)
- UMD FG Color: UMD Character color Select (RGB\_255\_192\_128\_Transparent)
- UMD BG Color: UMD BG color Select (RGB\_255\_192\_128\_Transparent)

- **Input ID**

- Input ID: source Message display.
- ID Style: select "Input Format"/"Custom Label"
- Input Label: Custom made ID input source which will be displayed on source OSD and message OSD



- **SDI Signal State**

- SDI Signal State: on/off as shown on the pic below



- **Color Space Label**

- Color Space Label: User 1,2 & 3 color space LUT ID can be customized and will be displayed on OSD

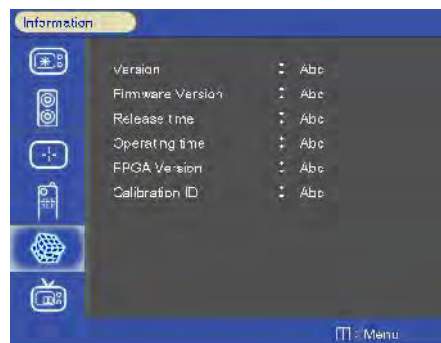
#### 4. Advanced

- Information, Control, Screen Control, Network Config, Fan Control, Protocol Setting & Software update



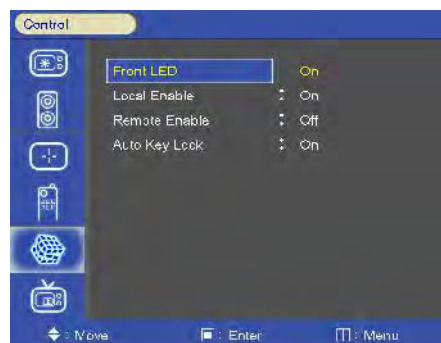
- **Information**

- Version, Firmware Version, Release time, Operating time, FPGA Version, Calibration ID



- **Control**

- FRONT LED: Front LED on/off
  - Local Enable: Power, up and down key is only operational, 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 operational. However, when local is selected, local key only operational.
  - Auto Key Lock: All keypad buttons will lock If there has been NO keypad operation for 10 mins. To unlock the keypad, you must press and hold down any button for 2 sec.



- **Screen Saver**

- When this option is ON, Blue screen will be displayed when “LOS” Loss of Signal.
- BG Gray: Gray level video will fill up the black area in graphic modes
- Power save mode: Utilizing “DPMS” Display Power Management Signaling, when this option is selected, the monitor will switch to standby mode when LOS is detected after 30 sec.

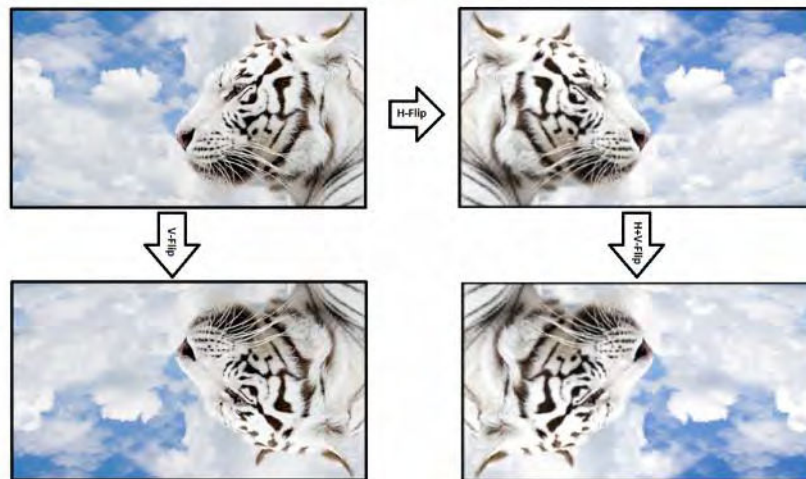
- **Screen Control**

- Reset Calibration, which would reset and erase any calibration LUT within the monitor. This is password protected. Please contact Plura technical team [tech@plurainc.com](mailto:tech@plurainc.com) for further information
- Backlight Adjust, to adjust panel backlight
- Inverter dimming Level select (0~100)
- Gamma Select levels (0.8 ~ 3.0)
- Internal Pattern. Different internal generated video signals available “White, RED, Green, Blue, Yellow, Cyan & Magenta” which can be displayed on the screen. When Auto Run is selected, it will run through all patterns in sequence.
- HDR Mode options as below.
  - OFF
  - PQ Rec 709
  - HLG Rec 709



Please Note: This option will be unavailable when User 1, 2 or 3 predefined color space is selected

- Flip function, can be set to H-Flip, V-Flip & H+V-Flip as shown in the example below



- **Fan Control**

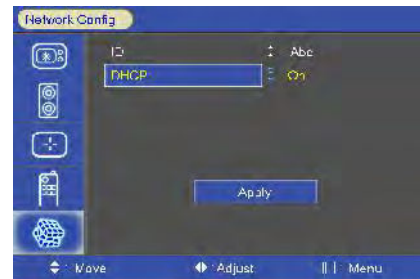
- Fan Control: Internal Fan Control option based on temperature sensor Auto / force on / force off
- Fan Active Temperature: Adjusts fan based on temperature in Celsius degree. ONLY applicable when the Fan Control setting is set to Auto.
- Hysteresis: Adjusts fan hysteresis temperature in Celsius degree. (1-10 )
- Shutdown: Monitor protection, monitor will shut down if inside PCB temperature exceeds 75 .



- **Control LAN1**

This will be applicable for Plura config LAN 1.

- DHCP: DHCP on/off (Manual IP settings - DHCP on)
- "Apply" to confirm all settings were applied.



- **Control LAN2 / Ember+ (Option)**

This will be applicable for Plura config LAN 2 Ember+ option.

- DHCP: DHCP on/off (Manual IP settings - DHCP on)
- "Apply" to confirm all settings were applied.

- **Protocol Setting**

- Multiple settings can be selected
- PLURA PSC 400/500
- TSL 5.0, using control LAN1
- TSL 4.0 using RS-232 port

- **Software Update**

Use this setting to update monitor Firmware, OSD & FPGA with the USB port



## 5. Caption For North American Market



- Closed Caption Mode: 608 Line21, 608 ANC, 608 Transcoded, 708 modes selection
- 608 Caption channel: C/C1, C/C2, C/C3, C/C4, TEXT1, TEXT2, TEXT3, TEXT4
- 708 Caption Service: Service 1/Service 2

## 6. Waveform

- Waveform Enable: Waveform, Vector Display on/off. (SDI only)
- Waveform Format: Waveform Mode select. (Rotation, Y, Cb, Cr, Y+Cb+Cr, G, B, R, G+B+R)
- Line Select: Used to select specific Vertical Line for Waveform/Vector scope.
- Line Number select: In WAVEFORM/VECTOR, use the Up/Down button or Adjust by Turning Right/ Left to select User's desired line.
- Line Display: off/on/5 sec
- Intensity: 1~63



Press the Waveform button to display the desired Waveform Mode

### Y-Pb-Pr Waveform



Y\_Pb\_Pr Waveform & Audio Level Meter & info Window & time code Display.

### Y-Waveform + Vector Scope



Waveform & Vector Scope & Audio Level Meter & info Window & time code Display.





### Dual Display, Dual WF/VT



SDI 1, 2 & Dual Waveform/Vector Scope & Audio Level Meter & info Window & time code Display.

### Y-Waveform + Vector Scope trans



Waveform & Vector Scope trans.

## 7. Video Range



- 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)



## 8. Dual Link Mode (SDI only)

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

## 9. Set ID

- Set ID is required for remote control access. Set ID range (01-99).



## 13. PIP (Picture IN Picture)

This unique Plura feature allow the user to display two programs or sources at the same time. Set up PIP size and position.

### 1. PIP ON/Off

- Set PIP function on/off.

### 2. Input Source

- PIP input Source can operate with different signal and type.
- Analog (composite1, 2, 3, Y.Pb.Pr, GBR, Pc) inputs + Digital (DVI, HDMI) + SDI (SDI1, SDI2) inputs
- SDI + SDI input PIP
- ex) AV + S-Video (X), DVI + SDI (O), SDI1+SDI2 (O)



	AV/PC	HDMI/DVI	SDI1	SDI2
AV/PC		X	O	O
HDMI/DVI	X		O	O
SDI1	O	O		O
SDI2	O	O	O	

### 3. Aspect Ratio

- Select PIP size and mode
  - PIP
  - PaP1\_side by side maintaining aspect ratio
  - PaP2\_side by side without maintaining aspect ratio





PIP



PaP1



PaP2

#### 4. Position

- Select the PIP corner position



#### 5. PIP Blend

- Manage the PIP blend ratio



#### 6. PIP Swap

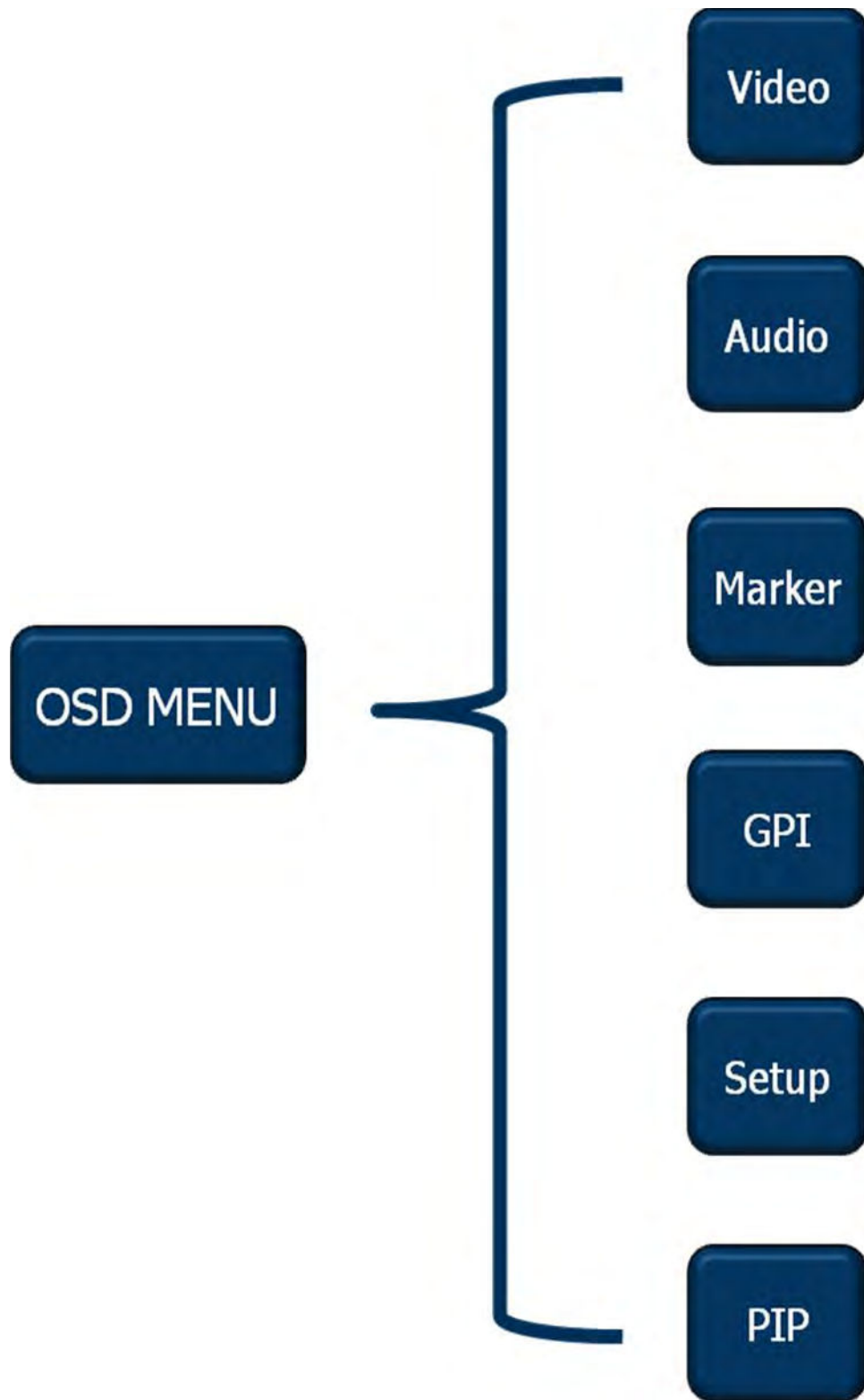
- PIP Swap option, you can exchange two programs or sources at the same time.

#### 7. Audio Select

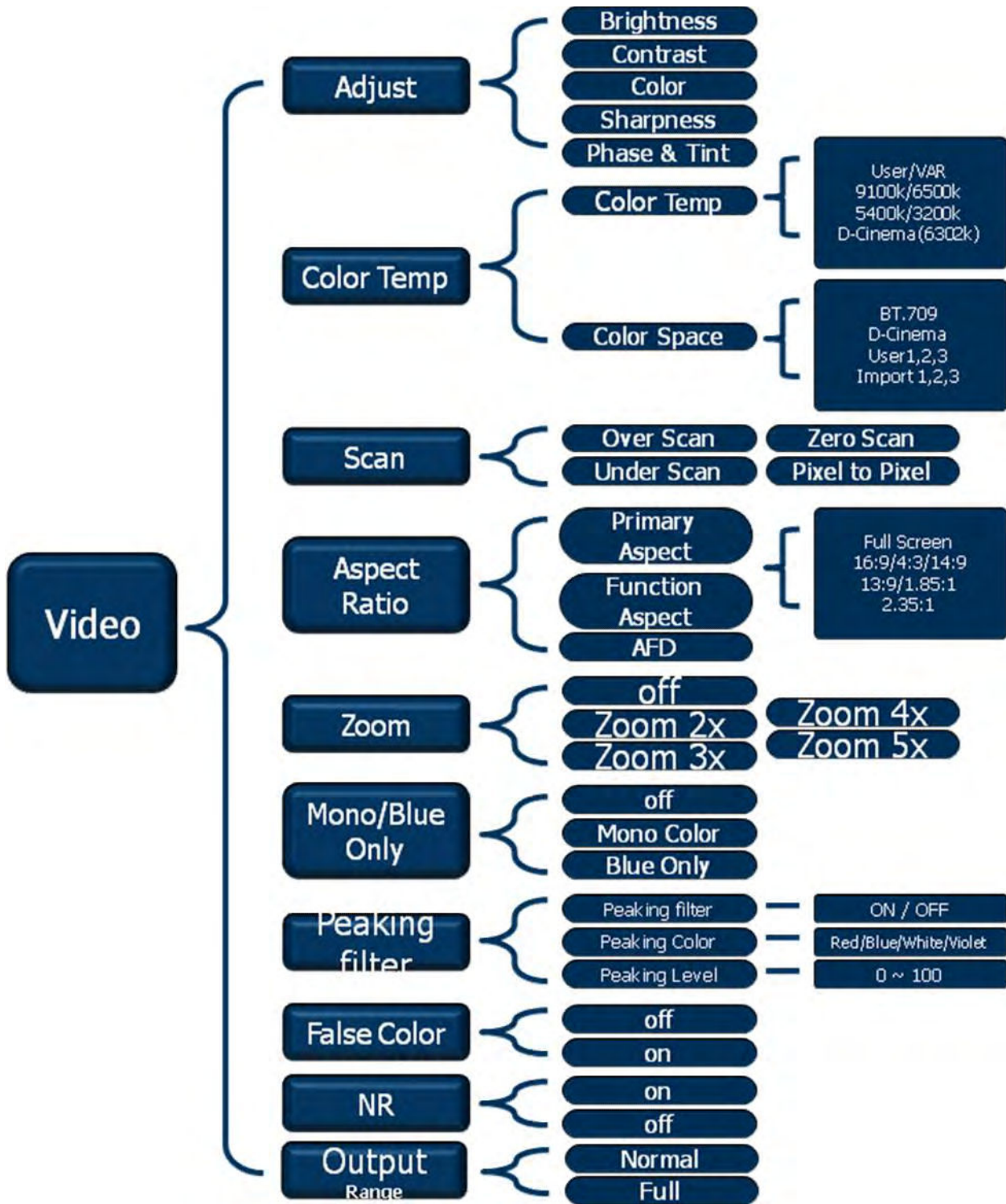
- Audio PIP Swap option, you can exchange the audio of two programs or sources at the same time.



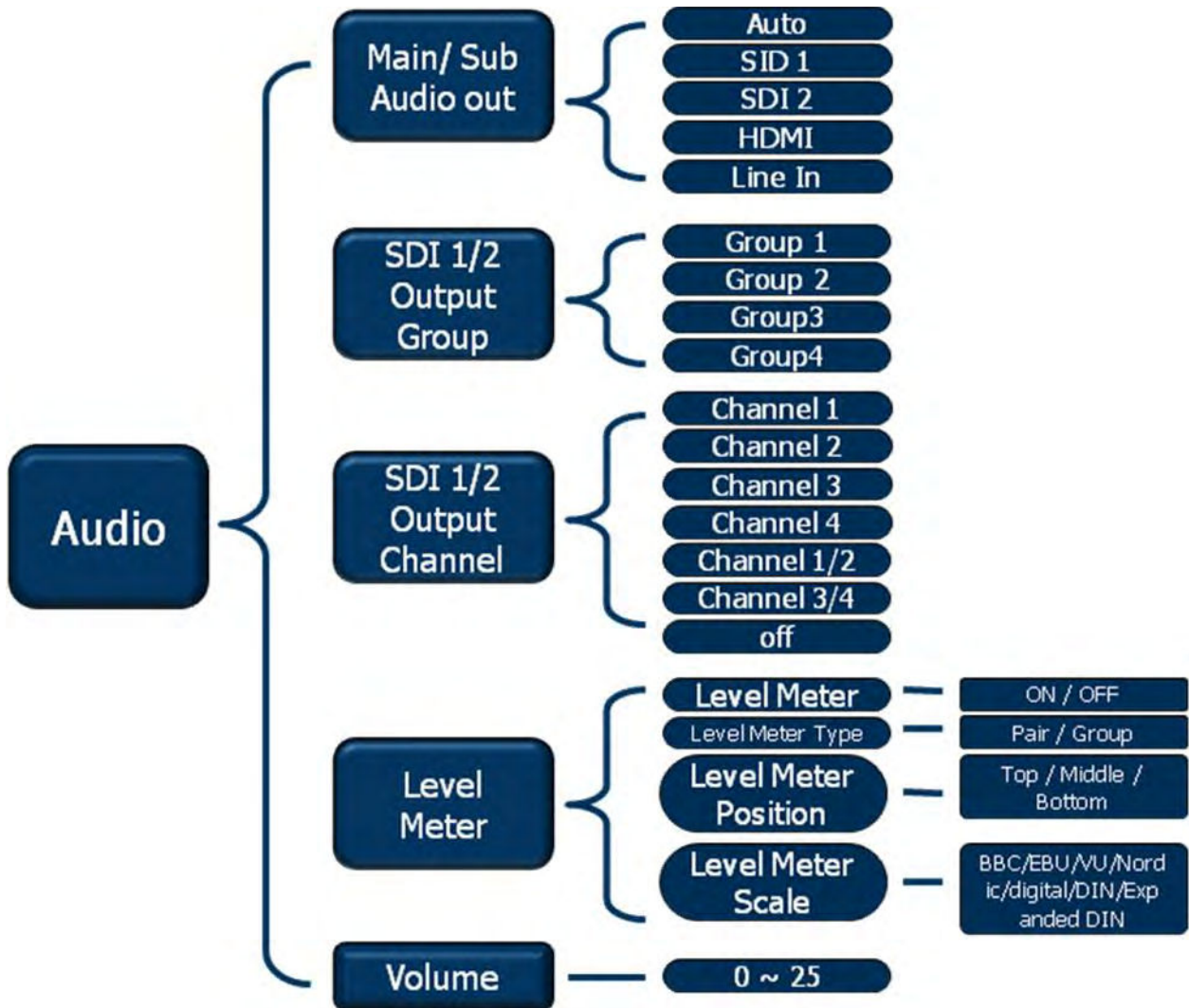
## 14. OSD TREE



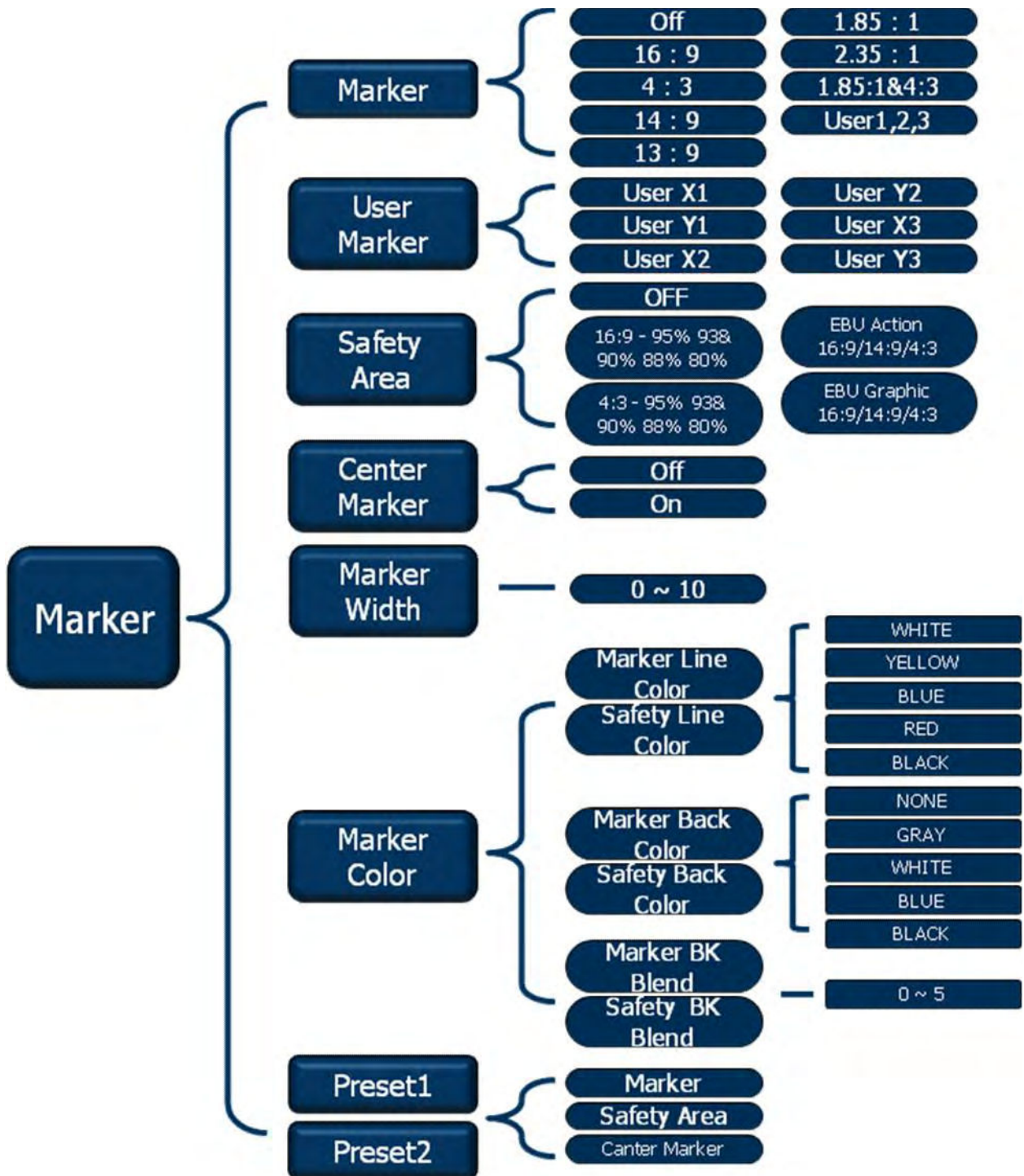
1. Video



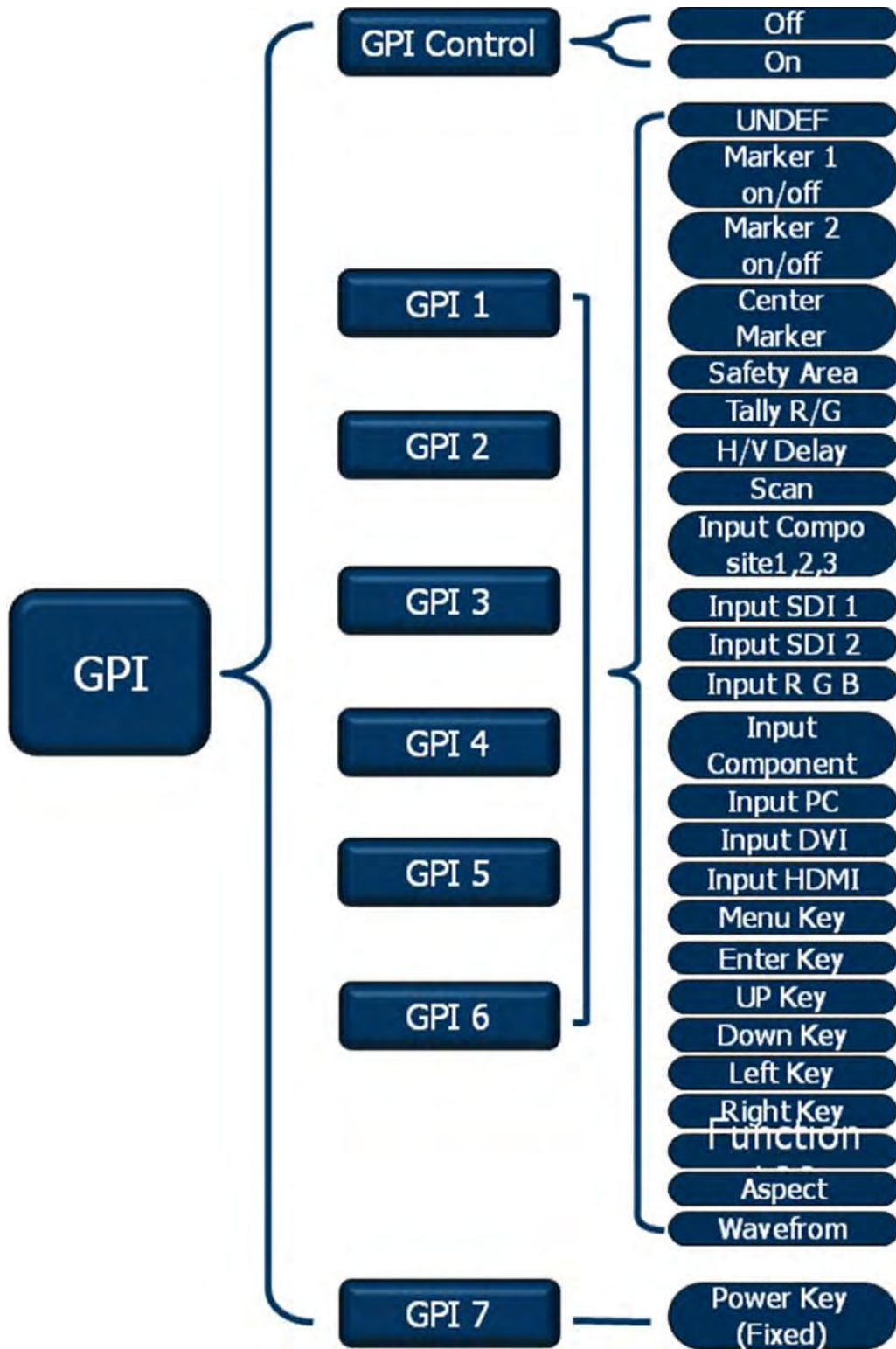
## 2. Audio



### 3. Marker

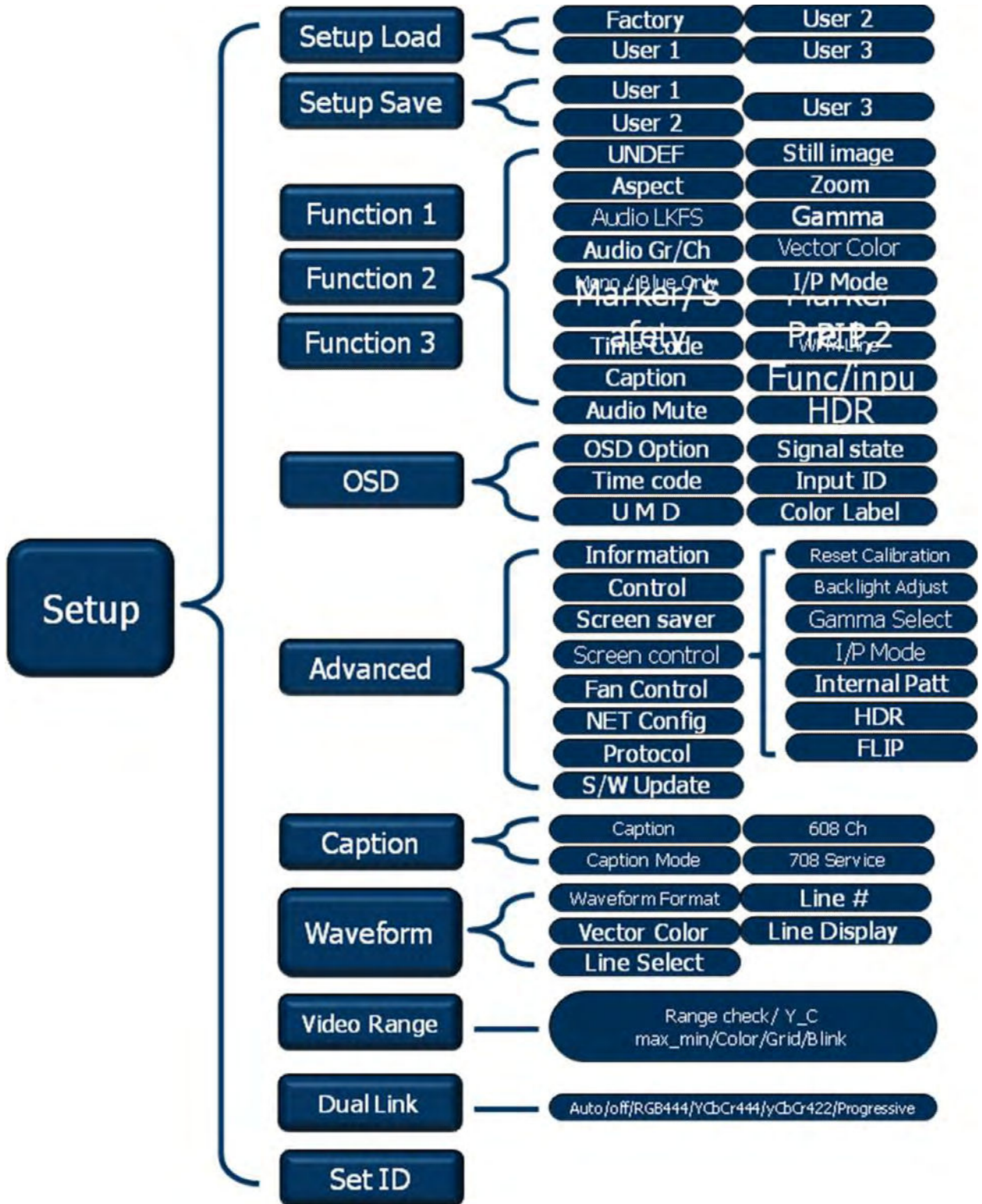


#### 4. GPI

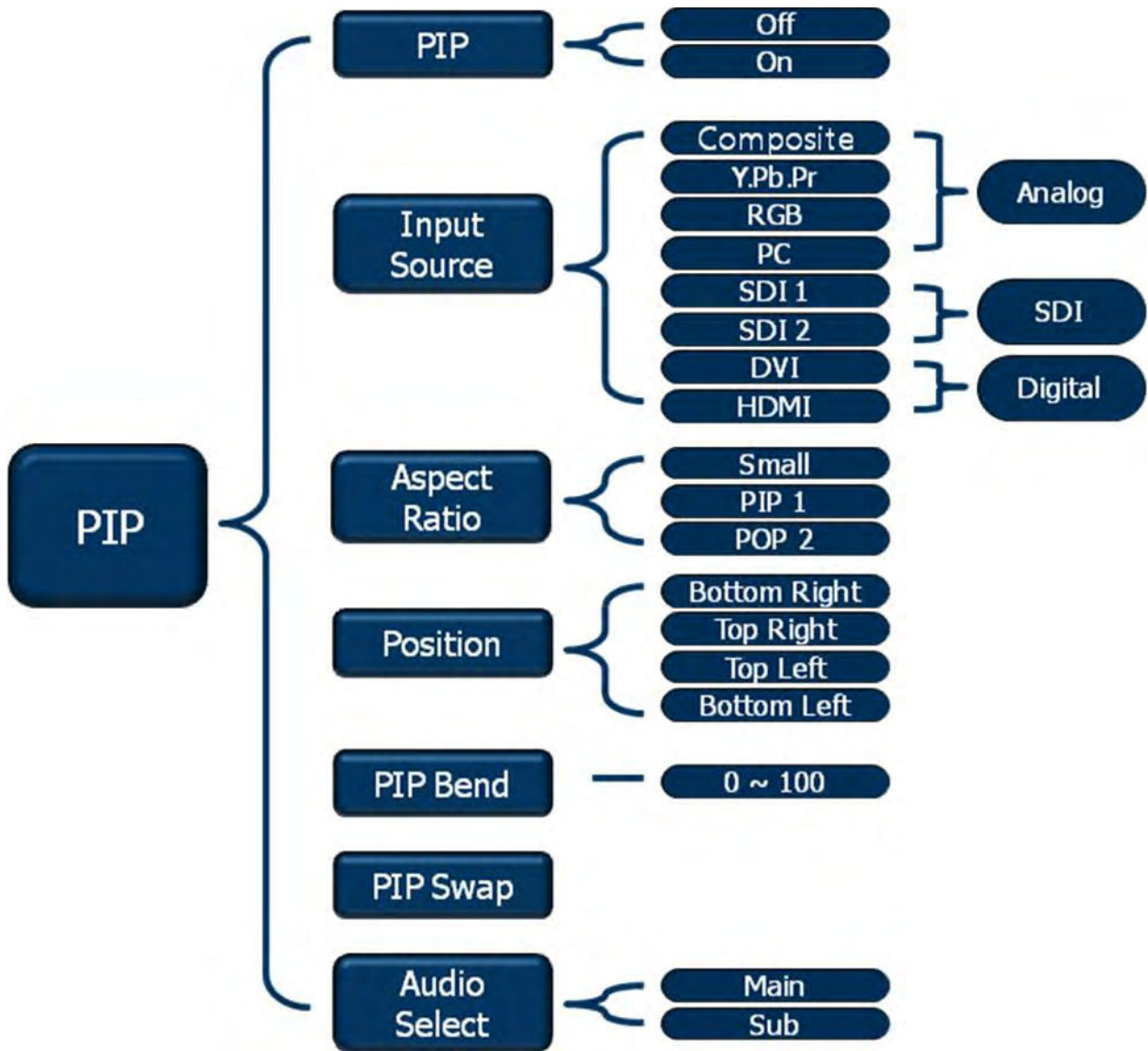




### 5. Setup



## 6. PIP



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