

**User Manual
for
Venus2 - Pro**

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Key Operation

MENU Key

- Displays OSD menu when OSD menu is not shown.
- Exit and hide OSD menu
- Cancels current adjustment and restore back to previous state.

SELECT Key

- Confirms current value during adjustment

UP Key

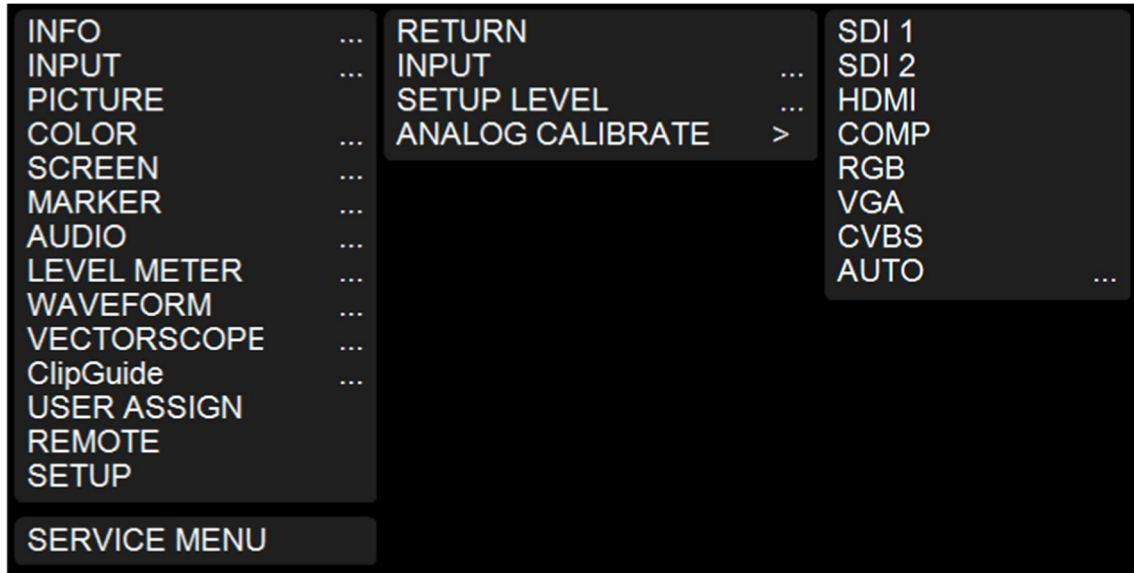
- Moves up cursor
- Increase value during adjustment
- Press and hold for continuous adjustment

DOWN Key

- Moves down cursor
- Decrease value during adjustment
- Press and hold for continuous adjustment

OSD Menu Layout

Menu consists of 3 level as below from left to right for deeper level.



To enter next level

Choose Level1 item and press SELECT key to enter Level2 items.

To exit from current level

Press MENU key or Choose RETURN menu.

INFO Menu

MODEL

Shows product model name "Venus2 Pro" as default

INPUT

Shows current selected video input port such as SDI 1 or HDMI

FORMAT

Shows current detected video format such as 1080/60i

COLOR TEMP

Shows current selected color temperature such as D65

RANGE

Shows current digital representation range such as LIMITED or FULL

LIMITED uses 16-235 in 8 bits representation.

FULL uses 0-255 in 8 bits representation.

VERSION

Shows current firmware version information.

INPUT Menu

RETURN

Return to Level 1 menu

INPUT

Selects an input port.

- **SDI1:** Selects SDI1 Input, SDI Out will be copy of SDI 1
- **SDI2:** Selects SDI2 Input, SDI Out will be copy of SDI 2
- **HDMI:** Selects HDMI
- **COMP:** Use 3 BNC Input as Component input (Y/Pb/Pr)
- **RGB:** Use 3 BNC Input as RGB input (R/Gs/B)
- **VGA:** Selects VGA port
- **CVBS:** Use 1 BNC input as CVBS (NTSC/PAL)
- **AUTO:** Scans for valid video format on selected ports

SETUP LEVEL

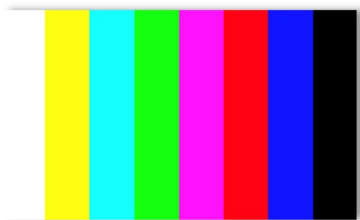
Choose setup level for CVBS input.

7.5 IRE: **Default** value for NTSC-M SMPTE 170M Standard

0 IRE: Japanese black level

ANALOG CALIBRATE

Calibrate ADC with 8 COLOR BARS.



IMPORTANT 8 ColorBars must contain 8th color as BLACK.

Dual confirmation is required to start calibration.

Selects CALIBRATE then move up(or down) and selects for final confirm.

PICTURE

RETURN

Return to Level 1 menu

BRIGHT

Changes black level at range of 0 to 100.

Default value is **50** for even black level to LCD panel's black.

CONTRAST

Changes video gain at range of 0 to 100.

Default value is **80** for unity gain and maximum dynamic range.

Minimum value 0 shows no video because of gain value at 0.

Maximum value 100 boosts video up with approx. 20% saturation.

CHROMA

Changes Chroma level at range of 0 to 100.

Default value is 50 for standard color representation.

Minimum value 0 shows video in grayscale.

Maximum value 100 shows boosted color approx. 6dB.

SHARPNESS

Changes sharpness level at range of 0 to 100.

Default value is 0 for neutral image processing.

GAMMA

Changes gamma curve at range of 0.45 to 3.00 with 0.05 steps.

Default value is 2.20.

Typical value is between 2.20 and 2.40.

Lower range helps enhancing dark area for easier view.

RESET TO DEFAULT

Resets only picture related values back to default values.

Other values will not be changed.

COLOR

RETURN

Return to Level 1 menu

COLOR TEMP

Selects color temperature for CIE D65 and Japanese D93.

D65 offers preset 6500K for white balance.

D93 offers preset 9300K for white balance.

USER allows manual adjustment for gain and bias.

Default value is **CIE D65**.

BIAS

Adjusts black level of LCD panels at range of -50 to +50.

Often used to calibrate lower luminance white balance points.

However, leave it as 0 on all channels are recommended for general practice.

Default value is **0** on all channels.

GAIN

Adjusts post processing video gain at range of 0 to 255.

Often used to calibrate higher luminance white balance points.

In general, any channels should not exceed 128.

Use only lower than 128 to avoid unnecessary saturation.

E.g. 120/128/124 for R/G/B

Default value is **128** on all channels.

SCREEN

RETURN

Return to Level 1 menu

SCAN

- **NORMAL**
 - Displays all valid video region.
 - Also known as JUST SCAN or ZERO SCAN.
- **OVERSCAN**
 - Crop and zoom approx. 5%
- **ZOOM**
 - Crop and zoom at the center of video input for magnification.

ASPECT

- **AUTO**
 - Maintains original aspect ratio.
 - Border may appear according to panel's native aspect ratio.
- **4:3**
 - Forces any video input to 4:3 ratio.
- **16:9**
 - Forces any video input to 16:9 ratio
- **FILL**
 - Forces any video stretch to panel's all valid area.

MONO/COLOR

- **RGB**
 - Displays all three(RGB) channels for normal operation.
- **MONO**
 - Displays video in grayscale.
- **RED/GREEN/BLUE**
 - Displays only one channel at a time for channel verification.

FLIP H/FLIP V

Flips image horizontally and vertically.

MARKER

Marker is a utility which helps to find center, perpendicular and aspect ratio.

Marker is hidden when OSD menu is displayed.

Marker is hidden when there is no valid input signal.

RETURN

Return to Level 1 menu

MARKER

Enables/Disables marker lines.

CENTER

Enables/Disables center cross marker.

ASPECT

Enables/Disables marker for aspect ratio guide line.

- OFF
- 4:3
- 16:9
- 1.85:1
- 2.35:1
- 4:3&1.85:1
- 4:3&2.35:1

SAFETY

Adjusts margin for safety marker at range from 80% to OFF.

Default value is **80**.

CROSSHATCH

Enables/Disables crosshatch type markers. Crosshatch marker is used for perpendicular guide.

- **OFF(DEFAULT)**
- SMALL
- MEDIUM
- LARGE

MARKER MAT

Choose background type when marker is enabled.

- **CLEAR(DEFAULT)** background is clear
- **HALFTONE** background is half transparent.
- **BLACK** background is opaque black.

LINE THICKNESS

Controls thickness of markers at range from 1 to 3.

[Thin] 1 to 3 [Thick]

Default value is **1** [Thinnest].

AUDIO

Controls volume for an external speaker if available.

RETURN

Return to Level 1 menu

FRONT VOLUME

Default Volume is **50**.

REAR VOLUME(Optional)

Default Volume is **50**.

LEVEL METER

What is Audio Level Meter?

SDI signal can carry embedded audio along video signal.

Often confirmation of audio signal presence is required for various reasons.

Audio level meter offers not only the presence of audio signal but it also displays precisely measured level in dBFS (Decibel in Full Scale).

Venus2 Pro displays audio channel 1 on left and channel 2 on right.

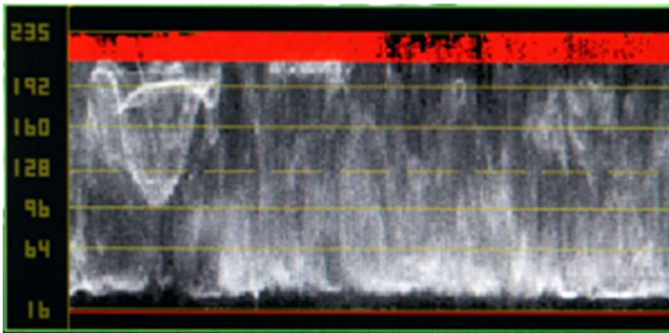
LEVEL METER

Enables/Disables Audio Level Meter for embedded audio from SDI inputs.

WAVEFORM

What is Waveform Monitor?

To prevent accidental over exposure (or saturation), engineers need to verify valid range of dynamic range. Waveform monitor helps engineer to determine dynamic range of input signal. It also helps to adjust optical focus on camera shooting.



RETURN

Return to Level 1 menu

WAVEFORM

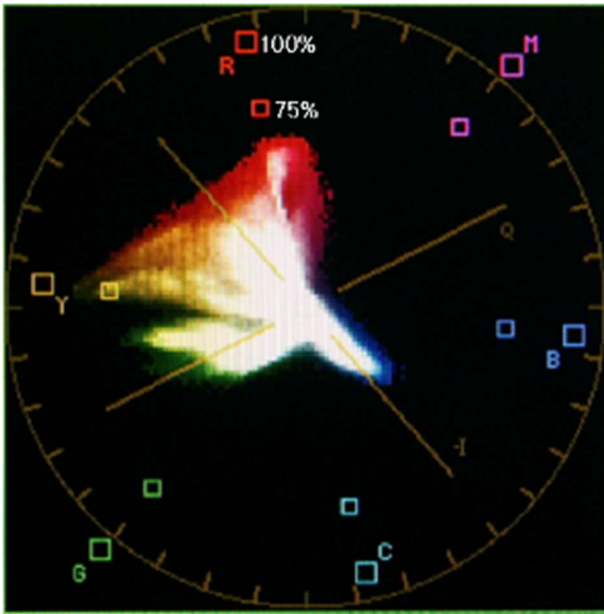
Enables/Disables Waveform monitor for video analysis from SDI inputs.

VECTORSCOPE

What is Vector Scope?

Conventional TV system limits color reproduction range due to limitation of technical reasons like bandwidth and interference over RF transmit.

VectorScope is designed to verify chrominance range over the content in real time.



RETURN

Return to Level 1 menu

VECTORSCOPE

Enables/Disables VectorScope for video analysis from SDI inputs.

ClipGuide

Monitor input video range on luminance and chrominance to avoid accidental clipping or saturation. This feature is also known as Zebra but ClipGuide is more enhanced with color and lower/upper thresholds.

RETURN

Return to Level 1 menu

CLIPGUIDE

Enables/Disables ClipGuide feature.

MODE

- **LUMA[Y]**
 - Apply ClipGuide on luminance(Y) channel only
- **Y ON MONO**
 - Apply ClipGuide on luminance(Y) channel only
 - Displays original video content in grayscale for better identification.
- **CHROMA**
 - Apply ClipGuide on chrominance channel only
- **C ON MONO**
 - Apply ClipGuide on chrominance channel only
 - Displays original video content in grayscale for better identification.
- **Y & C**
 - Use both Luminance and Chrominance.
- **Y & C ON MONO**
 - Use both Luminance and Chrominance.
 - Displays original video content in grayscale for better identification.

Y UPPER LIMIT

Sets threshold at range of -7.3 to 109.1 in IRE representation.

Default value is **103.2** in IRE representation.

Y LOWER LIMIT

Sets threshold at range of -7.3 to 109.1 in IRE representation.

Default value is **-0.9** in IRE representation.

C UPPER LIMIT

Sets upper threshold at range of 0 to 255 in 8 bits digital representation.

Default value is **240** in 8bpp representation.

C LOWER LIMIT

Sets lower threshold at range of 0 to 255 in 8 bits digital representation.

Default value is **16** in 8bpp representation.

USER ASSIGN

Sets user selected feature as a hotkey for specific features.

RETURN

Return to Level 1 menu

Available Options

INPUTS

SDI1/SDI2/CVBS/HDMI/RGB/VGA/COMPONENT

Screen Modes

Rotates available options of each feature.

- **MONO**
- **COLOR**
- **CHANNEL**

Screen Modes

Rotates available options of each feature.

- **SCAN**
- **ASPECT**
- **ZOOM**

Utility

Enables/Disables each feature.

- **MARKER**
- **AUDIO METER**
- **WAVEFORM MON**
- **VECTORSCOPE**
- **ClipGuide**
- **TIMECODE**

Audio

Mutes/Unmutes audio output

- **AUDIO MUTE**

REMOTE

Venus2 Pro can be controlled via RJ45 connector by open-short circuit control.

A user can control each feature by shorting circuit.

Pin1 and Pin2 are fixed with preset.

Pin5 is always ground by hardware design.

Pin 3,4,6,7,8 can be assigned to desired feature just like available options in USER ASSIGN menu.

Short and Open will trigger for both on and off for features.

RETURN

Return to Level 1 menu

PIN1

Fixed with **RED TALLY**.

PIN2

Fixed with **GREEN TALLY**

PIN3

Default value is **BLUE TALLY**

PIN4

Default value is **MARKER**

PIN5

Electrical signal **ground**. (Not shown in menu)

PIN6

Default value is **SDI1**

PIN7

Default value is **SDI2**

PIN8

Default value is **ASPECT**

SETUP

RETURN

Return to Level 1 menu

FORMAT DISPLAY

- **AUTO** – Displays detected video format approx. 5 sec.
- **ON** – Displays detected video format always.
- **OFF**- Does not display detected video format.

Default value is **AUTO**.

TIMECODE

Enables/Disables TIMECODE from SDI signal.

- **OFF** – Does not display timecode from SDI.
- **LTC** – Displays LTC from SDI ANC.
- **VITC1/VITC2** - Displays VITC1 or VITC2 from SDI ANC.

Default value is **OFF**.

USERBIT

Enables/Disables Userbit from SDI

PICTURE DELAY

- **NORMAL** – Enables all video enhancement processing for optimum quality.
- **FAST** – Reduces some video processing for faster picture response.

Default value is **NORMAL**.

POWER SAVE

Enables/Disables power consumption control when there is no valid video signal.

- **ALWAYS ON** – Does not control power saving.
- **OTHER** – Waits for selected period until it goes to sleep.

Default value is **ALWAYS ON**.

Wakes up at any key input or valid video input signal.

KEY LOCK

Prohibits OSD key operation except MENU key.

BACKLIGHT

Controls backlight at range from 0 to 100%.

Default value is 80%.

OSD ALPHA

Controls transparency of OSD menu at range from 0 to 6.

[Opaque] 0 ~ 6 [Transparent]

Default value is **0**.

RESET TO DEFAULT

Restores all setting back to factory standard.

Requires dual confirmation.

BACKUP USER CONFIG

Backs up current setting at where it can be retrieved later.

RESTORE USER CONFIG

Restores backed up setting from where user saved for the last time.