User Manual

PAX-324

24" True Flat Medical Monitor

ADVANTECH

Enabling an Intelligent Planet

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Important

Please read this User's Manual carefully to familiarize yourself with safe and effective usage procedures. Please retain this manual for future reference.

Importante

Lea detenidamente este manual del usuario para familiarizarse con los procedimientos de uso eficaces y seguros. Conserve este manual para futuras consultas.

重要

ご使用前には必ず取扱説明書をよくお読みになり、正しくお使いください。 この取扱説明書は大切に保管してください。

Symbols

Symbol	Title
⚠	The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.
⚡	The lighting flash with arrowhead symbol in an equilateral triangle, is intended to alert the user to the presence of un-insulated "Dangerous Voltage" within the product's enclosure that of many sufficient magnitude to constitute a risk of electric shock to persons.
📖	Follow operating instructions NOTE: On ME EQUIPMENT "Follow instructions for use"
▬▬▬	Direct Current.
▲	This symbol denotes the manufacturer.

FCC Compliance Information

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Class A

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. Modifications not expressly approved by the manufacturer could void the user's authority to operated the equipment under FCC rules.

CE (Conformity European)

CE mark notice
Declaration of conformity in accordance with Article 10(1) of the CE directive.
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

UL (Underwriters Laboratories)

LCD MONITOR E328413
4LN3
MEDICAL EQUIPMENT WITH RESPECT TO ELECTRIC SHOCK, FIRE AND MECHANICAL HAZARDS ONLY IN ACCORDANCE WITH UL60601-1 AND CAN/CSA C22.2 NO. 601.1

VCCI (Voluntary Control Council for Interference)

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラス A 情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

KC (Korea Communication Commision)

A 급 기기 (업무용 방송통신기자재)
이 기기는 업무용 (A 급) 전자파적합기기로서 판매자 또는 사용자는 이 점을 주의하시기 바라며 , 가정외의 지역에서 사용하는 것을 목적으로 합니다 .

Disposal of Waste

- This mark shown on the product or any items, indicates that it should not be disposed of with other household waste at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of waste and recycle it responsibly to promote the sustainable reuse of material resources.
- Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.
- Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial waste for disposal.

Safety Precautions and Maintenance

Safety precautions

Caution! *FOR OPTIMUM PERFORMANCE, PLEASE NOTE THE FOLLOWING WHEN SETTING UP AND USING THE LCD MONITOR.*

- DO NOT OPEN THE MONITOR. There are no user serviceable parts inside and opening or removing covers may expose you to dangerous shock hazards or other risks. Refer all servicing to qualified service personnel.
- Do not spill any liquids into the cabinet or use your monitor near water.
- Do not insert objects of any kind into the cabinet slots, as they may touch dangerous voltage points, which can be harmful or fatal or may cause electric shock, fire or equipment failure.
- Do not place any heavy objects on the power cord. Damage to the cord may cause shock or fire.
- Do not place this product on a sloping or unstable cart, stand or table, as the monitor may fall, causing serious damage to the monitor.
- When operating the LCD monitor with its AC power supply, use a power supply cord you use must have been approved by and comply with the international safety standards.
- Do not place any objects onto the monitor and do not use the monitor outdoors.
- The inside of the fluorescent tube located within the LCD monitor contains mercury. Please follow the bylaws or rules of your municipality to dispose of the tube properly.
- Do not use monitor in very hot, humid, dusty or oily areas.
- If a monitor or glass is broken, handle with care. Do not come in contact with the liquid crystal.

Caution! *Immediately unplug the monitor from the wall outlet and refer servicing to qualified service power personnel under the following conditions:*

- When the power supply cord or plug is damaged.
- If liquid has been spilled, or objects have fallen into the monitor.
- If the monitor has been exposed to rain or water.
- If the monitor has been dropped or the cabinet damaged.
- If the monitor does not operate normally by following operating instructions.
- Allow adequate ventilation around the monitor so that heat can properly dissipate. Do not block ventilated openings or place the monitor near a radiator or other heat sources. Do not put anything on top of the monitor.
- The power cable connector is the primary means of detaching the system from the power supply. The monitor should be installed close to a power outlet which is easily accessible.
- Handle with care when transporting. Save packing for transporting.

Warning! *High Voltage*

The AC/DC inverter where high voltage current flows has the following 'CAUTION mark against high voltage' and you are absolutely not allowed to open the monitor to access the inverter. Please refer to a technician for service, if it is necessary.

Safety

- This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to other devices in the vicinity. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to other devices, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
1. Reorient or relocate the receiving device.
2. Increase the separation between the equipment.
3. Connect the equipment into an outlet on a circuit different from that to which the other device(s) are connected.
4. Consult the manufacturer or field service technician for help.

Keep away from a window

- Do not place your LCD Monitor near a window to protect the Monitor from being exposed to rain, water, moisture or sunlight that can severely damage it.

Safe storage

■ Safe storage of the LCD Monitor is in a range of minus 20 to plus 60 Celsius (68°F - 149°F). Storing the LCD Monitor out of this range could result in permanent damage.

Image Persistence

■ Image persistence is when a residual or ghost image of a previous image remains visible on the screen. Unlike CRT monitors, LCD monitors' image persistence is not permanent, but constant images being displayed for a long period of time should be avoided.

■ To alleviate image persistence, turn off the monitor for as long as the previous image was displayed. For example, if an image was on the monitor for one hour and a residual image remains, the monitor should be turned off for one hour to erase the image.

> *Note!* *As with all personal display devices, Kostec recommends using a moving screen saver at regular intervals whenever the screen is idle or turning off the Monitor when not in use.*

Placement and Adjustment of the Monitor

■ For optimum performance of the system, one hour warm-up is recommended.

■ Adjust the monitor height so that the top of the screen is at or slightly below eye level. Your eyes should look slightly downward when viewing the middle of the screen.

■ Rest your eyes periodically by focusing on an object farther away and blinking often.

■ Position the monitor at a 90 degree angle to windows and other light sources to minimize glare and reflections. Adjust the monitor tilt so that ceiling lights do not reflect on your screen.

■ You can use an anti-glare filter to have a better view out of the reflected light.

■ Clean the LCD monitor surface with a lint-free, non-abrasive cloth. Avoid using any cleaning solution or glass cleaner.

■ Adjust the monitor's brightness and contrast controls to enhance readability.

■ Avoid displaying fixed patterns on the monitor for long periods of time to avoid image persistence (residual image).

> *Note!* *For optimal view, 20-inch distance from your eyes to the screen is recommended.*

Battery Related

■ When you remove the batteries from the remote control, keep the batteries out of the reach of children. If a child swallows the battery, consult your doctor immediately.

■ When replacing the batteries, insert the batteries with the correct polarities (+, -). If the batteries are inserted incorrectly, the batteries may implode or the internal chemicals may leak, which may result in fire, injury or contaminate the environment.

- Used batteries including rechargeable batteries must be disposed of separately and collected for recycling. Used batteries and rechargeable batteries can be handled by a nearby recycling center or agency that deals in batteries or rechargeable batteries.
- Use only designated standard batteries. Do not use new batteries with old one(s). The batteries may implode or the internal chemicals may leak, which may result in fire, injury or contaminate the environment.

Contents

Chapter 1

Introduction

1.1 Introduction

The PAX-324 LCD monitor is a 24-inch TFT LCD monitor designed for the needs of medical image display. With the DICOM GSDF and the 10-bit gamma correction for white balance, PAX-324 is optimized for the display of medical images, allowing high-quality medical video images. The Medical LCD Monitors are intended to be used in various kinds of medical image applications for which the device complies with the performance specified by the manufacturer of the system.

1.2 Features

- True Flat Design with AR Filter
- High Brightness and High Contrast Ratio
- Integral Light Emitting Diode (LED) Backlight System
- FHD Resolution (1920 x 1200)
- HDMI 2.0 (High Definition Multimedia Interface) Support Up to 1920 x 1200 @ 60 Hz
- DP 1.2 (Display Port 1.2) Support Up to 1920 x 1200 @ 60 Hz
- SDI (Serial Digital Interface) Support Up to 1920 x 1080 @ 60 Hz
- DVI (Digital Visual Interface) Support Up to 1920 x 1200 @ 60 Hz
- Multi-Standard Video System Supported: NTSC, PAL, SECAM
- Video Enhancement features including
  - 14-bit LUT (Look Up Table) processing
  - DICOM Part 14 GSDF Compliant
  - DICOM Clear and Blue Mode support
- Variable Gamma and DICOM (Color Temp) mode
- Variable Picture control
- Variable Image size
- Variable Multi-Picture display mode
- Optional upgrade to IP-based monitor with built-in AVAS

1.3 Specifications

1.3.1 Display

Item	Specifications	
	PAX-324-C2F-HAS	PAX-324-C2B-NAS
Screen Size (Active Area)	24.07" (518.40(H) x 324.0(V) [mm])	
Aspect ratio	16:10	
Number of Pixels	1920 (H) x 1200 (V)	
Pixel Pitch	0.270 (H) x 0.270 (V) [mm]	
Displayable Colors	1.07 Billion (10-bit)	16.78M (8-bit)
Brightness (Typical)	900 cd/m^2	350 cd/m^2
Contrast Ratio (Typical)	1,000:1	
Display Mode	AHVA	AH-IPS
Response Time (Typical)	14ms (Gray to Gray)	
Viewing Angle (H/V)	178/178	

1.3.2 General

Item	Specifications	
	PAX-324-C2F-HAS	PAX-324-C2B-NAS
Power Supply	DC24V, 4.16A(MAX)	
Power Consumption (Max)	65.0 W	
Dimensions (Without Stand) [W mm x H mm x D mm]	578.13 x 402.78 x 68.0 [mm]	
Weight (Without Stand)	7.85kg 7.2kg	

1.3.3 Environmental

Item		Specifications	
		PAX-324-C2F-HAS	PAX-324-C2B-NAS
Temperature	Operational	0 ~ 40°C	
	Storage	-20 ~ 60°C	
Humidity	Operational	Ta = 40°C, 90% RH (No condensation)	
	Storage	5% ~ 90%	
Pressure	Operational	500 hPa to 1013 hPa	
	Storage	500 hPa to 1013 hPa	

1.3.4 AVAS (Optional)

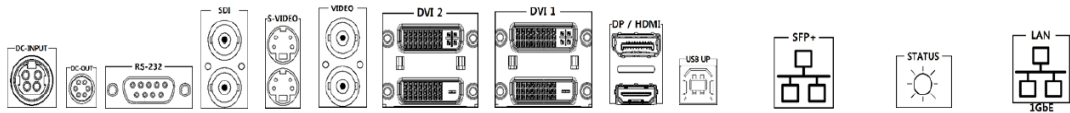| LAN	RJ45 Jack x 1	1GbE
SFP+	Module	SFP+ 10Gbps

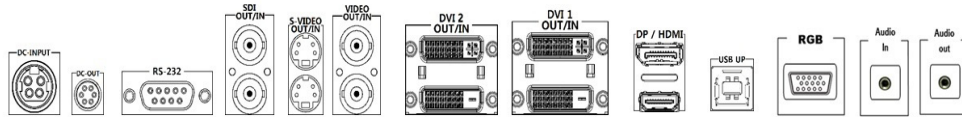Status LED will indicate the AVAS operational status:
1. Blinking green: running OK.
2. Blinking orange: warning indicator.
3. Continuous orange: FPGA is starting-up.
4. Blinking red: An error has occurred.
5. Off, no power supplied to the AVAS.

1.3.5 Input / Output Signal Connectors

*PAX-324-C2F-HAS (AVAS option)

*PAX-324-C2B-NAS

Symbol	Signal	Connector	Specification
RS-232C	RS-232C	D-Sub Jack x 1	Service Port
USB Up	USB Up	USB-B Jack x 1	For Touch (Option)
Video	Video Input	BNC Jack x 2	1V[p-p] (75 Ω) [NTSC / PAL / SECAM]
	Video Output		
S-Video	S-Video Input	Mini DIN Jack x 2 (4 pin)	Y: 1V[p-p] (75 Ω) , C: 0.286V[p-p] (75 Ω) [NTSC] Y: 1V[p-p] (75 Ω) , C: 0.300V[p-p] (75 Ω) [PAL / SECAM]
	S-Video Output		
SDI 1	SDI Input	BNC Jack x 2	Serial Input Common Mode : 2.2V[p-p](75 Ω) MAX : 1920 x 1080 / 60 Hz
	SDI Output		
DVI 1~2	DVI Input	DVI Jack x 2 (Type D)	Digital RGB : TMDS MAX : 1920 x 1080 / 60 Hz
	DVI Output		
HDMI	HDMI 1.4 Input (For AVAS)	HDMI Jack x 1 (Type A) (Internal Connection)	
	HDMI 2.0 Input	HDMI Jack x 1 (Type A)	Digital RGB : TMDS MAX : 1920 x1200 / 60 Hz
DP	DP 1.2 Input	DP Jack x 1	DisplayPort 1.2 MAX : 1920 x 1200 / 60 Hz
RGB	RGB Input	D-Sub Jack x 1	Analog RGB: 0.7V[p-p](75 Ω), H/CS/V : TTL (2.2 kΩ), MAX : 1920 x 1200 / 60 Hz
Audio	Audio Input	Stereo Jack x 1	1V[p-p]
Audio	Audio Output	Stereo Jack x 1	1V[p-p]

Caution! *Do not touch signal input, signal output or other connectors, and the patient simultaneously.*

External equipment intended for connection to signal input, signal output or other connectors, shall comply with relevant IEC Standard (e.g., IEC60950 for IT equipment and IEC60601-1 series for medical electrical equipment). In addition, all such combination-system-shall comply with the standard IEC60601-1 and /for IEC60601-1-1 harmonized standard or the combination.

If in doubt contact qualified technician or your local representative.

NOTICE : The specifications of Advantech Kostec products are subject to change without notice.

1. Type of protection against electric shock: Class I equipment.
2. Degree of protection against electric shock: Not classified - no applied parts.
3. Classification according to the degree of protection against ingress of water: IPX0, ordinary equipment.
4. This equipment is not suitable for use in the presence of flammable anesthetics or oxygen.
5. Mode of operation: continuous operation.

Chapter 2

Installation

2.1 Unpacking

Before you unpack the LCD monitor, prepare a suitable workspace, stable, level and clean, near a wall outlet. Set up the LCD monitor in a location where is sufficient with airflow and away from the range of direct sunlight. On unpacking the LCD monitor, make sure the following items are included in the box and in good condition:
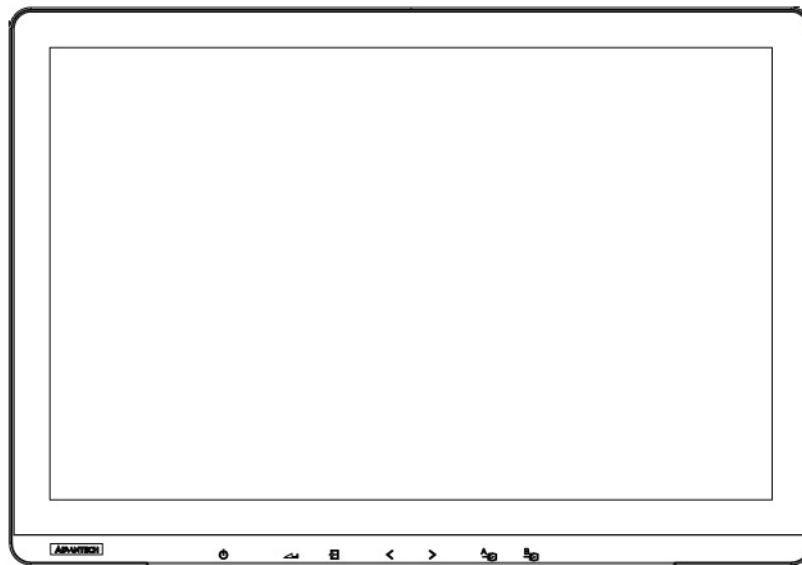
■ LCD Monitor

If you find any of these items are missing or damaged, contact your dealer or the seller immediately. Do not throw away the packing material or shipping carton in case you need to ship or store the LCD monitor in the future.

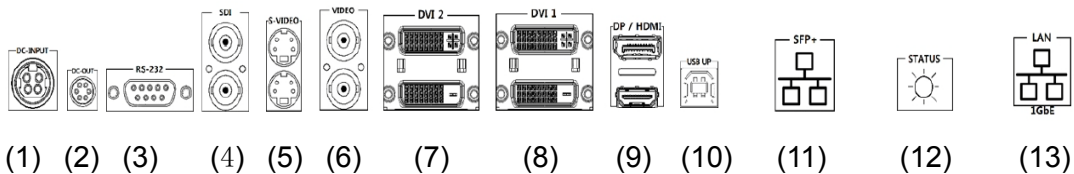## 2.2 Identifying Components

The LCD monitor is designed to provide easy and convenient access to all the control keys and the peripheral ports. Before you begin with installation, please identify the controls and ports through the following figures.
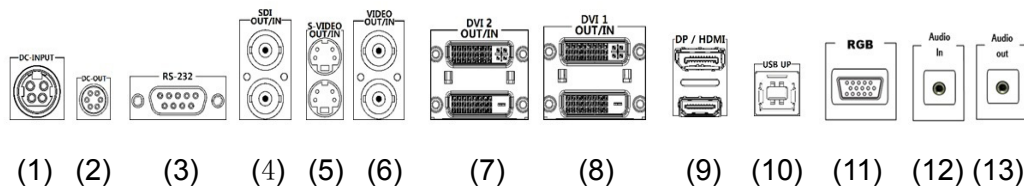
LCD Monitor View

2.2.1 I/O PORTS

*PAX-324-C2F-HAS (AVAS option)

(1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13)

*PAX-324-C2B-NAS

(1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13)

2.2.2 Display Module

The display is a 24" diagonal TFT LCD display. The screen supports the maximum resolution of 1920x1200 @ 60Hz.

2.2.3 OSD Key Functions

Key Name	Function
Power Key	Power On/ Off
Menu/Enter Key	Select main OSD menu. Select sub menu. Apply adjustments (save).
Exit / Return Key	Exit / Return to previous menu in main OSD menu. Used to activate Input hot menu when main OSD menu isn't displayed. Used to LOCK / UNLOCK setting for key activation by holding the key for longer than 15 sec. when main OSD menu isn't displayed.
Left Key	Move and adjust values in main OSD menu. Used to activate "Backup Source MSG On / Off" hot menu by holding the key for longer than 3 sec. when main OSD menu isn't displayed.

Right Key	
>	Move and adjust values in main OSD menu. Used to activate Display Mode hot menu by holding the key for longer than 3 sec. when main OSD menu isn't displayed.

Port A Key	
A	PIP Main input selection function It is available only when using the pip function.

Port B Key	
B	PIP Sub input selection function It is available only when using the pip function.

2.2.4 Input /Output Signal Ports

(1) DC power input : +24v power connector

(2) DC power output : +5v/+12v power connector

(3) RS-232C

(4) SDI 1 out/input

(5) S-VIDEO out/input

(6) VIDEO out/input

(7) DVI 2 out/input

(8) DVI 1 out/input

(9) DP/HDMI input

(10) USB up

(11) RGB input (SFP+ option)

(12) Audio input (STATUS option)

(13) Audio output (LAN option)

2.2.5 Interface on AVAS Back Panel

NAME	Function
SFP+	SFP+ port for SFP+ Modules only.
Status LED	Status LED, will indicate the AVAS operational status: a. Blinking green: running OK; b. Blinking orange: warning indicator; c. Continuous orange: FPGA is starting-up; d. Blinking red: An error has occurred; e. Off, no power supplied to the AVAS.
1GbE	1GbE(RJ45) has no function yet.

Note! *The plug on the power supply cord of the power supply is the discon-nnecting device for the AVAS. The used socket-outlet should be installed near the equipment and should be easily accessible.*

2.3 Adjusting the Viewing Angle

The LCD monitor can be adjusted vertically for the user's preferable viewing angle position.

Caution! *Do not force the monitor past its maximum extension in any direction. You could damage the monitor and the monitor stand.*

2.4 Positioning

Before you set up your workstation, prepare a suitable place, which should be a sta-ble flat dust-free surface with good ventilation. Position the screen of the monitor not to face a window where sunlight often comes in. The glare caused by reflected sun-light can make the image on the screen difficult to read.

Caution!
- When positioning the equipment, make sure that the main ports and sockets are easily accessible.
- Do not place the monitor close to a heat source.
- Do not place the monitor in direct sunlight or near a window. When the monitor is exposed to moisture and direct sunlight, it can be seriously damaged.

2.5 Connecting AC/DC Power

- Plug the female end of the AC/DC power adaptor into the DC power connector.
- Plug the female end of the power cord into the AC power connector on the adaptor.
- Plug the male end of the power cord into the wall socket.
- The plug on the power cable can be various according to the electrical standard in each country.

2.6 Connecting Video

- Before connecting the monitor to the PC or the equipment, please power off the both devices.
- Connect one end of HDMI 2.0 cable to the PC's or the equipment's HDMI port and the other end to the monitor HDMI port. You may also connect the DP 1.2 cable to the DP port if the PC or the equipment are equipped with DP input.
- Make sure the signal cable is secure to both the monitor and the PC or equip-ment. Tighten the connecting screws to ensure a secure connection.

■ The signal input is selected by the OSD menu. For more details, please refer to the next chapter.

*PAX-324-C2F-HAS (AVAS option)
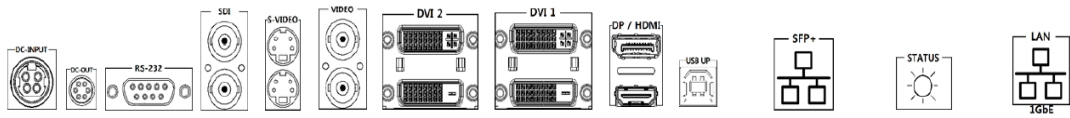
*PAX-324-C2B-NAS
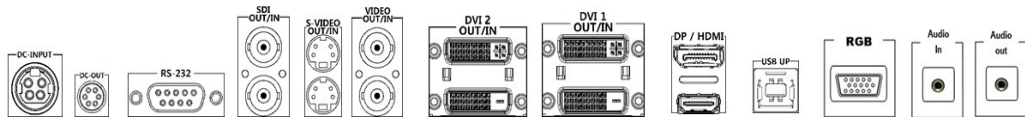
Chapter **3**

OSD Menu

3.1 OSD Menu Controls

This chapter refers to the On Screen Display (OSD) controls. Using the OSD controls the user can adjust contrast, brightness, display clarity, color temperature and etc. Please read this chapter carefully to get the most out of this monitor.

3.1.1 Display Mode
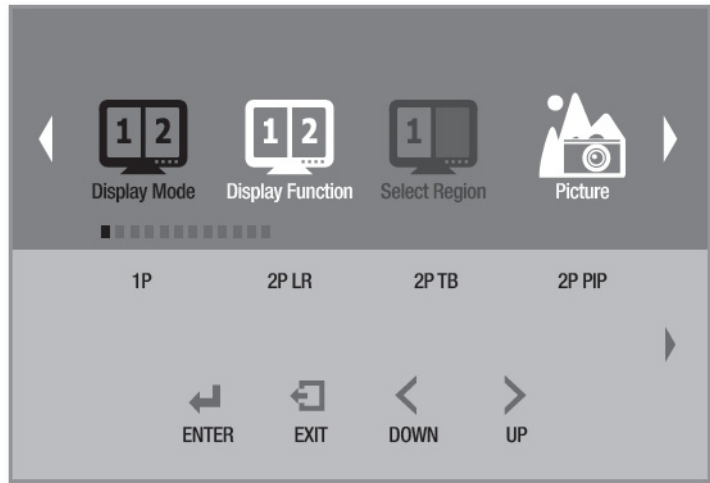
Menu	Description	Default	Remarks
Display Mode	Used to select a Display mode. [1P, 2P LR, 2P TB, 2P PIP, 4P]	1P	

3.1.2 Display Function

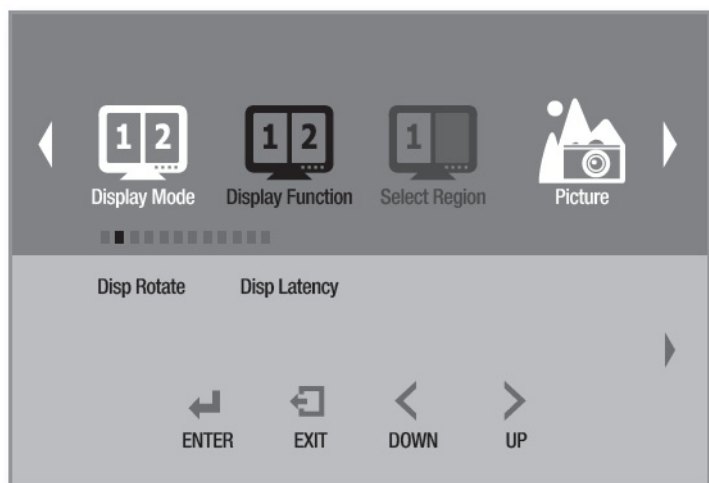| Menu			Description	Default	Remarks
Disp Rotate			Used to rotate the screen.[0°, 90°, 180°, 270°]	0°	
Disp Latency			Not Used.		
Multi-Display Mode	2P LR	LR Ratio	Used to adjust the screen size from two 2P LR PIP mode.		
		Input Swap	2P LR Used to change the position of the two port screens in PIP mode.		
	2P TB	Input Swap	2P TB Used to change the position of the two port screens in PIP mode.		
	2P PIP	PIP Position	Used to change the position of the two port screens in 2P PIP mode. [Top-Left, Top-Right, Bottom-Left, Bottom-Right, Center , USER]	Bottom-Right	
		PIP Transparency	Not Used.		
		PIP Size	In 2P PIP mode, it is used to adjust the size of two port screens.	10	
		Input Swap	2P PIP Used to change the position of the two port screens in PIP mode.		
	4P		Not Used.		

3.1.3 Select Region
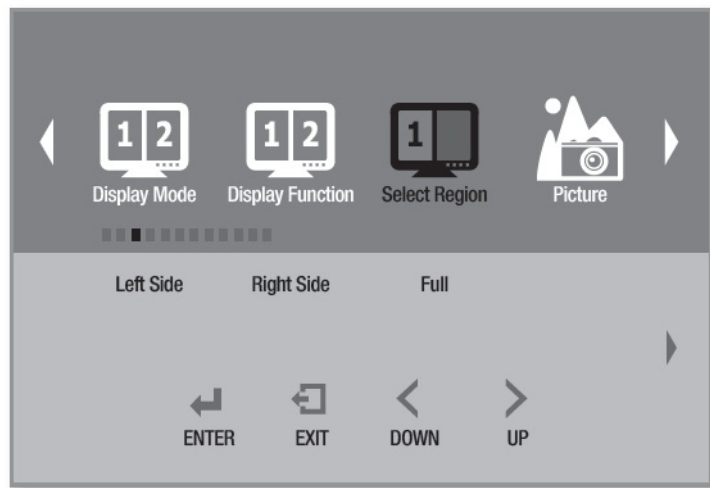
Menu		Description	Default	Remarks
Select Region		PIP feature is the ability to use the screen.[Left Side, Right Side, Full]	Full	
Multi-Display Mode	2P LR	PIP feature is the ability to use the screen.[Left Side, Right Side, Full]	Full	
	2P TB	PIP feature is the ability to use the screen.[Top Side, Bottom Side, Full]	Full	
	2P PIP	PIP feature is the ability to use the screen.[Main, Sub, Full]	Full	
	4P	PIP feature is the ability to use the screen.[4P Full]	4P Full	

3.1.4 Picture
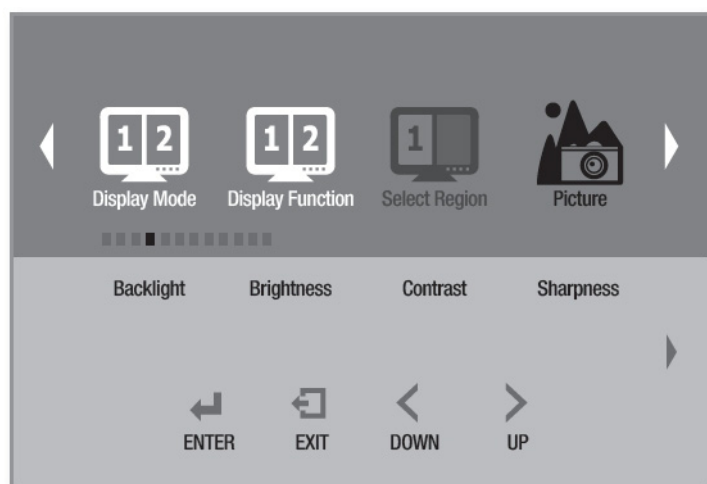
Menu	Description	Default	Remarks
Backlight	Adjust the target Luminance.	100	
Brightness	Adjusts the brightness of the screen. Press the < or > button to adjust brightness.	50	
Contrast	Adjusts the contrast of the screen. Press the < or > button to adjust contrast.	50	
Sharpness	Adjusts the sharpness of the screen. Press the < or > button to adjust sharpness.	2	

3.1.5 Color
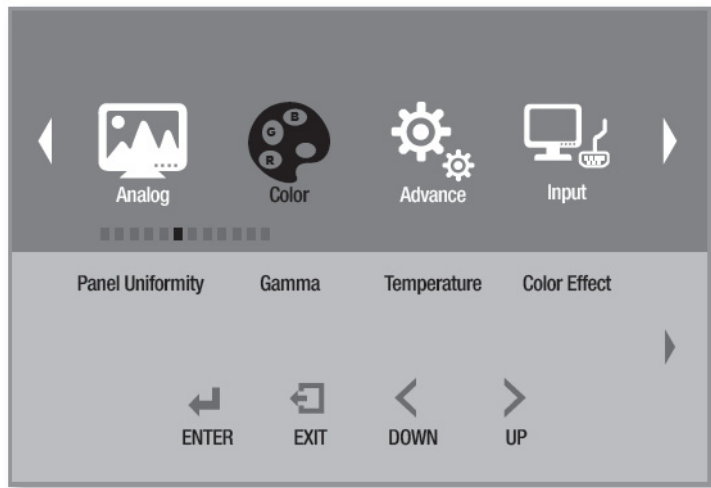
Menu	Description	Default	Remarks
Panel Uniformity	Not Used.		
Gamma	Used to select the variable gamma. [OFF, Custom, 2.0, 2.2, DICOM]	2.2	
Temperature	Control the intensity of the color of the screen's image. [D95,D75,D65,Blue,Clear,User] In User Mode, Off should be set in Gamma mode to adjust Red, Green, Blue.	Clear	
Color Effect	Used to represent the color effect of the screen. [Standard, Game, Movie, Photo, Vivid, User]	Standard	
Demo	Used to change the type used in the demo. [OFF,Type1, Type2, Type3, Type4, Type5]	OFF	
Color Format	Colors used are used in the form of a screen. [RGB, YUV]	RGB	
PCM	Not Used.		
Hue	Adjust the Hue of the screen.	50	
Saturation	Used to change the color saturation of the screen.	50	

3.1.6 Advanced
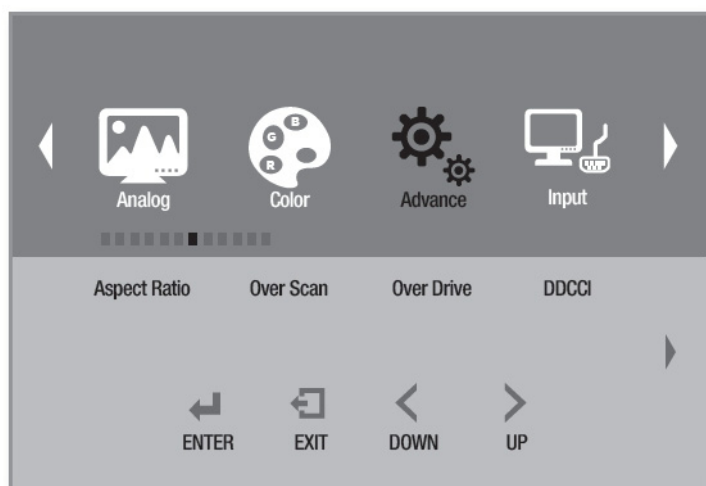
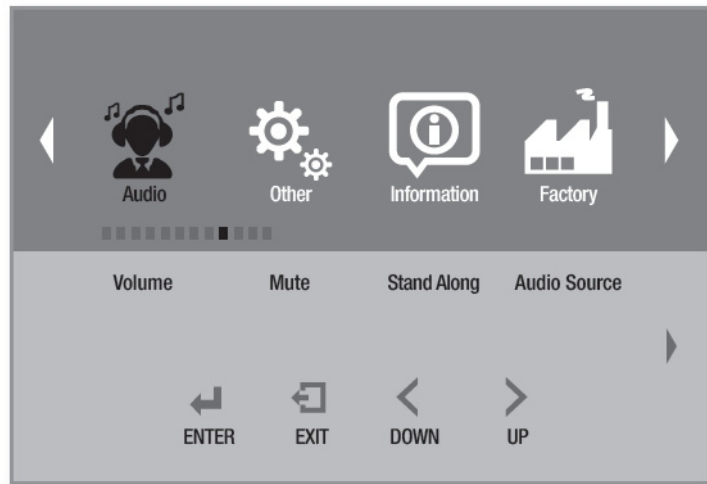| Menu	Description	Default	Remarks
Aspect Ratio	Adjusts the Aspect Ratio of the screen. Press the < or > button to select the desired aspect ratio. [Full, 16:9, 4:3, 5:4, 1to1, Auto Mode, Fill Zoom]	Full	
Over Scan	Used to scan over the screen. [ON,OFF]	OFF	
Switching Time	Screen switching time setting function.	2	
Over Drive	Not Used.		
DDCCI	Selects the DDCCI function. [ON,OFF]	ON	Display Data Channel Command Interface
Ultra Vivid	Used to screen appear sharp.. [OFF, L, M, H]	OFF	
Over Scan Ratio	Adjusts the Over Scan Ratio of the screen. Over Scan Ratio After adjustment, Over Scan On / Off menu is On, the adjusted Over Scan Ratio value is applied.	10	
DP Option	Used to select a DP Version. [D0, D1, D6]	D0	
DP MST	Not Used.		
DP EDID	Not Used.		
Clone mode	Not Used.		
Free Sync	Not Used.	OFF	
Freeze	Used to stop the screen. Press the Right button to set freeze function [ON,OFF]		

3.1.7 Input
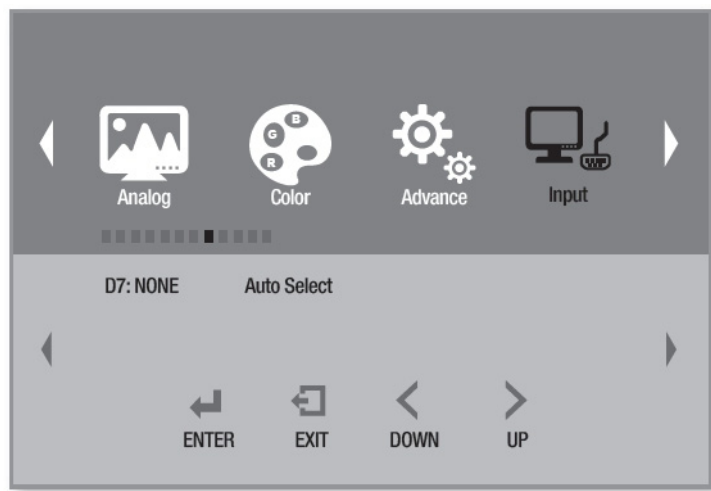
Menu		Description	Default
Input		Selects Monitor or other external input sources connected to the Monitor. [RGB,DP, HDMI, DVI 1, DVI 2, SDI 1, AVAS, S-VIDEO, VIDEO, Auto Select]	AUTO
PIP Mode	2P LR	2P LR Used to change the side of the two port screens in PIP mode. [Left side, Right side]	
	2P TB	2P TB Used to change the side of the two port screens in PIP mode. [Top side, Bottom side]	
	2P PIP	In the 2P PIP mode it is used to set the Main Screen, Sub screen.	
	4P	4P Used to set the position of each port in PIP mode.[1p In, 2p In, 3p In, 4p In]	

3.1.8 Audio

Menu	Description	Default	Remarks
Volume	Used to adjust the speaker volume on the monitor.	50	
Mute	The sound of the screen can be adjusted [ON, OFF].	OFF	
Stand Along	Don't Switch Audio Source if Line In is Currently Playing unless a Digital Source is found. (Optional - ready for future use)	OFF	
Audio Source	Used to select the audio source.[Analog , Digital region1]	Analog	

3.1.9 Other
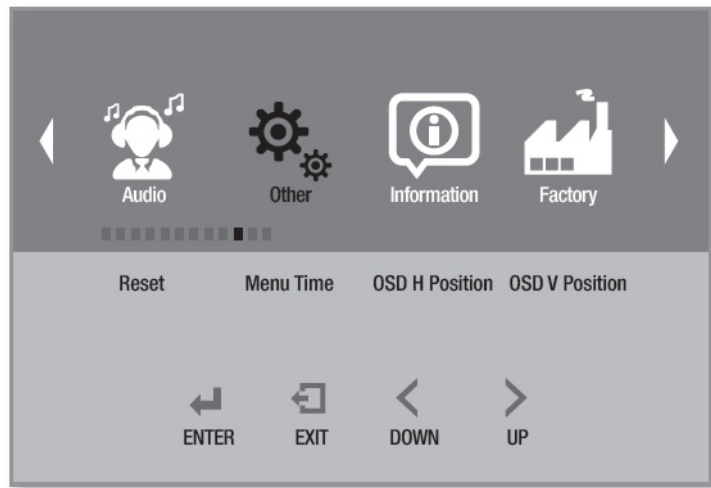
Menu	Description	Default	Remarks
Reset	Used to reset.		
Menu Time	OSD Menu disappears from over the screen after setting time.	20	
OSD H Position	Adjusts the OSD Menu position.	50	
OSD V Position	Adjusts the OSD Menu position.	50	

3.1.10 Information
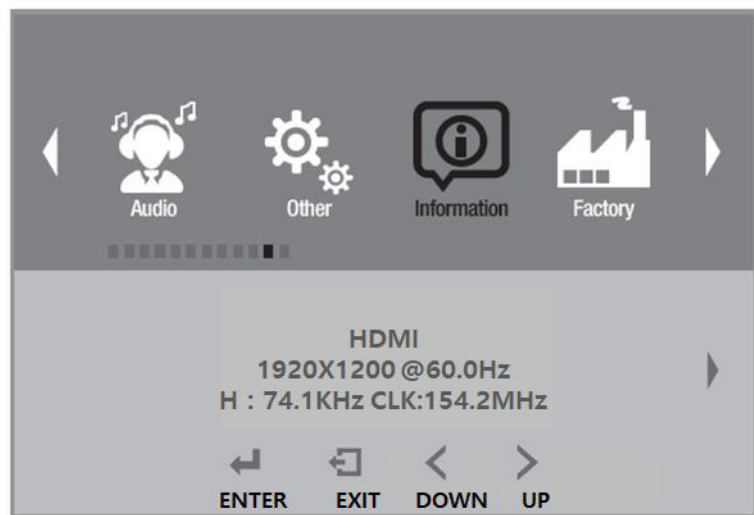
Menu	Description	Default	Remarks
Information	Information about the monitor.		

3.1.11 OSD Input Source

Main Source	RGB DP HDMI DVI 1 DVI 2 SDI 1 AVAS S-VIDEO VIDEO Auto Select	Used to select required Main Input source

3.1.12 PIP Table

	RGB	DP	HDMI	DVI 1	DVI 2	SDI 1	AVAS	S-VIDEO	VIDEO
RGB	O	O	O	O	O	O	O	O	O
DP	O	O	O	O	O	O	O	O	O
HDMI	O	O	O	O	O	O	O	O	O
DVI 1	O	O	O	O	O	O	O	O	O
DVI 2	O	O	O	O	O	O	O	O	O
SDI 1	O	O	O	O	O	X	O	X	X
AVAS	O	O	O	O	O	O	O	O	O
S-VIDEO	O	O	O	O	O	X	O	X	X
VIDEO	O	O	O	O	O	X	O	X	X

Appendix A

Cleaning

A.1 Cleaning the LCD Panel

- When the liquid crystal panel becomes dusty or dirty, wipe gently with a soft cloth.
- Do not rub the LCD panel with a hard or coarse material.
- Do not apply pressure to the LCD surface.
- Do not use OA cleaner as it may cause deterioration or discolor the LCD surface.

A.2 Cleaning the Cabinet

- Firstly, unplug the power supply.
- Gently wipe the cabinet with a soft cloth.
- Dampen a cloth with a neutral detergent and water, wipe the cabinet and then dry with a soft cloth.

> **Note!** *Many plastics are used on the surface of the cabinet. Do not clean with benzene, thinner, alkaline detergent, alcoholic system detergent, glass cleaner, wax, polish cleaner, soap powder, or insecticide. Do not place rubber or vinyl against the cabinet for long periods. These types of fluids and fabrics can cause the paint to deteriorate, crack or peel.*

Appendix **B**

Troubleshooting

B.1 Power Button Does Not Respond

■ Unplug the power cord of the Monitor from the AC outlet to turn off and reset the Monitor.

B.2 No Picture

■ The signal cable should be completely connected to the computer or the equipment.
■ Front power switch and computer (equipment) power switch should be in the ON position.
■ Make sure that a supported mode has been correctly selected on the system being used.
■ Check the monitor and your display card with respect to compatibility and recommended settings.
■ Check the signal cable connector for bent or pushed-in pins.
■ Check the signal input.

B.3 No Video

■ If no video is presented on the screen, turn the power off and on again.
■ Make sure the computer is not in a power-saving mode.

B.4 Image Persistence

■ Image persistence is when a residual or ghost image of a previous image remains visible on the screen. Unlike CRT monitors, LCD monitors' image persistence is not permanent, but constant images being displayed for a long period of time should be avoided.
■ To alleviate image persistence, turn off the monitor for as long as the previous image was displayed. For example, if an image was on the monitor for one hour and a residual image remains, the monitor should be turned off for one hour to erase the image.

Note! *As with all personal display devices, Kostec recommends using a moving screen saver at regular intervals whenever the screen is idle or turning off the Monitor when not in use.*

B.5 Unstable, Unfocused or Swimming Image

■ Signal cable should be completely attached to the computer or equipment.
■ Check the monitor and your display card with respect to compatibility and recommended signal settings.
■ If your text is garbled, change the display mode and use 60Hz refresh rate.

B.6 Display Image is Not Properly Sized

■ Check to make sure that a supported mode has been selected on the display card or system being used. (Consult display card or system manual to change graphic mode)

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