Disposal of Old Equipment and Batteries Only for European Union and countries with recycling systems

The above mark is in compliance with the Waste Electrical and Electronic Equipment Directive 2012/19/EU (WEEE). The mark indicates the requirement NOT to dispose the equipment including any spent or discarded batteries as unsorted municipal waste, but use the return and collection systems available. If the batteries or accumulators included with this equipment display the chemical symbol Hg, Cd, or Pb, then it means that the battery has a heavy metal content of more than 0.0005% Mercury, or more than 0.002% Cadmium or more than, 0.004% Lead.

Note for the battery symbol (bottom symbol): This symbol might be used in combination with a chemical symbol. In this case it complies with the requirement set by the Directive for the chemical involved.

IMPORTANT INFORMATION

WARNING : TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

FOR CUSTOMERS IN U.K.
IMPORTANT
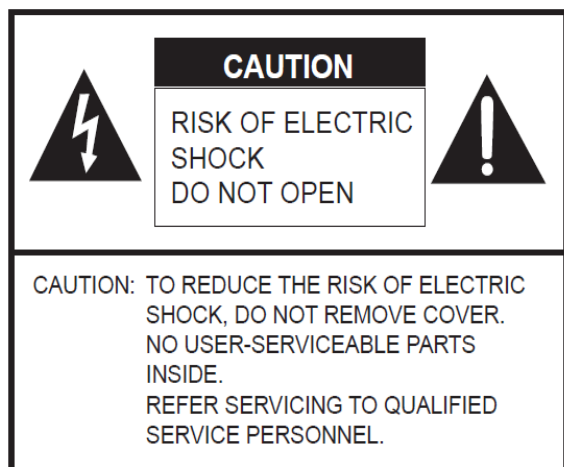The wires in this mains lead are coloured in accordance with the following code:

GREEN-AND-YELLOW:	**Earth**
BLUE :	**Neutral**
BROWN:	**Live**

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markins identifying the terminals in your plug proceed as follows.

- The wire witch is coloured GREEN-AND-YELLOW must be connected to the terminal in the plug which is marked by the letter **E** or by the safety earth ⏚ or coloured green or green-and-yellow.
- The wire which is coloured BLUE must be connected to the terminal which is marked with the letter **N** or coloured black.
- The wire which is coloured BROWN must be connected to the terminal which is marked with the letter **L** or coloured red.

Ensured that your equipment is connected correctly. If you are in any doubt consult a qualified electrician.
"WARNING: THIS APPARATUS MUST BE EARTHED"

CAUTION
RISK OF ELECTRIC SHOCK DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within a triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons. The exclamation point within a triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

WARNING:

FCC Regulations state that any unauthorized changes or modifications to this equipment not expressly approved by the manufacturer could void the user's authority to operate this equipment.

NOTE: This equipment has been tested and found to comply with the limits for 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.

DEAR SHARP CUSTOMER

Thank you for your purchase of a SHARP interactive monitor. To ensure safety and many years of trouble-free operation of your product, please read the Safety Precautions carefully before using this product.

SAFETY PRECAUTIONS

Electricity is used to perform many useful functions, but it can also cause personal injuries and property damage if improperly handled. This product has been engineered and manufactured with the highest priority on safety. However, improper use can result in electric shock and/or fire. In order to prevent potential danger, please observe the following instructions when installing, operating and cleaning the product. To ensure your safety and prolong the service life of your LCD product, please read the following precautions carefully before using the product.

1. Read instructions — All operating instructions must be read and understood before the product is operated.
2. Keep this manual in a safe place — These safety and operating instructions must be kept in a safe place for future reference.
3. Observe warnings — All warnings on the product and in the instructions must be observed closely.
4. Follow instructions — All operating instructions must be followed.
5. Cleaning — Unplug the power cord from the AC outlet before cleaning the product. Use a dry cloth to clean the product. Do not use liquid cleaners or aerosol cleaners.
6. Attachments — Do not use attachments not recommended by the manufacturer. Use of inadequate attachments can result in accidents.
7. Water and moisture — Do not use the product near water. Do not install the product in a place where water may splash onto it. Be careful of equipment which drains water such as an air-conditioner.
8. Ventilation — The vents and other openings in the cabinet are designed for ventilation. Do not cover or block these vents and openings since insufficient ventilation can cause overheating and/or shorten the life of the product. Do not place the product on a sofa, rug or other similar surface, since they can block ventilation openings. Do not place the product in an enclosed place such as a bookcase or rack, unless proper ventilation is provided or the manufacturer's instructions are followed.
9. Power cord protection — The power cords must be routed properly to prevent people from stepping on them or objects from resting on them.
10. The LCD panel used in this product is made of glass. Therefore, it can break when the product is dropped or applied with impact. Be careful not to be injured by broken glass pieces in case the LCD panel breaks.
11. Overloading — Do not overload AC outlets or extension cords. Overloading can cause fire or electric shock.
12. Entering of objects and liquids — Never insert an object into the product through vents or openings. High voltage flows in the product, and inserting an object can cause electric shock and/or short internal parts. For the same reason, do not spill water or liquid on the product.
13. Servicing — Do not attempt to service the product yourself. Removing covers can expose you to high voltage and other dangerous conditions. Request a qualified service person to perform servicing.
14. Repair — If any of the following conditions occurs, unplug the power cord from the AC outlet, and request a qualified service person to perform repairs.
- When the power cord or plug is damaged.
- When a liquid was spilled on the product or when objects have fallen into the product.
- When the product has been exposed to rain or water.
- When the product does not operate properly as described in the operating instructions.
- Do not touch the controls other than those described in the operating instructions. Improper adjustment of controls not described in the instructions can cause damage, which often requires extensive adjustment work by a qualified technician.
- When the product has been dropped or damaged.
- When the product displays an abnormal condition. Any noticeable abnormality in the product indicates that the product needs servicing.

15. Replacement parts — In case the product needs replacement parts, make sure that the service person uses replacement parts specified by the manufacturer, or those with the same characteristics and performance as the original parts. Use of unauthorized parts can result in fire, electric shock and/or other danger.
16. Safety checks — Upon completion of service or repair work, request the service technician to perform safety checks to ensure that the product is in proper operating condition.
17. Wall mounting — When mounting the product on a wall, be sure to install the product according to the methot recommended by the manufacturer.
18. Heat sources — Keep the product away from heat sources such as radiators, heaters, stoves and other heat-generating products (including amplifiers).
19. Batteries — Incorrect use of batteries may cause the batteries to burst or ignite. A leaky battery may corrode the equipment, dirty your hands or spoil your clothing. In order to avoid these problems, make sure to observe the precautions below:
    • CAUTION Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.
    • Use the specified batteries only.
    • Install the batteries with due attention to the plus (+) and minus (-) sides of the batteries according to the instructions in the compartment.
    • Do not mix old and new batteries.
    • Do not mix batteries of different types. Voltage specifications of batteries of the same shape may vary.
    • Replace an exhausted battery with a new one promptly.
    • If you will not use the remote control for a long time, remove the batteries.
    • If leaked battery fluid gets on your skin or clothing, rinse immediately and thoroughly. If it gets into your eye, bathe your eye well rather than rubbing and seek medical treatment immediately. Leaked battery fluid that gets into your eye or your clothing may cause a skin irritation or damage your eye.
20. Usage of the monitor must not be accompanied by fatal risks or dangers that, could lead directly to death, personal injury, severe physical damage or other loss, including nuclear reaction control in nuclear facility, medical life support system, and missile launch control in a weapon system. Do not stay in contact with the parts of the product that become hot for long periods of time. Doing so may result in low-temperature burns.
21. The socket-outlet shall be installed near the equipment and shall be easily accesible.
22. Plug the appliance to a grounded outlet. Always use the grounded power cord supplied with your product. Manufacturer is not responsible for any damage caused unearthed usage.

WARNING:
This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

To maintain compliance with EMC regulations, use shielded cables to connect to the following terminals:PC/AV HDMI input terminal, PC/AV D-SUB input terminal, RS- 232C input.

If a monitor is not positioned in a sufficiently stable location, it can be potentially hazardous due to falling. Many injuries, particularly to children, can be avoided by taking simple pre cautions such as:
• Using fixing devices like wall mount brackets recommended by the manufacturer.
• Only using furniture that can safely support the monitor.
• Ensuring the monitor is not overhanging the edge of the supporting furniture.
• Not placing the monitor on tall furniture (for example, cupboards or bookcases) without anchoring both the furniture and the monitor to a suitable support.
• Not standing the monitors on cloth or other materials placed between the monitor and supporting furniture.
• Educating children about the dangers of climbing on furniture to reach the monitor or its controls.

SAFETY PRECAUTIONS (Continued)

Especially for child safety
- Don't allow children to climb on or play with the monitor.
- Don't place the monitor on furniture that can easily be used as steps, such as a chest of drawers.
- Remember that children can become excited while watching a program, especially on a "larger than life" monitor. Care should be taken to place or install the monitor where it cannot be pushed, pulled over, or knocked down.
- Care should be taken to route all cords and cables connected to the monitor so that they cannot be pulled or grabbed by curious children.

SAFETY INSTRUCTION

- Do not use the monitor where there is a lot of dust, where humidity is high, or where the monitör may come into contact with oil or steam, as this could lead to fire.
- Ensure that the monitor does not come into contact with water or other fluids. Ensure that no objects such as paper clips or pins enter the monitör as this could lead to fire or electric shock.
- Do not place the monitor on top of unstable objects or in unsafe places. Do not allow the monitör to receive strong shocks or to strongly vibrate.
- Causing the monitor to fall or topple over may damage it.
- Do not use the monitor near heating equipment or in places where there is likelihood of high temperature, as this may lead to generation of excessive heat and outbreak of fire.
- Do not use the monitor in places where it may be exposed to direct sunlight.
- Please be sure to constantly remove dust and garbage that has attached to the ventilation opening.
- If dust collects in the ventilation opening or the inside of the monitor, it may lead to excessive heat, outbreak of fire, or malfunction.

- Please request a cleaning of the inside of the monitor from an authorized SHARP servicing dealer or service center.
- The AC outlet shall be installed near the equipment and shall be easily accessible.

The Power Cord

- Use only the power cord supplied with the monitor.
- Do not damage the power cord nor place heavy objects on it, stretch it or over bend it. Also, do not add extension cords. Damage to the cord may result in fire or electric shock.
- Do not use the power cord with a power tap.
- Adding an extension cord may lead to fire as a
- result of overheating.
- Do not remove or insert the power plug with wet hands. Doing so could result in electric shock.
- Unplug the power cord if it is not used for a long time.
- Do not attempt to repair the power cord if it is broken or malfunctioning. Refer the servicing to the service representative.

MOUNTING PRECAUTIONS

- This product is for use indoors.
- A mounting bracket compliant with VESA specifications is required.
- Since the monitor is heavy, consult your dealer before installing, removing or moving the monitor.
- Mounting the monitor on the wall requires special expertise and the work must be performed by an authorized SHARP dealer. You should never attempt to perform any of this work yourself. Our company will bear no responsibility for accidents or injuries caused by improper mounting or mishandling
- Use the monitor with the surface perpendicular to a level surface. Do not install the product on a ceiling or inclined wall.
- This monitor should be used at an ambient temperature between 32°F (0°C) and 104°F (40°C). Provide enough space around the monitor to prevent heat from accumulating inside
- If it is difficult to provide sufficient space for any reason such as the installation of the monitor inside a housing, or if the ambient temperature may be outside of the range of 32°F (0°C) to 104°F (40°C), install a fan or take other measures to keep the ambient temperature within the required range.
- Temperature condition may change when using the monitor together with the optional equipments recommended by SHARP. In such cases, please check the temperature condition specified by the optional equipments.

- Do not block any ventilation openings. If the temperature inside the monitor rises, this could lead to a malfunction.
- Do not place the monitor on a device which generates heat.
- Adhere to the following when installing the monitor in its portrait orientation. Failing to adhere to the following may cause malfunctions.
- Install the monitor such that the power LED is located on the bottom side.
- When clamping the power cord, take care not to stress the terminal of the power cord. Do not bend the power cord excessively.

Content Table

NOTE

Depending on the model you have bought, the appearance of your INTERACTIVE MONITOR may not be the same as the one displayed in this manual.

As a part of our policy of continuous improvement, SHARP reserves the right to make design and specification changes for product improvement without prior notice. The performance specification figures indicated are nominal values of production units. There may be some deviations from these values in individual units.

⚠ **CAUTION** ⚠

Do not leave a static image displayed for prolonged period of time. If a static image is displayed continously for a long period of time, that image may cause image sticking on the display. This condition is not permanent, but may require a considerable amount of operational display time to dissipate, depending upon the degree of image stick, 120 minutes of continous motion display will eliminate most image sticking effects at normal room temperature (not lower than 10 C).

As the nature of the TFT technology, you may see some amount of bright, dark, red, green and blue dots and sparlings on the screen, those do not affect the performance of the computer and are not accepted as a defect.

System Features		
Model Name		PN-VC651B
Installation		Landscape
LCD Panel	Backlight	Edge
	Max. Resolution	1920 × 1080 pixels
	Max. Display Colours (approx.)	1.07 B
	Pixel Pitch (HxV)	0.744 mm
	Max. Brightness (average)	360cd/m²
	Contrast Ratio	4000:1
	Viewing Angle (H/V)	178˚/ 178˚
	Active Screen Area (WxH) (approx.)	1428.48(H)x803.52(V)(mm) (56.24" x 31.63")
	Response Time	8 ms (Gray to Gray, Ave.)
Touchscreen	Touch Technology	IR Touch Screen (6-point simultaneous touch screen support)
	Power Supply	USB
	Multi Touch	6 points
	Protection Glass Thickness	4mm anti-glare glass. 4mm tempered, anti-reflective glass(optional)
Computer Input	Video	HDMI1.3b
	Synchronisation	HDMI TMDS
	Plug & Play	VESA DDC2B
	Power Management	VESA DPMS
Video Colour System		
Input Terminals	PC Analogue	VGA D-sub15 pin x1
	HDMI	x1 (HDCP and 1080p compatible)
	Audio	φ3.5mm -diameter stereo jack x1
	Video	N/A
	Component Video	N/A
	DisplayPort	N/A
	USB (Type B)	x1 (for external touch screen usage only)
Output Terminals	Audio	φ3.5mm-diameter stereo jack x1
	DisplayPort	N/A
	Speaker Output	15W + 15W(8Ω)
Input/Output Terminals		
Speaker Output		
Mounting		
Power Supply		
Power Consumption		
Environmental Condition	Operating Temperature	0℃ to 40℃
	Operating Humidity	90% relative humidity
Dimensions (WxDxH) (approx.) (display only)		1562,2mm x 93,2mm x 959,6mm
Weight (approx.)		51kg (112.435754lbs)
Main Accessories		Remote control, power cable, information booklet, HDMI cable
Power Ranges with Only Monitor		220-240V AC, 50-60Hz, 1000mA

*Use this product at altitudes not exceeding 2000m above sea level, in dry locations.

PACKING LIST

Remote Controller x 1
Additional battery x1
Power Cord x 2 (Euro / UK)
HDMI Cable x 1
USB Cable
Touch Screen Pen x 1

INTRODUCTION

This instruction manual is intended to help you to get the best out of " INTERACTIVE MONITOR "

Chapter 1 Introduction to your INTERACTIVE MONITOR

Chapter 2 Using your INTERACTIVE MONITOR . Instructions for using the and its functions.

Chapter 3 Power management. Information about power management.

Chapter 4 Addition of other devices to your INTERACTIVE MONITOR.

Chapter 5 Using your INTERACTIVE MONITOR more efficiently.

Chapter 6 Troubleshooting.

Signs used in this manual

Some words and phrases are written in a different format to get your attention.

Note: It is being used to put emphasis on useful information and critical points regarding

the product .

Important!

Important instructions are to be read carefully in order to prevent any damage to yourself, stored

data and computer parts.

SAFETY PRECAUTIONS

Power plug must be at a point that can be easily accessible and close to product.
Please read the following recommended safety precautions carefully for your safety.

Power

In order to disconnect your INTERACTIVE MONITOR from all power supplies, first turn off

your computer and unplug its AC cable from the power source.

• Always use the earthed AC cable provided.

Warning!

The device you have bought must be plugged into the grounded electrical outlet. Please always use

the grounded power cord provided. Manufacturer takes no responsibility for any damage that may

occur as a result of ungrounded usage.

Warning!

Disconnect your system from the power source in case of a long period of disuse.

Cleaning

Important!

Disconnect your   from the power supply before cleaning it.

Do not clean your INTERACTIVE MONITOR while it is switched on. Use a soft and damp cloth

to clean the surface of. Do not use chemical cleaners to clean the screen. Do not apply

cleanser directly on your computer.

Vent holes of your

Vent holes on the cabin of your INTERACTIVE MONITOR ensures stable performance of

your computer without overheating. Do not block these openings in any way.

Important!

• Do not put any objects in the vent holes of your. This may cause fire or short circuit of the

inner parts of your.

Temperature & Fire

Do not expose your INTERACTIVE MONITOR close to fire or high heat sources.

Lightning

Before lightning or storms, disconnect your INTERACTIVE MONITOR from the mains.

Servicing
Please refer all servicing to qualified personnel. Do not remove the cover yourself as this may result in
an electric shock.

CAUTION : TO REDUCE THE RISK OF ELECTRIK SHOCK. DO NOT REMOVE COVER. (OR
BACK) NO USER –SERVICEABLE PARTS INSIDE. REVER SERVICING TO QUALIFIED SERVICE
PERSONEL

Do not jolt your INTERACTIVE MONITOR

Ensure that it stays in a balanced stance on its position.

Do not throw or drop any object on your INTERACTIVE MONITOR .

Do not keep your INTERACTIVE MONITOR in a humid environment.

Do not keep your INTERACTIVE MONITOR   in an extremely cold environment.

Do not keep your INTERACTIVE MONITOR in an extremely hot environment.

CHAPTER 1:

INTRODUCTION TO INTERACTIVE MONITOR

Congratulations for buying our INTERACTIVE MONITOR 65"(165cm) (165cm)/165cm !

We believe that you will be extremely satisfied with this   and hope that you will have pleasant and productive times with your INTERACTIVE MONITOR .

Your INTERACTIVE MONITOR provides a modern design that is compatible with most working conditions by combining a 65"(165cm) (165cm)/165cm TFT-LCD monitor, touch screen and a desktop computer.

Since all essential components that compose your INTERACTIVE MONITOR are all together, it is easy to use and user-friendly. In addition to being compact, it also supports many functional features. Some of these are; RS232 connection compatible and high quality speakers.

Note: Information here is only for reference purposes, the INTERACTIVE MONITOR you have bought may have some differences from the definitions and images in this manual.

### Front view
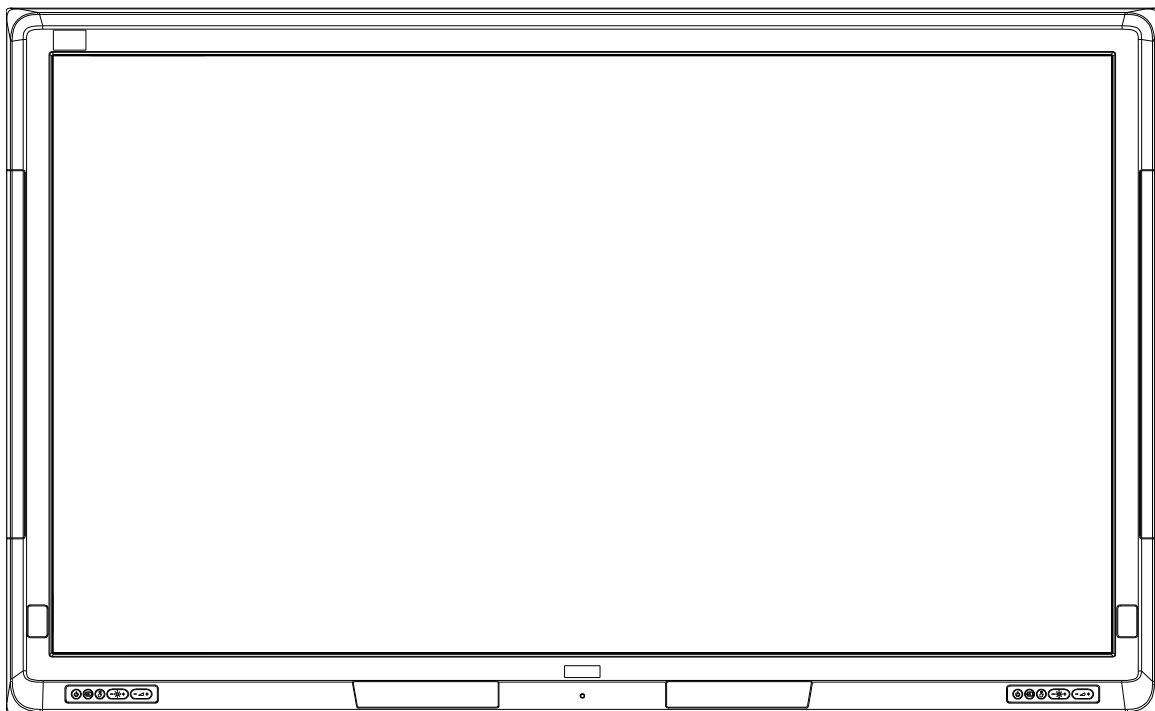
CHAPTER 2:
USING AND ITS FUNCTIONS.

Panel

Panel type		TFT LCD
Active area		1428.48 (H) x 803.52 (V)
Visual angle	Horizontal	178°
	Vertical	178°
Max. brightness		360 cd/m2
Max. contrast		4000:1
Response time		8 ms G2G
Max. resolution		1920 * 1080
H - frequency		60 KHz ~ 73 KHz
V - frequency		47Hz ~ 63Hz (typical: 60Hz)

Controlling the Monitor with a PC (RS-232C)

You can control this interactive monitor from a PC via RS-232C (COM port) on the PC.

- ## PC Connection

Connect with RS-232 cross cable between the PC's COM port (RS-232C connector) and the RS-232C input terminal on the monitor.
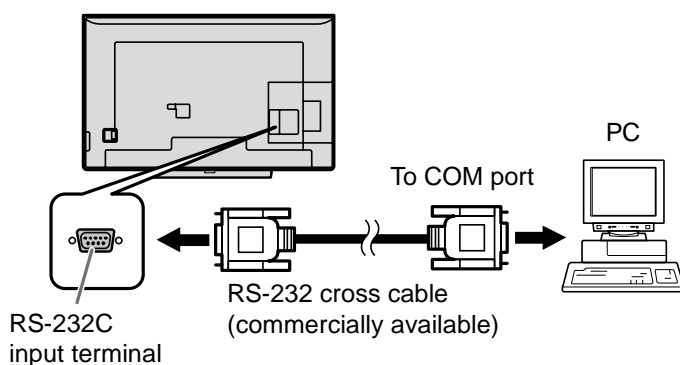
- ## Comminucation conditions

Set the RS-232C communication settings on the PC to match the monitor's communication settings as follows:

Boud Rate	19200
Data Lenght	8 Bits
Parity Bit	None

Stop Bit	1 Bit
Flow Control	None

- ## Comminucation conditions
Command Format
When a command is sent from the PC to the monitor, the monitor operates according to the received command and sends a response message to the PC.

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	P1

Command field (12 byte Hexadecimal)
Parameter field (1 byte Hexadecimal)
Example1: Volume set command: BE EF 03 06 00 31 D3 03 00 01 20 01 15
This command is used for setting volume value as 21 out of 100.
Example2: Backlight get command: BE EF 03 06 00 89 D2 02 00 03 20 00 00
This command is used for getting backlight value.
Be sure that the command include exactly 13 Bytes data.

• **Response Code**

3 type of response codes are exist.
1: RS232 get command(1 Byte)
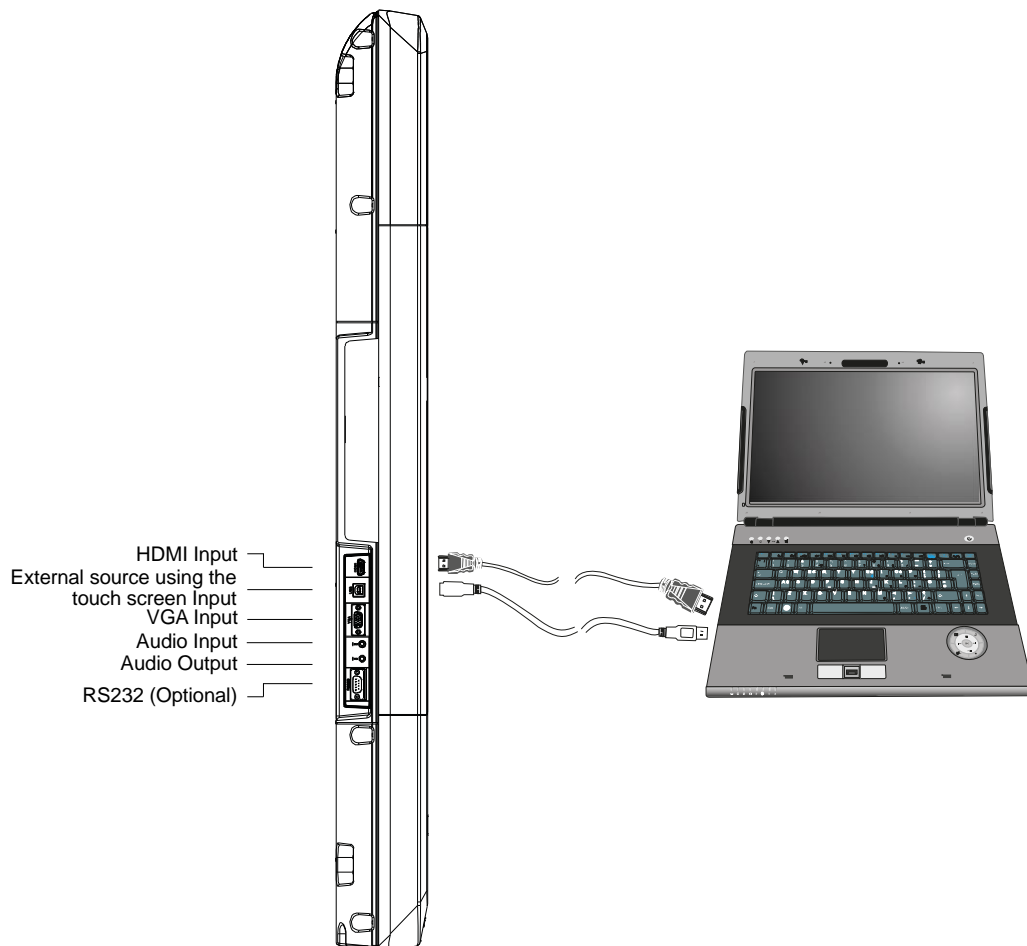2: True (06)
3:False(15)
Get commands don't response true or false.

• **Communication Interval**

After 06 or 15 returned, you must send the following commands.
Provide an interval of 350 ms or more between the command response and the transmission of the next command.

Usage of Touch Screen with External PC

HDMI Input
External source using the
touch screen Input
VGA Input
Audio Input
Audio Output
RS232 (Optional)

If you want to use touch screen when you connect an external PC to your INTERACTIVE MONITOR via VGA or HDMI inputs, you should connect the external PC to your INTERACTIVE MONITOR with a USB-USB cable as shown above. Touch screen will be activated soon.

- **Compatible signal timing (PC)**

Screen Resolution		Hsync	Vsync	Dot frequency	Digital HDMI	Analog (D-Sub)
VESA	640x480	31.5kHz	60Hz	25.175MHz	Yes*1*2	Yes
	800x600	35.1kHz	56Hz	36.0MHz	Yes	Yes
		37.9kHz	60Hz	40.0MHz	Yes	Yes
	1024x768	48.4kHz	60Hz	65.0MHz	Yes	Yes
Wide	1280x720	44.7kHz	60Hz	74.4MHz	Yes	Yes
	1920x1080	65.5kHz	60Hz	148.5MHz	Yes	Yes
Sun*4	1024x768	48.3kHz	60Hz	64.13MHz	Yes	Yes

- **Compatible signal timing (AV)**

Screen resolution	Frequency	HDMI
1920x1080P	50Hz	Yes
	59.94Hz	Yes
	60Hz	Yes
1280x720P	50Hz	Yes
	59.94Hz	Yes
	60Hz	Yes
720x576P	50Hz	Yes
720x480P	59.94Hz	Yes
	60Hz	Yes
640x480(VGA)	59.94Hz	Yes*1
	60Hz	Yes*1

- ## RS232 Command Table

| Function Name	Function Type	Command Data (HEX)							Additional Information		
OPS Power	OFF	BE EF	03	06 00	2A D3	01 00	00 60	00 00			
	ON	BE EF	03	06 00	BA D2	01 00	00 60	01 00			
	GET	BE EF	03	06 00	19 D3	02 00	00 60	00 00	1D 00 00 : OFF	1D 00 00 : ON	
Source	OPS	BE EF	03	06 00	FE D2	01 00	00 20	00 00			
	HDMI	BE EF	03	06 00	0E D2	01 00	00 20	03 00			
	VGA	BE EF	03	06 00	6E D2	01 00	00 20	01 00			
	GET	BE EF	03	06 00	CD D2	02 00	00 20	00 00	1D 00 01: PC	1D 00 02: VGA	1D 00 03:HDMI
Backlight	GET	BE EF	03	06 00	89 D2	02 00	03 20	00 00	1D 00 XX : value		
	INCREMENT	BE EF	03	06 00	EF D2	04 00	03 20	00 00			
	DECREMENT	BE EF	03	06 00	3E D3	05 00	03 20	00 00			
	SET	BE EF	03	06 00	89 D2	03 00	03 20	00 00	Default Value: 0x64	Range: 0x64 - 0x1E	
	RESET	BE EF	03	06 00	58 D3	06 00	00 70	00 00			
Volume	GET	BE EF	03	06 00	31 D3	02 00	01 20	00 00	1D 00 XX : value		
	INCREMENT	BE EF	03	06 00	57 D3	04 00	01 20	00 00			
	DECREMENT	BE EF	03	06 00	86 D2	05 00	01 20	00 00			
	SET	BE EF	03	06 00	31 D3	03 00	01 20	01 XX	Default Value: 0x10	Range: 0x1D-0x00	
Screen	ON	BE EF	03	06 00	FB D8	01 00	20 30	00 00			
	OFF	BE EF	03	06 00	6B D9	01 00	20 30	01 00			
	GET	BE EF	03	06 00	C8 D8	02 00	20 30	00 00	1D 00 00 : OFF	1D 00 01 : ON	
Auto Adjust	ON	BE EF	03	06 00	32 D4	01 00	19 20	01 00			Only VGA
	OFF	BE EF	03	06 00	A2 D5	01 00	19 20	00 00			Only VGA
Keypad Lock	ON	BE EF	03	06 00	93 97	01 00	11 24	01 00			
	OFF	BE EF	03	06 00	03 96	01 00	11 24	00 00			
	GET	BE EF	03	06 00	30 96	02 00	11 24	00 00	1D 00 00 : OFF	1D 00 01 : ON	
Remote Controller Lock	OFF	BE EF	03	06 00	E7 96	01 00	16 24	01 00			
	ON	BE EF	03	06 00	77 97	01 00	16 24	00 00			
	GET	BE EF	03	06 00	44 97	02 00	16 24	00 00	1D 00 00 : OFF	1D 00 01 : ON	
OSD Menu	ON	BE EF	03	06 00	6A 63	01 00	00 37	01 00			
	OFF	BE EF	03	06 00	FA 62	01 00	00 37	00 00			
Contrast	GET	BE EF	03	06 00	FD D3	02 00	04 20	00 00	1D 00 XX : value		
	SET	BE EF	03	06 00	FD D3	03 00	04 20	01 XX	40" default value: 0x9E 50" default value: 0x8A	65"(165cm) (165cm)/165cm default value: 0x9E	Range: 0xB2- 0x4E
	INCREMENT	BE EF	03	06 00	9B D3	04 00	04 20	00 00			
	DECREMENT	BE EF	03	06 00	4A D2	05 00	04 20	00 00			
Monitor	ON	BE EF	03	06 00	19 D3	02 00	00 60	02 00			
	OFF	BE EF	03	06 00	19 D3	02 00	00 60	01 00			
	GET	BE EF	03	06 00	19 D8	03 00	00 60	07 00	1D 00 00 : OFF		
Mute	ON	BE EF	03	06 00	D6 D2	01 00	02 20	01 00			
	OFF	BE EF	03	06 00	46 D3	01 00	02 20	00 00			
	GET	BE EF	03	06 00	75 D3	02 00	02 20	00 00	1D 00 00 : OFF		
Auto Position	EXECUTE	BE EF	03	06 00	91 D0	02 00	0A 20	00 00			Only VGA
Color Temperature	INCREMENT	BE EF	03	06 00	0B F5	10 00	B0 30	03 00	9300K, 6500K, 5000K, 7500K, USER		
	DECREMENT	BE EF	03	06 00	CB F8	01 00	B0 30	13 00	9300K, 6500K, 5000K, 7500K, USER		
	GET	BE EF	03	06 00	C8 F5	02 00	B0 30	00 00	1D 00 XX : value	00=9300K, 00=6500K, 00=7500K, USER	
Clock	INCREMENT	BE EF	03	06 00	19 D4	03 00	00 60	03 00			Only VGA
	DECREMENT	BE EF	03	06 00	19 D5	03 00	00 60	04 00			Only VGA
	GET	BE EF	03	06 00	19 D7	03 00	00 60	06 00	1D XX XX : value		Only VGA
Phase	INCREMENT	BE EF	03	06 00	2F 83	04 00	03 21	00 00			Only VGA
	DECREMENT	BE EF	03	06 00	FE 82	05 00	03 21	00 00			Only VGA
	GET	BE EF	03	06 00	49 83	02 00	03 21	00 00	1D 00 XX : value		Only VGA
H-Position	INCREMENT	BE EF	03	06 00	97 82	04 00	01 21	00 00			Only VGA
	DECREMENT	BE EF	03	06 00	46 83	05 00	01 21	00 00			Only VGA
	GET	BE EF	03	06 00	F1 82	02 00	01 21	00 00	1D XX XX : value		Only VGA
V-Position	INCREMENT	BE EF	03	06 00	6B 83	04 00	00 21	00 00			Only VGA
	DECREMENT	BE EF	03	06 00	BA 82	05 00	00 21	00 00			Only VGA
	GET	BE EF	03	06 00	0D 83	02 00	00 21	00 00	1D 00 XX : value		Only VGA
Color Get Gain R	INCREMENT	BE EF	03	06 00	52 F4	04 00	B1 30	00 00			
	DECREMENT	BE EF	03	06 00	83 F5	05 00	B1 30	00 00			
	GET	BE EF	03	06 00	34 F4	02 00	B1 30	00 00	1D XX XX : value		
Color Get Gain G	INCREMENT	BE EF	03	06 00	16 F4	04 00	B2 30	00 00			
	DECREMENT	BE EF	03	06 00	C7 F5	05 00	B2 30	00 00			
	GET	BE EF	03	06 00	70 F4	02 00	B2 30	00 00	1D 00 XX : value		
Color Get Gain B	INCREMENT	BE EF	03	06 00	EA F5	04 00	B3 30	00 00			
	DECREMENT	BE EF	03	06 00	3B F4	05 00	B3 30	00 00			
	GET	BE EF	03	06 00	8C F5	02 00	B3 30	00 00	1D XX XX : value		

Install the sound drivers included in your system before using the sound function of your " INTERACTIVE MONITOR " In case of any sound distortions during recording, please decrease microphone volume.

The methods of playing and recording sound depend on the operating system in use. Please refer to the instructions in your operating system's support points for these methods.
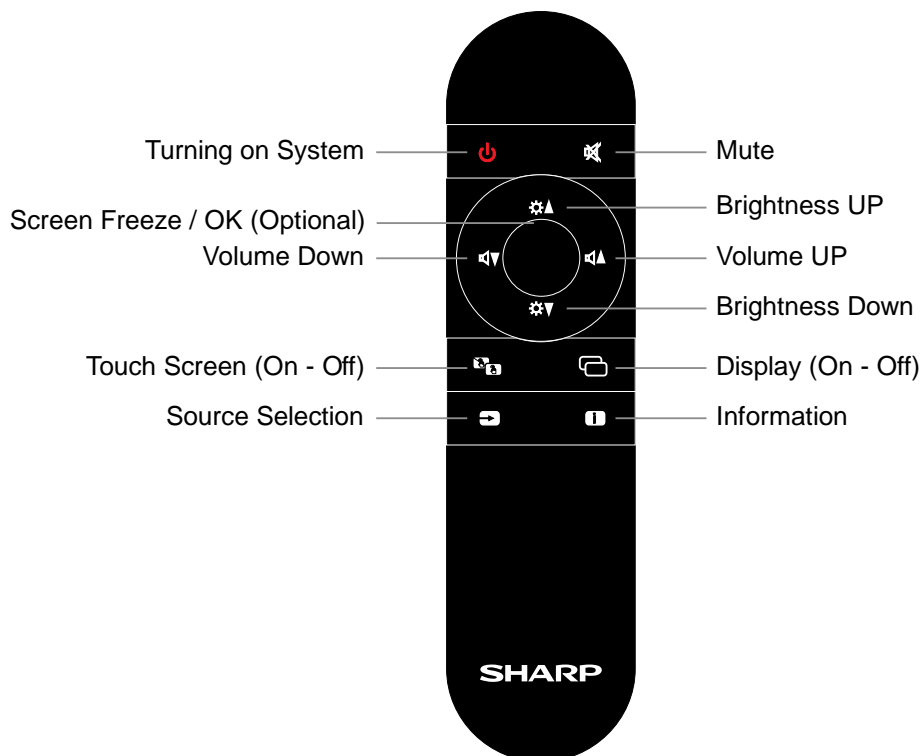
Function Buttons and Remote Controller

There are 7 function buttons on " INTERACTIVE MONITOR " . These buttons are shown below and remote controller is shown on the next page;

| System ON / OFF | Source Select | Touch Screen ON / OFF | Brightness UP / Down | Volume UP - Down |
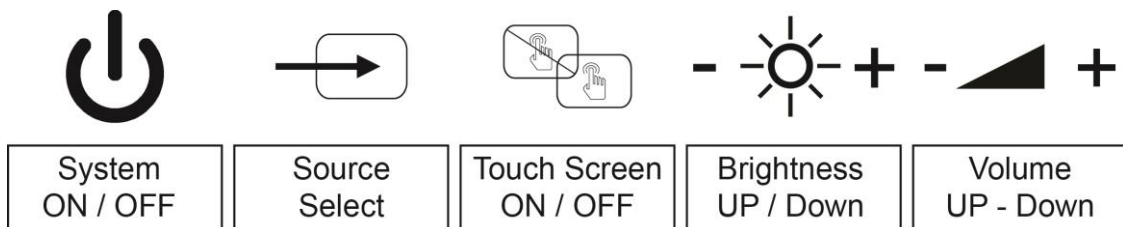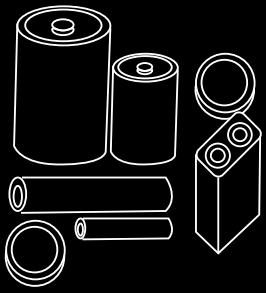
Please hold down the touch screen on/off button for 4 seconds to enable or disable the function of keypad on the front.
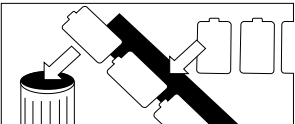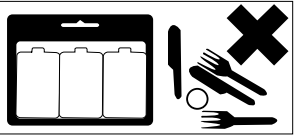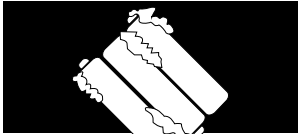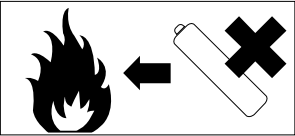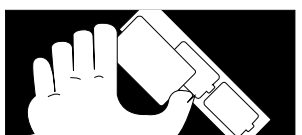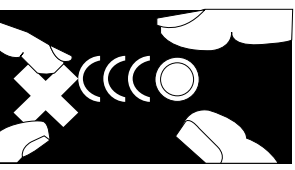
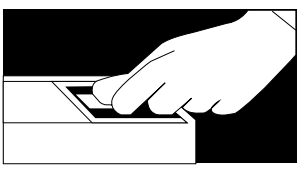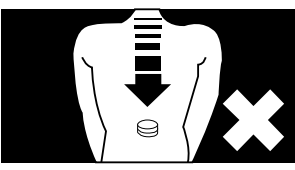|	
Turning on System	Mute
Screen Freeze / OK (Optional)	Brightness UP
Volume Down	Volume UP
	Brightness Down
Touch Screen (On - Off)	Display (On - Off)
Source Selection	Information

CAUTION : RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.
DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

BATTERY SAFETY GUIDELINES

Used correctly, domestic batteries are a safe and dependable source of portable power. Problems can occur if they are misused or abused resulting in leakage or, in extreme cases, fire or explosion.
Here are some simple guidelines to safe battery use designed to eliminate any such problems.

Take care to fit your batteries corretl y, observing the plus and minus marks on the battery and appliance. Incorrect fitting can cause leakage o r, in extreme cases, fire or even explosion.

Replace the whole set of batteries at one time, taking care not to mix old and new batteries or batteries of different types, since this can result in leakage or, in extreme cases, fire on even an explosion.

Store unused batteries in their packaging and away from metal objects which may cause a short-circuit resulting in leakage o r, in extreme cases, fire or even an explosion.

Remove dead batteries from equipment and all batteries from equipment you know you are not going to use for a long time. Otherwise the batteries may leak and cause damage.

Never dispose of batteries in fire as this can cause them to explode. Please recycle dead batteries; do not put with the normal household waste.

Never attempt to recharge ordinary batteries, either in a charger or by applying heat to them. They may leak, cause fire or even explode. There are special rechargeable batteries which are clearly marked as such.

Supervise children if they are replacing batteries themselves in order to ensure these guidelines are followed.

Remember that small button cell batteries such as used in some hearing aids, toys, games and other appliances, are easily swallowed by young children and this can be dangerous.

Keep loose button cells away from young children.

Make sure battery compartments are secure.

Seek medical advice if you beileve a cell has been swallowed.

Note: Any issues which are caused by customer mis-adjustment of any software including the operating system are not covered by the warranty.

4.1.1. Touch screen Installation instructions

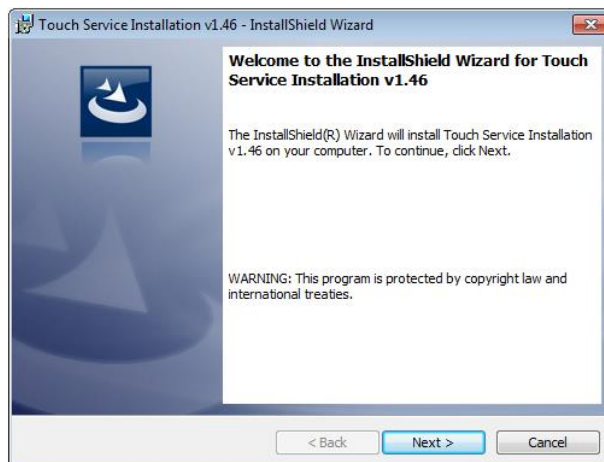The INTERACTIVE MONITOR is supplied with USB Stick which contains drivers and the Touch Service calibration application.
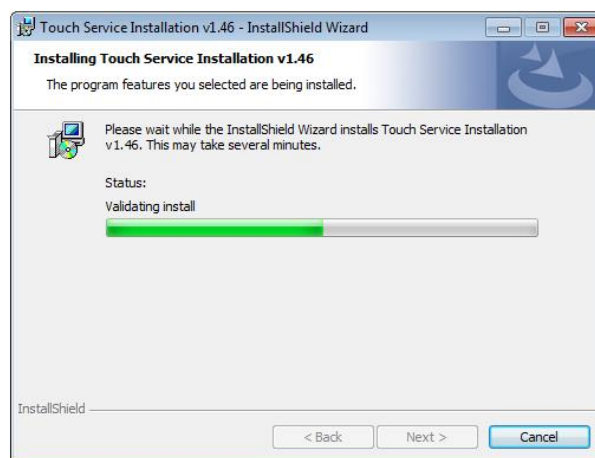
4.1.2. Touch screen Installation instructions

1. Double-click the installation file of "setup.exe"
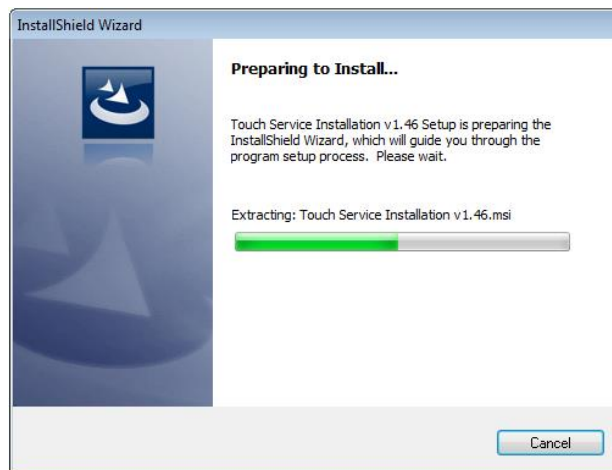
2. To exit the installation, please click "Cancel"; to continue, click "Next", directly go to step.

3. Start the installation by clicking "Install".

4. When completed, click "Finish" and exit.

**5.** When the installations finished, a shortcut is available on the desktop as shown below;

CALIBRATING THE TOUCH SCREEN

Function Description

1) The coordinates of the touch panel and display screen should be accurately matched by calibration.
2) When will calibration be needed?
        a) The first time you have installed touch panel bundled software.
        b) Inconsistency occurred between the mouse and your finger action.
        c) After changing the touch panel or monitor.
        d) Having moved the touch panel or there is a change in monitor resolution.

Operating steps

1) Click "Calibration" on Touch Service main interface
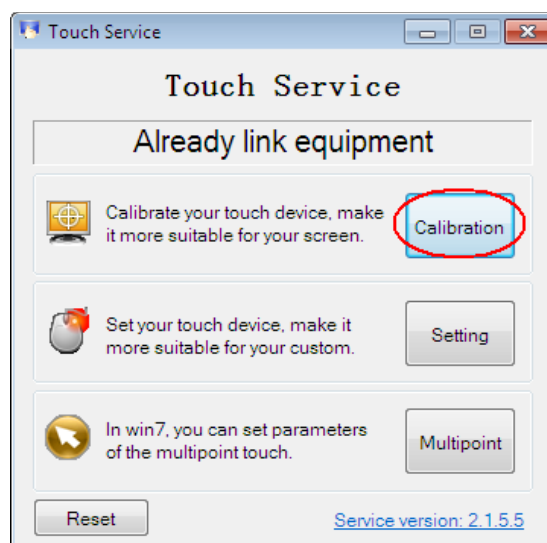
2) Touch the center of the calibration points shown on the screen one by one with your finger in order below (Figure 4-6). In total, there are four calibration points. (Upper left corner→ upper right corner → lower right corner → lower left corner).

        a) The number in the center is the countdown. When it comes to zero, you will automatically exit the calibration without saving the result.
        b) Also, you can press ESC to exit the calibration process without saving the result.

Touch the centre of the calibration point.

3) Having touched the four calibration points, a dialogue box will pop up. Click "Yes" to save the calibration data and "No" not to. If you don't click yes or no within 10s, you will automatically exit the calibration process without saving the data.
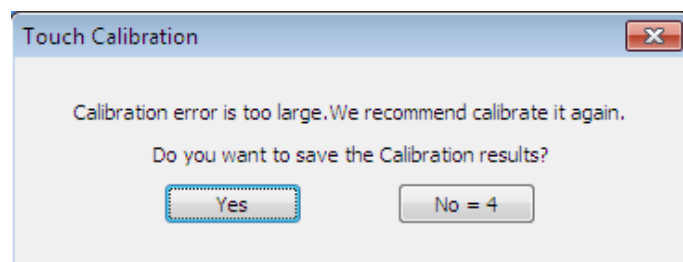
Using External Sources with INTERACTIVE MONITOR

• Plug the cable of the external source (HDMI – VGA)

• Plug the USB cable which transfer the data of the touch screen to external sources
Important: Please connect the line in cable while using the VGA source for transfering the audio data

• Please use your external source's display settings and select INTERACTIVE MONITOR as a monitoring device

• Plugging AC cable of   INTERACTIVE MONITOR is enough for using your external sources.

For switching to external sources you should press source select button "

Be sure that which source (HDMI - VGA) is active.

CHAPTER 3:

Troubleshooting

If you are experiencing any problem with your display, before calling for service, please review the following troubleshooting tips.

There is no picture or sound.

• Is the power on?

• Make sure correct input mode is selected.

• If any external equipment is connected, make sure the equipment is operating (playing back).

Remote control does not work.

• Is the battery inserted with polarity (+,-) aligned?

• Is the battery exhausted?

• Point the remote control unit toward the monitor's remote control sensor.

Sound from left and right speakers is reversed. Sound is heard from only one side.

• Are audio cables connected properly?

There is a picture but no sound.

• Is the sound muted? (See page 10.)

• Make sure the volume is not set to minimum. (See page 10.)

• Are audio cables connected properly?

Unstable video.

• The signal may be incompatible. (See pages …)

The video from the HDMI input terminal does not appear properly.

• Is the HDMI cable HDMI standard compliant? The monitor will not work with cables that are not standard compliant.

• Is the input signal compatible with this monitor? (See pages …)

The video from D-sub input terminal does not appear correctly.

• Is the input signal compatible with this monitor? (See page …)

There is no picture.

• Turn on the monitor first before turning on the computer or playback device.

Computer resolution changes automatically.

• If you turn the power switch off and then back on again connecting the computer with a graphic card, the resolution may change to 640 x 480. The resolution changes back to 1920 x 1080 according to the following steps.

- Disconnect and connect the video cable.

- Reboot the computer.

The touch panel does not respond.

• Is the USB cable connected properly?

The response of the touch screen is slow.

Some parts of the screen do not respond.

A different place is touched

• Is the screen exposed to direct sunlight or other strong light?

The touch panel uses infrared rays and thus may not operate correctly.

• Is there an obstacle between the infrared transmitter/receiver and the touch pen or your finger?

An obstacle will prevent correct operation. If your fingers or a sleeve are too close to the screen, correct operation will not be possible.

• Is the infrared transmitter/receiver dirty? Gently wipe off any dirt with a soft cloth.

• If the touch panel is touched with a small tip less than about 5/16 inch (8 mm) x 5/16 inch (8 mm), the touch may not be detected by infrared and correct operation will not take place.

• When starting your computer or connecting the USB cable, do not touch the touch panel. If you touch the touch panel, this may be detected as an element failure in the infrared transmitter/receiver and incorrect operation will result.

• When two touch pens are used, it may not be possible to write correctly.

- When touch pens are moved near each other.

- When a pen is held at an angle while writing.

Power LED flashes red.

• The monitor has no signal input. If signal input is connected, the monitor will restart(LED is off) and display the picture.

The monitor makes a cracking sound.

• You may occasionally hear a cracking sound from the monitor. This happens when the cabinet slightly expands and contracts according to change in temperature. This does not affect the monitor's performance.

FREQUENTLY ASKED QUESTIONS

Sound Issues

Check the following:
Be sure that sound volume is not low and sound is not muted. Ensure that the sound driver and its application are installed properly. Check that your is not in Hibernate mode. Check cable connections in case you use an external speaker.

Symptom: External microphone and auditory devices are not working

Check the following:
Make sure that the cables are properly and firmly connected. Check that the driver is installed. Check sound settings and whether the system is muted or not.

Issues about turning on the system

Symptom: System does not start, LED is not on.

To be checked:
Be sure that AC cable is connected firmly.
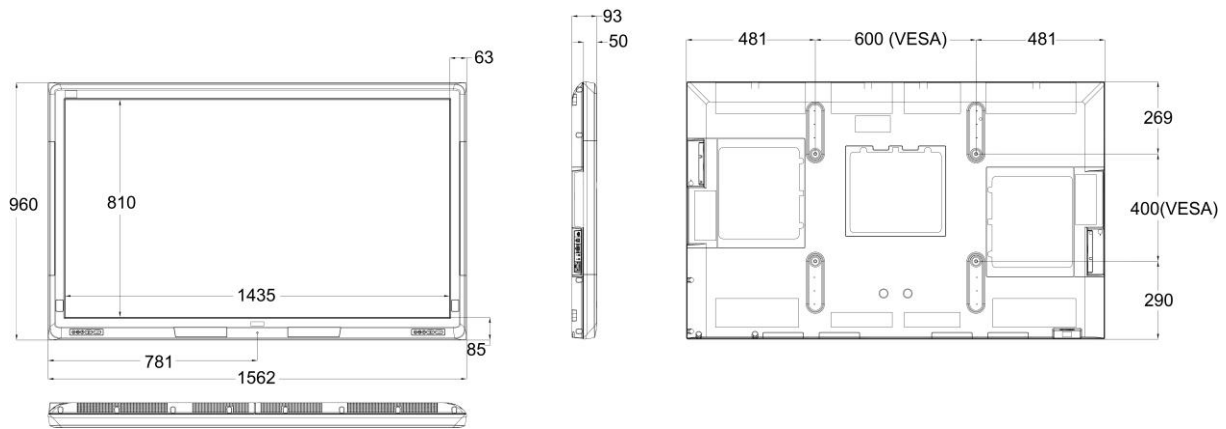
Issues about writing with a pen

Symptom: Writing and drawing with a pen or stylus results in uneven or erratic lines.

To be checked: Be sure to use only the original pen, which is supplied with the monitor.

Specifications

- **Dimensional Drawings**

Note that the values shown are approximate values.

When mounting the monitor, be sure to use a wall-mount bracket that complies with the VESA-compatible mounting method. SHARP recommends using M6 screws and tighten the screws.

Mounting Precautions (For SHARP dealers and service engineers)

- When installing, removing or moving the monitor, ensure that this is carried out by at least 3 people.
- Be sure to use a Wall-mount bracket designed or designated for mounting the monitor.
- This monitor is designed to be installed on a concrete Wall or pillar. Reinforced work might be necessary for some materials such as plaster / thin plastic board / wood before starting installation. This monitor and bracket must be installed on a Wall which can endure at least 4 times or more the weight of the monitor. Install by the most suitable method fort he material and the structure.
- To attach to a VESA compliant mounting bracket, use M8 screws of about 45mm length and use additional spacers of 32mm length.
- Do not use an impact driver.
- After mounting, please carefully ensure the monitor is secure, and not able to come loose from the Wall or mount.
- Do not use any screw holes other than VESA holes for installation.