

**BCT IM 19-PM-R-AC**

**19" INDUSTRIAL TFT LCD MONITOR**

**User's Manual**

## Safety Approvals

- ◆ CE Marking
- ◆ FCC Class A

### FCC Compliance

This equipment has been tested and complies 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 in a residential installation. If not installed and used in accordance with proper instructions, this equipment might generate or radiate radio frequency energy and cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, 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 antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help.

Shielded interface cables must be used in order to comply with emission limits.

## Safety Precautions

Before getting started, read the following important cautions.

1. The BCT IM19 does not come equipped with an operating system. operating system must be loaded first before installing any software into the computer.
2. Be sure to ground yourself to prevent static charge when installing the internal components. Use a grounding wrist strap and place all electronic components in any static-shielded devices. Most electronic components are sensitive to static electrical charge.
3. Disconnect the power cord from the BCT IM19 before making any installation. Be sure both the system and the external devices are turned OFF. Sudden surge of power could ruin sensitive components. Make sure the BCT IM19 is properly grounded.
4. The brightness of the flat panel display decreases with usage. However, hours of use vary depending on the application environment.
5. Turn OFF the system power before cleaning. Clean the system using a cloth only. Do not spray any liquid cleaner directly onto the screen. The BCT IM19 may come with or without a touchscreen. Although touchscreen is chemical resistant, it is recommended that you spray the liquid cleaner on a cloth first before wiping the screen. In case your system comes without the touchscreen, you must follow the same procedure and not spray any cleaner on the flat panel directly.
6. Avoid using sharp objects to operate the touchscreen. Scratches on the touchscreen may cause malfunction or internal failure to the touchscreen.
7. The flat panel display is not susceptible to shock or vibration. When assembling the BCT IM19, make sure it is securely installed.

8. Do not open the system's back cover. If opening the cover for maintenance is a must, only a trained technician is allowed to do so. Integrated circuits on computer boards are sensitive to static electricity. To avoid damaging chips from electrostatic discharge, observe the following precautions:
  - ✓ Before handling a board or integrated circuit, touch an unpainted portion of the system unit chassis for a few seconds. This will help to discharge any static electricity on your body.
  - ✓ When handling boards and components, wear a wrist-grounding strap, available from most electronic component stores.

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# Chapter 1

## Introduction

This chapter contains the general information and the detailed specifications of the BCT IM19. Chapter 1 includes the following sections:

- **General Description**
- **Features**
- **System Specification**
- **Dimensions**
- **I/O Inputs**

### 1.1 General Description

The BCT IM19, a industrial 19.0 inches view area LCD Monitor comes with slim, light and reliable features to replace traditional bulky CRT for industrial application. Its unique front side design is fit for open frame mounting or panel mounting. The display interface offers VGA-in, DVI, S-Video,

Video standard interfaces for different input source from PC system or multimedia system that let you upgrade the display don't change anything from your system. Besides, for varied HMI field, you can choose one of resistive, capacitive touch screen or glass interface to meet your application. In addition, this monitor has more comfort, safety, and environmental protection for humanized & health consideration those would be the benefit that users can get.

This LCD monitor builds in 19.0" color active matrix thin-film-transistor (TFT) liquid crystal display to provide superior display performance. A maximum resolution of 1280x1024 is ideal for displaying complex graphics and high definition images. Other outstanding designs that enhance this LCD monitor 's performance are Plug & Play compatibility, and OSD (On Screen Display) controls, especially OSD,

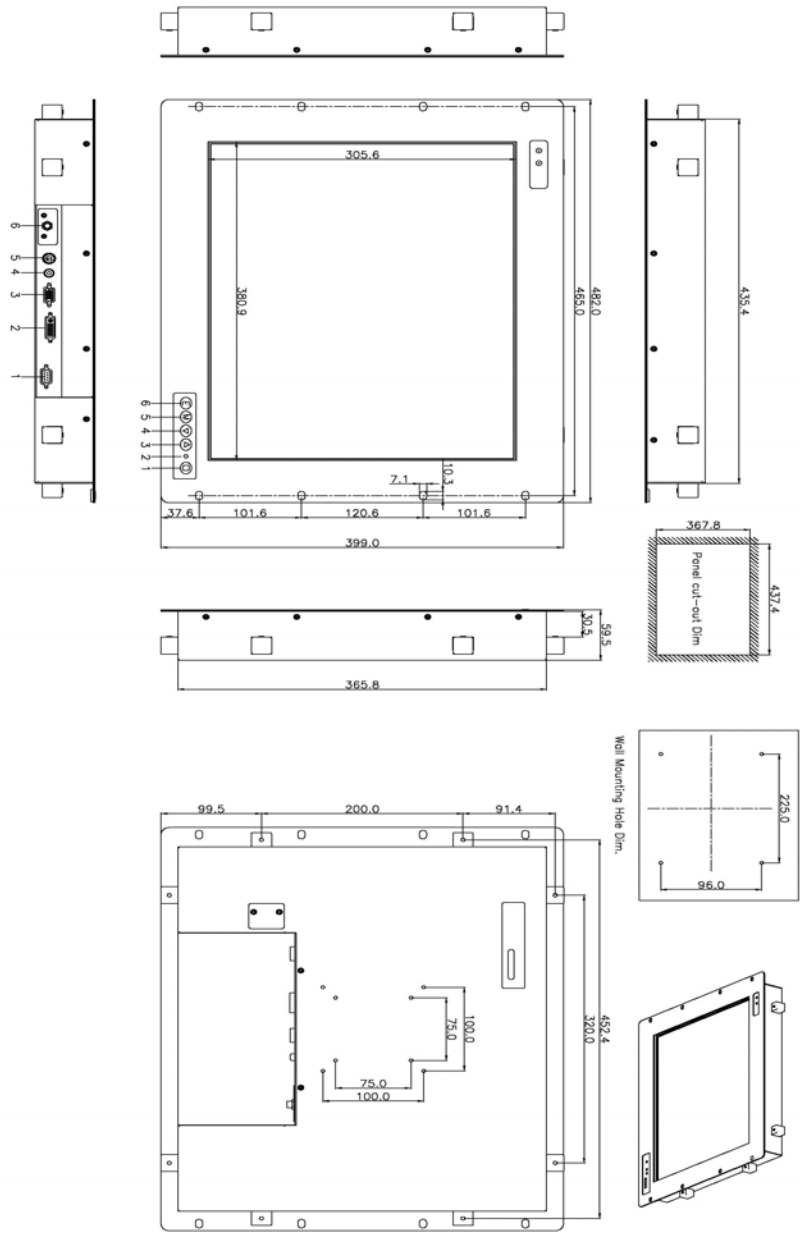
## 1.2 Features

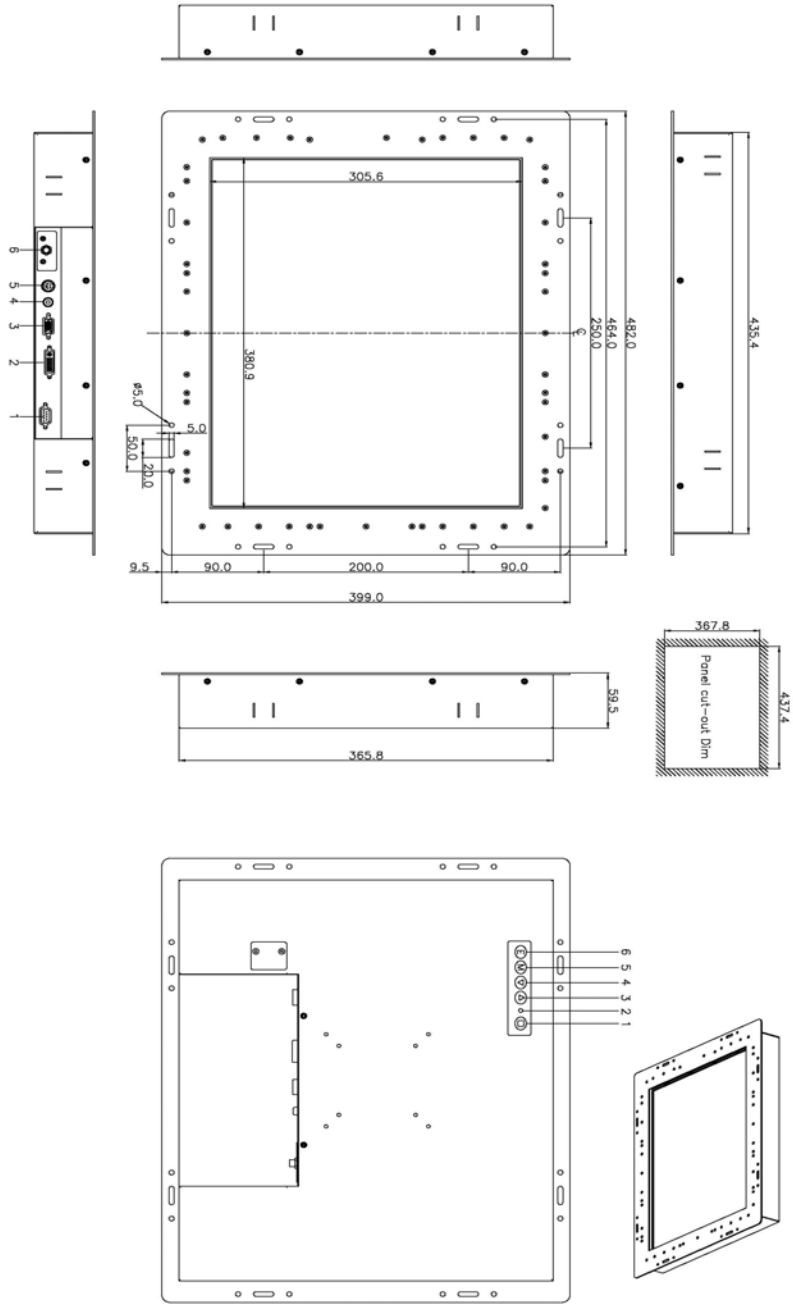
- High contrast color 19.0" SXGA TFT LCD display support resolution up to 1280x1024
- Heavy-duty steel chassis with NEMA4/IP65-compliant
- Suits with resistive, capacitive or tempered anti-reflection glass
- Multi-scan function supports SXGA, XGA, SVGA, VGA, VGA-Text, PC-9801, MAC.
- High Brightness and Ultra-wide viewing angle with anti-glare features
- Power management system conforms to VESA DPMS standard
- Advanced OSD control for picture quality adjustment
- Supports VESA ARMS, Desktop Stand
- Rear, Panel, Wall or Rack mounting

## 1.3 Specifications

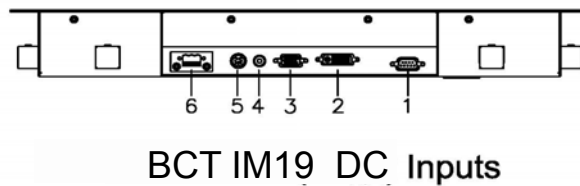
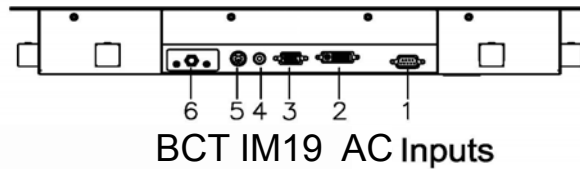
- **Construction:** Heavy-duty steel chassis
- **Control:** OSD (On Screen Display) control pad on front side
- **Mounting:** Support Panelmount, VESA arm mounting, Rackmount, and Wallmount(optional)
- **Net weight:** 9.465 Kgs for BCT
- **Dimension (main body size):**
  - BCT IM19
  - 482.0X399.0X59.5 mm
- **Operating Temperature Range:** 0°C ~ 50°C
- **Relative Humidity:** 20% ~ 90%; non-condensing

## 1.4 Dimensions





## 1.5 I/O Inputs



1. **T/S Port (D-sub optional):** This connector will be present only if a touchscreen is installed. It must be connected to the RS-232 port of the PC. The touchscreen cable is included with all orders, which include the touchscreen option.
2. **DVI Port:** This connector can be connected to the system via the external DVI connector located on the bottom side of the system unit.
3. **VGA Port (D-sub):** This D-Sub15 connector can be connected to the system via the external D-Sub15 connector located on the bottom side of the system unit.
4. **AV Port:** This connector can be connected to the system via the external connector located on the bottom side of the system unit.
5. **S-Video Port:** This connector can be connected to the system via the external connector located on the bottom side of the system unit.
6. **DC +12V:** This connector will be connected to the DC 12V Switching Power Supply.

**Remark:** BCT IM19 only support one display input. Please do not plug-in multiple display input at one time.

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## Chapter 2

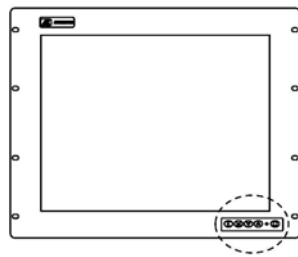
### System Setup

This chapter details the system parts and components with figures. Sections include

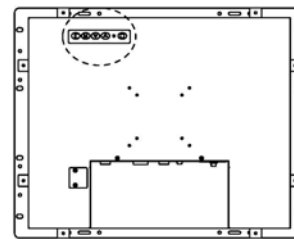
- System Configuration
- Rack Mounting
- Panel Mounting
- Desktop Stand
- Wall Mounting

### 2.1 System Configuration

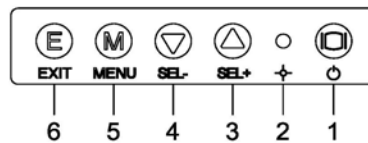
The figure below shows the front views of BCT IM19



BCT IM19 Panel Mount



BCT IM19 Open Frame

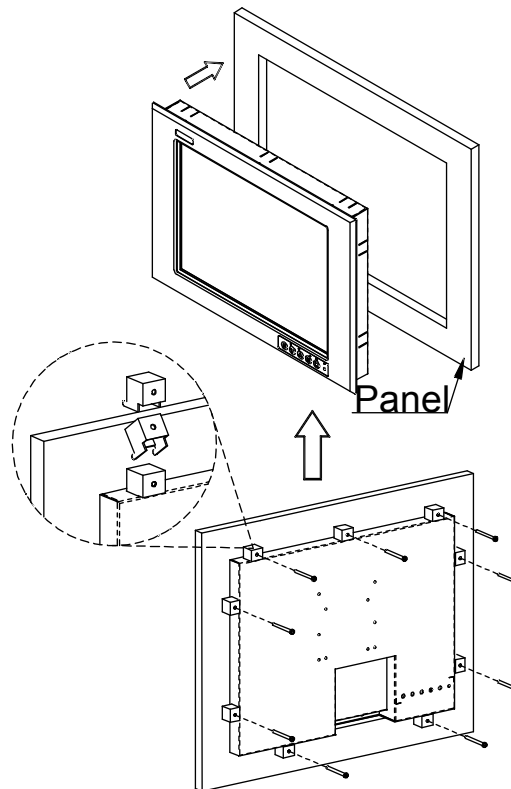


Control Keypad

1. **Power switch:** Press this button to turn on/off the monitor.
2. **Power LED:** When the light is green, the power is on, flash when the power is active off.
3. **SEL+:**
  - To scroll up the menu.
  - To increase the value of selected item.

4. **SEL-:**
  - To scroll down the menu.
  - To decrease the value of selected item.
5. **Menu:**
  - Press this button to turn on/off the OSD (On Screen Display) main menu.
  - Press this button to activate selected items.
6. **Exit:** Jump out the selection icon.

## **2.2 Panel Mounting**



Two accessory items are needed for this application.

Mounting bracket x 8 pcs

Pan head screws (M4x0.7PxL45.0mm) x 8 pcs

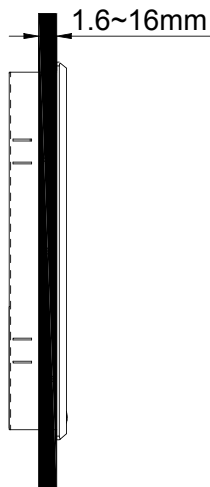
Installation instruction

1. Find a plate and cut off a window, refer the **1.4 BCT IM19-P Dimensions** for the dimension.
2. Screw the mounting bracket to the unit.
3. Combine flange nuts with box head screws and then screw to the mounting bracket to tighten the unit.

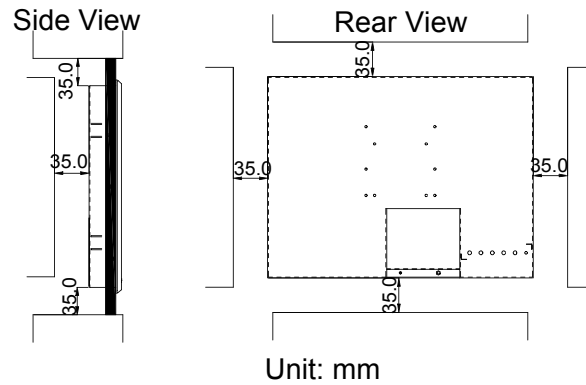
**Note:** To obtain the maximum degree of moisture resistance, be sure to mount the BCT IM19 on a smooth, flat surface.

The panel itself can be from 1.6 to 16.0mm thick.

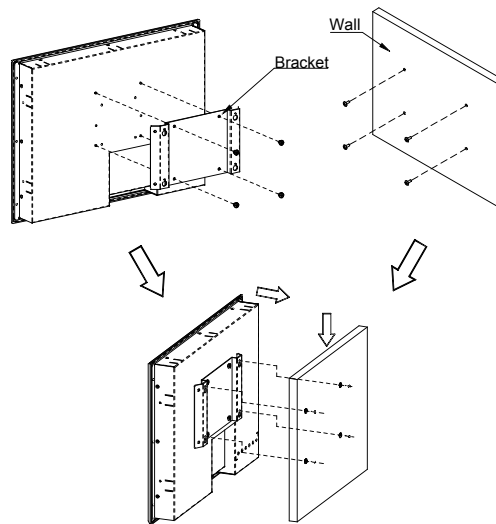
Strengthening may be required for the panel. Be sure to consider the



**Note:** To enhance the BCT IM19's maintainability, operability and ventilation, allow at least 35mm clearance between the BCT IM19 and any other objects. (The clearance must be large enough to allow you to insert or remove expansion boards and to attach connectors.)



## 2.3 Wall Mounting (Option)



The unit is designed to support wall mounting application. It let you to mount the unit on the wall.

Three accessory items to support this feature.

Wall mounting bracket x 1 pcs

Binding head & washer screws (M4x0.7PxL6.0mm) x 4 pcs

Truss head screws (TTS-4, 3.5x10mm-black) x 4 pcs

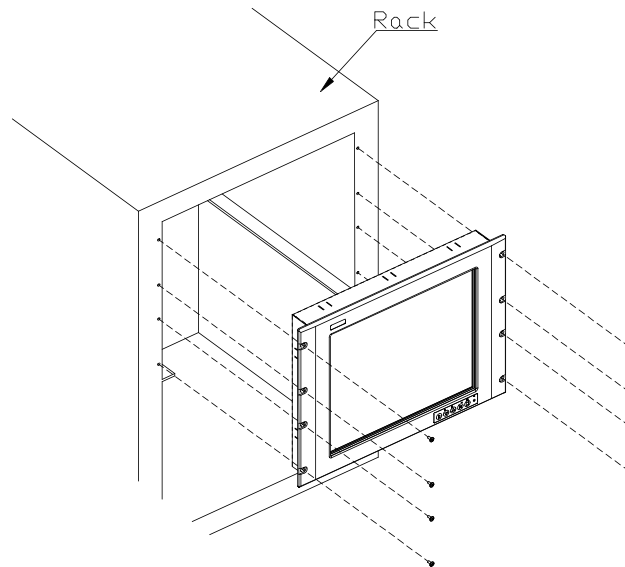
*Installation instruction*

1. Refer the hole location on the page 3. Screw the truss head screws to the hole location on the wall.

**Note:** Do not tight the screw for mounting the unit. The minimum space between the wall and the top of screw is 1.6mm.

2. Mount the wall mounting bracket to the back cover of the unit.
3. Mount the unit to the wall.

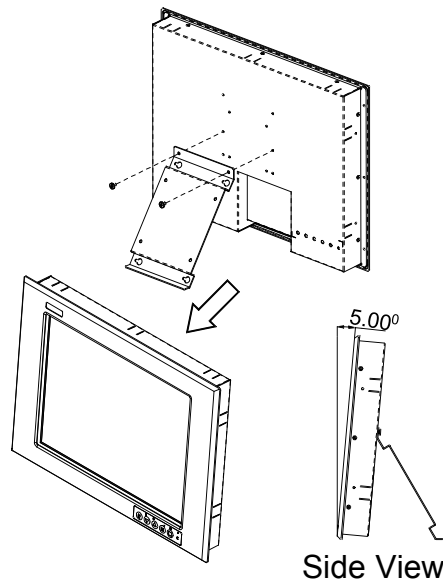
## 2.4 Rack Mounting



### Installation instruction

1. Remove 8 seal pads in front panel.
2. BCT IM19 series products could to mount directly to standard 19" industrial rack. There are four screw holes on each side of front panel.

## 2.5 Desktop Stand (Option)



The unit is designed to support desktop stand application.

Two accessory items are needed for this application.

Wall mounting bracket x 1 pcs

Binding head & washer screws (M4x0.7PxL6.0mm) x 2 pcs

[Installation instruction](#)

Mounting the wall mounting bracket with the binding header & washer screws to the back over of the unit and then the unit can stand on the desktop.

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## Appendix A

### Supported Input Timing Modes

#### Supported Input Timing Modes

The following timings below are already programmed in this module.  
The input synchronous signals are automatically recognized.

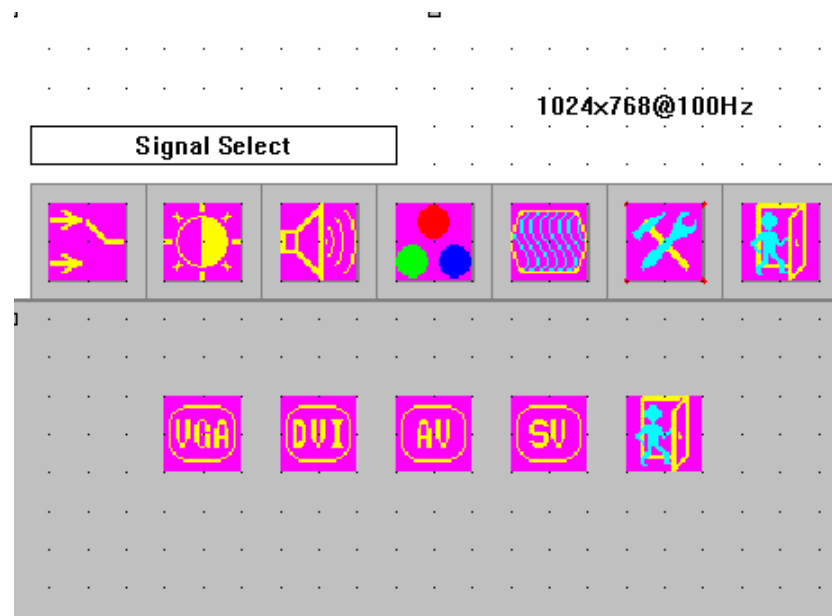
<b>Preset No.</b>	<b>Display Size</b>	<b>Vsync (Hz)</b>
1	640x350	70
2	640x400	70
3	640x480	60
4	640x480	72
5	640x480	75
6	720x400	70
7	800x600	60
8	800x600	72
9	800x600	75
10	1024x768	60
11	1024x768	70
12	1024x768	75
13	1152x864	75
14	1280x960	60
15	1280x1024	75

## Appendix B

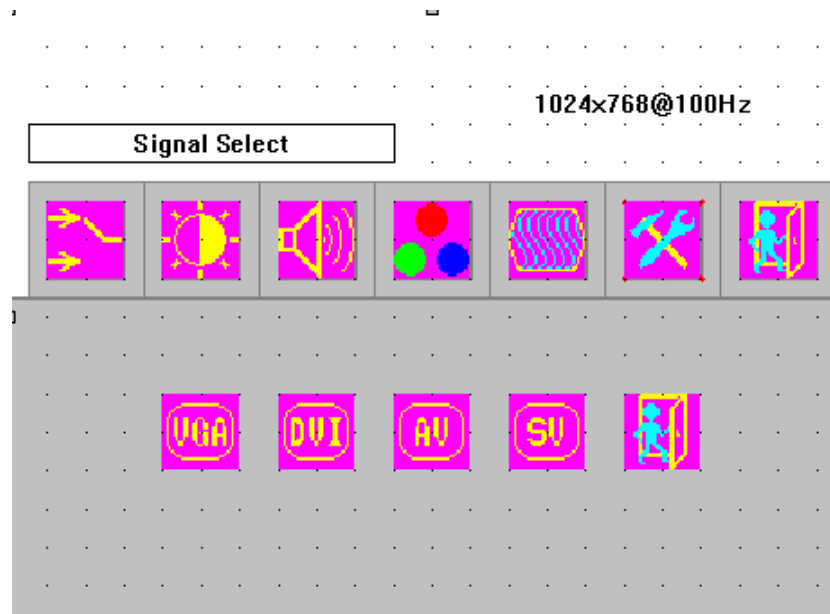
### OSD Operation

#### Function Description of OSD Menu

##### Main Screen



## Signal Select



### VGA Input

Setting Monitor's Input to VGA



### DVI Input

Setting Monitor's Input to DVI



### AV Input

Setting Monitor's Input to AV



### S-Video Input

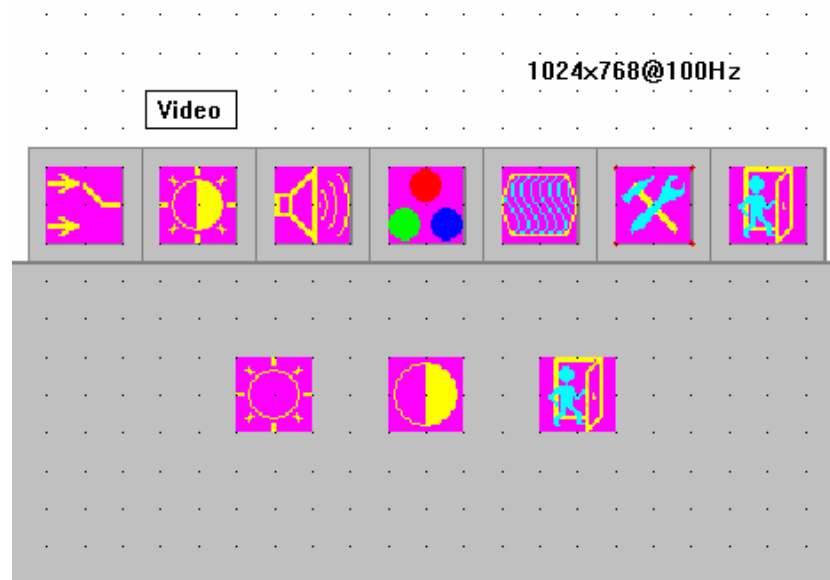
Setting Monitor's Input to S-Video



### Exit

Exit the LCD Setting

## Video Adjust



### Brightness Adjust

Adjust Monitor's Brightness

Use ▲ or ▼ button to increase or decrease the setting.



### Contrast Adjust

Adjust Monitor's Contrast

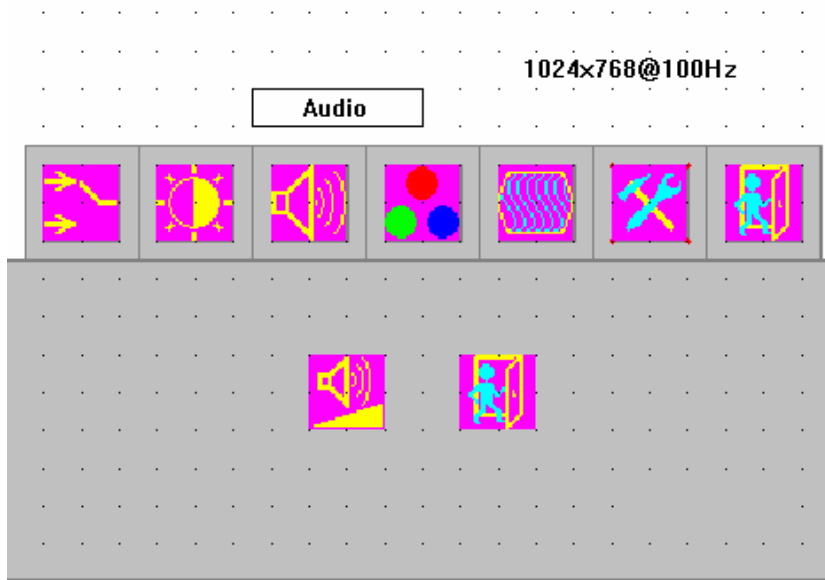
Use ▲ or ▼ button to increase or decrease the setting.



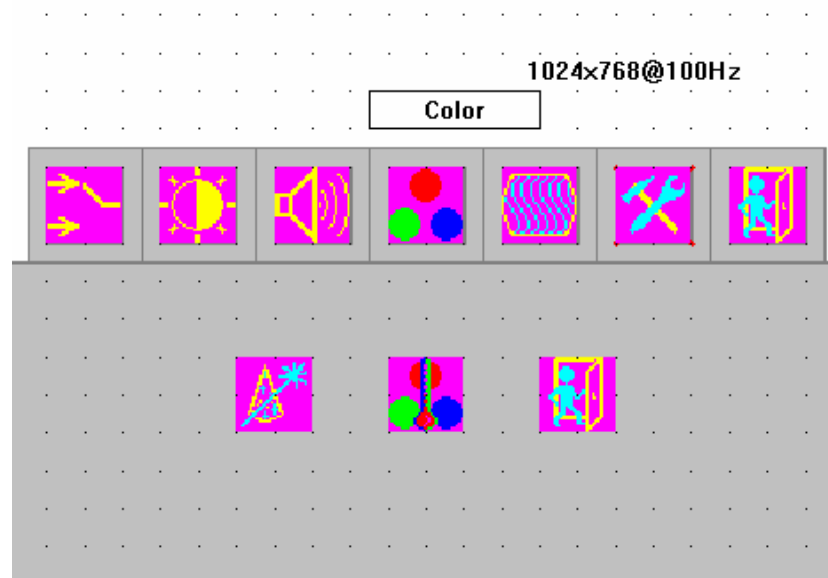
### Exit

Exit the LCD Setting

### Audio Adjust: BCT IM19 doesn't support



## Color Adjust



### Automatically Color Tuning

Monitor will automatically tune the color setting.



### Manually Color Tuning

Adjust color setting

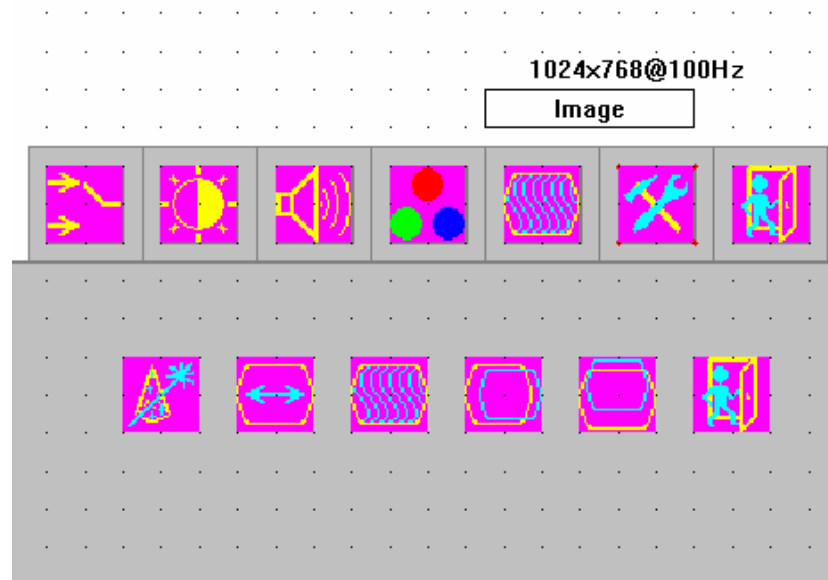
Use ▲ or ▼ button to increase or decrease the setting.



### Exit

Exit the LCD Setting

## Image Adjust



### Automatically Image Tuning

Monitor will automatically tune the image setting.



### Horizontal Width Adjust

Adjust Monitor's horizontal width setting.

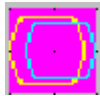
Use ▲ or ▼ button to increase or decrease the setting.



### Horizontal Phase Adjust

Adjust Monitor's horizontal phase setting.

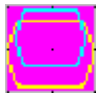
Use ▲ or ▼ button to increase or decrease the setting.



**Horizontal Position Adjust**

Adjust horizontal position setting.

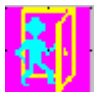
Use ▲ or ▼ button to increase or decrease the setting.



**Vertical Position Adjust**

Adjust vertical position setting.

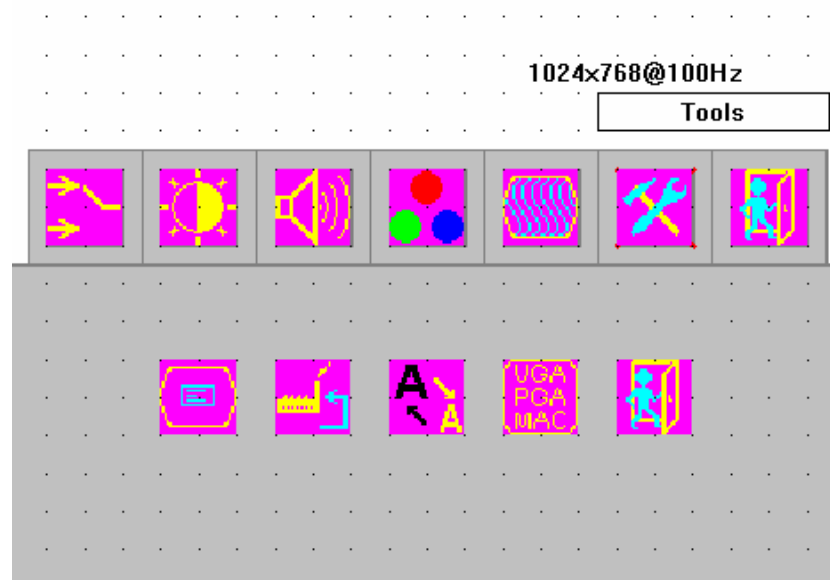
Use ▲ or ▼ button to increase or decrease the setting.



**Exit**

Exit the LCD Setting

## Image Adjust



### OSD Setting

Adjust OSD setting.



### Recall Previous Setting

Monitor will recall the previous setting.



### Sharpness Adjust

Adjust Monitor's sharpness setting.

Use ▲ or ▼ button to increase or decrease the setting.

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