User Instructions

COLOR TFT-LCD MONITOR

20.1 INCH TFT-LCD MONITOR
20.1 INCH TFT-LCD PUBLIC VIEW MONITOR
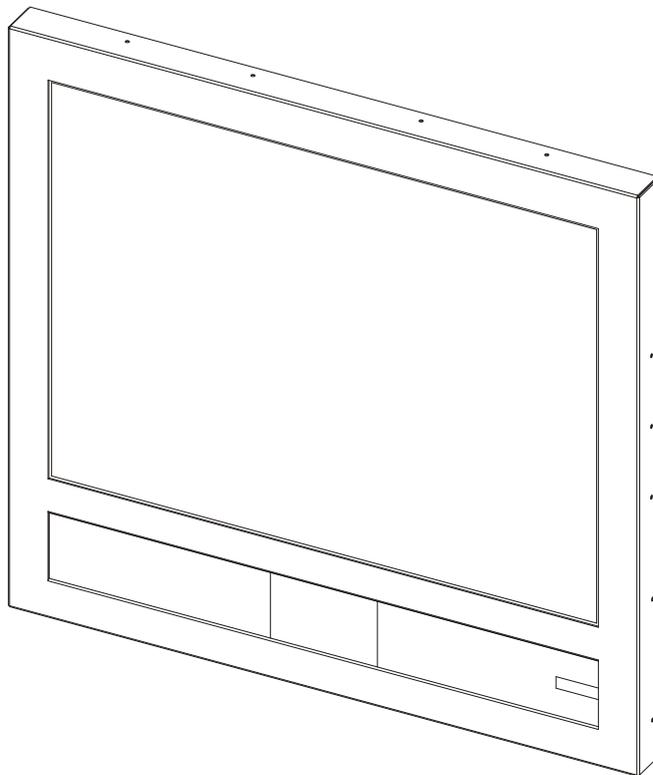
M201SB-WDR

Please read this manual thoroughly before use and keep it handy for future reference.

LIMITATION OF LIABILITY

THE INFORMATION IN THIS PUBLICATION IS BELIEVED TO BE ACCURATE IN ALL RESPECTS, HOWEVER, WE CANNOT ASSUME RESPONSIBILITY FOR ANY CONSEQUENCES RESULTING FROM THE USE THEREOF. THE INFORMATION CONTAINED HEREIN IS SUBJECT TO CHANGE WITHOUT NOTICE. REVISIONS OR NEW EDITIONS TO THIS PUBLICATION MAY BE ISSUED TO INCORPORATE SUCH CHANGES.

WARNINGS AND CAUTIONS:

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE. DO NOT INSERT ANY METALLIC OBJECTS THROUGH THE VENTILATION GRILLS OR OTHER OPENINGS ON THE EQUIPMENT.

CAUTION:
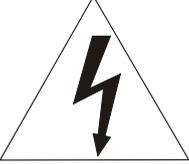
CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

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

EXPLANATION OF GRAPHICAL SYMBOLS
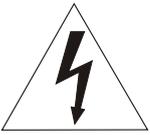
The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

PRECAUTIONS

Safety ---

Should any liquid or solid object fall into the cabinet, unplug the unit and have it checked by the qualified personnel before operating it any further.

Unplug the unit from the wall outlet if it is not going to be used for several days or more. To disconnect the cord, pull it out by the plug. Never pull the cord itself.

Allow adequate air circulation to prevent internal heat build-up. Do not place the unit on surfaces (rugs, blankets, etc.) or near materials(curtains, draperies) that may block the ventilation holes.

Height and vertical linearity controls located at the rear panel are for special adjustments by qualified personnel only.

Installation ---

Do not install the unit in an extremely hot or humid place or in a place subject to excessive dust or mechanical vibration.

The unit is not designed to be waterproof.
Exposure to rain or water may damage the unit.

Cleaning ---

Clean the unit with a slightly damp soft cloth.
Use a mild household detergent. Never use strong solvents such as thinner or benzine as they might damage the finish of the unit.

Retain the original carton and packing materials for safe transport of this unit in the future.

FCC COMPLIANCE STATEMENT

FCC INFORMATION : 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.

CAUTION : CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

THIS CLASS A DIGITAL APPARATUS COMPLIES WITH CANADIAN ICES-003.

CET APPAREIL NUMÉRIQUE DE LA CLASSE A EST CONFORME À LA NORME NMB-003 DU CANADA.

CE COMPLIANCE STATEMENT

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.

IMPORTANT SAFEGUARDS

1. READ INSTRUCTIONS -- All the safety and operating instructions should be read before the appliance is operated.

2. RETAIN INSTRUCTIONS -- The safety and operating instructions should be retained for future reference.

3. CLEANING -- Unplug video monitor or equipment from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

4. ATTACHMENTS -- Do not use attachments not recommended by the video monitor or equipment manufacturer as they may result in the risk of fire, electric shock or injury to persons.

5. WATER AND MOISTURE -- Do not use video monitor or equipment near water -- for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, or the like.

6. ACCESSORIES -- Do not place video monitor or equipment on an unstable cart, stand or table. The video monitor or equipment may fall, causing serious injury to a child or adult, and serious damage to the equipment. Wall or shelf mounting should follow the manufacturer's instructions, and should use a mounting kit approved by the manufacturer.

6A. Video monitor or equipment and cart combinations should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the equipment and cart combination to overturn.

7. VENTILATION -- Slots and openings in the cabinet and the back or bottom are provided for ventilation, and to ensure reliable operation of the video monitor or equipment and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the video monitor or equipment on a bed, sofa, rug, or other similar surface. Video monitor or equipment should never be placed near or over a radiator or heat register. Video monitor or equipment receiver should not be placed in a built-in installation such as a bookcase unless proper ventilation is provided.

8. POWER SOURCES -- Video monitor or equipment should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your home, consult your video monitor or equipment dealer or local power company. For video monitor or equipment designed to operate from battery power refer to the operating instructions.

9. GROUNDING OR POLARIZATION -- This video monitor may be equipped with a polarized alternating - current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

Alternate Warnings - This video monitor is equipped with a three-wire grounding-type plug, a plug having a third (grounding) pin. This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding-type plug.

10. POWER CORDS -- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

11. HEED WARNINGS -- Follow all instructions marked on the video monitor or equipment.

12. LIGHTNING -- For added protection for video monitor or equipment during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the video product due to lightning and power-line surges.

13. OVERLOADING --Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.

14. OBJECT AND LIQUID ENTRY -- Never push objects of any kind into video monitor or equipment through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

15. SERVICING -- Do not attempt to service video monitor or equipment yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

16. DAMAGE REQUIRING SERVICE -- Unplug video monitor or equipment from the wall outlet and refer servicing to qualified service personnel under the following conditions:

A. When the power-supply cord or the plug has been damaged.
B. If liquid has spilled, or objects have fallen into the video product.
C. If the video product has been exposed to rain or water.
D. If the video product does not operate normally by following the operating instructions, adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the video product to its normal operation.
E. If the video product has been dropped, or the cabinet damaged.
F. When the video product exhibits a distinct change in performance -- this indicates a need for service.

17. REPLACEMENT PARTS -- When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

18. SAFETY CHECK -- Upon completion of any service or repairs to this video product, ask the service technician to perform safety checks to determine that the video product is in proper operating condition.

19. FIELD INSTALLATION -- This installation should be made by a qualified service person and should conform to all local codes.

20. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that product heat.

TABLE OF CONTENTS

CHAPTER 1. FEATURES

DESCRIPTION

The 20.1" Color TFT-LCD Monitor can display up to two video sources.
The monitor features built-in video motion detection (VMD) allowing the monitor image to switch to one or both of the camera images which contains motion.
The monitor provides five display modes including full-screen (CAM1 or CAM2), picture-in-picture (PIP) mode and picture-by-picture (PBP) mode.
All monitor programming is accomplished via an IR remote control.

FEATURES

High Brightness and Contrast Color TFT-LCD Monitor

High Resolution Display

Motion Detection Capability

PIP & PBP Display

Fully Programmable via remote control

Built-in Light Sensor

Three Video Output Connectors

Flip Cover On The Rear Panel

DC 12 Volts Output

ACCESSORIES

Please make sure the following items are included with your LCD Monitor.
If any items are missing, contact your dealer.

Power Cord   DC Adapter   User Manual
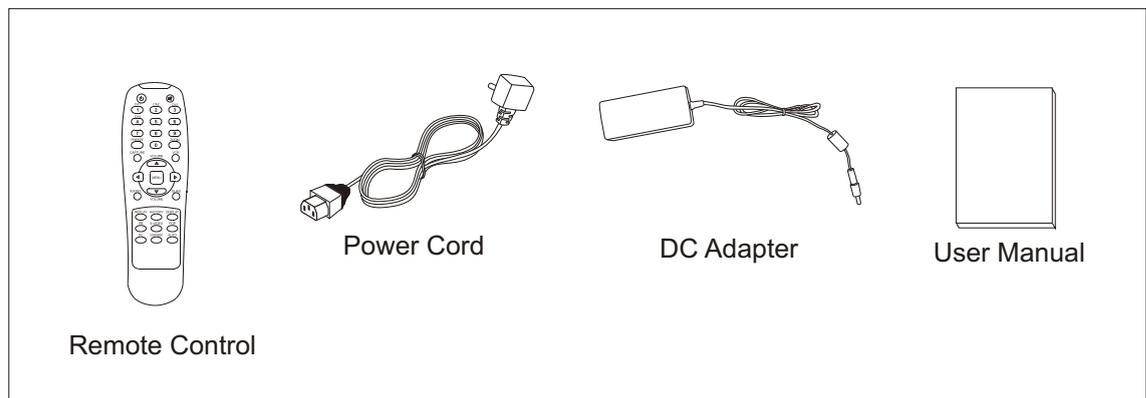
Remote Control

CHAPTER 2. FRONT AND REAR PANEL

THE FRONT PANEL
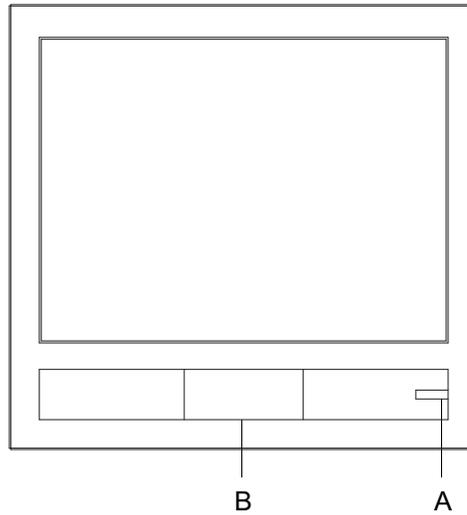
Part	Function	Description
A	IR / LIGHT SENSOR	Remote control sensor / Light sensor for detecting ambient light.
B	INTEGRATED CAMERA	Integrated camera window.(Public View Monitor)

THE REAR PANEL
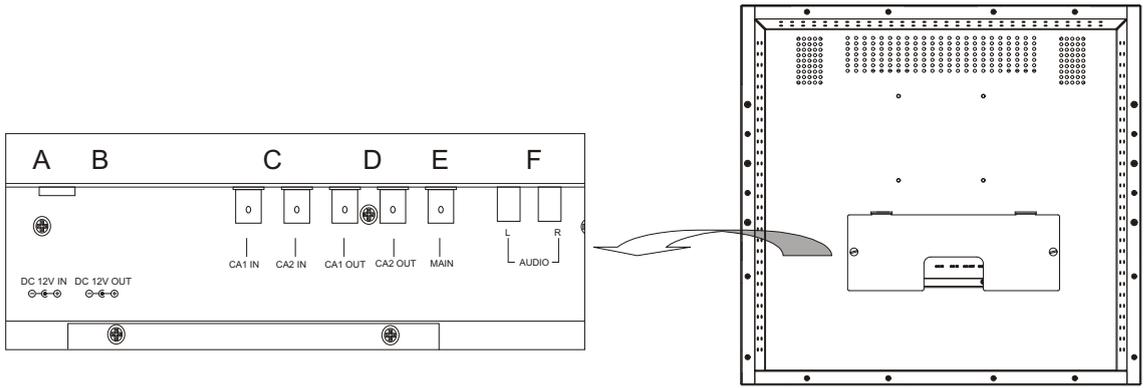
< 20.1 Inch TFT-LCD Monitor >
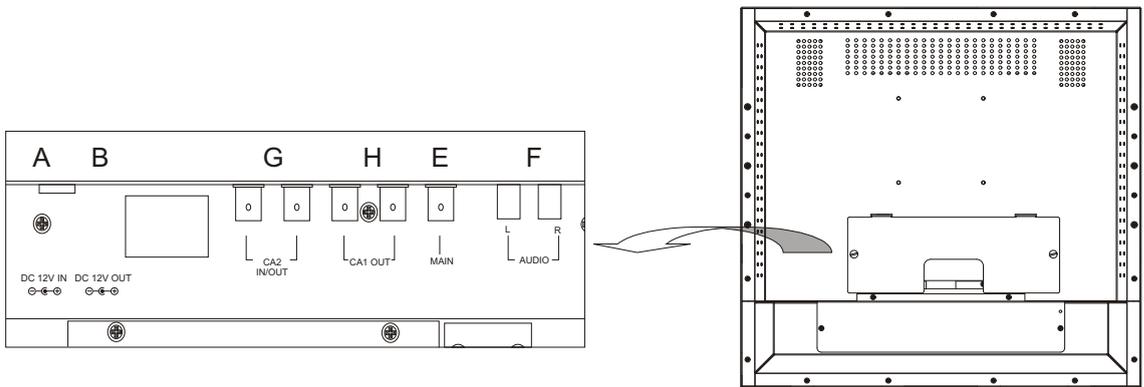
< 20.1 Inch TFT-LCD Public View Monitor >

PART	LABEL	FUNCTION
A	DC 12V IN	Connect the adapter jack to the DC power connector on the back of the monitor
B	DC 12V OUT	DC output connector for an external camera. (DC 12V / 500mA)
C	CA1/CA2 IN	Video input connectors of the CA1 (Camera 1) and the CA2 (Camera 2) video sources. Use the BNC connections.
D	CA1/CA2 OUT	Video output connectors of the CA1 (Camera 1) and the CA2 (Camera 2)
E	MAIN	The video output connector -The same video as the picture displayed.
F	AUDIO	Audio Input connector
G	CA2 IN/OUT	Video input connectors of the CA2 (Camera 2) video sources. Use the BNC connections. *Either left or right BNC can be input or output The connectors have auto-termination internal switches.*
H	CA1 OUT	The video output connector of the integrated camera

CHAPTER 3. REMOTE CONTROL

1. Mute
   Cuts off the sound.

2. Zoom
   Not available.

3. VCR
   Not available.

4. Up/Down Keys
   Moves up/down in the OSD menu.
   Increases/decreases audio volume.

5. Left/Right Keys
   Displays sub-menu of selected item in the OSD.
   Decreases/increases the chosen item.

6. QUAD
   Changes the picture display mode on the screen.

7. Display
   Displays setup information.

8. POP
   Not available.

9. S-Video
   Not available.

10. Power
    Turns the monitor on or off.

11. Numbers (0~9)
    1~2(CA1~2) : Displays the selected camera in full
             On the screen.
    3~9, 0 : Not available.

12. Freeze
    Not available.

13. Capture
    Not available.

14. Menu
    Turns the OSD menu on/off.

15. Sequence
    Sequences the picture from CA1 to CA2.

16. History
    Not available.
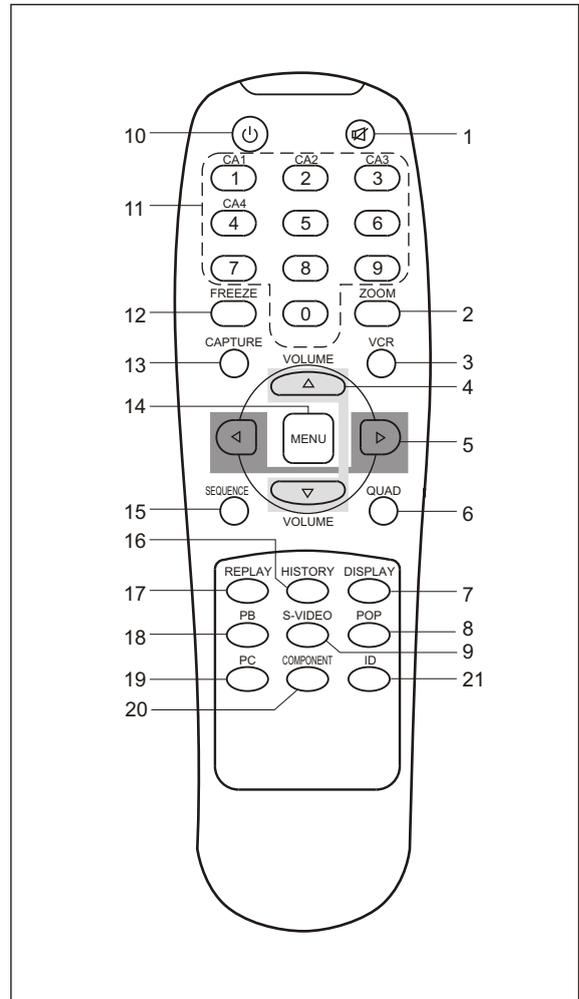
17. Replay
    Not available.

18. PB
    Not available.

19. PC
    Not available.

20. Component
    Not available.

21. ID
    Not available.

CHAPTER 4. SETUP MODE

OVERVIEW

All functions are controlled via the supplied remote control.

Pressing the MENU button places the unit into the programming mode.

In the programming mode, the arrow buttons are used to move the cursor DOWN, UP, LEFT and RIGHT in the OSD Setup menu.

The selected values are saved when exiting the OSD menu.

OSD WINDOW OF MAIN MENU

```
┌─────────────────────────────────┐
│  MAIN MENU                       │
│                                  │
│  SCREEN MODE        MODE1        │
│  MOTION SET                      │
│  TIME/DATE                       │
│  PICTURE                         │
│  CAMERA TITLE                    │
│  CAMERA ADJUST                   │
│  PIP                             │
│  CONFIGURATION                   │
│  OSD MENU                        │
└─────────────────────────────────┘
```

This monitor has 9 main OSD items.

Press the MENU button to turn the main OSD Menu on or off.

The MENU button is also used to go to the previous OSD menu.

Use UP(DOWN) button to move up(down) in the OSD menu.

Use LEFT or RIGHT button to display the sub-menu of the item where the horizontal indication bar is located or decrease or increase the amount of the selected item.

SELECTING SCREEN MODE

SCREEN MODE is used to select how the camera image is displayed on the screen.
There are 5 options available.
Use the QUAD button on the remote control to change the SCREEN MODE.

ITEMS	DESCRIPTIONS
MODE 1 CA1	Full display of the camera chosen to display on the screen. The screen is switched to the camera which contains motion when the camera MOTION is enabled. The screen will be PBP (cameras are displayed side by side) if motion occurs within the field of both cameras.
MODE 2 CA1	Main + PIP The main window and the PIP window are exchanged when motion occurs on PIP windows. User can select CA1 or CA2 as the PIP window video source. If CA2 is selected as the PIP window, CA1 will be the main window.
MODE 3 CA1	Main + PIP The PIP window appears if motion occurs on the PIP camera and then disappears after DWELL TIME expires. The DWELL TIME is set the MOTION SET menu.
MODE 4 CA1 CA2	PBP display Half of the horizontal area is cropped on each camera. The screen switches to full display when motion occurs within the filed view of one of the cameras. Each camera's horizontal display position can be adjusted.
MODE 5 CA1 CA2	PBP display Full area of each camera is displayed on the screen side by side, but the areas cannot be manipulated horizontally.
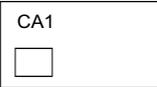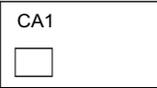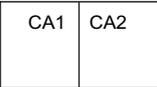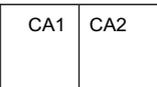
Use the following steps to set the SCREEN MODE option.

STEP	ACTION
1	Press MENU button and then select DISPLAY MODE using ▼ or ▲.
2	Press ◄ or ► button to change the display mode.
3	Press MENU button to exit from main OSD window.

MOTION SETUP

This monitor has a motion detection function to support automatic switching from one of the cameras to the other camera with motion.
Motion detection is available on both camera inputs.

The Motion Sensitivity and other options for motion detection can be adjusted in this setup menu.

MOTION ENABLE and SENSITIVITY options can be adjusted individually on each camera.

MOTION SET	
CAMERA	CA1
MOTION ENABLE	ON
SENSITIVITY	10
CAPTURE TIME	05 SEC
DWELL TIME	05 SEC
MOTION TIME	18:00:00-
	06:00:00

CAMERA
This menu is used to select the camera for adjustment of motion detection options.

MOTION ENABLE
This option is used to activate or deactivate the motion detection function.
"ON" : Motion detection of selected camera is enabled.
"OFF" : Motion detection of selected camera is disabled.

SENSITIVITY
Use SENSITIVITY to adjust the sensitivity of motion detection.
To increase (decrease) the motion detection sensitivity of the camera, increase (decrease) the sensitivity value.

CAPTURE TIME
CAPTURE TIME is the interval that the motion detection is processed.
When it is set to 5 SEC, the motion detection is processed at every five seconds.
This means that the minimum switching interval from the camera to the other camera is 5 seconds when this monitor is operated in MODE 1.
It supports up to 99 seconds.

DWELL TIME
If there is a motion in the field of view of the CA2, the main screen switches to the CA2 image for a length of time set in the DWELL TIME setup menu and then returns to the previous screen mode. DWELL TIME is the time that the motion detected camera is displayed on the screen.
It supports up to 99 seconds.

MOTION TIME
This option is used to set when the motion detection function is active. The time represented by the upper line is the start of motion detection and the lower line represents the end of motion detection time period.
The motion detection function only works during MOTION TIME.
If the user want to use motion detection all the time, adjust the time of lower line sooner than the time of upper line.

Use the following steps to adjust MOTION SET options.

STEP	ACTION
1	Press MENU and then move the indication bar to MOTION SET using ▼ or ▲.
2	Press ◀ or ▶ to display sub-menu of MOTION SET.
3	Move the indication bar to CAMERA using ▼ or ▲ and then select the camera (CA1 or CA2) for adjustment of MOTION SET using ◀ or ▶.
4	Move the indication bar to the item (MOTION ENABLE, SENSITIVITY, CAPTURE TIME or DWELL TIME) to be adjusted using ▼ or ▲.
5	Adjust the option selected using ◀ or ▶.
6	Move the indication bar to MOTION TIME using ▼ or ▲.
7	Select one of the options using ◀ or ▶.
8	Adjust the option selected using ▼ or ▲.
9	Press MENU to display the previous OSD window.
10	Press MENU to go to the previous OSD window or exit from the OSD.

TIME/DATE

OVERVIEW
The TIME/DATE menu allows you to adjust current time and date for display on the screen.

```
TIME/DATE

DATE FORMAT          US
DATE                 MM/DD/YYYY
TIME                 HH/MM/SS
DISPLAY              ON
```

DATE FORMAT
The option on the time and date setup screen is date format.
This is used to select between the following three date formats:

FORMAT	DISPLAY	EXAMPLE
US (default)	MM/DD/YYYY	01/01/2004
EURO	DD/MM/YYY	01/01/2004
ASIA	YYYY/MM/DD	2004/01/01

DATE
This field is used to set the current date.
The format displayed on the screen is dependent on the format option.

TIME
This field is used to set the time in the 24-hour format.

DISPLAY

The display option on the time and date setup screen allows you to select whether to display the time and date on the screen. The default option is ON.

Use the following steps to adjust the DATE/TIME option.

STEP	ACTION
1	Press MENU and then move the indication bar to DATE/TIME using ▼ or ▲.
2	Press ◄ or ► to display sub-menu of DATE/TIME.
3	Move the indication bar to DATE FORMAT and select the format you want using ◄ or ►.
4	Move the indication bar to the item (DATE or TIME) to be adjusted using ▼ or ▲.
5	Select one of the option using ◄ or ►.
6	Adjust the option using ▼ or ▲.
7	Press MENU to display the previous OSD window.
8	Move the indication bar to DISPLAY and select the option "ON" to display time and date on the screen.
9	Press MENU to go to the previous OSD window or exit from the OSD.

PICTURE ADJUSTMENT

OVERVIEW

The PICTURE menu allows you to modify the picture quality by adjusting the contrast, brightness, color, tint and sharpness.

```
┌────────────────────────────────┐
│  PICTURE                       │
│                                │
│  VOLUME            00          │
│  CONTRAST          19          │
│  BRIGHTNESS        19          │
│  COLOR             50          │
│  TINT              50^1)       │
│  SHARPNESS         06          │
│  MOTION ADJUST     2           │
│                                │
└────────────────────────────────┘
```

1) Tint is only activated in NTSC system.

VOLUME

The volume adjustment controls the audio level to the internal speakers.

MOTION ADJUST

MOTION ADJUST does not affect the motion detection settings of cameras.
This control is used to adjust the picture quality of moving images.
At times unwanted artifacts can be seen on the edge of objects moving fast through the scene.
A lower value results in improved picture quality for images moving fast.
However, a better picture quality is obtained by adjusting MOTION ADJUST to a larger value in still image scenes.

Use the following steps to adjust the picture quality.

STEP	ACTION
1	Press MENU and then move the indication bar to PICTURE using ▼ or ▲.
2	Press ◄ or ► to display sub-menu of PICTURE.
3	Move the indication bar to the item to be adjusted using ▼ or ▲ .
4	Adjust the option selected using ◄ or ►.
5	Press MENU to go to the previous OSD window or exit from the OSD.

CAMERA TITLE

The CAMERA TITLE setup screen allows you to modify the name of each camera.
This option is also used to select whether or not the screen displays the camera title.

```
CAMERA TITLE

CA1                    CA1
CA2                    CA2
DISPLAY                ON
```

CA1 & CA2
An 8-character title can be designated for each camera or video input, and this title appears on the screen when the display option is ON and the camera is selected.
The default camera title is "CA" with the corresponding number.

Following are the available characters for camera titles regardless of the language setting :

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
Ä Á À Ë É È Ï Í Ì Ö Ó Ò Ü Ú Ù Ñ Ç ß # BLANK ( ) O / \ * + - , . : ? 0 1 2 3 4 5 6 7 8 9

DISPLAY
To display the camera title on the screen, select the DISPLAY option "ON".

Use the following steps to adjust the CAMERA TITLE option.

STEP	ACTION
1	Press MENU and then move the indication bar to CAMERA TITLE using ▼ or ▲.
2	Press ◄ or ► to display the sub-menu of CAMERA TITLE.
3	Move the indication bar to the item to be adjusted (CA1 or CA2) and select the character position of the title using ◄ or ►.
4	Change the character of the title selected using ▼ or ▲.
5	Press MENU to display the previous OSD window.
6	Move the indication bar to DISPLAY using ▼ or ▲.
7	Select the DISPLAY option "ON" or "OFF".
8	Press MENU to go to the previous OSD window or exit from the OSD.

CAMERA ADJUSTMENT

The picture quality of each camera can be adjusted by using the CAMERA ADJUST setup menu. This setup menu is composed of 7 options.

CAMERA ADJUST	
CAMERA	CA1
CONTRAST	25
BRIGHTNESS	25
COLOR	25
TINT *	25
SHARPNESS	01
SEQUENCE	03 SEC

) Tint is only activated in NTSC system.

SEQUENCE
This option is used to set the dwell time of the selected camera when the monitor is operated in the SEQUENCE mode. The picture sequences in the order of CA1, CA2, CA1, CA2.. by pressing the SEQUENCE button on the remote control.

Use the following steps to set the picture quality of each camera and other options.

STEP	ACTION
1	Press MENU and then move the horizontal bar to CAMERA ADJUST using ▼ or ▲.
2	Press ◄ or ► to display sub-menu of CAMERA ADJUST.
3	Locate the horizontal bar at CAMERA and then select the camera to be adjusted using ◄ or ►.
4	Select the option to be adjusted using ▼ or ▲.
5	Adjust the option selected using ◄ or ►. - *Only the picture quality of the selected camera is adjusted.*
6	Press MENU to go to the previous menu or exit from the OSD menu.

PIP ADJUSTMENT

This setup menu is used to adjust the PIP position and size.

PIP	
PIP SIZE	00
PIP H POS	008
PIP V POS	005
PIP CAMERA	CA2

PIP SIZE

The PIP window size can be adjusted by using the PIP SIZE menu option.
Larger PIP window sizes can be obtained by increasing the PIP SIZE value.

PIP H&V POS

The PIP window can be displayed in any position on the screen by adjusting these options.
The PIP position is dependent on the PIP size, so care must be exercised not to display PIP window beyond the border of the screen.

PIP CAMERA

This option is used to select which camera is designated as the PIP window.
If CA1 is designated as the PIP window, CA2 will be the Main window.
This option is only applied on SCREEN MODE 2 & 3.
Use the following steps to set PIP options.

STEP	ACTION
1	Press MENU and then move the horizontal bar to PIP option using ▼ or ▲.
2	Press ◄ or ► to display sub-menu of PIP.
3	Select the option to be adjusted using ▼ or ▲.
4	Adjust the option selected using ◄ or ►.
5	Press MENU to go to the previous menu or exit from the OSD menu.

CONFIGURATION

```
CONFIGURATION

VIDEO SYSTEM        NTSC
PHOTO INPUT         OFF
RECALL              OFF
AUTO POWER          OFF
ON TIME             09:00:00
OFF TIME            18:00:00
```

VIDEO SYSTEM

Select the video system that is used in your region.

Use the following steps to set the video system.

STEP	ACTION
1	Press MENU and then move the horizontal bar to CONFIGURATION using ▼ or ▲.
2	Press ◄ or ► to display sub-menu of CONFIGURATION.
3	Locate horizontal bar at VIDEO SYSTEM and then select NTSC or PAL using ◄ or ►.
4	Press MENU to go to the previous menu or exit from the OSD menu.

PHOTO INPUT

This monitor can be turned off and goes to power saving mode if there is low ambient light by setting PHOTO INPUT to "ON".

Use the following steps to set the PHOTO INPUT option.

STEP	ACTION
1	Press MENU and then move the horizontal bar to CONFIGURATION using ▼ or ▲.
2	Press ◄ or ► to display sub-menu of CONFIGURATION.
3	Locate horizontal bar at PHOTO INPUT and then select ON of OFF using ◄ or ►. - ON : The monitor turns off when ambient light is low. - OFF : The monitor doesn't go to low power mode.
4	Press MENU to go to the previous menu or exit from the OSD menu.

RECALL

This option allows you to return the unit to factory-defined defaults.
Some items do not go to factory default values.

STEP	ACTION
1	Press MENU and then move the horizontal bar to CONFIGURATION using ▼ or ▲.
2	Press ◄ or ► to display sub-menu of CONFIGURATION.
3	Locate horizontal bar at RECALL and then select ON using ◄ or ►.
4	Press MENU to make the monitor factory default state.

AUTO POWER

This option is used to turn the monitor on and off automatically at ON TIME and OFF TIME.

Use the following steps to adjust the ON and OFF TIME.

STEP	ACTION
1	Press MENU and then move the indication bar to CONFIGURATION using ▲ or ▼.
2	Press ◄ or ► to display sub-menu of CONFIGURATION.
3	Move the indication bar to AUTO POWER and select ON or OFF using ◄ or ►.
4	Move the indication bar to ON TIME or OFF TIME using ▲ or ▼.
5	Select one of the option using ◄ or ►.
6	Adjust the selected option using ▲ or ▼.
7	Press MENU to display the previous OSD window or exit from the OSD.

ADJUSTING OSD WINDOW

OVERVIEW

Use the OSD Menu to adjust the OSD window.

The OSD Position and other options can be adjusted in this setup menu.

```
┌─────────────────────────────────────┐
│  OSD MENU                            │
│                                      │
│  LANGUAGE          ENGLISH           │
│  BLENDING          ON                │
│  TIME              40 SEC            │
│                                      │
│                                      │
│                                      │
└─────────────────────────────────────┘
```

LANGUAGE

Selects OSD language displayed.

Use the following steps to change OSD language.

STEP	ACTION
1	Press MENU and then move the horizontal bar to OSD MENU using ▼ or ▲.
2	Press ◄ or ► to display sub-menu of OSD MENU.
3	Locate the horizontal bar at LANGUAGE and then choose the desired language using ◄ or ►.
4	Press MENU to go to the previous menu or exit from the OSD menu.

BLENDING

Use the Blending setup menu to change the opaqueness of the background of the OSD.

Use the following steps to change the BLENDING option.

STEP	ACTION
1	Press MENU and then move the horizontal bar to OSD MENU using ▼ or ▲.
2	Press ◄ or ► to display sub-menu of OSD MENU.
3	Locate the horizontal bar at BLENDING and then choose "ON" or "OFF" using ◄ or ►.
4	Press MENU to go to the previous menu or exit from the OSD menu.

TIME

Use the TIME setup menu to adjust the on-screen display time.

Use the following steps to change the OSD time.

STEP	ACTION
1	Press MENU and then move the horizontal bar to OSD MENU using ▼ or ▲.
2	Press ◄ or ► to display sub-menu of OSD MENU.
3	Locate the horizontal bar at TIME and then select preferred time using ◄ or ►.
4	Press MENU to go to the previous menu or exit from the OSD menu.

CHAPTER 5. TROUBLESHOOTING

1. **Screen is black and power indicator is off.**
   Ensure that the power cord is firmly connected and the LCD monitor is on.
   Check PHOTO INPUT adjustment.

2. **No Picture.**
   Check the signal connections.

3. **The image is too light or too dark.**
   Adjust the Brightness and Contrast.

4. **Picture is impropely tinted.**
   Check color adjustment.

5. **Motion not detected or detected too often.**
   Adjust sensitivity of motion detection.

6. **Remote control malfunctions.**
   Check the battery terminals.
   Replace the remote control batteries.

7. **No sound.**
   Ensure that the audio cables are firmly connected to both the audio-in ports on your monitor.
   Check the volume level.

CHAPTER 6. SPECIFICATIONS

ITEMS		MODEL	20.1 Inch TFT-LCD Color Monitor
LCD		LCD Panel	20.1 inches (510.54 mm) TFT LCD Panel
		Active Display Area	408.0 mm(H) x 306.0 mm(V)
		Pixel Format	640(H) x 480(V), RGB vertical stripe
		Pixel Pitch	0.6375 mm x 0.6375 mm
		Color Depths	8 Bit / 16.7M Colors
		Contrast Ratio	800 : 1 (Typical)
		Brightness	450 cd/m^2 (Typical)
		Viewing Angles (L/R/U/D)	89 / 89 / 89 / 89 (Typical)
		Light Source / Lifetime	6CCFL / 50,000Hrs (Minimum)
		Response Time	25 ms (Typical)
Video Input		Camera Video Input Connector	BNC x 2
		Video Mode	NTSC/ PAL
		Video Input Level	1.0Vp-p @ 75 ohm
Video Output		Video Output Connector	BNC x 3 - Video Output x 2 - Main Output x 1
		Video Output Level	1.0Vp-p @ 75 ohm
Audio		Audio Input level	Line level
		Audio Input Connector	RCA x 2
		Audio Amplifier	2.5 W x 2
Power Requirement			DC12V / 4.9A, DC Output Jack 12V 0.5A(Max)
Power Consumption			60 Watts
Operating Temperature			0~40°C
Storage Temperature			0~50°C
Case Material			Metal
Dimensions		Net	472.4mm x 451.4mm x 62mm
		Packing	640mm x 540mm x190 mm
Weight		Net	8.6kg
		Packing	12.4kg
Accessories			AC-DC Adapter, Power Cord, Manual, Remote Controller

ITEMS	MODEL	20.1 Inch TFT-LCD Public View Monitor
Input	Display Source	Built-in Camera Video + External Camera Video
LCD	LCD Panel	20.1 inches (510.54 mm) TFT LCD Panel
	Active Display Area	408.0 mm(H) x 306.0 mm(V)
	Pixel Format	640(H) x 480(V), RGB vertical stripe
	Pixel Pitch	0.6375 mm x 0.6375 mm
	Color Depths	8 Bit / 16.7M Colors
	Contrast Ratio	800 : 1 (Typical)
	Brightness	450 cd/m^2 (Typical)
	Viewing Angles (L/R/U/D)	89 / 89 / 89 / 89 (Typical)
	Light Source / Lifetime	6CCFL / 50,000Hrs (Minimum)
	Response Time	25ms (Typical)
Composite Video (Built-In Camera)	Video Mode	NTSC/ PAL
	Camera Video Input Level	1.0Vp-p @ 75 ohm
Composite Video (External Camera & Video Output)	Video Mode	NTSC/ PAL
	Camera Video Input Level	1.0Vp-p @ 75 ohm
	Camera Video Input Connector	BNC x 1
	Video Output Level	1.0Vp-p @ 75 ohm
	Video Output Connector	BNC x 3
	Monitor Output Level	1.0Vp-p @ 75 ohm
	Monitor Output Connector	BNC x 1
Built-In Camera	CCD Image Sensor	1/3"
	Resolution	470 TVL
	Sensitivity	1 Lux (F2.0 , 50 IRE)
	S/N Ratio	50dB
	Auto Iris	Yes
	Auto White Balance	Yes
	Electronic Shutter	1/60 ~ 1/100,000, 1/50 ~ 1/100,000 Sec
	VF Lens	4－9mm (F 2.0 ~ 2.8)
Audio	Audio Input level	Line level
	Audio Input Connector	RCA x 2
	Audio Amplifier	2.5 W x 2
Power Requirement		DC 12V (Adaptor), DC Output Jack 12V 500mA
Power Consumption		60 Watts
Operating Temperature		0~40℃
Storage Temperature		0~50℃
Case Material		Metal
Dimensions	Net	472.4mm x 451.4mm x 89.4mm
	Packing	640mm x 540mm x190 mm
Weight	Net	8.9kg
	Packing	12.7kg
Accessories		AC-DC Adapter, Power Cord, Manual, Remote Controller, Extension Cable for power(optional)

HCS775 Mount
Light Duty Ceiling LCD Mount Bracket
15", 17", 19", 20.1" LCD Monitors

■ FEATURES

- Adjustable swivel head (Pan 180°, Tilt +/-15")
- 75mm or 100mm VESA compatible
- Die cast and aluminum construction
- Cable feed-through to conceal wiring
- 1,1/4" NPT standard pipe
- Maximum load 20 lbs (9.0kg)

■ USE

The bracket is designed for industry standard LCD monitors.
The mount is intended for use in ceiling mount applications.

■ ASSEMBLY

The ceiling mounting plate (1) must be attached to a structural object such as hard wood, ceiling rafter or concrete that will support the weight of the mount and monitor. The mounting plate may be attached using the M6 x 35 (3X) or substitute hardware as required providing a secure attachment.

The VESA plate must be attached to the ball socket stem using the two M5 x 16L machine screws and tooth washers.

> **NOTE:** PROPER ORIENTATION OF THE BALL-SOCKET ASSEMBLY IS REQUIRED FOR CEILING INSTALLATION.
> IMPROPER INSTALLATION WILL BREAK THE SOCKET AND MAY CAUSE THE MONITOR TO FALL.

Check if the installation requires ceiling mounting of the LCD. The orientation of the ball socket to ball socket adapter may be changed by unscrewing the Allen screw inside the adapter, repositioning the adapter to the top or side position on the socket and reattaching the adapter to the socket.
Tighten the inside Allen screw firmly.

If ceiling mount is required, ensure the ball socket is orientated in a "C" shape with the ball socket adapter located at the 12:00 o'clock position(Vertical direction) in relationship to the ball socket.
(See ceiling mount configuration)

Attach the extended length of pipe to the 1,1/2" ceiling mount (1). Attach the VESA plate (2) to the back of the LCD monitor using the four M4 x 8L machine screws. Both 75mm and 100mm VESA mounts are accommodated.

Rotate monitor and mount assembly to the desired location and tighten the two remaining ball socket screws firmly.

Tighten the pole set screws (❻) with the supplied wrench.

(1)

(2)

Ceiling mount configuration

Unit: mm

Unit: Inch(mm)

■ SPECIFICATION

Pan adjustment	180°
Tilt adjustment	-15° ~ +15°
LCD mounting hardware	❶ Qty 4 M4 x 8L (VESA plate) ❷ Qty 2 M5 x 16L (Ball socket) ❸ Qty 2 Star washers (Ball socket) ❹ Qty 3 M6 x 35 (Lag Screws) ❺ Qty 3 Ceiling anchors ❻ Qty 2 M4 x 4L (Set screws)
Construction	Die Cast and aluminum
Finish	Light-gray or black polyester powder-cost
Maximum load	20 lbs (9.0 kg)
Dimensions	See dimensional outline
Weight	Unit 4.4 lbs (2.0kg) Shipping 5.5 lbs (2.5kg)

HCS775-E Mount
Light Duty Ceiling LCD Mount Bracket
15", 17", 19", 20.1" LCD Monitors

■ FEATURES

- Adjustable extension length (26.4" to 36.6")
  (670mm to 930mm)
- Three fixed extension lengths 26.4" (670mm),
  31.5" (800mm) or 36.6" (930mm)
- Interior pole may be used as a 19.7" (500mm)
  extension with use of purchased 1,1/2" to
  1,1/4" NPT reducer
- Adjustable swivel head (Pan 180°, Tilt +/-15")
- 75mm or 100mm VESA compatible
- Die cast and aluminum construction
- Cable feed-through to conceal wiring
- 1, 1/2" NPT / 1,1/4" NPT standard pipe
- Maximum load 20 lbs (9.0kg)

Extension Type

■ USE

The bracket is designed for industry standard LCD monitors. The mount is intended for use in ceiling mount applications when adjustment of the pipe length may be required.

■ ASSEMBLY

The 1,1/2" ceiling mounting plate (1) must be attached to a structural object such as hard wood, ceiling rafter or concrete that will support the weight of the mount and monitor. The mounting plate may be attached using the M6 x 35 (3X) or substitute hardware as required providing a secure attachment.

The VESA plate must be attached to the ball socket stem using the two M5 x 16L machine screws and tooth washers.

Insert the threaded 1,1/4" NPT pipe into the 1,1/2" NPT pipe at the required length and fasten the poles together using the four M6 x 12L Allen-head machine screws and split washers.

> **NOTE:** PROPER ORIENTATION OF THE BALL-SOCKET ASSEMBLY IS REQUIRED FOR CEILING INSTALLATION.
> IMPROPER INSTALLATION WILL BREAK THE SOCKET AND MAY CAUSE THE MONITOR TO FALL.

Check if the installation requires ceiling mounting of the LCD. The orientation of the ball socket to ball socket adapter may be changed by unscrewing the Allen screw inside the adapter, repositioning the adapter to the top or side position on the socket and reattaching the adapter to the socket.
Tighten the inside Allen screw firmly.

If ceiling mount is required, ensure the ball socket is orientated in a "C" shape with the ball socket adapter located at the 12:00 o'clock position(Vertical direction) in relationship to the ball socket.
(See ceiling mount configuration)

Attach the extended length of pipe to the 1,1/2" ceiling mount (1). Attach the VESA plate (2) to the back of the LCD monitor using the four M4 x 8L machine screws. Both 75mm and 100mm VESA mounts are accommodated.

Rotate monitor and mount assembly to the desired location and tighten the two remaining ball socket screws firmly.

Tighten the pole set screws (❽) with the supplied wrench.

Unit: Inch(mm)

■ SPECIFICATION

| Pan adjustment	180°
Tilt adjustment	-15° ~ +15°
LCD mounting hardware	❶ Qty 4 M4 x 8L (VESA plate) ❷ Qty 2 M5 x 16L (Ball socket) ❸ Qty 2 Star washers (Ball socket) ❹ Qty 4 M6 x 12L (Pipe extensions) ❺ Qty 4 split washer (Pipe extensions) ❻ Qty 3 M6 x 35 (Lag Screws) ❼ Qty 3 Ceiling anchors ❽ Qty 2 M4 X 4L (Set screws)
Construction	Die Cast and aluminum
Finish	Light-gray or black polyester powder-cost
Dimensions	See dimensional outline
Weight	Unit 6.6 lbs (3.0kg) Shipping 7.7 lbs (3.5kg)

HCS37G Mount
Wall Mount Bracket
for LCD monitor

■ PRODUCT FEATURES

- Light duty wall mount
- Conform to the VESA 75mm or 100mm standard
- Adjustable swivel head
- Durable steel construction and hardened zinc metal frame
- Maximum load 29 lb (13kg)

The HMS37G is light duty wall mount designed for use With LCD monitor.
This mount is for use in wall mounting applications and is capable of supporting loads up to 29 lb (13 kg).

Unit: mm
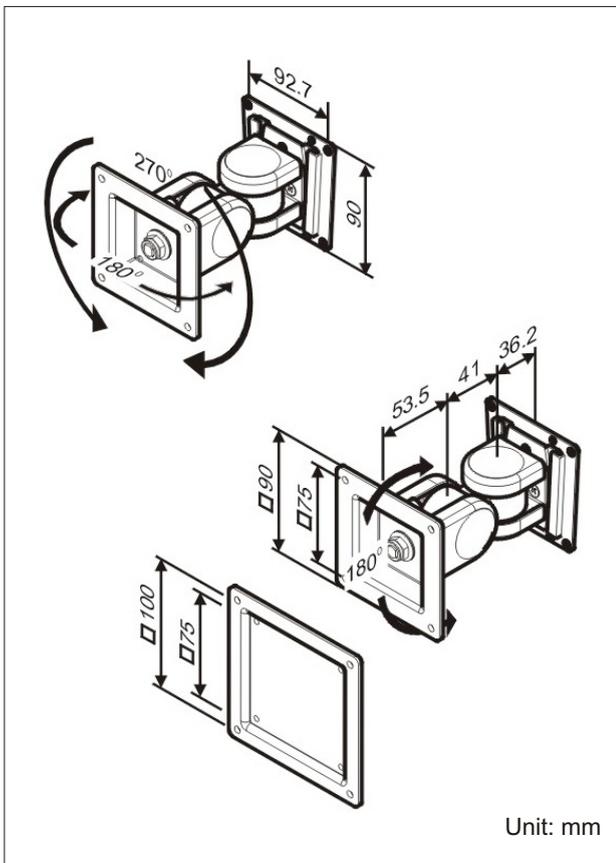
■ SPECIFICATION

GENERAL

Swivels to right and left up to 180°
Pivots upwards to 10° and downwards to 25°

LCD mounting	four(4) M4 x 8L machine screw (supplied)
Construction	Durable steel & hardened zinc metal
Maximum load	29 lb (13 kg)
Dimension	See dimensional outline
Weight	Unit : 2.2 lb (1.0 kg) Shipping : 3.3 lb (1.5 kg)

FITTING CHECK-LIST

01	Small Screw	....	9pcs	
02	Nut	....	1pcs	
03	Cable Holder	....	1pcs	
04	Cable Tie	....	3pcs	
05	Wrench	....	1pcs	
06	Connector Plate	......	1pcs	
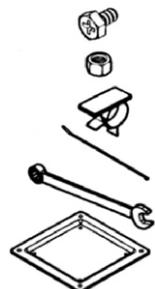
MEMO

MEMO

20.1 INCH TFT-LCD MONITOR
20.1 INCH TFT-LCD PUBLIC VIEW MONITOR   50301791B