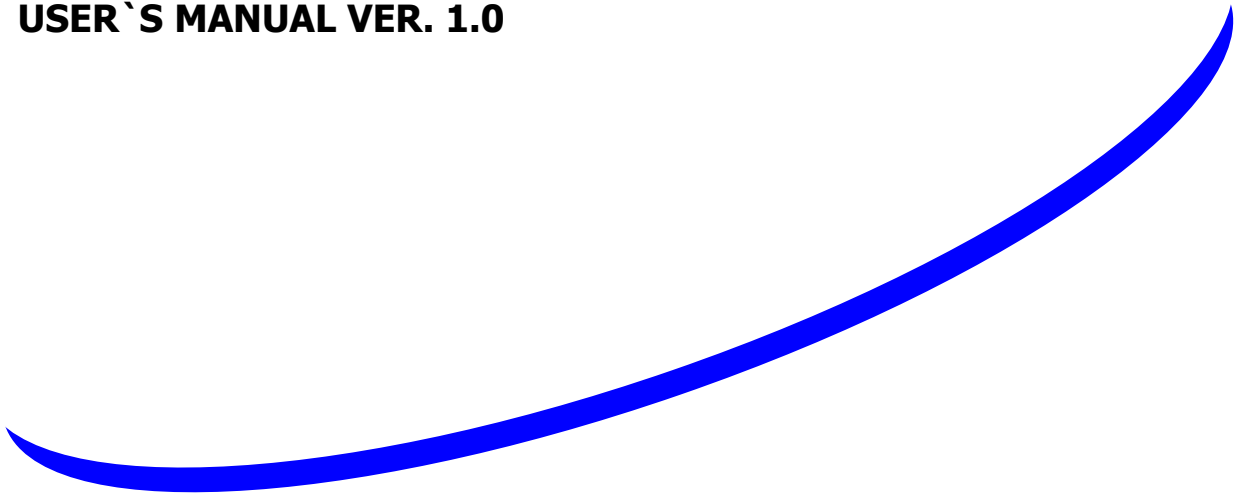


USER`S MANUAL VER. 1.0



CCTV COLOR MONITORS

**NVM-015CH
NVM-017CH
NVM-019CH
NVM-021CS**

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1. FCC Information

This equipment has been tested and found to comply with the limits for a class B 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. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to 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:

- Reorient or relocate the receiving antenna;
- Increase the separation between the equipment and receiver;
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected;
- Consult the dealer or an experienced radio/TV technician for help;

Shielded interface cables and A.C. power cord, if any, must be used in order to comply with emission limits.

Changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.

2. Safety Precaution

1. Operate this unit only from the type of power source indicated on the label.
2. Do not block or cover ventilation openings on the back or bottom of the monitor cabinet.
3. Do not place this monitor near a radiator or heating vent.
4. Do not push objects of any kind through cabinet openings. This may result in fire or electrical shock.
5. Before adding attachments always ask a service technician to perform routine safety tests to determine that equipment is in safe operating condition. Ground potential tests should be part of the routine safety check made by the service technician.
6. Do not place monitor on an unstable cart, stand, or shelf where it may fall and injure personnel or damage equipment.
7. Route power cords so that they cannot be walked upon or tripped over. Do not allow anything to rest on the power cord.
8. Do not install monitor in wet areas, or where it may be exposed to rain or water. Do not spill liquid of any kind on the unit.
9. Unplug the power cord from the unit before cleaning the display. Use only a damp cloth. Do not use alcohol, spirits, or ammonia to clean the display.
DO NOT ATTEMPT TO CLEAN THE INTERIOR OF THIS UNIT - - THIS ACTION MUST BE PERFORMED BY THE SERVICE TECHNICIAN AS REQUIRED DURING NORMAL MAINTENANCE.
10. Refer all servicing to qualified service personnel. REMOVAL OF BACK COVER BY UNAUTHORIZED PERSONNEL MAY EXPOSE THE USER TO DANGEROUS VOLTAGES OR OTHER HAZARDS.
11. Unplug the unit immediately and notify the service technician.
 - A. If liquid has been spilled into the display or the display has been exposed to rain or water.
 - B. If the unit has been dropped or the cabinet damaged.
 - C. If fuses continue to blow.
 - D. If the power cord is damaged or frayed.
 - E. If a distinct change from normal operation is apparent.

SAFETY PRECAUTIONS

When replacement parts are required, be sure that the service technician uses components specified by the manufacturer which have the same characteristics as the original parts.

UNAUTHORIZED SUBSTITUTIONS MAY RESULT IN FIRE, ELECTRICAL SHOCK OR OTHER HAZARDS.

Upon completion of any service or repairs, ask the technician to perform safety checks to determine that the equipment is in safe operating condition.

WARNING

SERIOUS SHOCK HAZARDS EXIST WITHIN THE COVERS OF THIS MONITOR. DO NOT OPEN THE COVERS UNDER ANY CIRCUMSTANCES, THERE ARE NO USER SERVICEABLE COMPONENTS INSIDE

GENERAL FEATURES

3. General Features

1. Compatible With : NTSC / PAL System
2. Scanning System :
NTSC, 15750 Hz / 60 Hz / 525 Lines
PAL 15625 / 50 Hz / 625 Lines,
3. Video Input Signal : CVBS1 / CVBS2 / S-Y/C
4. Audio Input Signal : AU1 / AU2
5. Input Power : 100~240V AC or 23V DC +/- 1V(Option)

STANDARD SYSTEM COMPONENTS AND ATTACHMENTS



NVM-015CH



NVM-017CH



NVM-019CH



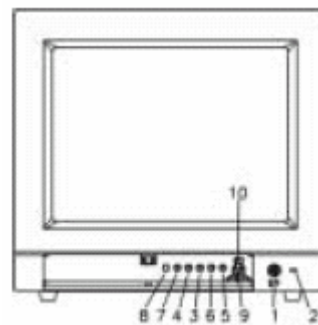
NVM-021CS

NVM-015CH Front and Rear Views

4. NVM-015CH Front and Rear Views

Front View

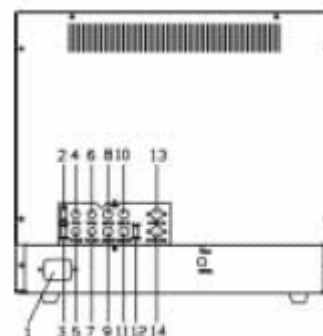
1. Power On/Off Switch
2. Power-On Indicator
3. Contrast Adjustment
4. Brightness Adjustment
5. Tint Adjustment
6. Color Adjustment
7. Sharpness Adjustment
8. Volume Adjustment
9. CVBS1 / CVBS2 / S-Y/C Switch
10. Audio1 / Audio2 Select Switch



NVM-015CH

Rear View

1. Power Inlet
2. Video 1 Load Impedance Switch
3. Video 2 Load Impedance Switch
4. Video 1 Input : BNC Connector
5. Video 1 Output : BNC Connector
6. Video 2 Input : BNC Connector
7. Video 2 Output : BNC Connector
8. Audio 1 Input : RCA Jack
9. Audio 1 Output : RCA Jack
10. Audio 2 Input : RCA Jack
11. Audio 2 Input : RCA Jack
12. S-Y/C Load Impedance Switch
13. S-Y/C Input Connector
14. S-Y/C Output Connector



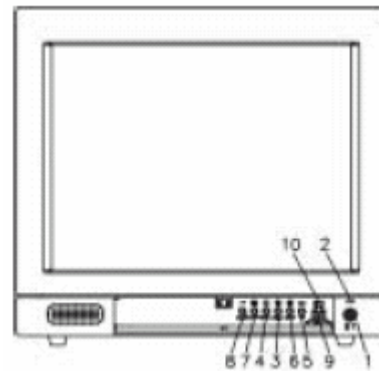
NVM-015CH

NVM-017CH Front and Rear Views

5. NVM-017CH Front and Rear Views

Front View

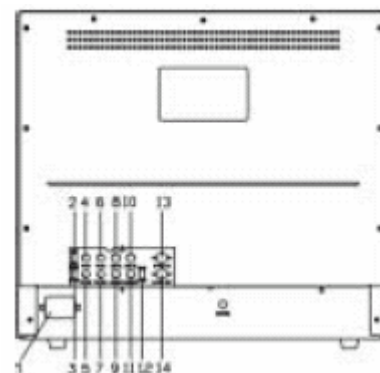
1. Power On/Off Switch
2. Power-On Indicator
3. Contrast Adjustment
4. Brightness Adjustment
5. Tint Adjustment
6. Color Adjustment
7. Sharpness Adjustment
8. Volume Adjustment
9. CVBS1 / CVBS2 / S-Y/C Switch
10. Audio1 / Audio2 Select Switch



NVM-017CH

Rear View

1. Power Inlet
2. Video 1 Load Impedance Switch
3. Video 2 Load Impedance Switch
4. Video 1 Input : BNC Connector
5. Video 1 Output : BNC Connector
6. Video 2 Input : BNC Connector
7. Video 2 Output : BNC Connector
8. Audio 1 Input : RCA Jack
9. Audio 1 Output : RCA Jack
10. Audio 2 Input : RCA Jack
11. Audio 2 Input : RCA Jack
12. S-Y/C Load Impedance Switch
13. S-Y/C Input Connector
14. S-Y/C Output Connector

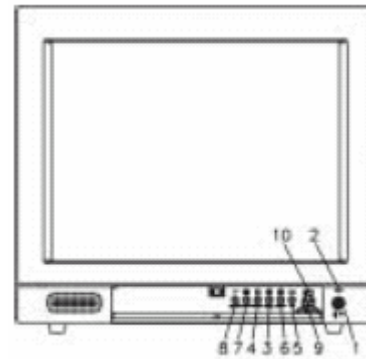


NVM-017CH

6. NVM-019CH Front and Rear Views

Front View

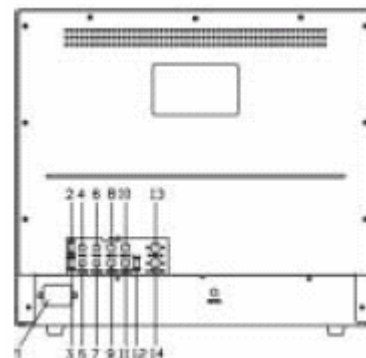
1. Power On/Off Switch
2. Power-On Indicator
3. Contrast Adjustment
4. Brightness Adjustment
5. Tint Adjustment
6. Color Adjustment
7. Sharpness Adjustment
8. Volume Adjustment
9. CVBS1 / CVBS2 / S-Y/C Switch
10. Audio1 / Audio2 Select Switch
11. Underscan Select Switch
12. 16:9 Select Switch



NVM-019CH

Rear View

1. Power Inlet
2. Video 1 Load Impedance Switch
3. Video 2 Load Impedance Switch
4. Video 1 Input : BNC Connector
5. Video 1 Output : BNC Connector
6. Video 2 Input : BNC Connector
7. Video 2 Output : BNC Connector
8. Audio 1 Input : RCA Jack
9. Audio 1 Output : RCA Jack
10. Audio 2 Input : RCA Jack
11. Audio 2 Input : RCA Jack
12. S-Y/C Load Impedance Switch
13. S-Y/C Input Connector
14. S-Y/C Output Connector

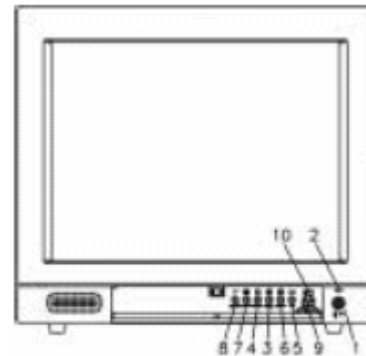


NVM-019CH

7. NVM-021CS Front and Rear Views

Front View

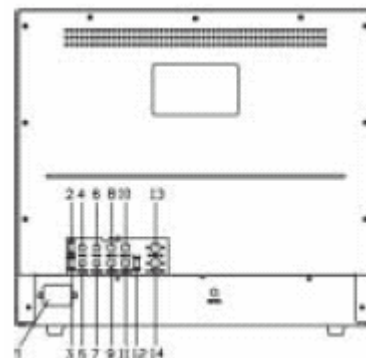
1. Power On/Off Switch
2. Power-On Indicator
3. Contrast Adjustment
4. Brightness Adjustment
5. Tint Adjustment
6. Color Adjustment
7. Sharpness Adjustment
8. Volume Adjustment
9. CVBS1 / CVBS2 / S-Y/C Switch
10. Audio1 / Audio2 Select Switch
11. Underscan Select Switch
12. 16:9 Select Switch



NVM-021CS

Rear View

1. Power Inlet
2. Video 1 Load Impedance Switch
3. Video 2 Load Impedance Switch
4. Video 1 Input : BNC Connector
5. Video 1 Output : BNC Connector
6. Video 2 Input : BNC Connector
7. Video 2 Output : BNC Connector
8. Audio 1 Input : RCA Jack
9. Audio 1 Output : RCA Jack
10. Audio 2 Input : RCA Jack
11. Audio 2 Input : RCA Jack
12. S-Y/C Load Impedance Switch
13. S-Y/C Input Connector
14. S-Y/C Output Connector



NVM-021CS

8. Operating Instructions

1. Place the monitor on a flat and firm surface (see Safety Precautions on page 4).
2. This monitor can be operated between 100VAC to 240VAC.
3. Plug the power cord into AC outlet on the wall.
4. Plug the power cord into AC outlet on the wall.
5. Link the audio/video terminal from your devices into the audio/video in RCA/BNC connectors of the monitor.
6. Turn your device system power switch ON. then turn the monitor power switch on. The power indicator will be ON at this moment.
7. Allow about 30 seconds for the display tube to warm up, then the image should appear on the screen.
8. The monitor will detect the frequency of the input signal automatically, and the image may be adjusted through the function VR on front control panel.
9. Adjust the user controls to optimize picture quality.

WARNING

1. "DC IN" can connect to external DC power supply at voltage range 22-24 volts. Monitor can function properly with this "DC IN".
2. "DC OUT" can provide DC 23 volts at maximum current 250 mA to a device such as a camera, and monitor can still function properly.

9. Specifications

Model	NVM-015CH	NVM-017CH	NVM-019CH	NVM-021CS
CRT Size	15”	17”	19”	21”
CRT Dot Pitch	0.28 mm	0.28 mm	0.27 mm	0.76 mm
Power Consumption	68 W	72 W	78 W	70 W
Operation System	NTSC / PAL (Auto Scan)			
Power Supply	AC 100 ~ 240 V, 60/50 Hz			
Input / Output Video	2 Inputs (BNC) 75Ohm or Hi-Z 2 Loop Through Outputs (BNC) 1 Y/C (Mini-DIN 4 Pin) 75Ohm or Hi-Z 1 Loop Through Output			
Audio	2 Inputs (RCA) Hi-Z 2 Loop Through Outputs			
Built-in S-VHS (Y/C)	Yes			
Horizontal Resolution	700 lines, Y/C more than 800 lines			450 lines, Y/C more than 500 lines
Front Panel Control	Power switch, Video select switch, Audio select switch, Contrast, Brightness, Color , Sharpness, Tint and Volume			
Underscan Select Switch	No		Yes	
16:9 Select Switch	No		Yes	
Linearity	Horizontal: 10%; Vertical: 10%			
Temperature	0°C ~ 50°C			
Humidity	10 ~ 85%			
Case	Metal			
Dimension W x H x D [mm]	356x333x381	405x370.5x406	442x405x446	480x462x439.3

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