




PVS - 1

**B/W Observation System
12" Monitor with Built-In Quad Splitter
And 4-channel Sequential Switcher**


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OPERATION MANUAL



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 FOR SERVICE TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of un-insulated “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 appliance.

THE GRAPHIC SYMBOLS WITH SUPPLEMENTAL MARKING IS APPLIED ON THE REAR SIDE OF THE SUBJECT MONITOR.

WARNING : To prevent fire or shock hazard, do not expose this appliance to rain, water, wet locations. Do not insert any metallic object through ventilation grilles.

IMPORTANT SAFETY INSTRUCTIONS

This video monitor equipment is provided 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.

6. TROUBLESHOOTING

If the system does not function properly, check following points before contacting the service center.

No	Problem	Possible Solutions
1	No Video & Sound	<ul style="list-style-type: none"> ● Verify power to all pieces of equipment in the system. ● Verify that the power switches are in the ON position. ● Verify that the cameras are properly hooked up.
2	Video, But no control	<ul style="list-style-type: none"> ● Turn the power OFF for 30 seconds and then turn it ON again.

- c. TIME DISPLAY
 - Selecting ‘Y’ or ‘N’ using the QUAD/MENU button will turn the TIME Display ON or OFF
- d. TITLE DISPLAY
 - Selecting ‘Y’ or ‘N’ using the QUAD/MENU button will turn the TITLE Display ON or OFF.
- e. KEY BUZZER
 - You could set where using buzzer sound or not.
- f. LOSS BUZZER
 - You could set where using buzzer sound or not. According to the change of input of video signal.
- g. ALARM BUZZER
 - You could set whether using buzzer sound or not. When display of Alarm is mismatch with being set on channel menu.
- h. OSD LEVEL
 - Establish brightness of system establishment screen by 4 steps.
- i. DEFAULT SETTING
 - Place the cursor to the “DEFAULT SETTING”
 - You could set whether supplier set changing to initial setting of menu.
- j. EXIT
 - Place the EXIT with the CH 2 and the CH 4 buttons.
 - Press the QUAD/MENU button to exit the CHANNEL setup.

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1. PURPOSE OF THIS PRODUCT

The purpose of this 12" B/W QUAD MONITOR is to provide an economical, but effective method to monitor more than one area with video cameras. This monitor has following features to enable the users to get the best for their money and efforts:

- Accepts EIA & CCIR video format.
- EIA : 720 x 480 Pixels, CCIR : 720 x 580 Pixels .
- Real time quad picture display.
- PIP (Picture-In-Picture) function.
- Double zoom function in VCR mode
- Full-screen display of any one camera.
- Four-position sequential switcher.
- Programmable dwell times which includes cameras and the quad display in the sequential switching mode.
- On-screen-display and programmable menus.
- User-programmed data is battery backed up.
- Freeze capability to freeze a picture.
- Alarm capability allows alarm devices to be connected to the monitor.
- Alarm hold time: zero to 59 seconds.

5-6-4. SPECIAL

- Place the cursor to the INPUT MODE, DATE FORMAT, TIME/TITLE DISPLAY, BUZZER SOUND or DEFAULT SETTING with the CH 2 and the CH 4 buttons.
- Select a format you wish to display on the screen, according to your country system or your preference.

[SPECIAL]	
INPUT MODE	[EIA]
DATE FORMAT	MM/DD/YYYY
TIME DISPLAY	[Y]
TITLE DISPLAY	[Y]
KEY BUZZER	[Y]
LOSS BUZZER	[Y]
ALARM BUZZER	[Y]
OSD LEVEL	[2]
DEFAULT SETTING	[N]
EXIT	[↵]

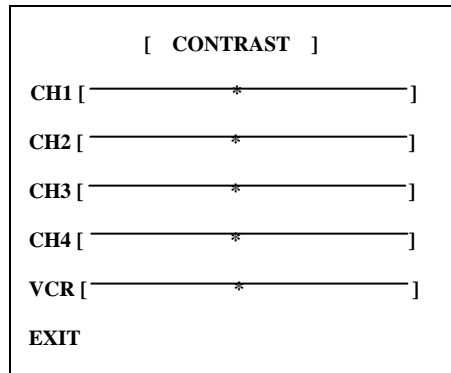
a. INPUT MODE

- Please select [EIA] mode or [CCIR] mode by using QUAD/MENU button.

b. DATE FORMAT

- There are three formats to display the date.
- MM-DD-YYYY : for U.S.A.
- MM-DD-YYYY : for Asian countries.
- DD-MM-YYYY : for European countries.

5-6-3. CONTRAST



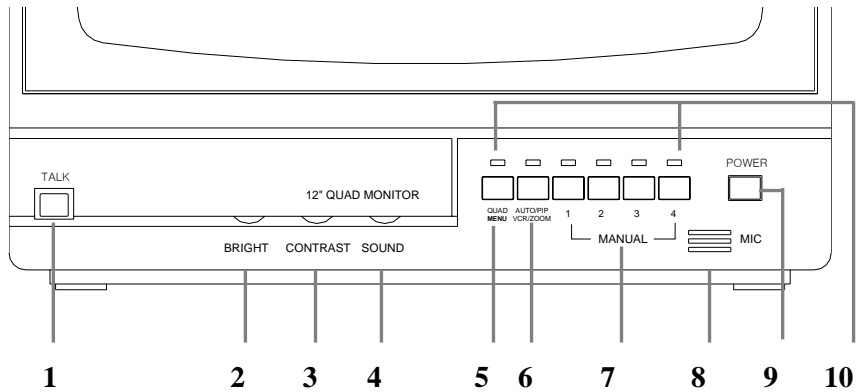
- Using CH 2 button and CH 4 button, please select a channel.
- Change value of Bright using CH 3 button and CH 1 button.
- The channel of VCR is optional.
- If you want to move to main setup menu, select the EXIT

2. SPECIFICATIONS

- System
 - E I A : 525 lines, 60 fields per second
 - CCIR : 625 lines, 50 fields per second
- Input Signal
 - Composite video, sync. Negative
- Operating Temperature
 - 32 to 104 degree F
 - 0 to 40 degree C
- Humidity
 - 0% to 90% (Non-condensing)
- Connectors
 - RCA JACK : AUDIO IN / OUT
 - BNC JACK : VIDEO IN/OUT
 - MINI DIN JACK : CAMERA IN
- Power Source
 - AC 90V~240V, 50~60Hz, 65W
 - Free Voltage Switching Power Supply
- Power consumption
 - 25W
- Dimension
 - Width: 11.3 inch (28.7 cm)
 - Height: 11.7 inch (29.7 cm)
 - Depth: 11.7 inch (29.7 cm)
- WEIGHT
 - 9Kg

3. LOCATION OF CONTROLS AND INDICATORS

3-1. FRONT VIEW



1. TALK

- Enables voice communications between the monitor and camera.
- Press this button in PIP mode to talk with the camera in the background screen.
- Press this button in the Auto mode to change to full mode
- This button has no effect in the Quad mode.

2. BRIGHTNESS

- Adjusts the shading of the screen and establishes its brightness.

3. CONTRAST

- Adjusts between light and dark areas of the screen.

4. SOUND

- Adjusts the sound-volume from MIN to MAX.

Automatic sequential switching mode.

- Place the cursor to the DWELL TIME using the CH 1, CH 3, CH 4 and the CH 2 buttons, and press the QUAD/MENU button to blink the Dwell Time and set it using the CH 2 or the CH 4 buttons. Press the QUAD/MENU button again to stop flashing the Time.

c. ALARM

- There are three factors to provide the alarm positions, Normal Open (N/O), Normal Closed (N/C).
- Using CH 2 and the CH 4 buttons after selecting Alarm could change it.
- Factory default is fixed on N/O.

d. EXIT

- Place the character to the EXIT with the CH 2 and the CH 4 buttons.
- Press the QUAD/MENU button to exit the CHANNEL setup mode.

5-6-2. CHANNEL

- The following items can be adjusted or programmed on this menu screen.

[CHANNEL]				
	TITLE	DWELL	ALARM	
CH1	: C 1	03 SEC	N/O	
CH2	: C 2	03 SEC	N/O	
CH3	: C 3	03 SEC	N/O	
CH4	: C 4	03 SEC	N/O	
QUAD	: -----	03 SEC		
EXIT	: [↵]			

a. Camera TITLE

- Place the cursor to the date digit using the CH 1, CH 3, CH 2, and the CH 4 buttons, and press the QUAD/MENU button. The first empty box will be blinking.
- Select the position you want to enter the letter or the numeric number using the CH 1, CH 3 buttons.
- CH 2 and the CH 4 buttons are to change the new character. Button to return to the CHANNEL menu.
- You can enter up to 8 characters for each camera title.

b. Set the DWELL TIME

Dwell Time is the amount of time that a camera is displayed on the screen when the system is in the Automatic sequential switching mode. The Dwell Time can be adjusted individually for each camera and the quad display from 0 to 59 seconds. When it is set to be zero (OFF) the corresponding camera will be skipped in the

5. **QUAD / MENU**

- Press this button and the Quad mode appears, Press for more than 2 seconds and system menu mode appears.

6. **[AUTO/PIP] / [VCR/ZOOM]**

- Press this button and the Auto mode, PIP1 mode, PIP2 mode appears in order and press long (more than 2 seconds) the unit is converted to VCR mode. Press again for more than 2 seconds the zoom command is achieved.

7. **MANUAL 1-4**

- Use to select full screen of each camera or to freeze a picture in full mode or quad mode.

8. **MIC**

- Built-in condenser microphone for 2-way audio.

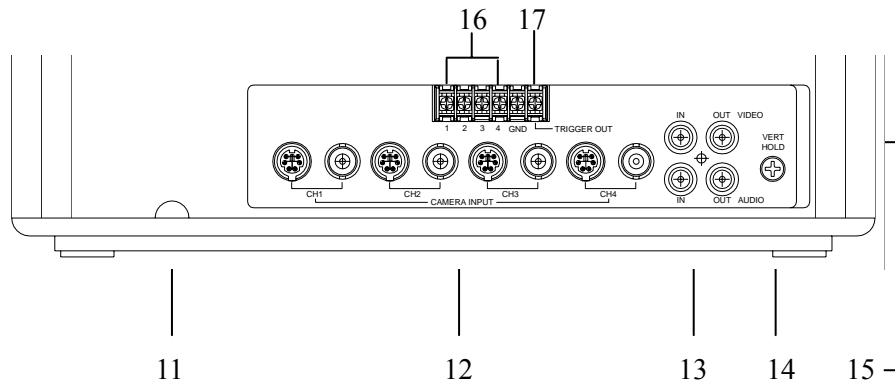
9. **POWER**

- Push switch to turn the monitor ON or OFF.

10. **LED**

- Display function practice state of button

3-2. REAR VIEW



11. AC POWER CORD

- Connect to 120V AC outlet.

12. CAMERA INPUT MINI DIN, BNC JACK

- Connect the cables from camera 1-4 here.

13. VCR CONNECTORS

- RCA Audio/Video-In/Out jacks for the VCR Connection.

14. V-HOLD CONTROL

- Controls to stop the picture from rolling up/down.

15. SPEAKER

- Built-in dynamic speaker from audio out

16. ALARM INPUT

- For alarm sensor input from each camera

17. TRIGGER OUTPUT

- Normally open (N/O) or active 500ms (closed)

- Press the QUAD/MENU button to flash the time, and set it with the CH 2 and the CH 4 buttons. It can be set from zero (OFF) to 59 seconds.
- Press the QUAD/MENU button again to stop flashing the ALARM TIME.

d. Set the MODE PIP1

- It would appear an another small picture in the full picture
- It would appear small picture, which you selected on the menu on the right-bottom of full picture.

e. Set the MODE PIP2

- There are two small pictures on the full picture.
- It would appear two small pictures, which you selected on the menu on the right-bottom and left-bottom of full picture.

f. Set the CHANNEL

- Pressing QUAD/MENU button, it moves to channel setup menu.
- Refer to setup menu 5-6-2

g. Set the CONTRAST

- Using QUAD/MENU button, it moves to contrast setup menu.
- Refer to contrast menu 5-6-3

h. Set the SPECIAL

- Using QUAD/MENU button, it moves to special setup menu.
- Refer to contrast menu 5-6-4

j. EXIT

- Place the character to the EXIT with the CH 2 and the CH 4 buttons.

Press the QUAD/MENU button to exit the MAIN SETUP Set-up mode.

a. Set the TIME

- Place the cursor to the time digit using the CH 1 or the CH 3 buttons, and press the QUAD/MENU button to blink the TIME (HH:MM:SS) and set it using the CH 2 or the CH 4 buttons. Press the QUAD/MENU button again to stop flashing the TIME.
- Use the CH 1 and the CH 3 buttons to shift the cursor to the next digit.
- The TIME is displayed in military form of time.
- Press QUAD/MENU button the EXIT location to exit in this mode, the splitter will display the quadrant picture.

b. Set the DATE

- Place the cursor to the date digit using the CH 1, CH 3, CH 2 and the CH 4 buttons, and press the QUAD/MENU button to blink the DATE (MM:DD:YYYY). Change the content using the CH 2 and the CH 4 buttons. Press the QUAD/MENU button again to stop blinking the DATE.
- Use the CH 1 and the CH 3 buttons to shift the cursor to the next digit.
- Press QUAD/MENU button at the EXIT location to exit from this mode, the splitter will display the quadrant pictures.

c. Set the ALARM TIME

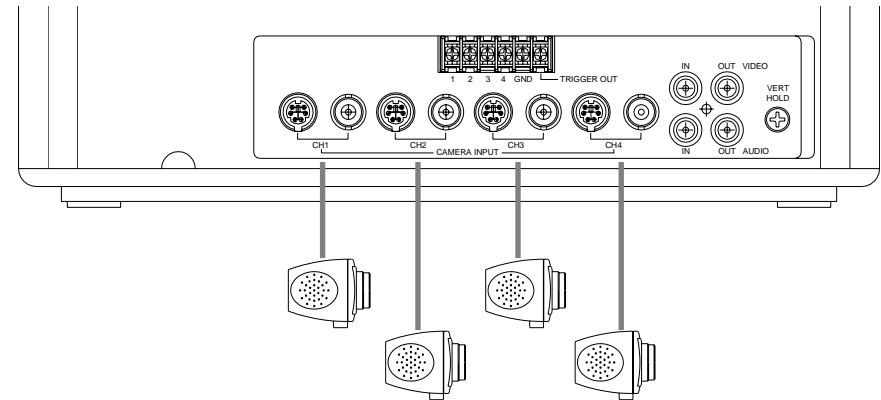
The ALARM TIME is the duration time that the audible buzzer sounds.

- Place the cursor to the ALARM TIME with the CH 2 and the CH 4 buttons.

4. INSTALLATION

4-1. Basic System Installation

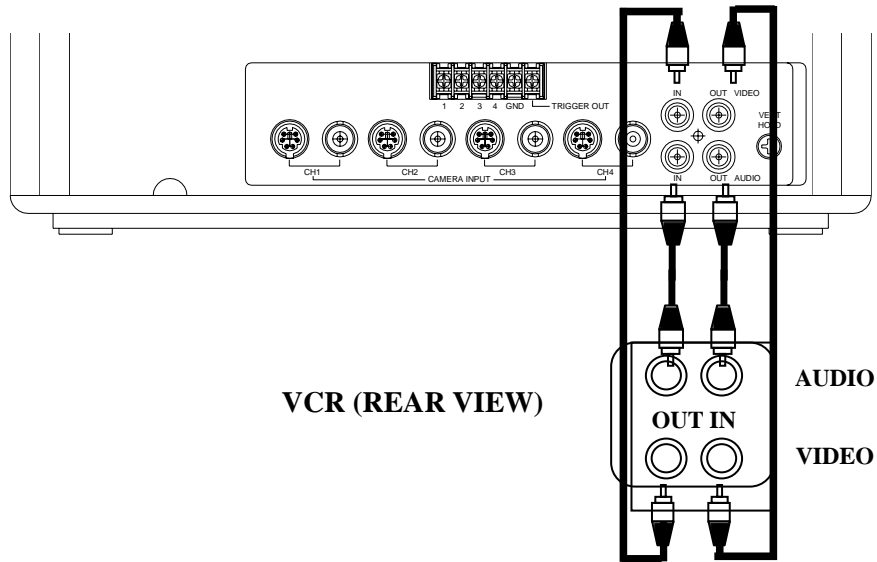
Perform following steps to install your monitor. See Fig. 3.



- Unpack all components of the monitor from the packing material.
- Identify all of the following pieces
 - ◇ Monitor
 - ◇ Cameras and Camera Cables
 - ◇ Operation Manual
- Place the monitor in a convenient location for your use.
- Install cameras to be connected to this monitor.
- Connect the power cord between this monitor and your wall mounted power outlet.
- Turn on the monitor. The monitor supplies power to the camera.
- A quad display should be seen on the monitor.

4-2. Installation with a VCR or Time Lapse Recorder

Perform following steps to install your monitor. See Fig. 3.



- Connect all cameras to the monitor.
- Connect coaxial cables between the MONITOR and the VCR as shown above.
- Plug the power cords for the monitor and the recorder into the wall mounted power outlets.
- Turn on the power switches for the monitor and the recorder. A picture should be displayed on the monitor.
- Program the recorder and start the recording process using the VCR manufacturer's instructions.

4-3. Installation with Sensors

This monitor has the capability to receive alarms and activate a recorder or other external alarm device when that is activated. Perform following steps after the installation of the monitor.

each alarmed camera will be displayed for the alarm hold time after the previous camera completes its alarm cycle.

5-6. How to Program the Menus for OSD (On Screen Display)

There are five pages of Menus to display the time, date, and a camera title for each camera, etc. on the monitor. To enter the MENU SETUP mode, press the QUAD/MENU button on the front panel of the monitor for 2 seconds until the MENU is displayed. The [MAIN SETUP] screen will be displayed with beeping sound.

When you are finished in the [MAIN MENU], press QUAD/MENU button after select EXIT menu in menu.

5-6-1. MAIN SETUP

The following items can be adjusted or programmed on this menu screen.

[MAIN SETUP]	
TIME	: HH:MM:SS
DATE	: MM/DD/YYYY
ALARM TIME	: 03 SEC
MODE PIP1	: 1- [2]
MODE PIP2	: 1- [2,3]
CHANNEL	: [↓]
CONTRAST	: [↓]
SPECIAL	: [↓]
EXIT	: [↓]

5-2. Quad Mode Operation

The screen displays a quadrant picture in the Quad mode on the monitor when the power is first applied to it. If the monitor is not displaying quadrant pictures, press the QUAD button so that the unit returns to the QUAD mode. Press the channel 1-4 button to freeze the picture corresponding picture(s) will be frozen with the letter “F” on the screen.

5-3. Automatic Camera Skip in the Auto Mode

If there is no camera in a camera in a certain position, change the DWELL TIME value to zero in CHANNEL SETUP MODE.

5-4. Manual Mode Operation

This monitor displays only one camera (full-screen), even if there are additional cameras connected to it.

If you change to quad mode from auto mode, press auto/VCR in front panel of the monitor quickly, and press the channel key that you want if change.

5-5. Alarm Functions

An audible buzzer for 0 to 59 seconds and an alarm output for 0 to 59 seconds are provided to alert the user or to activate external devices. The trigger signal is sent from splitter to the monitor when an alarm is activated, so that the camera corresponding to the alarm displays in full screen, even if the monitor is in the QUAD mode.

At that time audible buzzer will sound for 0 to 59 seconds.

If a second or third alarm is activated while the first alarm is operating,

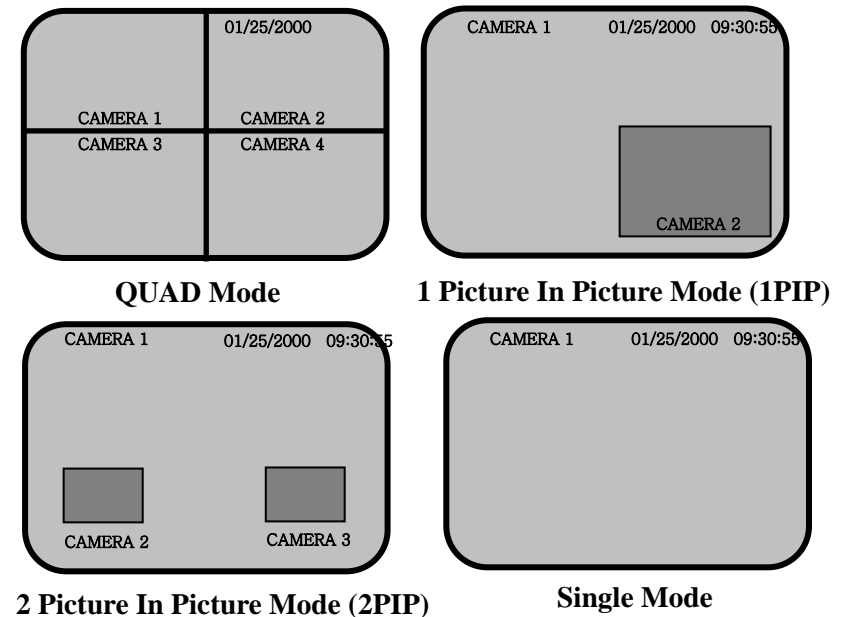
- Obtain the suitable sensors for your applications. They must be normally open (N.O.) output.
- Connect a length of wire from the sensor to the monitor, and connect the end of the wire to the sensor, following the manufacturer’s instructions.
- Supply the power to monitor, cameras and sensors.

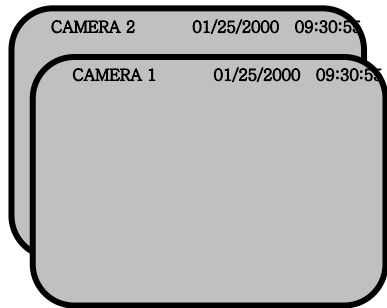
Place the monitor in the desired operating mode. See section 3.

5. OPERATION

5-1. Change Display Mode

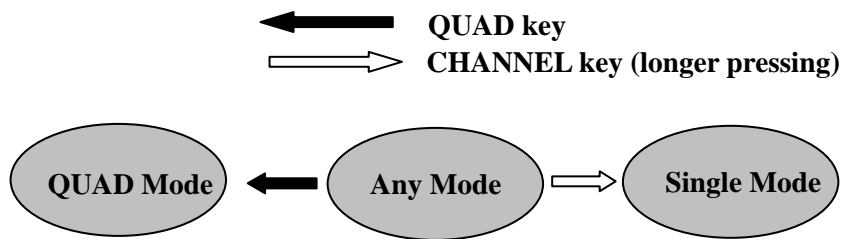
There are 5 different display mode styles as shown below. They are selected by the MODE key or the QUAD key or the AUTO key or CHANNEL keys. When the system is reset or when power is switched on or off the system is initialized to the QUAD mode.



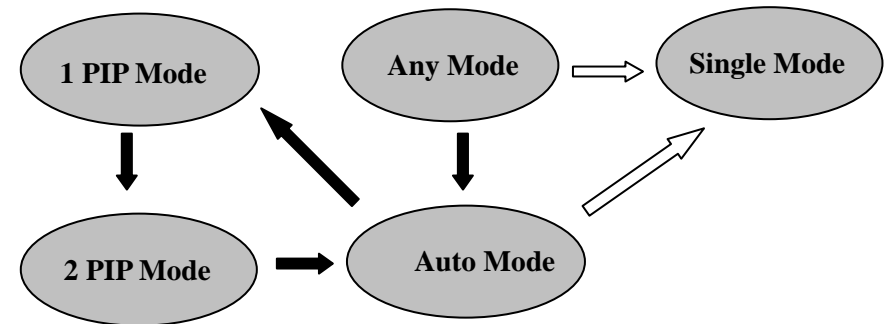


Auto Sequence Mode

The following diagram shows the sequence of selected modes when pressing the QUAD key and CHANNEL keys.



Change Auto mode by pressing the [AUTO/PIP] key shortly in the single mode. If you press [AUTO/PIP] again quickly in the Auto mode, it is returned to the Auto mode and if pressed again quickly in PIP2 mode, it is converted to the PIP1 mode To change to the Full channel press the channel key.



If you press the [VCR/ZOOM] key more than 2 seconds, it is changed to the VCR mode. If you press [VCR/ZOOM] key again in the VCR mode, it is changed to zoom mode.

