



DVR-Q4
DVR-Q4/80
DVR-Q4/120

Operating Instructions

Four Camera DVR System

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Important Note: The default password for the DVR-Q4 is “0000”. You will need this password to enter certain menu selections. You may change this to your own unique password by following the instructions on page 21.

In addition, users entering the Menu will cause the unit to stop recording. Recording will commence based on record mode once user exits menu. This is also true for search and playback functions.

Units requiring Hard Drive replacement or upgrade must first be formatted for FAT32.

1.Features :

- Up to 15 frames per second video display
- Simultaneously record and view live pictures
- Automatically detects NTSC/PAL
- Replaces conventional time-lapse VCR
- Video compression: MJPEG
- Motion/Activity detection recording
- Various recording modes including continuous, scheduled, motion detection and external sensor mode
- Four alarm inputs and one alarm output connection.
Automatic recording when alarm is triggered.
- 1 channel audio recording
- Quick and easy search for events by time, date and camera
- Highly stable non-PC based proprietary system
- Easy to operate front panel
- Alarm notification when storage capacity is full
- Automatically returns unit to original state when power recovers from outage.
- Watch Dog timer for improper power spike.
- Built in buzzer for video loss and alarm sensor input.

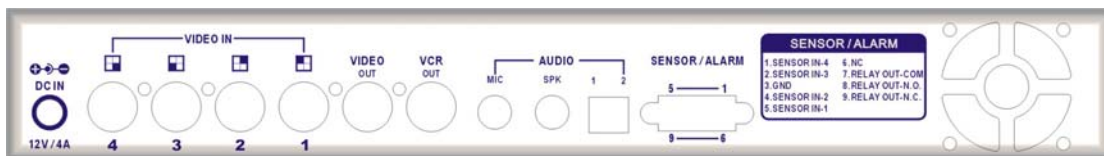
2. Specification :

Operation Mode	Front panel, OSD
Resolution	720 x 240 or 360 x 240
Display Mode	Single channel (1,2,3,4) Auto-sequence (2-9 sec., adjustable) Quad
Recording Speed	720 x 240 : 1-10frames/sec (adjustable) 360 x 240 : 1-15frames/sec (adjustable)
Recording Mode	Continuous (Manual) Scheduled Motion/Activity Detection External Sensor (Adjustable)
Audio Recording / Live	1 ch
Compression	MJPEG
Screen Division Mode	1, 4 Division
Camera Input	4 channels BNC (NTSC/PAL)
Video Output	Composite video (BNC) x 2
Playback Function	Playback — forward·reverse Fast forward Fast reverse Forward one frame Rewind one frame Zoom in, zoom out

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HDD	40 Gigabytes standard. Option for 80 or 120 Gigabytes
Built-in Buzzer	Available (buzzer ON/OFF) When video-loss detection; motion detection or external sensor has been triggered.
Watch-Dog Function	Automatically returns unit to original state when power recovers from outage.
Search Mode	Date, Time, Camera
Operation Temperature	5 °C → 40 °C
Power Supply	AC100V~240V, 50/60Hz DC 12V/4A
Power Consumption	20 W
Dimension	313mm x 255mm x 44mm (W x D x H)
Weight	3.1Kg

3. Installation :



Rear panel

Power Supply : 12VDC – 4 Amp.

VIDEO IN: Four cameras with BNC inputs.

VIDEO OUT: BNC “MONITOR OUT” is connected to monitor “VIDEO IN”.

VCR OUT: BNC “VCR OUT” is connected to the VCR “VCR IN”.

AUDIO IN: Used for microphone connection.

MIC OUT: To VCR, when recording.

LINE OUT: For audio output during playback.

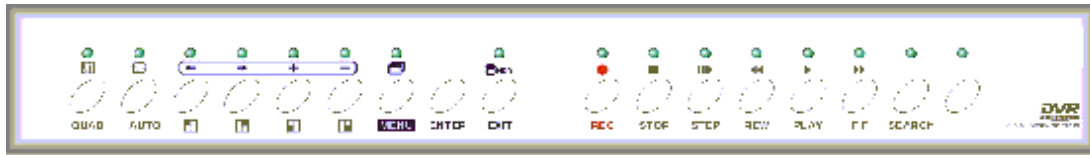
SENSOR/ALARM: There is a DB9 connector on the right side of the rear panel, which is connected to the external sensors trigger input and alarm output (Relay).

FAN: For air circulation.

DB9 PIN CONFIGURATION:

1	Sensor Trigger Input – 4	External sensor input 4
2	Sensor Trigger Input – 3	External sensor input 3
3	GND	Ground
4	Sensor Trigger Input – 2	External sensor input 2
5	Sensor Trigger Input – 1	External sensor input 1
6	No Connection	
7	Relay Out – COM	Replay output COM terminal
8	Relay Out – N.O.	Replay output normal open terminal
9	Relay Out – N.C.	Replay output close terminal

4. Function Key Description :



Front Panel

QUAD : Quad images

AUTO : Automatically switching channels

1 : Camera selecting key, view full screen of camera 1.

2 : Camera selecting key, view full screen of camera 2.

3 : Camera selecting key, view full screen of camera 3.

4 : Camera selecting key, view full screen of camera 4.

MENU : Menu set up

ENTER : Enter to sub-menu for editing procedure.

← : Move to the left (up) item during editing procedure.

→ : Move to the right (down) item during editing procedure.

+ : Next value.

- : Previous value.

SEARCH : Under normal or playback mode, press to display the log file lists.

REC : Under normal mode, press this key to enter record mode.

PLAY : Under normal mode, press this key to enter the latest recorded file.

F.F. (▶▶) : Under playback mode, press this key to fast forward the images.

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REW (◀◀) : Under playback mode, press this key to fast reverse images.

STEP (||▶) : Under playback mode, press this key to skip and pause images.

STOP : Under playback mode, press this key to stop playback mode and return to normal mode.

ALARM(ON/OFF) : Alarm switch consists of a relay and buzzer.


“**ON**” : Triggers the alarm buzzer & LED lights up.

“**OFF**” : Switches off the alarm buzzer & LED goes off.

※ When the alarm is switched off, the alarm setup menu goes on, if an event (Motion Detect、 Sensor Trigger、 Video Loss) happens during schedule time, alarm buzzer will not go off.

5. Operation Mode :

There are four operational DVR modes:

Camera selecting key 、、、 to select full-view of the camera channels #1,2,3 or 4.

Press <QUAD> to view quad images.

Press <AUTO> to enter auto sequence mode. *

**For Settings of SEQUENCE and Dwell Time, please refer to menu set up on page 20.*

6. Recording and Playback :

6.1 Play mode :

In normal or sequential mode, press **<PLAY>** key to enter the playback mode, or press **<SEARCH>** key to enter the log files list (including: date, time), then press **<PLAY>** key or **<ENTER>** key to display image.

- **Quick Image Search :**

Press **<F.F.>** (▶▶) key, for quick fast forward search image (x1, x2, x4).

Press **<REW>** (◀◀) key, for quick fast reverse image (x1, x2, x4).

Press **<PLAY>** once again to return to normal speed.

- **Skip Search :**

Press **<STEP>** (||▶) key, to skip and pause images.

- **Zoom :**

When under Step mode, press **<←>**, **<**

→> to display the image on the right

hand side, press **<←>**, **<→>**, **<+>**, **<**

- > key to move zoom cursor and

zoom in and out, then press **<ENTER>**

key to enter zoom in function, press

<ENTER> key again to return to its

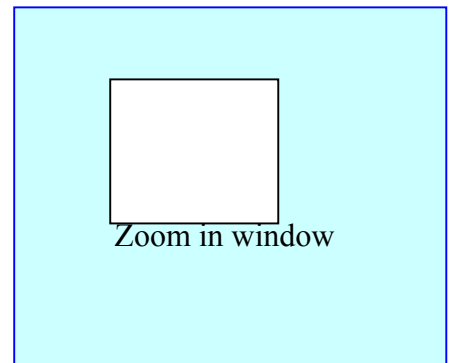
original size, then the block may be

moved to other selected areas for

zooming in or out, or press **<PLAY>**

key to return to normal mode.

When the resolution is 360x240, it



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enlarges the image automatically, press **<ENTER>** key to return to normal image size (360x240).

- **Full-image :**

Press the camera selecting key **<[]>**、**<[]>**、**<[]>**、**<[]>** for full-image viewing.

- **Quad-image :**

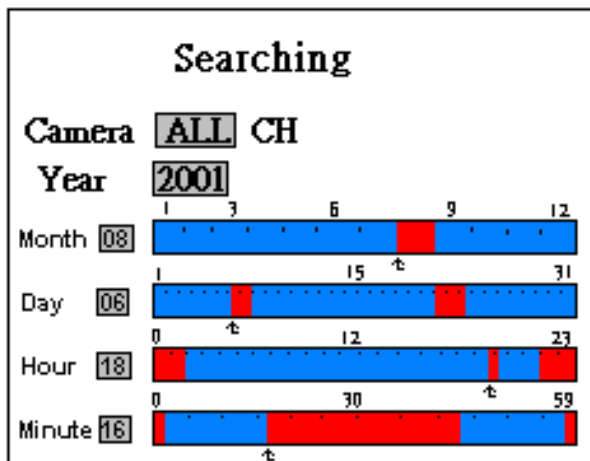
Press **<QUAD>** key to view quad images.

- **Stop mode :**

Press **<STOP>** key to stop play mode and return to normal mode.

6.2 SEARCH :

Supports camera, date, time and search function, press **<SEARCH>** key to display the image below :



Use **<←>**、**<→>** key to move the cursor up and down (Highlight) to the area to be modified, press **<+>**、**<->** to make changes.

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Camera:

Press <←>, <→> key, to move the cursor (Highlight bar) to the selected area, then press <+>, <-> key, to select the camera (All,1,2,3,4).

Year:

Enter year, press <←>, <→> , <+>, <-> to select the year.

Month、 Day、 Hour、 Minute :

Enter month, day, time, minute by <←>, <→> Using the cursor (Highlight bar) to move to month, press <+>, <-> or (▶▶) 、 (◀◀) the cursor may be moved up or down and at the same time shows the recorded data by month, day, hour and minute.

After all selections have been made, press <PLAY> or <ENTER> key to enter play mode, or <EXIT> key to return to normal mode.

Red : Indicates that the area is under Motion Recording or that the Sensor has been triggered for Recording.

Blue : Indicates manual recording or schedule recording.

7. Recording Mode :

Manual Recording : Press <REC> recording key, for all cameras to start recording, press <STOP> key, to stop manual recording.

- During “Schedule Recording” time, the **<STOP>** button does not function when it has been pressed.
- For other functions including: schedule recording, motion detection recording, sensor input recording, please refer to the setup menu section 8.5 starting on page 16 of this manual.

8. Menu Set Up :

8.1 Enter Main Menu :

Press **<MENU>** key to enter Main Menu, using the cursor, which can be moved up and down by the **<←>**, **<→>** keys. All the items in the main menu contain several sub menus which will be described step-by step in the following section. Press **<ENTER>** key to enter the set up selection, press **<EXIT>** key to return to the previous page. Press **<STOP>** key to exit the main menu.

MAIN MENU

SYSTEM STATUS
DATE/TIME
RECORD SETTING
RECORD MODE
ALARM OUTPUT
VIDEO LOSS ALARM
ENGINEER SETUP

8.2 System Status :

When entering the main menu, select SYSTEM STATUS and press **<ENTER>** to enter the menu. The DVR system status information can be viewed at any time. Press **<EXIT>** to return to the main menu, Or **<STOP>** to exit the main menu.

SYSTEM STATUS

Total Capacity: 40GB
Remain Capacity: 40%
Resolution: 720X240/360X240
Record Mode:
Camera 1: **ON** Continue
Camera 2: **OFF** Motion
Camera 3: **ON** Sensor
Camera 4: **ON** Schedule
Disk Full : Overwrite
Frame Rate : 2 FPS
Current Date : 01/08/30
Current Time : 20:30:00

8.3 Date / Time

Select DATE/TIME and press **<ENTER>** key to enter the menu:

Press **<←>**、**<→>** to move the cursor

Press **<+>**、**<->** to make changes

Press **<EXIT>** to return to the main menu, or **<STOP>** to exit the main menu.

Time and date for the on-screen calendar. Clock is set from this menu.

<u>DATE / TIME</u>		
Date Format		yy/mm/dd
Date	ON	01/08/30
Time	ON	20:30:00
Location		Right Bottom

Date Format :

The date format can be one of the following :

- YY/MM/DD (year-- month -- day)
- MM/DD/YY (month – day – year)
- DD/MM/YY (day – month – year)

Date :

Toggles the date for the monitor display ON/OFF.

Time :

Toggles the time for the monitor display ON/OFF.

Location :

Set the location to display time and date. The position can be one of the following:

- LEFT TOP
- RIGHT TOP
- LEFT BOTTOM
- RIGHT BOTTOM

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- e. TOP
- f. BOTTOM

※ **When recording, the date/ time will be stored together with the image. Please try and prevent the constant changing of date/ time setup to prevent unnecessary errors from occurring.**

8.4 Recording Settings :

Select RECORD SETTING and press <ENTER> key to enter the menu :

Press <←>, <→> to move the cursor

Press <+>, <-> to make changes

Press <EXIT> to return to the main menu, or <STOP> to exit the main menu.

Compression : MJPEG

Resolution : 720 × 240

360 × 240

REC Rate : FPS per second, press <+>, <-> Key

to adjust the rate.

720x240 : 1~10 FPS

360x240 : 1~15FPS

Disk Full : When the disk is full, select "Overwrite" to "ON", the disk will be overwritten starting with oldest data first.

Selecting "STOP" will cause the recording to "Stop" when hard drive becomes full.

Audio IN : In the **RECORDING** menu select **Audio In**, and press

<ENTER> to enter the menu. Toggles the data for the Microphone input ON/OFF.

Record Time :

Total Time : According to resolution, the HDD and the recording

RECORD SETTING

Compression	MJPG
Resolution	720X240
REC Rate	2 FPS
Disk Full	Overwrite
Audio In	OFF

Record Time

Total Time : 53hr

Remain Time : 33hr

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rate reflects the total available recording time.

Remain Time : According to resolution, the HDD and the recording rate reflects the remaining recording time.

8.5 Record Mode

In the MAIN MENU move the cursor to RECORD MODE, press <ENTER> to enter the Record Mode display:

RECORD MODE

Schedule Recording
 Motion Detection Recording
 Sensor Input Recording
 Post Alarm Time : 05

Three types of recording mode:

- a. **Schedule Recording** According to the camera for continuous recording.
- b. **Motion Detection Recording** According to the schedule time, to set the camera for motion detection recording.
- c. **Sensor Input Recording** According to the schedule time, to set the camera for sensor input recording.

Schedule Recording

Channel	Time Begin-End	Schedule Recording
ALL Cameras	20:00-08:00	Off
Camera 1	08:00-20:00	On
Camera 2	00:00-00:00	On
Camera 3	00:00-00:00	Off
Camera 4	00:00-00:00	Off

Motion Detection Recording

Channel	Time Begin-End	Motion Recording	Sensitivity	Activity Grid
ALL Cameras	20:00-08:00	Off	3	Setup
Camera 1	08:00-20:00	Off	3	
Camera 2	00:00-00:00	Off	3	
Camera 3	00:00-00:00	On	3	
Camera 4	00:00-00:00	On	3	

Sensor Input Recording

Channel	Time Begin-End	Sensor In Recording	Type
ALL Cameras	20:00-08:00	Off	NO
Camera 1	08:00-20:00	On	NC
Camera 2	00:00-00:00	Off	
Camera 3	00:00-00:00	Off	
Camera 4	00:00-00:00	On	

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Press <←>, <→>, key and then move the cursor to press

<+>, <-> key to change the settings and press <EXIT> key to return to the previous page.

Channel : All Cameras, Camera 1, 2, 3, 4

Select all cameras and do the settings at once, or select for single settings (# 1, 2, 3, 4).

Time :

Begin : Starting time for recording.

END : Ending time for recording.

* <Example> recording time from 08:00 am to 20:00 pm, enter 08:00—20:00.

Schedule Recording :

ON : For scheduled recording.

OFF : Schedule is not active.

(<STOP> key dose not work during Schedule Recording)

Motion Detection Recording :

ON : For motion detection recording.

OFF : Motion Detection recording is not active.

(<STOP> key dose not work during Motion Detection Recording)

Sensor Input Recording :

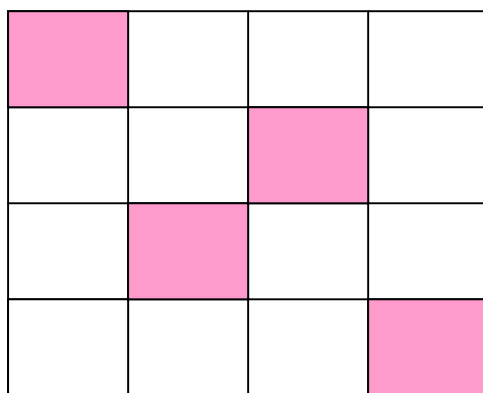
ON : For sensor input recording.

OFF : Sensor Input is not active.

(<STOP> key does not work during Sensor Input Recording)

Motion Sensitivity : There are 5 levels of sensitivity for motion Detection.

Motion Activity Grid : Move the cursor to the Activity Grid, then press **<ENTER>** key to enter the Motion Activity Grid display:(Red block indicates the area under motion detection)



Press **<←>**、**<→>** key to move the cursor

Press **<+>**、**<->** key to switch ON/OFF the motion detection area.

Press **<EXIT>** key to return to the previous page or **<STOP>** to skip over the main menu.

Sensor Sensitivity : 1~ 5 (Adjustable)

- 1: 0.2 Sec.(Sensor triggers the alarm and starts recording after 0.2 second)
- 2: 0.5 Sec.(Sensor triggers the alarm and starts recording after 0.5 second)
- 3: 1 Sec.(Sensor triggers the alarm and starts recording after 1 second)
- 4: 2 Sec.(Sensor triggers the alarm and starts recording after 4.2 second)
- 5: 5 Sec.(Sensor triggers the alarm and starts recording after 5.5 second)

Sensor Type :

NC → Normal-close sensor (TTL level input)

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Set to NC, to trigger the alarm for recording during NC status.

NO → **Normal-open sensor** (TTL level input)

Set to NO, to trigger the alarm for recording during NO status.



Post-alarm Time : The recording time after the alarm has been triggered.

8.6 Alarm Output

In the main menu select ALARM OUTPUT, and press **<ENTER>** key to enter the menu :

Press **<←>**、**<→>** to move the cursor

Press **<+>**、**<->** to change the settings.

Press **<EXIT>** to return to previous page.

ALARM OUTPUT

Buzzer : OFF Period : 01 Min

Relay : ON Period : 02 Min

Buzzer : Set "ON" to return the internal buzzer on upon alarm.

Set "OFF" to keep the buzzer mute.

Relay : Set "ON" to turn the relay on upon alarm.

Set "OFF" to keep relay to the current state.

Period : Constant alarm timing (1-15 Min. settings).

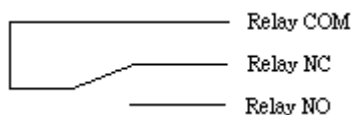
Three kinds of event :

- ① Motion Detect
- ② Sensor Trigger
- ③ Video Loss

※Alarm Out (Relay):

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Two types of Alarm Out signal are provided : Relay NC and Relay NO.



8.7 Video Loss

In main menu, move the cursor to VIDEO LOSS, press **<ENTER>** to enter the Video Loss Setup menu :

Press **<<->**、**<->** key to move the cursor

Press **<+>**、**<->** key to change the value

Press **<EXIT>** key to return to the previous page

Video Loss Setup

Video loss Alarm	
Channel	Alarm
Camera All	On/Off
Camera 1	x
Camera 2	x
Camera 3	x
Camera 4	x

Channel :

Select and set up all cameras, or select camera (# 1, 2, 3, 4) for single set up.

Detection :

ON : Start detection (Relay, Buzzer)

OFF : End detection (VIDEO LOSS will be displayed on the image)

8.8 Engineering Setup

In the main menu select ENGINEER SETUP, and then press <ENTER> to enter the menu :

Press <←>, <→> to move the cursor

Press <+>, <-> to change the value settings

Press <EXIT> to return to the previous page

ENGINEERING SETUP

Set Passwords

Camera Titles Setup

Channel Sequence

Video Quality

Hard Disk Format

Color Bar

Load Factory Default

8.8.1 Set Passwords

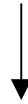
Move the cursor to Set Passwords, press <ENTER> to enter the menu :

Press <←>, <→> key to move the cursor

Press <+>, <-> key to change the password, press <ENTER> the system will request the old password, then the new password and after the change, press <ENTER> to confirm.

(Password 0000 is already set for you)

Check Password ****



Set Passwords
 Enter New Password ****
 Confirm Password ****

8.8.2 Camera Title Setup

Move the cursor to Camera Title

Setup, press <ENTER> key to enter

the menu. The camera titles can be up to eight (8) characters in length and configured using the following available characters: A-Z 0-9.

Press <←>, <→> to move the cursor

Press <+>, <-> to change the setting values

Press <EXIT> to return to the previous page

ON : To show the camera title

OFF : To hide the camera title

Camera Title Setup
 CH1 OFF < 1 >
 CH2 OFF < 2 >
 CH3 OFF < 3 >
 CH4 OFF < 4 >

8.8.3 Channel Sequence

Sequence:

In auto sequence mode, the order of switching is as following sequence #1,

Channel Sequence	
Sequence	1 2 3 4 5 6 7 8
Camera Number	Q 1 2 3 4 ---
Dwell Time	3 3 3 3 3 3 3 3

2, 3 ... 8 and switch back to # 1.

Camera Number:

There are six selective values :

Q : to display quad-images

1 : to display the full-image of camera 1

2 : to display the full-image of camera 2

3 : to display the full-image of camera 3

4 : to display the full-image of camera 4

- : to skip channels

Dwell Time : 2~9 (Adjustable)

The time and seconds of the auto sequence that the images dwells.

Example :

<Camera 1> Quad image, 3 sec. dwelling time.

<Camera 2> Camera 1 image, 3 sec. dwelling time.

<Camera 3> Camera 2 image, 3 sec. dwelling time.

<Camera 4> Camera 3 image, 3 sec. dwelling time.

<Camera 5> Camera 4 image, 3 sec. dwelling time.

<Camera 6> Skip to the next channel.

<Camera 7> Skip to the next channel.

<Camera 8> Skip to the next channel.

8.8.4 Video Quality

Adjust camera brightness, contrast, color and sensitivity. Four cameras may be separately adjusted.

BRIGHT	18	BRIGHT	18
CONTRAST	46	CONTRAST	46
CHROMA	32	CHROMA	32
SHARP	20	SHARP	20
BRIGHT	18	BRIGHT	18
CONTRAST	46	CONTRAST	46
CHROMA	32	CHROMA	32
SHARP	20	SHARP	20

8.8.5 Hard Disk Erasing

Move the cursor to Hard Disk Erasing, press **<ENTER>** to enter the menu :

Check Passwords ****

Password should be entered, before erasing the data in the hard disk, then press **<ENTER>** to enter the Hard Disk Erasing display :



Hard Disk Erasing
NO YES

To reconfirm:

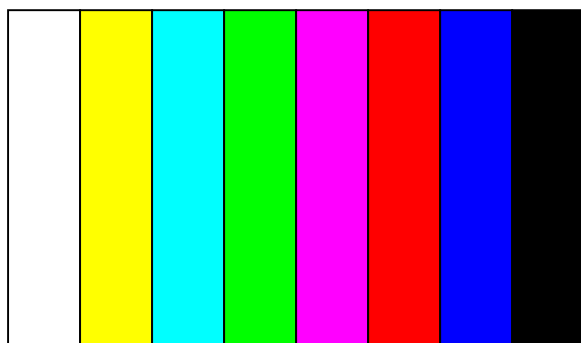
Select "YES", then press enter **<ENTER>** to erase the data in the hard disk.

※ By now all stored images are erased.

Press **<EXIT>** to return to the previous page.

8.8.6 Color Bar

Color bar is helpful to set up the monitor.



8.8.7 Load Factory Default

To Load default, please press "YES", than press <ENTER>, to complete the setup procedure.

Press <EXIT> to return to the previous page.

