

# 4 CH Digital Quad Recorder

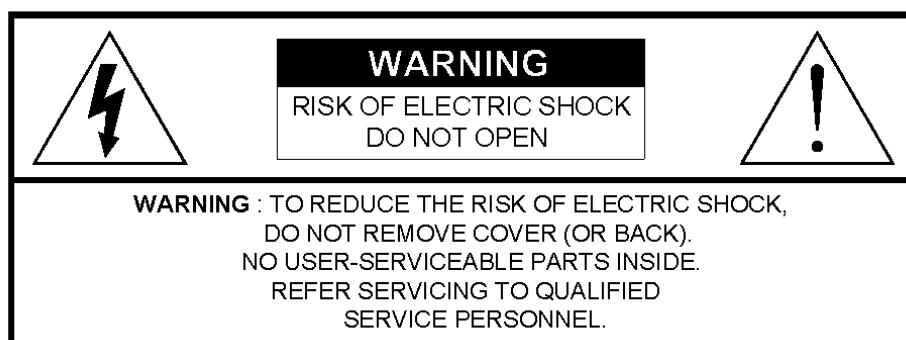


## VT-DVR04Q

Please read this instructions thoroughly before operation and retain it  
for future reference.

## WARNING

*All the safety and operating instructions should be read before operation. The improper operation may cause permanent damage.*



- Please use the adaptor provided from **VITEK** (Other adaptor is not suitable for this machine).
- Please lift and place this equipment gently.
- Do not expose this equipment to open sunlight.
- Do not use this equipment near water or in contact with water.
- Do not spill liquid of any kind on the equipment.
- Please power off the unit before unplugging.
- Do not switch the Power On & Off within short period of time (within 3 seconds).
- Do not attempt to service this equipment by yourself.
- Installation should be made by qualified service personnel.



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 appliance.

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## FEATURES

# What do you get ?

### DQR Features

- Wavelet Compression Format replaces Time-Lapse VCR + Quad
- 4 Audio inputs / 2 Audio outputs
- On Screen Display and RTC (Real time clock) Function
- Support from 1 channel to 4 channels video inputs
- Digital Zoom can be up to 2 X 2 in DQR playback modes
- Alarm Input & Output Function
- Video loss detected on each channel can record up to 64 events
- Power-loss memory function
- Support 1 Removable HDD, IDE Type
- Quick Multiple Search by date/time, alarm, full list
- Timer : Schedule recording
- Security password protection
- RS-232, RS-485 communication protocol

## PACKAGE INCLUDING



Digital Quad Recorder(with HDD cartridge)



User Manual



Accessories pack



2 Keys for Cartridge



Power Adapter and Cord

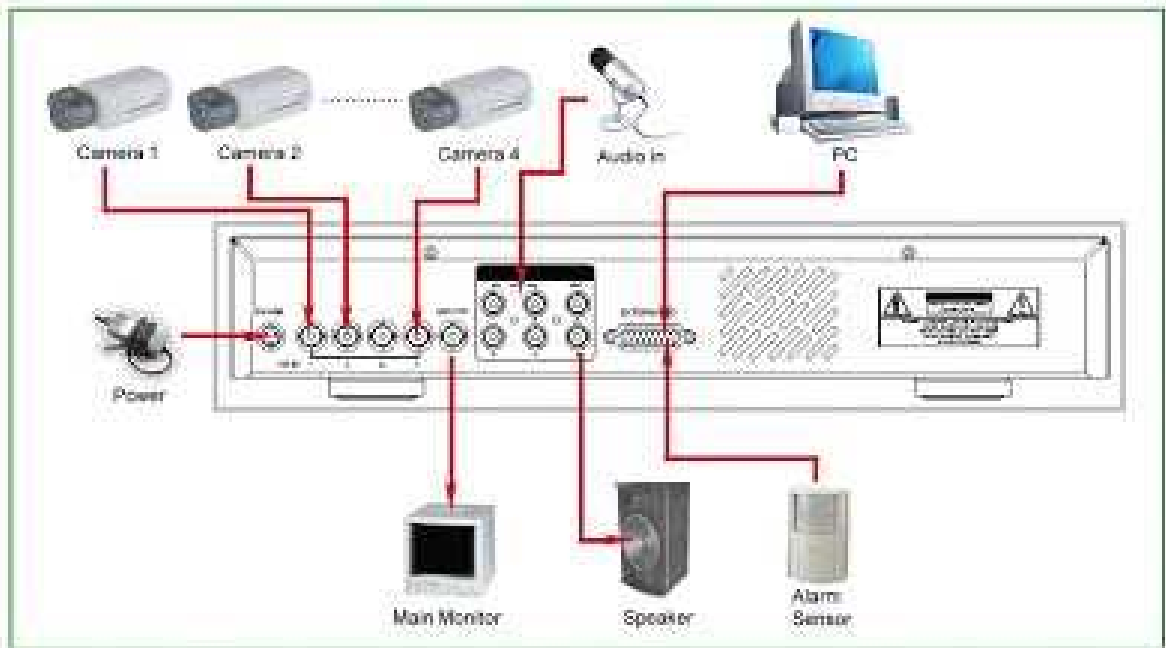
**NOTE : Please check the package to make sure that you receive the complete accessories which includes those components shown above.**

## INSTALLATION GUIDE

1. Connect cameras and monitor with the DQR.
2. Shown below is one example for connecting the DQR to your existing Observation System.
3. Install HDD (The compatible HDD Brands are listed in the following table.)

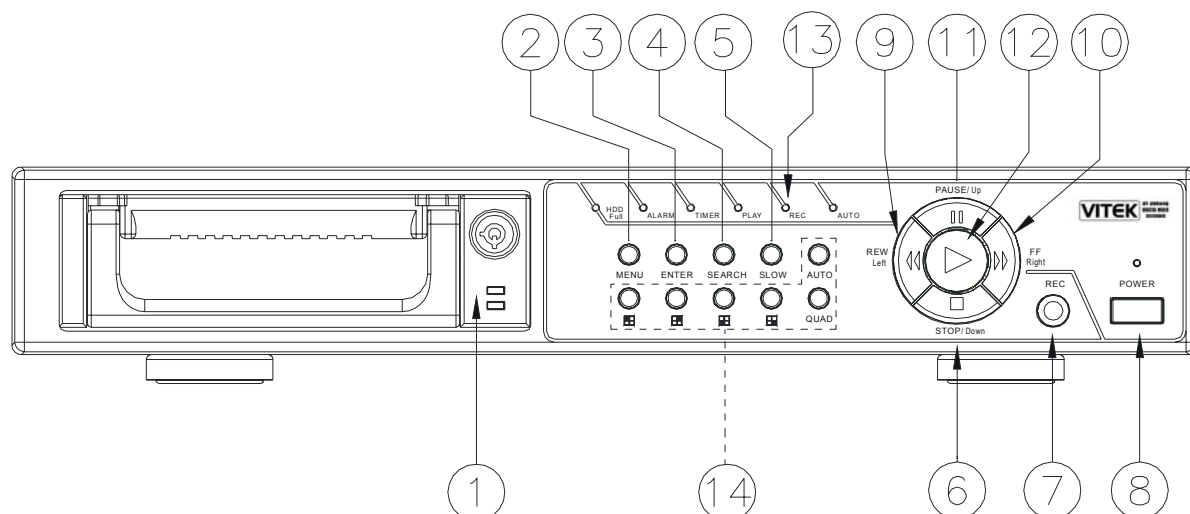
Please refer to page.18 Appendix #1 for installation instructions.

The HDD must be installed before turning on the DQR.



### COMPATIBLE HARD DISK BRANDS

Manufacturer	Model	Capacity	Rotation
HITACHI	Deskstar 180 GXP (120 GB)	120GB	7200rpm
IBM	Deskstar 120GXP (40GB)	40GB	7200 rpm
IBM	Deskstar 60GXP IC35I060	60GB	7200 rpm
IBM	Deskstar 120GXP (80GB)	80GB	7200 rpm
IBM	Deskstar 120GXP (120GB)	120GB	7200 rpm
Maxtor	DiamondMax 536DX(60GB) 4W060H4	60GB	7200rpm
Maxtor	DiamondMax Plus 9	80GB	7200 rpm
Maxtor	DiamondMax Plus 9, Model#6Y120L	120GB	7200 rpm
Seagate	Barracuda ATA IV ST340016A	40GB	7200 rpm
Seagate	Barracuda ATA V, ST3120023A	120GB	7200 rpm
Seagate	Barracuda ATA IV, ST380021A	80GB	7200rpm
Western Digital	Caviar WD400BB-00BSA0	40GB	7200 rpm
Western Digital	Caviar WD400EB-00CPF0	40GB	5400 rpm
Western Digital	Caviar WD1200BB-00CAA1	120GB	7200rpm



## 1. REMOVABLE HDD CARTRIDGE

Please refer to page.18 Appendix #1.

## 2. MENU

Press MENU to enter main menu.

## 3. ENTER

Press ENTER for confirmation.

## 4. SEARCH

Press **SEARCH** for searching recording video.

## 5. SLOW

To slow down speed of play mode.

## 6. STOP / Down

- STOP : Under DQR Record / Play mode, it can stop the moment action.
- DOWN : Under setup mode, it works as Down button.

## 7. REC

Press **REC** to start recording.

## 8. POWER

Press Power to turn ON / OFF the DQR.

## 9. REW / Left

- REW : Under DQR play mode, it can play video backward at different speeds. (Press REW again to adjust speed as 1, 2, 4, 8, 16, 32 times)
- Left : Under setup mode, it works as Left button.

## 10. FF / Right

- FF : It can play video forward at high speed, and press FF again to adjust speed from 1, 2, 4, 8, 16, 32 times.
- Right : Under setup mode, it can work as Right button.

## 11. PAUSE / Up

- Pause : Under DQR play mode, it can pause the action.
- UP : Under setup mode, it works as Up button.

## 12. PLAY


Press PLAY to playback recorded video.


## 13. LED LIGHT


The LED Light is ON under following condition.

- HDD Full : HDD is full
- ALARM : If Alarm Enable sets as "YES", while the alarm is triggered , the led will be flashing
- TIMER : When Timer is set as Enabled
- PLAY : On Play mode
- REC : On Recording mode
- AUTO : 4 channel will display in full screen by turns

## 14. : Displays the CH1 camera

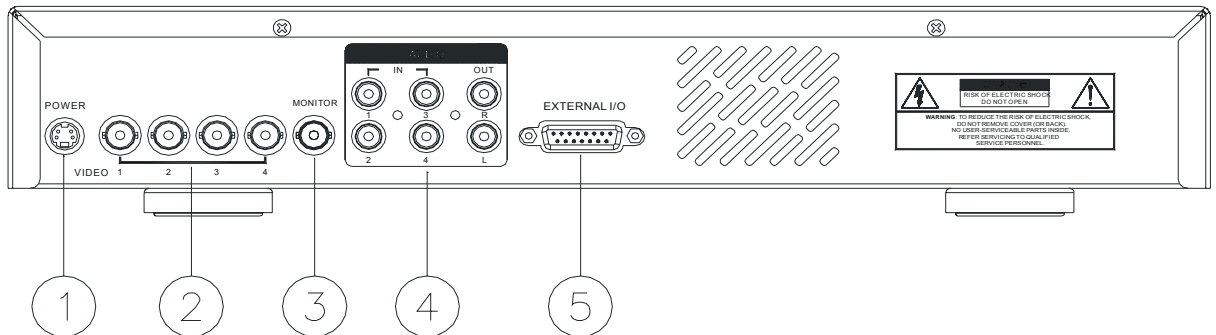
 : Displays the CH2 camera

 : Displays the CH3 camera

 : Displays the CH4 camera

**QUAD** : Display 4 cameras in Quad screen format

**AUTO** : 4 channel will display in full screen format by turns



## 1. POWER

Please use the provided adaptor to connect power cord (Other adaptor is not suitable for this machine).

## 2. VIDEO INPUT (1-4)

Connect to video source, such as camera

## 3. MONITOR

Connect to Main monitor

## 4. AUDIO IN (1-4)

Connect to audio source, such as microphone

**NOTE :** 1.IPS should be set over 30 (for NTSC) or 25 (for PAL)

2.You could just record only one Audio in every time.

## AUDIO OUT (R/L)

Connect to monitor or speaker.

**\* with 2 mono audio outputs from the same source.**

## 5. EXTERNAL I/O

- Controlled remotely by an external device or control system.
- Alarm input, external I / O explanation.

**NOTE :** While the power is off, if the DQR is triggered by Timer or Alarm, it will start recording automatically and while stop recording (depend on Alarm Duration Time), the power will be back to the "off" situation again.



## START THIS UNIT

Before using the DQR, please have a HDD installed ready. (refer to Appendix #1 for installation or removal of a HDD).

1. Connect the AC Power Cord with Power Adapter and plug into an electrical outlet. The Red LED indicator light will be ON and the DQR is in Standby mode.
2. Press the Power button. The POWER LED will turn from red to orange, and other red LED indicators will turn ON. It takes approximately 5 to 15 seconds to boot the system with the message : " HDD Detecting ". Once connected, the POWER LED will change to green color, and the Alarm and Timer LED will be ON.
3. Before operating the DQR, please set up the system time first. (for setting system time, please refer to page.11).

**NOTE : When "HDD not found" message shows up, please refer to appendix # 1. As the HDD is likely not installed correctly.**

## OPERATION

### **RECORDING**

The DQR offers a variety of recording modes, such as record continuously, at scheduled time, and by events. You can set up recording speed and resolution. You can set these options by selecting MENU / RECORD before recording, please refer to page.13. Under the recording status, if power is off accidentally, recorded video will still store in the HDD. DQR will return to original recording situation after power returns again.

On the screen, you will find the date, time, HDD recording type, the amount of available GB left in the HDD memory and the letter "A" represents the method of recording that is occurring.


(OW : HDD Overwrite)

**NOTE : When the HDD is full under O/W Recording mode, previous recorded files may be overwritten without further warning notices.**

2002 – JAN –01 01:02:03 A●OW
---------------------------------

There are 4 recording modes in which Recording can occur : Alarm, Timer, Manual and External Record.

#### **1. ALARM RECORD**

When DQR is triggered by an alarm input, it will record immediately. Indicated by the letter "A" and show  diagram on the triggered channel.

#### **2. TIMER RECORD**

When recording is scheduled by a Timer. Indicated by the letter "T".

#### **3. MANUAL RECORD**

When recording is initiated by manually pressing the REC button. Indicated by the letter "M".

#### **4. EXTERNAL RECORD**

When recording is triggered by an External device. Indicated by the letter "E".

## **PLAY**

Press "PLAY" button, the DQR will show the last recording.

### **1. FAST FORWARD (F.F. ) & FAST REWIND (F.R.)**

You can increase the speed of Fast Forward and Rewind on the DQR.

In the Play mode, press "▶▶" once to get 2X speed forward and press twice to get 4X speed,... and the maximum speed can reach 32X.

Press "◀◀" once to get 1X speed rewind and press twice to get 2X speed, ... and the maximum speed can reach 32X.

### **2. SLOW FORWARD (S.F.) & SLOW REWIND (S.R.)**

You can also slow down the speeds of Forward and Rewind on the DQR.

In the Play mode, press the SLOW button and you will enter Slow mode.

Press "▶▶" once to get 1/2X speed forward and press twice to get 1/4X speed,... and the slowest speed can reach 1/32X.

Press "◀◀" once to get 1/2X speed rewind and press twice to get 1/4X speed, ... and the slowest speed can reach 1/32X.

### **3. PAUSE**

It will let you pause the current image displayed on the screen.

### **4. STOP**

Press "STOP" under any circumstance, it will return DQR to live monitoring mode.

### **5. IMAGE JOG DIAL**

It will allow you to manually view video frame-by-frame, one image at a time.

While in PLAY mode, press "PAUSE", it will pause the screen.

Pressing "▶▶" button advances the frozen screen one image forward.

Pressing "◀◀" button moves back one image.

# Detailed Menu Setup

## ACCESS MENU

The Menu allows you to configure your DQR settings. Please follow below steps to access the Menu :

Press the Menu button. The password screen will appear:

Password: 0000

**NOTE :** The default Password is 0000. Simply press the Enter button to access the Menu.

To key-in the Password, press the “Right” and “Left” buttons to move between numbers, and use the “Up” and “Down” buttons to input the number.

Press the ENTER button once the correct Password is entered. The MENU options screen will appear.

**Note:** If you get a message “Password Error”, you have entered an incorrect password.

## MAIN MENU

There are 8 options available in the Main Menu:

**TIMER** ----- Scheduling Record  
**CAMERA** ----- Camera Channel Setup  
**RECORD** ----- Record Mode Setup  
**ALARM** ----- Alarm Mode Setup  
**DWELL** ----- Auto channel switching setup  
**REMOTE** ----- Remote control protocol Setup  
**SYSTEM** ----- System Setup  
**EVENT** ----- Event List

(MENU)  
▶TIMER  
CAMERA  
RECORD  
ALARM  
DWELL  
REMOTE  
SYSTEM  
EVENT

Outlined below are the buttons used for Menu setting :

- “Up” and “Down” : Scroll up and down or change values when an option is selected and is blinking
- “Left” and “Right” : Scroll sideways within a menu option that has been selected
- ENTER : Selects a submenu / an option under a submenu for browsing / modification
- MENU : Completes modification of a menu option; exits a menu

## MENU OPTIONS

### **SYSTEM**

#### 1. AUDIO INPUT

To choose one of 4 channels to record. (only can select 1 during operation for recording)

#### 2. BUZZER

While you set the BUZZER as "ON", it will be triggered by event occurrence.

#### 3. HDD OVERWRITE

Select "YES" to overwrite previous recording video in HDD.

**NOTE : When the HDD is full under O/W Recording mode, previous recorded files may be overwritten without further warning notices.**

(MENU)  
TIMER  
CAMERA  
RECORD  
ALARM  
DWELL  
REMOTE  
► SYSTEM  
EVENT

#### 4. MESSAGE LATCH

To select whether the DQR messages will disappear after 10 sec or remain on screen. NO is the default setting which the messages will go away after 10 sec.

**NOTE : Video loss message will be showed the same as Alarm Duration time.**

#### 5. DATE DISPLAY

To set the Date mode showed on the monitor.

#### 6. DATE

To set the system date on the DQR.

#### 7. TIME

To set the system time on the DQR.

#### 8. NEW PASSWORD : XXXX (Default password : 0000)

To set the new password.

(SYSTEM)  
► AUDIO INPUT : 1  
BUZZER : ON  
HDD OVERWRITE : NO  
MESSAGE LATCH : NO  
DATE DISPLAY : Y-M-D  
DATE : 2003-JAN-02(THU)  
TIME : 01:41:23  
NEW PASSWORD : XXXX  
CLEAR HDD : NO  
SYSTEM RESET : NO

#### 9. CLEAR HDD

Delete all the contents of your HDD. When you choose "YES" on this option, you will be prompted with the question shown : Press "►" to clear HDD or press "◄" to confirm not to clear HDD.

ALL DATA IN HDD  
WILL BE CLEARED  
ARE YOU SURE?  
(◄ : NO ► : YES )

#### 10. SYSTEM RESET

Reset all system settings to book to factory default settings.

## **TIMER**

### **1. DAY**

Select the day, or days of the week (Mon–Fri / Sat–Sun / Daily) that you wish to schedule the DQR to automatically record.

**NOTE :** 1.Special Date could be changed by “Enter”, “Up” and “Down” buttons.

2. If you have selected the specific date and recording timer set from that specific day to a new day, then the Recording Timer Schedule will be set as whole week. For specific date of Recording Timer Schedule, it is not recommended to set End Time over 23:59. For Example:If you set Timer Schedule Day as Sunday, and START from 11:30, but End on 00:20, then Recording Timer Schedule is set as from every Sunday's 11:30 to next Sunday's 00:20. If you only want to set Recording Timer Schedule from every Sunday 11:30 to Monday 00:20, then you should set Recording Timer Schedule as Sunday from 11:30 to 23:59, and Monday from 00:00 to 00:20.

(MENU)  
► **TIMER**  
CAMERA  
RECORD  
ALARM  
DWELL  
REMOTE  
SYSTEM  
EVENT

### **2. START**

Select the starting time for the recording.

### **3. END**

Select the finishing time for the recording.

### **4. IPS**

Stand for Images Per Second and it could let you see Record submenu for more details.

**NTSC**—60、30、15、8、4、2、1、OFF

**PAL**—50、25、12、6、3、2、1、OFF

(TIMER)			
DAY	START	END	IPS
DAILY	00:00	00:00	OFF
DAILY	00:00	00:00	OFF
DAILY	00:00	00:00	OFF
DAILY	00:00	00:00	OFF
DAILY	00:00	00:00	OFF
DAILY	00:00	00:00	OFF
DAILY	00:00	00:00	OFF
DAILY	00:00	00:00	OFF
TIMER ENABLE : YES			

### **5. TIMER ENABLE**

Enables / Disables Timer recording function

## **CAMERA**

___ <b>CH1</b> ___		___ <b>CH2</b> ___	
<b>BRIGHTNESS</b>	: 5	<b>BRIGHTNESS</b>	: 5
<b>CONTRAST</b>	: 5	<b>CONTRAST</b>	: 5
<b>COLOR</b>	: 5	<b>COLOR</b>	: 5
___ <b>CH3</b> ___		___ <b>CH4</b> ___	
<b>BRIGHTNESS</b>	: 5	<b>BRIGHTNESS</b>	: 5
<b>CONTRAST</b>	: 5	<b>CONTRAST</b>	: 5
<b>COLOR</b>	: 5	<b>COLOR</b>	: 5

(MENU)  
TIMER  
► **CAMERA**  
RECORD  
ALARM  
DWELL  
REMOTE  
SYSTEM  
EVENT

### **1. TITLE**

Assign a title to each camera input. Initially each title is the camera's number.

### **2. Brightness / Contrast / Color**

Have a video adjustment (Brightness / Contrast / Color) of each channel. The level is from 0 to 9.

## **RECORD**

### **1. RECORD IPS**

Select the images per second of recording. The options are as following :

**NTSC**—60、30、15、8、4、2、1

**PAL**—50、25、12、6、3、2、1

### **2. RECORD QUALITY**

There are four quality settings : BEST, HIGH, NORMAL and BASIC.

**NOTE : The relationship of Record time, IPS and record quality, please refer to page.23 Recording Speed.**

(MENU)  
TIMER  
CAMERA  
► RECORD  
ALARM  
DWELL  
REMOTE  
SYSTEM  
EVENT

### **3. RECORD MODE**

Set recording mode between Frame and Field. One frame is equal to two fields.

**NOTE : It is recommended that you leave the Record Mode as Field.**

(RECORD)  
► RECORD IPS : 60  
QUALITY : NORMAL  
RECORD MODE : FRAME

## **ALARM**

### **1. ALARM ENABLE**

Enables / Disables Alarm feature to function.

### **2. ALARM DURATION**

Set the length of time for recording after Alarm trigger.

### **3. RECORD IPS**

Select the images per second of recording. The options are as following :

**NTSC**—60、30、15、8、4、2、1

**PAL**—50、25、12、6、3、2、1

### **4. RECORD QUALITY**

There are four quality settings : BEST, HIGH, NORMAL and BASIC.

**NOTE : The relationship of Record time, IPS and record quality, please refer to page.23 Recording Speed.**

(MENU)  
TIMER  
CAMERA  
RECORD  
► ALARM  
DWELL  
REMOTE  
SYSTEM  
EVENT

### **5. RECORD MODE**

Set recording mode between Frame and Field. One frame is equal to two fields.

**NOTE : It is recommended that you leave the Record Mode as Field.**

(RECORD)  
► ALARM ENABLE : YES  
ALARM DURATION : 10 SEC  
RECORD IPS : 60  
QUALITY : HIGH  
RECORD MODE : FRAME

## **DWELL**

### **1. DWELL TIME**

DWELL TIME is the time period that each channel sequentially shown on monitor. (From 01-10 SEC)

### **2. CH1-CH4**

YES-Chose channel will be showed on the screen sequentially.  
NO-Chose channel will not be showed on the screen.

### **3. QUAD**

YES-QUAD will be showed on the screen sequentially.  
NO-QUAD will not be showed on the screen.

(DWELL)  
► DWELL TIME : 02  
CH1 : YES  
CH2 : YES  
CH3 : YES  
CH4 : YES  
QUAD : YES

(MENU)  
TIMER  
CAMERA  
RECORD  
ALARM  
► DWELL  
REMOTE  
SYSTEM  
EVENT

## **REMOTE**

### **1. REMOTE MODE**

Select RS-232 or RS-485 interface for the remote computer connection Protocol. (Please refer to page.16 for RS-232 Remote Protocol)

### **2. BAUD RATE**

Set the speed of the remote computer's Baud Rate – which is the rate of Data transmission. Available Baud Rate are 115200, 57600, 19200, 9600, 4800, 3600, 2400 and 1200.

### **3. ID**

Allow you to use RS-232 or RS-485 protocol to program different DQRs. The range of ID is from "000" to "255".

(MENU)  
TIMER  
CAMERA  
RECORD  
ALARM  
DWELL  
▶ REMOTE  
SYSTEM  
EVENT

(REMOTE)  
▶ REMOTE MODE: RS-232  
BAUD RATE: 9600  
ID: 000

## **EVENT**

The recorded events will be showed on a single page and please press "◀" or "▶" to change the pages. An "Event" occurs when following incidents occur :

**PWR** : Recovery time after power shut down  
in record mode

**HDD** : HDD error time

**1VL / 2VL / 3VL / 4VL** : Video loss time

PWR 2002-JAN-01 03:00:00  
1VL 2002-JAN-01 01:02:04  
HDD 2002-JAN-01 01:02:03  
PWR 2002-JAN-01 01:02:02  
2VL 2002-JAN-01 01:02:01  
HDD 2002-JAN-01 01:02:00  
◀: Page Up ▶: Page Down

(MENU)  
TIMER  
CAMERA  
RECORD  
ALARM  
DWELL  
REMOTE  
SYSTEM  
▶ EVENT

## **VIDEO LOSS**

Screen will display **X** if the video input is not connected properly.

## **SEARCH**

### **1. LAST RECORD**

Play the last recorded video.

### **2. FULL LIST**

Show a listing of all recorded video on the HDD which sorted by time.

M : Manual Record time

A : Alarm Record time

T : Timer Record time

E : External Record time

### **3. ALARM LIST**

Show a listing of all recorded video triggered by an Alarm.

**NOTE : If there are no Alarm in the record, the screen will display "EMPTY".**

### **4. TIME SEARCH**

Find video recorded on a specific date that is entered.

► LAST RECORD  
FULL LIST  
ALARM LIST  
TIME SEARCH

► M 2002-JAN-02 01:02:03  
M 2002-JAN-01 05:02:03  
A 2002-JAN-01 04:02:03  
T 2002-JAN-01 03:02:04  
T 2002-JAN-01 02:02:03  
M 2002-JAN-01 01:02:01  
◀: PAGE UP ▶: PAGE DOWN

## **CAMERA SELECT (1-4)**

Press     to select appointed camera to display on full screen mode.

## **QUAD&AUTO**

Press "**QUAD**" button to display 4 cameras in Quad screen format

Press "**AUTO**" button to display 4 channels and Quad mode in full screen format by turns



## KEY LOCK

For added security, you can "Lock" all buttons on your DQR. Locking disables the buttons and prevents other people from using the system.

Press ENTER and MENU at the same time to enable Key Lock.

Press ENTER and MENU at the same time to disable Key Lock.

## RS-232 REMOTE PROTOCOL

You can use the PC keyboard to simulate DQR keypad.

DATA : REMOTE PROTOCOL using 8 bit data、1 start bit、1stop bit

FUNCTION	CODE	ASCII	FUNCTION	CODE	ASCII
MENU	0x4D	M	PLAY	0x50	P
ENTER	0x0D	ENTER	REC	0x72	r
Search	0x48	H	CH1	0x31	1
Slow	0x53	S	CH2	0x32	2
Up	0x55	U	CH3	0x33	3
Down	0x4E	N	CH4	0x34	4
Left	0x4C	L	QUAD	0x51	Q
Right	0x52	R	AUTO	0x41	A

## TROUBLE SHOOTING

When malfunction occurs with DQR, it may be not serious and can be corrected easily. The table below describes some typical problems and their solutions. Please check them before calling your DQR dealer.

PROBLEM	SOLUTION
HDD Not Found	<ul style="list-style-type: none"> <li>● Please Insert HDD</li> <li>● Please use the Key to lock the HDD Cartridge</li> <li>And press any key</li> </ul>
No power	<ul style="list-style-type: none"> <li>● Check power cord connections.</li> <li>● Confirm that there is power at the outlet.</li> </ul>
Not working when press any button	<ul style="list-style-type: none"> <li>● Check if it is under Key Lock mode.</li> <li>● Press "<b>MENU</b>" &amp; "<b>ENTER</b>" to exist Key Lock mode.</li> </ul>
No recorded video	<ul style="list-style-type: none"> <li>● Check if the HDD is installed properly.</li> </ul>
Timer Record enable does not working	<ul style="list-style-type: none"> <li>● Check if the Record Enable is set to YES</li> </ul>
No live video	<ul style="list-style-type: none"> <li>● Check camera video cable and connections.</li> <li>● Check monitor video cable and connections.</li> <li>● Confirm that the camera has power.</li> <li>● Check camera lens setting.</li> </ul>

## SPECIFICATIONS

<b>Video format</b>	NTSC/EIA or PAL/CCIR
<b>Hard disk storage</b>	IDE type, UTMA 66 above, 1 removable HDD supported
<b>Record mode</b>	Manual / Alarm / Timer / External
<b>Camera Input Signal</b>	Composite video signal 1 Vp-p 75 $\Omega$ BNC, 4 channels
<b>Main Monitor Output</b>	Composite video signal 1 Vp-p 75 $\Omega$ BNC
<b>Audio input</b>	4 audio inputs, (RCA) *
<b>Audio output</b>	2 audio outputs, (RCA) **
<b>Video Loss Detection</b>	Yes
<b>Refresh Rate</b>	60 images/sec. for NTSC / 50 images/sec. for PAL
<b>Recording Rate</b>	60 images/sec. for NTSC / 50 images/sec. for PAL
<b>Dwell Time</b>	Programmable (1~10 Sec)
<b>Key Lock</b>	Yes
<b>Picture Zoom</b>	2*2 (Digital Zooming)
<b>Camera Title</b>	10 letters
<b>Video Adjustable</b>	Color/ Contrast/ Brightness Adjustable
<b>Alarm Input</b>	TTL input, Hi (5V), Low (GND)
<b>Alarm Output</b>	COM / N.O / N.C
<b>Remote Control</b>	RS-232 or RS-485
<b>Time Display Format</b>	YY/MM/DD, DD/MM/YY, MM/DD/YY, OFF
<b>Power Source</b>	AC90~240V $\pm$ 10% switching adaptor
<b>Power Consumption</b>	<27W
<b>Operation Temperature</b>	10 ~ 40 $^{\circ}$ C
<b>RS-232C / RS-485 (bps)</b>	115200、57600、19200、9600、4800、3600、2400、1200
<b>Dimension (mm)</b>	380(W) x 270(L) x 65(H)
<b>Net Weight</b>	5.2 kgs

*Specifications are subject to change without notice.*

\* 4 audio inputs, but only can select 1 during operation for recording

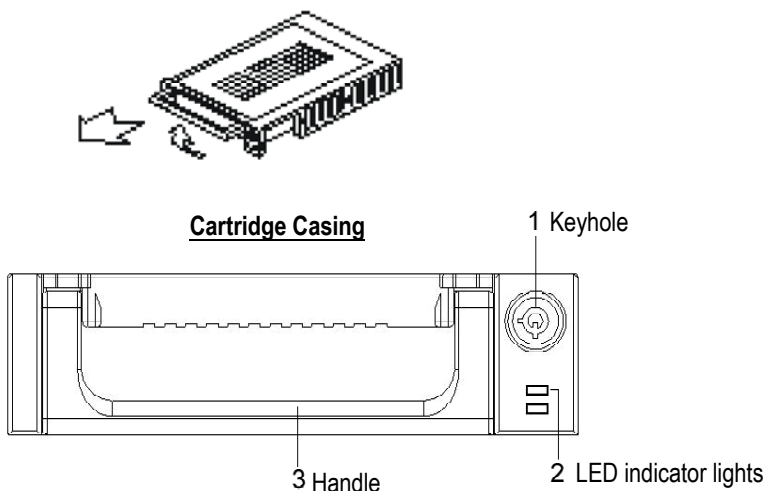
\*\* with 2 mono audio outputs from the same source.

# APPENDIX #1 – INSTALLING the HDD

Please follow the steps carefully in order to ensure correct installation.

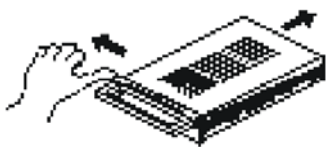
The compartment located on the front panel of the DQR is the removable Cartridge Casing, in which you insert the HDD. The various parts of the Cartridge Casing are labeled for your reference.

## 1. Remove the Cartridge Casing from the DQR



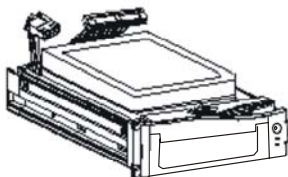
## 2. Remove the Cover from the Cartridge Casing

- Unclip the release latch with the word “OPEN” printed beside it by gently pushing on the latch.
- Slide the cover off the Cartridge Casing.



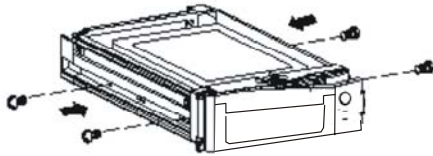
## 3. Connect the HDD into the Cartridge Casing

Please take the Hard Disk Drive and Connect the two cables from the back of the Cartridge Casing to the HDD.



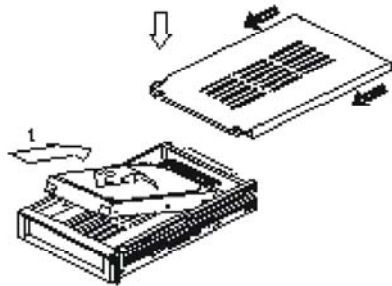
#### 4. Secure the HDD in the Casing (optional)

Use the screws supplied to tighten them, place the HDD into correct position.



#### 5. Slide the top Cover over the Cartridge Casing

Slide the Cover forward over the Cartridge Case. Ensure it is secured in place over the release latch.

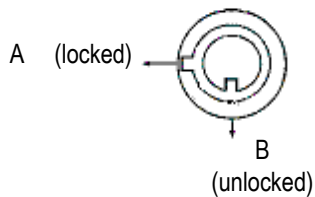


#### 6. Reinsert the Cartridge Casing into the DQR

Fully insert the Cartridge Case into the DQR.

#### 7. Lock the Cabinet

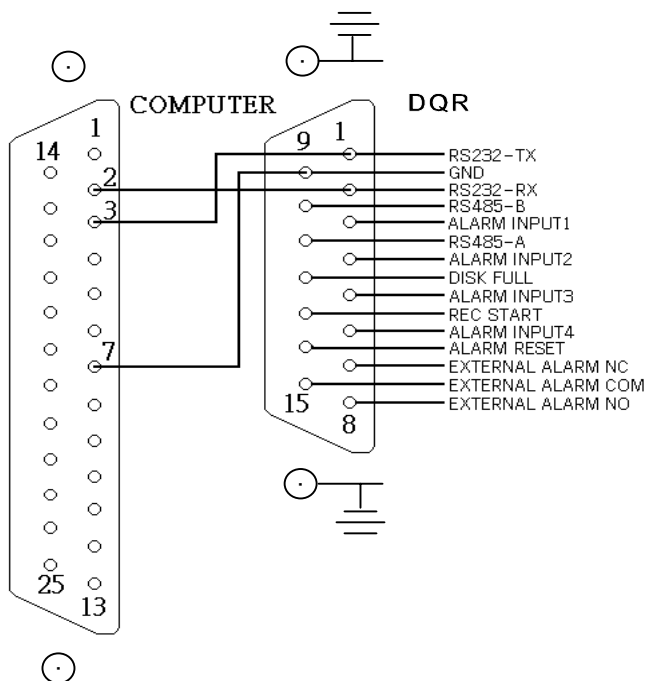
Lock the cabinet by turning the key clockwise.



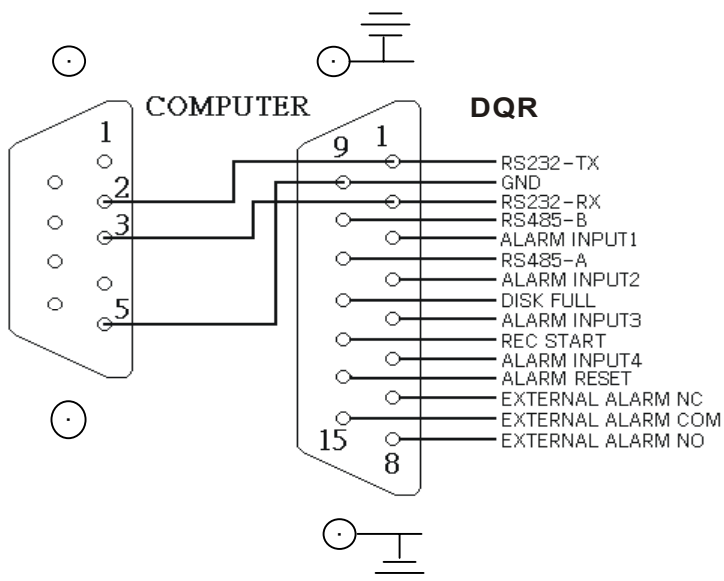
**Note :** If you do not lock the cabinet, the DQR system will not function properly.

# APPENDIX #2 – PIN CONFIGURATIONS

## 25 pin com port



## 9 pin com port



### **PIN 1. RS232-TX : RS-232**

DQR can be controlled remotely by an external device or control system, such as a control keyboard, using RS-232 serial communications signals.

### **PIN 2. RS232-RX : RS232**

DQR can be controlled remotely by an external device or control system, such as a control keyboard, using RS-232 serial communications signals.

### **PIN 3, 4, 5, 6 ALARM INPUT**

To connect wire from **ALARM INPUT (PIN 3, 4, 5, 6)** to **GND ( PIN 9 )** connector, DQR will start recording and buzzer will be on. When alarm has been triggered, signal becomes “Low”, and it will stop all alarm activities. Under normal operation, signal remains “High”.

### **PIN 7. EXTERNAL ALARM NC**

Under normal operation COM connect with NC and disconnect with NO. But when alarm triggered, COM disconnect with NC, and connect with NO.

### **PIN 8. EXTERNAL ALARM NO**

Under normal operation, COM will disconnect from NO. But when Alarm triggered, COM will connect with NO.

### **PIN 9. GND**

GROUND

### **PIN 10. RS485-B**

DQR can be controlled remotely by an external device or control system, such as a control keyboard, using RS485 serial communications signals.

### **PIN 11. RS485-A**

DQR can be controlled remotely by an external device or control system, such as a control keyboard, using RS485 serial communications signals.

### **PIN 12. DISK FULL (OUTPUT)**

When HDD is full, it sends a signal to trigger next DQR record mode, if you install another DQR. Under normal operation, the signal remains “High”. But when disk full, DQR will send the “Low” signal.

### **PIN 13. REC START (INPUT)**

This pin can accept the external trigger signal to activate record mode from external device. When the external signal turn to “Low”, it will trigger DQR record mode. When the external signal back to “High”, it will stop recording action. The default normal operation remains “High”.

### **PIN 14. ALARM RESET (INPUT)**

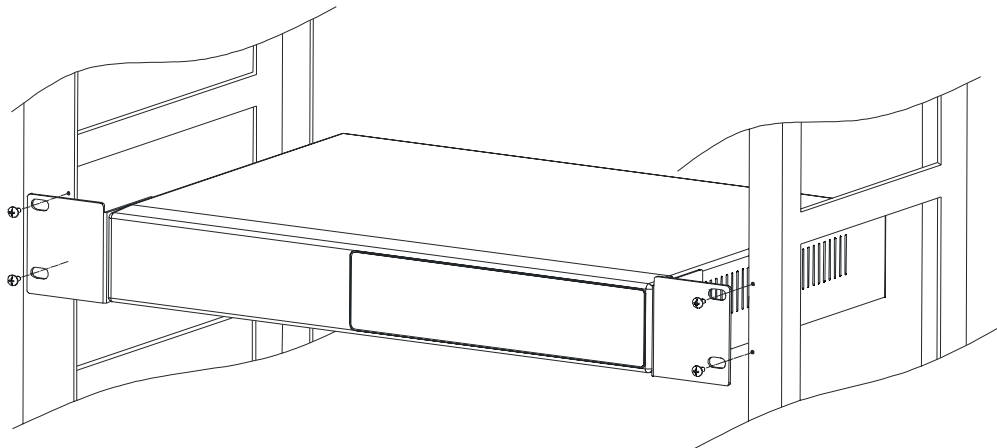
To connect wire from ALARM RESET ( PIN 14 ) to GND ( PIN 9 ) connector, it can disable ALARM. An external signal to ALARM RESET ( PIN 14 ) can be used to reset both ALARM OUTPUT signal and DQR's internal buzzer. When alarm has been triggered, signal becomes “Low”, and it will stop all alarm activities. Under normal operation, signal remains “High”.

### **PIN 15. EXTERNAL ALARM COM**

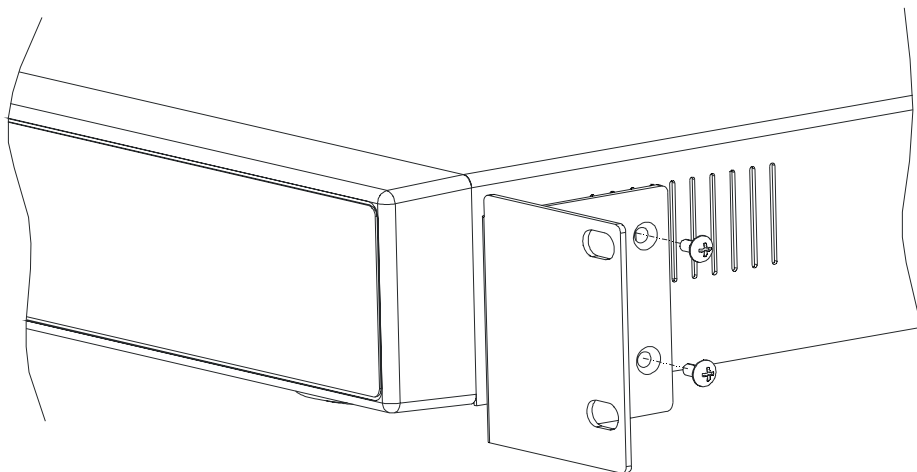
Under normal operation COM connect with NC and disconnect with NO. But when alarm triggered, COM disconnect with NC, and connect with NO.

## APPENDIX #3 – RACK MOUNT

Screws and brackets for rack mounting applications can be purchased as an optional accessory.



Front Angle with Rock Mount



Side View with Rack Mount

## APPENDIX #4 – RECORDING SPEED

The Record Time is different based on Record Speed and Record Quality. Please refer to following table.

### NTSC SYSTEM

IPS		60	30	15	8	4	2	1
Record Quality	Best	12hr	24hr	48hr	90hr	180hr	360hr	720hr
	High	15hr	30hr	60hr	112.5hr	225hr	450hr	900hr
	Normal	24hr	48hr	96hr	180hr	360hr	720hr	1440hr
	Basic	40hr	80hr	160hr	300hr	600hr	1200hr	2400hr
HDD Type		120GB						

### PAL SYSTEM

IPS		50	25	12	6	3	2	1
Record Quality	Best	12hr	24hr	50hr	101hr	203hr	304hr	608hr
	High	15hr	30hr	63hr	127hr	253hr	380hr	760hr
	Normal	24hr	49hr	101hr	203hr	405hr	608hr	1220hr
	Basic	41hr	81hr	168hr	338hr	675hr	1013hr	2025hr
HDD Type		120GB						

*Note: Above data is obtained from actual test of recording normal TV program. (For Reference Only)*





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