## **INSTALLATION/OPERATION**

# DIGITAL VIDEO RECORDER (MPEG4 - 4/8/16 CHANNEL)





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.

- WARNING: To prevent a risk of fire of electric shock, do not expose this product to rain or moisture.
- This installation should be made by a qualified service person and should conform to all local codes.
- 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.

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## 1. FOR THE SAFETY OF CUSTOMERS

#### SAFETY PRECAUTIONS

- 1. Do not modify the three-prong grounding type power plug in any way.
- 2. Operate this unit only from the type of power source indicated on the label.
- 3. Do not block or cover ventilation openings on the Unit.
- 4. Do not place this unit near a radiator or heating vent.
- 5. Do not push objects of any kind through cabinet openings. This may result in fire or electrical shock.
- 6. 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.
- 7. Do not place the unit on an unstable cart, stand, or shelf where it may fall and injure personnel or damage equipment.
- 8. Route power cords so that they cannot be walked upon or tripped over. Do not allow anything to rest on the power cord.
- 9. Do not install the unit in wet areas, or where it may be exposed to rain or water. Do not spill liquid of any kind on the unit.
- 10. Unplug the power cord from the unit before cleaning case. Use only a damp cloth. Do not use alcohol, spirits, or ammonia to clean the device.

DO NOT ATTEMPT TO CLEAN THE INTERIOR OF THIS UNIT- THIS ACTION MUST BE PERFORMED BY THE SERVICE TECHNICIAN AS REQUIRED DURING NORMAL MAINTENANCE.

- 11. Refer all servicing to qualified service personnel. REMOVAL OF TOP COVER BY UNAUTHORIZED PERSONNEL MAY EXPOSE THE USER TO DANGEROUS VOLTAGES OR OTHER HAZARDS.
- 12. Unplug the unit immediately and notify the service technician.
  - A. If liquid has been spilled into the device or the device has been exposed to rain or water.
  - B. If the unit has been dropped or the casing 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.

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 DEVICE. DO NOT OPEN THE COVERS UNDER ANY CIRCUMSTANCES, THERE ARE NO USER SERVICEABLE COMPONENTS INSIDE

## **2. DESCRIPTION OF PARTS AND FUNCTION**

## **2-1 COMPOSITION OF UNIT**



If you have received a product "without HDD", the accessories to fit HDD will be supplied 1) Stand for HDD installation 2) fixing screws will be supplied.

Accessories are subject to change without notice.

#### Use the designated HDD

Please use the designated HDD. Otherwise, recording may not operate correctly.

Maker	HDD Capacity
Western Digital	80GB, 160GB, 250GB, 320GB

## **2-2 FEATURES**

#### • Convenience

- User-friendly UI( Text Based User Interface)
- Easy-to-use menu composition
- Easy-to-use recorded data search (Time, Date, Motion, Alarm)

#### • Stability

- Auto restart after power interruption
  - DB structure offers data stabilization and best storage utilization

#### • Expandability

-Various remote multi DVR's can be controlled by Web browser (PC Client System)

#### • Technology

- -Embedded LINUX OS
- -Totally maximum recording rate 100 fps (Pal) 120 fps (NTSC)
- -High-resolution & high-quality MPEG-4 algorithm
- -Using Water marking & scrambling technologies,
- -Strong protection recorded data
- -MPEG-4 :  $1 \sim 2$  Kbytes per image with resolution 360x240

#### • Functionality

- Variable recording function (normal, alarm, motion, schedule)
- Full channel real-time monitoring
- Live monitoring, recording, playback, backup, remote access at the same time
- Multi channel playback
- Variable events notification to e-mail, buzzer or PC Client system

## **2-3 DESCRIPTION OF PARTS AND FUNCTION**

## 2-3-1 Front Panel



#### (1) LED

- REC : Recording status (When recording is on, the red LED flashes)
- PWR : System Power On/Off (When power is on, the green LED is lit)

#### (2) USB 2.0 PORT

- USB2.0 connector

#### (3) POWER BUTTON

- System Power On/Off

#### (4) NUMERIC & CHARACTER

- Input for numeric & character

#### **(5) MENU**

- Displays on the menu on the screen

#### (6) SEARCH

- Entering search mode directly

## (7) PLAY ( )

- Playback of the recorded data
- If pressed again in play mode, fast-forward will be executed

#### (8) REWIEND ( )◀

- Playback on the reverse

## (9) PAUSE (

- To freeze picture on playback mode and live mode.

## (10) STOP / EJECT (

- To stop playback and go back to live mode.

## (11) REC (•)

- To start & stop manual recording of relevant camera in a full screen live mode.

## (12) VOL (▲ ▼)

- To adjust volume up and down.

#### (13) AUDIO (8/16CH Only)

- when user selects "audio" key, available audio will be switched.

#### (14) ARROW KEY

- Curser shifting on the menu
- Shows the divided screen

#### (15) SELECT

- Menu selection



#### (1) Video Input (BNC)

- 16/8/4 Camera input (1.0 v p-p, 75 $\Omega$ ) depending on the model

#### (2) Video Out (BNC / S-VIDEO / VGA)

- Composite Output through BNC / S-VIDEO / VGA

#### (3) Line Audio Input

- 4 Audio Input through line (1x Audio on 4way)

#### (4) Audio Output

- 1 Audio Output

#### (5) RS232

- 1 Serial Communication

## (6) Network Port (RJ-45)

- Available to monitor live screen and recorded data on the HDD through Internet or LAN

#### (7) DIP switch (NTSC/PAL Video Selection)

-Selectable either NTSC or PAL

#### (08) RS422 / 485

- 1 Serial Communication for Pan / Tilt Camera (Future Development)

#### (09) Alarm/Sensor

- Alarm / 4 Sensor input / 1 output port

#### (10) AC Power

- AC 110~240 V (Free Voltage)

#### **ATTENTION**

When the video format is changed (NTSC/PAL), the system should be re-booted

#### The video format should be selected before booting

#### **Default Passwords**

"*0000000*" i.e. 8x Zero's. Password is required if you need to down-power or stop recording, prompt will be displayed asking for password.

Stop Recording	
Password	
1	,
ОК	Cancel

#### Web Client

User ID "*admin*" (not case sensitive). Admin ID cannot be changed this is full administrator ID. Password "*0000000*" i.e. 8x Zero's

Login	
ID	admin
Password	******
ок	Cancel

## 2-3-3 System Connection Diagram



## 2-3-4. Remote Controller



1.Power :
2. Rec : Start & Stop Recording
3. $\sim$ :Key for figure and character
4. PTZ: Controlling PTZ camera
(future development)
5. OSD : Operating OSD ON/OFF
6. SEQ : Key for SEQ operation
7. LOG : Direct access Log list
8. INFO: Direct access system Info.
9. ID : Reserved.
10. MUTE : Audio Mute
11. AUDIO : Available audio switching
when user select this key
12. MENU : Entering system menu
13. SEARCH : Entering search
14. ARROW & SPLIT : Key moving
left, right, up and down. Also, Screen
split display shows
15. VOL"+,-" : Up, down volume
16. CH "+,-" : Up, down channel(s)
17. : Play(or fast forward)
18. : Reverse play
19 II : Pause
20. Stopping playback

## 2-3-5. OSD Description



## 3. MENU-





## 3-2 Main Menu

### <u>NOTE</u>

Before using, be sure to setup the unit properly.

Below menu shows when you press the menu button on the front when the system is on.

MAIN MENU

DISPLAY SET RECORDING SET SYSTEM SET NETWORK SET EVENT NOTIFICATION

Please use UP ( $\checkmark$ ) or DOWN( $\checkmark$ ) on the front Panel to move to next menu. To move to the submenu, use the "SELECT" button.

## **Display Set**

#### DISPLAY SET

MONITOR ADJUSTMENT (4CH Only) CAMERA COVERT CAMERA NAME OSD ON/OFF SET DISPLAY SEQUENCE(8/16CH Only) EVENT CLEAR

## Monitor Adjustment- (4CH Only)

This controls the verticality and horizontality of live picture. With the background screen shown, use Left ( ), Right( ), Up( $\blacktriangle$ ), Down( $\nabla$ ) button for setting the location.

## **Camera Covert**

This allows the camera to be hidden, which means, camera is not available/shown in live monitoring (just blue screen), the camera will still be recording (if recording is "on" condition).

#### Camera Name

Camera title can be displayed on the screen.

#### OSD On/Off

OSD on/off: Selecting whether the OSD is displayed.

#### **Set Display Sequence**

#### SET DISPLAY SEQUENCE

FULL DISPLAY SEQUENCE QUAD DISPLAY SEQUENCE START FULL DISPLAY SEQUENCE START QUAD DISPLAY SEQUENCE

Sequence dwell time can be selected among 5,10,15,30,45,60 sec. When you select " Start Full or Quad Display Sequence", monitor switch will be started (Or, user can select " SEQ" button on the remote controller)

#### **Event Clear**

This is for erasing OSD characters related with events.

#### **Recording Set**

In our system, all recorded data can be saved in the format of watermark or scrambling when user select "watermark :On" (Default On)So, After downloading the saved data you want to check , user can confirm it whether it has been changed by someone using PC software provided.

#### RECORDING SET

GLOBAL PARAMETER NORMAL RECORDING ALARM RECORDING MOTION RECORDING SCHEDULE RECORDING RECORDING PRIORITY

#### **Global Parameter**

All the setup values for Audio/ Repeat/ Watermark / Resolution will be applied globally to all channels.

#### **Normal Recording**

It executes the continuous recording according to the designated set-up value.

#### Alarm recording

It executes the recording when sensor is taken.

#### **Motion recording**

It executes the recording when motion is captured.

#### Schedule recording

It executes the recording as per the programmed time table.

#### **Recording priority**

It specifies the priority among 4 kinds of recording methods.

#### <u>NOTE</u>

"Instant playback" (direct playback via , not search mode) is available. The file is created on the unit of 500Mbyte

#### **Recording Parameter**

RECORDING PARAMETER

AUDIO : ON/OFF REPEAT RECORDING : ON/ OFF WATERMARK : ON /OFF RECORDING RESOLUTION SAVE AND EXIT

## Audio Recording (4CH)

4CH : On/Off. When audio is "on", the audio will be input globally.

RECORDING PARAMETER AUDIO 1 RECORDING: OFF~CH16 AUDIO 2 RECORDING: OFF~CH16 AUDIO 3 RECORDING: OFF~CH16 AUDIO 4 RECORDING: OFF~CH16 REPEAT RECORDING OFF WATERMARK OFF RECORDING RESOLUTION SAVE AND EXIT

## Audio Recording (8/16CH)

8/16CH: 4 Audio are available. User can match 4 audios to each video channels.

#### **Repeat recording**

This sets the recording mode when the HDD capacity is exceeding. Selectable between "On" (overwrite) / "Off" (stop).

#### Watermark

This can select either Watermark On or OFF. This menu is for protecting video data from forging when exported to the digital media for backup.

#### **Recording Resolution**

Unit supports  $360x288 / 720x288 \mod (PAL)$  or  $360x240 / 720x240 \mod NTSC$ . The default is  $360x288 \mod (\leftarrow, \rightarrow)$  buttons are used for changing the resolution.

#### <u>NOTE</u>

- 1. The resolution is applied to all channels. (Individual set-up is not possible)
- When you are in the "recording" mode, the menu, "Global parameter" and 4 recording mode (normal, alarm, motion, schedule)" can not be changed. If you want to change these settings you must stop recording first.

## **Normal Recording**

NOR	MAL RECORDING	(4channel Only)
CH1	FRAME RATE	: 25FPS
CH2	FRAME RATE	: 25FPS
CH3	FRAME RATE	: 25FPS
CH4	FRAME RATE	: 25FPS
CH1	<b>RECORDING QUA</b>	ALITY : HIGH
CH2	<b>RECORDING QUA</b>	ALITY : HIGH
CH3	<b>RECORDING QUA</b>	ALITY : HIGH
CH4	<b>RECORDING QUA</b>	ALITY : HIGH
SAVE	E AND EXIT	

#### Frame Rate (fps) :4channel

The above shows available frame rate each channel. In 360x288 mode,  $0\sim25$  fps is available each channel (4 channel totally 100 fps) and 720x 288 is  $1\sim12/13$  fps each (4 channel total 50 fps, available max. frame rate for each channel is 25 fps- for exam, Ch.1 25 fps, Ch2. 25 fps, Ch3. 0 fps, Ch4 0 fps. ~) Frame rate will be changed pushing the " $\leftarrow$ ,  $\rightarrow$ " button

PAGE	: 1 (8/16CH Only)	
CH1	FRAME RATE	: 6FPS
CH2	FRAME RATE	: 6FPS
CH3	FRAME RATE	: 6FPS
CH4	FRAME RATE	: 6FPS
CH1	<b>RECORDING QUA</b>	ALITY : HIGH
CH2	<b>RECORDING QUA</b>	ALITY : HIGH
CH3	<b>RECORDING QUA</b>	ALITY : HIGH
CH4	<b>RECORDING QUA</b>	ALITY : HIGH
SAVE A	AND EXIT	

## Frame Rate (fps) :8/16 channel

The above shows available frame rate each channel. In 360x288 mode, 6 fps is available each channel (16/8 channel totally 100fps) and 720x 288 is 3 fps each (16/8 channel totally 50fps). Individual frame rate control is available as per 4channel.

Frame rate will be changed pushing the " $\leftarrow$ ,  $\rightarrow$  " button

## **Recording Quality**

Selectable from High, Mid, Low.

### Save and Exit

All the set-up value will be stored and move to higher menu.

## **Alarm Recording**

Either one is taken from 4 sensors, the recording will be activated as per set-up value.

ALARM RECORDING (4channel Only) CH1 FRAME RATE : 25FPS CH2 FRAME RATE : 25FPS CH3 FRAME RATE : 25FPS CH4 FRAME RATE : 25FPS CH1 RECORDING QUALITY : HIGH CH2 RECORDING QUALITY : HIGH CH3 RECORDING QUALITY : HIGH CH4 RECORDING QUALITY : HIGH POST ALARM DURATION : 5sec SAVE AND EXIT

## Frame Rate (fps) :4channel

The above shows available frame rate each channel. In 360x288 mode,  $0\sim25$  fps is available each channel (4 channel totally 100 fps) and 720x 288 is  $1\sim12/13$  fps each (4 channel totally 50 fps, available max. frame rate each channel is 25 fps- for exam, Ch.1 25 fps, Ch2. 25 fps, Ch3. 0 fps, Ch4 0 fps.  $\sim$ ) Frame rate will be changed pushing the " $\leftarrow$ ,  $\rightarrow$ " button

ALAR	RM RECORDING (8/16	Schannel Only)	
PAGE	E:1 (8/16CH Only)		
CH1	FRAME RATE	: 6FPS	
CH2	FRAME RATE	: 6FPS	
CH3	FRAME RATE	: 6FPS	
CH4	FRAME RATE	: 6FPS	
CH1	<b>RECORDING QUA</b>	ALITY : HIGH	
CH2	<b>RECORDING QUA</b>	ALITY : HIGH	
CH3	<b>RECORDING QUA</b>	ALITY : HIGH	
CH4	<b>RECORDING QUA</b>	ALITY : HIGH	
POST	ALARM DURATION	: 5sec	
SAVE	AND EXIT		

#### Frame Rate (fps) :8/16 channel

The above shows available frame rate each channel. In 360x288 mode, 6 fps is available each channel (16/8 channel totally 100fps) and 720x 288 is 3 fps each (16/8 channel totally 50fps). Individual frame rate control is available as per 4channel.

Frame rate will be changed pushing the " $\leftarrow$ ,  $\rightarrow$  " button

## **Recording Quality**

Selectable from High, Mid, Low.

#### **Post Alarm Duration**

After alarm activates, this sets how long the recording continues. The value is from 5/30/60/90/120/150/180/210/240 sec.

#### Save and Exit

All the set-up value will be stored and move to higher menu.

## **Motion Recording**

MOT	ION RECORDING (	4channel Only)
CH1	FRAME RATE	: 25FPS
CH2	FRAME RATE	: 25FPS
CH3	FRAME RATE	: 25FPS
CH4	FRAME RATE	: 25FPS
CH1	<b>RECORDING QUA</b>	LITY : HIGH
CH2	<b>RECORDING QUA</b>	LITY : HIGH
CH3	<b>RECORDING QUA</b>	LITY : HIGH
CH4	<b>RECORDING QUA</b>	LITY : HIGH
SETU	P MOTION	
SAVE	EAND EXIT	

#### Frame Rate (fps) :4channel

The above shows available frame rate each channel. In 360x288 mode,  $0\sim25$  fps is available each channel (4 channel totally 100 fps) and 720x 288 is  $1\sim12/13$  fps each (4 channel totally 50 fps, available max. frame rate each channel is 25 fps- for exam, Ch.1 25 fps, Ch2. 25 fps, Ch3. 0 fps, Ch4 0 fps. ~) Frame rate will be changed pushing the " $\leftarrow$ ,  $\rightarrow$  " button

```
MOTION RECORDING (8/16channel Only)
PAGE : 1 (8/16CH Only)
CH1
       FRAME RATE
                         : 6FPS
CH2
       FRAME RATE
                         : 6FPS
CH3
       FRAME RATE
                         : 6FPS
CH4
       FRAME RATE
                         : 6FPS
CH1
       RECORDING QUALITY : HIGH
       RECORDING QUALITY : HIGH
CH2
CH3
       RECORDING QUALITY : HIGH
       RECORDING QUALITY : HIGH
CH4
SETUP MOTION
SAVE AND EXIT
```

## Frame Rate (fps) :8/16 channel

The above shows available frame rate each channel. In 360x288 mode, 6 fps is available each channel (16/8 channel totally 100fps) and 720x 288 is 3 fps each (16/8 channel totally 50fps). Individual frame rate control is available as per 4channel.

Frame rate will be changed pushing the " $\leftarrow$ ,  $\rightarrow$  " button

## **Recording Quality**

Selectable from High, Mid, Low.

#### **Setup Motion**

SETUP MOTION	
PAGE : 1 (8/16CH Only)	
POST MOTION : 30 SEC	
SET CH1 MOTION AREA	
SET CH2 MOTIION AREA	
SET CH3 MOTION AREA	
SET CH4 MOTION AREA	
CH1 MOTION SENSITIVITY:	HIGH
CH2 MOTION SENSITIVITY:	HIGH
CH3 MOTION SENSITIVITY:	HIGH
CH4 MOTION SENSITIVITY:	HIGH
SAVE AND EXIT	

## **Post Motion**

This sets the how long the recording lasts after motion is taken. The value is among  $30 \sim 240$  sec.

## Set CH. Motion Area

The following will be displayed when user selects the menu.

	1	2		
	3	4		

The detection area is divided 8x6 cells. Default is all-cells activated. 1,2,3,4 cells (white color background) is disabled area. "SEL" button is required for selecting some area.

## **Motion Sensitivity**

It consists of High, Mid, Low.

## <u>NOTE</u>

When you record the camera image with the motion-recording mode, the data file will be saved depending on the motion sensitivity. So, higher caution is required to apply the sensitivity to the actual recording.

## Schedule Recording

SCHEDULERECORDING (4channel Only)CH1FRAME RATE: 25FPSCH2FRAME RATE: 25FPSCH3FRAME RATE: 25FPSCH4FRAME RATE: 25FPSCH1RECORDING QUALITY : HIGHCH2RECORDING QUALITY : HIGHCH3RECORDING QUALITY : HIGHCH4RECORDING QUALITY : HIGHCH4RECORDING QUALITY : HIGHCH4RECORDING QUALITY : HIGHCH4RECORDING QUALITY : HIGHSETUP SCHEDULESAVE AND EXIT

## Frame Rate (fps) :4channel

The above shows available frame rate each channel. In 360x288 mode,  $0\sim25$  fps is available each channel (4 channel totally 100 fps) and 720x 288 is  $1\sim12/13$  fps each (4 channel totally 50 fps, available max. frame rate each channel is 25 fps- for exam, Ch.1 25 fps, Ch2. 25 fps, Ch3. 0 fps, Ch4 0 fps.  $\sim$ ) Frame rate will be changed pushing the " $\leftarrow$ ,  $\rightarrow$ " button.

SCHEDULE RECORDIN	NG (8/16channel On	ly)	
PAGE 1			
CH1 FRAME RATE	: 25FPS		
CH2 FRAME RATE	: 25FPS		
CH3 FRAME RATE	: 25FPS		
CH4 FRAME RATE	: 25FPS		
CH1 RECORDING QUA	LITY : HIGH		
CH2 RECORDING QUA	LITY : HIGH		
CH3 RECORDING QUA			
CH4 RECORDING QUA			
SETUP SCHEDULE			
SAVE AND EXIT			

## Frame Rate (fps) :8/16 channel

The above shows available frame rate each channel. In 360x288 mode, 6 fps is available each channel (16/8 channel totally 100fps) and 720x 288 is 3 fps each (16/8 channel totally 50fps). Individual frame rate control is available as per 4channel.

Frame rate will be changed pushing the " $\leftarrow$ ,  $\rightarrow$  " button

## **Recording Quality**

Selectable from High, Mid, Low.

#### **Setup Schedule**

SCHEDULE SETUP 0 4 8 12 16 20 MON TUE WED THU FRI SAT SUN SAVE AND EXIT

"SEL" button is used for selecting relevant time and day. Arrow Key will be used for movement.

#### <u>NOTE</u>

To change the items regarding recording (resolution, mode, frame rate, etc), you must stop recording first.

## **Recording Priority**

RECORDING PRIORITY 1<sup>ST</sup> PRIORITY: NORMAL 2<sup>ND</sup> PRIORITY: MOTION 3<sup>RD</sup> PRIORITY: SCHED 4<sup>TH</sup> PRIORITY: ALARM SAVE AND EXIT

This sets the priority from the 4 recording methods. If Normal is 1<sup>st</sup> priority, the recording is carried out as per normal recording' setup value.

## System Set

SYSTEM SET

BASIC DISK FORMAT PASSWORD CHANGE PROGRAM UPDATE CLIENT ACCOUNT SENSOR

## Basic

## BASIC

LANGUAGE : ENGLISH INITIALIZATION DATE FORMAT : mm-dd- yyyy DATE/TIME : 11-18-2004 03:50:31 INFORMATION SAVE AND EXIT

## Language

English, Italian, and French (4 way only). The default is English.

English, Italian, French and Hungarian (8/16 way). The default is English.

### Initialization

All the menu value will be returned to the factory default. To initialize the system, you must stop recording first.

#### **Date Format**

Can select among the formats, mm-dd-yyyy / dd-mm-yyyy, yyyy-mm-dd. If date format needs to be changed, you must stop recording first.

#### <u>NOTE</u>

#### PLAYBACK FOLLOWING TIME CHANGE

The DVR uses the time and date to index video on the hard disk drive so you can find it later. Changing the time can cause the DVR to work incorrectly when you try to play back video. If you set the time 1 hour ahead, this is not a problem. But, if you set the time 1 hour back, there will be more than one recording of the same time.

Such as during the October Daylight Saving Time changeover, if you try to search for video between 1 a.m and 2 a.m, the recorder may not operate properly because there will be two hours of recorded video during this time period. To view video during this overlapping time period, you must start playback before 1 a.m, then recorder will play both hours between 1 a.m and 2 a.m.

You cannot do a backward search through the overlapping time. But, you can do forward search.

## Disk Format

#### DISK FORMAT

INTERNAL HDD : YES EXTERNAL DEVICE // HDD : NOT FOUND EXECUTE FORMAT

Password is required for Disk to be formatted (default password is "00000000" 8x Zero's, which is the same if you need to turn "recording off" see page 12). You must stop recording and playback first to format the HDD.

## **Client Account**

CLIENT ACCOUNT

ADD NEW ACCOUNT DELETE ACCOUNT SAVE AND EXIT

CLIENT LIST

To access as a Client on the network you first must register "Add New Account". User ID & Password has to be registered at the system first to connect with a 'user level'. But, administrator can access without registering. Default Settings USER ID "*admin*" Password"*00000000*"

#### Program Update

The latest firmware version can be upgraded through USB 2.0 Port using a Memory Stick. When

memory stick connects USB port; will be shown on the right corner of monitor. Then, enter "menu"-> "System Set"-> "Program Update". If there is a new file that already installed the system will recognize "new program", "New program found" will be displayed on the screen. Then, press "Select" button/Key. Processing percentage will be displayed.

#### NOTE.

1. If the system doesn't recognize "new program", "New program not found" will be displayed.

2. USB compatibility has been tested successfully, Lexar Jumpdrive 128/256MB, Sandisk Mini Cruzer 128MB & Cruzer Micro 256MB.

3. For system stability please turn off 1) recording 2) playback 3) network connection during upgrading.

4. After updating program, please reboot the Unit.

#### Sensor

SENSOR	
SENSOR 1 INPUT SENSOR 2 INPUT SENSOR 3 INPUT SENSOR 4 INPUT ALARM OUT SAVE AND EXIT	: N.C : N.O : NONE : NONE : ON

Sensor Input is selectable N.C, N.O, None.

#### 3. Network Set

NETWORK SET USE DYNAMIC IP: NO IP ADDRESS :000.000.000.000 GATEWAY :000.000.000 NETMASK :000.000.000 DNS SERVER :000.000.000 DVR PORT 2000 WEBSERVER PORT 80 SAVE AND EXIT

To enter Network Set menu, system will ask for password (default is "00000000" 8x Zero's).

When user is using a fixed IP, each address is required to be filled out as per network environment.

In fixed IP environment is being used, no need to change DVR & Web Server Port.

As per DVR & Web server port, please refer Appendix 4.

If unit is set up for "Dynamic IP", the following will be shown.

#### NETWORK SET

USE DYNAMIC IP: YES XDSL USER ID : XDSL PASSWORD : DDNS USER ID : DDND PASSWORD: REGISTERED DOMAIN: SAVE AND EXIT

For Dynamic IP, either XDSL or Cable. In XDSL environment, the input for XDSL user ID/  $\,$ 

XDSL password is required. In cable environment, Mac address is required to be filled out irrespective of ID and password.

DDNS Server is needed when clients connects the DVR, which is on Dynamic IP, since clients doesn't know of IP of system DVR. (Please register your ID & domain at <u>www.dyndns.org</u>, in which you can use DDNS server free of charge). (See Appendix 4)

## **Event Notification**

EVENT NOTIFICATION

► E-MAIL REGISTRATION E-MAIL REPORT NOTIFICATION OUT SAVE AND EXIT

E-MAIL REGISTRATION

► USER1 USER2 USER3 SENDER MAIL ID SENDER DOMAIN SEND TEST MAIL SAVE AND EXIT

At E-Mail registration menu, sent up the e-mail addresses to receive several "Event Notification ". To register a e-mail address, 1) input the address 2) push "Save and Exit" 3) " Send test mail".

NOTE

1. Sender mail ID & domain should be input. If not, e-mail doesn't work. If you input Quantum4 as mail ID & Norbain.co.uk as domain, sender's information will be "Quantum4@norbain.co.uk.

I.e. e-mail will come from "Quantum4@norbain.co.uk

2. IP & Gateway in the system should be set up first.

E-MAIL Report is available from Daily/ Weekly/ Immediately. Daily report will be done 00(H):00(M) "Midnight" each day and weekly report will be done 00(H):00(M) "Midnight" on Sunday.

## **Notification Out**

```
NOTIFICATION OUT
```

► E-MAIL BEEP ALARM-OUT

When event happens, each output is operated as per setup value. Events such as "Video Loss/ Alarm/ Motion/Power Loss" will be sent to E-Mail address or Beep or Alarm according to setup value.

## 4. Search

SEARCH

DATE/TIME SEARCH CALENDAR SEARCH BACKUP LOG

## Date / Time Search

If you select date/time search, the following will be shown.

DATE/TIME SEARCH

```
EVENT : ALL
HDD : INTERNAL
DATE : 11-12-2004 13:10:50
PLAY
```

the  $(\blacktriangle), (\blacktriangledown)$  buttons for selecting the clauses. When you select the specific time/date, and then select "Play", which execute the playback.

#### **Calendar Search**

Following screen shows when "Calendar search" is selected.

C	ALENI	DAR SI	EARC	СН			
-	EAR :2						
	IONTH						
SUN	MON	N TUE	WE.	D TH	U FR	I SAT	
	1	2	[3]	4	5	6	
7	8	9	10	11	12	13	
14	15	16	17	18	19	20	
21	22	23	24	25	26	27	
28	29	30					

This shows where the recorded data is located at sight. Using " $\rightarrow$ ,  $\leftarrow$ "buttons, are available to move to specific time/date. To enter sub-menu (Time), please use "SEL" button. Day (11, eleven) will be changed 'up and down ( )' key.

Buttons "Search" will make a following display.

	SEAR	CH R	ESU	LT				
	ATE OUR			-	12	16	20	
	H1 H2							
-	H3 H4	-						

The hour, which has data, will be shown in white bar, the hour, which you want to play, is selected with "SEL" button, then the following sub-menu will be shown.

SEA	RCH	RESU	JLT			
DATE	E/HOU	JR 1	1-12-2	204/07		
MIN	0	12	24	36	48	
CH1						
CH2						
CH3						
CH4						

The area, which has data, will be shown in white and using "SEL", user can start the playback.

## Back Up

## 1. INTERNAL

#### BACKUP

BACKUPDEVICE: CD/DVD-R DEVICE FORMAT FILE FORMAT: EXCLUSIVE/AVI FROM: 12-07-2004 12:46:30 TO :12-07-2004 12:47:30 CHANNEL : 1 CALCULATING BACKUP SIZE TRANSFER FREE/TOTAL SPACE 49M/245M REQUIRED SPACE 60M:

#### **Backup Device**

Internal CD-R or DVD-R is available.

> Note:

1. Manufacturer guarantee

1) CD-R drive: LG GCE 8527B(CD-R Disk: Imation or Melody brand, 52x Max)

2) DVD-R drive: LG GSA-4167B (DVD-R disk: Imation or Melody brand, 8x Max)

2. When DVR system try to read disk or drive, "READING OPTICAL MEDIA" message will be shown and no key buttons works.
## **Device Format**

Format for CD/DVD-R is not needed. When use CD/DVD-RW, format should be done first.

#### **File Format**

Exclusive or AVI file is available. AVI file is played with window media player (Codec required) and exclusive file will be played with our own player. Player is downloaded automatically together with video data.

#### From/ To

You can set up the time, which is required to be backed up to the internal CD/DVD-R Drive.

## Channel

When you select exclusive, all channels can be downloaded at the same time. But, if you select AVI only one channel can be selected.

## Transfer

Downloading the backup data to internal disk. Percentage during downloading will be shown.

> Note:

Network should be disconnected during downloading to internal DVD/CD-R disk. If network is connected, connection will be terminated during "making backup file"

## 2. EXTERNAL

When a Memory stick is connected to the USB port, the icon will be shown at the bottom of Monitor. Also, the following menu will be shown.

#### BACKUP

BACKUP DEVICE: CD WR /FLASH DEVICE FORMAT FILE FORMAT: EXCLUSIVE/AVI FROM: 12-07-2004 12:46:30 TO :12-07-2004 12:47:30 CHANNEL : 1 CALCULATING BACKUP SIZE TRANSFER FREE/TOTAL SPACE 49M/245M REQUIRED SPACE 60M:

## **Backup Device**

USB memory stick (thumbs drive) or internal CD RW is available.

## **Device Format**

To back up the data, please delete existing files on the stick first.

## **File Format**

Exclusive or AVI file is available. AVI file is played with window media player (codec required) and exclusive file will be played with our own player. Player is downloaded automatically together with video data.

## From/ To

You can set up the time, which is required to be backed up to the memory stick.

## Channel

When you select exclusive, all channels can be downloaded at the same time. But, if you select AVI only one channel can be selected.

## Transfer

Downloading the backup data to stick. Percentage during downloading will be shown.

\* USB compatibility has been tested successfully for these recommended USB devices.
Lexar JumpDrive 128/256MB
SanDisk Mini Cruzer 128MB, SanDisk Cruzer Micro 256MB
DVD/RW Plextor PX-716UFL
CD/RW Freecom Classic CD-RW 52x24x52
Lite-On CD/RW (LTR-52327SX)
Western Digital Essential 80GB USB2.0 7200RPM (Manu codeWDXUL800BBNU) they do this in various HDD sizes unfortunately we have not tested them all.

## NOTE

For system stability, we highly recommend that the recording is turned off during downloading the data to USB device.

#### Procedure for saving data onto a USB device.

- 1. Stop recording. Press "Record" enter Password (0000000) Default
- 2. Insert USB device. Wait until USB symbol appears on screen
- 3. Press "Search" button
- 4. Go to "Backup" Press "Enter"
- 5. Select "File Format" Press "Enter" change to "Exclusive"
- 6. Select Start & Stop times (Press "Enter" to change, use camera buttons) Press "enter"
- 7. Enter channel numbers (cameras 1,2,3 or 4) Select "Save & Exit"
- 8. Select "Calculate Backup size"
- 9. Select "Transfer" after file download
- 10. Exit "Search" mode
- 11. Press "Record" button

"Exclusive" allows all cameras to be selected and recorded. "AVI" allows single camera only to be selected and recorded.

PC Playback

- 1. Insert USB device
- 2. Go to "My Computer"
- 3. Double Click USB drive letter
- 4. Folders & Files on device: *Download*, *BK\_Play*, *Index*, *Kerberos*, *KW Client*
- 5. Double Click "*BK\_Play*"
- 6. Player opens, click "play" button

## **5. CLIENT PROGRAM**

#### 5-1. Network Connection

#### Minimum PC specification (4, 8/16CH)

CPU: 4CH- Pentium III 750MHz over, 8/16CH- Pentium 1.7GHz over. Graphic Memory: 4CH- 32M over, 8/16CH – 64M over.

#### **IP Insertion**

Connection will be done by just writing DVR IP address on the Internet Explorer window. If domain is kept to reach DVR by DDNS server, it is allowed to write domain name directly.

#### **Downloading ActiveX Control**

When DVR connects network, the window to download active X control will be displayed then login Box will be displayed.

If downloading does not begin "Active X control" may not be enabled. (See Appendix 3)

#### Log In

Login	
ID	
Password	******
ОК	Cancel

Live Monitoring

#### **Channel Button**



When Log- In window appears, input the ID & Password. Then, click "OK", which starts the live monitoring. If ID & PW is input wrong, the Login box appears repeatedly. If it login fails or clicking "Cancel", the programs ends.

Client program is optimized on the resolution, 1024 x 768.

This shows how many channels are activating on the live monitoring or playback. When selecting the relevant channel, it will show a full, single image only and the camera button will go green.



#### **Channel Division**



Multi-channel division will be done during the monitoring or playback. As seen in picture, 1,4,8,9,16 division is supported.



#### Termination of Live monitoring



Live monitoring will be terminated when user pushes "Live Off" button. Live monitoring will be re-started when user pushes "Live On" button.

#### System & Local



System means the DVR.

Local means Remote PC as client

#### **Recording & Playback**



Step backward / Backward / Play / Pause / Recording /
Stop / Step forward in left order.
One more click during playback makes speed
double. Pause is temporary stop. If user wants to play the
video forward during reverse, push the stop key and
then push fast forward button.

#### System & Local recording

1) System recording



To start the recording on the DVR via client PC, press the recording button, when the system icon is on green. Shadow bottom is shown as seen in blue circle. Please check system is on the recording mode.

\* Admin only can control 'recording on/off' on the system via network.

SYSTEM LOCAL	
Stop Recording	J
Password	
ОК	Cancel
SYSTEM LOCAL	

#### NOTE :

To off 'recording', push the red recording button again. Then, shadow bottom will disappears and system will ask for the password. To stop recording of system, please input password. And, check if the system is out of recording mode.

#### 2) Local recording





To save the live video onto client PC HDD, press the recording button when the local icon is on green. Shadow bottom is shown as seen in blue circle. Then, recording data is saving on the client HDD.

\* Both admin and user can do local recording.To off the recording, press recording button again. Then, shadow bottom will disappears.

#### Local playback





When "Local" button is activated (**LOCAL**), it will operate.

When you push the Play ( ),

the window left is shown.

On clicking the "OK" button then set the start & end time. Please check either 'Download' or 'Live

Backup'.

Download is transmitting recorded data from system HDD to Client PC .

Live Backup is saving the live image on the client PC.

On clicking the "OK" button, the available list will be displayed.

O Download	O Live Backup	СК
	j	Cancel

Start Time	7/21/2005 • 4:43:33 PM	
End Time	9/27/2005 🔽 11:31:33 AM	Cancel

2005       7       31       10:30:05 - 10:31:1         2005       8       2       01:42:00 - 01:42:0         2005       8       2       01:42:00 - 01:42:1         2005       8       2       01:42:00 - 01:42:1         2005       8       2       01:42:00 - 01:42:1         2005       8       24       19:39:50 - 19:39:1         2005       8       24       19:42:30 - 19:45:0         2005       8       25       17:47:27 - 17:49:1         2005       8       26       10:46:20 - 10:52:2         2005       9       6       17:26:39 - 17:27:1         2005       9       6       17:26:39 - 17:26:4         2005       9       8       15:08:21 - 15:08:2         2005       9       8       15:08:21 - 15:08:2         2005       9       27       11:11:02 - 11:31:3	11:1	1:02		11:11:02	11:31:33
2005       7       31       10:30:05 - 10:31:1         2005       8       2       01:42:00 - 01:42:0         2005       8       2       01:42:00 - 01:42:1         2005       8       2       01:42:00 - 01:42:1         2005       8       2       01:42:00 - 01:42:1         2005       8       24       19:39:50 - 19:39:1         2005       8       24       19:42:30 - 19:45:0         2005       8       25       17:47:27 - 17:49:1         2005       8       26       10:46:20 - 10:52:2         2005       9       6       17:26:39 - 17:27:1         2005       9       6       17:26:39 - 17:26:4         2005       9       8       15:08:21 - 15:08:2         2005       9       22       13:31:36 - 13:38:2	Start	t Time		Selected Time	End Time
2005       7       31       10:30:05 - 10:31:1         2005       8       2       01:42:00 - 01:42:0         2005       8       2       01:42:00 - 01:42:1         2005       8       2       01:42:00 - 01:42:1         2005       8       24       19:39:50 - 19:39:1         2005       8       24       19:42:30 - 19:45:0         2005       8       25       17:47:27 - 17:49:1         2005       8       26       10:46:20 - 10:52:1         2005       9       6       17:26:39 - 17:27:1         2005       9       6       17:26:39 - 17:26:4         2005       9       8       15:08:21 - 15:08:1	.8	2005	9	27	11:11:02 - 11:31:33
2005         7         31         10:30:05 - 10:31:3           2005         8         2         01:42:00 - 01:42:0           2005         8         2         01:42:00 - 01:42:3           2005         8         2         01:42:00 - 01:42:3           2005         8         24         19:39:50 - 19:39:3           2005         8         24         19:42:30 - 19:45:0           2005         8         25         17:47:27 - 17:49:3           2005         8         26         10:46:20 - 10:52:3           2005         9         6         17:26:39 - 17:27:3           2005         9         6         17:26:39 - 17:26:4	.7	2005	9	22	13:31:36 - 13:38:24
2005         7         31         10:30:05 - 10:31:3           2005         8         2         01:42:00 - 01:42:0           2005         8         2         01:42:00 - 01:42:3           2005         8         2         01:42:00 - 01:42:3           2005         8         24         19:39:50 - 19:39:3           2005         8         24         19:42:30 - 19:45:0           2005         8         25         17:47:27 - 17:49:3           2005         8         26         10:46:20 - 10:52:2           2005         9         6         17:26:39 - 17:27:3	.6	2005	9	8	15:08:21 - 15:08:23
2005         7         31         10:30:05 - 10:31:3           2005         8         2         01:42:00 - 01:42:0           2005         8         2         01:42:00 - 01:42:3           2005         8         2         01:42:00 - 01:42:3           2005         8         24         19:39:50 - 19:39:3           2005         8         24         19:42:30 - 19:45:0           2005         8         25         17:47:27 - 17:49:3           2005         8         26         10:46:20 - 10:52:2	.5	2005	9	6	17:26:39 - 17:26:43
2005         7         31         10:30:05 - 10:31:1           2005         8         2         01:42:00 - 01:42:0           2005         8         2         01:42:00 - 01:42:1           2005         8         2         01:42:00 - 01:42:1           2005         8         2         01:42:00 - 01:42:1           2005         8         24         19:39:50 - 19:39:1           2005         8         24         19:42:30 - 19:45:0           2005         8         25         17:47:27 - 17:49:1	4	2005	9	6	17:26:39 - 17:27:16
2005         7         31         10:30:05 - 10:31:3           2005         8         2         01:42:00 - 01:42:0           2005         8         2         01:42:00 - 01:42:3           2005         8         2         01:42:00 - 01:42:3           2005         8         2         01:42:00 - 01:42:3           2005         8         24         19:39:50 - 19:39:3           2005         8         24         19:42:30 - 19:45:0	.3	2005	8	26	10:46:20 - 10:52:20
2005         7         31         10:30:05 - 10:31:3           2005         8         2         01:42:00 - 01:42:0           2005         8         2         01:42:00 - 01:42:3           2005         8         2         01:42:00 - 01:42:3           2005         8         24         19:39:50 - 19:39:3	2	2005	8	25	17:47:27 - 17:49:52
2005         7         31         10:30:05 - 10:31:1           2005         8         2         01:42:00 - 01:42:0           2005         8         2         01:42:00 - 01:42:1           2005         8         2         01:42:00 - 01:42:1	1	2005	8	24	19:42:30 - 19:45:08
2005         7         31         10:30:05 - 10:31:5           2005         8         2         01:42:00 - 01:42:0	.0	2005	8	24	19:39:50 - 19:39:53
2005 7 31 10:30:05 - 10:31:	9	2005	8	2	01:42:00 - 01:42:57
	8	2005	8	2	01:42:00 - 01:42:05
2003 7 23 10:20:37 10:20:3	7	2005	7	31	10:30:05 - 10:31:57
2005 7 22 10:26:57 10:20:1	6	2005	7	23	10:26:57 - 10:28:57
2005 7 16 15:07:16 - 15:07:2	5	2005	7	16	15:07:16 - 15:07:21

Select the required time and push 'start' button.



Then, local playback will be done as above.

#### **Remote playback**

SYSTEM LOCAL

SYSTEM	LOCAL	

This works when system button is in (**SYSTEM**) green.

When youpush the Play button(),

Start Time	8/ 4/2005	▼ 2:15:04 PM	•	ОК
End Time	9/28/2005	▼ 2:09:28 PM	•	Cancel

the window left is shown. After input "start" and "end" time, push "OK" button.

169	2005	9	28	12:49:15 - 13:17:58
170	2005	9	28	13:17:58 - 13:43:15
171	2005	9	28	13:43:15 - 13:51:24
168	2005	9	28	12:33:23 - 12:49:15
166	2005	9	28	12:03:03 - 12:03:07
167	2005	9	28	12:03:24 - 12:19:00
165	2005	9	28	10:51:23 - 10:53:44
163	2005	9	28	10:44:15 - 10:44:29
164	2005	9	28	10:45:04 - 10:50:45
162	2005	9	28	10:42:39 - 10:43:25
160	2005	9	28	09:44:07 - 10:04:52
161	2005	9	28	10:41:37 - 10:42:25
158	2005	9	28	08:48:50 - 09:17:37
159	2005	9	28	09:17:37 - 09:44:07

Then, list will be shown above.

158	2005	9	28	08:48:50 - 09:17:37
159	2005	9	28	09:17:37 - 09:44:07
60	2005	9	28	09:44:07 - 10:04:52
.61	2005	9	28	10:41:37 - 10:42:25
<b>l62</b>	2005	9	28	10:42:39 - 10:43:25
.63	2005	9	28	10:44:15 - 10:44:29
.64	2005	9	28	10:45:04 - 10:50:45
.65	2005	9	28	10:51:23 - 10:53:44
166	2005	9	28	12:03:03 - 12:03:07
.67	2005	9	28	12:03:24 - 12:19:00
68	2005	9	28	12:33:23 - 12:49:15
.69	2005	9	28	12:49:15 - 13:17:58
.70	2005	9	28	13:17:58 - 13:43:15
.71	2005	9	28	13:43:15 - 13:51:24
.72	2005	9	28	13:51:35 - 14:09:28
Start	t Time		Selected Time	End Time
13:51:35			13:51:35	14:09:28
				Start Cano

Select the required time and push 'start' button.



Then, remote playback will be done as above.

#### Setup



#### **Remote setup**



Display Se	Recon	ling Set	Set Ev	Event Set		
		Camera C	efinition ——			
	Name	Covert		Name	Covert	
Camera O1	CH1		Camera 09	CH9		
Camera O2	CH2		Camera 10	CH10		
Camera 03	СНЗ		Camera 11	CH11		
Camera O4	CH4		Camera 12	CH12		
Camera O5	CHS		Camera 13	CH13		
Camera O6	СН6		Camera 14	CH14		
Camera 07	CH7		Camera 15	CH15		
Camera O8	CH8		Camera 16	CH16		
		Camera	Sequence			
	Seque	nce Interval		sec		
	Sequ	ience Mode		cameras		



Setup menu is composed of 1) Remote Setup2) Local Setup 3) Firmware Upgrade menu.

#### Note:

When the main system is entered "menu OSD", remote setup doesn't work. "OSD updating failure" message will be displayed. This is only available when logged on as Administrator

When you select 'Remote Setup' menu,

User enters 'Display Set' menu, in which user can input 'Camera name' as per setting up at the DVR. To save changed values, you should press button "Save & Exit".

When user selects 'Recording Set' menu, this has 3 sub-menu's.

Basic Configuration. : you can configure (1)
 Audio Recording (2) Repeat Recording (3)
 Watermark Embedding (4) Recording Resolution
 as per setting up at the DVR.

2) Recording Group : this has 4 sub-menu , (1)Normal (2) Alarm (3) Motion (4) Schedule as per setting up at the DVR

3) Recording Priority : User can select the recording priority.

Display S	et	Recording Set	5	ystem Set	Event Set		
		Account		P/T/Z Camera Mo	del —	Schedule	Backup
	ID		Add	DVR CH No.	-	Stored	Condition -
User 1	Password	·	Set	Manufacture	*	9/28/2005 💌	🗖 Alarm
	Confirm		Del	P/T/Z Model	~	9/28/2005 💌	Motion
	ID		Add	ID		Start Time	End Time –
User 2	Password	·	Set	Sensor In —		9/28/2005 💌	9/28/2005
	Confirm	(	Del	Sensor 1 None	•	3:14:52 PM 🔆	3:14:52 PM
	ID		Add	Sensor 2 None		Target	Table
User 3	Password	í	Set	Sensor 3 None	•	· ·	SET
	Confirm		Del	Sensor 4 None	•	Cam	era —
	ID		Add	Alarm Out —			□ 2 □ 4
User 4	Password		Set	Buzzer	-		
	Confirm		Del	Alarm 1 Off			8
	ID		Add	Alarm 2	-		□ 10 □ 12
User 5	Password		Set	Alarm 3	-		14
	Confirm		Del	Alarm 4	-	15	16

From 'System Set' menu, PTZ Camera & Schedule Backup menu are unavailable for 4 8,16channel (Future development). Others are the same as local system configuration.

E-mail Registration							
E mai regisa daon		Sender I	nformat	ion —			
User	ID	DVR					_
User	Domain	DVR					
		Notifica	ation Ou	t			
E-mail Report		В	еер	E-m	nail	Ala	rm
Monday Tuesday	Alarm	No	-	No	•	No	•
Vednesday 🔄 Thursday 🗾	Motion	No	-	No	•	No	-
Friday Saturday 🗾	Parameter		Ŧ		Ŧ		Ŷ
Sunday 🗾 Holiday 🗾	Video Loss	No	-	No	•	No	-
Time 3:17:39 PM 👘	Power Loss	No	•	No	•	No	•
Immediately 💌	Operation		<b>*</b>	[	¥	ļ	Ŧ

From 'Event Set' menu this has 1) E-Mail registration 2) E-Mail report 3) Notification out. The menu is same as local menu tree.

## Local setup





The detail left will be shown when you click the 'Local Setup' menu. 1) Draw Mode: User can select between YUV format using Direct X or RGB. 2)Date Format: Select the time/ date format. 3)Save Format: Select the saving file format from JPEG or BMP. 4) OSD: (1) CH1, CH2, ... (2) Size : Actual video size. NTSC - 720x240, 360x240, PAL-720x288, 360x288 (3)Speed: Playback Speed (4)Rate : Frame number per sec. (5)Mode: Live(Live monitoring) / R-Play(Remote play) / L-Play(Local play)

49/86

#### **Firmware Upgrade**



UPGRADE	
New prog	ram found!
Upgrade	Cancel

UP	GRADE FIRMWARE			
	RAMDISK	2072000 /	2850454	72 %
	Firmwa	re data transferrinç	]	Cancel

When user selects 'Firmware Upgrade' menu, if higher version exits in C:\KWClient\Upgrade folder, 'New Program Found!' message will be shown

If version is not higher in C:\KWClient\Upgrade folder,

'New Program Not Found' message will be displayed.

When 'New Program found' message is displayed, please push 'Upgrade' button. When user press's 'Cancel' button, 'Firmware Upgrade Fail' message is shown.

Note : For system stability, please "stop" the system from Recording.

UPGRADE FIRMWARE				
RAMDISK	2850454 / 2850454	100 %		
Wait !!! Firmware upgrading				

When firmware Upgrade is done successfully, 'Firmware Upgrade success!' message will be displayed.



The local system should be re-booted.

## Download, Image Save, Two-Way audio, Stop, Connect

#### Download



This is for transmitting the recorded data on HDD to client PC.



When 'download' button is pushed,

Start Time	8/ 4/2005	• 2:15:04 PM	Е ОК
End Time	9/28/2005	▼ 3:28:00 PM	Cancel

User select 'Start time' and 'End time' to download and push 'OK' button.

15:03:15			15:03:16	15:28:00
Start Time		1	Selected Time	End Time
175	2005	9	28	15:03:15 - 15:28:00
174	2005	9	28	14:36:18 - 15:03:15
173	2005	9	28	14:09:28 - 14:36:18
172	2005	9	28	13:51:35 - 14:09:28
171	2005	9	28	13:43:15 - 13:51:24
170	2005	9	28	13:17:58 - 13:43:15
169	2005	9	28	12:49:15 - 13:17:58
168	2005	9	28	12:33:23 - 12:49:15
167	2005	9	28	12:03:24 - 12:19:00
166	2005	9	28	12:03:03 - 12:03:07
165	2005	9	28	10:51:23 - 10:53:44
164	2005	9	28	10:45:04 - 10:50:45
163	2005	9	28	10:44:15 - 10:44:29
162	2005	9	28	10:42:39 - 10:43:25

Select the number (time) from list for 'Start Time'.

Download -	End Time	_			
1	2005	9	28	15:03:15	15:28:00
	t Time	9	Selected Time		End Time
15:0	3:16		15:27:59		15:28:00
					[
				End	Cancel

Select the number (time) from list for 'End Time'.



Processing bar will be shown above please wait till downloading is finished.

SYSTEM	LOCA		 HIIIH

When downloading is finished,

push 'Local' button, which turns to green (**LOCALE**) colour.

Then, push play( ) button.

Select 'Start Time' & 'End Time' and check ( ) 'Download'.

Start Time	2003-11-18 🔹 오후 8:36:36 🛖	ок
End Time	2004-11-17 • 오후 8:36:36 •	Cancel
Download	O Live Backup	Advanced



Then, the download list left will be shown. Select the number (time) which you want to play.



Local Play (from downloaded files) will be done like above.

## **Image Save**



This is for saving format. Either JPEG or BMP. The file will be stored C:\KWClient\Save.

#### Stop



This is for stopping Downloading.

# Connect

Re-connecting when access has failed

#### Pan/Tile, Zoom/Focus, OSD



1) Pan / Tilt

Using arrow key, controls the Pan/Tilt (Not supported at present)

- 2) Zoom / Focus
  - Using arrow key, controls Zoom, Focus (Not supported at present)
- 3) OSD

Whether OSD is displayed during live / playback

#### Log / Event / Info / Status

Log Event Info Status The relevant information like Log, Event, Info, Status will be shown as below.

Log Event Info Status	
System Message	
Log Event Info Status	
Close	

#### **Event Clear**



The relevant OSD turns to green colour when DVR has an event like Alarm, Motion, Video-loss.



Reset for event button (event clear)

#### Timer



This shows the client PC timer when monitoring is working.

**4:37:54** On the other hand, it shows the time the recording data belongs to during

playback. The timer format is according to date format specified on the "local Setup".





# Q & A

- 1.
- Q: The message "Can't display the page" is shown and failed to connect to DVR, when IP address or domain name is entered on the Internet explorer window.
- A: 1) DVR is not working or 2) a problem on the network connection. Please check the DVR is working properly also check the connection both DVR and PC.

2.

- Q: Can't download the ActiveX Control.
- A: This happens if "Windows XP Service Pack 2" is installed on the PC. Either remove "service pack 2" on the PC Menu, "program add & removal" on the control panel. Or, refer to Appendix 3 (See page 65)

3.

- Q: The client program is terminated with the message "Unsupported OS version!"
- A: The client program only works with Windows XP or 2000. Doesn't support Win.98, 98SE, ME.
- 4.
- Q: Login box keeps appearing.
- A: It appears repeatedly when Client ID & Password is input wrong. Please check the exact ID & Password set on the DVR.

5

- Q: Can't change "Draw mode" on the menu, Local setup.
- A: This is not possible during live monitoring and playback. User must stop the live monitoring or playback. Then, you can change the "Draw mode".

6.

- Q: Where is the saved file located?
- A: This is stored "C:\KWClient\Saved". The file can be played with Image viewer.

- 7.
- Q: There is no response after pushing the OSD button.
- A: OSD is showing several statuses during playback. If the detail items are not specified on the "Local Setup", there is no response even if pushing the OSD button during playback. Try it after selecting required OSD menu on the Local Set-up.

## 8.

- Q : I can't see the back up file made from a DVR on the monitor.
- A : Please check whether you have a Codec S/W or not. If you don't have, you have to install it in your PC.

## 9.

- Q : When I downloaded the image as AVI on to my memory stick, it plays back ok, but no date & time
  - A : Date & time is not supported when using AVI mode (window media player Codec required) this is only supported when back up is carried out using Exclusive mode.

#### 10.

- Q: I can see the display web layout on the monitor but no video pictures.
- A1 : Please check your PC specification needs to be Minimum Pentium III 750MHz and Graphic Memory 32M.
- A2 : Please, go to control panel -> Internet options -> security -> select Customer Level.

Go to ActiveX controls and plug-ins -> Automatic prompting for ActiveX Controls => Disable" Go to Download unsigned ActiveX controls => Prompt"

Go to Miscellaneous -> Allow script-initiated windows without size or position constraints" => Enable" (see Appendix 3)

# Appendix 1.

## 1. HDD INSTALLATION

#### 1) Components

The attached components are as follows,

0.8" Round Screw : 4

0.6" Round Screw : 2

Left Complementary Device : 1

40 Pin Connector Cable : 1

HDD Power Connector Cable : 1

## 2) Inner Configuration

The inner configuration of DVR is as follows,



0.8" Round Screw 0.6" Round Screw Left Complementary Device for fixing the HDD HDD 40 Pin Connector HDD Power Connector KERBEROS Main Board HDD Power Cable

#### 2. HDD Install Processing

Assemble the HDD with the Left Complementary Device using 0.8" Round Screw Fix the Left Complementary Device with 0.6" Round Screw to Main Body Fix the Right Part of HDD with 0.8" Round Screw to Main Body Assemble the HDD Cable and HDD Power Cable each others

# Appendix 2

## SENSOR INSTALLATION

#### 1. Components

- 1) External Sensor : 1 (You should prepare one set)
- 2) DVR System : 1

## 2. Inner Circuit for Sensor Input

The inner circuit of Mpeg 4 DVR is as follows,



PC817 : Photo Coupler The Specification of PC817

	Parameter			Unit
	Forward current	IF	50	mA
Innut	*1Peak forward current	I FM	1	А
Input	Reverse voltage	V R	6	V
	Power dissipation	Р	70	mW
	Collector-emitter voltage	V CEO	35	V
Output	Emitter-collector voltage	V ECO	6	V
Output	Collector current	IC	50	mA
	Collector power dissipation	P C	150	mW
Total	power dissipation	P tot	200	mW
*2I	*2Isolation voltage			V rms
Operation	Operating temperature			°C
Stor	Storage temperature			°C
*3Solo	lering temperature	T sol	260	°C

#### Absolute Maximum Ratings

\*1 Pulse width<=100 s, Duty ratio : 0.001 \*2 40 to 60% RH, AC for 1 minute

\*3 For 10 seconds

#### Electro-optical Characteristics

	Parameter		Symbol	Conditions	MIN.	TYP.	MAX.	Unit
	Forward vo	oltage	V F	IF = 20mA	-	1.2	1.4	V
Input	Peak forward voltage		V FM	IFM = 0.5A	-	-	3.0	V
mput	Reverse cu	rrent	IR	V R = 4V	-	-	10	μΑ
	Terminal capacitance		Ct	V = 0, $f = 1$ kHz	-	30	250	pF
Output	Collector dark current		ICEO	V CE = 20V	-	-	10 -7	А
	*4Current transfer ratio		CTR	IF = 5mA, V CE = 5V	50	-	600	%
	Collector-emitter saturation voltage		V CE( sat)	IF = 20mA, I C = 1mA	-	0.1	0.2	V
Turnel	Isolation resistance		R ISO	DC500V, 40 to 60% RH	5 x 1010	1011	-	Ω
Transfer charac-	Floating ca	pacitance	Cf	V = 0, f = 1MHz	-	0.6	1.0	pF
teristics	Cut-off fre	quency	fc	V CE = 5V, I C = 2mA, R L = 100 W, - 3dB	-	80	-	kHz
	Response	Rise time	tr	V CE = 2V, I C =	-	4	18	μs
	time	Fall time	tf	2mA, R L = 100 Ω	-	3	18	μs

## 3. SENSOR Install Processing

Please refer the below block diagram.



# Appendix 3

## INSTALLING VISTA WEB CLIENT ON WINDOWS XP SERVICE PACK 2.

1) Security Setup

Internet Options	
General Security Privacy Content Connections Programs Advanced	
Select a Web content zone to specify its security settings.	
Internet	
This zone contains all Web sites you Sites	
Security level for this zone	Tools-> Internet Options-> Security -> Select "Customer Level"
Custom settings. - To change the settings, click Custom Level. - To use the recommended settings, click Default Level.	
Custom Level Default Level	
OK Cancel Apply	
Security Settings	
Settings:	
Enable     Allow script-initiated windows without size or position constr     Disable     Enable     Enable     Allow Web pages to use restricted protocols for active cont	
Disable     Enable     Prompt Display mixed content     Disable	Select "Allow script-initiated windows without Size or position constraints"-> Enable.
Enable     Prompt     Don't prompt for client certificate selection when no certificate	
Reset custom settings Reset to: Medium Reset	
OK Cancel	



Security Settings	? 🗙
Settings:	
ActiveX controls and plug-ins  Automatic prompting for ActiveX controls  Disable  Administrator approved  Disable  Enable  Download signed ActiveX controls  Disable  Prompt  Download unsigned ActiveX controls  Additional unsigned ActiveX controls  Download unsigned ActiveX controls  Prompt  Promp	
	>
Reset custom settings Reset to: Medium Reset to: Medium	set
ок с	ancel

Select " Download unsigned Active X controls"-> Prompt

Select "Automatic Prompting for Active X controls"-> Disable

## 2) Connection





Select "Install Active X Control "

Internet	: Explorer - Security Warning
The pu softwa	blisher could not be verified. Are you sure you want to install this re?
Nai	me: kwclient.cab
Publist	ner: Unknown Publisher
	Install Don't Install
8	This file does not have a valid digital signature that verifies its publisher. You should only install software from publishers you trust. <u>How can I decide what software to install?</u>

Select "Install" and then 'Log-In' box will be shown.

# Appendix 4

DYNAMIC IP (Supporting DDNS Server)

1. Visit <u>http://www.dyndns.com/services/dns/</u> to get the DDNS user ID & PW as well as domain name.

		Favorites 🛃 🔯	· 🎍 🖬 • 🛄 🛃	-23		
ess 🗃 http://www.dyndns.com	n/services/dns/				<u> </u>	Go Links »
🐼 Dvn D				User:	Pass:	Login
	DynDNS: Keep	Connected			ost Password? - Sign Up No	w
	About	Services	Account		WS	
Services	-	•				
DNS Services	DNS Servi	ices				
Custom DNS Secondary DNS Recursive DNS		eral DNS services to fit all				
Recursive Divo	<ul> <li>Custom DNS</li> </ul>	- Our flagship DNS mana	gement tool for your own d	omain		
Dynamic DNS						
Dynamic DNS Static DNS	Secolaria	NS - Add reliability to you				
-	Security D <u>Recursive DN     Dynamic DNS </u>		n for your DNS queries			
Static DNS	Security D <u>Recursive DN</u> <u>Dynamic DNS</u> Dynamic DNS	NS - Add reliability to you S - orsure DNS resolutions S - Triffee dynamic DNS one free DNS service for the	n for your DNS queries (DDNS) service hose with static IP addres:	ses		
Static DNS TLD DNS	Security D <u>Recursive DN</u> <u>Dynamic DNS</u> Dynamic DNS	NS - Add reliability to you NS - asure DNS resolutio S - Transfere dynamic DNS	n for your DNS queries (DDNS) service hose with static IP addres:	ses		
Static DNS TLD DNS Domain Registration	Security D <u>Recursive DN</u> <u>Dynamic DNS</u> Dynamic DNS	NS - Add reliability to you S - orsure DNS resolutions S - Triffee dynamic DNS one free DNS service for the	n for your DNS queries (DDNS) service hose with static IP addres:	Secondary DNS	Dynamic DNS	Static DNS
Static DNS TLD DNS Domain Registration Mail Services	Scalar D     Recursive DN     Dynamic DNS     Dynamic DNS     TLD DNS - D	NS - Add reliability to you S - orsure DNS resolutions S - Triffee dynamic DNS one free DNS service for the	n for your DNS queries (DDNS) service hose with static IP address is and gTLDs Custom DNS		Dynamic DNS No	Static DNS No
Static DNS TLD DNS Domain Registration Mail Services Network Monitoring	Security Diversion of the security of the	NS - Add reliability to you <u>IS</u> - orsure DNS resolutio <u>S</u> - Th free dynamic DNS the free DNS service for the NS for operators of ccTLD	n for your DNS queries (DDNS) service hose with static IP address is and gTLDs Custom DNS me Yes	Secondary DNS	-	
Static DNS TLD DNS Domain Registration Mail Services Network Monitoring Web Redirection	Security Difference of the security of th	NS - Add reliability to you S - osure DNS resolution S - Th free dynamic DNS one free DNS service for the NS for operators of ccTLD ith your own domain name	n for your DNS queries (DDNS) service hose with static IP address is and gTLDs Custom DNS me Yes ttes Yes	Secondary DNS Yes	No	No
Static DNS TLD DNS Domain Registration Mail Services Network Monitoring Web Redirection Account Upgrades Pricing	Security Difference of the security of th	NS - Add reliability to you S - usure DNS resolutio S - TH free dynamic DNS one free DNS service for the NS for operators of ccTLD ith your own domain na pports Dynamic IP Upda	n for your DNS queries (DDNS) service hose with static IP address is and gTLDs Custom DNS me Yes ttes Yes No	Secondary DNS Yes N/A	No Yes	No Yes
Static DNS TLD DNS Domain Registration Mail Services Network Monitoring Web Redirection Account Upgrades	Security Difference of the security of th	NS - Add reliability to you S - Dusure DNS resolution S - TH free dynamic DNS one free DNS service for the iNS for operators of ccTLD ith your own domain namp pports Dynamic IP Updative irres your own nameserve Service Level Agreem	n for your DNS queries (DDNS) service hose with static IP address is and gTLDs Custom DNS me Yes ttes Yes No	Secondary DNS Yes N/A Yes Optional	No Yes No Not Available	No Yes No

2. Click "Dynamic DNS" menu.

## 3. Select "How To" menu.

e Edit View Favorites	Tools Help						
Back 🔹 🍙 - 💌	🗿 🏠 🔎 Search	👷 Favorites 🥝	🔿 - 📐 🕅 - 🗖	* 38			
ress 🙆 http://www.dyndns.o		~ ~		· 🔤 🕶		So Li	nks » 🧃
					]		Login
🎯 Dynl	JNS			User:	Pass:		Login
	About	Services	Account	Support	Lost Password? - News	Sign Up Now	
Services	-	DUOSM			· · · · · ·		
DNS Services	Dynamic	DNS					
Custom DNS Secondary DNS Recursive DNS	allowing your com	DNS service allows you puter to be more easily o the Internet community	accessed from various				
Dynamic DNS Features Available Domains FAQs How-To Static DNS	those important d always pointing to	S service is ideal for a ho ocuments while you're a your IP address, no ma P address, or e-mailing	t work. Using one of the atter how often your ISP	available third-party u changes it. No more fi	odate clients you can umbling to find that pi	keep your hostnam iece of paper where	ne you
TLD DNS			Add Dynamic DNS	- Manage Existing Hos	<u>sts</u>		
Domain Registration							
Mail Services	More Info:						
Network Monitoring							
Web Redirection		a basic overview of the f comains - a listing of don					
Account Upgrades		tly asked questions					
Pricing	• <u>How-To</u> - s	teps o get up and runni	•				
		- update clients tha	t work with this service				
Search DynDNS							
[Soarch]						Internet	

#### 4. Select "account" menu.

ynDNS Dynamic DNS	How To - Microsoft	Internet Explorer					
Edit View Favorites	Tools Help						
Back 🔹 🐑 - 🔀 🛛	💈 🏠 🔎 Search	📌 Favorites 🚱 👔	🧟 • 🎍 🖻 • 📒	🗵 🔏			
ess 🗃 http://www.dyndns.	com/services/dns/dyndns/h	iowto.html				🖌 🄁 Go	Links » 🍕
@ D				User:	Pass:	-	Login
🥪 Dyni	DNS			User.			
_	About	Services	Account	Support	Lost Password? News	- Sign Up Now	
	About	Genices	Account	Support	INCW5		
Services	Dynamic	DNS <sup>sM</sup> How	-To				
DNS Services	Dynamic	Dite new	10				
Custom DNS	First you will noo	an account of you alros	dy have an account pla	ease use the same acco	unt to croato addit	ional hostnamos	
Secondary DNS	First you will need	an <u>account</u> . If you allea	iuy nave an account, pr	ease use the same acco	Junit to create addit	ional nostnames.	
Recursive DNS	To graate the heat	, use the Add Host Forr	~				
Dynamic DNS	To create the host	, use the <u>Add Host Foll</u>	<u>II</u> .				
Features	The bester	т.		and the former barriers		d	. Constanting
Available Domains				ame in the input box, an g, anythingelse.homeun		d part of the name	e nom the
FAQs				g, anythingerse.nomeun the IP of the computer y		he form from Cho	ock it to
How-To Static DNS				the hostname to point to			CK IL LO
TLD DNS	make sure	unau iuns une same as u	ie ir address you want	the nostname to point to	o, or change it to th	ie right i=.	
	The rest of the field	de on this form are evol	ained below, as they als	o appear in the "Edit" fo			
Domain Registration		as on this form are expl	anica below, as they are		////.		
Mail Services	If you wish to edit	an existing host select	that host from the list in	n the <u>Dynamic DNS</u> sec	tion. You will need	to be logged in to	edit vour
Network Monitoring		editing form, you can:					
Web Redirection	-						
	<ul> <li>Check the</li> </ul>	IP in Database/DNS - t	his is the IP that your h	ostname currently point	s to.		
Account Upgrades				e auto-detected by our	· · ·		•
Pricing	· · · ·	field is NOT the IP addre the form from.)	ess that is currently in o	ur database, it is the IP	address that our s	ystem has detect	ed you are
Search DynDNS	<ul> <li>If you want</li> </ul>	anything-here.yourhost.	dyndns.org to work (ie.	to make things like www	w.yourhost.dyndns.	org work), check	the
	Enable Wi	Idcard box.					
				e Mail Exchanger field			
Soarch	If all a local a	a and an and a she and the a	ليحتجز فبالجة الحجيب بتبدر الج	ta tradición de la subsectión de la seconda de la second	the transformed and a state of the	C-4 0401 L	10

- Mark "I have read and agree to the Acceptable Use Policy above"
   Input "Username" & "Password".
- (For exam. Username: example, PW: quantumdvr)

DynDNS	Current User: eddydwr (LogOut)							
1	About Services Account Support Developers News							
y Account	Create Account							
ty Services account Settings billing	Please complete the form below to create your account. You will receive an e-mail containing instructions to activate your account. If you do not follow these directions within 48 hours, you will need to recreate your account.							
	It is strongly recommended that you visit this page securely. You are not currently visiting this page securely.							
	Acceptable Use Policy							
	Policy Last Modified: May 4, 2004							
	1. ACKNOWLEDGMENT AND ACCEPTANCE OF TERMS OF SERVICE							
	All services provided by Dynamic Network Services, Inc. ("DynDNS") are provided to you (the "Member") under the Terms and Conditions							
	set forth in this Acceptable Use Policy ("AUP") and any other operating rules and policies set forth by DynDNS. The AUP comprises							
	I have read and agree to the Acceptable Use Policy above: 🔽							
	Username							
	Username example							
	Your username will be used to login to your account and make changes.							

Check account registration is done successfully.
7. Select "Add Host Form" to create the domain name.



8.

- 1) Input "Hostname". Hostname is the same one as "username" (for exam: example)
- 2) You should select "dyndns.org" from the drop down menu, which is limited on our system.
- 3) Current dynamic IP will be shown below
- 4) After checking 1)~3), select "Add Host"
- 5) After registering hostname, check the ping status (ping -t example.dyndns.org)

🛎 DynDNS,org Dynamic DN					
	즐겨찾기( <u>A</u> ) 도구( <u>T</u> )	도움말(법)			
누 뒤로 • → - ③ ② △ 주소(D) ⑧ http://www.dyndn					
	is, org/ accounty services	7nosis/uynuns/auu,niini			Current User: eddydvr (LogOut)
DvnDNS.o	re				Cullent Osel. eutyawi (Logou)
	-0				
	A	bout Services A	ccount Support De	velopers News	
My Account	New Dynam	ic DNS <sup>SM</sup> Host			
My Services	New Dynam	C DING HUSE			0
Account Upgrades MailHop Outbound SLA		Hostname:	example	, dyndns.org	J
My Zones Add Zone Services		IP Address:	220.76.93.153		
My Hosts Add Host Services	En	able Wildcard:			
Dynamic DNS Static DNS WebHop	Mail Ex	changer (optional):		🔲 🗆 Backup M)	(?
MyWebHop Network Monitoring					Add Host Reset Form
Account Settings Billing					
- County					
			Dynamic Network Services, Inc. le Use Policy   Trademark Notice		
		T fivacy Folicy [Acceptab	ie ose i olicy i nademark volice	•	
ø) 완료					
한 관료 (1월 시작) 🔀 🥭 🔕 📿 🥺		SAL ST ST SAL	ଦନ ଜନନ ଜନନ ଜନନ ଅଲେ ଅନ୍		) 💕 인터넷 1) 🚴 🔽 🖾 🧐 🥔 A 🤔 📼 오후 8:30

9.

To connect DVR system, the followings-XDSL ID & PW / DDNS ID & PW/ Registered Domainhave to be input on the "Network set" menu.

#### NETWORK SET

USE DYNAMIC IP: YES XDSL USER ID : XDSL PASSWORD : DDNS USER ID : DDNS PASSWORD : REGISTERED DOMAIN: SAVE AND EXIT

## Appendix 5

#### SETUP FOR DVR PORT/ WEB SERVER PORT USING IP SHARING ROUTER

#### NETWORK SET

USE DYNAMIC IP: NO IP ADDRESS :000.000.000 GATEWAY :000.000.000 NETMASK :000.000.000 DNS SERVER :000.000.000 DVR PORT 2000 WEBSERVER PORT 2001 SAVE AND EXIT

1) To use IP sharing Router, "Use Dynamic IP" should be set to " No" first.

- DVR Port: Port number to connect network client program on remote PC. When it needs to be changed, number which is not overlapped should be input (2001~65535)
- Web Server Port: Port number to download network client program to remote PC. When it needs to be changed, number which is not overlapped should be input (2001~65535)

2) Setup "virtual server" on IP sharing Router

It is for setting virtual server to forward IP, which is allotted to DVR.

For exam.)

- DVR 1 IP: 192.168.0.11, DVR Port: 2500, Web Server Port: 2501
- DVR 2 IP: 192.168.0.12, DVR Port: 2600, Web Server Port: 2601

If two sets of DVR are configured above, the virtual server on IP sharing router is as follows.

(1) PC Server Name: DVR1-1 (192.168.0.11)

Protocol: TCP, Internal Port: 2500, External Port: 2500

PC Server Name: DVR1-2 (192.168.0.11)

Protocol: TCP, Internal Port: 2501, External Port: 2501

(2) PC Server Name: DVR2-1 (192.168.0.12)

Protocol: TCP, Internal Port: 2600, External Port: 2600

PC Server Name: DVR2-2 (192.168.0.12)

Protocol: TCP, Internal Port: 2601, External Port: 2601

\* For more detail, please refer to relevant IP sharing manual.

(3) 'DDNS' Setup on IP sharing router

DDNS configuration is no needed in case of fixed IP.

(4) Address and port number input on the Internet explorer window.

Please input the following format, <u>http://address:web server port</u>. If the system is on the dynamic IP environments and the address configured (3) is abc.dyndns.org and the same address and port is designated like (2),

To connect DVR1, http://abc.dyndns.org:2501, to connect DVR2, http://abc.dyndns.org:2601.

### Appendix 6

#### MAKING PARTITION ON EXTERNAL USB HDD

To back up to USB HDD, the USB HDD should be formatted first on PC. We are supporting FAT32 file system of which maximum size is 30GB at one partition. Please refer to the following procedure to make a partition and format on PC.

1. Select Control panel-> administrative Tools.



2. Select "Computer Management"



#### 3. Select "Disk Management".



4. Click right mouse button and select "New Partition".

🚽 Computer Management									
🚽 File Action View Window H	lelp								
_ ← → 12 12 12 12 12 12	1								
Computer Management (Local)	Volume	Layout	Type	File System	Status	Capacity	Free Space	% Free	Fault Tol
🗐 🌇 System Tools		Partition	Basic		Healthy (Unknown Partition)		27.44 GB	100 %	No
🕀 🔝 Event Viewer		Partition	Basic		Healthy (Unknown Partition)	510 MB	510 MB	100 %	No
<ul> <li>Gamma Shared Folders</li> <li>Mathematical Content of Conten</li></ul>	💷 (C:)	Partition		NTFS	Healthy (System)	27.95 GB	22.51 GB	80 %	No
Performance Logs and Alerts	BUSB DRIVER (E:)	Partition	Basic	CDFS	Healthy	81 MB	0 MB	0%	No
🛄 Device Manager									
Storage Hermovable Storage									
Removable Storage Bisk Defragmenter									
👸 Disk Management									
Services and Applications									
	@Disk 0								
	Basic	(C:)							
	55.88 GB Online	27.95 GB Healthy (S				14 GB Ithy (Unknov	vo Partition)		
		moderly (			Inca		arriadony		
	Disk 1     Basic		/////			7//////////////////////////////////////			777777
	37.25 GB	37.25 GB	Net	w Partition					
	Online	Unallocate		perties	- <u>[////////////////////////////////////</u>				//////
	ACD-ROM C		I — —	·					
	DVD 81 MB	USB DRI 81 MB CD	Hel	p					
	I OT MD	TRT MR CD	F'S						

5. Follow "New Partition Wizard" procedure as below.



6.

H wot	elp											
e k	l											
d)	Volume		Layout	Туре	File System	Statu	JS		Capacity	Free Space	% Free	Fa
	New Pa	artition	Wizard								100 % 100 %	No No
ps d Alerts			tion Type three type		itions: prima	ry, exte	nded, and l	ogical.		Ø	100 % 80 % 0 %	No No No
		Prir     Ext     Coscrip     A prim     Windo	mary partiti ended par gical drive otion ary partitio ws and ot up to four	on tition n is a volu her opera	iting system	s can sl	tart from a p	ce on a basi primary partiti ions and an	ion. You can			
	<b>E</b> 5: 0						< Back	Next :	·	Cancel		
	<b>Disk 1</b> Basic 37.25 GB Online		37.25 GB Unallocate	ed ///								

7. Maximum is 30GB at FAT32 file format.

Ve	lume Layout	Type File System	Status	Capacity	Free Space	% Free	1
	New Partition Wizard				×	100 %	1
	Specify Partition Size Choose a partition si		Ø	100 % 80 % 0 %	1		
	Maxium disk space i Minimum disk space Partition size in MB:		38147 8 3000q				
B 50			< Back Next >		ancel		
B- 3	PDisk 1 asic 7.25 GB 37.25 GB Iline Unallocate	ad					

8.

٧o	lume	Layout	Туре	File System	Status	:	Capacity	Free Space	% Fr
	New Partition	n Wizard							100 ዓ 100 ዓ
	<b>Assign Driv</b> For easie				e letter o	r drive path to your	r partition.		100 % 80 % 0 %
	O Mour		owing e	e letter: mpty NTFS fo tter or drive pa		D v Browse			
₩ B.50						K Back	ext > (	Cancel	
Ba	PDisk 1 asic 7.25 GB	,37.25 GB							

9.

HQ.										
	Vo	ume	Layout	Туре	File System	Status		Capacity	Free Space	% Free
		New Partition Format Par								100 % 100 % 80 %
ts	2			is partitio	on, you must fi	ormat it first.			<b>V</b>	0%
			whether yo o not forma			artition, and if so, wh	hat settings y	you want to	use.	
		💽 Fo	ormat this p	artition v	vith the followi	ng settings:				
			File system	1:	FA	Т 32				
			Allocation	unit size	: De	fault	~			
			Volume lat	oel:	Ne	w Volume				
			Perform	n a quicl	k format	$\checkmark$				
	_		Enable	file and	folder compre	ession				
	₩ 8 5									
	5					< Back	Next >		ancel	
	Ва 37	P <b>Disk 1</b> Isic 1.25 GB Illine	(37.25 GB Upallocati	//// ed ///						

10. At this stage, New Partition has been made.

Volume	Layout Typ	e   File System   Status	Capacity	Free Space	% Free
📕 New Partitio	n Wizard				100 %
		Completing the New Parti Wizard You have successfully completed the New F		rd	100 % 80 % 0 %
	J	You selected the following settings: Partition type: Primary partition Disk selected: Disk 1 Partition size: 30000 MB Drive letter or path: D: File system: FAT32 Allocation unit size: Default Volume label: New Volume Durick format: Yes			
B. Si		To close this wizard, click Finish.			
0 —		< Back Finish		ancel	
Basic     37.25 GB	37.25 GB				

11. Check New partition was created correctly. (Format will be executed automatically)

File Action View Window H	lelp									
-> 🗈 📧 😫 🕼 📽 📓	1									
Computer Management (Local)	Volume	Layout	Туре	File System	Status	Capacity	Free Space	% Free	Fault Tolerance	Overhead
🍒 System Tools	8	Partition	Basic		Healthy (Unknown Partition)	27.44 GB	27.44 GB	100 %	No	0%
🖅 💼 Event Viewer		Partition	Basic		Healthy (Unknown Partition)	510 MB	510 MB	100 %	No	0%
🗄 👰 Shared Folders	🗐 (C:)	Partition	Basic	NTFS	Healthy (System)	27.95 GB	22.51 GB	80 %	No	0%
🗉 🕵 Local Users and Groups	Rew VOLUME	Partition	Basic	FAT32	Healthy	29.28 GB	29.28 GB	100 %	No	0%
🕀 🎆 Performance Logs and Alerts	SB DRIVER (E:)	Partition	Basic	CDFS	Healthy	81 MB	0 MB	0%	No	0%
🛄 Device Manager										
Storage										
Removable Storage Disk Defragmenter										
Disk Management										
Services and Applications										
	🗇 Disk 0									
	Basic	(C:)								
	55.88 GB Online	27.95 GB Healtiny (:	11 S .			44 GB				510 MB
	Online	Heatiny (	System;	)	Hea	althy (Unknov	wn Partition		11	Healthy (Unkr
	🖓 Disk 1									
	Basic	NEW YOL		(D:)						
	37.25 GB Online	29.29 GB	FAT32				7.96 GB			
	Online	Healthy					Unallocate			
	-						_			
					_					

### 12. Check New Partition was created correctly

	NEW VOLUME (D	);)	
	NEW VOLUME (D:) F	Properties	? 🔀
torage	General AutoPlay 1	Tools Hardware Sharing	<u> </u>
		/ VOLUME	
	Type: Local	Disk	
	File system: FAT3	2	
	Used space:	16,384 bytes	16.0 KB
	Free space:	31,438,045,184 bytes	29.2 GB
	Capacity:	31,438,061,568 bytes	29.2 GB
		Drive D	Disk Cleanup
		OK Cancel	Apply

# Appendix 7

# **SPECIFICATION**

		Model		G	Quantum DVR Series				
Vic	Camera	input (NTS	SC / PAL)	Quantum4-DVD	Quantum8-DVD	Quantum16-DVD			
Video		Output		1 BNC, 1S-Video	1 BNC, 19	S-Video, VGA			
Αı		Audio inpu	ıt	1RCA		RCA			
Audio		Output			1 RCA				
S	Sensor in (N/	/C, N/O) /A	larm out	4 In / 1 Out					
	Opera	ting syste	m		Embedded Linux				
Di		Speed		120fps	240fps	480fps			
Display	Resolution (pixel)			720*480, 260*2	20(NTSC)/ 720*288, 3	360*288(PAL)			
ay		Split scree	n	1,4 sequence	1,4,6,8 sequence	1,4,6,8,16 sequence			
	C	Compressio	on		MPEG4				
	Re	solution (p	ixel)	720*480, 260*2	20(NTSC)/ 720*288, 3	360*288(PAL)			
	Р	icture qual	lity	3 STE	PS, (Low, Medium, I	High)			
-		Mode		Normal	. Motion. Alarm. Sec	uence			
lec	Priority			Alarm $\rightarrow$ Motion $\rightarrow$ Sequence $\rightarrow$ Normal					
Recording		Total	NTSC/PAL	60fps(720*240), 120fps(360*288) / 50fps(720*288), 100fps(36					
ling			NTSC	30fps(360*240)	15fps(360*240)	7.5fps(360*240)			
-	Speed	Each		15fps(720*240)	7.5fps(720*240)	3.75fps(720*240)			
		channel	PAL	25fps(360*288)	12.5fps(360*288)	6.25fps(360*288)			
				12.5fps(720*288)	6.25fps(720*288)	3.125fps(720*288)			
	Water m	arking & so	crambling	Propriety Algorithm					
		Display		1, 4	1,4,8	1,4,8,16			
Ρ	S	Search moo	de	Date, Time, Calendar Normal.Rew.FF. (Recorded speed *2, *4, *16) Frame to Frame,					
Playback		Speed		Normal.Rew.FF. (Rec	orded speed *2, *4, * Pause	16) Frame to Frame,			
bac		Device			Internal HDD				
×	НС	DD Sizes (	GB)	80,160 & 250		50 & 500			
		age capture			n or AVI Format & US				
		twork inter			Ethernet				
7		Protocol		TCP/IP, SMT	P, HTTP, DHCP, PPP	OE (ADSL)			
Network	Seria	l communi	cation	No	RS-232 1eac	h, RS-485 1each			
Nor		Application	n	Window	vs 2000 / XP (Client s	system)			
×	V	Veb brows	er	Internet Explore	er ≥ 5.0. (DVR's cont	rol or viewing)			
	E١	vent transp	ort	When eve	ent occur, set to sen	d E-mail			
Ва		Interface			USB 2.0				
Backup	Ва	ack-up dev	ice	External USB HDD, int	ernal DVD-RW, Netw stick	vork Backup, Memory			

	Motion detection			E	ach control/channel				
				Sensitiv	ity: 3step for each channel				
Contro			Area:	Area: Individually programmable motion detection area for each camera.					
tro	Alarr	n hold time			5 ~ 240 seconds				
-	Event log		256 event	t (alarm, moti	ion, video & power loss & record On/Off)				
	Remote controller			IR remote controller (32)					
	Pan/Tilt camera		N	No RS-485 inte					
		HDD	Two HDD's max.						
	Pow	/er source		100	~ 240V AC. 50 ~ 60Hz.				
	Power su	pply capability:	60	W	250W (AC current ≤ 500mA)				
Q	Operatin	ig temperature		5	~ 40°C (41 ~ 104°F)				
Others	Relati	ve humidity		Maxim	um 80% Non-condensing				
S	Weight	Net	4.0	Жg	6.0Kg				
	troigin	Gross (box)	5.0	Жg	7.0Kg				
	Dimension	Net	350(w)*250	(d)*70(h)	450(w)*370(d)*90(h) mm				
	Binenolon	Gross (box)	400(w)*340	(d)*170(h)	500(w)*460(d)*190(h) mm				

Design and product specifications subject to change without notice

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