Four Channel
Embedded Digital Video Recorder

JMK

USER'S MANUAL

JDR-913

CE FC

Index

Introduction and attention

The digital video recorder (DVR) is for recording/retrieving video streams from up to 4 channels at the same time. It adopts a digital image compression technology to c-ompress the input channel video streams, and uses HDD to record the compressed video stream.

The following operation guide explains how to operate/manage the DVR, and the f-ollowing installation guide explains how to install DVR at your home or HDD into the DVR.

Hope you enjoy it, use it to protect your home, and eventually make your home as SAFE HOME.
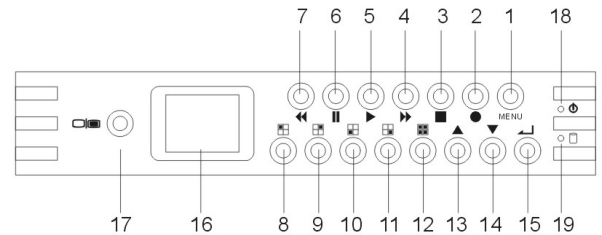
1. Menu Button: Press this button to enter & start the menu option
2. Recording Button: Press it to start recording
3. Stop Button: Press it to stop display/recording(Notice:There's a password requirement to stop recording,it will just be stopped after the password confirmed by the device.The "@"button will disappeared after closed recording function, password will be setup as: 111111)
4. Quick Dispaly Button: Displaying video forward qucikly
5. Dispaly Button: Press it to choose dispalying time & event(Notice:Please stop recording before displaying)
6. Pause/Single video picture displaying button: Press it to make the Pause/display single video picture
7. Replay Button: Press it to replay(Notice:The replay speed is relate of the numbers of recording file/ number of recording channel/quality of recording)
8. Channel 1 Button: Choose Channel 1
9. Channel 2 Button: Choose Channel 2
10. Channel 3 Button: Choose Channel 3
11. Channel 4 Button: Choose Channel 4
12. Full Channel Button: Choose all the 4channels together
13/14. Up/Down Button: Choose/reset
15. Choose/Confirm Button: Confirm to enter the choosed item & set-up for each funtion
16. TFT LCD Monitor
17. Switch
18. Power light
19. HDD working light
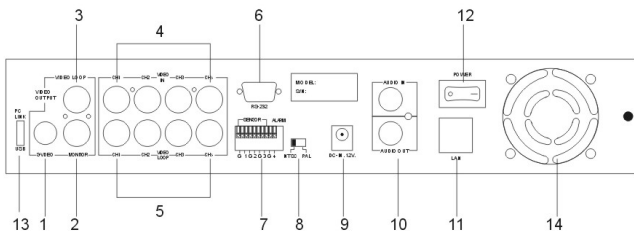
1.S Video

2.Video output

3.Monitor : Second Video output

4.Video input

5.Video loop-through

6.VGA port(optional)

7.Sensor input/alarm output: 4 sensor inputs and one alarm output

8.NTSC/PAL switch

9.DC-in (12Voltage 3-5A)

10.Audio-in/out (optional function)

11.LAN(RJ45)   (optional function)

12.Power switch

13.PC Link : USB device (2.0) (optional function) or USB Host

14.FAN

※Back side panel connection diagram
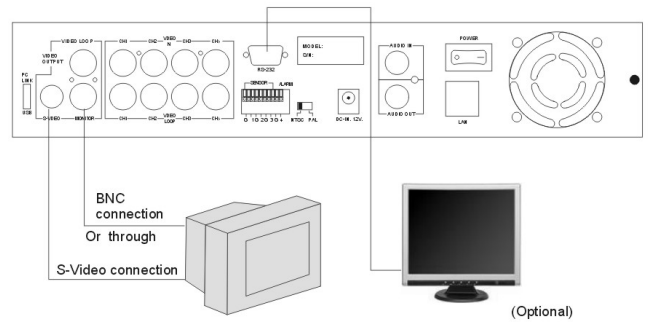
(Optional)

1.Video output connection (TV or monitor, LCD monitor)
*Please connect TV(monitor) or LCD monitor (optional) to the unit over
the Video output connector.
*The unit provides 1 x S-Video input, 2 x BNC connector and 1 x VGA
output. (optional)
*The above Figure shows the video signal line connection.

2. Video input connection (Camera)
Please connect Camera to the unit over the Video input connector.
It can working with 4 cameras.The camera installation
Procedures are as following:
1.Connect the video signal line: connect the video signal line to the unit
2.plug in the adaptor. The complete connection with a camera will be shown
  as figure below:

Signal Line

Sensor

Power line

power outlet

AC/DC adaptor
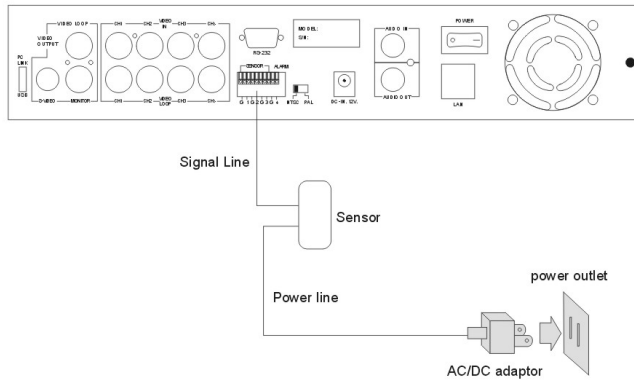
3.Sensor Installation
The unit provides 4 sensor input for 4 channels. The sensor
Installation procedures are as follows. There are two simple steps
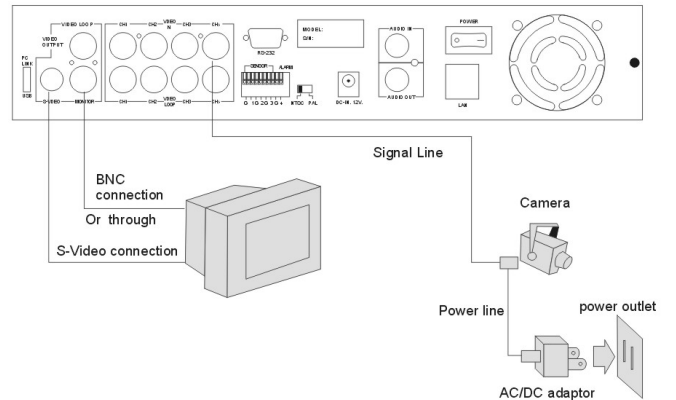For the installation of the sensors.
1.Connect the sensor signal line: Connect the video signal line to the unit. The
Sensor signal terminal is at the unit's back panel
2.Connect the sensor adaptor jack into the sensor, and plug in the adaptor.

CH1   CH2   CH3   Ch4   Alarm out

Power line

Signal Line

Alarm

power outlet

AC/DC adaptor
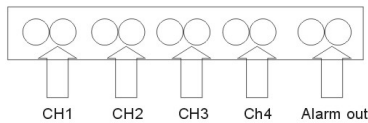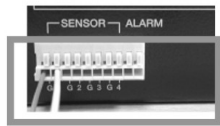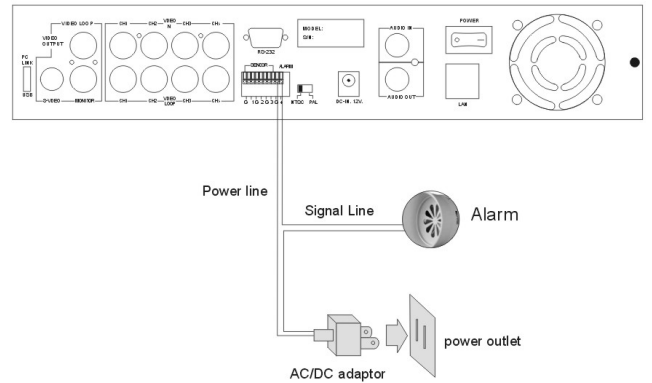
4. Alarm installation
   The unit provides 1 more external switch for sounding alarm when the
sensor is Activated due to the unwanted entrance of anonymous visitor.
The switch Is open at normal state,but,if the switch is closed it will causes
the electric bell by the loop , the circuitry is showing as above.

There are two steps for the installation of the alarm
1.Prepare the power supply:the alarm needs a power supply, the power
supply comes with the alarm
2.Connect the alarm power line:the alarm power line is connected with the
alarm switch terminal.

Please confirm the installation of system before starting DVR(prefer to P5),and then plug the power to press the switch in the back board.

After the unit is powered on, the unit is checking HDD for several seconds,the inform-ation will be displayed on the screen as right:

HDD CHECKING

OK

The unit will enter into real-time display mode shown as the right figure:

CH1 CH2
CH3 CH4

NOTICE

1. Make sure the HDD is off before removing the drive

TURN OFF AND ON THE DVR!

2.Once you resume the initial setting, the right information will be displayed on the screen. Then turn off the unit and re-power on it.

Power on the system

MAIN MENU
CAMERA SELECT   1234
RECORD SELECT   1234
RECORD MODE   EACH/QUAD
RECORD FRAMERATE   30
RECORD QUALITY   HIGH
RECORD SCHEDULE
SUB MENU
HARD DRIVE SETUP
SENSOR SETUP
LANGUAGE SELECTION   ENG/中文

Press"MENU"button to open OSD menu as right

Press"MENU"button to exit OSD menu to real-time display

CH1 CH2
CH3 CH4

Press" ● "button to start recording

Press" ■ "button to stop recording (password is requested!)

Press" ▶ "button to search time or event to playback

SEARCH TIME
HDD: MASTER
04/03/24 13:24:21-04/03/24 13:44:54
>01 TIME 04/03/24 13:24:21
>02 TIME 04/03/24 13:30:55
>03 TIME 04/03/24 13:40:54
(▲▼)MOVE;(←) CHANGE;(◀)PLAY

Repress"MENU"button to exit the menu

SEARCH MODE

Press" ▶ "button to   start replaying

Press" ■ " button to stop recording

CH1 CH2
CH3 CH4

PLAYBACK MODE

※MAIN MENU

Press"MENU"to display
menu option shown as
right figure.

```
        MAIN MENU
CAMERA SELECT        1234
RECORD SELECT        1234
RECORD MODE          EACH/QUAD
RECORD FRAMERATE     30
RECORD QUALITY       HIGH
RECORD SCHEDULE
SUB MENU
HARD DRIVE SETUP
SENSOR SETUP
LANGUAGE SELECTION   ENG/中文
```

Operation Buttons
MENU--- press to display menu option.

▲▼ --- press to change menu field
or change the unit's conf-
iguration values.

◢◣ --- press to select menu item or
confirm the selection.

※Please stop recording or playback before you enter into OSD menu.
※You will be requested to enter password, while stopping recording.(the original password:111111)
※"NETWORK SETUP"is optional function which is only provided with LAN model.

※CAMERA SELECT

```
        MAIN MENU
CAMERA SELECT        1234
RECORD SELECT        1234
RECORD MODE          EACH/QUAD
RECORD FRAMERATE     30
RECORD QUALITY       HIGH
RECORD SCHEDULE
SUB MENU
HARD DRIVE SETUP
SENSOR SETUP
LANGUAGE SELECTION   ENG/中文
```

The unit provides 4 cameras inputs. You can use
channel buttons on the front panel to select
specified channel for real-time display.

You can use "◢◣" button or channel buttons for different combinations for
channel display.
Example:
1. When you choose (-----), all cameras are off
2. When you choose (1234), all cameras are displayed.
3. When you choose (-----4), only the fourth channel is displayed.

⚠ NOTICE

VIDEO LOSS !

"VIDEO LOSS" signal will be displayed, and the built-in
alarm buzzer will be triggered to sound, (for 30s)while no
video connection or connection failure.

⚠ NOTICE

Channel Display Control

In each mode(回) mode, you can use the following buttons to
display Full-screen format of each channel.

▦ Channel 1 button: Full screen display of channel 1

▦ Channel2 button: Full screen display of channel 2

▦ Channel 3 button: Full screen display of channel 3

▦ Channel 4 button: Full screen display of channel 4

※RECORD SELECT

```
        MAIN MENU
CAMERA SELECT        1234
➤RECORD SELECT        1234
RECORD MODE          EACH/QUAD
RECORD FRAMERATE     30
RECORD QUALITY       HIGH
RECORD SCHEDULE
SUB MENU
HARD DRIVE SETUP
SENSOR SETUP
LANGUAGE SELECTION   ENG/中文
```

Selecting channel on this menu option is same
as "CAMERA SELECT" options.
Only selected camera will record real-time events
during recording period

※RECORD MODE

```
        MAIN MENU
CAMERA SELECT        1234
RECORD SELECT        1234
➤RECORD MODE          EACH/QUAD
RECORD FRAMERATE     30
RECORD QUALITY       HIGH
RECORD SCHEDULE
SUB MENU
HARD DRIVE SETUP
SENSOR SETUP
LANGUAGE SELECTION   ENG/中文
```

You can use "◢◣" botton to select specified channel
or all channels record:
choose "田" :all channels record
choose "回" :specified channel record on full screen.
Notice:this DVR does not support two kinds records at
the same time.

※RECORD FRAMRATE

MAIN MENU
CAMERA SELECT   1234
RECORD SELECT   1234
RECORD MODE   EACH/QUAD
➤ RECORD FRAMERATE   30
RECORD QUALITY   HIGH
RECORD SCHEDULE
SUB MENU
HARD DRIVE SETUP
SENSOR SETUP
LANGUAGE SELECTION   ENG/中文

There are 9 different frame rate settings for operation:
30fps,15fps,10fps,7fps,5fps,4fps,3fps,2fps,1fps

But the unit is set to NTSC:30fps;PAL:25fps in the factory

⚠ NOTICE

RECORDING FRAME RATE
The higher the record frame rate is, the more natural look will be
displayed on the screen on playback mode.
But the lower the record frame rate is, the more you can save the
space on HDD.

FPS		1	2	3	4	5	7	10	15	30
Full screen	CH1	1	2	3	4	5	7	10	15	30
	CH2	0.5	1	1.5	2	2.5	3.5	5	7.5	15
	CH3	0.33	0.67	1	1.33	1.7	2.33	3.33	5	10
	CH4	0.25	0.5	0.75	1	1.25	1.75	2.5	3.75	7.5
4 Quad		1	2	3	4	5	7	10	15	30

※VIDEO QUALITY

MAIN MENU
CAMERA SELECT   1234
RECORD SELECT   1234
RECORD MODE   EACH/QUAD
RECORD FRAMERATE   30
➤ RECORD QUALITY   HIGH
RECORD SCHEDULE
SUB MENU
HARD DRIVE SETUP
SENSOR SETUP
LANGUAGE SELECTION   ENG/中文

There are 3 different video quality settings for
operation: Normal, Low, High

⚠ NOTICE
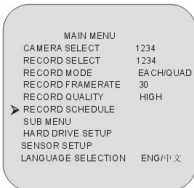
DIFFERENT VIDEO QUALITY SETTINGS ON HDD CAPACITY
The higher the video quality is, the clearer images the unit plays.
But the lower the video quality is, the more you can save the space
on HDD(80G).

FPS		1	2	3	4	5	7	10	15	30
Full screen	HI	1466H	732H	488H	366H	292H	208H	146H	96H	50H
	NORMAL	1984H	938H	662H	496H	396H	282H	198H	132H	66H
	LO	2306H	1152H	768H	576H	460H	306H	230H	152H	78H
4 Quad	HI	1112H	558H	370H	278H	222H	160H	112H	74H	38H
	NORMAL	1526H	764H	510H	380H	304H	220H	152H	102H	50H
	LO	1754H	876H	584H	440H	350H	250H	176H	116H	58H

※RECORD SCHEDULE

```
            MAIN MENU
      CAMERA SELECT      1234
      RECORD SELECT      1234
      RECORD MODE        EACH/QUAD
      RECORD FRAMERATE   30
      RECORD QUALITY     HIGH
  ➤  RECORD SCHEDULE
      SUB MENU
      HARD DRIVE SETUP
      SENSOR SETUP
      LANGUAGE SELECTION  ENG/中文
```

Enter into this option to change a recording schedule during a day (24-hour period) .

```
        Record schedule
    + T T T A A T T T T T T T T T +

    0  3  6  9  12  15  18  21  24
```
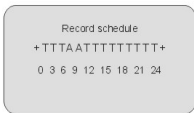
Numbers above indicate the time duration of 24 hours.
(T) Letter indicates recording.
(S) Letter indicates sensor recording. It means the unit starts recording as the attached sensors being triggered during this period.
(--) Recording is off during this duration.

SETTING EXAMPLE:

```
 0:00 ~ 7:00     SENSOR RECORDING
 7:00 ~ 11:00    RECORDING DISABLED
11:00 ~ 18:00    RECORDING
18:00 ~ 24:00    SENSOR RECORDING
```

```
+ A A A A A A A - - - - T T T T T T T A A A A A A +
:                 :   :               :           :
0                 7   11              18          24
```
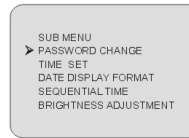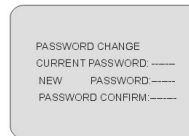
NOTICE

SENSOR RECORDING INSTALLATION

The unit provides 4 alarm inputs which can be configured as normal close, normal open, motion detection +NC and motion detection+NO over "SENSOR SETUP" menu option. (Please refer to P. 18 for the sensor setup). After the sensor configuration, please go back to "RECORD SCHEDULE" menu to enable sensor recording.

※PASSWORD CHANGE

```
      SUB MENU
  ➤  PASSWORD CHANGE
      TIME SET
      DATE DISPLAY FORMAT
      SEQUENTIAL TIME
      BRIGHTNESS ADJUSTMENT
```

PASSWORD CHANGE .
You enter into "PASSWORD CHANGE", a password change input menu replaces the "SUB MENU" (The default password is 11111)
When the new password is accepted, the board will flash the following screen message:
PASSWORD changed!!!
The message will blink 5 times. Then the display goes back to SUB MENU.
If the password was not accepted, the unit will automatically return to SUB MENU.

```
  PASSWORD CHANGE
  CURRENT PASSWORD: -------
  NEW       PASSWORD:-------
  PASSWORD CONFIRM:-------
```

NOTICE

FRONT PANEL BUTTONS DEFINITION

⊞ means "1"	⊞ means "5"	▶ means "b"
⊞ means "2"	● means "6"	MENU means "c"
⊞ means "3"	◀◀ means "7"	▲ means "D"
	■ means "8"	▼ means "E"
⊞ means "4"	❚❚ means "9"	⌐ means "F"
	▶▶ means "0"	

※TIME SET

```
         TIME
  2006/03/21  03:23:21
```

Enter into this option to change date and hour.

※DATE DISPLAY FORMAT

```
  DATE DISPLAY FORMAT
          V
      YYYY/MM/DD
```

The unit provides yyyy/mm/dd or dd/mm/yyyy variant which depends on the regional preference.

※SEQUENTIAL TIME

```
  SEQUENTIAL  TIME  9sec
```

Use this menu to specify each channel display dwell time.
Dwell time settings determine from 1 sec to 9 sec between displays for 4 channels.

※AUTO RECORD

Use this menu to run auto recording

※HDD SETUP

```
      HARD DRIVE SETUP
  HDD OVERLAY        YES
  MASTER HDD SIZE    82395MB
  MASTER HDD USED   0MB  0%
  MASTER HDD FORMAT
  SLAVE HDD SIZE
```

HDD overlay:
If you choose "YES" , the unit will continue recording and overlay the recorded data when HDD's space is full
If you choose "NO" , the unit will stop recording while HDD's space is full
MASTER HDD SIZE:
It indicates the capacity of the primary HDD installed in the unit
MASTER HDD USED:
It indicates how many percentage of HDD's capacity has been occupied.
MASTER HDD FORMAT:
It erases all of the recorded data in Master HDD
The authorized password is requested before formatting, after the unit formatted, the following information will appear on the screen "HARD DISK FORMATTED" .

※ALARM SETUP

```
           SENSOR SETUP
  ALARM  RECORD  TIME    15
  ALARM  OUT       TIME    05

  CHANNEL–1   TYPE:MOTION+ N-C
  CHANNEL–2   TYPE:MOTION+ N-C
  CHANNEL–3   TYPE:MOTION+ N-C
  CHANNEL–4   TYPE:MOTION+ N-C
```

SENSOR RECORD TIME:
Recording continuously once sensor Being triggered.

ALARM OUT TIME:
It controls how long (in second) the alarm ringing after being triggered.

H/W SENSOR SETUP
The unit provides 3 different modes for External sensor facilities
:
1.Not installed. 2. Normal open.
3. Normal close.
In normal open mode, the cable line Connected between the sensor and the unit is cut off by an intruder, the unit starts recording.

In normal close mode, the cable line connected between the sensor and the Unit is cut off by an intruder , the unit stops recording

※PLAYBACK

```
       SEARCH TIME
       HDD: MASTER
  06/03/03 13:24:21-04/03/24 13:44:54
  >01 TIME  04/03/24  13:24:21
  >02 TIME  04/03/24  13:30:55
  >03 TIME  04/03/24  13:40:54
```

Please use the front panel buttons to operate various playback functions.

Press "▶" button, then the playback time/events selection menu as the left figure appears on the screen. Or you can simply press "▶" twice to directly start playing.

You can either enter the specified time/date to playback or select the event or even view the playback over PC

Operation guide

NOTICE

1. Please stop recording before playback.
2. Because the events selection is default setting, so you need to press "▲/▼" button to switch to time selection.

CONTROL BUTTONS

1. ▶▶ (fast forward button):
Press this button to play the recorded stream faster.
The unit provides three levels of fast forward
playback speed:

▶▶1: play one time faster (x1), press "?" button
▶▶2: play two times faster (x2) than the normal play
▶▶3: play four times faster (x4) than the normal play
▶▶4: play thirty-two times faster (x32) than the normal play
▶▶5: play sixty-four times faster (x64) than the normal play

2. ◀◀ (playback button):
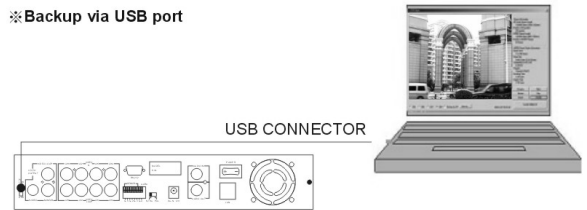Press this button to play the recorded stream backward.
Remarks: the playback speed depends on the number of the recording file/
         recordig channel,and the quality.

3. ▮▮ (Pause button) :
Single press it for pause,double press it for playing.

Optional functions

※**Backup via USB port**

USB CONNECTOR

The unit provides one USB port to simple backup over the connection with PC.
Please mind the following steps to successful link.
Step 1. Connect the USB cable between the unit and PC
Step 2. Select "LINK TO PC" under submenu of the unit
Step3. The "linking" will take around 30sec.
Step4. The connection is ready for PC backup as "Linked" indicates on the screen.
Step 5. Open the PC viewer on PC, once PC identifies one unknown Hardware device
Step6. Press"Menu" button back to "Main Menu"

Notice:
1.the unit employs USB 2.O, so it will take around 5 min to hand shake with USB 1.0.
2.Before operating backup over USB, please install PC viewer software into your PC.

NOTICE

Please don't press "MENU" button during linking status,
it would likely lead to unpredictable Error on your PC

REMARKS: Please refer to Page.25 for the PC viewer installation and
operation guide.

Optional functions

※**Network Setup**   Network/Audio record & play setting:

```
NETWORK SETUP
ACCEPT IP            YES
MAC ADDRESS    03:01:01:01:25:46
IP ADDRESS        192.168.000.090
SUBNET MASK     255,255,255,000
GATEWAY           192.168.000.001
DVR ID ON LAN    A PLUS
DHCP                  [OFF]
```

This DVR has network function, please make sure to set network from network option,Due to this setting will concern to some technique questions, we suggest let network controller to set, or please refer to left drawing demonstrated.

Long-distance connecting operations please refer to Page 21!

Consistent PC system spec:
1.CPU:1GB HZ OR ABOVE.
2.System Memory:256MB or above
3.VGA memory:32MB
4.OS:Window2000/XP

※**Audio record.**

```
Record        [ON]
Play           [OFF]
```

This offer 1 channel input, set audio record and play from this option.

※**PC Client Application.**

This dedicated remote PC client software allows you from a remote location to view live and recorded video over Internet. Also, you can capture,convert the video from the unit into AVI file or JPEG file, or play the stored video later on.
Please follow the instructions below to use PC client.

After you install PC client software into your PC, the Main window will appear on screen:


1.How to connect to the DVR

Click on "Connect " to enter into "DVR Client connection manager" As the following dialog window:

DVR IP: The DVR IP address is the IP address of the remote DVR.
Password : The password is same password used for formatting the DVR's Hard Drive. The default value is 111111
Nickname: If you have configured DHCP settings in DVR, you can connect to DVR by click on "Search DVR" . There will be a list of DVR in Nickname list box. Select one you want to connect with from the list.
click on "OK" to create connection.

2. Connection Status:

When successfully connected, you would see"Connected" sign. This window also displays DVR IP address and shows changes of connection speed.
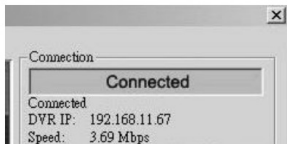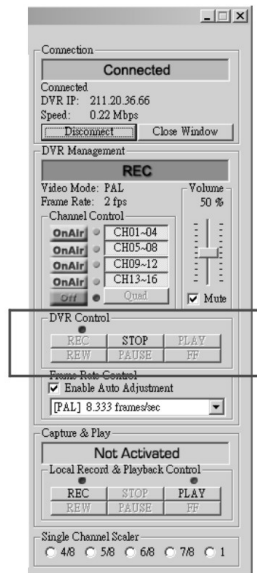

To disconnect, simply click " Disconnect "
To close the application, click " Close Window" button

3. DVR control

The panel shown as the following figure operates exactly as the remote DVR operational button allow you to control remote DVR to live view, record and playback as well.

4. Capture & Save &Play on you PC


A： Capture video data
When you click "REC" button, it will start to record the incoming video on your PC hard disk. The DVR client creates " steam_files" folder where the execution file is located. When the client is recording, the Capture & Play status indicator would show the current status, REC.

B： Playback
After recording is finished, click" Play " button to play the recorded video stream. Then you will see a stream file list of the video stream files previously captured.

5. DVR management
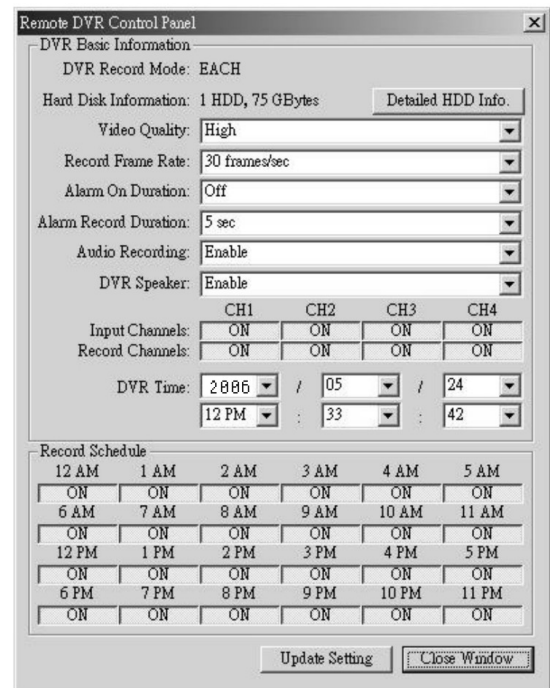
This option enables you to adjust remote DVR's operation setting : Video Quality, Record Frame rate, Alarm On Duration, Alarm record Duration, Input Channels, Record Channels, DVR system time setting and Record Schedule. All of settings operate as you do with DVR itself. Notice: For the record mode change can be made only on DVR,so the display shows the current DVR record mode on connection.

6.AVI file

Click on this button to convert the real-time video data or the recorded data into AVI file

Click on "AVI save as" button to convert the desirable data into AVI file, then you will see the following dialog box for saving the AVI file. After specifying the file name and confirmation, please click on "Backup to AVI" to start the conversion.
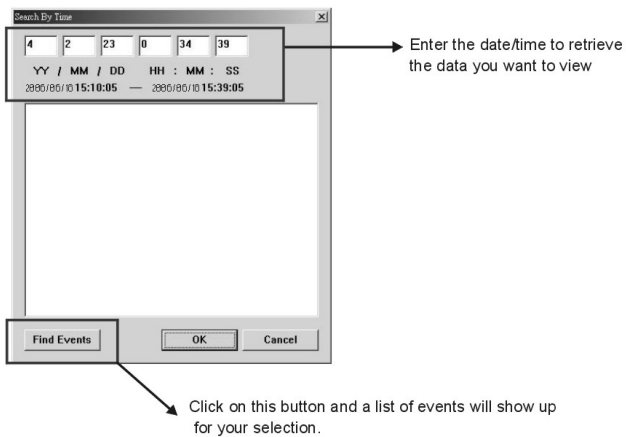
※**PC Viewer application**

Figure 1

Play · Search · Capture

One single frame backward · Advancing One single frame · Fast forward playback speed · Backup to AVI

Please follow the steps below to complete the installation of pc viewer:
Please install USB pen drive into your pc
1.Please install PC viewer software into your PC (This software currently)
2.supports Windows2000 and Windows XP!) and enter into the software, then you will see a dialog box as above(figure 1) appear on the screen.
3.Storage Device button to activate the software
   play button to start the playback
   Fast forward playback speed : 5 levels of playback speed: 1, 4, 16, 32,64
   Button for advancing one single frame
   Button for one single frame backward
   Backup to AVI button : click to create a new file to save AVI file in PC and start to convert the data into AVI file.
   Capture button: click to snapshot the data as BMP file.

4.Click on "Search" key to retrieve the desired video to view through entering the time/date or selecting event, then you will see the dialog box as below.

Enter the date/time to retrieve the data you want to view

Click on this button and a list of events will show up for your selection.

Please click on "Play" button to start the playback after your confirmation on the retrieval. (This is a must step to initially activate the playback!!!)

5. Click on "AVI save as" button to convert the desirable data into AVI file, then you will see the following dialog box for saving the AVI file. After specifying the file name and confirmation, please click on "Backup to AVI" to start the conversion.