

QUICK GUIDE

H.264 Realtime Digital Video Recorder (4/8/16 Channel)



Use the designated HDD

Please use the designated HDD. Otherwise, recording may be operated improperly.

Maker	HDD Capacity
Western Digital Seagate	80,160,250,320,500,750,1000GB each and Totally up to 3TB is supported.(3pcs X HDDs) But, please combine same size HDDs (i.e 80GB x 80GB)

USB2.0 for Memory Stick & External CD/DVD RW

* USB compatibility: the following models have been tested by manufacturer.

Lexar JumpDrive	128/256MB	KINGSTONE	2GB
SanDisk Mini Cruzer	128MB	A-DATA	2GB
SanDisk Cruzer Micro	256MB, 512GB, 1GB	IMATION	2GB
DVD/RW Plextor	PX-716UFL	MARUZEN	1GB
Lite-On CD/RW	LTR-52327SX		

FRONT PANEL

(1) LED

- REC: Recording status (When recording is on, the red light will flash)
- POWER: System Power On/Off (When power is on, the green light will be illuminated)
- NET: Network status (When network is connected, the light will lash)
- HDD: HDD status (When the system is reading or writing to the HDD, the light will flash)

(2) USB 2.0 PORT

- USB2.0 connector, for downloading to USB pens / drives (upgrading firmware)

(3) POWER BUTTON

- System Power On/Off

(5) MENU

- Displays the menu on the screen

(7) PLAY (▶▶)

- Playback of the recorded data
- When in play mode press again to enter fast forward mode.

(9) PAUSE (■ ■)

- To freeze picture on playback mode and live mode.

(11) REC (●)

- It starts & stop manual recording, password protected.

(13) ARROW KEY

- Moves the cursor while in menu mode

(15) Screen Split

- Selection of multi screen functions

(16) PTZ Selection

- PTZ Channel selection

(4) NUMERIC & CHARACTER

- Input for numbers & letters within the setup menus and searches

(6) SEARCH

- Entering search mode

(8) REWIND (◀◀)

- Reverse play of recorded data
- When in play mode press again to enter fast rewind mode.

(10) STOP / EJECT (■)

- To stop playback and go back to live mode.
- To eject DVD-RW

(12) SELECT

- Menu selection

(14) Screen Split

- Selection of multi screen functions

(17) ZOOM

- ZOOM P/T/Z camera in and out

(19) AUDIO Selection

- Switches between audio channels

(18) PAN / TILT

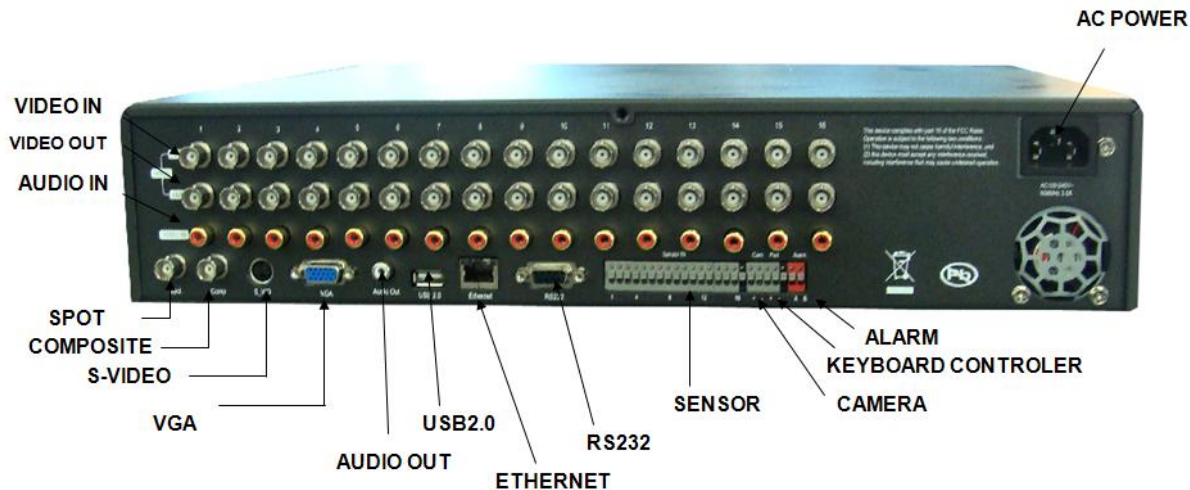
- To control P/T/Z, press this button to browse virtual key on screen.

(20) VOLUME UP & DOWN ()

- To increase or decrease the volume.

**NOTE: (19)&(20) are dependent on Front Panel specification

Description of Rear Panel Parts and Functions



(1) VIDEO IN (BNC)

- 16/8/4 Camera input (1.0v p-p, 75Ω)

(3) LINE AUDIO INPUT

- 16/8/4 Audio input through line

(5) RS232

- 1 Serial Communication

(7) USB 2.0

- USB 2.0 connector for mouse control.

(9) CAMERA / KEYBOARD CONTROLLER

- 1 Serial Communication for Pan / Tilt Camera
- 1 Serial Communication for P/T/Z Control Keyboard

(10) AC POWER

- AC 110~240 V

(2) VIDEO OUT

- 16/8/4 LOOP / SPOT / Composite / S-VIDEO / VGA

(4) AUDIO OUTPUT

- 1 Audio output

(6) Network Port (RJ-45)

- Connecting to the DVR through Internet or LAN

(8) ALARM / SENSOR

- ALARM / 16/8/4 SENSOR INPUT / 1 OUTPUT PORT

ATTENTION

When the video format is changed, the system should be re-booted

DEFAULT PASSWORDS

Front Panel

A Password is required if you need to: enter the menus; search; down power; playback; stop recording or changing an IP setting.

A prompt will be displayed asking for password.
The default Password is: **00000000** (8 zeros)



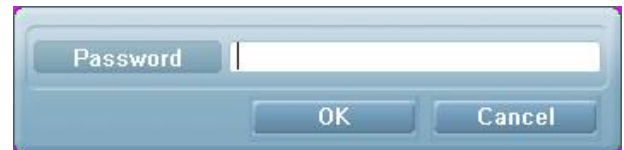
Viewer Software

When using the supplied Viewer software, the following password will be required.

User ID is “**admin**” (not case sensitive).

Password is “**00000000**” i.e. 8x Zero's

(Admin ID cannot be changed, as this is the full administrator ID)

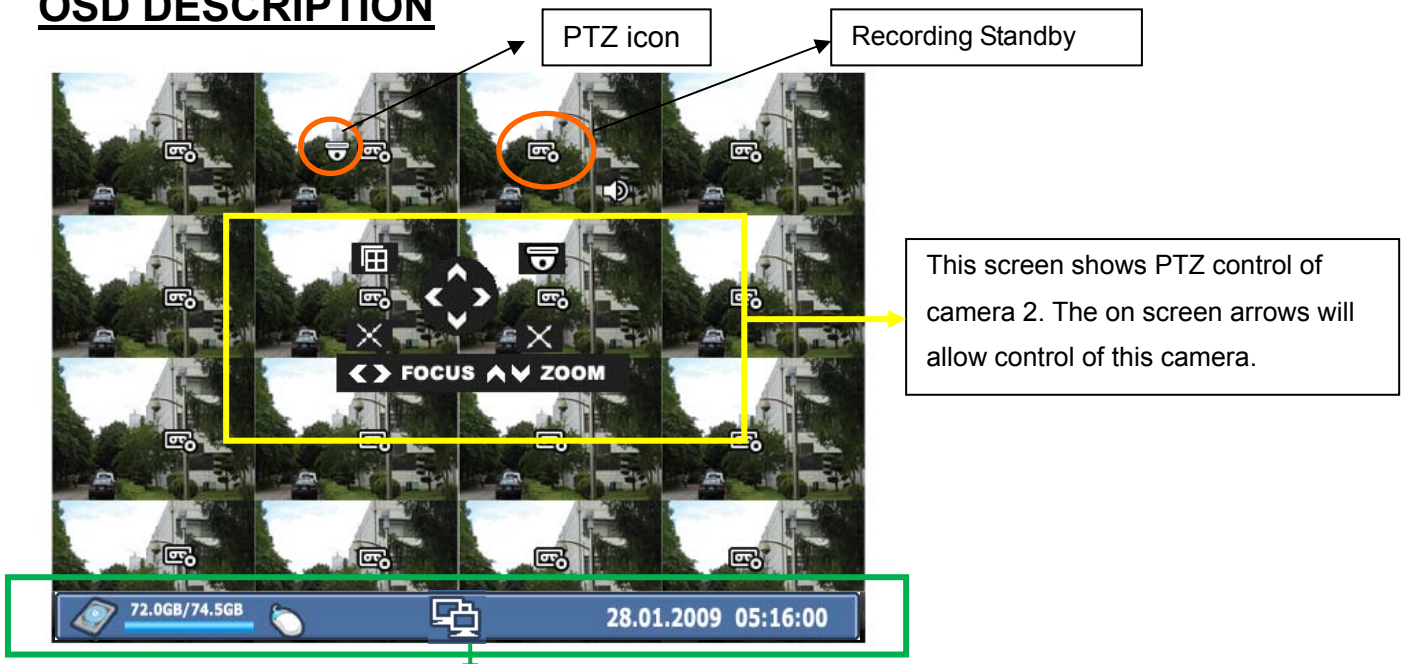


IR Remote Controller



1. Power : Power ON/OFF
2. Rec : Start & Stop Recording
3. ①~⑨:Key for figure and character
4. P/T/Z: Entering PTZ menu directly
5. OSD : Operating OSD ON/OFF
6. SEQ : Direct access for Spot
7. LOG : Direct access for Log list
8. INFO: Direct access for system Info.
9. ID : Remote controller ID setting
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. || : Pause
20. ■ : Stopping playback
21. Cam : Changing PTZ icon
22. P/T : Pan &Tilt
23. Z/F : Zoom/ & Focus
24. DIS : Channel Division

OSD DESCRIPTION



This screen shows PTZ control of camera 2. The on screen arrows will allow control of this camera.

The Status Bar shows HDD capacity, Network connection, Time, etc using by icons.

- HDD capacity : 72GB is used out of 74.5GB
- USB Mouse : It is shown USB mouse is connected.
- Network connection : It is shown that admin or user is connected.
- Date/Time

*Others : Backup , Mute , USB Stick:

MENU Navigation

To enter the set-up menu press the Menu button or right click with mouse on screen The following screen will be displayed.

Enter the password (default password is 00000000 – 8 zeros) and click 'OK' to confirm.

Front Panel or IR remote control

All menus are navigated around using the left / Right / Up / Down and the Select button.



To step back through the menus press MENU button

Mouse control

Using the mouse allows the operator to enter the Menus to set up the DVR or enter the Search functions to play back and archive recorded data..

Right Clicking will bring up the following screen:



Left click the required icon from:
Menu, Search, Record,
Power down, Play Forward,
Audio Eject, Channel Select
and Multi Screen

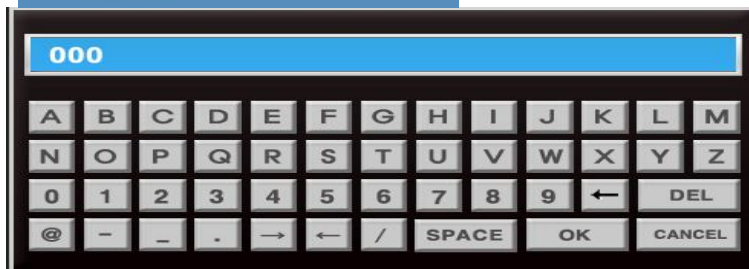


If Menu has been selected the left screen will be displayed.

Select Sub menus by clicking on the relevant title.

Change Values/settings by either double clicking to bring up the following keyboard:

Or to change other values simply multi click the segments, which will toggle through available settings



SAVE/EXIT: In order to save any modified setting value or get out from the Sub Menu, please press “MENU” key on the front or click Right on the mouse. This action can be carried out within each Sub Menu.

RECORDING

All recorded data is watermarked to ensure that it is not tampered with. Using the software supplied the legitimacy of this data can be verified.



Global

Within this section:

1. Watermarking should be set to on, this allows the supplied software to verify the downloaded information to ensure it has not been tampered with or changed.
2. Repeat recording can be set to continually overwrite or stop when the drives are full.
3. Pre Recording resolution can be set to 4CIF (D1) – 720 X 576 (giving 100fps recording) or 2CIF -720 X 288 (200fps) or CIF - 360 X 288 (400fps).
4. Pre FPS/Pre Duration/Post Duration is recommended to set active to get data just before event occurs. Post Duration is selectable.
 - Pre FPS: Value dependant on Pre resolution setting (up to 25 FPS)
 - Pre Duration & Post Duration: 5/30/60/90/120/150/180/210/240 sec.
5. Quality options are High, Middle or Low
6. Alarm/Event Mode is used for EVENT(Alarm, Audio, Motion) Recording. Default is 'Normal' and when event happens, the frame rates vary depends on the number of event channels.

1) For example, 16Channel unit with "Normal" setting,

When there is upto 3 event cameras : 25fps

4 ~ 7 event cameras : 12fps

8 ~ : earliest camera drops rate to 1fps, same as non-event camera

This is same condition regardless of resolution_CIF, 2CIF, and 4CIF.(only depends on number of event cameras)

And then when there are only 1~3 event cameras left : go back to 25fps

2) "Exclusive" setting,

Only event channels will be recorded.

These settings are applied to all channels.



Normal (TL)

This configures the continuous recording settings per channel



Record rates available:

In 360x240 modes, 30fps is available to each channel (total 480fps_NTSC).

In 720x240 mode 15fps is available to each channel (Total 240fps_NTSC).

In 720x480 mode 7.5fps is available to each channel (Total 120fps_NTSC).

Each channel can be individually configured for record rate and Audio on/off.

Alarm



There are 16 Alarm inputs on the rear of the unit these can be used to initiate the Alarm record mode. The Alarm recording is set up in the same way as Normal Recording.

Motion



Motion on any channel can trigger recording of that camera.

Resolution, Images Per second, Audio, and Quality can all be configured individually per channel. As per Normal and Alarm Recording Modes.

To setup the motion detection grid per channel select the “Sel” button.

Motion Sensitivity

It consists of High, Mid or Low.

Motion Region

The following will be displayed when “Sel” is selected.

The detection area is divided into a grid of 11x8 cells. Default is all cells in active mode.

Use the Left right up down to move cursor and the Select key to toggle between active and inactive.

The mouse can also be used to select cells and toggle them on and off.

Double clicking on one of the 4 dots in the corner of the



selected cell, will toggle between all cells being active or inactive.

Care must be taken in setting of the motion sensitivity. It is recommended that each level is testing to find out which one suits that particular camera site. The motion detection is not recommended for external cameras.

Schedule



The schedule allows the DVR to be set to only record at particular times of the day. This timing setting is global for all channels. However the Resolution, Images per second and Audio can be configured per channel.

To set the timetable select the large SET box(PRESS SELECT KEY) on the right of the menu page, the following page will appear. It allows each hour within the week to be set to be either Active (Yellow) or Inactive (Pink&Blank)



“SEL” button is used for selecting relevant time and day. Arrow Key will be used for movement. Or toggle between on and off with the mouse.


Audio Event



16 Audio Inputs and 1 Output are available. Recording can be triggered when Audio is detected. As with Normal and Alarm recording the Resolution, Images per second can be set per channel. Individual channels can be enabled or disabled and the sensitivity set to either Low, Middle or High.

Duration

The Duration mode allows the user to set the number of days that they require to record for. The resolution; whether cameras are active or not and whether audio is being recorded can each be set per channel. The user then sets the number of days of recording required, then the DVR will automatically calculate best record rate to achieve these settings

NOTE: If recording is in Standby mode, the following icon is displayed. 

Priority



The RECORD PRIORITY allows the mixing of the various record methods to customise the individual site requirements.

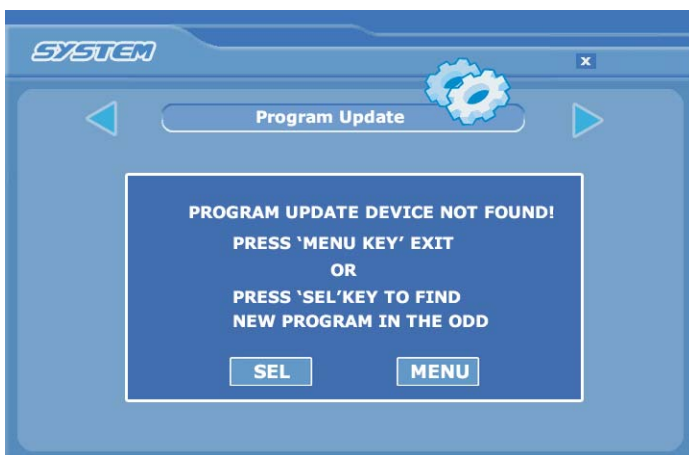
Example: A site may require Alarm recording at night, then a standard FPS recording during the day. In this case the Schedule would be set for required FPS and resolution, and the timetable set for this recording between 8am and 8pm each day. Schedule would be set as 1st Priority. The Alarm settings would be configured as required and


this would be set as the 2nd priority.

The DVR would then record between 8am and 8pm at the Scheduled rate, then once beyond 8pm would look to the second priority and only record Alarm Events.

Program Update

Always turn off: Recording, Playback and Network access while upgrading the unit



The latest firmware version can be upgraded through USB 2.0 Port using Memory Stick or CD/DVD Media. When a memory stick is connected to the USB port, this symbol  will be shown in the status bar of the screen.

Enter “menu”-> “System Set”-> “Program Update”. If the system recognizes the new firmware then, “New program found” will be displayed on the screen.

Next press the “SELECT” button.

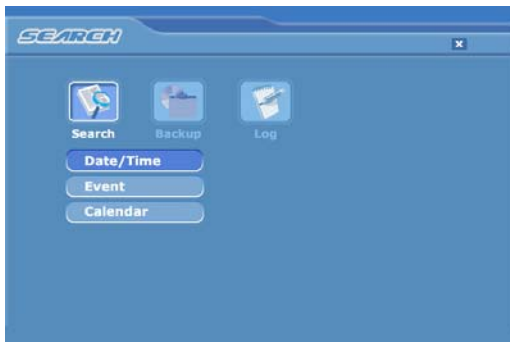
Processing percentage will be displayed.

NOTE.

1. If the system doesn't recognize the new firmware, “New program not found” will be displayed.
2. USB compatibility has been tested successfully with: Lexar Jumpdrive 128/256MB, Sandisk Mini Cruzer & Cruzer Micro 2GB, KINGSTONE 2GB, A-DATA 2GB, IMATION 2GB, SANDISK 1GB, SANDISK 512MB, MARUZEN 1GB
3. For system stability, please turn off 1) recording 2) playback 3) network connection during upgrading.
4. **After updating program, reboot the DVR. The simplest way is press POWER button and enter the password.**

SEARCHING VIDEO FOOTAGE

To access the search option, press the SEARCH button on the front panel or right click the mouse and select Search, (A password may have to be entered) after which the following screen will be displayed.



Date / Time Search

If you select date/time search, the following will be shown. Use the numerical number on the front panel or the mouse to select the time and date required, then select Play.

EVENT

This allows the user to select between ALARM, MOTION or AUDIO. Select required option by pressing the right arrow, or selecting with the mouse.

ALARM – The search is for any alarm activation within the times defined.

MOTION – The search is for any motion events within the times defined.

AUDIO – The search is for any audio activations within the times defined.

Calendar Search

Following screen is displayed when “Calendar” search is selected.



The Calendar search gives a graphical representation of when video is recorded on the hard drive.

The year and month can be selected. This month is shown as a calendar on the screen, any day which contains recorded video will be indicated by a highlighted number in white.

Move to the desired day by using the up / down / left / right buttons, Select the day by pressing SEL.

The following screen will be displayed.



The hours which have recorded data are displayed as a coloured bar. Select the hour which you want to review, the following screen will be displayed.

The minutes which have recorded data will be displayed as a coloured bar, click on the time required; the recorded data will be played back from this point.

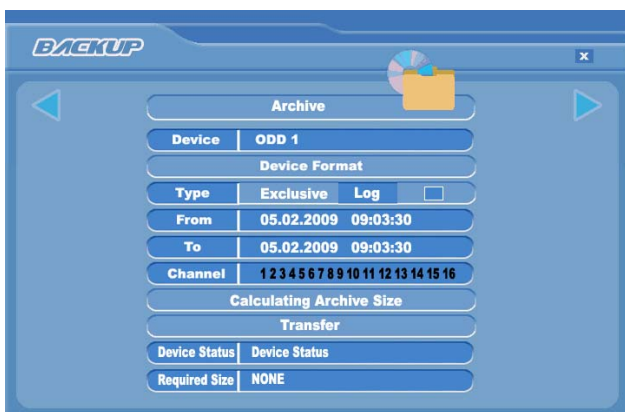
* **Preview function**

Before actual viewing of recorded data from the calendar menu, it is possible to preview the selected time and date on the screen behind the search window. This is done by selecting a time and pressing the “ZOOM” button on the front panel. If a different time is required, select it and press “ZOOM” again.

Archiving Evidence to DVD/CD or USB

Once the required video has been found, it may be necessary to download it for evidential purposes. This can be done either onto the internal CD/DVD-R writer or via the USB port on the front of the DVR.

To do this press the SEARCH button and using the down button move to ARCHIVE, once highlighted press SEL, the following screen will be displayed.



Device

This allows selection between the internal CD /DVD-R writer and the FLASH option via the USB port, when highlighted use the right arrow to toggle between the options.

Device Format

Format for **CD/DVD-R** is **not** needed. When using a **USB pen**, the format **should** be done first.

Type

EXCLUSIVE file type

If evidence is downloaded as an Exclusive file, the DVR will download bespoke player software on to the CD / DVD or USB device along with the evidence. This means that no special software is required, by the reviewing PC. This format is secure and watermarked.

LOG

The Log file can be downloaded from this menu screen, simply tick the LOG box and do not select any camera channels, then select transfer.

From/ To

You can set up the start and stop time which is required to be backed up to the internal **CD/DVD-R or USB device**.

Highlight this option, then press SEL, then use the alphanumeric buttons or the mouse to set the time and date.

Repeat for the end time.

Channel

As long as the EXCLUSIVE file format is selected, the number of channels to be downloaded can be selected. Anything from a single channel to all 16 can be selected.

Calculate Archive size

Once the time and date and file format have been entered, it is necessary to confirm that the size of file created will not exceed the size of memory available on the disk or USB device. Move to Calculated Archive size and press SEL. The DVR will then calculate storage space required for download file. This will be displayed in the Required Size section. As long as the Required Size is smaller than the Free/ total space, then move to Transfer and select it.

Transfer

When Transfer is highlighted press SEL, the downloading will start. Percentage done during downloading will be shown.

* PC Playback

1. Insert USB device
2. Folders & Files on device: *Download(fold), autorun.inf, clientD4.bin, ComMark.bmp, DDVR4000.exe, DdvrRes.dll, H264_D4.dll, LogoD.bmp, VdoLoss.bmp*
3. Double Click “DDVR4000”
4. Local search > Click Record Date -> Click ”playback” button

Client Viewer software – H.264 Real

Minimum PC specification

> CPU: Core 2 Duo 1.8GHz, > Graphic Memory: 256MB

1) Installing software

When you put DVR Network installation CD into your PC, it will auto run and lead you through an installation wizard. Follow the instructions. Once the software is loaded it will automatically run.

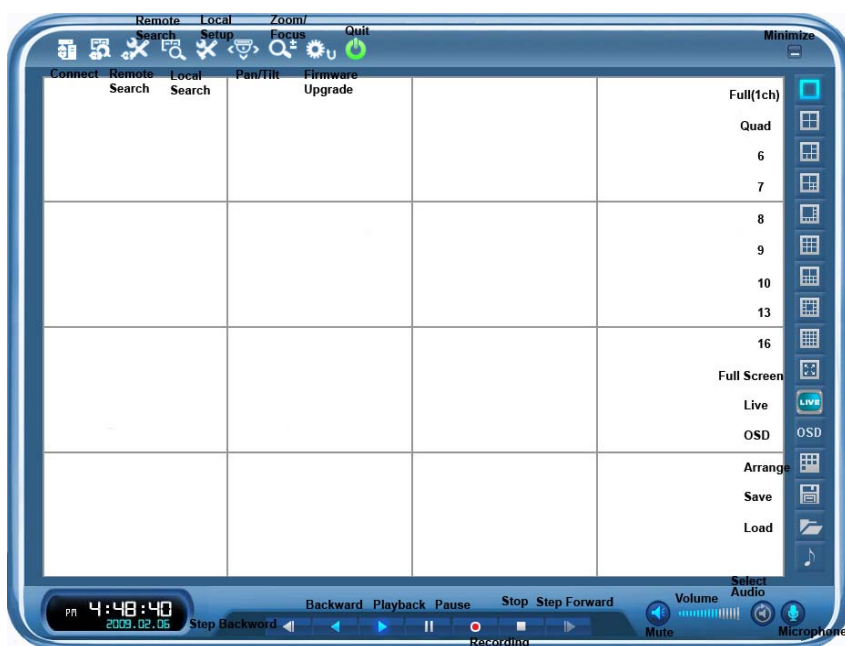
2) IP Insertion through IE

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

*Downloading Active X Control

When DVR connects network, the window to download active X control will be displayed in case that no downloading “Active X control” has been done or once installed DVR is higher version than PC Client Software. Then, select “Yes”.

Explanation of Screen Buttons

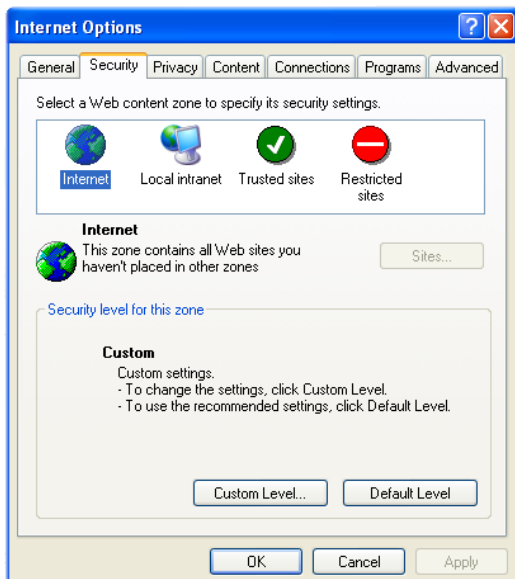


Appendix 1

INSTALLING WEB CLIENT ON WINDOW XP/2000 & VISTA SERVICE PACK 2.

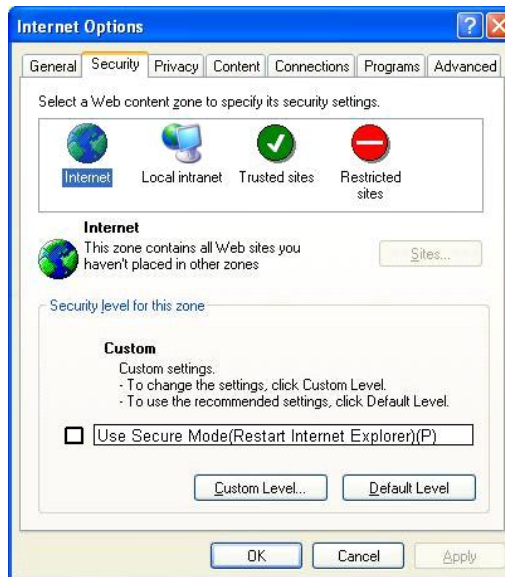
1) Security Setup

> Window XP / 2000



Tools-> Internet Options-> Security
-> Select "Customer Level"

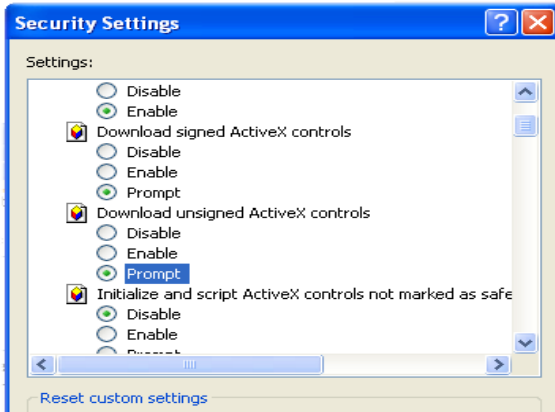
> Window Vista



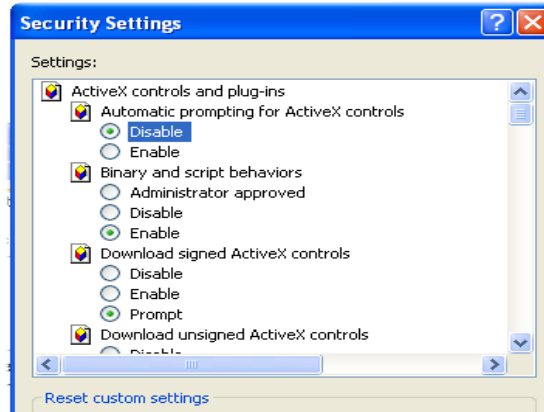
Tools-> Internet Options-> Security
-> Unselect square box ->
Select "Customer Level"



Select " Allow script-initiated windows
without Size or position constraints"
-> Enable.

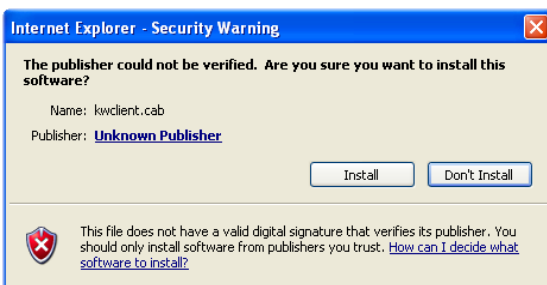
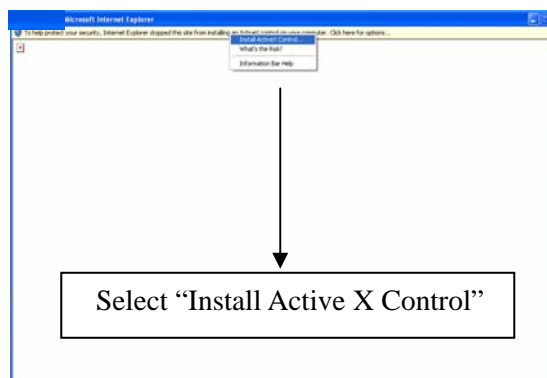
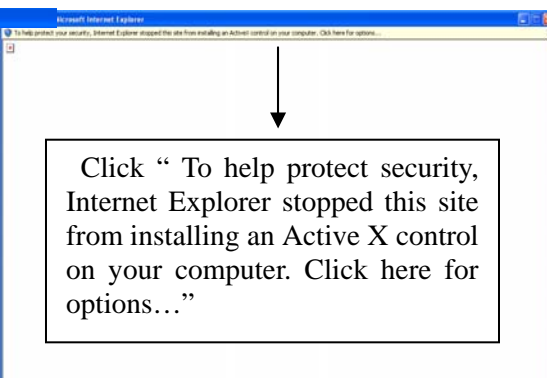
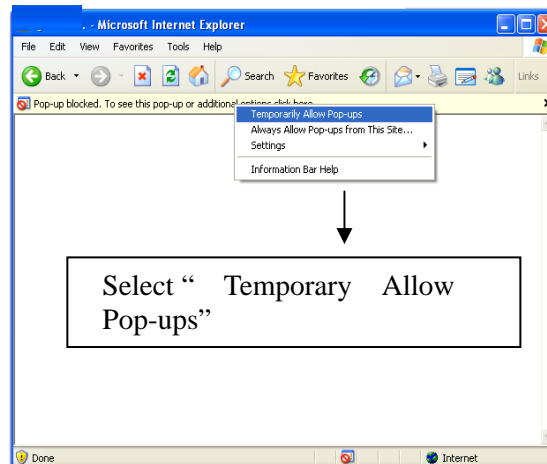
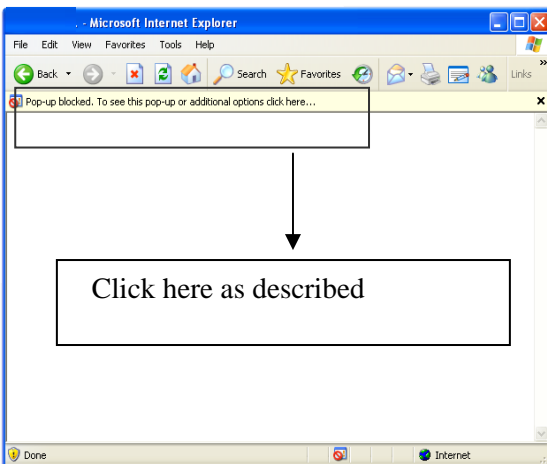


Select “ Automatic Prompting for Active X controls”-> Disable



Select “ Download unsigned Active X controls”-> Prompt

2) Connection



Select “Install” and then Log-In box will be shown

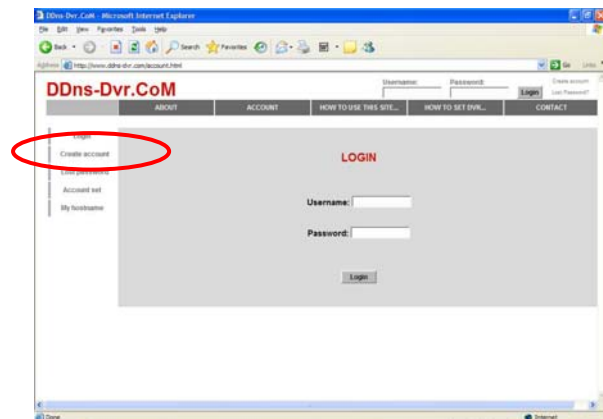
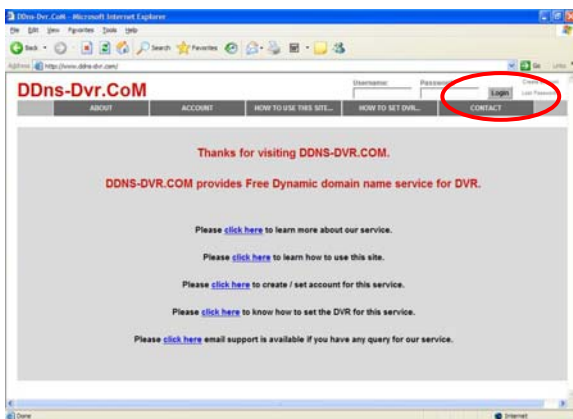
APPENDIX 2

DYNAMIC IP (Supporting DDNS Server)

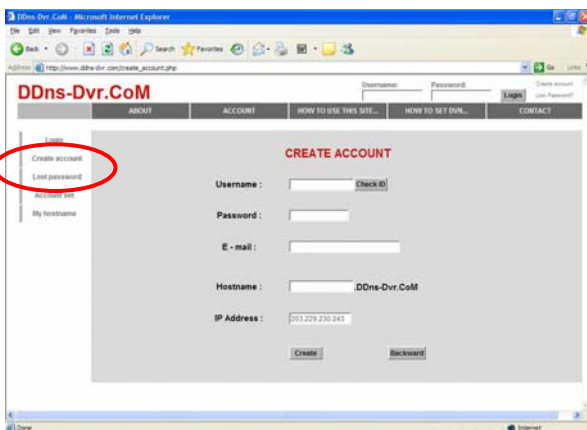
With DDNS Server, This allows a user to connect to the unit remotely without the need for a fixed IP address.(Please register your ID & Domain at www.ddns-dvr.com in which you can use their DDNS server as free of charge)

1. Visit www.ddns-dvr.com to get the DDNS user ID & PW as well as Host name.

2. Click “Login”



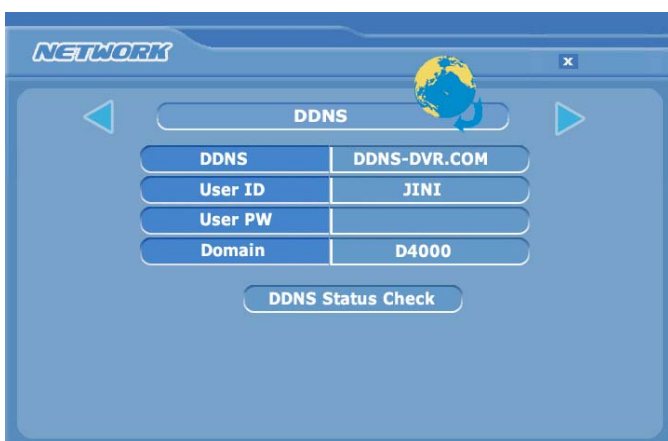
3. Create Account.



> Fill in all blanks in order to create new account. ID & Password will be emailed to you when the account is setup correctly.

Once the DDns-Dvr account has been setup, it is necessary to add the details in the Network section of the DVR’s menus.

DDNS SET



To enter Network set menu, system ask password (Default is 00000000).

In DDNS environment, need to be changed DVR & Web server port, please refer to IP set.

Set up DDNS

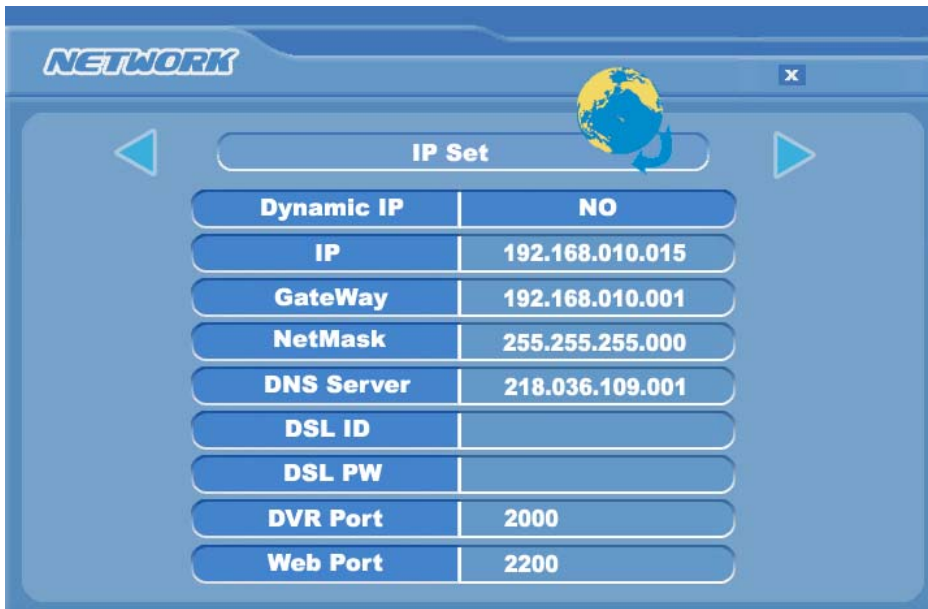
1. Change DDNS to ON
2. Input User ID
3. Input User PW
4. Input Domain
5. Click “DDNS Status Check” if it is “ok” Click “Apply”

> Note; In DDNS Setup, The Domain Name has to be filled in.

Appendix 3

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

(Port Forwarding)



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

- DVR Port: This can be set to any number between 2000 to 65535.

- Web Server Port: this can be set to any number between 2000~65535, as long as it is not the same as the DVR Port number

2) Setup "virtual server" on IP sharing Router

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

> For example,

D4000, IP : 192.168.10.15, DVR Port : 2000, Web Server Port : 2200

If DVR-1 is configured as above, the virtual server on IP sharing router is as follows.

1) PC Server Name : D4000(IP 192.168.10.15)

Protocol : TCP, Internal Port : 2000, External Port : 2000

2) PC Server Name : D4000 (IP 192.168.10.15)

Protocol : TCP, Internal Port : 2200, External Port : 2200

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

(3) 'DDNS' Setup on IP sharing router

DDNS configuration is not needed in case of fixed IP.

(4) To connect D4000 with Internet Explorer, <http://d4000.ddns-dvr.com:2200>,

to connect D4000 with CD installer, <http://d4000.ddns-dvr.com:2000>.