



Stinger J16

16ch DVRX - TCP/IP - JPEG 2000 Model



User Manual

ABOUT THIS MANUAL

Before installing stand alone DVRX, be sure to thoroughly review and follow the instructions in this User's Manual. Pay particular attention to the parts that are marked NOTICE.

Strong recommendation on installation of the DVRX unit

1. Check the electrical source at the location you want to install the DVRX unit is stable and meets the DVRX electrical specifications. Unstable electrical supplies may cause recording malfunctions or give critical damage to the unit.
2. Several chips on the main board of the DVRX unit and hard disk drive inside generate heat, which must be properly dispersed. Do not allow objects to block the fan on the rear of the unit.
3. Put the DVRX in a well-ventilated place and do not put heat-generating objects near the unit. When it is installed inside 19 inch equipment rack together with other devices, please check the rack ventilation fan is fully operational & running.

INSTALLATION & SAFEGUARDS

All the safety and operating instructions should be read before the unit is operated.

Environment Condition for Installation

To prevent electric shock or other hazard, do not expose units to rain, moisture, or dust.

This unit should be located in an area with low humidity and a minimum of dust..

Place this unit in a well-ventilated place and do not place heat-generating objects on this unit.

This unit should not be located in an area where it is likely to be subjected to mechanical shocks.

Before You Start

- Ensure the power switch is in the OFF position prior to starting.
- Do not attempt to service this unit yourself as opening or removing covers may expose you to dangerous voltage or other hazards.
- Installation should be performed by qualified service personnel only.
- This unit should be operated only from the type of power source indicated on the manufacturer's label and with the power supply included with the unit.

Notice

Be aware thoroughly about the power connection before installation of the unit. (Please read Instruction for DC Power Adapter which is included in the package).

Before initial configuration or operation you must first set the TIME/DATE, followed by setting the unit to the FACTORY DEFAULT settings, lastly clearing the HDD. Please follow these steps in order.

Before installing a second HDD, ensure that the drive conforms to the specifications listed on the specifications page at the end of this manual. When installing a second HDD, set the drive to SLAVE. After installation, first reset the TIME/DATE, followed by resetting the unit to the FACTORY DEFAULT settings, lastly clearing the new HDD.

Pull the unit out of record mode prior to cutting power to the unit. Do this by entering the setup menu, followed by switching the unit off. Powering off the unit while writing to the disks can cause critical malfunctions (eg: Recording Error, Playback Error, System Error).

When you set the record type, you have to set the Record Configuration and also Schedule Setup. This unit records as per the Record type & Schedule setup.

The [REC] button on the front panel is for emergency record using highest image quality.



The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user of this equipment that there are dangerous voltages within the enclosure which may be of sufficient magnitude to constitute a risk of electric shock.



The exclamation point within an equilateral triangle is intended to alert the user to presence of important operating and maintenance (Servicing) instructions in the literature accompanying the appliance.

Features

1-1. Features

Live View

Real time display per camera
Auto Sequence
PIP (Picture in picture)
Digital Zoom
Display Freeze
Simple Playback mode
Simple PTZ camera control

Record

Variable Record resolution (For higher picture quality or higher recording speed)
Efficient Image Quality setup in 5 steps
Schedule Record / Holiday Record
Event Record (Alarm / Motion)
Emergency Record

Network

View Live and Playback images across IP network
Copy images across the network

Playback

Search & Playback by Date/Time, Event and Camera
Outstanding picture quality by JPEG 2000 compression algorithm (No mosaic effect)
Suitable for recording not only images but also text
Various steps in Forward Playback Speed (X1/4, X1/2, X2, X4, X16, X60)
Various steps in Backward Playback Speed (X1/4, X1/2, X2, X4, X16, X60)
Easy and convenient search by Jog Shuttle & Remote Controller

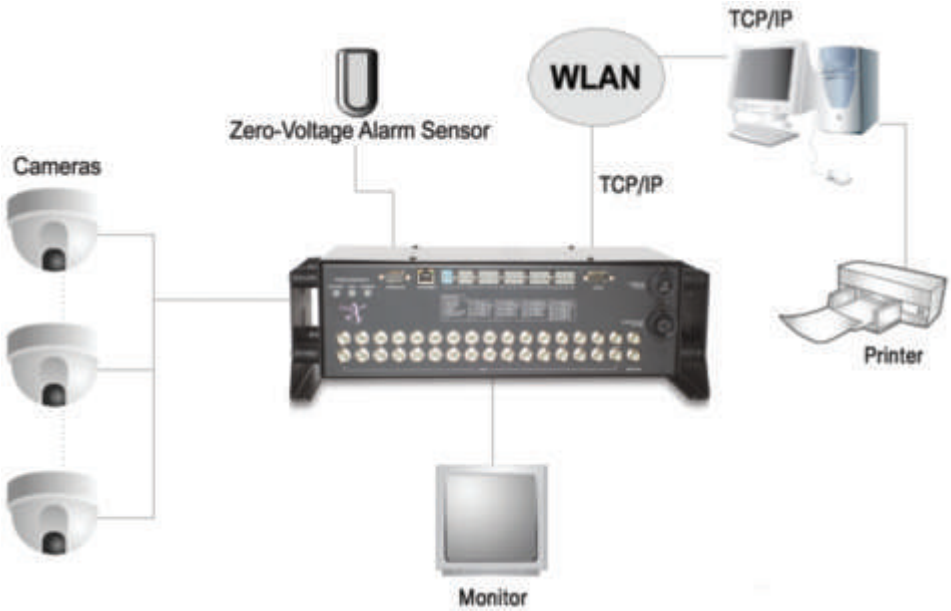
Data Back-Up

Simple Back-Up using built-in CD Writer (Back-up CD Player included in the package)
Network Back-Up using Remote Viewer program (Remote Viewer included in the package)
Supports bigger capacity of HDD (300GB or bigger)

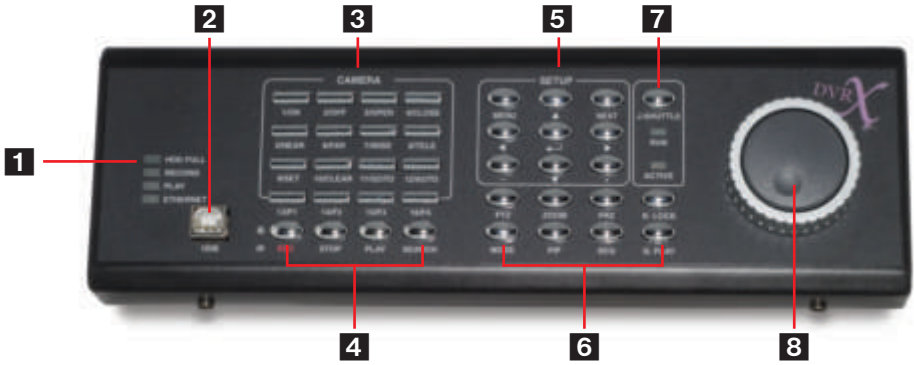
Others

Multi-Language (English, Spanish, Portuguese, German, French, Italy, Japan, China)
VGA option board supports both TFT LCD monitor and CRT monitor
Lock the system by Password
JOG / SHUTTLE
PAL/NTSC Auto detection
Control the unit by using Remote Controller

INSTALLATION OVERVIEW



KEYBOARD



Optional Remote Keyboard

See button references on next page



NOTICE: If several buttons are simultaneously or incorrectly pressed, the system may not respond properly.

Numbered Items

- 1. LED Lamps
- 2. USB Firmware Port
- 3. Camera selection & PTZ camera control

Function

- Shows status of DVR operation.
- Firmware upgrade by connecting PC with latest firmware to USB port.
- a. Pressing this button will display a full screen image of that camera.
- b. Control PTZ camera (Each button is assigned for each PTZ command).

- | | |
|--------------------------|----------------------------|
| ON: LIGHT ON | SET: SET PRESET |
| OFF: LIGHT OFF | CLEAR: CLEAR PRESET |
| OPEN: IRIS OPEN | GOTO: GOTO PRESET |
| CLOSE: IRIS CLOSE | AUTO: AUTO SCAN |
| NEAR: FOCUS NEAR | F1: USER MACRO 1 |
| FAR: FOCUS FAR | F2: USER MACRO 2 |
| WIDE: ZOOM IN | F3: USER MACRO 3 |
| TELE: ZOOM OUT | F4: USER MACRO 4 |

4. Record /Playback

- REC** Alarm Record Mode/Emergency Record at continuous, Best Quality - Maximum Frame Rate.
- STOP** Stops Alarm Record Mode and returns DVR to Schedule Record or stops Playback and returns to Schedule Record Mode.
- PLAY** Playback of recorded images on HDD.
- SEARCH** Search for recorded images on HDD.

5. SETUP

- MENU** Set up for SYSTEM MENU or use to exit the previous sub-menu.
- ENTER** Selects each menu option.
- NEXT** Move to next step.

  Navigate in the menu.

+ / - Reduce or increase the option value in the menu.

6. LIVE Display Controls

- PTZ** On/Off for PAN/TILT/ZOOM control mode
Press this button first to control PTZ camera connected to DVR unit via RS-485
- ZOOM** Zooming an image
- FRZ** Freezing an image
- MODE** Switch to split display MODE button changes screen-division from (to) full screen to (from) 16-split screen.
- PIP** Display in PIP (Picture in Picture) mode
- SEQ** Auto camera image sequencing in full screen mode
- K.LOCK** Lock the key function. To unlock, press longer time (for several seconds) and then input the password.
- Q. Play** (Quick Play) Play from image recorded 2 minutes ago in forward direction. (in case recorded in continuous mode).

7. Jog Shuttle Enable

- J/SHUTTLE** Pressing Jog Shuttle button (Ready for use Jog/Shuttle)
In playback mode, pressing J. SHUTTLE button make images frozen.
RUN LED on: While you operate Jog or Shuttle
ACTIVE LED on: When J. SHUTTLE button is pressed

8. Jog Shuttle

Very easy and convenient search: Press J. Shuttle button, and images in playback pause, and then Jog and Shuttle makes it very easy and convenient to search, forward or backward, fast and slow, as user want.

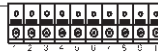
DVR CONNECTIONS



1. RS-232C Port Connection for control of DVR via PC.



2. Alarm/Relay Inputs/Outputs + PTZ Control.



3. WLAN/Laptop Connection: TCP/IP.



4. Camera Connections.



5. Camera LOOP Outputs.



6. 2 x MONITOR Connections.



Battery connector – Amphenol C16-1 3W+ PE plug PG 9

Pin 1	12 VDC or 24VDC (dependant on version ordered)
Pin 2	GND
Pin 3	12 VDC or 24VDC ignition feed (delay off controller)

12VDC camera / TFT connector – Amphenol C16-1 3W + PE PG 9

+12VDC	
-12VDC	(0V – isolated from Vehicle ground)



NB: BATTERY CONNECTOR

If PIN 1 is connected to a permanent power feed (battery) and PIN 3 to the ignition power feed this enables the “delay off” feature. This means after ignition is switched off the recorder will continue to record for approx 30 minutes. If the “delay off” is not required place an insulated jumper wire from PIN 1 to PIN 3. The DVR will now record only when power is supplied from the main switch (so long as the permanent power feed is behind the main switch).

INSTALLATION

1. Camera Connection

Connect the camera to a CAMERA INPUT on the Front Panel of the unit.



Notice: This DVRX system automatically detects the video standard(PAL/NTSC) of the camera you connect to the unit when you initialise the DVRX system.

2. Monitor Connections (Composite Connection Method)

Connect the driver's monitor to a MONITOR OUT on of the unit.



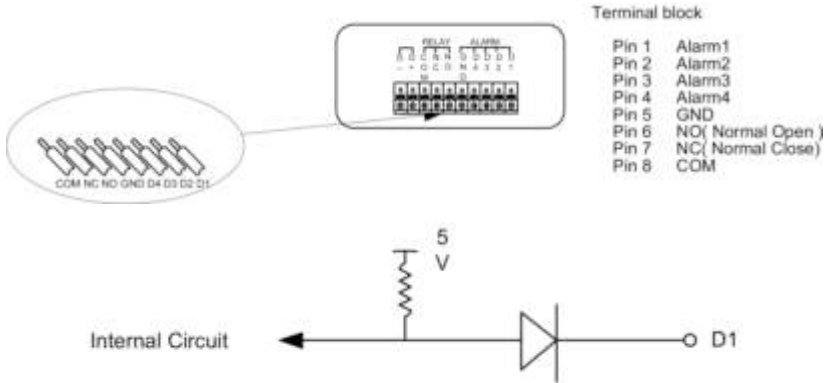
NOTICE: ONLY connect cameras or monitors to DVRX while the DC power is switched **OFF**.

3. Alarm Connections

Connect the alarms to the SENSOR INPUT/OUTPUT on the unit.

Relay output: COM+NC, COM+NO OR COM+NC+NO

Alarm input: A short-circuit between Alarm 1, Alarm 2, Alarm 3 or Alarm 4 and GND will be recognized as an alarm (**VOLTAGE FREE**) .



NOTICE: Alarm input is RECOGNIZED as LOW when alarm signal is on a level with GND, and recognized as HIGH when alarm signal is FLOATING or 5V. Above is the internal circuit. Be aware there is a danger of damage, if the alarm input goes to a negative level or voltage higher than 5V. **If exceeded this will invalidate the manufacturer's warranty.**

4. External Devices

RS-232C: Connect to PC to control DVRX remotely.

RS 485: On-Alarm connector block for control of PTZ cameras.

RJ-45 (ETHERNET): Connect to LAN, GPRS Modem or WAN.

5. Other External Devices

RELAY Output: Relay Output

SENSOR Input: SENSOR Input (Alarm connection)

OPERATION

4-1. System Log-In

- 4-1.1.** To enter into the setup menu, press the [MENU] button.
- 4-1.2.** Enter password with camera number buttons from 1 to 10 on the DVRX keyboard. (Maximum of 8 digits are available)
- 4-1.3.** After entering the password, press the [ENTER] button.



Administrator :

If the password entered matches previously set password, "LOGIN ADMIN" message appears and you can enter into SYSTEM SETUP. If the password entered does not match previously set password, the DVRX unit goes back to live display mode.

Factory default password is blank. For log-in, just press [MENU] button and then [ENTER] button.

Factory default password

ADMIN : (Blank)
 MANAGER : ' 1 '
 USER 1~USER8 : ' 2 ' ~ ' 9 '



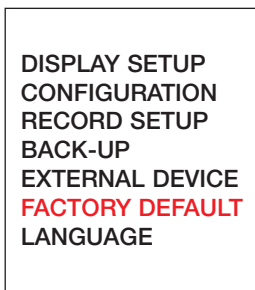
We recommend configuring a unique password as per the procedure in SYSTEM MENU - CONFIGURATION - PASSWORD SETUP.

For security reasons, be sure to make note of your own password.

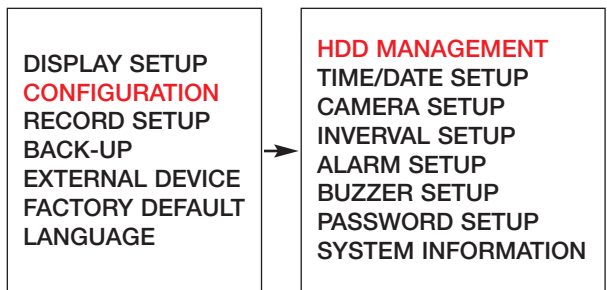
4-2. Factory Default

Before first operation, you must set FACTORY DEFAULT, set Time/Date, and then clear HDD, even though it is a brand new HDD this time-synchronises the motherboard of the DVR and the HDD together as a pair. Starting recording without FACTORY DEFAULT setting and HDD clear will cause future image-search malfunctions.

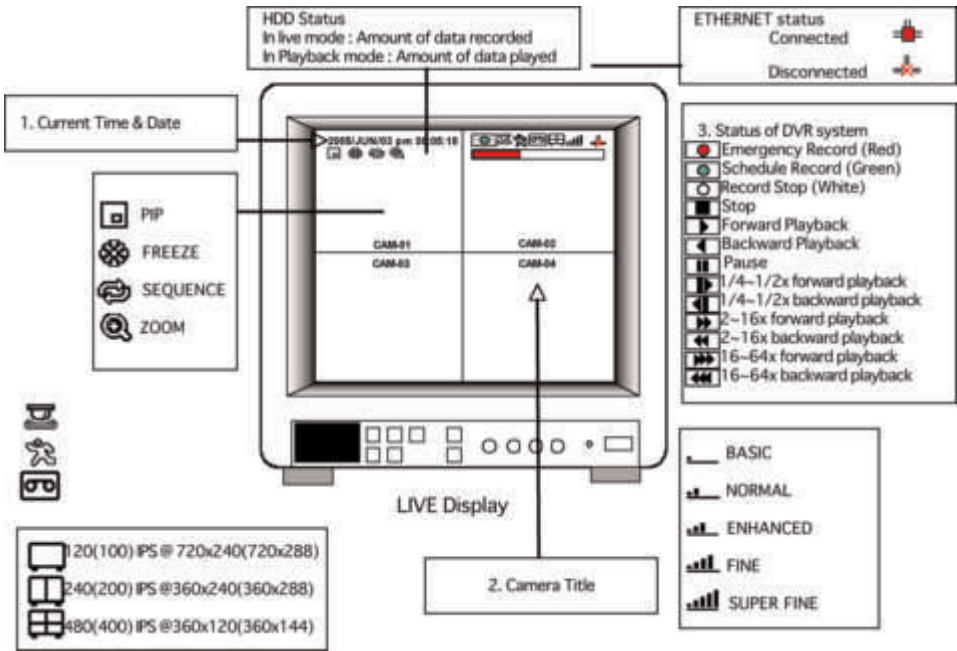
1. FACTORY DEFAULT



2. HDD CLEAR



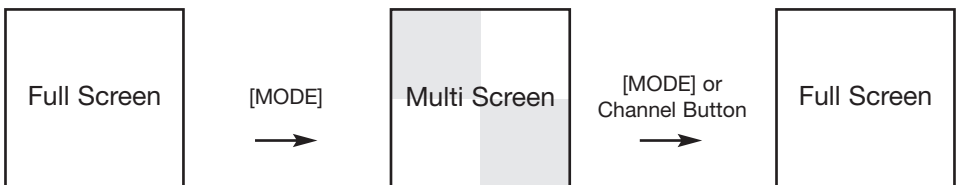
4-3. Display On-Screen Information



4-4. Live View Options

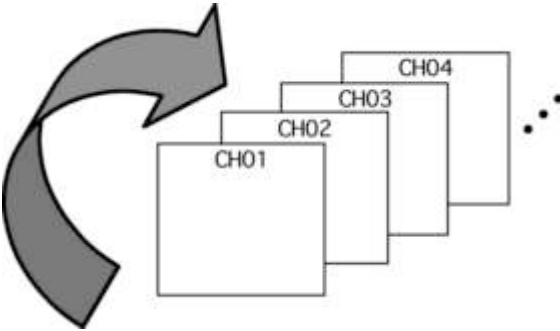
4-4.1. Full/Multiple View

Switch to multi-screen display by pressing [MODE]. For full image display, just press the channel button you require or [MODE] button again.



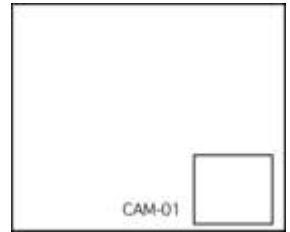
4-4.2. Sequence

Press [SEQ] button. It automatically displays full screen images in sequence.



4-4.3. Picture in Picture (PIP)

When it is in full screen display mode, you can see any other camera in a small window by pressing [PIP]. The other cameras in small window rotate in sequence to the next camera and you can set the sequence time interval as per the procedure in SYSTEM MENU/CONFIGURATION/INTERVAL SETUP.



4-4.4. Freeze

Full display mode: If you press the [FRZ] button, the FRZ icon will be activated on the screen and the “F” character will be displayed along side the camera title, and the live image will be frozen.

Split display mode: If you press the [FRZ] button, the FRZ icon will be activated on the screen. press the camera button you want to freeze. To release the frozen image, press camera number of the frozen image again and press [FRZ] button to exit FRZ mode.

4-4.5. Zoom

In full screen, press the [ZOOM] button and move the Selection Frame using J.SHUTTLE or Direction keys to the area which you want to enlarge. And then press the [ENTER] button for 2-times enlarged picture. To exit Zoom mode, just press [ZOOM] button again.

Horizontal Movement: J.SHUTTLE.

Vertical Movement: Hold [UP or DOWN] button and turn J/SHUTTLE.

4-5. Record

Recording mode is set before delivery by the manufacturer (Default recording mode) is Schedule Recording. In this default recording mode, it records 24 hours/day continuously. Once you press the [REC] button when viewing live images, the record type is changes to Emergency Record mode.


Emergency Record: Records at full resolution/in best quality


Record type: CONTINUOUS, SUPER FINE quality, 60 (50) ips at 720X240 (720x288)


Schedule Record: Records and stops as set (time interval and record type) in RECORD-SCHEDULE SETUP menu.

Stop Record: Recording stops as set in the RECORD-SCHEDULE SETUP menu.

On-Screen Icons

Emergency Record: Red Record Icon () and Record LED is lit.

Schedule Record: Green Record Icon () and Record LED is lit.

Record Stop: White Icon () and Record LED is off.

Motion Record, Alarm Record, Alarm+Motion Record: Record standby LED blinks/Record LED is lit.



While in Emergency Record mode, press [STOP], [PLAY], [MENU], or [SEARCH] button to exit from Emergency Recording mode and return to Schedule.Record mode.

For details, refer to the SYSTEM MENU – RECORD SETUP

This DVR unit will not record in the following states; While entered in the Menu.

No camera is connected

Overwriting is off in the Record Setup menu.

4-6. Playback

In record mode or stop mode, press the [PLAY] button to play the recorded images in real time (1x speed).

For reverse playback, press [PLAY] button again to change direction of play.

Use the Jog/Shuttle to pause and control playback speed. To stop playback, press the [STOP] button.

Using Jog/Shuttle

Press the [J.SHUTTLE] button in playback mode. The [ACTIVE] LED will be lit, and Jog/Shuttle is ready for use. The [RUN] LED will blink whenever you operate the Jog/Shuttle. To scan forwards, turn the Shuttle right and turn Shuttle left to scan backwards.

Rotate inner Jog/Shuttle using your index figure to perform frame advance in forward or reverse directions.

Operation of Shuttle is as follows.

1/4x: 4 times slower than normal playback speed

1/2x: 2 times slower than normal playback speed

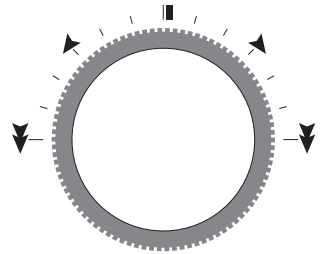
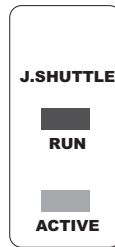
1x: Normal playback speed

2x: 2 times faster than normal playback speed

4x: 4 times faster than normal playback speed

16x: 16 times faster than normal playback speed

64x: 64 times faster than normal playback speed



If you want to maintain the playback speed selected using the outer Jog/Shuttle, hold the Jog/Shuttle at that position for a few seconds, and the playback speed selected continues until you rotate the Jog/Shuttle again.

4-7. Search

Press [SEARCH] button, and 3 different methods for searching recorded images are shown in the window displayed. To select search method, use the direction keys or Jog/Shuttle.

After selecting each search method, press the [ENTER] button to start playback. To exit, press the [MENU] button.

4-7.1. SEARCH BAR

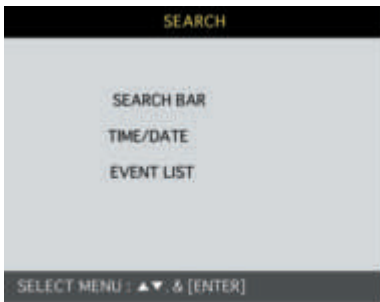
Search by percentage of total recorded images. It starts from the image corresponding to the displayed % of the Search Bar.

4-7.2. TIME/DATE

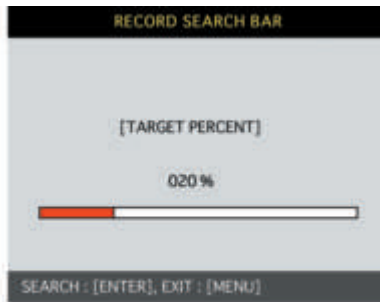
Searches by time & date. Playback starts from the time & date selected.

4-7.3. EVENT LIST

Search by event list (Motion, Alarm, Video Loss).



SEARCH page



SEARCH BAR page



TIME/DATE page



EVENT LIST page

4-8. PAN/TILT/ZOOM Camera Operation

Press [PTZ] button first for PTZ control mode. Numeric buttons from 1 to 16 and direction buttons are assigned for each PTZ command, and user can control PTZ camera connected to DVR unit by pressing any one of those 20 buttons, one after the other, as needed, and it is just like control by separate PTZ controller.

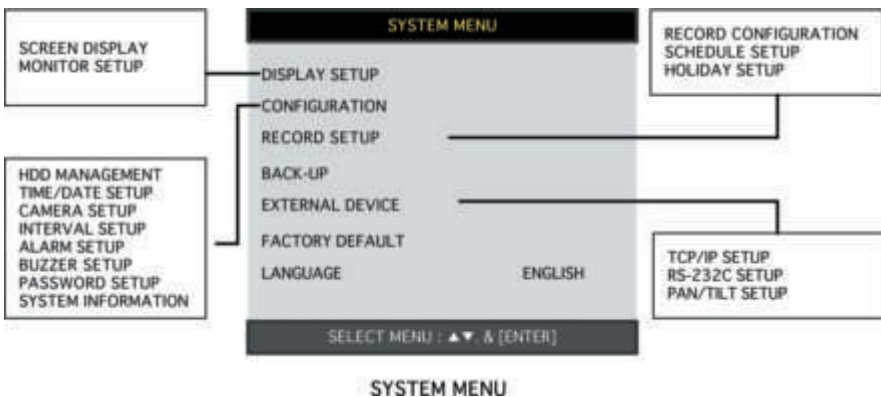
Button	PTZ Command	Button	PTZ Command
1. ON	LIGHT ON	10. CLEAR	PRESET CLEAR
2. OFF	LIGHT OFF	11. GOTO	PRESET GOTO
3. OPEN	IRIS OPEN	12. AUTO	PRESET AUTO
4. CLOSE	IRIS CLOSE	13. F1~16. F4	FUNCTION
5. NEAR	FOCUS NEAR	UP BUTTON	TILT UP
6. FAR	FOCUS FAR	DOWN BUTTON	TILT DOWN
7. WIDE	ZOOM IN	LEFT BUTTON	PAN LEFT
8. TELE	ZOOM OUT	RIGHT BUTTON	PAN RIGHT
9. SET	PRESET SET		

SETUP

5-1. Entering into the Menu

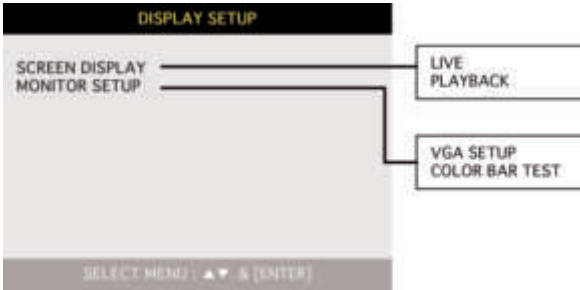
Enter into SYSTEM MENU by pressing [MENU] button.

Button	Function
MENU	Enter into SYSTEM MENU. Move to previous menu, ESC
ENTER	Selection key, Move to sub-menu, change status (ON or OFF)
NEXT	Move to next page
UP	Move to upper side
DOWN	Move down side
LEFT	Move to the left
RIGHT	Move to the right
MINUS [-]	Decrease the option value
MINUS [+]	Increase the option value
Jog Shuttle	Jog left turning: Move backward to next image/Decrease value Jog right turning: Move forward to next image/Increase value
	Shuttle left turning: Decrease playback speed/Decrease value Shuttle right turning: Increase playback speed/Increase value



5-2. Display Setup

Setting up parameters for monitor and display on screen.
Enter into SYSTEM MENU-DISPLAY SETUP.



5-2.1. Screen Display

Setting up the screen display in LIVE mode and PLAYBACK mode.

Select the sub-menu which you would like to set using direction buttons and then change ON/OFF with [ENTER] button.

1. **TIME/DATE:** Display time & date
2. **DVR STATUS:** Display system setting status
3. **ICON DISPLAY:** Display function setting status
4. **REC/PLAY BAR:** Display record / playback status
5. **CAMERA TITLE:** Display camera title



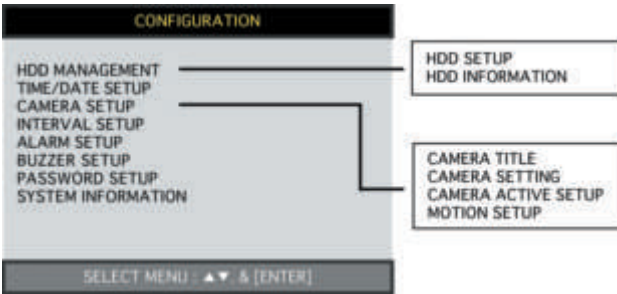
5-2.2. Monitor Setup

VGA SETUP: Not Used

COLOR BAR TEST: Adjust color tone of monitor.

5-3. Configuration

Various parameters for system can be set in CONFIGURATION menu.
Enter into SYSTEM MENU-CONFIGURATION and press the [ENTER] button.



5-3.1. HDD Management

Enter into SYSTEM MENU-CONFIGURATION-HDD MANAGEMENT and press the [ENTER] button.

1. HDD Setup

This page includes information about start and end of recording, location of recorded data, or location of last playback on HDD. In addition, users can delete all the images on the HDD.

On the [HDD CLEAR] sub-menu, press the [ENTER] button to delete all image data on HDD.

The system will ask password for verification. After you clear all data on the HDD, status of HDD CLEAR changes from IN USE to EMPTY.



When you clear HDD, event list is deleted, too.

If you selected OVERWRITE in Record Setup, the HDD STATUS presented as OVERWRITE.

2. HDD Information

This menu will show the physical information of HDD in DVR.



5-3.2. Time & Date Setup

Set time and date of DVR system which is very important for search with time and date of the event. The time and date set by the manufacturer is often different from the local time of the user, and the user must set the time and date correctly in the initial DVR setup prior to recording.

Set time & date using direction buttons and [-][+] button or Jog/Shuttle.



5-3.3. Camera Setup

1. Title: Input Title of each camera. Move to channel you want to change using [LEFT] or [RIGHT] direction button and then change the title using [-] [+] button. When modification is finished, press the [ENTER] button. To exit to previous menu, press the [MENU] button.



2. Colour:

Adjust image color.

Move to each element using [UP][DOWN] button and adjust using [-] [+] button or Jog shuttle.

CHANNEL: Select camera

BRIGHTNESS: Adjust image brightness (-32~ 31)

CONTRAST: Adjust color contrast (-32 ~ 31)

SATURATION: Adjust color saturation (-32 ~ 31)

HUE: Adjust color hue (-32 ~ 31)



SELECT : ▲▼ CHANGE VALUE : +-

3. Camera Active Setup:

With the direction button, move to the option to be changed, and press the [ENTER] button to select [ON/OFF]. If it is set at LIVE [OFF] and REC [ON], the DVR system records, but does not show the live image of the selected camera on the live display monitor.

STATUS: Shows if the image from a specific camera is available for live display and recording. Normally the camera condition is ACTIVE, but LOSS is displayed when a camera is disconnected or not working.

LIVE: Decides whether to show LIVE screen image or not.

REC: Decides whether to record relevant camera or not.



SELECT : ▲▼ ◀▶ ⏎ [ENTER]

5-3.4. Motion Setup:

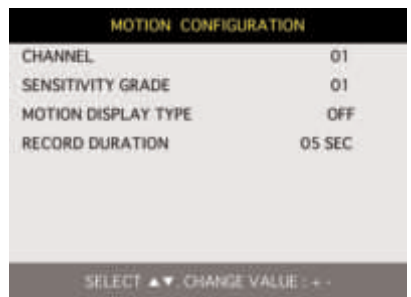
You can set the sensitivity of motion detection in 4 steps, the detection window number, motion detection area and other parameters relating to the motion recording in this menu.

1. Motion Setup:

Sensitivity Grade: Adjusts motion detection sensitivity. (LOW, MEDIUM, HIGH, VERY HIGH).

Motion Display Type: Showing cells with motion detected differently from cells with no motion.

Record Duration: Whenever motion is detected and it is set at Motion Recording mode, DVR system records for RECORD DURATION from time motion is detected. (1sec. ~ 99 sec.) (Default duration: 5 sec.)



SELECT ▲▼ CHANGE VALUE : +-

2. Motion Mask Setup:

Set motion detection area. Direction button is for moving and [ENTER] button is for selection, and [MODE] button is for changing mode of MASK SETUP.

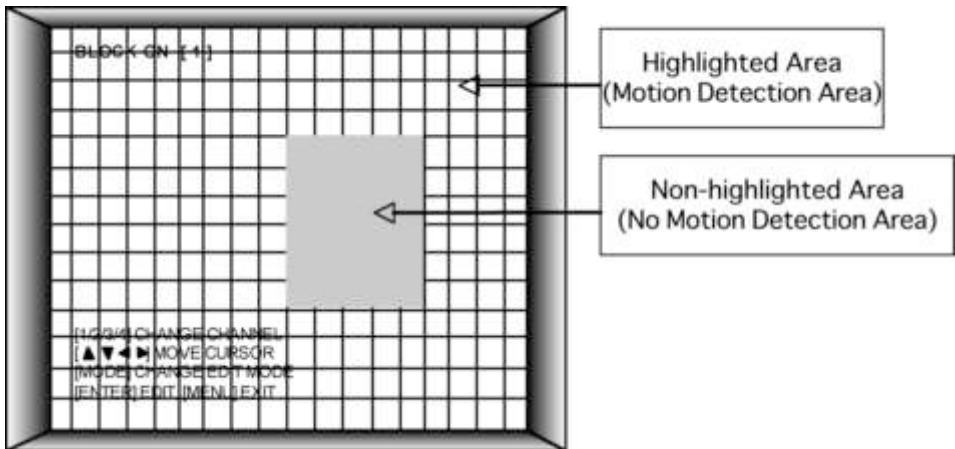
CELL: Move to the location which you want to detect and then press the [ENTER] button. Highlighted cell area means motion detection area.

ALL ON: Set all cells as detection area. Use [ENTER] button to set.

ALL OFF: Set all cells as no-detection area. Use [ENTER] button to set.

BLOCK ON: Select detection area by block. Use [MODE] button and press [ENTER] button to set ON.

BLOCK OFF: Select un-detection area by block. Use [MODE] button and press [ENTER] button to set ON.



3. Interval Setup:

Set the switching time interval for SEQ or PIP function. (1 sec. ~ 99 sec.)

FULL SCREEN: Set the sequencing switch time interval in live full screen.

PIP SCREEN: Set the sequencing switch time interval of PIP window.

EVENT UPDATE TIME: Set the minimum time interval of event to be listed in EVENT LIST. If EVENT UPDATE TIME is set at 20 sec, only following event happened 20 sec or more than 20 sec later previous event shall be listed in EVENT LIST.

INTERVAL SETUP	
SWITCHING INTERVAL	
FULL SCREEN	: 01 SEC
PIP SCREEN	: 01 SEC
EVENT RECORD	
EVENT UPDATE TIME	: 01 SEC
SELECT ▲▼◀▶ CHANGE VALUE : +-	

4. Alarm Setup:

Set type of alarm sensors connected to DVR unit.

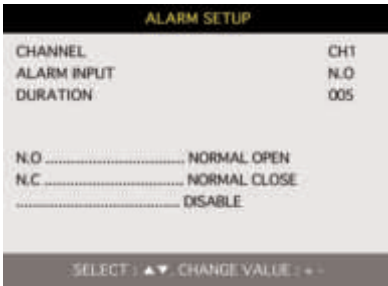
N.O represents Normal Open type and N.C Normal Close type.

1. ALARM INPUT: Select type of alarm sensor connected to DVR unit (N.O or N.C).

Use direction button and [-] [+] button to set.

DISABLE represents not to use alarm sensor connected to DVR.

2. DURATION: Set the duration of alarm when an ALARM is activated. (0 sec. ~ 300 sec.)



6. Buzzer Setup

Set parameters for buzzer (On or Off). Use direction button and [ENTER] button.

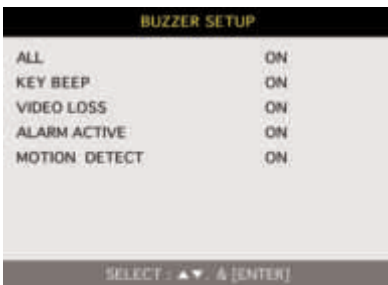
KEY BEEP: Buzz when button is pressed.

VIDEO LOSS: Buzz when video signal is lost.

ALARM ACTIVE: Buzz when alarm is activated.

MOTION DETECT: Buzz when motion is detected.

User can set all buzzers at On/Off at once by set ALL at ON/OFF.



SETUP

RS-232C Hex-codes table

Following ASCII-codes are for programmers who want to control the DVRX via the RS-232C port.

RS-232C specification (baud rate/parity/data length/stop bit) : 19200, N, 8, 1

1 Byte ASCII-code

REC	R	DOWN	J	PTZ	T	KLOCK	C	CH6	6	CH13	#
STOP	S	LEFT	H	ZOOM	Z	QPLAY	Y	CH7	7	CH14	\$
PLAY	P	RIGHT	K	FRZ	F	CH1	1	CH8	8	CH15	%
pause	A	NEXT	N	MODE	D	CH2	2	CH9	9	CH16	^
SEARCH	E	ENTER	0x0d	PIP	I	CH3	3	CH10	0		
MENU	M	-	<	SEQ	Q	CH4	4	CH11	!		
UP	U	+	>	J.SHU	L	CH5	5	CH12	@		

Jog Shuttle

Input 'L' command to activate J/SHUTTLE function using PC keyboard

Shuttle Right 10 degree	"&<1" [enter]	Shuttle Right 10 degree	"&>1" [enter]
Shuttle Right 20 degree	"&<2" [enter]	Shuttle Right 20 degree	"&>2" [enter]
Shuttle Right 30 degree	"&<3" [enter]	Shuttle Right 30 degree	"&>3" [enter]
Shuttle Right 40 degree	"&<4" [enter]	Shuttle Right 40 degree	"&>4" [enter]
Shuttle Right 50 degree	"&<5" [enter]	Shuttle Right 50 degree	"&>5" [enter]
Shuttle Right 60 degree	"&<6" [enter]	Shuttle Right 60 degree	"&>6" [enter]
Shuttle Right 70 degree	"&<7" [enter]	Shuttle Right 70 degree	"&>7" [enter]
		Shuttle Right 80 degree	"&>8" [enter]
Jog Minus	"&- " [enter]	Jog Plus	"&+ " [enter]

Shuttle: After inputting a command once, it will keep performing the command until next command.

Jog: Returns DVR from Jog operation to Button operation.

7. Password Setup

Use the [UP] and [DOWN] buttons to move to the correct option and the [LEFT] and [RIGHT] buttons to set user ID.

The password must be consist of 1 to 8 digit numbers. Just use number buttons from 1 to 10 on the keyboard.

To change password, the user must input the correct old password and then input the new password. The new password must then be re-confirmed.

Default value:

ADMIN : ' ' (Blank)

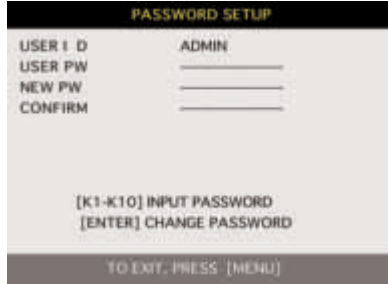
MANAGER : '1'

USER 1 : '2'

:

:

USER 8 : '9'



- * Change the user PASSWORD in the first operation is recommended.
- * To avoid forgetting the DVR PASSWORD, we recommend you write it down and store in a secure area..

8. System Information

DVR system information including firmware version, hardware version, product ID, etc...



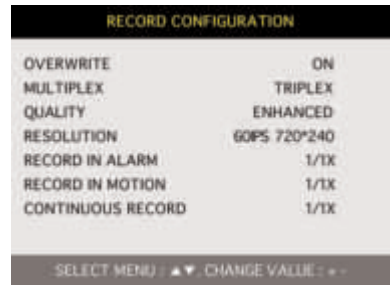
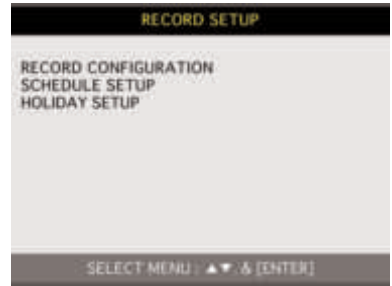
5-4. Record Setup

This is the most important configuration of the DVR.
Enter into SYSTEM MENU-RECORD SETUP and press the [ENTER] button.

5.4.1 Record Configuration

Use direction button to move and [-] [+] button to set value.

1. **OVERWRITE:** Set overwrite or stop recording when the HDD is full.
2. **MULTIPLEX:** DUPLEX: Playback & Ethernet
TRIPLEX: Playback & Recording & Ethernet



Note: DUPLEX MODE is recommended to playback the images at a maximum frame rate. But, one down side is that it causes the DVR not to record during a playback/search.

3. QUALITY: Setting recorded picture quality.

To select the picture quality, the user will step-through the quality settings as listed below. Be aware the higher the resolution (eg: Super Fine), the quicker the HDD capacity will be used up and images will be overwritten earlier. For most operations we recommend either **BASIC** or **NORMAL**.

BASIC -> NORMAL -> ENHANCED -> FINE -> SUPER FINE: *Default quality set by manufacturer is Super Fine*



In Emergency recording mode, recording quality is SUPER FINE.

To send more images via IP network and longer recording time, set QUALITY at NORMAL or ENHANCED and record at 360x240 or 360x120.

Data size of image in PAL system is a little bigger than NTSC system, but the total recording time is same as in NTSC system.

4. RESOLUTION: Set recording resolution.

60 ips at 720x240(NTSC), 50 ips at 720x288(PAL)
 120 ips at 360x240(NTSC), 100 ips at 360x288(PAL)
 240 ips at 360x120(NTSC), 200 ips at 360x144(PAL)

Images recorded in 360x240 (360x288) or 360x120 (360x144) are always played in quad mode. It is not possible to see these images in full screen mode while playing back recorded images.

Recording in half or quad resolution is recommended for higher recording speeds, or when wishing to transmit images via a GPRS network for a live remote view.

5. Record in Alarm Set record speed (skip rate) in ALARM record mode.**6. Record in Motion:** Set record speed (skip rate) in MOTION record mode.**7. Continuous Record:** Set record speed (skip rate) in CONTINUOUS record mode.

Set record speed (skip rate); 1/1x, 1/2x, 1/999x record speed

(R: RECORD S: SKIP)

ex: 1/2x) R -> S -> R -> S...

ex: 1/3x) R -> S -> S -> R -> S -> S -> R...

ex: 1/4x) R -> S -> S -> S -> R -> S -> S...

ex: If record resolution is set at 360x240, 1/1x = 120 ips, 1/2x = 60 ips, 1/3x = 40 ips, etc.

5.4.2. Schedule Setup

Unless you select an alternative recording mode, the DVR system records in Schedule Recording mode as default. In SCHEDULE REC SETUP, you can set the type of recording for every time interval of 2 hours in each day. Schedule Recording as set by the manufacturer is recording continuously at its full recording speed, this means the DVR system records continuously at 100 ips at 720x240 resolution.

To change Schedule Recording parameters, enter the SYSTEM MENU-RECORD SETUP-SCHEDULE SETUP and Press the [ENTER] button.

1. Schedule Setup

Set recording type for each recording time interval for each day of the week (2 hours interval).

Use the [MODE] button to select the record mode type (A/M/C) and move to the time interval of a day of the week you want to change.

Press the [ENTER] button to confirm and use the [+] or [-] buttons, to change the record type. To move to the next page and continue editing, use the [NEXT] button.

MODE (Edit type)

CELL BY CELL: Set each time interval of a day of the week

DAY OF THE WEEK: Set a day of the week at once

TIME SLOT: Set a time slot at once

ALL: Set page by page at once

CLEAR ALL: Clear page by page

SCHEDULE REC SETUP							
	SUN	MON	TUE	WED	THU	FRI	SAT
00-02	-M-	AM-	--C	--C	--C	--C	--C
02-04	-M-	AM-	--C	--C	--C	--C	--C
04-06	-M-	AM-	--C	--C	--C	--C	--C
06-08	-M-	AM-	--C	--C	--C	--C	--C
08-10	---	AM-	--C	--C	--C	--C	--C
10-12	--	AM-	--C	--C	--C	--C	--C
MODE: CELL BY CELL							1/2
▲▼◀▶& [NEXT], [EDIT] ← [MODE]							
A-ALARM M-MOTION C-CONTINUES							

Unless user press [REC] button to record at full resolution and in SUPER FINE picture quality, the DVR system records in SCHEDULE Record mode by default.

DEFAULT record mode for each time interval of a day of the week set by the manufacturer is C (CONTINUOUS) recording.

Record type:

After power on:	Schedule record
Exit from menu:	Schedule record
End of search or playback:	Schedule record
After pressing [STOP] button:	Schedule record
After pressing [REC] button:	Emergency record (Continuous recording in full performance) (60 (50) ips at 720x240 (720x288))

3. Holiday Setup

Users can set national holidays on the calendar to record just for that specific period in the SCHEDULE REC SETUP. Use the [MODE] button to select the month and the direction buttons to move to the day, then press the [ENTER] button to set a holiday. The color of the date set will change to red text. The maximum number of holidays is 100 days.

EDIT HOLIDAY: Set as holiday

CLEAR MON DATA: Cancel the holiday set per month

CLEAR ALL DATA: Cancel all holiday set

HOLIDAY SETUP							
< APR >							000/100
SUN	MON	TUE	WED	THU	FRI	SAT	
							01 02
03	04	05	06	07	08	09	
10	11	12	13	14	15	16	
17	18	19	20	21	22	23	
24	25	26	27	28	29	30	

MODE . EDIT HOLIDAY
SELECT ▲▼◀▶. EDIT [ENTER] [MODE]

5-6. External Device

To set parameters of external devices connected to the DVR, like Ethernet, PTZ camera, RS-232C, etc.

Use the direction buttons to move to the sub-menu and Press the [ENTER] button to select.



5-6.1. TCP/IP Setup

TCP/IP function enables user to see live pictures and recorded pictures via the internet.

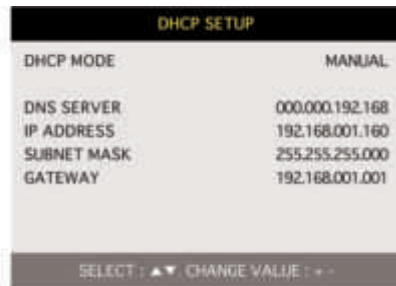
1. IP CONFIG Setup:

Show the network information assigned to the DVR unit. If the DHCP setup status is AUTOMATIC, user can set the IP port only and if the DHCP setup status is MANUAL, user must set all parameters.

2. Connection Setup:

TIME OUT: Adjust TIMEOUT value properly to successfully access to DVRX unit via an TCP/IP connection. If data transmission speed is high enough, leave TIMEOUT value as set by manufacturer (200 msec), and increase it if data transmission via TCP/IP GPRS connection is relatively slow. Execute tracert (Tracing Route) in your PC for IP assigned to DVRX unit, and you can figure out how much to increase the TIMEOUT value by.

RETRY COUNT: Set the retry number of times for network connection.



5-6.2. RS-232C Setup

User can control the DVR via RS-232C port. Connect DVR to PC via RS-232C port and control DVR using keyboard of PC. This function is mainly for programmers who want to control the DVR as part of many devices connected to PC network.



5-6.3. PAN/TILT Setup

It is to set parameters for PTZ cameras connected to the DVRX unit. The DVR unit already includes all the protocols of many well-known PTZ cameras such as PELCO D-type. After the user has selected the correct MODEL and set the parameters to control his PTZ cameras, he can control them using the operation buttons on the keyboard of the DVRX. If the PTZ camera protocols are not available in the PTZ list, the user must input the parameters of the PTZ protocol himself. Using the USB firmware port, the user can upgrade protocol for new PTZ cameras as they become available.

1. **CHANNEL:** Select channel
2. **MODEL:** Select camera model (protocol type) per each channel
3. **PTZ ID:** Select ID
4. **BAUDRATE:** Select data transmission speed
5. **CMD DELAY:** Select command delay time



5-7. Factory Default

Reset the all system parameters via the factory default menu screen, as per the manufacturers recommendation before commissioning the final settings and handing over the installation to the end user. This acts as a kind of system initialization, and the manufacturer recommends you do it when you add new HDDs or make other changes to the system menu that affect the normal system operation.

Use the direction buttons to navigate the sub-menus and Press the [ENTER] button to change parameters. When ready, select RUN, and press the [ENTER] button to action the Factory Default setting.

5-8. Language Setup

The menu can be displayed in a number of languages.

Press the [ENTER] button to select your language.



6-1. DVR Network Configuration

Now that you are familiar with the equipment and need to be able to identify a router from a modem and a Cat5 network cable from a telephone cable, we will proceed to determine the network scenario that fits your current network.

Please call your provider to identify what type of service they are providing you. You will need to know following;

Upload speed: For your own reference for expected frame rates

Download speed: For your own reference for expected frame rates

Addressing: To determine what scenario you should follow

Router or Modem: For determine what scenario you should follow



NOTE: If your provider is using PPPoE (usually DSL providers), you **MUST** have a router installed on site and follow CASE C for DVR setup and access.

Please verify TCP/IP settings after installing any new equipment (routers, switches, modems, etc.). If possible, use a PC on the network to verify that the connection can be made and that all current configurations on any equipment are up and working properly. Do this before doing ANY configurations with the DVR. We are assuming that your current equipment is configured properly for TCP/IP access.

PC's TCP/IP Setting

Before configuring the DVR, please fill out the information below if applicable;

Choose any PC on your network and determine its TCP/IP settings;

IP Address: (ex. 192.168.1.5)

Subnet Mask: (ex. 255.255.255.0)

Default Gateway: (ex. 192.168.1.1)

For information on how to determine this information, please consult the FAQ page 43.

The next few pages cover several network scenarios. Each one is labeled with a letter. Please identify which scenario your current network falls within and follow the instructions for configuring and accessing your DVR via TCP/IP.

The box below represents an area that you can't control. If you are unable or do not have access to your router for port forwarding. Please contact your provider and request them to forward a port to the corresponding DVR IP address:

Case A: Laptop Directly Connected to DVRX Unit



Configure the DVR as follows :

1. Set the DVR to MANUAL for the TCP/IP settings. Do not use DHCP SETUP for this application or verify that DHCP SETUP is set to MANUAL.
2. **IP ADDRESS:** assign it a public IP address (eg: 192.168.1.160)
 - a. You need to assign the DVR an IP address just as you would a PC.
 - b. The default static IP address from the manufacturer is as above, if you are unsure of this IP address please contact the manufacturer.
 - c. When configuring the DVR's IP address information, the version of firmware within the units may display the IP addresses differently. For simplicity sake, 192.168.1.160 may have to be configured as 192.168.001.160
3. **PORT NUMBER:** 50000
 - a. 4 channel, 8 channel & 16 channel: This number is stated explicitly.
 - b. For most situations, please use the default 50000 for simplicity.
4. **SUBNET MASK:** 255.255.255.000 (example)
 - a. Along with your static IP address you should set your subnet mask to conform with your current TCP/IP network. Please use the same subnet mask when configuring the DVR.
5. **GATEWAY:** 192.168.1.190 (example)
 - a. Please set this parameter to 000.000.000.000 unless interfacing with your existing TCP/IP network, then contact your IT department for the correct gateway settings.
6. **Please DO NOT configure MAC ADDRESS or DHCP SETUP.**



7. Your DVR is now ready for access via your laptop.

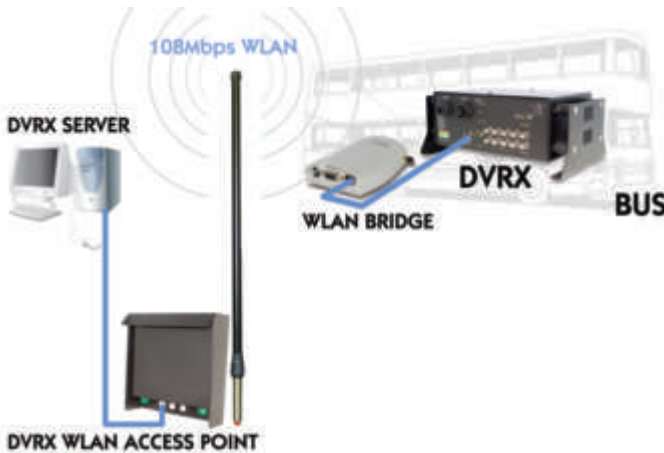
Accessing the DVR using the Remote Software for CASE A

LOCALLY :

To access the DVR locally, open the remote viewing software and click on the "Settings" button. Now add the correct IP address to match that of the DVR you wish to connect to.

1. **Public IP** address of 192.168.1.160
2. **Port:** 50000 (this has to match what is configured in the DVR)
3. **User ID:** (always leave the default "admin")
4. **Password:** this must match what is configured in the DVR
 - a. 4,8,16 channel default password: (NO PASSWORD) - leave blank.

Case B: Multiple DVRX units via Wireless LAN

**Configure the DVR as follows :**

1. Set the DVR to MANUAL for the TCP/IP settings. Do not use DHCP SETUP for this application or verify that DHCP SETUP is set to MANUAL.
2. **IP ADDRESS:** assign it a public IP address (eg: 10.10.10.101)
 - a. You need to assign the DVR an IP address just as you would a PC.
 - b. For this case you must have received several available static IP addresses. Of those, choose one that is not in use to which you can assign the DVR, if you do not know your available IP addresses please contact your IT department.
 - c. When configuring the DVR's IP address information, the version of firmware within the units may display the IP addresses differently. For simplicity sake, 10.10.10.101 may have to be configured as 010.010.010.101
3. **PORT NUMBER:** 50000
 - a. 4 channel, 8 channel & 16 channel: This number is stated explicitly.
 - b. For most situations, please use the default 50000 for simplicity.
4. **SUBNET MASK:** 255.255.000.000 (example)
 - a. Along with your static IP addresses you should have received your subnet mask from your IT department. Please use the same subnet mask when configuring the DVR. If you did not receive this information contact your IT department.
5. **GATEWAY:** 000.000.000.000 (example)
 - a. Please set this parameter to 000.000.000.000 unless interfacing with your existing TCP/IP network, then contact your IT department for the correct gateway settings.


6. Please DO NOT configure MAC ADDRESS or DHCP SETUP.

7. Your DVR is now ready for access via your WLAN network.

Accessing the DVR using the Remote Software for CASE B

REMOTE ACCESS:

To access the DVR via WLAN, open the remote viewing software and click on the "Settings" button. Now add the correct IP address to match that of the DVR you wish to connect to.

1. **Public IP** address of 10.10.10.101
2. **Port: 50000** (this has to match what is configured in the DVR)
3. **User ID: (always leave the default "admin")**
4. **Password:** this must match what is configured in the DVR
 - a. 4,8,16 channel default password: (NO PASSWORD) - leave blank.

6-2. Free Remote Viewer program



1. **Power switch:** Press the Power switch to exit the program. Please disconnect the live feed before powering off the software
2. **Connect button:** Press the Connect button to view the live images from the DVR. These are the same images being displayed on the monitor of the DVR, with a delay depending on your internet connection at both the DVR location and from where you're currently accessing.
3. **Disconnect button:** Press this button to disconnect from the DVR unit. Then you may power off the software.
4. **Screen Division button:** Select how many channels to view simultaneously (single, 4-split, 9-split, or 16-split). When you select a view you will see the Channel Numbers highlighted which determine what channels are currently being viewed.
5. **Channel number button:** Select the channel that you want to view based on what Screen Division view is enabled.
6. **Status window:** Display's the current time and date based. The date is in the format : Year/Month/Day. You will also see the status of your connection.
7. **Setting, Playback, and Sequence buttons;**
 - a. **Setting:** Enables the software configuration screen.
 - b. **Playback:** Enables the remote playback screen.
 - c. **Sequence:** When in single channel view, hitting the sequence button will sequence through all active channels at a speed specified in the settings menu.
8. **PTZ control:** You can control a PTZ camera via the software with these controls.
 - a. First, you must input or configure the specific PTZ protocol into the software in order to communicate with the PTZ device.
 - b. When you press any of the controls for the PTZ, please press and hold the button for 1-2 seconds per instance to compensate for the data transmission rate. If you do not and instead simply click the PTZ buttons, you may get undesired results (having the requested operation transmitted repeatedly, regardless of your intention).
 - c. The plus and minus buttons send the PTZ commands to the corresponding PTZ camera ID.

Setting Screen

RemoteViewer Setup

IP/PORT | PTZ/SAVE |

NAME:

ADDRESS: PORT:

USER ID: PASSWORD:

Name	IP	Port
INTERNET	192.168.1.160	50000

OK Save Delete

OK Cancel

Name (LABEL): This just identifies your settings. The settings are automatically saved under this label when you hit 'OK'.

IP Address: Based on your network scenario and from where you're accessing, enter the appropriate IP address.

PORT: Enter the Port Number you assigned the DVR.

ID: Always enter "admin"

Password: This must match the password on the DVR. For simplicity, just use numbers.

It can add and save several IP Addresses for prompt multi-site monitoring.

RemoteViewer Setup

IP/PORT | PTZ/SAVE |

OPTION

Circular Monitoring Interval:

Scan Rate:

PTZ

PTZ Type:

PTZ Baudrate: bps

SAVE

Set Path to Save Downloaded image

f:\work\4_dvrclient2\remoteviewer(2005_09_...)

Run in Full Screen Mode

OK Cancel

PTZ TYPE: If using PTZ device or camera, select the protocol your PTZ camera is using from the list of preconfigured protocols.

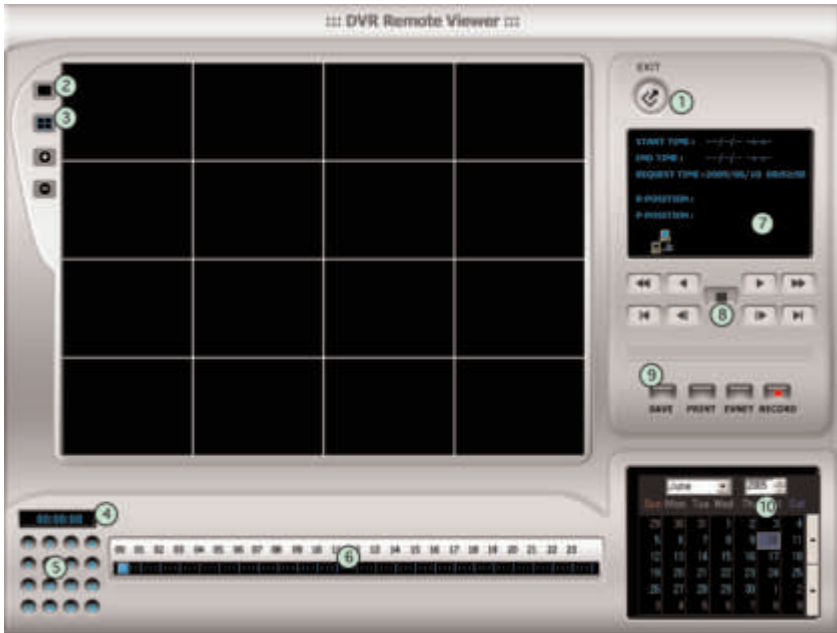
Circular Monitoring Interval: This indicates the speed of the channels sequence when the SEQUENCE button is used from the main interface.

PTZ Baud Rate: Enter the Baud Rate of your PTZ camera.

Run in full screen mode: When checked, this will enable the program to re-adjust the interface to completely fill your computer screen.

Set Path to Save Downloaded image: Determines the location and folder on your PC where the downloaded video clips are stored. If you do not specify a valid location, The viewer program will save all files in the default location of C:\Program Files\DvrRemoteViewer4

PLAYBACK INTERFACE through Remote Viewer

**Function of each button in Search window.**

1. **Exit** : Exit to live window.
2. **Full screen**: Select a certain camera to view in full screen.
3. **Quad**: To view quad mode (4 channels at the same time)
4. **Time**: The recording time & date information of the pictures which is being played.
5. **Channel selection**: Select each camera.
6. **Time selection**: Select a time from which user want to see. The playback will be started from this point.(drag the point using mouse)
7. **Start and end time**: Indicate record starting time and end time of images on HDD
8. **Other operating button**: Refer to the next page description.
9. **Command Button**
 - a) **SAVE**: After pressing the Stop button, click SAVE button to save the currently viewed image in jpg format.
 - b) **PRINT**: After pressing the Stop button, click PRINT button to print the currently viewed image.
 - c) **EVENT**: To be available later
 - d) **RECORD**: Press this button to download playback images transmitted from DVR unit into your PC. Images downloaded is saved in the folder set in Remote Viewer Setup. Press the RECORD button again to stop downloading. User can see saved images using Media Player.
10. **Calendar**: Use this to select the date you wish to search. The filled in square outlines the date that is at the beginning of the hard drives. The outlined square indicates the data at the end of the hard drives. Select the date you wish to view. Verify a filled in square for that particular date. If an invalid date is selected it will default to the beginning of the hard drive(s).



Play Fast Backward



Move to the start of recording



Play Backward



Move to the previous hour



Play Forward



Move to the afterward hour



Play Fast Forward



Move to the end of the recording



Stop Playback



Notice: To see continuous live view, it is recommended to set recording mode of DVR unit in continuous recording mode. If it is set at motion recording mode, image transmission is done only when motion is detected, and user only see still images for most of cases.

While user access to DVR unit via IP network to see live view, the DVR unit continues to record. While user see recorded images via IP, DVR unit shows live images through monitor connected to DVR unit. This is only for TRIPLEX MODE.

6-4. Frequently Asked Questions

How do I determine my PC's TCP/IP settings?

For Window 98 / Me Users

1. Click on the Start Menu, select RUN
2. Type 'winipcfg' (without the quotes), hit Enter
3. Use the drop down list to select your 10/100 Fast Ethernet Adapter(not the PPP adapter)
4. Now you will see your IP Address, Subnet Mask, and Default Gateway information

For Window 2000 / XP

1. Click on the Start Menu, select RUN
2. Type 'cmd' (without the quotes), hit Enter
3. The command prompt will appear. At the prompt type – "ipconfig" (without the quotes)
4. This will list your current IP address, subnet mask, and default gateway.

How do I choose a unique IP that matches my network?

For your home or small office, ensure that all devices on your network are running. Chose an IP address that you wish to assign the DVR. To ensure the IP address that you will assign the DVR matches your network, review the "PC's TCP/IP settings" that you had recorded earlier. See some examples below."

If your "IP Address" entry in "PC's TCP/IP Settings" was 192.168.0.y and your "Subnet Mask" was 255.255.255.0 then use 192.168.0.x for your DVR's IP Address ("x" meaning any number between 2-254 that you wish, as long as it passes the "PING" test).

If your "IP Address" entry in "PC's TCP/IP Settings" was 192.168.1.y and your "Subnet Mask" was 255.255.255.0 then use 192.168.1.x for your DVR's IP Address ("x" meaning any number between 2-254 that you wish, as long as it passes the "PING" test).

After choosing an appropriate IP address, 'PING' the IP address that you plan to assign to the DVR. If you receive a "Request timed out", then you may use that IP address (the PING test has passed).

* If your "IP Address" entry under "PC's TCP/IP Settings" is not a 192.168.z.y address with a "Subnet Mask" of 255.255.255.0 then please contact our Support Center.

** If your "IP Address" entry under "PC's TCP/IP Settings" is not a 192.168.z.y address, please contact our Support Center.

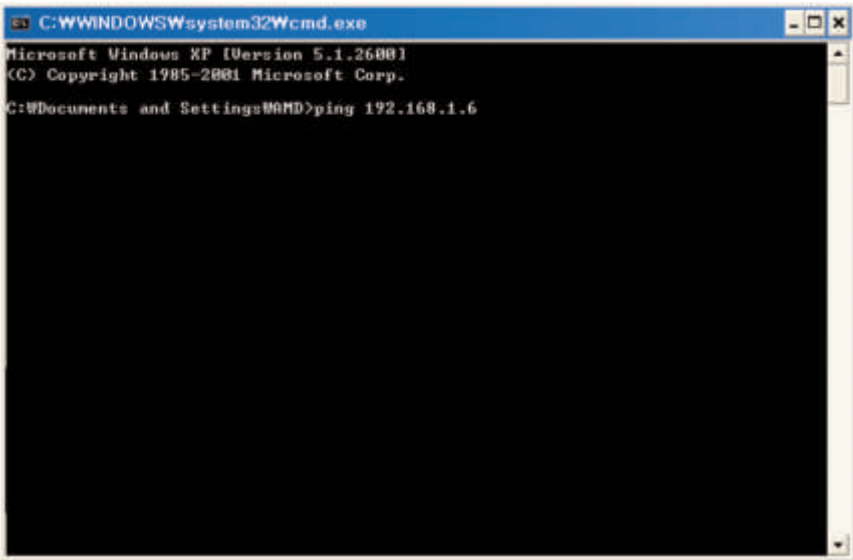
How do I "PING" an IP address ?

1. Open an MS-DOS (or Command) prompt.
2. At the prompt type – "ping xxx.xxx.xxx.xxx" (without the quotes and replace the x's with an IP address)
3. Press Enter

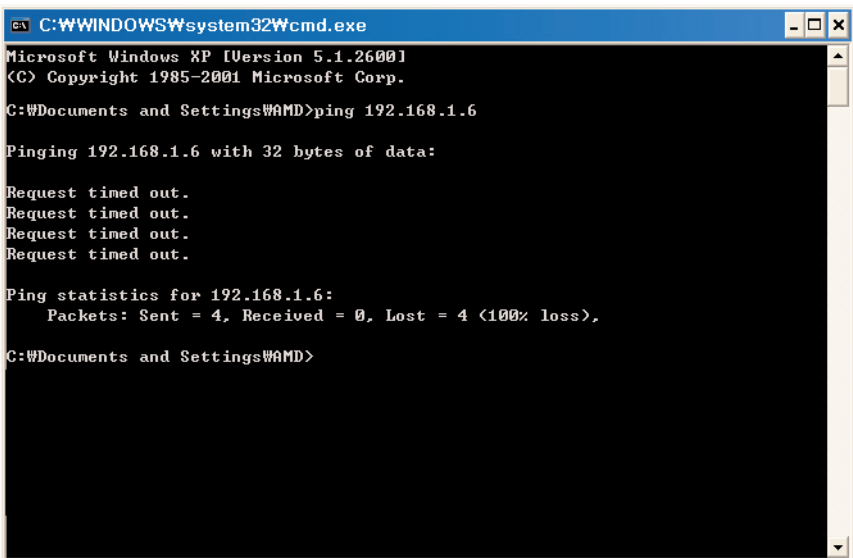
How do I "PING" an IP address ?

1. Open an MS-DOS (or Command) prompt
2. At the prompt type – "ping xxx.xxx.xxx.xxx" (without the quotes and replace the x's with an IP address)
3. Press Enter

Ping Result. When testing for a usable IP address, verify that you get a "Request timed out" message. This ensures that the IP address that you have tested is not being used by another device on your network.



```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.
C:\Documents and Settings\AMD>ping 192.168.1.6
```



```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.
C:\Documents and Settings\AMD>ping 192.168.1.6

Pinging 192.168.1.6 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 192.168.1.6:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\Documents and Settings\AMD>
```

How do I open an MS-DOS or Command Prompt?

Windows 98/Me: Start -> Programs -> Accessories -> MS-DOS prompt

Windows 2000/XP: Start -> (All) Programs -> Accessories -> Command Prompt

How do I choose a private IP address : Below lists the ranges for private addresses.

Private Class A address space: 10.0.0.0 – 10.255.255.255

Private Class B address space: 172.16.0.0 – 172.31.255.255

Private Class C address space: 192.168.0.0 – 192.168.255.255

For most cases you will choose a private IP address that falls in the Class C address space. (ex. 192.168.1.x or 192.168.0.x)

How do I forward a port in my router?

For cases A&C you must forward a TCP/IP port through your router. This port is the Port Number specified in the DVR. For most cases you should be able to leave the default at 50000.

Every router has a different procedure for forwarding ports. Please consult your router's user guide on how to correctly configure Port Forwarding.

Can I configure my DVRX for remote access using a Dial-Up connection?

Yes, it is possible, but not recommended. With a live video feed, the bandwidth that a dial-up connection provides is very poor. In addition, you will have to install a device that allows your DVR to connect directly to your dial-up phone line.

Why is my remote video jerky?

The frame rates received via the Internet are all dependent on your connection condition and speed at both the DVR site and the location from where you are accessing the DVR. The fastest frame rates are achieved locally.

Important Notes Regarding the Remote Viewer and the DVR

When you are in SCAN MODE and are playing back data, you are actually accessing the DVR remotely and placing the unit itself in playback mode, which enables DVR to record the images.

When selecting a date/time to play back. First, ensure that the stop button has been pressed (screen should have no images displayed). Next, select the date you wish to view and verify that it is a valid date on the hard drive and that the selected data is outlined with the box filled in. Then, select the time you wish to access for that particular date. Finally, hit the single-arrow play or double-arrow play button.

To see continuous live view, we recommend NOT setting the DVR for motion detection. The remote viewer only sends images when there is motion and this motion is not fluid. The remote SCAN MODE option still operates as normal. We recommend only using the remote playback feature if you set the DVR for Continuous Record.

The DVR still records images in the remote scan mode, but recording rates drop by a small amount. Therefore, we recommend remote access to DVR for Scan when needed.

The remote viewer is only compatible with Windows operating systems. If the connection is lost during remote playback, exit SCAN MODE, reconnect to the live view, then re-enter SCAN MODE.

Specifications

- Best picture quality (JPEG-2000)
- Real time live display in all channels
- 4 channel video 120(100)fps recording capability
- Triplex (Playback/Recording/Ethernet)
- Multi-language menu
- Convenient search function with Jog/shuttle
- USB port for firmware upgrades
- Easy PTZ camera control by pre-assigned buttons
- Password Protection
- Remote monitoring and download through network

STORAGE CAPACITY	Internal	HDD, up to 2 HDDs with no limitation on capacity Future support for CD-RW For backup (can be replaced by 3rd HDD)
VIDEO I/F	Input	Composite 4ch
	Output	Composite 2ch (Monitor/VCR) Loop Out 4ch
	Compression	JPEG 2000
	Compression Rate	User Definable (1/1 ~ 1/999); 1/1 = real time, 1/2 = half real time etc...
	Image Size Fixed	Basic, Normal, Enhanced, Fine, Super Fine
	Display Speed	Real Time
RECORDING/SEARCH	Recording Mode	Scheduled, Motion, Alarm
	Search	Event Search, Date/Time Search, Jog/Shuttle Search
	Recording Speed (NTSC/PAL)	Full (60/50), Dual (120/100), Quad (240/200)
	Recording Resolution (NTSC/PAL)	Full (720 x 240/720 x 288), Dual (360 x 240/360 x 288), Quad (360 x 120/360 x 144)
MULTI-LANGUAGE		English, Spanish, German, Italian, French
SWITCHING INTERVAL		1~99 sec selectable
MULTI-SCREEN DISPLAY OPTIONS		4 Way, 6 Way, 8 Way, 9 Way, 13 Way, 16 Way, PIP Digital Zoom, Freeze Function available in Live Mode, PIP
ALARM	Inputs	4 Alarms (NO/NC selectable in SETUP menu)
	Outputs	1 (NO/NC)
	Post Alarm	Duration of alarm output: 1 sec~99 sec selectable
MOTION DETECTION	Area Division	16 x 12
	Detection Division	32 x 24
NETWORK		Ethernet (TCP/IP), Remote Viewer Program included
BACKUP		VCR, CD-RW Back-up, Downloaded via IP Network
PTZ CONTROL		RS-485, Key Control (Key Assigned for each PTZ Command)
FIRMWARE UPGRADE		USB Port for Firmware Upgrade, CD-R
SERIAL I/F	RS-485	For PTZ Camera Control
	RS-232C	For operation using keyboard of PC
POWER REQUIREMENTS		12VDC 5A Adapter
WEIGHT		8.5kg
DIMENSIONS (W/H/D)		436 x 396 x 88mm