Triplex MPEG-4 DVR 4CH

Release Version : 1.5

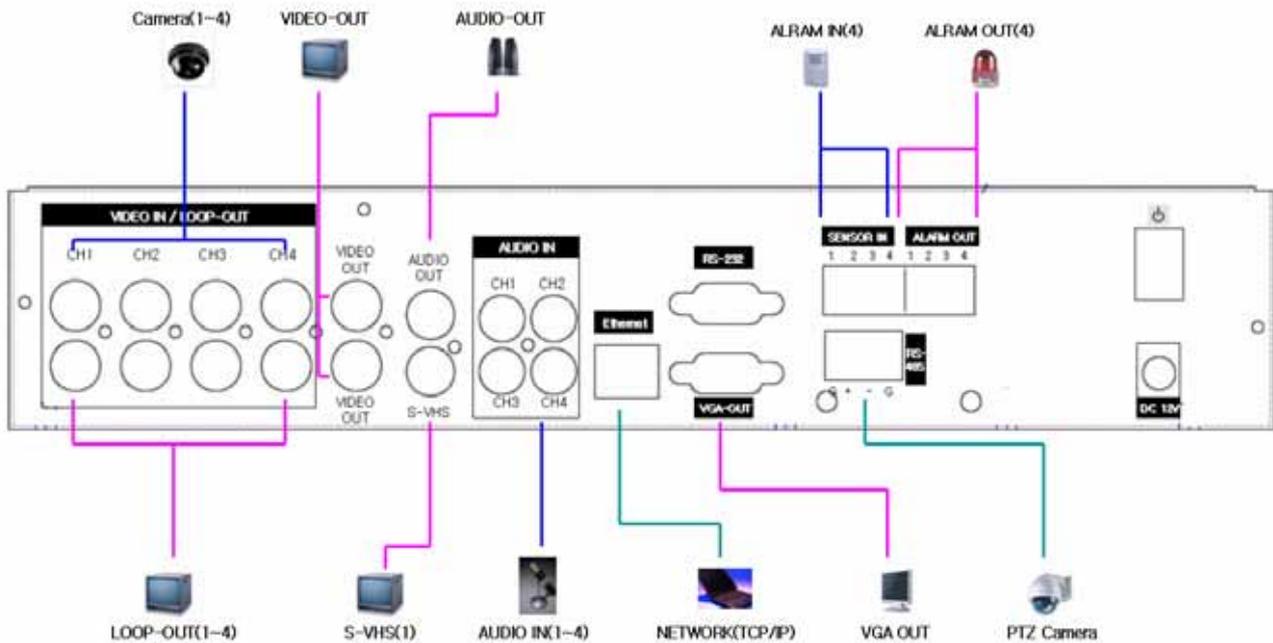This document contains preliminary information and subject to change without notice.

THE LIST OF CONTENTS

This Product is the triplex MPEG-4 DVR.
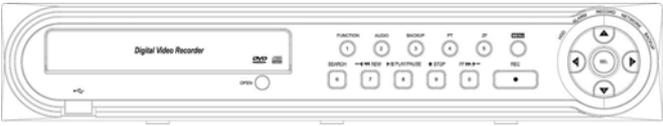
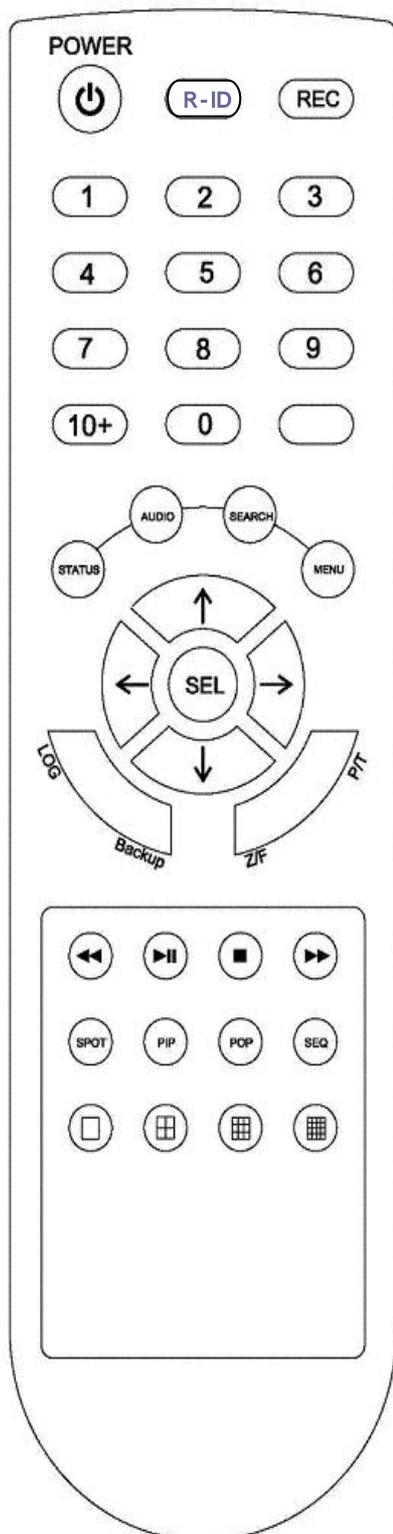|	
DVR SET	
USER (CLIENT) SOFTWARE CD	
REMOTE CONTROLLER	
BATTERY	
POWER ADAPTOR	
MANUAL	
SCREWS	
IDE HDD CABLE	
HDD SUPPORT BRACKETS	
POWER CABLE	
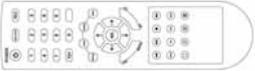
REAR PANEL CONNECTIONS

REAR PANEL Structure

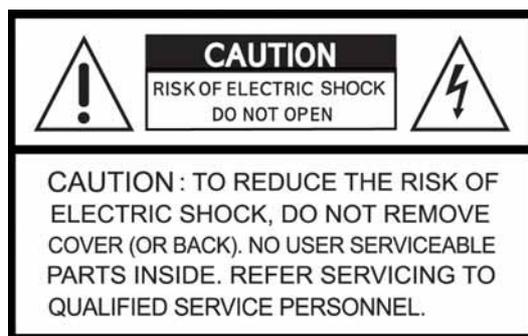| 1.CAMERA INPUT	Camera Input Jack of the DVR system (1CH~4CH)
2.LOOP-OUT	Output for the detection of each camera input channel
3.VIDEO-OUT	Output jack of DVR System. Video Output.
4.AUDIO OUT	Audio Input Jack, Audio Output for Store and Search and Real-time Output Support during Recording
5.S-VHS	It displays the image of S-VHS
6.AUDIO IN	It is the audio input jack for the real-time audio input (4 CH supports).
7.NETWORK	It supports the TCP/IP network through RJ45 jack.
8.RS-232	It is the RS-232 Network Port for technical tool.
9.VGA OUT	It is the VGA Output Jack that operates the same function as the VIDEO-OUT jack.
10.SENSOR-IN	SENSOR-Input Jack (1~4)
11.ALARM-OUT	It supports the alarm output by the image motion, sensor motion, or event motion.
12.PTZ CAMERA	It offers the communication system (RS-485) for the PAN/TILT/ZOOM/FOCUS Control.

THE OPERATION OF REMOTE CONTROLLER

1.NUMERIC	It inputs the set point and selects channels.
2.STATUS BUTTON	It displays the current status of the DVR system.
3.AUDIO BUTTON	It selects the output by assigning the AUDIO Output
4.BACKUP BUTTON	It stores the saved image in Back-up Media.
5.P/T BUTTON	It operates the PAN/TILT,Zoom function of the camera.
6.Z/F BUTTON.	It operates the ZOOM/FOCUS and preset function of the camera.
7.REC BUTTON	It select/ un-select recording the input Images (Forced Recording).
8.R-ID BUTTON.	It configure Remocon ID.(Range is from 00 to 99)
9.MENU BUTTON	It displays MENU. It selects the item on the MENU category and has the set-up and ending features.
10.SCROLL BUTTON	It moves the cursor in the SELECT and MENU categories. It changes the direction of PTZ.
11.SEL (SELECT)	It changes the selection and set-up on the menu categories.
12.SEARCH	It searches the stored images.
13.LOG	It displays the LOG to operate the DVR function.
14.REW	It replays the search image backward up to 128 times faster. It supports the STEP Rewind function at the pause.
15.PLAY/PAUSE	It plays/pauses the image during search.
16.Forward/ Fast Forward	It replays the search image forward up to 128 times faster. It supports the STEP Forward function at the pause.
17.STOP	It stops the playing process. When the stop button is pushed, the status is converted into Detection Mode.
18.SPOT	SPOT Function Button (for9/16CH Product Only)
19.PIP	It views the image from other channels during monitoring the current image from the camera Small pop-up screen is displayed at the PIP Setup. The small pop-up screen can be adjusted Up-Down-Left-Right

20.POP	It detects the image in the assigned mode (16CH Only)
21.SEQUENCE	It displays the image in the Sequence for each channel.
22.1 DIVISION	It selects and detects each channel.
23.4 DIVISION	It divides the entire channel into 4 individual channels for detection.
24.9 DIVISION	It divides the entire channel into 9 individual channels for detection. This function is applied on only the 16CH product.
25.16 DIVISION	It divides the entire channels. This function is applied on only the 16CH product.

SAFETY PRECAUTIONS


```
        CAUTION
    RISK OF ELECTRIC SHOCK
         DO NOT OPEN

CAUTION : TO REDUCE THE RISK OF
ELECTRIC SHOCK, DO NOT REMOVE
COVER (OR BACK). NO USER SERVICEABLE
PARTS INSIDE. REFER SERVICING TO
QUALIFIED SERVICE PERSONNEL.
```

EXPLANATION OF SYMBOLS

This symbol is intended to alert the user to the presence of important operation and maintenance (servicing) instructions in the literature accompanying the appliance.

This symbol is intended to alert the user to the presence of unprotected "dangerous voltage" within the product's enclosure that may be strong enough to cause a risk of electric shock persons.

CAUTION

THIS PRODUCT HAS MULTIPLE-RATED VOLTAGES (110V AND 220V).

SEE INSTALLATION INSTRUCTIONS BEFORE CONNECTING TO THE POWER SUPPLY

THIS PRODUCT USES A LITHIUM BATTERY.

RISK OF EXPLOSION IF THE BATTERY ON THE MAIN BOARD IS REPLACED BY AN INCORRECT TYPE.   DISPOSE OF USED

BATTERIES ACCORDING TO INSTRUCTIONS.

See INSTALLION INSTRUCTION BEFORE CONNECTING TO THE SUPPLY.

THIS EQUIPMENT AND ALL COMMUNICATION WIRINGS ARE INTENDED FOR INDOOR USE.

TO REDUCE THE RISK OF FIRE ELECTRIC SHOCK, DO NOT EXPOSE THE UNIT TO RAIN OR MOISTURE.

WARNING

The product should be installed by a trained professional.   The DVR should be powered off when connecting camera, audio, or sensor cables.

The manufacturer is not responsible for any damages caused by improper use of the product or failure to follow instructions for the product.

The manufacturer is not responsible for any problems caused by or resulting from the user physically opening the DVR for examination or attempting to fix the unit.   The manufacturer may not be held liable for any issues with the unit if the warranty seal is removed.

INDEX

Chapter 1. System Information

1. FRONT Description & Specification
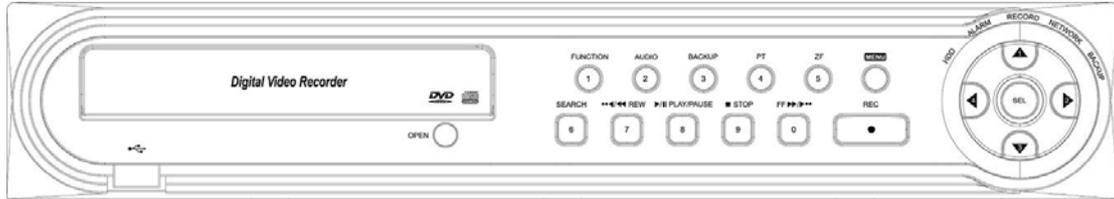
Figure 1. FRONT PANEL

1.1   FRONT LED DESCRIPTION

REC	It is blinking when the record function of the DVR system is operated.
ALARM	LED is turned on when the EVENT of Schedule and Sensor is operated.
POWER	The status of power is indicated as POWER ON when the power is delivered to the DVR system.
NETWORK	LED is turned on when the Network Function is operated through Network Client Connection.
HDD	LED is blinking when Video or Audio is stored in the DVR system.

1.2 FRONT KEY DESCRIPTION

FUNCTION	It controls the other features whose button is not displayed on the front and It operates the features of STATUS, AUDIO, BACKUP, PT, ZF, SEQUENCE, and LOG. * This feature is applied and operated by the remote controller.
AUDIO	It controls the Audio feature of the DVR system.
BACKUP	It is the backup process of stored image in the DVR system.
PT	It controls the PAN/TILT/ZOOM feature of the PTZ camera installed in the DVR.
ZF	It controls the ZOOM/FOCUS and Preset feature of the PTZ camera installed in the DVR.
MENU	It displays the categories of the SETUP and MENU of the DVR System.
SEARCH	It searches the stored image.
REW/STEP REW	It rewinds and replays the stored image up to 128 times faster. It supports the STEP Rewind feature on the pause.
PLAY/PAUSE	It plays/pauses the image during search.
STOP	It stops the searching process of the stored image.
FAST FORWARD	It is for the FAST Forward feature during the search of the stored image. It offers the search up to 128 times faster.
SCROLL BUTTON	-It moves (Up/Down/Left/Right)the cursor in the menu categories & PTZ screen -It displays full screen of camera(1ch/2ch/3ch/4ch)
SEL	-It confirms the set-up status within the detail menu categories. -It selects/ends the menu & the setup process at the MENU DISPLAY screen .

* USB Port use USB memory stick, CD-RW, DVD-RW as firmware update and backup.

1.3 System Specifications

			Stand-Alone(16CH)		Stand-Alone(9CH)		Stand-Alone(4CH)	
Video	Input	Channel	16ch		9ch		4ch	
		Signal Selection	Auto Detection(NTSC/ PAL)					
		Input Level	Composite 1.0Vp-p±10%, 75Ω					
		Video Loss Check	Yes					
	Output	Display output	TV-OUT(1), VGA-OUT(1), S-Video(1)					
		Output Level	Composite 1.0Vp-p, 75Ω/ 15Pin D-Sub/ S-Video port					
		Etc Output	Loop-Out 16ch/SPOT 1ch		Loop-Out 9ch/SPOT 1ch		Loop-Out 4ch	
Audio	Input	Channel	4ch		4ch		4ch	
		Codec	ADPCM		ADPCM		ADPCM	
	Output	Output	1ch		1ch		1ch	
Sensor/Alarm	Input Channel		16ch		9ch		4ch	
	Output Channel		4ch		4ch		4ch	
Language	Multi-Language		English, Spanish, French, Korean, Chinese, Tiwan					
OS	Operation System		Embedded Linux					
Display	Frame Rate		NTSC	PAL	NTSC	PAL	NTSC	PAL
			480fps(30fps/ch)	400fps(25fps/ch)	270fps(30fps/ch)	225fps(25fps/ch)	120fps(30fps/ch)	100fps(25fps/ch)
	Display Format		1,4,9,16 & PIP,POP(9-Division)		1,4,9 & PIP,POP(9-Division)		1,4& PIP	
	Auto sequence		1 Split/ 4 Split		1 Split/ 4 Split		1 Split	
Recording	Compression		MPEG-4(Hardware Codec)					
	Frame Rate		NTSC	PAL	NTSC	PAL	NTSC	PAL
		360x240/ 360x288	120fps	100fps	120fps	100fps	120fps	100fps
		720x240/ 720x288	60fps	50fps	60fps	50fps	60fps	50fps
		720x480/ 720x588	30fps	25fps	30fps	25fps	30fps	25fps
	Image Quality Grid		Best/ High/ Normal/ Basic					
	Recording Mode		Disable, Continuous, Schedule, Motion detection, Sensor, Manual					
	MotionDetection Sensitivity		Motion detection setup control(1~9)					
	Pre Recoding by Event		2sec, 4sec, 6sec, 8sec, 10sec					
	Post Recoding by Event		10sec, 30sec, 1min, 5min, 10min					
	Backup type		Time / File					
	Backup Device		External Device by USB(USB Memory, CD-RW, DVD-RW) / Internal Device(CD-RW, DVD-RW)					
	HDD Full Display		OSD Indicate					
Search	Playback	Play	Step Forward/Reverse, Play/Pause, Stop, Fast Forward/ Reverse					
		Fast Forward / Reverse	x2,4,8,16,32,64,128					
	Search Mode		Time, Event, File					
Storage	Interanl HDD	Interface Type	EIDE/ATA 133					
		Max HDD Number	4 HDD(2HDD in DVR Case)					
	Backup	USB 2.0	USB Memory (Backup, Firmware update)					
		Imternal Backup Device	CD-RW, DVD-RW					
		External Backup Device	CD-RW, DVD-RW, USB Memory by USB					
Serial port	Console		RS-232C					
	Camera Control		RS485					
Network	Program		EnClient/ Web-Viewer, EnTMS					
	Network Support		ADSL/ Static IP/ Dynamic IP(Available DDNS Server)					
Dimension	Device(W x H x D)		430 x 95 x 380		430 x 95 x 380		380 x 68 x 330	
	Packaged(W x H x D)		520 x 230 x 470		520 x 230 x 470		460 x 155 x 460	
Weight	Net		6.69kg		6.69kg		4.23kg	
	Gross		7.92kg		7.92kg		5.24kg	
Power	Power Supply		AC Input 100-240, 50/60Hz		AC Input 100-240, 50/60Hz		DC 12V(AC Input 100-240, 50/60Hz)	

Chapter 2. Boot Procedure

It is for the starting operation of the DVR system.

This DVR System uses DC 12V as a power source and the power adapter included in the package.

There is the power switch that controls POWER ON/OFF for the stability of the DVR system.

1. Boot Screen

Figure 2-1

'Boot Loading' is shown on the screen after the system booting (Figure 2-1) and the booting process is started to operate.

Figure 2-2

The authentication process is started for the security of the system (Figure 2-2), when the booting process of Figure 2-1 is completed.   The default password from factory is "0000" and can be changed by an Admin password at the SYSTEM SETUP MENU.

2. SYSTEM OSD

Figure 2-3

The general indication of the system is displayed on the main screen (Figure 2-3).

Camera Name	It indicates the camera channel and name.
Operation Status of System	It indicates the current operation status of the system. LIVE: monitoring status, REC: The current status of the system is recording. USB: The connection of the device that is connected to USB. *USB is shown above LIVE and REC is placed below LIVE on the screen.
HDD	This system supports HDDs up to 2 that are indicated as HDD–A, HDD–B, HDD-C and HDD-D. HDD-A: FULL (When fill space of HDD, Indicates on the screen.) HDD-A : FULL(when storage capacity of HDD is full, this indicates on the screen) HDD-A: xx% (Recorded Space Ratio) HDD-A: None (HDD is not installed or unavailable HDD is installed.) HDD-A: N/F (It means NON-FORMAT and indicates that the disk is used for the first time or requires the format, even though the device is recognized.)
Date & Time	It indicates the time & date that are set up on the current system.

Chapter 3. The Menu of DVR System

It is the setup process for the DVR system.　Users can adjust and control it for their needs before starting to use it.　This process sets up the environment of the DVR system.　Users should confirm each menu before starting to use the system.

Figure 3-1

Detail Menu of Figure 3-1.

SYSTEM	[PASSWORD] ADMIN PASSWORD [TIME] TIME SETUP TIME FORMAT [REMOCON ID] [CHANGE LANGUAGE] [SOFTWARE UPDATE] [DEFAULT SETUP]	LIVE	[SEQUENCE DWELL(SINGLE)] [CAMERA NAME] [HIDDEN CAMERA] [CAMERA COLOR] [PTZ PROTOCOL] [VIDEO STANDARD]
REC	[REC PROPERTY] [REC OPTION] [EVENT REC] [SCHEDULE REC]	NETWORK	[TYPE] [DDNS] [NET PASSWORD] [NET CLIENT PORT] [NET CLIENT ID] [NETWORK BANDWIDTH] [WEB PORT]
SENSOR/ ALARM	[SENSOR-TYPE] [ALARM MOTION MANAGER] [ALARM SENSOR MANAGER] [ALARM BUZZER] [ALARM OUTPUT] [ALARM OUT PERIOD]	FUNCTIONS	[STATUS] [AUDIO] [BACKUP] [PAN/TILT BASIC] [PAN/TILT ADVANCE] [SEQUENCE] [LOG LIST]

* User's advanced menu supports the other functions beside OSD main menu.

For use advanced menu, you have to press each button on remote controller.

These buttons are status, audio, search, stop and sel key.

Chapter 4. Setting up the DVR System

1. SETUP - SYSTEM

It is the menu that set up the system of the DVR system.

This chart is for the SYSTEM MENU of Figure 4-1.

[PASSWORD] ADMIN PASSWORD	It sets up the password for the administrator. By setting the password, the administrator gets the authority for the system initiation and setup.
[TIME] TIME SETUP	It sets up the date and time.
[TIME] TIME FORMAT	It selects the type of the time indication. There are 3 types available for the time indication.
[REMOCON ID]	It is a menu for selecting specific DVR using ID for each DVR.
[CHANGE LANGUAGE]	Menu for multi-languages, User can select prefer language to operate.
[SOFTWARE UPDATE]	Firmware upgrade is available using USB memory or through network.
[DEFAULT SETUP]	It re-sets to the initialized status from factory.

* Press the Menu Key if you want to return to Previous Menu from current Menu or return to Main Screen from current Menu.

1.1 PASSWORD

1.1.1 Admin Password
It is the window for user to input NEW admin password when changing admin password.

Figure 4-2

Figure 4-2 shows the menu that changes the password of the administrator.   It changes a new password from the default password "0000".   The window is pop up to confirm the new password and the new password is typed in again at the window.

The administrator has the authority on the initiation, operation, set-up, and change of the system.

1.2 TIME

1.2.1 Time Setup

Figure 4-3

It sets up the year, month, date, and time.   Place the cursor on the wanted field with the scroll buttons of the front key panel or the remote controller to reset the time.   And then type the time in the field with the numeric buttons.

1.2.2 Time Format

Figure 4-4

It selects the type of the time display and there are 3 types of the time display.
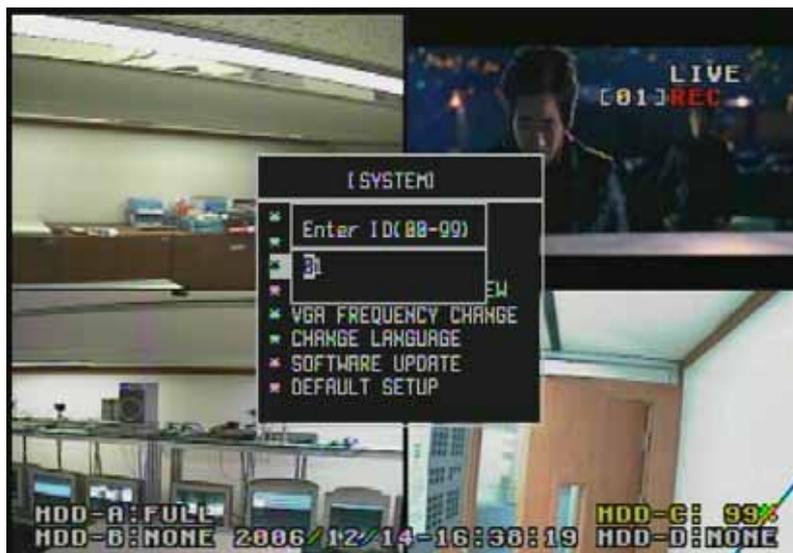
1.3 REMOCON ID

Figure 4-5

User can assign unique ID to each DVR in order to control specific DVR using ID.
It is a useful feature when user controls each dvr among them.

[Example] When Remote controller ID is "05" on setup, if you select specific remote controller ID, then it will be display "Enter ID" with ID number on the screen. Please press "sel" button. After that remote controller ID will be changed to [05] on the screen. To user remote controller ID [05], you have to press "Remote controller ID" button and "0" and "5" on remote controller's. Finally remote controller ID [05] changed yellow color.

1.4 CHANGE LANGUAGE

This is the menu that users can change language.   Figure 4-6

1.5 SOFTWARE UPDATE

Figure 4-7

Firmware update is available in this menu suing USB memory stick or through network.

The network update means that DVR update new firmware through network from update server.

We will notice about that function after we ready.

1.5.1 Network Update

Figure 4-8

This is firmware update through network firmware server. The firmware server is available all the time and no limited any other users. DVR system must be connected on the network to connect with that server. Please fill the blank as under text.

 - SERVER IP : endvr-update.com
 - FILE NAME : 4CH(eto-4.tar.gz), 9CH(eto-9.tar.gz), 16CH(eto-16.tar.gz)

1.5.2 USB Update

This is firmware update through USB memory stick use by USB port in front of DVR's panel.

Please select USB update in figure 4-7, then you will see figure 4-9.

Figure 4-9

1.6 DEFAULT SETUP

This changes the status of the set point to the factory setting.   Therefore, users should pay attention on this setup.

2. SETUP – LIVE

It is for the live setup of the DVR system.

Figure 4-10

The chart below is for the LIVE MENU of Figure 4-10

SEQUENCE DWELL (SINGLE)	It sets up the time interval between the images of each camera, which are displayed progressively in full screen.
CAMERA NAME	It changes the name of each camera and supports capital and lowercase of English letters, numbers, and special characters.
HIDDEN CAMERA	It shows or hides each image channel.
CAMERA COLOR	It changes the brightness, contrast, and color of camera.
PTZF PROTOCOL	It sets up the protocol of each PTZF.
VIDEO STANDARD	It changes the VIDEO standard selecting AUTO DETECT, JUMPER (in Main Board), NTSC, PAL.

2.1 SEQUENCE DWELL(SINGLE)

Figure 4-11

It sets up the time interval between images of each camera that are displayed progressively in full screen. Change the time with the scroll buttons on the line of the wanted camera.

2.2 CAMERA NAME

Figure 4-12

It changes the name of the camera.   Place the cursor on the wanted camera name and push the SEL button to see the character arrangement.   Select the character to type in to change the camera name up to 8 characters.

2.3 HIDDEN CAMERA

Figure 4-13

It can be set up as SHOW or HIDE on the current display of the live screen from the camera and can be assigned to each channel.

2.4 CAMERA COLOR

Figure 4-14   Figure 4-15

It adjusts the color and brightness of the camera (Figure 4-14).   To adjust them, it moves to the setup item of each channel.   The window that sets up the each channel is displayed at the right side of the screen when the SEL button is pushed (Figure 4-15).

	BRIGHT	+125~ -125
Set Value	CONTRAST	+125~ -125
	C0LOR	+125~ -125

2.5 PTZF PROTOCOL

It selects various protocols, such as PAN, TILT, ZOOM, and Focus, for each vendor of the camera.

The triplex MPEG-4 DVR supports the interface protocol of RS-485 through the sensor terminal board that is connected to the main board.

Figure 4-16   Figure 4-17

The PTZ protocol can be selected for each camera.   Select the wanted camera with the scroll keys and move to the PTZF item (Figure 4-17).   Then, push SEL button to display the name of each protocol.

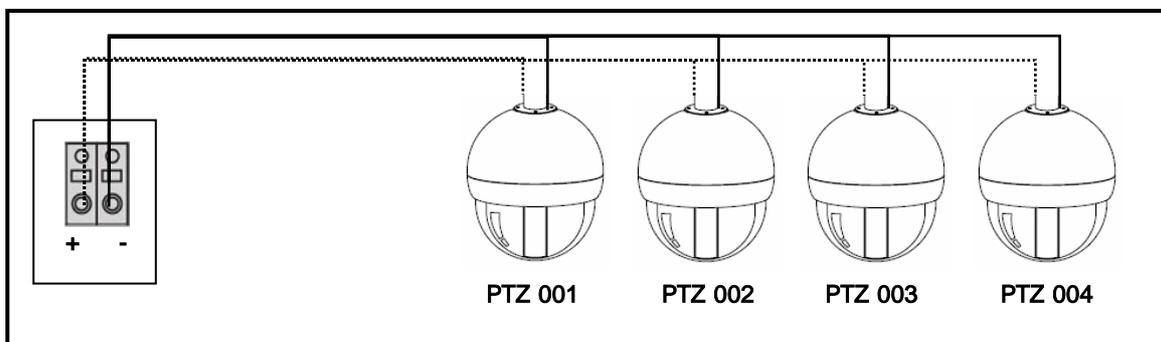It can assign the PTZF ID from 1 to 255 and can be connected through the RS-485 terminal of the system.

Figure 4-18

Figure 4-18 is an example to connect the PTZF camera to the system.

2.6 VIDEO STANDARD

Figure 4-19

It sets up the video standard type of each camera to AUTO DETECT, JUMPER, NTSC, PAL.

AUTO DETECT	It decides Video standard type to NTSC or PAL by input source of CH 1.
JUMPER	It decides Video standard type to NTSC or PAL by the configured value of Main Board.
NTSC	It configures Video standard type to NTSC.
PAL	It configures Video standard type to PAL.

3. SETUP – RECORD

It sets up the recording status of the DVR system.

Figure 4-20

The chart below is for the RECORD MENU of Figure 4-20.

REC PROPERTY	-It sets up the image store resolution of the entire channel in 360x240, 720x240, and 720x480 -It selects the Store Frame Rate for each channel in 1,2,4,8,15,30.
REC OPTIONS	It sets up the type of image recording (continuous recording), flicker removal, and image protection (WATER-MARK).
EVENT REC	It sets up the motion detection, sensor detection, and PRE/POST RECORD.
SCHEDULE REC	It assigns the image recording by day and time.

3.1 Rec Property

Figure 4-21

The chart below is for RECORD PROPERTY of Figure 4-21.

REC RESOLUTION	It can be set up in 360X240, 720X240, and 720X480 Move the cursor to REC RESOLUTION and press the SEL Button. The resolution is set up on the target of the entire channels and the setup for each channel is not available.
REC QUALITY	It sets up the recording quality in BEST, HIGH, NORMAL, and BASIC. The default setting from factory is HIGH. The BEST setting provides the best image quality in those four settings, but its file size is largest in those settings. IMAGE QUALITY can be reduced from BEST > HIGH > NORMAL > BASIC.
REC RATE	It sets up the rate on the saved frame. This feature changes the rate into 1/2 Frame as the Setup Values on the standard of Real-Time. <table><tr><td>RESOLUTION</td><td>RATE Range</td><td>Out of Range RATE</td></tr><tr><td>360X240</td><td>0,1,2,4,8,15.30</td><td>-</td></tr><tr><td>720X240</td><td>0,1,2,4,8,15</td><td>30</td></tr><tr><td>720X480</td><td>0,1,2,4,8</td><td>15,30</td></tr></table> The standard setup values are 0, 1, 4, 8, 15, and 30. It is available to adjust the rate for each channel within the entire frame that can be divided, when the frame rate of other channel is adjusted downwards.

3.2 REC OPTIONS

Figure 4-22

It sets up the recording type and includes the recording type, image revision, and water-mark.

RECORD CONTINUOUS	It sets up the recording type. It continuously stores the image when it is ON mode. It records the image by the EVENT recording type, such as MOTION/SENSOR or SCHEDULE, if it is off mode. The set point for the recording is stored as the REC PROPERTY of Chapter 3.1.
PLAY DEINTERLACE	It controls the flicker that can threaten the image quality by turning it ON or OFF. The flicker can be appeared in CCTV monitor, when the Image that is saved in the 720X480 resolution is played. For this situation, set it ON mode. And set it OFF mode, if the VGA PC monitor that has no flicker, is used.
WATER MARK	It protects the image data from the processing or revision of the stored or backup file. It alarms users when it is ON mode and the file is processed or revised. * The changed image can be confirmed in the RMS Program.

3.3 EVENT REC

It consists of the motion detection, sensor detection, and option.   It assigns the setup of motion field, the image-recording feature at the sensor detection for each channel, interlock setup, setup of pre/post record, and pop-up screen feature.

The menu of Figure 4-23 is for the operation of the detail feature on the RECORDING and can be set up by users for their needs.

Figure 4-23

MOTION DETECTION	It sets up the field on the image motion, such as motion sensitivity and motion field.
SENSOR DETECTION	It sets up the sensor Interlock on the image store, such as entire set-up and individual set-up.
OPTIONS	It sets up the pre-record, post-record, and pop-up items and offers the additional features on the store and monitoring.

3.3.1 Motion Detection

Figure 4-24   Figure 4-25

The SUB-MENU is shown (Figure 4-24), when the MOTION DETECTION on the screen of Figure 4-24 is selected.   At the MENU, the sensibility on motion is set up from the level 0 to 9.   To set up the sensibility, place the cursor on the field number of the sensitivity and press the number from 0 to 9.

Figure 4-25 shows the setup on the motion field.   The setup is divided into ALL, PART, and OFF.

The entire image of the channel is set up as the motion detection field, when the ALL is selected.   The motion detection field can be selected like Figure 4-26, when the PART is set up.

For this setup, place the box on the wanted block area of the image and press the SEL button to operate the motion detection on the wanted block.

Figure 4-26

The motion field has 8 blocks on length and 6 blocks on height and total 48 blocks can be selected to operate this feature.

3.3.2 Sensor Detection

Figure 4-27   Figure 4-28

It records the image from the assigned channel, when the exterior sensor connected to the DVR is operated.   The individual setup is available (Figure 4-27) and also the entire sensor setup can be possible. In order to setup, place the indicator on each sensor of CHs & press the SEL button to mark " ".

For the setup of the ALL, place the indicator on the ALL field for each channel with the scroll keys and press the SEL to mark "   " at the entire sensors of the channel.

3.3.3 Options

For the recording mode by the motion or sensor detection, it sets up the pre-record time and post-record time to start it from the time of the motion or sensor detection (Figure 4-27).

With the POP-UP screen feature, it displays the wanted channel in full screen.

Figure 4-29   Figure 4-30

The POST-RECORD TIME sets up the recording time in 10 seconds, 30 seconds, 1 minute, 5 minutes, or 10 minutes, after the motion or sensor detection (Figure 4-30) and automatically stores the image for the set time after the detection.

Figure 4-31   Figure 4-32

Unlike the POST-RECORD TIME, the PRE-RECORD TIME stores the previous image from the time of the motion or sensor detection.   The duration of the image recording can be set up in NONE, 2, 4, 6, 8, and 10 seconds.   The POP-UP SCREEN displays the image in full screen at the motion or sensor detection (Figure 4-32).

3.4 SCHEDULE REC

Figure 4-33

The SCHEDULE RECORD assigns the image store of the camera by each time and helps to utilize the store time (Figure 4-33).   For this setup, place the cursor on the wanted channel with the scroll keys and press the SEL button.   The screen is changed to Figure 4-34.

Figure 4-34

It sets up the schedule for each channel and stores the image (Figure 4-34).   The time zone for each date is selected.   For the setup, place the cursor on the wanted time zone for each date with the scroll keys and push the SEL button to mark "   ".   The image will be stored in the set time.   The time zones for the entire weekdays are automatically set up, when the ALL is selected.

Figure 4-35 shows the screen that sets up the SCHEDULE.

Figure 4-35

The left picture of the Figure 4-35 shows the screen when the time zones for each date are set up on the wanted channel.   The right picture shows the screen when the entire weekdays for the each time zone are set up.

Figure 4-36

Unlike Figure 4-36, Figure 4-34 shows the SCHEDULE RECORDING SETUP for each date/each time zone on the entire channel.

The process of its setup is same as Figure 4-35 and the difference is that the entire channels are assigned.

4. SETUP – STORAGE

It sets up the storage status of the DVR system.

Figure 4-37

This STORAGE Setup has an option to overwrite a new data over the existing data (Figure 4-37), when there is no storage space for further image recording.   This also confirms that the user wants to format a hard disk and that the device is correctly connected.   The progress of format is indicated on the screen during formatting. The formatting progress doesn't include the storage device that is storing the current image data.

This chart below see the status of HDD and CD-RW(DVD-RW) device.

This system supports HDDs up to 2 that are indicated as HDD–A, HDD–B, HDD-C and HDD-D.

- xxx G : HDD's Space capacity

- None : HDD is not installed or unavailable HDD is installed)

- N/F : It means NON-FORMAT and indicates that the disk is used for the first time or requires the format, even though the device is recognized.

- CD-ROM : It mean that CD-ROM Drive installed in DVR system.

* You can format HDD while HDD status is "FULL" or "xx%" or "N/F"

5. SETUP – NETWORK

It sets up the network status of the DVR system.

Figure 4-38

5.1 TYPE

Users can select one of static IP, dynamic IP or PPPOE, as the set-up item on this menu.

The NETWORK TYPE is shown at Figure 4-39 and users can select one to set up.

Figure 4-39

5.1.1 STATIC

As the network environment that uses the static IP, it can be operated after inputting the information of IP, SUBNET MASK, and GATEWAY.

Figure 4-39 shows the set-up example for the static IP.   Users can input set points with the number buttons on the remote controller, after placing a cursor on each field.   The set-up of network is

completed by pushing MENU button when the input of set points is finished.

Figure 4-40

5.1.2 DYNAMIC

When the DYNAMIC is selected on the Figure 4-39, users automatically get the IP ADDRESS through the connected network and the indication of PLEASE WAIT is shown during the acquiring the IP ADDRESS. Figure 4-41 shows the screen after the DYNAMIC is selected.

Figure 4-41

5.1.3 PPPOE

It is the network that uses the Internet service from Internet service providers (ISP).

Users can connect the network by typing in the ID and password that are authenticated to users by ISP.

Figure 4-42 shows the progress of authentication registration for PPPOE.   Place the cursor on the blank and push the SEL button to see the character arrangement.   And then, select the characters to type in the ID and password.

Figure 4-42

By pushing the MENU button, users automatically get IP addresses that are authorized by ISP, when finished the input process.

5.2 DDNS

DDNS supports the Dynamic IP users to connect automatically their network regardless of the change of the IP ADDRESS, when data is registered in DDNS. It is managed by the DDNS server, but the users should consult with Manufacturer before their operation, if they want to build the network on the special network or for their own separate management.

Figure 4-43

Figure 4-43 shows the input window on the screen for DDNS.   The users should change the status of ACTIVATE to "ON" after inputting DOMAIN, USER ID and PASSWORD.

5.3 NET PASSWORD

Figure 4-44

Network Password is necessary when connecting the DVR system through Remote Management Software.   For its set-up, users should place the cursor on the blank, input numbers, and finish the set-up process by pushing the SEL button. It is to secure the user to setup the default setup in the dvr systems.

5.4 NET CLIENT PORT

It is for the assignment of communication port to communicate with the DVR system through RMS (Remote Management Software). It is recommended to avoid system port and user port that is generally used a lot.

Figure 4-45 shows the network port of the default set-up .

This port is good to use. Each port is required for RMS operation and should be assigned.

Figure 4-45

5.5 NET CLIENT ID

Figure 4-46

ID and password for the network are given up to 4 to avoid the system overload due to excessive connection on RMS and it intercepts the connection of unregistered ID. ID and password that are registered on the system should be typed in to connect the RMS. For the registration, place the cursor on each blank and push the SEL button to see the character arrangement. Select the characters to type in.

5.6 NETWORK BANDWIDTH

This chapter is for configuring Network Bandwidth connected to DVR and controlling the transferring Video and Audio relate to Network Bandwidth. As a result of this option, it can save Network bandwidth between Remote client connection and DVR.

Figure 4-47

It can be set up to UNLIMITED, 64KBPS, 128KBPS, 256KBPS, 512KBPS, 1MBPS, 2MBPS, 4MBPS, 10MBPS like Figure 4-47. UNLIMITED means that no BANDWIDTH selection for specific configuration.

Regarding Network Client, Users feel that low throughput(64KBPS) is transferring data slowly,
and high throughput(10MBPS) is transferring data more faster.

5.7 WEB PORT

Figure 4-48

It is used with WEB MONITORING SERVICE. Default port is 80.

6. SETUP – SENSOR / ALARM

It is the set-up MENU for SENSOR/ALARM of DVR system.

Figure 4-49

It sets up the input sensor and alarm output and controls the exterior input/output device.

6.1 SENSOR TYPE

This sensor device has two types of NC (NORMAL CLOSE) and NO (NORMAL OPEN). Users can set up the NC or NO type on DVR system to operate the exterior input sensor for specific purpose.

Figure 4-50 shows the set-up of the sensor type. Each sensor can be assigned for each type.

Figure 4-50

6.2 ALARM MOTION MANAGER

Figure 4-51

It is the set-up menu that connects and operates the exterior alarm device when any motion is detected on each camera.   The alarm can be selected and registered for each camera channel and total alarms can be set up for each camera.   For its set-up, move the cursor to each set-up line.   Push the SEL button to change to "   " and it starts to operate.

6.3 ALARM SENSOR MANAGER

Figure 4-52

This menu assigns the alarm output for each sensor. It operates the assigned alarm output device when input sensor is operated. Users can assign each alarm output for each input sensor and assign the total

alarm for each input sensor through the set-up menu of ALL.

6.4 ALARM BUZZER

Figure 4-53

It operates the buzzer that is built in the DVR system at the same time with the alarm output, when motion is detected or sensor is operated. It helps an administrator check the status of the alarm, even though the alarm device is separated from the DVR system. Through this additional feature, the administrator can be aware of the occurrence of the alarm.

6.5 ALARM OUTPUT

Figure 4-54

This menu is to select the alarm output operation. Set alarm to **off** when alarm out is not set.

6.6 ALARM OUT PERIOD

Figure 4-55

It sets up the time of the alarm output in 30 seconds, 1 minute, 3 minutes, or 10 minutes.

This set-up effects the whole alarm devices at the same time.

Chapter 5. SEARCH

Figure 5-1

This menu searches the saved image data by time, event, or file and replays it (Figure 5-1).

For secure reasons, DVR system must be has ID and password to assigned users.

1. SEARCH - TIME SEARCH

It is the menu to search the image data by record time.   The screen (Figure 5-2) is shown up when the TIME SEARCH is selected.   Place the cursor on the data that you want to search with the scroll keys and push the SEL button.

Figure 5-2

The existence of the image data is indicated and the image data is searched when the date to search is selected (Figure 5-3).

The image data is indicated by colored section.   Place the cursor on the colored section and push the SEL button to play the saved image data.

As the cursor moves, its location and time is indicated on the time bar at the bottom of the screen.

Figure 5-3   Figure 5-4

The saved image data can be searched with REW(   )/PLAY(   )/STOP(■)/FF(   ) (Figure 5-4).
During the playing, pushing the play button pauses the play of the image data.
Button instruction for searching the image data

REW ( )	-It rewinds the image data to replay the passed image during the search of the image data.
	-Its rewind speed goes up to 128 times faster by pushing this button repeatedly.
	-STEP REWIND feature is operated by pushing this button, when the pause button is pushed during the search.
PLAY ( )	It replays the saved image in normal speed.　It pause the play by pushing it once more.
STOP (■)	It stops the search of the image data.
FF ( )	-It is for the search of the image data in fast speed and replays it up to 128 times faster.
	-STEP FORWARD feature is operated by pushing this button, when the pause button is pushed during the search like REW ( ).

2. SEARCH - EVENT SEARCH

This feature separates the data that is recorded by EVENT from the image data to search the image.
Refer to Chapter 4/ 3.3 EVENT REC for the set-up of EVENT RECORD.

Figure 5-5   Figure 5-6

Figure 5-5 is the screen when EVENT SEARCH is selected and the SEL button is pushed of Figure 5-1.
Through this, the recorded data is confirmed and selected by calendar through the set-up of EVENT.
The indicated date with white color shows the recorded data by EVENT is existed on the date.　To select the date, place the cursor on the white-colored date and push the SEL button.
Figure 5-6 shows the image data by EVENT on the date.　To play the image data, place the cursor on the data that is wanted to search and push the SEL button.

3. SEARCH - FILE SEARCH

Unlike the TIME and EVENT SEARCHES, the FILE SEARCH shows the saved image data by FILE and the data can be searched individually.
For the FILE SEARCH, Select the FILE SEARCH on the screen from Figure 5-1 and push the SEL button.

Then the calendar window is shown and the date that the image is saved is indicated with white color. Place the cursor on the date and push the SEL button.   The image data by FILE   will be displayed (Figure 5-7).
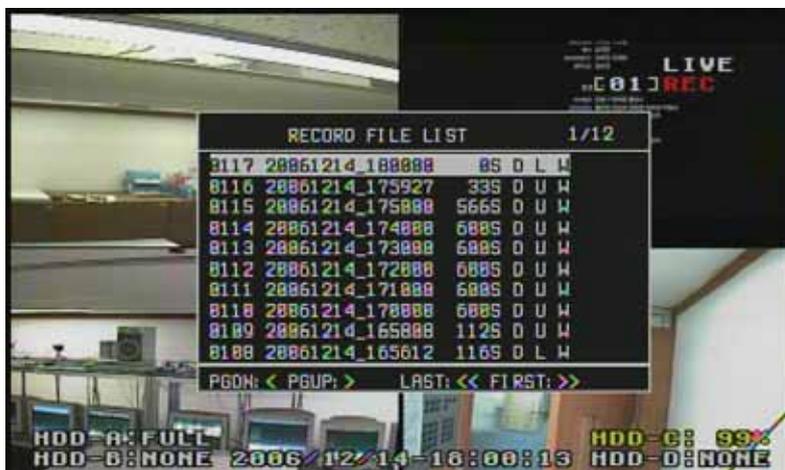

<div align="right">Figure 5-7</div>

Chapter 6. FUNCTIONS

Each feature of the FUNCTION is selectively operated by the button on the front panel of the Triplex MPEG-4 DVR.

Each menu of FUNCTION is located on the remote controller and the FUNCTION button is not required when using the remote controller.   Figure 6-1 shows the detail menu of FUNCTION.

<div align="right">Figure 6-1</div>

The screen of Figure 6-1 is shown when the FUNCTION button on the front key panel of the Triplex MPEG-4 DVR is pushed.

1. FUNCTIONS – STATUS

It indicates the status of the DVR system and shows software version, the status of store device, and the set-up environments of network and recording zone. Therefore, the administrator can see the system environment easily without checking each menu on system.

Figure 6-2

To use this STATUS FUNCTION, move the cursor on the screen of Figure 6-1 while pushing the FUNCTION key on the button of the Triplex MPEG-4 DVR. Or use the STATUS key on the remote controller, when the remote controller is used.

2. FUNCTIONS – AUDIO

IT controls the audio output on each channel.   The users can select the audio output to turn on of off by choosing AUDIO ON or OFF (Figure 6-3) and the audio output can be paused by MUTE.

Figure 6-3

Audio Connection of DVR System
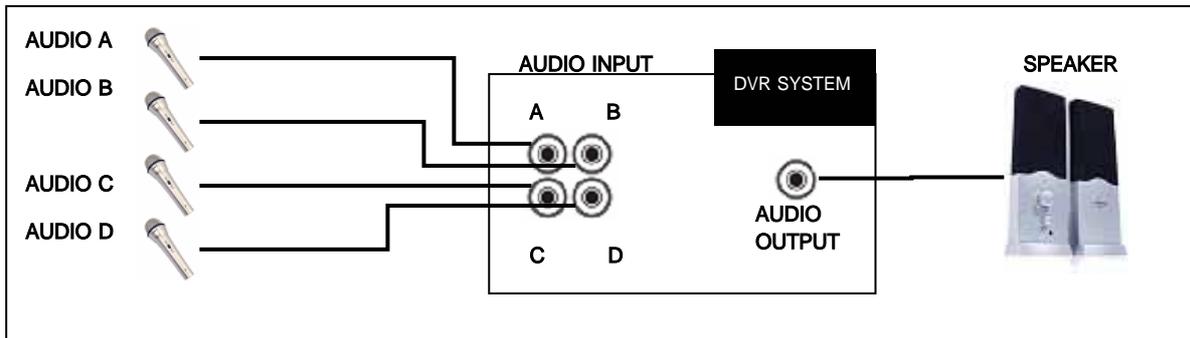
3. FUNCTIONS – BACKUP

It stores the saved image and sound data in backup device.   For the BACKUP set-up, refer to Figure 6-4 to Figure 6-10.

For secure reasons, DVR system must be has ID and password to assigned users.

It is the explanation of the BACKUP set-up.

MEDIA TYPE	You can select CD-R, CD-RW, DVD-R, DVD-RW, and USB MEMORY for the BACKUP MEDIA.
BACKUP BASE	It assigns the form of BACKUP by FILE or TIME.
CHANNEL	It assigns the BACKUP target channel. All channels are assigned when ALL is selected and users can select the channel if PART is selected.
TIME	It assigns the starting and ending time for BACKUP.

Figure 6-4   Figure 6-5

Figure 6-4 and 6-5 shows the screen that MEDIA is selected for backup.   You can select CD-R, CD-RW, DVD-R, DVD-RW, and USB MEMORY, as you can see on the screen, to assign the data.

3.1 File Backup

Figure 6-6   Figure 6-7

Figure 6-6 shows the screen that the form of backup is assigned.   The backup can be selected by FILE or TIME.   The backup process is progressed by FILE, when the FILE is set up.   And the backup is progressed by time, if TIME is selected.

Figure 6-7 shows FILE BACKUP.   It sets up the progress of BACKUP on the target of specific channel, not entire channels.   For the channel assignment, assign the channel ALL or Part.   When ALL is chosen, the BACKUP process is progressed on the entire channels.   For the PART, place the cursor on each camera of the channel and push the SEL button to select.
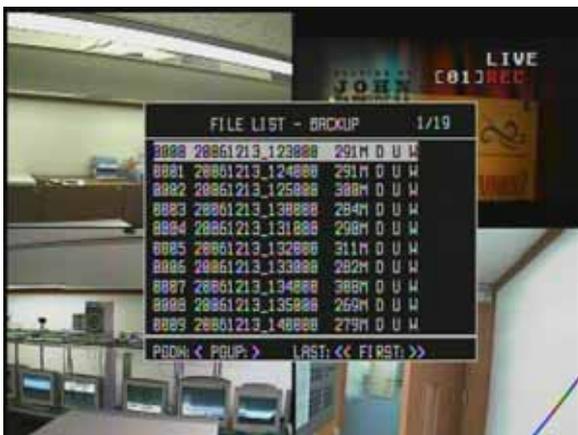
Figure 6-8   Figure 6-9

Place the cursor on the START of TIME to see the entire data that is progressed from
the START (Figure 6-8), after the set-up process of Figure 6-7.   Select FILE to read the data
(Figure 6-9).   The ending time set-up is operated same as the starting time set-up.

Figure 6-10

The size of the file that is on the BACKUP target is indicated at TOTAL SIZE (Figure 6-10).   Then, place the cursor on the Backup and push SELECT to progress FILE BACKUP.

3.2 Time Backup

 For the TIME BACKUP, set the BACKUP BASE by TIME, not FILE, from the screen of Figure 6-6.

The CHANNEL set-up is same as the process that is set up at FILE BACKUP.   After the set-up item, place the cursor on the START and push the SELECT to see the calendar window.   Then assign the date that has the image data on the calendar window.

After the date is assigned, it reads the data and prepares for data BACKUP

(Similar to Figure 6-9).

Place the cursor on the END and push the SELECT to initiate the START.

Then, The size of the BACKUP target is indicated at the TOTAL SIZE.

Place the cursor on the BACKUP and push the SELECT to initiate the BACKUP.

[FORMAT MEDIA]

 It can format USB MEMORY, CD-RW, and DVD-RW on the list of MEDIA TYPE.

4. FUNCTIONS – PTZ BASIC

The PTZ BASIC FUNCTION is the key to operate PAN/TILT and Zoom in/out after connecting between PTZ CAMERA and the DVR system. It is the simple function to control the PTZ. There are 2 operation methods for PAN/TILT FUNCTION.

FRONT BUTTON	Push the FUNCTION KEY on the front key panel of the Triplex MPEG-4 DVR to see the screen of Figure 6-11 and select PTZ BASIC on the screen.
Remote Controller	The FUNCTION is individually divided on the remote controller. So push the specific P/T button on the remote controller.

Figure 6-11

Figure 6-11 shows the menu to operate Pan/Tilt and Zoom in/out. Pan/Tilt use the scroll keys on front panel of DVR or remote controller. Zoom in/out use REW( ) and FF( ) keys on front panel of DVR or remote controller.

5. FUNCTIONS – PTZ ADVANCE

The PTZ ADVANCE FUNCTION is the key to operate ZOOM/FOCUS, preset and pattern setup after connecting between PTZ CAMERA and the DVR system.

There are 2 operation methods for the ZOOM/FOCUS FUNCTION, like the PAN/TILT FUNCTION.

FRONT BUTTON	Push the FUNCTION KEY on the front key panel of the Triplex MPEG-4 DVR to see the screen of Figure 6-12 and select ZOOM/FOCUS KEY on the screen.
Remote Controller	The FUNCTION is individually divided on the remote controller. So push the specific ZF button on the remote controller.

Figure 6-12

Figure 6-12 shows the menu to operate ZOOM/FOCUS.   Use the scroll keys to operate it.

5.1 Focus/Zoom and Iris

If the camera has focus, zoom and iris functions, use the scroll keys to operating.

5.2 Auto pan

If the camera has auto pan functions, use the scroll keys to operating.

5.3 Preset

Figure 6-13 shows preset menu operating

Figure 6-13

The table is the description for preset function.

ADJUST	It is the function to save a camera position. You can move the position by scroll keys in figure 6-14.
SAVE	You can save the assigned screen. Please select the save menu. Then you can save the preset numbers. Please refer to Figure 6-15..
CLEAR	You can clear the assigned the preset numbers. Please refer to Figure 6-16.
GO	Move to the position of the assigned preset numbers. Please refer to Figure 6-17.

Figure 6-14

Figure 6-15

Figure 6-16

Figure 6-17

5.4 Scan Points

It is the function to group each preset position. Therefore the camera moves to each preset position automatically. Figure 6-18 is the screen of the scan point.

Figure 6-18

The table is the description of scan point function.

EDIT	It is the menu to assign the scan point with preset position. You can assign the numbers from 1~ 16. And the scan point have the sixteen preset position. *Attention : You must be assign the delay time from 1 sec to 60 sec. Please refer to Figure 6-19.
DELETE	You can delete the assigned scan point numbers. Please refer to Figure 6-20.
START	You can start the assigned scan point with preset position. Please refer to Figure 6-21
STOP	You can stop while to operate the scan point.

Figure 6-19

Figure 6-20

Figure 6-21

5.5 Touring

It is the function to assign the observation position. It saved the observation position automatically while the PTZ camera move by scroll keys. You can assign the touring numbers from 1 to 4. It is the same function as pattern. Please refer to Figure 6-22~ Figure 6-25.

Figure 6-22

Figure 6-23

Figure 6-24

Figure 6-25

The table is the description of Touring function.

SETUP	Assign the observation area automatically while the PTZ camera move.
	Use the scroll keys and , keys. Please refer to Figure 6-23
START	Start the number of touring position.(Figure 6-24)
STOP	Stop touring operation. (Figure 6-25)

6. FUNCTIONS – SEQUENCE

The SEQUENCE FUNCTION shows each image channel progressively in a full screen.

The rotating time of this function on each channel is set up at the SEQUENCE DWELL of Chapter 4/2.1.

7. FUNCTIONS – LOG LIST

This function confirms the overall operation LOG in the DVR system.   Push the FUNCTION KEY and select the LOG LIST at the screen of Figure 6-1, when the keys from the front key panel of the Triplex MPEG-4 DVR is used.

Figure 6-26   Figure 6-27

Figure 6-26 shows the set-up item of the search of the LOG LIST.

LOG VIEW	It is the set-up item on the target of the LOG content search and is assigned as ALL or PART.
	-ALL: It searches the entire LOG items.
	-PART: It selects MOTION, SENSOR, ALARM, V-LOSS, SYSTEM, HDD, FILE, DB, POWER, or NET to search.
	Place the cursor on the item to search and push the SEL button to select or un-select.
TIME	It assigns the starting and ending times of LOG to search.

Figure 6-26 shows the screen when the each item is selected and the OK key on the bottom of the screen is pushed. At this screen, the content of each LOG can be searched.

Chapter 7. ADVANCED MENU

This chapter is the menu of added functions for users. Please press the remote controller keys. These keys are "status" , "audio", "search", "   ", and "sel".

Figure 7-1

1. TIME OSD FORMAT

Figure 7-2

It adjusts the location and color of the time display (Figure 7-2).

2. CURRENT STATUS VIEW

Figure 7-3

It is a feature that user watches current status(ON) or hides current status(OFF) on monitor.

3. VGA FREQUENCY CHANGE

Figure 7-4

It sets up or changes VGA frequency level when VGA monitor can not show correct camera image.

4. DELETE REC

It deletes the image data. Place the cursor on the wanted data with the scroll key at the screen that displays the specific file of the image data. Then push the SEL button and the file can be deleted after the indication of the warning message.

*"U" that is shown on the right side of Figure 7-5 means UNLOCK. It indicates the image data is not locked and can be deleted.

*"L" that is shown on the right side of Figure 7-5 means LOCK. It indicates the image data is locked and cannot be deleted.

* The file of the image data that is currently recorded is indicated with "L" and cannot be deleted. It can be deleted when the recording process of the DVR is stopped.
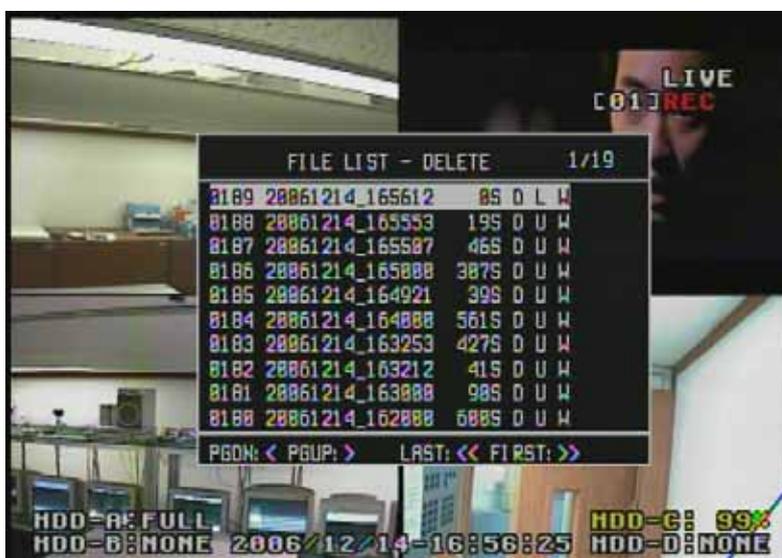
Figure 7-5

5. LOCK/UNLOCK REC

Generally DVR system stores new data after deleting previous data when its storage space is full. The DVR system selected the same principle as the other DVR systems. MPEG-4 DVR has a lock feature on file to protect the data that is important or is not wanted to delete. The data that the lock feature is set on cannot be deleted even though it is an old one. This function of LOCK/UNLOCK REC controls the lock/unlock status of a selected image data to protect it. Place the select bar on a wanted image data with scroll keys and then the status is changed to "L (LOCK)" or "U (UNLOCK)" with SEL button. The file that stores locked image data is indicated with "L" and it is not changed to "U" at this menu. As mentioned before, it can be changed only when the recording feature is stopped.
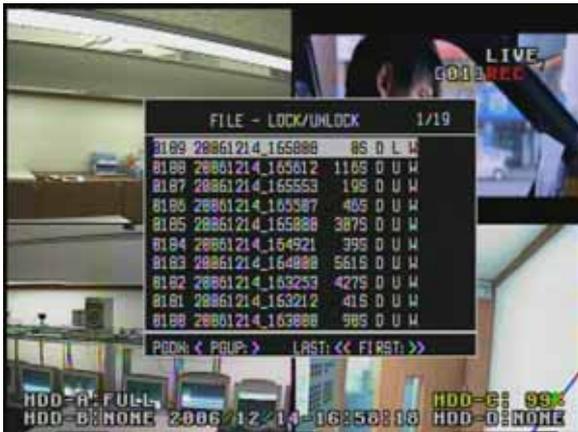
Figure 7-9

8. NET CLIENT ADDR
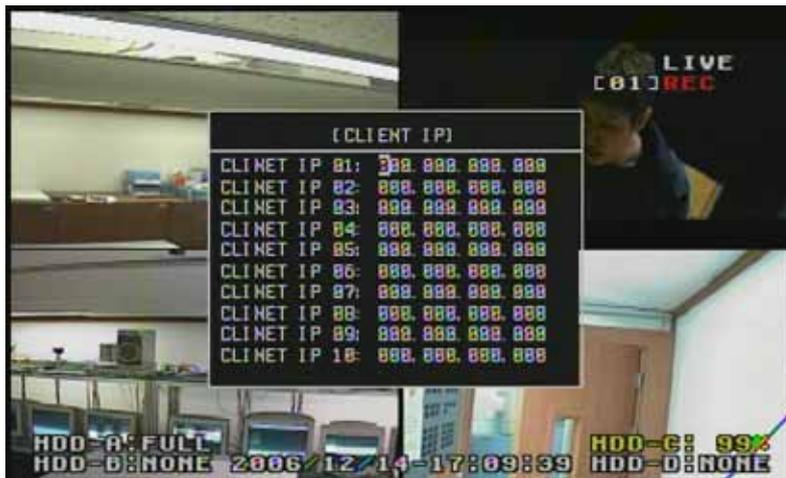
Figure 7-10

It limits the number of client and allows the connection of registered user IP ADDRESS (Figure 7-10).

EnNet Client Software
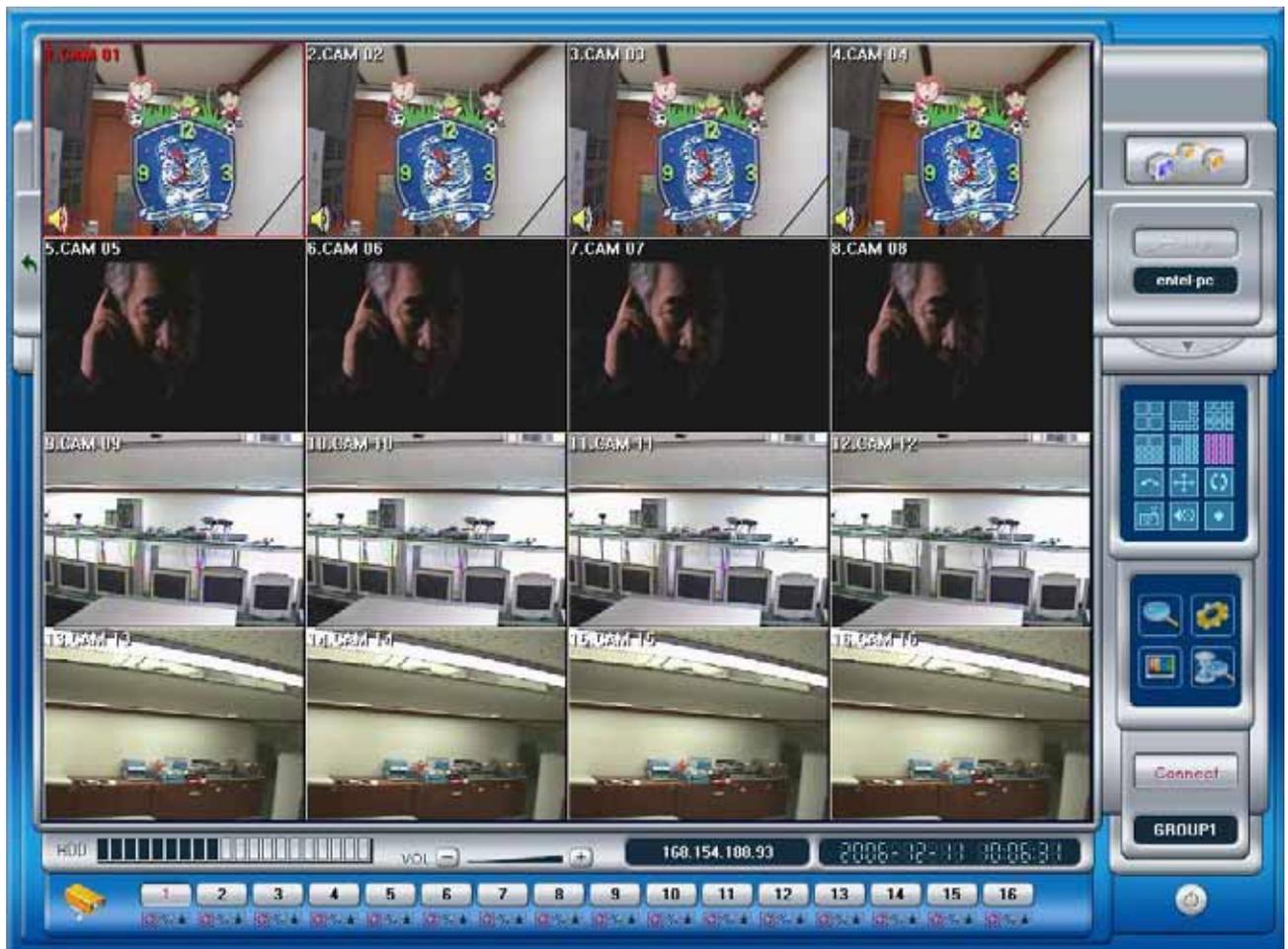
Release Version : 1.2

EnNet client is the software that is for controlling the system through the network.   Any copy or change would be prohibited by law.

1. Monitoring Feature

1.1 Starting EnNet
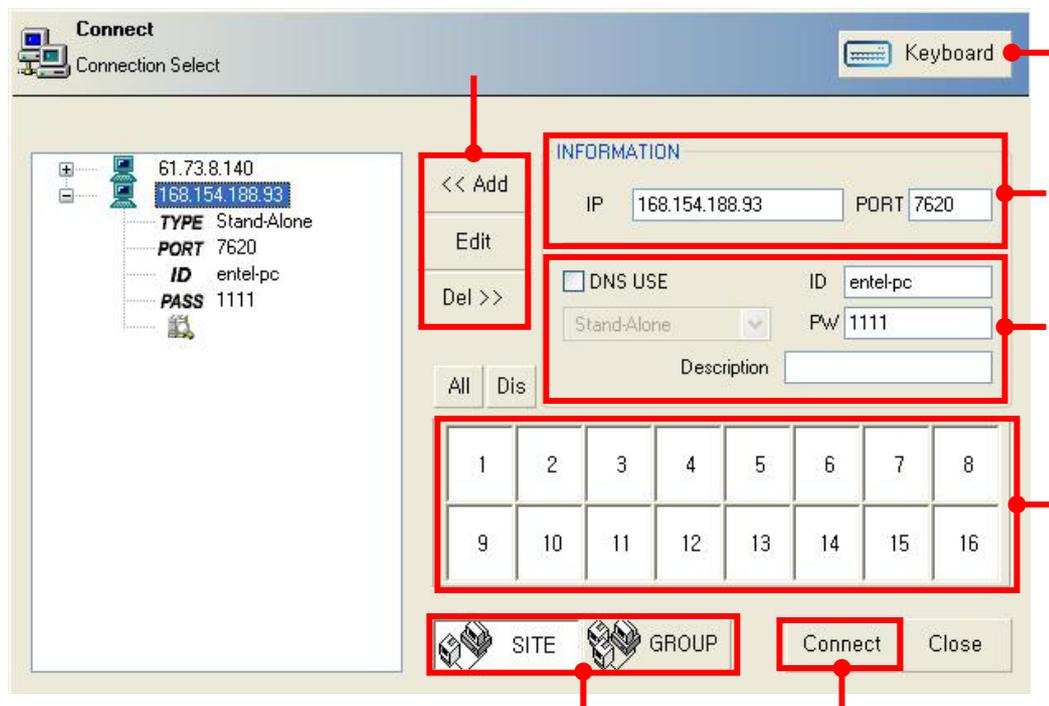
Click this icon then it will be starting a EnNet program.

Monitoring window will be shown up after a Loading screen for a while.

Monitoring Screen [Initial Screen]

1.2 Connection Feature

Connect   Click this button, then Connection window will be shown

	Add, modify and delete button of DVR connection sites
	Screen keyboard button
	Fields of DVR IP and TCP communication port.
	Choose **DNS USE** when using DDNS service. In case of using DNS, set up ID, Password which are registered in EnDNS server. For using DNS, Be sure to configure a same ID and password that is configured in EnDNS. ID & Password are same to the values of DDNS network setup of DVR Those are same values with CLIENT ID & PASSWORD.
	Select channels to monitor
	Choose one of SITE(1:1) or GROUP mode(1:N).
	Connect to DVR

1.3 Setting up GROUP connection

Press this button to connect the dvr system.

Then Connection window will be shown.
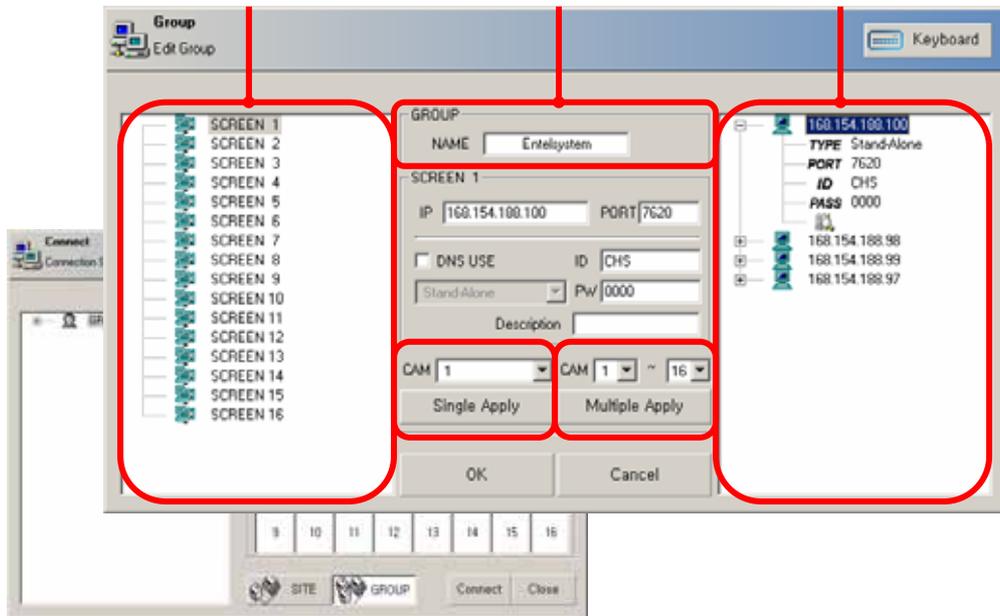
	Choose channels of DVR that will be registered.
	It shows IP, PORT info. of selected DVR in .
	Assign once channel of DVR to present selected channel.
	Assign channels of DVR to present selected channel. e.g.) Selected channel 1 , 1~4 => 1=1, 2=2, 3=3, 4=4
	It indicates GROUP NAME

1.4 Monitoring
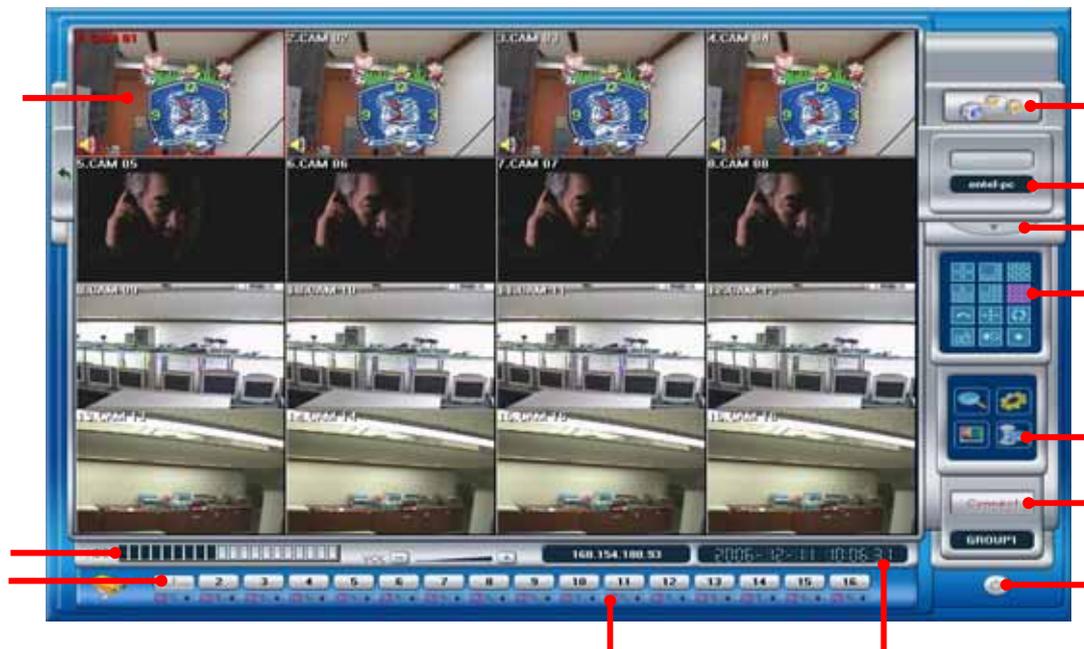
Monitoring-screen	Display video-out present monitoring.
HDD Volume	Display the amount used of HDD.
Channel	If you press the each channel number, then display full-screen selected channel.
Sensor/ Montion Status	Display present sensor, motion and continuous mode status .
Date/ Time	Display present date and time.
Network-connection	Display network connection status.
Log-in	Log-on DVR
PTZ Camera- Control	Pop-up menu for PTZ Camera- Control
Monitoring	Screen-division, Snap-shot, Enforcement Recording
DVR function	Searching, Setup, Screen-setup, Quick-searching
Connect	Connect or disconnect with DVR .
End/Completion	It ends the EnNet.

1.5 Screen Division

Channel Selection	Selected camera becomes full image of screen when choosing channel button.
Select Division	Selects division mode by 4,8,9,10,13 and 16 divisions. In case clicking [ ] button on 4 Division mode, then Screen channel mode is changed sequentially like below This figure is a sample example) 1 2 / 3 4 5 6 / 7 8 9 10 / 11 12 13 14 / 15 16 1 2 / 3 4
Auto-Switching	It displays sequential division cameras after dwell time if choosing Auto button.
Full-screen	It displays Full image without GUI menu. To return to previous, Click right button of mouse.

| Others | | : Capturing image on monitor. |
		(Saving *.JPG and Printing)
		: Saving live motions on monitor
		[Fast Search] supports to check saved images
		: Turing off audio

1.6 Selection Buttons on Menu

Search	Go to Search mode from Live mode.
Setup	Go to Setup mode.
Display	Go to Display mode.
Fast Search	Search manual recorded data (Local Search)

In case double click screen in fast search mode, then it changes

to expansion mode to search all channels.

2. Search feature – Remote and Local Search

2.1 Initial Search screen
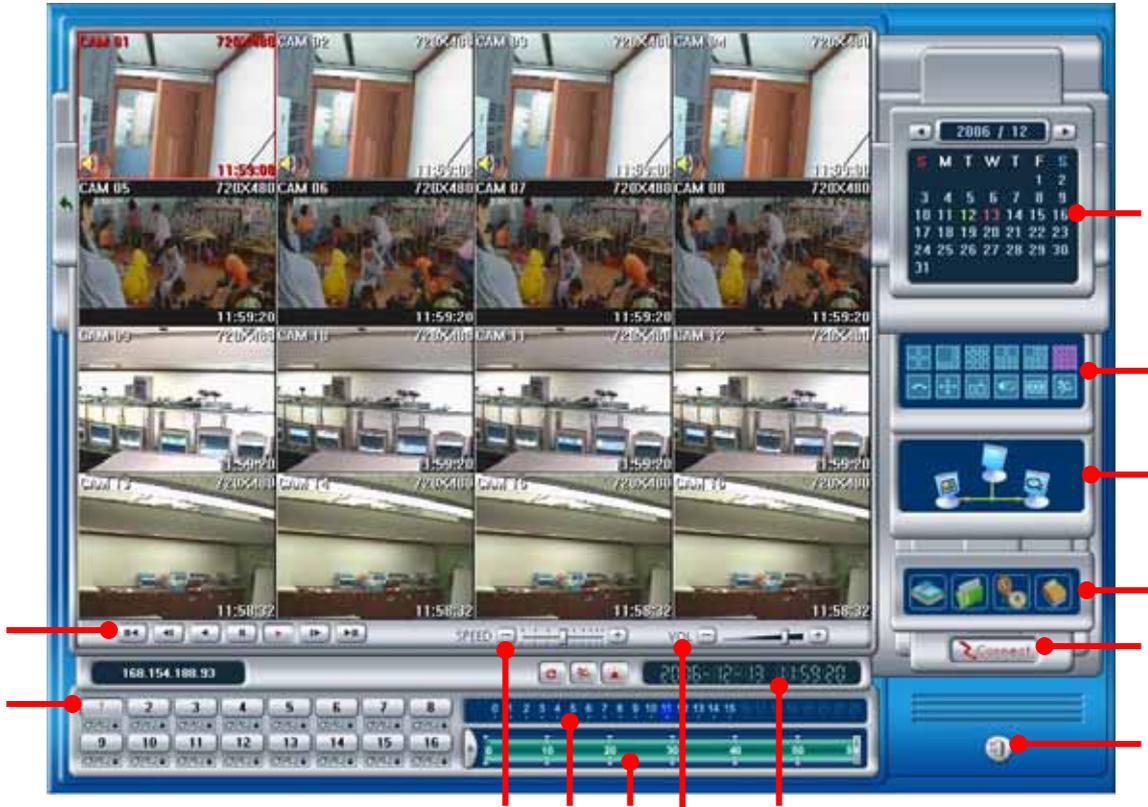
	Calendar
	Division by channel(s), Snapshot, Panorama Search
	Network status screen
	Backup, EnDB Open, History and Event Search, Book-Mark
	Buttons relate to Playback
	Choose channels by mouse click to be searched.
	Slider for search speed
	Hour
	Minute
	Audio volume
	Window for indicating time in playback mode
	Re-connection and Terminate connection (Local Search in case of non-connection to DVR)
	Exit

2.2 Date/Time
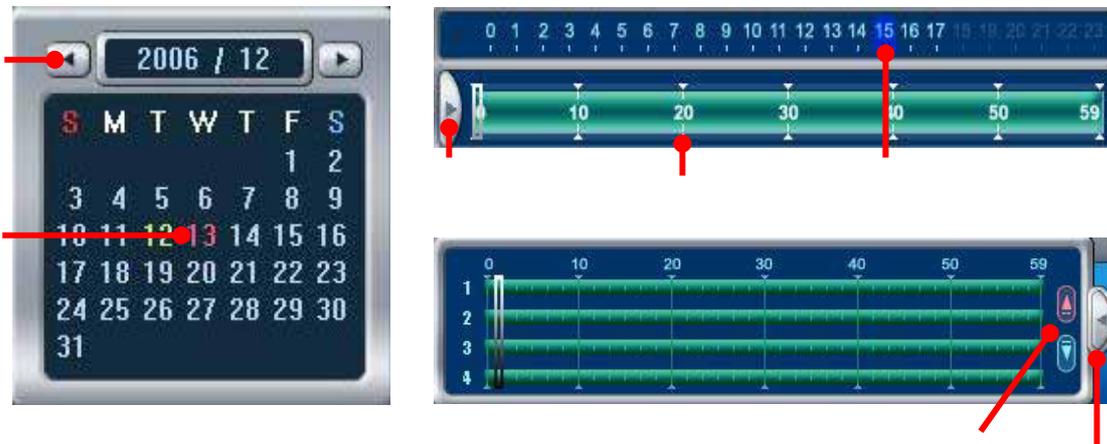
Month	, Move to wanted month
Date	Select wanted day. Red color means there is recorded data on the day.
Hour	Select Hour
Minute	Select Minute
Status Button	Shows detailed recorded data in an hour
Up/Down	Move to up/down channel to see detailed data in an hour
Close	Close status window and go to previous window

2.3 Playback Control Button

◀◀	Move to the beginning of data in selected search period
◀I	Playback one by one frame to reverse-direction
◀	Playback continuously to reverse-direction
II	Stop playback
▶	Playback continuously to forward-direction
I▶	Playback one by one frame to forward-direction
▶II	Move to the end of data in selected search period

2.4 Search Speed Slide

If you move to left-side the Search slide, search speed becomes slow down,
move to right-side the Search slider, search speed becomes speed up.

2.5 Volume Control Slide

If you move to left-side the Volume slider, playback-volume becomes turn-down,
move to right-side the Volume slider, playback-volume becomes turn-up.

2.6 Data Search and Panorama Search

|	
	When connect with DVR, selected channel color changed by red.
	In case of playing recorded data by motion detect mode, red color is ON
	In case of playing recorded data by sensor mode, red color is ON

It shows sequentially one channel panorama mode in 16 division mode

---

2.7 Backup, EnDB Open, Search by Event, Book-Mark

| Backup	Backup the recorded data. See in [3.Backup Feature]
EnDB Open	Reading Backup data. Supports Search feature with backup also possible to do playback feature
Search by Event	Able to see System, User, Network records and Search by event
BookMark	Move to the location of BookMark during search

BookMark [Local Search only] – Reference
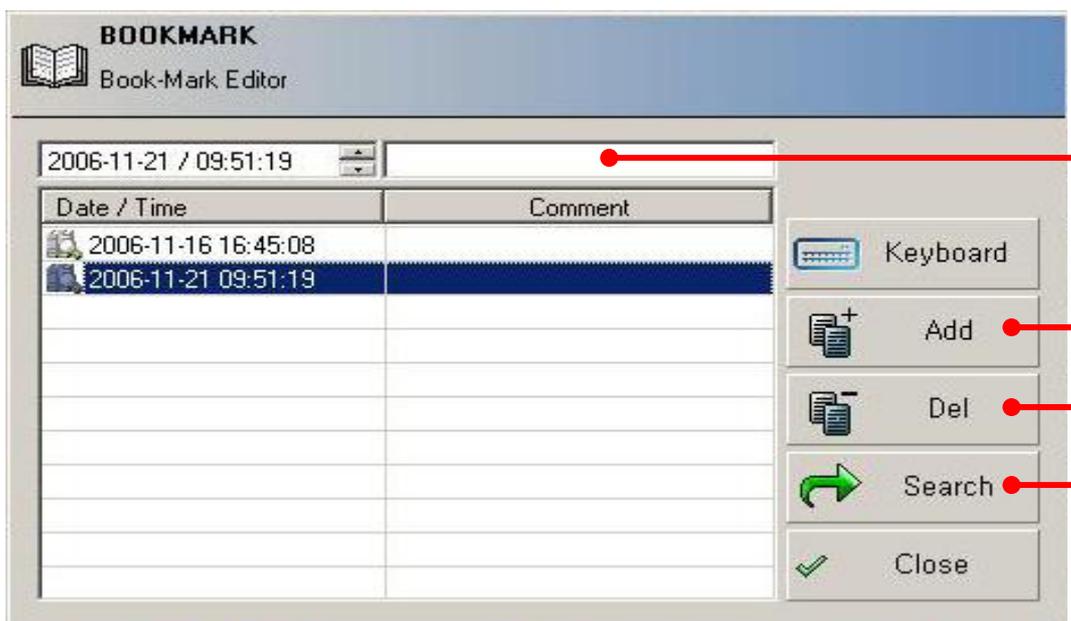
Comment	Space for comment of each bookmark
Add	Add Bookmark
Del	Delete Bookmark
Search	Move to location of selected Bookmark

3. Backup Feature

3.1 Remote Backup
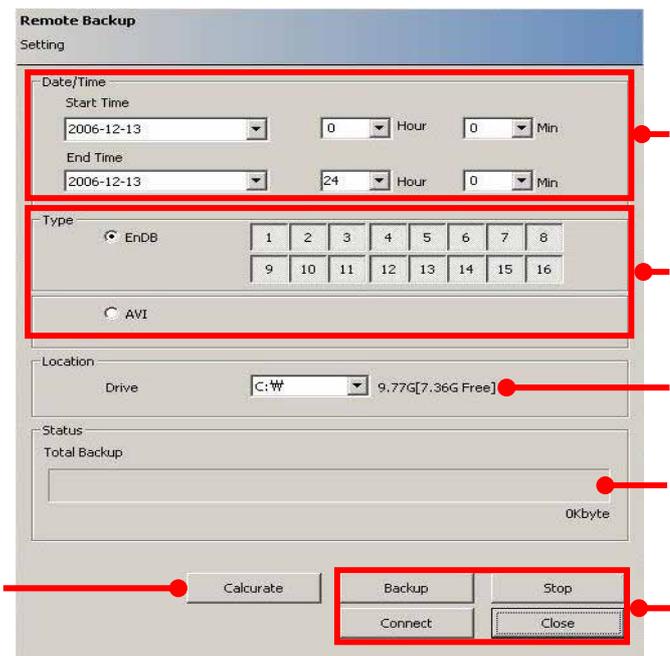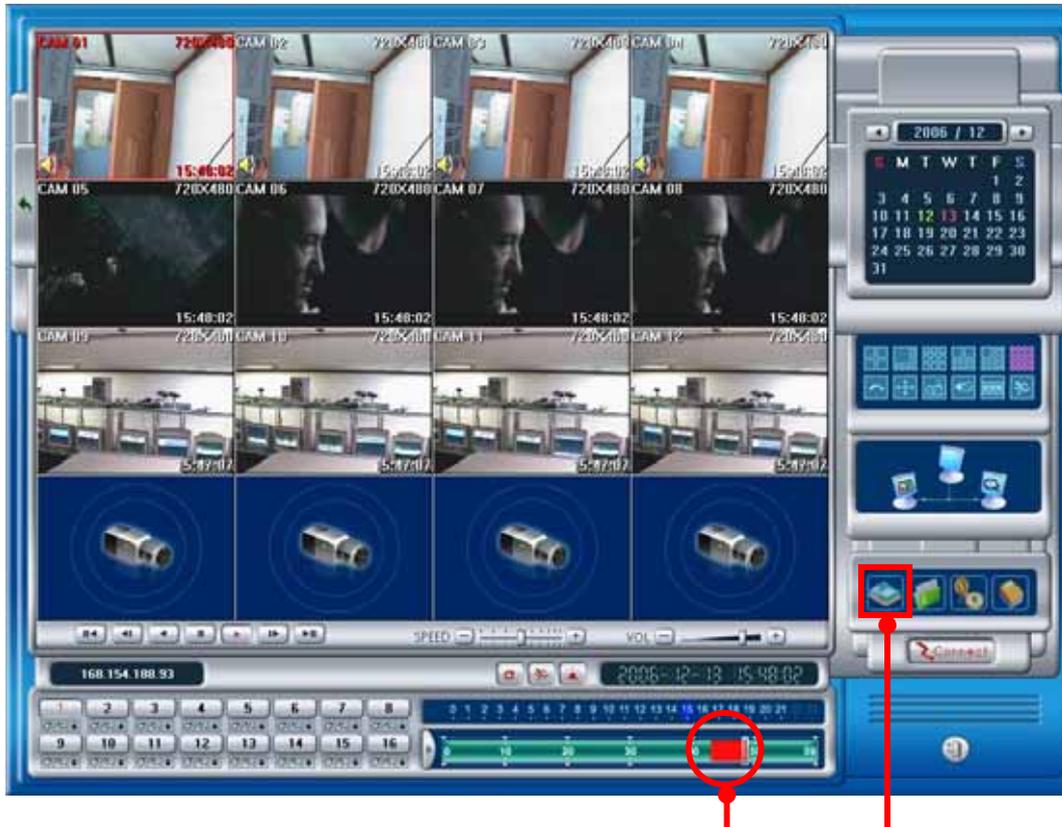
| Drag Bar	Move to wanted backup time in search screen using drag bar. Dragged parts will be indicated to red color.
Backup	Backup screen will be opened when click this button
Setup	Setup date and time to backup
Select Backup type	Select backup type (EnDB, AVI) and wanted channels.
Setup	Select backup drive. Backup folder will be made and starts backup into the drive
Status	It shows a process of backup status and backup data size.
Others	Backup process, Stop, Connect DVR, Stop backup.
Calculate	It calculates backup data size in advance.

Reference	One channel backup is only supported in Backup mode MS MPEG4 codec is used for AVI backup process.

## 3.2 Local Backup - AVI Backup

Saved Folder	It changes folder location to save backup video-clips. CD-RW drive is used for backup to CD-RW
AVI Backup	It chooses 'AVI' format for backup.
Starting Backup	It starts backup process.

3.3 Local Backup - EnDB Backup
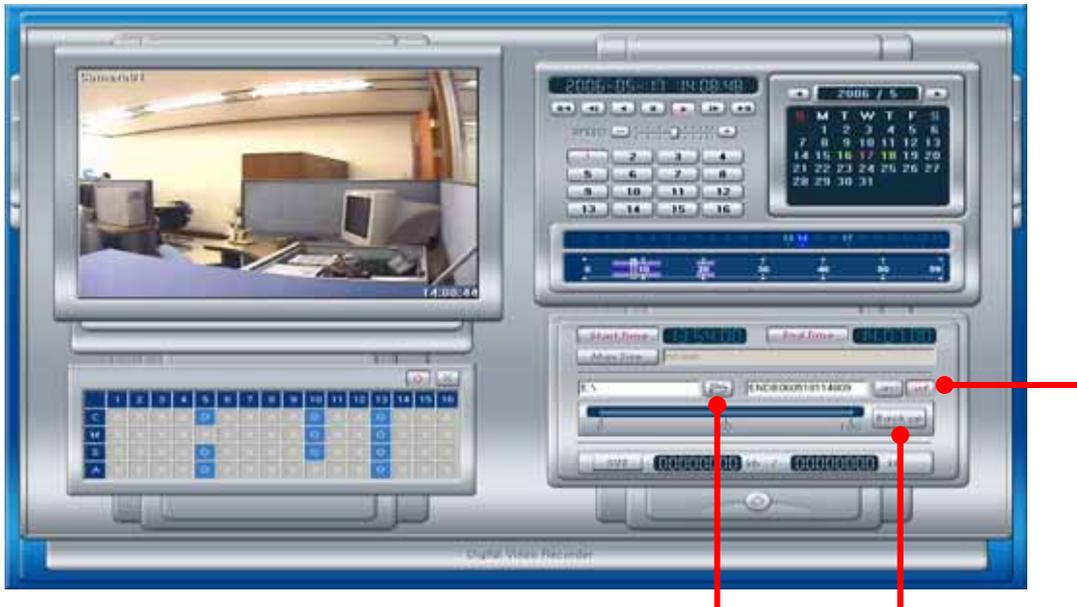
Saved Folder	It changes folder location to save backup video-clips. CD-RW drive is used for backup to CD-RW
EnDB Backup	It chooses 'INF'for backup EnDB.
Starting Backup	It starts backup process.
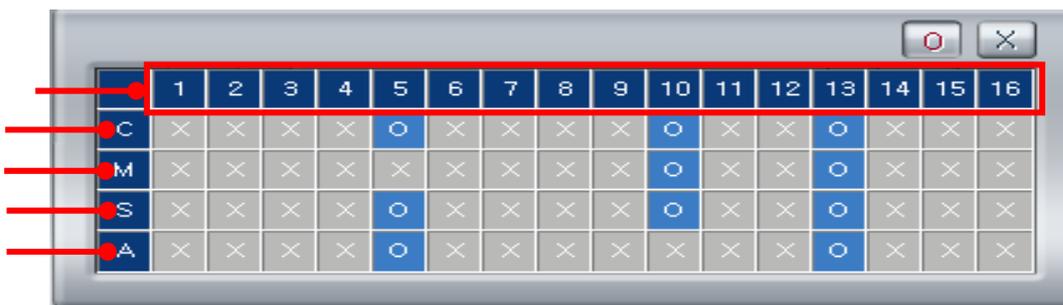
| Select Camera No. for backup-operation |
|---|
| Select Camera No. for backup-operation |
| Backup Recorded-data with motion-mode |
| Backup Recorded-data with sensor-mode |
| Backup only audio-data |

4. Screen Configuration

4.1 E-map Configuration

| MAP Folder	It selects a proper **MAP** where cameras installed
Video-Out Screen	Display video-output when selecting a camera on map..
Preview Screen	Display video-output which has present connected to DVR.
Present time	Display present time.
Connect	It connects to DVR.
Connect Ch. List	It displays present channels information
Quit	Exit E-map mode.

5. Environment Setup

5.1 System Setting
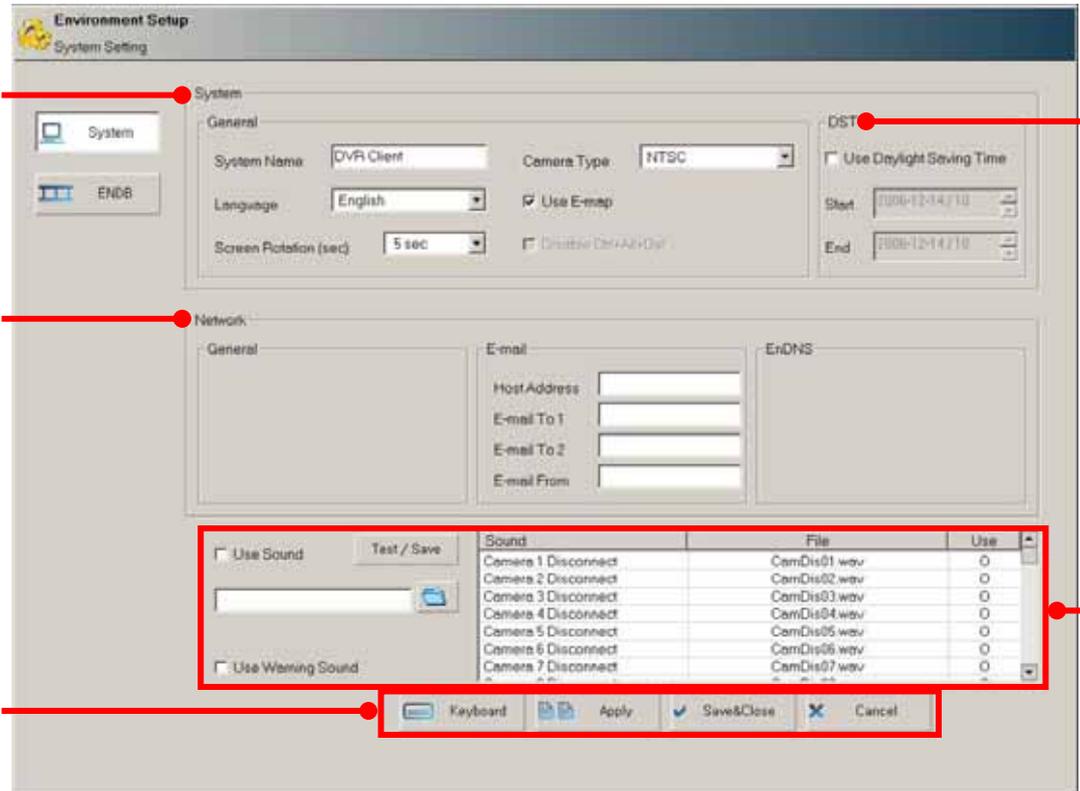
System	DVR name, Language, Camera Type(NTSC, PAL) Automatic Rotation Time, E-Map mode.
DST	It is setup option for using Summer Time.
Network	E-Mail: It sends to mail address in emergency state.
Sound conf.	It sets up alarm for each channel.
Save and Close	Save and Close window, Screen keyboard, Cancel

5.2 EnDB Setting
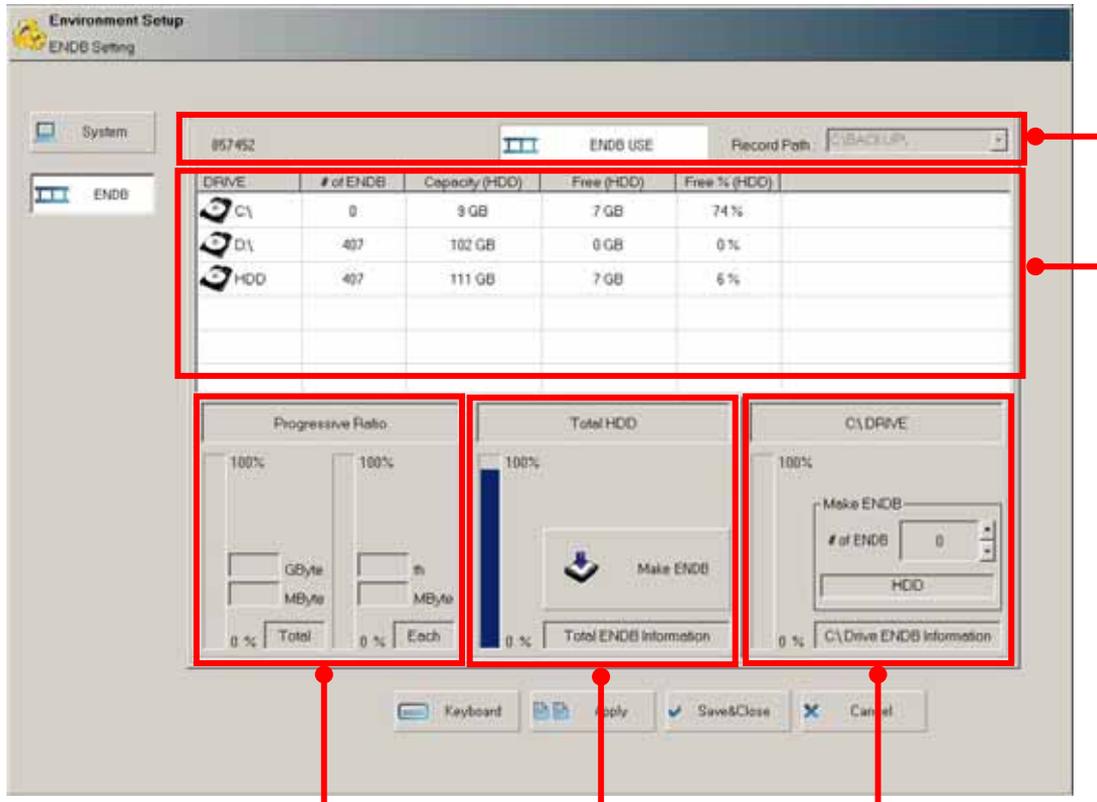
It chooses EnDB to use or not and sets up backup drive EnDB if not used.
It indicates EnDB information of System and can make EnDB selecting specific drive.
It shows a process status of generating EnDB.
It shows HDD free space information and makes EnDB.
It shows EnDB information of selected Drive in list and sets up EnDB using spin button.