INSTRUCTION MANUAL
Digital Single Channel Recorder

EDSR100
V1.3

About this manual
Before installing and using this unit, please read this Manual carefully.
Be sure to keep it handy for later reference.

EverFocus®

$C\!\in$

SPORTON LAB.

Certificate No: **C270305**

CERTIFICATE

● EQUIPMENT: **DVR (Digital Video Recorder)**
MODEL NO. : **EDSR-100**
APPLICANT : **EverFocus Electronics Corp.**
12-1F, No. 79, Sec. 1, Shin-Tai Wu Rd., Hsi-Chi, Taipei Hsien, Taiwan, R.O.C.

SPORTON LAB.

I HEREBY **CERTIFY THAT:**

THE MEASUREMENTS SHOWN IN THIS TEST REPORT WERE MADE IN ACCORDANCE WITH THE PROCEDURES GIVEN IN **EUROPEAN COUNCIL DIRECTIVE 89/336/EEC.** THE EQUIPMENT WAS **PASSED** THE TEST PERFORMED ACCORDING TO
EUROPEAN STANDARD EN 55022:1998 Class B, EN 61000-3-2:2000,
EN 61000-3-3:1995, and EN 55024:1998 (IEC 61000-4-2:1995,
IEC 61000-4-3:1995, IEC 61000-4-4:1995, IEC 61000-4-5:1995,
IEC 61000-4-6:1996, IEC 61000-4-8:1993, IEC 61000-4-11:1994) THE TEST WAS CARRIED OUT ON **Oct. 8, 2002** AT **SPORTON INTERNATIONAL INC. LAB.**

K. J. Lin Nov. 19, 2002

K. J. Lin
Manager

SPORTON INTERNATIONAL INC. 6F, No.106, Sec.1, Hsin Tai Wu Rd., Hsi Chih, Taipei Hsien , Taiwan, R.O.C.

SPORTON LAB.

NVLAP NVLAP LAB CODE 200079-0

Certificate No: **D270305**

CERTIFICATE OF COMPLIANCE

Authorized under Declaration of Conformity according to

47 CFR,Part 2 and Part 15 of the FCC Rules

Equipment: DVR (Digital Video Recorder)
Model No. : EDSR-100
Applicant : EverFocus Electronics Corp.
12-1F, No. 79, Sec. 1, Shin-Tai Wu Rd., Hsi-Chi, Taipei Hsien, Taiwan, R.O.C.

SPORTON LAB.

I HEREBY CERTIFY THAT:

THE MEASUREMENTS SHOWN IN THIS TEST REPORT WERE MADE IN ACCORDANCE WITH THE PROCEDURES GIVEN IN **ANSI C63.4 - 1992** AND THE ENERGY EMITTED BY THIS EQUIPMENT WAS **PASSED** CISPR PUB. 22 and FCC Part 15 in BOTH RADIATED AND CONDUCTED EMISSIONS CLASS B LIMITS. THE TESTING WAS COMPLETED ON **Sep. 20, 2002** AT **SPORTON INTERNATIONAL INC.** LAB.

Nov. 19, 2002

K. J. Lin
Manager

Safety Warning

⚠️

WARNING
TO REDUCE RISK OF FIRE OR ELECTRIC SHOCK,
DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

⚠️

CAUTION
DO NOT REMOVE COVER. NO USER SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

⚠️

Note:
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection. This equipment generates, uses and can radiated radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation If this equipment does cause harmful interference to
radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
-Reorient or relocate the receiving antenna.
-Increase these paration between the equipment and receiver.
-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-Consult the dealer or an experienced radio/TV technician for help.

The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Trade Name	Model Number

FC Tested To Comply
With FCC Standards

FOR HOME OR OFFICE USE

CE

Notice:
The information in this manual was current when published. The manufacturer reserves the right to revise and improve its products. All specifications are therefore subject to change without notice.

Safety Precautions

⚠
- Refer all work related to the installation of this product to qualified service personnel or system installers.

⚠
- Do not block the ventilation opening or slots on the cover.

⚠
- Do not drop metallic parts through slots.This could permanently damage the appliance. Turn the power off immediately and contact qualified service personnel for service.

⚠
- Do not attempt to disassemble the appliance.To prevent electric shock, do not remove screws or covers. There are no user-serviceable parts inside. Contact qualified service personnel for maintenance. Handle the appliance with care. Do not strike or shake, as this may damage the appliance.

⚠
- Do not expose the appliance to water or moisture, nor try to operate it in wet areas. Do take immediate action if the appliance becomes wet. Turn the power off and refer servicing to qualified service personnel. Moisture may damage the appliance and also cause electric shock.

⚠
- Do not use strong or abrasive detergents when cleaning the appliance body. Use a dry cloth to clean the appliance when it is dirty. When the dirt is hard to remove,use a mild detergent and wipe gently.

⚠
- Do not overload outlets and extension cords as this may result in a risk of fire or electric shock.

⚠
- Do not operate the appliance beyond its specified temperature, humidity or power source ratings. Do not use the appliance in an extreme environment where high temperature or high humidity exists. Use the appliance at temperature within $0^{o}C \sim +50^{o}C$ and a humidity below 90%. The input power source for this appliance is AC90~265V.

Safety Precautions

The lightning flash with an arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated " dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons

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.

Warning :
To prevent fire or shock hazard, do not expose units not specifically designed for outdoor use to rain or moisture.

Attention:
Installation should be performed by qualified service personnel only in accordance with the National Electrical Code or applicable local codes.

Power Disconnect:
Units with or without ON-OFF switches have power supplied to the unit whenever the power code is inserted into the power source; however, the unit is operational only when the ON-OFF switch is in the ON position. The power cord is the main power disconnect for all units.

External Power Supplies
Use only the recommended power supplies. Power supplies must comply with the requirement of the latest version of IEC 60065/CNS 13439. Substitutions may damage the unit or cause a fire or shock hazard

110V,60Hz Power Cords
110V,60Hz power cords, input and output, must comply with the latest versions of IEC 60065/CNS 13439

Warning:
Electrostatic-sensitive device. Use proper CMOS/MOSFET handing precautions to avoid electrostatic discharge.

UNPACKING
Unpack carefully.
This is electronic equipment and should be handled carefully.
Check to ensure that the following items are included;

•1. Digital Single Channel Recorder
•2. User's manual
•3. CF card reader
•4. Power Cord

If an item appears to have been damaged in shipment, replace it properly in its carton and notify the shipper. If any items are missing, notify your Everfocus Electronics Corp. Sales Representative or Customer Service. The shipping carton is the safest container in which the unit may be transported. Save it for possible future use.

Service
If the unit ever needs repair service, the customer should contact the nearest Everfocus Electronics Corp. Service Center for return authorization and shipping instruction.

Important Safeguards

⚠️

Read Instruction---All the safety and operating instructions should be read before the init is operated

⚠️

Retain Instructions---The safety and operating instructions should be retained for future reference.

⚠️

Heed Warnings—All warnings on the unit and in the operating instructions should be adhered to.

⚠️

Follow Instructions—All operating and use instructions should be followed

⚠️

Cleaning—Unplug the unit from the outlet before cleaning. Do not use liquid cleaners or aerosol cleaners.
Use a damp cloth for cleaning

⚠️

Attachments—Do not use attachment not recommended by the product manufacturer as they may cause hazards.

⚠️

Water and Moisture—Do not use this unit near water-for example, near a bath tub, wash bowl, kitchen sink,
or laundry tub, in a wet basement, near a swimming pool, in an unprotected outdoor installation, or any area which is
classified as a wet location.

⚠️

Servicing—Do not attempt to service this unit yourself as opening or removing covers may expose you to dangerous
voltage or other hazards. Refer all servicing to qualified service personnel.

⚠️

Power Cord Protection—Power supply cords should be routed so that they are not likely to be walked on or pinched by
items placed upon or against them, playing particular attention to cords and plugs, convenience receptacles, and the point
where they exit from the appliance.

⚠️

Object and Liquid Entry—Never push objects of any kind into this unit through openings as they may touch dangerous
voltage points or short-out parts that could result in a fire or electric shock, Never spill liquid of any kind on the unit.

Table of Contents

1. Product Overview

The EDSR100 is the first true VCR replacement designed particularly for the security industry, seamlessly combining high-resolution video multiplexing and digital recording.
The EDSR100 at speeds up to 60/50 images per second with NTSC/PAL formats and replay event instantly.
The EDSR100 incorporates all the benefits of digital video recording, is simple to install, and operates just like a VCR. The highly efficient compression technology, as well as the superior clarity and detail of recorder images, make the EDSR100 stand out from its competitors as the best choice for security surveillance.

1.1 Features

■   Digital Recording provides superior quality images

■   Hard-disk hot-swapping capability

■   Pre-Alarm image recording

■   Compatible with most multiplexers

■   Time lapse and real time recording

■   Refresh rate up to 60 field (50 field for PAL)

■   Quick Search by date/time, alarm events, and recording list

■   Fast and slow playback of recorded video in various speeds

■   On-screen setup menu and system timer

■   Multi-level password protection

■   RS-232 communication port

■   Highly stable non-PC based proprietary system

■   Built-in M-JPEG compression/decompression with configurable quality

■   Audio recording capability

■   Programmed with various time-lapse speeds, Data can be stored in Compact Flash Card.

■   Operation status record log

1.2 Specifications

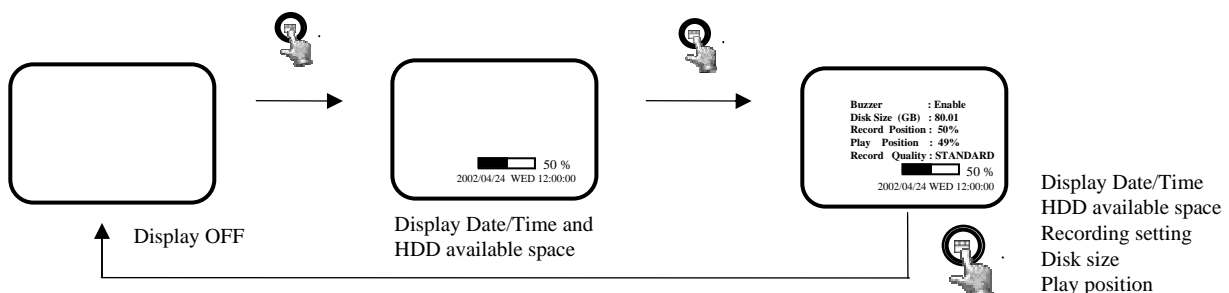|	
Video Input	1 video input with loop through (BNC), 1Vpp/75ohm;1S-Video input
Video Output	1 video output (BNC), 1Vpp/75ohm;1S-Video output
Video Compression	M-JPEG
Video Resolution	720x484 (NTSC); 720x576 (PAL)
CompactFlash Memory	Yes, Built-in Compact Flash card slot
Alarm Input	Yes
Alarm Output	Yes
Audio	2 input; 2 output
Video Loss Detection	Yes
Ethernet	RJ45 connector
Event Log	Yes
Hard Disk Storage	3.5" IDE type, Hot- swappable
Recording Mode	Continuous, Time-lapse recording, Timer or Event Recording
Recording Rate	60/50 field per second for NTSC/PAL
Playback Rate	60/50 field per second for NTSC/PAL
Playback Search	Date/Time or Event
Setup	On screen display setup
User Interface	Menu Driven
User Input Device	Front Panel Keypad
Timer	Built-in real time clock
Watch Dog Timer	Yes
RS-232	9-pin female connector
Power Source	AC90~265V
Dimension	430mm (L) x 88mm (W) x 300mm (H)
Operating Temperature	0℃~+50℃
Power Consumption	39W

2. Front Panel Keypads
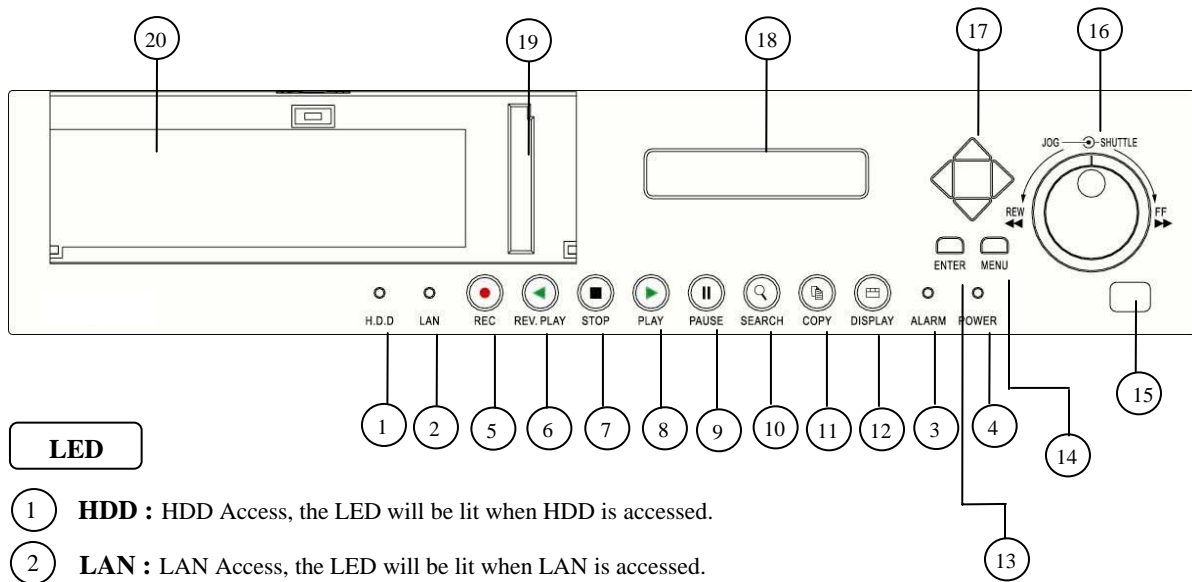
LED

① **HDD :** HDD Access, the LED will be lit when HDD is accessed.

② **LAN :** LAN Access, the LED will be lit when LAN is accessed.

③ **ALARM :** The LED will be lit when alarm occurs.

④ **POWER :** Indicates the power is normal.

Keys

⑤ **REC :** Press this key to start recording.

⑥ **REV. PLAY :** Reverse Play Back. The playback speed is shown on the LCD display, and press ▲▼ to change the speed if necessary.

⑦ **STOP :** Press this key to stop recording and play back.

⑧ **PLAY:** Play Back. The playback speed is shown on the LCD display, and press ▲ ▼ to change the speed if necessary.

⑨ **PAUSE:** Press this key to pause the playback picture.

⑩ **SEARCH:** Press this key to enter the Search Playback Menu.

⑪ **COPY:** Press this key to start copy still picture or video stream into Compact Flash card.

⑫ **Display:** Press this switch ON/OFF the display.

Display OFF

Display Date/Time and HDD available space

Display Date/Time
HDD available space
Recording setting
Disk size
Play position

Buzzer   : Enable
Disk Size (GB) : 80.01
Record Position : 50%
Play   Position : 49%
Record Quality : STANDARD
                                      50 %
2002/04/24 WED 12:00:00
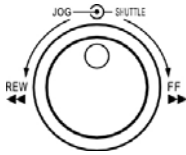
                                      50 %
2002/04/24 WED 12:00:00

3

⑬ ⬜ **ENTER :** Press this key to confirm the selection or data changed.

⑭ ⬜ **MENU :** Press this key to enter Setup menu.

⑮ [**Remote Control**] IR Remote receiver

⑯ [**Jog and Shuttle Dial**]

Shuttle Dial : In Playback mode, turning the shuttle dial can fast forward/rewind the picture.
In Pause mode, turning the shuttle dial can slow forward/rewind the picture.
In Menu mode, turning the shuttle dial can change menu page forward/rewind.

Jog Dial : In Pause mode, turn the jog dial can forward/rewind the Picture by one frame.
In Menu mode turning the jog dial clockwise increases the cursor data which show on the system. Turning the jog dial counterclockwise decreases the cursor data which show on the system.

⑰ ▲▼ **Up/ Down :** (1) In Menu mode, press those keys to change data.
(2) In Record/Playback mode, press those keys to change the Record/Playback speed.

◀ ▶ **Left/ Right :** In Menu mode, these keys are used to move cursor.

⑱ [**LCD Display**]

2002/04/24	SYS LOAD
12:00:00	002 HR

Switch on the power, "system loading" will be shown ten seconds, both in LCD display & main monitor.

2002/04/24	STANDARD
12:00:00	002 HR

In Standby mode, the date/time is current date/time and the right part shows the quality and rate setting for normal recording.

```
2002/04/24          RECORD
12:00:00            .   002   HR
```

In Recording mode, the date/time is current date/time and the right part shows RECORD and current recording rate.

```
2002/04/24          PLAY
12:00:00            >   002   HR
```

In Playback mode, the date/time is the playback date/time and the right part shows PLAYBACK and current playback rate.

(19) **Compact Flash Card Slot:** Insert a Compact Flash Card here.

(20) **Hard Disk Tray:** Hard Disk holder for HDD.

Note:This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
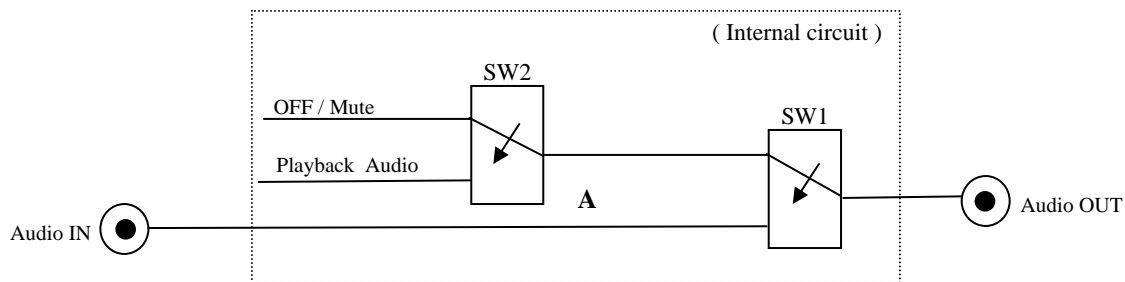
3. Back Panel Connections
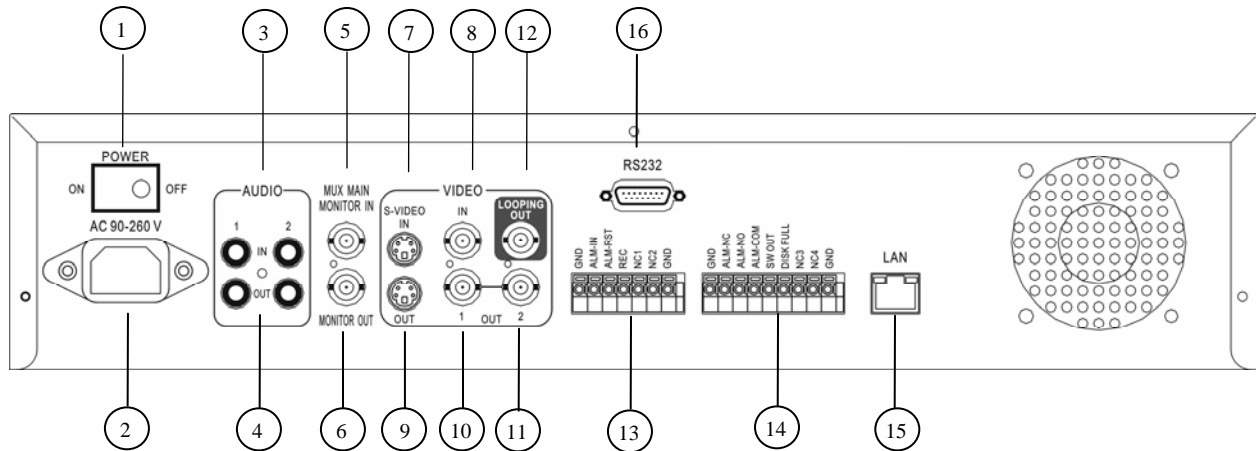
POWER

① **Power Switch: S**witch ON/ OFF the main power.

② **Main Power plug:** The main power input.

AUDIO

③ **Audio IN 1, 2 :** Audio input for recording.

④ **Audio OUT 1, 2 :** These two audio outputs can be set to "Enable" or "Disable" in Setup Menu. The operation of audio out is as follows:

Operation of SW1 :

When in recording or standby mode, the out of SW1 is connected to Audio IN.
When in playback mode the out of SW1 is connected to SW2 Audio.

Operation of SW2 :

When Playback Audio is enabled then the output of SW2 will be connected to Playback Audio.
When Playback Audio is disabled then there is no audio output (MUTE).

When Audio Out is enabled and machine is in Recording or Standby mode, the Audio IN is loop-through to Audio Out connector.
When Audio Out is enabled and machine is in Playback mode then the Audio Out playback audio.

MONITOR

⑤ **MUX MAIN MONITOR :** Video input BNC connector, connected to multiplexer main monitor output.

⑥ **MONITOR :** Video output BNC connector connected to main monitor.
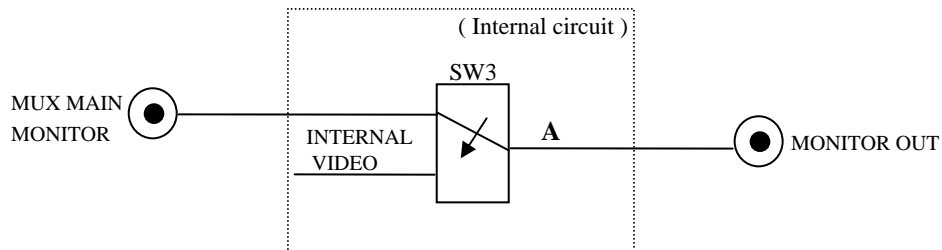
When the machine is in Menu, Search or Copy mode, the internal Video is switched to Monitor Out, so that the user can view full screen OSD. In other modes, the Video from multiplexer main monitor will be loop-through to the Monitor Out.

VIDEO Input to be Recorded

⑦ **S -VIDEO IN:** The S -VIDEO input connector.

⑧ **VIDEO IN:** The composite video input connector.

VIDEO Output

⑨ **S -VIDEO OUT :** The S -VIDEO output connector.
⑩ **VIDEO OUT(1) :** The composite video output connector.
⑪ **VIDEO OUT(2) :** Augments the composite video output connector.
⑫ **VIDEO LOOPING :** The loop-through composite video input can be connected to other devices.

Alarm Input

⑬ **Alarm Input Terminal Block**

ALM-IN :   Normal Open or Normal Close type alarm sensor input.
The Alarm Input can be selected as Normal Open or Normal Close input in the setup menu. When an alarm occurs, alarm recording will automatically start.

ALM-RST :   Normal Open or Normal Close type alarm reset input to reset the alarm.

REC :   External Recording request signal. The machine will start recording when a High Level is applied on this input terminal. If the machine is not in the timer, recording mode, the machine will stop recording when the REC signal drops from High to Low level.

Alarm Output

⑭ **Alarm Output Terminal Block**

ALM-NC :   Normal Close Alarm output. In normal condition, this terminal is shorted to the terminal of ALM-COM. In alarm status, it is open between ALM-NC and ALM-COM terminals.

ALM-NO :   Normal Open Alarm output. In normal condition, this terminal is open from the terminal of ALM-COM. In alarm status, those two terminals are shorted.

ALM-COM : Alarm Common Contact.

SW OUT :   Step signal to synchronize the machine and multiplexer.

DISKFULL : Disk-Full alarm signal.

LAN
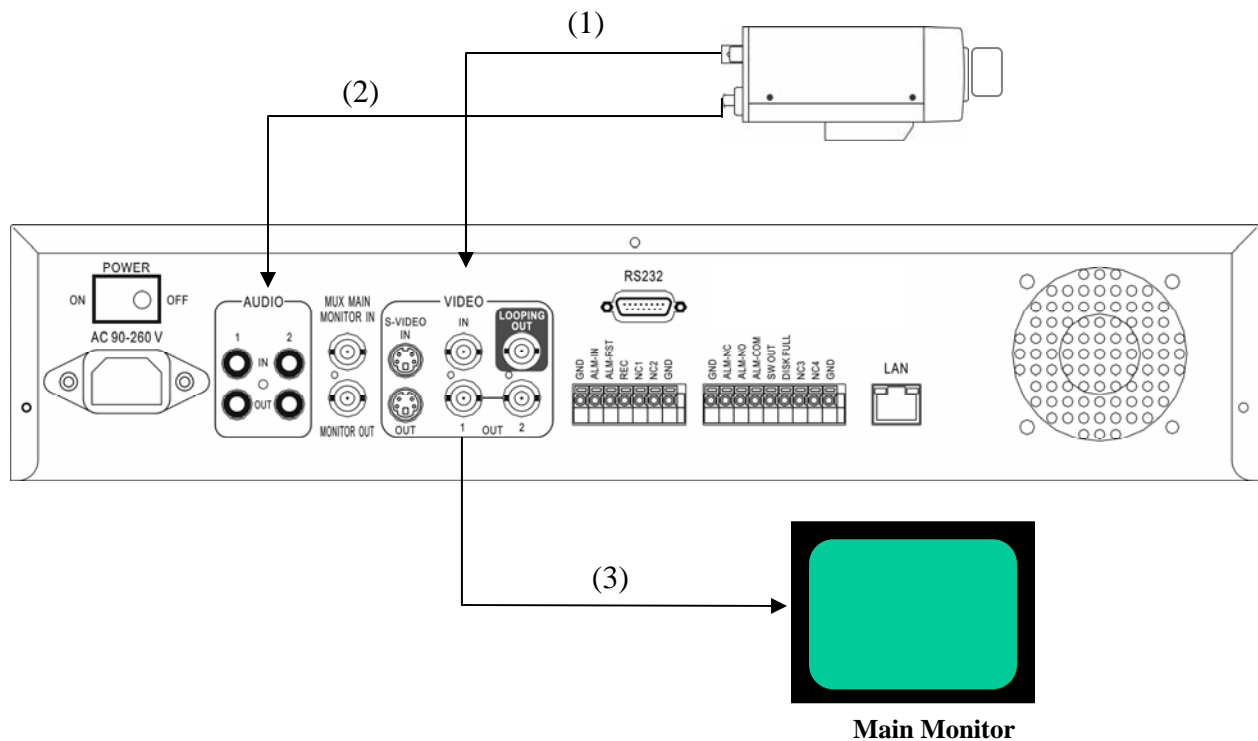
⑮ **LAN Connector** : The RJ-45 LAN connector.

RS232

⑯ **RS232 connector :** Connect D-Sub 9 pins connector to RS232 ports for remote control

4. System Connection

4.1 One Camera Connection.

Main Monitor

(1) :Video or S -VIDEO out:
The video input setting should be set as COMPOSITE. (SYSTEM SETTING MENU)
When the camera output is S-VIDEO, connect to the S-VIDEO input.
The video input setting should be set as S-VIDEO. (SYSTEM SETTING MENU)

(2) : Audio Out:
The camera audio output is connected to the audio input terminal at the rear panel.
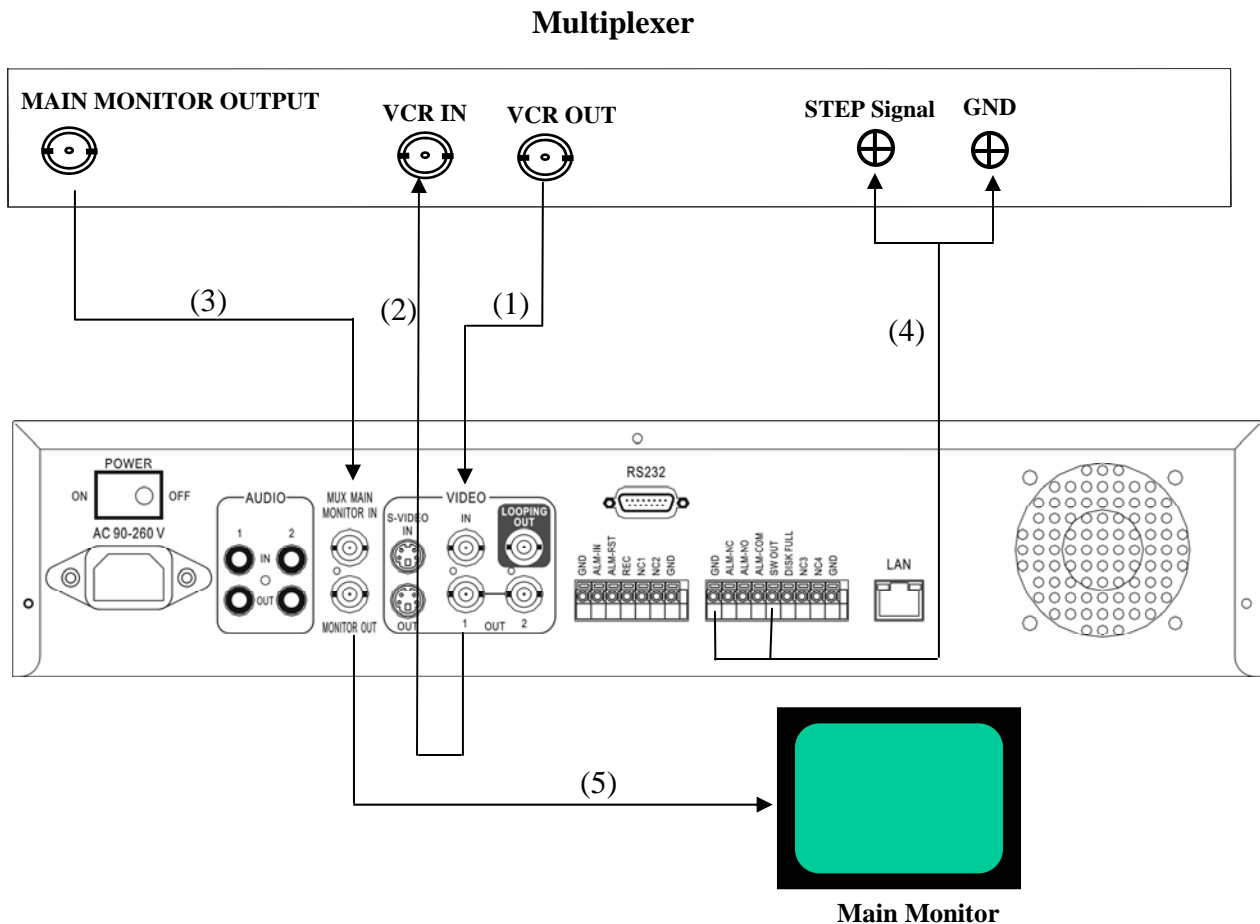
(3) : System Main Monitor Output:
The main monitor is connected to the VIDEO OUT 1 BNC connector or S-video
output S-connector.

(4) : Please set the Multiplexer item to OFF . (NORMAL RECORD SETTING MENU)

4.2 Multiplexer Connection.

Multiplexer

Main Monitor

(1): Multiplexer VCR Out :
This connects to the VIDEO IN connector at the rear panel.

(2) :Multiplexer VCR In :
This connects to the VIDEO OUT 1 connector at the rear panel.

(3) :Multiplexer Main Monitor Output:
This connects to the MUX. MAIN MONITORIN IN connector at the rear panel.

(4) :Step Signal:
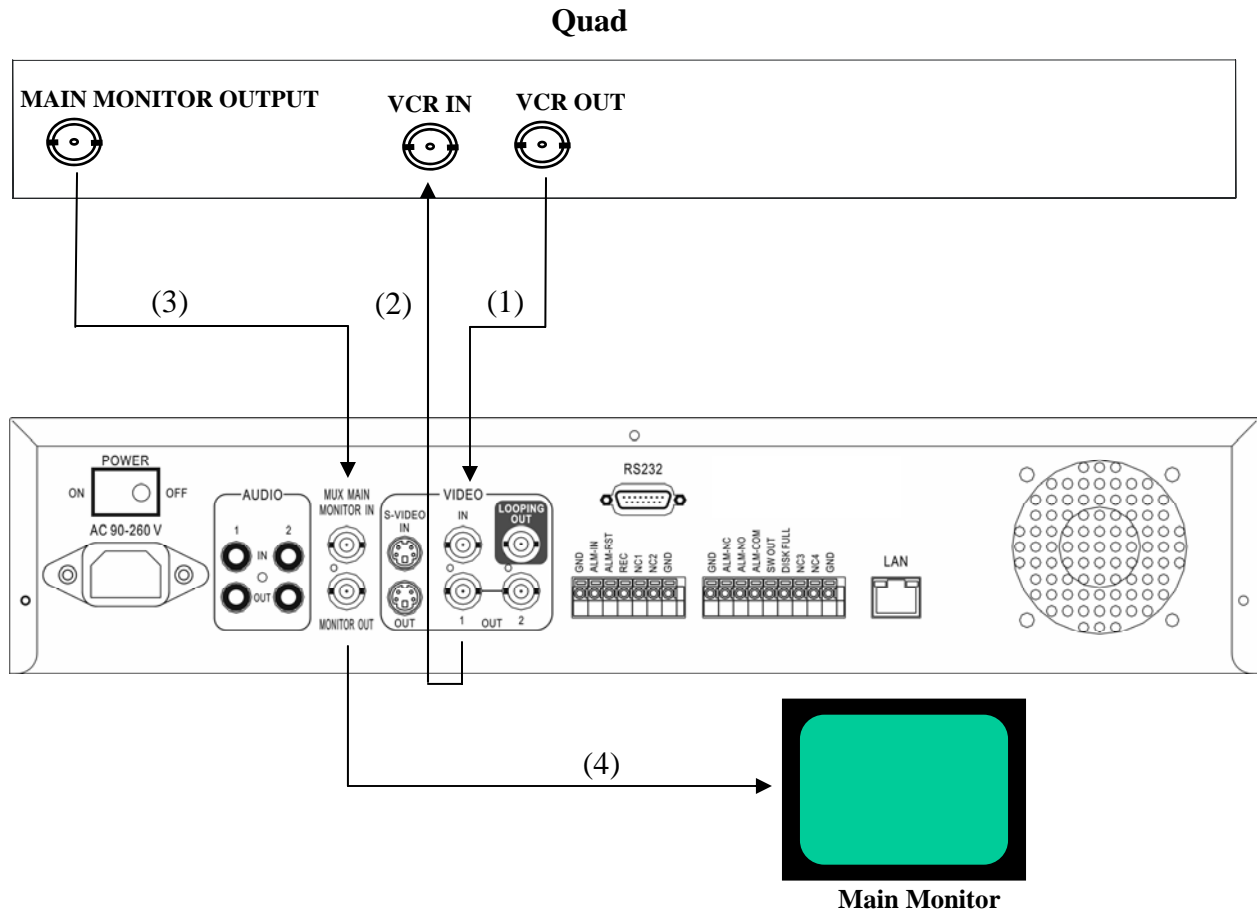This signal is used to synchronize the multiplexer and the video recorder.

(5) :System Main Monitor Out:
Connect the MAIN MONITOR OUTPUT connector to the main monitor.

(6) : Please set the Multiplexer item to ON . (NORMAL RECORD SETTING MENU)

4.3 Quad Connection. (Quad with VCR in VCR out connector)

Quad

MAIN MONITOR OUTPUT   VCR IN   VCR OUT

(3)   (2)   (1)

(4)

Main Monitor

(1): Quad VCR Out:
This connects to the VIDEO INPUT connector at the rear panel.

(2) : Quad VCR In:
This connects to the VIDEO OUTPUT connector at the rear panel.

(3) : Quad Main Monitor Out:
This connects to the MUX. Main connector at the rear panel.

(4) : System Main Monitor Output:
Connect the MAIN MONITOR OUTPUT connector to the main monitor.

(5) : Please set the Multiplexer item to ON . (NORMAL RECORD SETTING MENU)

4.4 Quad connection. (Quad without VCR in VCR out connector)

Quad

VIDEO OUT

(1)

(2)

Main Monitor

(1): Quad Video Out (to Video Recorder):
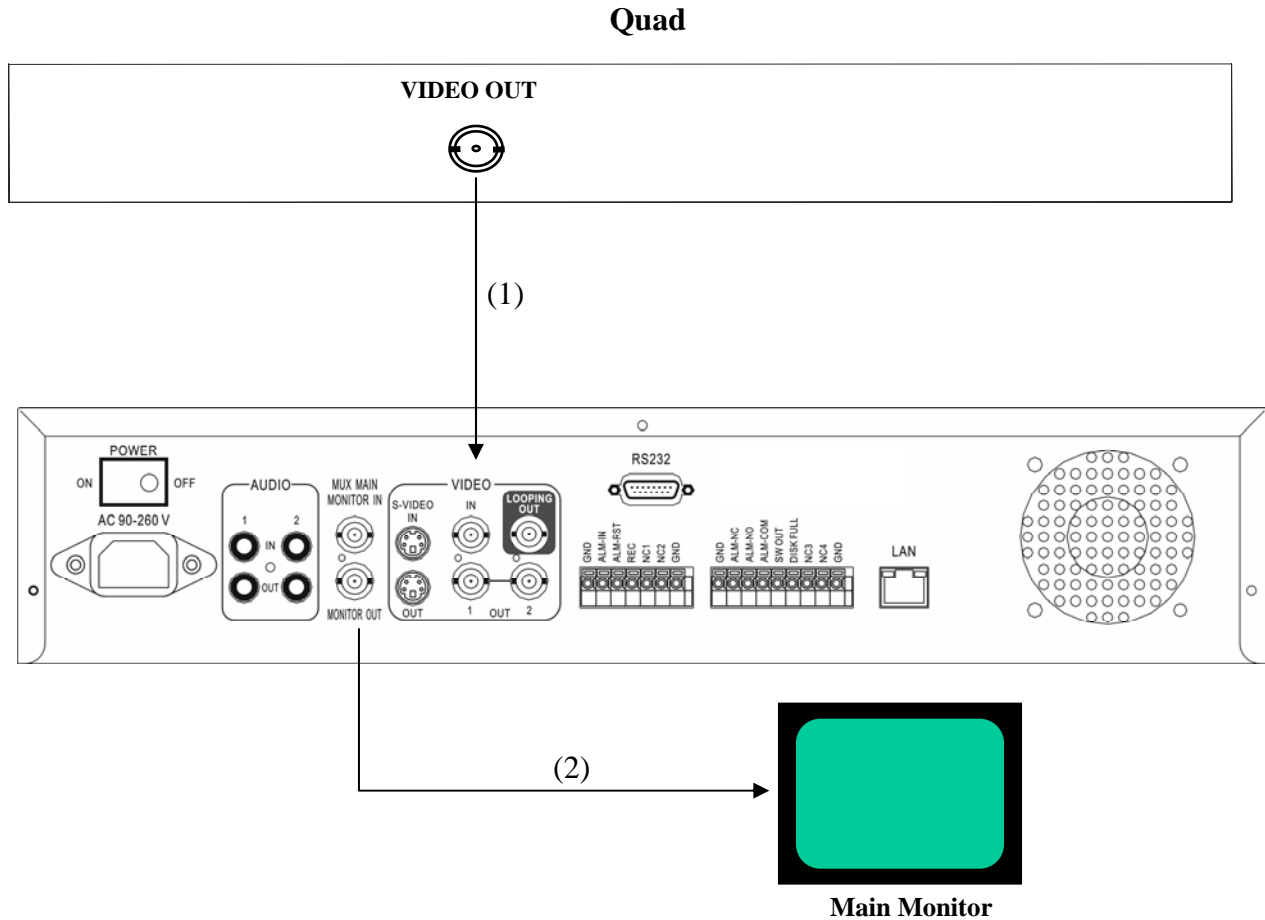This connects to the VIDEO INPUT connector at the rear panel.

(2): System Main Monitor Output:
Connect the MAIN MONITOR connector to the main monitor.

(3) :Please set the Multiplexer item to OFF . (NORMAL RECORD SETTING MENU)

5. Installation

(1) Insert a HDD (IDE) for Video Storage

The HDD should be set as MASTER.
(Normally the default setting of HDD is Master)

Notice: After the hard disk case is inserted into the hard disk tray, be sure to
Turn the tray key in lock position. Otherwise, hard disk will not be detected and
The System Loading procedure can not be completed.

(2) Connect cable for video/audio input and video/audio out,
The POWER LED lights if power is normal**.**

(3) Switch Power On
The detail connection is described in SYSTEM CONNECTION**.**

(4)

MENU

Press MENU key to enter SET UP MENU.

Once inside the main menu you will find there are
nine set up pages as below:

1.   CLOCK/LANGUAGE SETTING MENU

2.   TIMER-SET 1 SETTING MENU

3.   TIMER-SET 2 SETTING MENU

4.   NORMAL RECORD SETTING MENU

5.   ALARM RECORD SETTING MENU

6.   BUZZER SETTING MENU

7.   ARCHIVE SETTING MENU

8.   NETWORK SETTING MENU

9.   SYSTEM SETTING MENU

(5) **Turn the shutter dial clockwise or counterclockwise to change set up page.**

6. MENU FLOW

Turn the Shuttle dial clockwise or counterclockwise to change setting menu page.

■ CLOCK/LANGUAGE
SETTING MENU
(See page 15)

```
CLOCK/LANGUAGE SETTING MENU

DATE  :  2002/04/24 WED
TIME  :  13:01:02

DAYLIGHT SAVING  : OFF
MENU LANGUAGE   : ENGLISH
OSD COLOR       : WHITE
SPEED FORMAT    : BY FPS
VIDEO SYSTEM    : NTSC
```
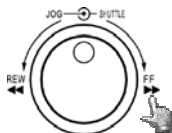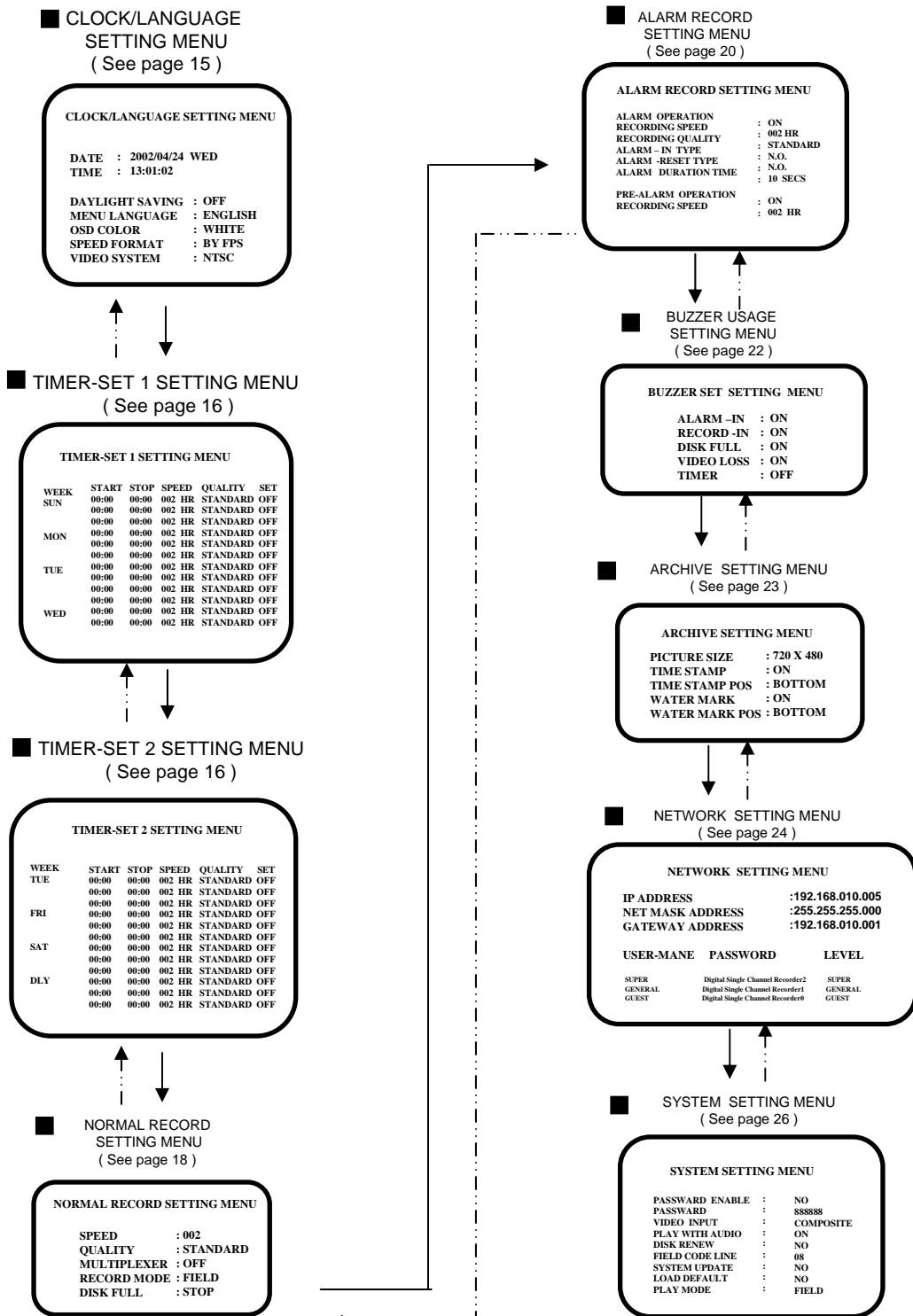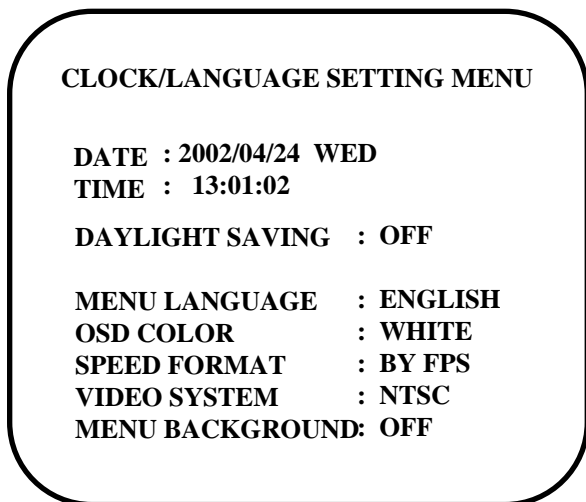
■ TIMER-SET 1 SETTING MENU
(See page 16)

```
TIMER-SET 1 SETTING MENU

         START  STOP  SPEED  QUALITY  SET
WEEK     00:00  00:00  002 HR  STANDARD OFF
SUN      00:00  00:00  002 HR  STANDARD OFF
         00:00  00:00  002 HR  STANDARD OFF
MON      00:00  00:00  002 HR  STANDARD OFF
         00:00  00:00  002 HR  STANDARD OFF
         00:00  00:00  002 HR  STANDARD OFF
TUE      00:00  00:00  002 HR  STANDARD OFF
         00:00  00:00  002 HR  STANDARD OFF
         00:00  00:00  002 HR  STANDARD OFF
WED      00:00  00:00  002 HR  STANDARD OFF
         00:00  00:00  002 HR  STANDARD OFF
```

■ TIMER-SET 2 SETTING MENU
(See page 16)

```
TIMER-SET 2 SETTING MENU

         START  STOP  SPEED  QUALITY  SET
WEEK
TUE      00:00  00:00  002 HR  STANDARD OFF
         00:00  00:00  002 HR  STANDARD OFF
         00:00  00:00  002 HR  STANDARD OFF
FRI      00:00  00:00  002 HR  STANDARD OFF
         00:00  00:00  002 HR  STANDARD OFF
         00:00  00:00  002 HR  STANDARD OFF
SAT      00:00  00:00  002 HR  STANDARD OFF
         00:00  00:00  002 HR  STANDARD OFF
         00:00  00:00  002 HR  STANDARD OFF
DLY      00:00  00:00  002 HR  STANDARD OFF
         00:00  00:00  002 HR  STANDARD OFF
         00:00  00:00  002 HR  STANDARD OFF
```

■ NORMAL RECORD
SETTING MENU
(See page 18)

```
NORMAL RECORD SETTING MENU

SPEED        : 002
QUALITY      : STANDARD
MULTIPLEXER  : OFF
RECORD MODE  : FIELD
DISK FULL    : STOP
```

■ ALARM RECORD
SETTING MENU
(See page 20)

```
ALARM RECORD SETTING MENU

ALARM  OPERATION       : ON
RECORDING SPEED        : 002 HR
RECORDING QUALITY      : STANDARD
ALARM – IN  TYPE       : N.O.
ALARM -RESET TYPE      : N.O.
ALARM  DURATION TIME   : 10  SECS

PRE-ALARM OPERATION    : ON
RECORDING SPEED        : 002  HR
```

■ BUZZER USAGE
SETTING MENU
(See page 22)

```
BUZZER SET  SETTING  MENU

ALARM –IN   : ON
RECORD -IN  : ON
DISK FULL   : ON
VIDEO LOSS  : ON
TIMER       : OFF
```

■ ARCHIVE SETTING MENU
(See page 23)

```
ARCHIVE SETTING MENU

PICTURE SIZE    : 720 X 480
TIME STAMP      : ON
TIME STAMP POS  : BOTTOM
WATER MARK      : ON
WATER MARK POS  : BOTTOM
```

■ NETWORK SETTING MENU
(See page 24)

```
NETWORK  SETTING MENU

IP ADDRESS         :192.168.010.005
NET MASK ADDRESS   :255.255.255.000
GATEWAY ADDRESS    :192.168.010.001

USER-MANE  PASSWORD            LEVEL

SUPER      Digital Single Channel Recorder2   SUPER
GENERAL    Digital Single Channel Recorder1   GENERAL
GUEST      Digital Single Channel Recorder0   GUEST
```

■ SYSTEM SETTING MENU
(See page 26)

```
SYSTEM SETTING MENU

PASSWARD  ENABLE  :   NO
PASSWARD          :   888888
VIDEO  INPUT      :   COMPOSITE
PLAY WITH AUDIO   :   ON
DISK RENEW        :   NO
FIELD CODE LINE   :   08
SYSTEM UPDATE     :   NO
LOAD DEFAULT      :   NO
PLAY MODE         :   FIELD
```

6.1 CLOCK/ LANGUAGE SETTING MENU

```
CLOCK/LANGUAGE SETTING MENU

DATE  : 2002/04/24  WED
TIME  :  13:01:02

DAYLIGHT SAVING   : OFF

MENU LANGUAGE     : ENGLISH
OSD COLOR         : WHITE
SPEED FORMAT      : BY FPS
VIDEO SYSTEM      : NTSC
MENU BACKGROUND: OFF
```

In CLOCK/LANGUAGE SETTING MENU , we SET

(1) **DATE :** Current date
          Year: 2000 ~ 2099   Month: 01~ 12   Date: 01~31

(2) **TIME :** Current time
          Hour: 00 ~ 23   Minute : 00 ~ 59   Second: 00 ~ 59

(3) **DAYLIGHT SAVINGS :**

      ON : Automatically 1 hour earlier during summer daylight saving period.
      OFF : No daylight savings.

(4) **MENU LANGUAGE:**
                ENGLISH

(5) **OSD COLOR:** 5 different colors can be selected:
            WHITE, RED, GREEN, BLUE, YELLOW
(6) **SPEED FORMAT**: Select recording speed by FPS (Fields per second) or HOUR

(7) **VIDEO SYSTEM**: Shows the video system "NTSC" or "PAL"

(8) **MNEU BACKGROUND:** Black out video ON/OFF when in Menu Mode
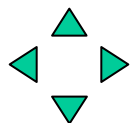
: Press ◀ or ▶ to move the cursor to the left or right.

: Press ▲ or ▼ or Jog Dial to change the value.

6.2 TIMER SET SETTING MENU

TIMER-SET 1 SETTING MENU

WEEK	START	STOP	SPEED	QUALITY	SET
SUN	00:00	00:00	002 HR	STANDARD	OFF
	00:00	00:00	002 HR	STANDARD	OFF
	00:00	00:00	002 HR	STANDARD	OFF
MON	00:00	00:00	002 HR	STANDARD	OFF
	00:00	00:00	002 HR	STANDARD	OFF
	00:00	00:00	002 HR	STANDARD	OFF
TUE	00:00	00:00	002 HR	STANDARD	OFF
	00:00	00:00	002 HR	STANDARD	OFF
	00:00	00:00	002 HR	STANDARD	OFF
WED	00:00	00:00	002 HR	STANDARD	OFF
	00:00	00:00	002 HR	STANDARD	OFF
	00:00	00:00	002 HR	STANDARD	OFF

TIMER-SET 2 SETTING MENU

WEEK	START	STOP	SPEED	QUALITY	SET
TUE	00:00	00:00	002 HR	STANDARD	OFF
	00:00	00:00	002 HR	STANDARD	OFF
	00:00	00:00	002 HR	STANDARD	OFF
FRI	00:00	00:00	002 HR	STANDARD	OFF
	00:00	00:00	002 HR	STANDARD	OFF
	00:00	00:00	002 HR	STANDARD	OFF
SAT	00:00	00:00	002 HR	STANDARD	OFF
	00:00	00:00	002 HR	STANDARD	OFF
	00:00	00:00	002 HR	STANDARD	OFF
DLY	00:00	00:00	002 HR	STANDARD	OFF
	00:00	00:00	002 HR	STANDARD	OFF
	00:00	00:00	002 HR	STANDARD	OFF

MENU

The monitored image can be recorded automatically by setting the start and end
times in TIMER SET SETTING MENU, we can set the schedule to record for a whole week.

    (1) WEEK: This selects the day for the timer. Records each day's schedule.

    (2) START: This is used to start the time recording.

    (3) STOP: This is used to end the time for recording.

    (4) Speed :
       When SPEEED FORMAT is set to HOUR, the recording speed can be set from
       2/3 (NTSC/PAL) HR to 960HR.
       When SPEED FORMAT is set to FPS, the recording speed can be set form
       1~60/1~50(NTSC/PAL)FPS.

    (5) Quality : There are six recording picture quality levels

LOWER	:	15 KB
LOW	:	20 KB
BASIC	:	25 KB
STANDARD	:	30 KB
HIGH	:	35 KB
SUPERIOR	:	40 KB

    (6) SET: Set "ON" when using timer recording.
          Set "OFF" when not using timer recording.
    (7) DLY : Record on same schedule every day.
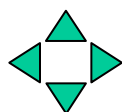
: Press ◀ or ▶ to move the cursor to the left or right.

: Press ▲or ▼ or Jog Dial to change the value.

```
2002/04/24          T. RECORD
12:00:00            .   002  HR
```

In Timer Recording mode, the date/time is Timer date/time and the right part shows T . RECORD and Timer recording rate.

For continuous recording, the quality level is unable to change.(Figure 1) The Seg 1 and Seg 2
will be treated as the continuous recording 08:30~00:00.
If you need to set different quality level, Please set as the Figure2.

Seg 1	08:30~17:00	Seg 1	08:30~17:00
Seg2	17:00~00:00	Seg2	17:01~00:00

      (Figure 1)   (Figure 2)

6.3 NORMAL RECORD SETTING MENU

```
NORMAL RECORD SETTING MENU

SPEED              :   002
QUALITY            :   STANDARD
MULTIPLEXER        :   OFF
RECORD MODE        :   FIELD
DISK FULL          :   STOP
```
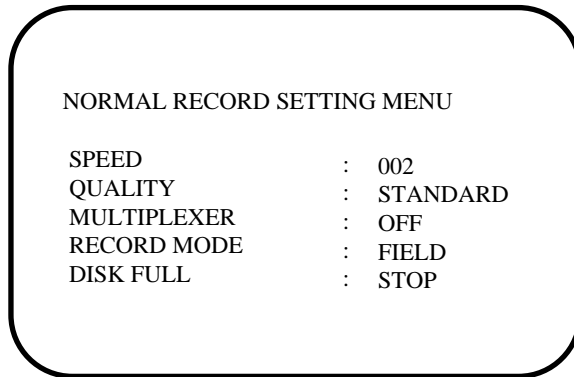
In NORMAL RECORDING MENU, we define

(1) SPEED :   Recording Speed
The user can select the recording speed from 2/3 (NSC/PAL) HR to 960 HR.

(2) QUALITY:
Picture Quality
There are six quality levels for recording

LOWER	:	15 KB
LOW	:	20 KB
BASIC	:	25 KB
STANDARD	:	30 KB
HIGH	:	35 KB
SUPERIOR	:	40 KB

(3) MULTIPLEXER:

      ON/OFF : The user can select Multiplexer connection or One Camera connection

        ON : The video input from MUX MAIN MONITOR connector at the rear
            panel will be looped through to the main monitor out when the
            recorder is not in MENU mode.

        OFF : The main monitor output is similar to the video out connector.

(4) RECORD MODE:

      There are two record modes for Time lapse recording.   FIELD or FRAME

(5) Disk Full:

      STOP : When the disk is full, the machine will STOP recording.

     REWRITE : When the disk is full, the current video will OVERWRITE the existing video
           from the beginning of HDD.
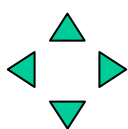
      : Press ◀ or ▶ to move the cursor to the left or right.

      : Press ▲ or ▼ or Jog Dial to change the value.

6.4 ALARM RECORD SETTING MENU

```
ALARM RECORD SETTING MENU

ALARM  OPERATION        : ON
RECORDING SPEED         : 002 HR
RECORDING QUALITY       : STANDARD
ALARM – IN  TYPE        : N.O.
ALARM  -RESET TYPE      : N.O.
ALARM   DURATION TIME   : 10  SECS

PRE-ALARM  OPERATION    : ON
RECORDING SPEED         : 002  HR
```

 In ALARM RECORDING MENU, we define

(1) ALARM OPERATION :

   ON : Records when alarm occurs.

   OFF : Does not record when alarm occurs.

(2) RECORDING SPEED : The recording speed in alarm duration.

   The max. recording speed is 2/3 (NTSC/PAL) HR.

   The min. recording speed is 960 HR.

(3) RECORDING QUALITY :

   Select the Recording picture quality when alarm occurs.

LOWER	:	15 KB
LOW	:	20 KB
BASIC	:	25 KB
STANDARD	:	30 KB
HIGH	:	35 KB
SUPERIOR	:	40 KB

(4) ALARM –IN TYPE :

   N.O. : Normal Open**,**
   N.C. : Normal Close

(5) ALARM - RESET TYPE:

   N.O. : Normal Open,
   N.C. : Normal Close

(6) ALARM   DURATION TIME :

   Alarm recording starts from the beginning of alarm and stops at the end of the duration.
   The max. duration is NON - STOP, the min. duration is 10 Seconds.

(7) PRE-ALARM OPERATION :
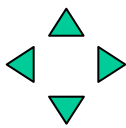
   ON :   Record the picture in pre-alarm recording speed in pre-alarm period.

   OFF : No pre-alarm recording before alarm occurs.

(8) RECORDING SPEED :

   This is the recording speed in the pre-alarm period.

   The max. recording speed is 2/3 (NTSC/PAL) HR.

   The min. recording speed is 960 HR.

(9) PRE – ALARM TIME :

   The duration of pre-alarm recording period

   In 2/3 hour Real Time recording mode, the duration of pre-alarm is about five seconds.

: Press ◀ or ▶ to move the cursor to the left or right.

: Press ▲ or ▼ or Jog Dial to change the value.

Notice :

If the alarm occurs when it is in standby mode or in normal recording mode,the recording quality will be the
same as the normal recording quality.

If the alarm occurs when it is in timer recording mode , the recording quality will be the same as the value
set in timer recording quality.

6.5 BUZZER SETTING MENU

```
BUZZER  SETTING  MENU

BUZZER          : ENABLE

ALARM –IN       : ON
RECORD -IN      : ON
DISK FULL       : ON
VIDEO LOSS      : ON
TIMER           : OFF
```
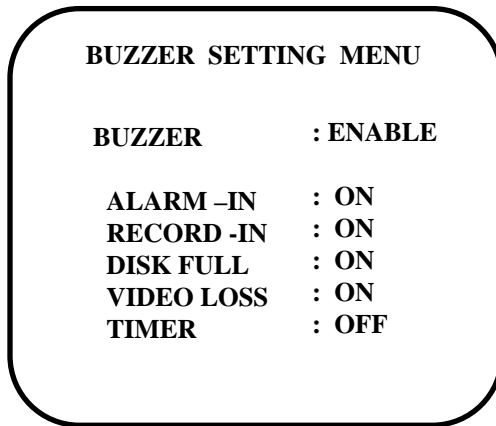
In BUZZER SETTING MENU, we SET the buzzer ON/OFF under the following conditions:

(1) BUZZER :

ENABLE: Turns the buzzer on.
DISABLE: Turns the buzzer off.

User can press Enter button to enable/disable in Record/Playback mode.

(2) ALARM –IN :

ON, the buzzer will sound when the alarm occurs.

(3) RECORD – IN:

ON, the buzzer will sound when Record-IN signal is applied on the Record-IN terminal.

(4) DISK FULL :

ON, the buzzer will sound when disk is near full 99.7%

(5) VIDEO LOSS :

ON, the buzzer will sound when the video loses.

(6) TIMER :

ON, the buzzer will sound when timer record occurs.
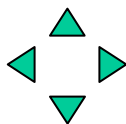
: Press ◀ or ▶ to move the cursor to the left or right.

: Press ▲ or ▼ or Jog Dial to change the value.

MENU

6.6 ARCHIVE SETTING MENU

```
ARCHIVE SETTING MENU

PICTURE SIZE        : 720x480
TIME STAMP          : ON
TIME STAMP POS      : BOTTOM
WATER MARK          : ON
WATER MARK POS      : BOTTOM
```
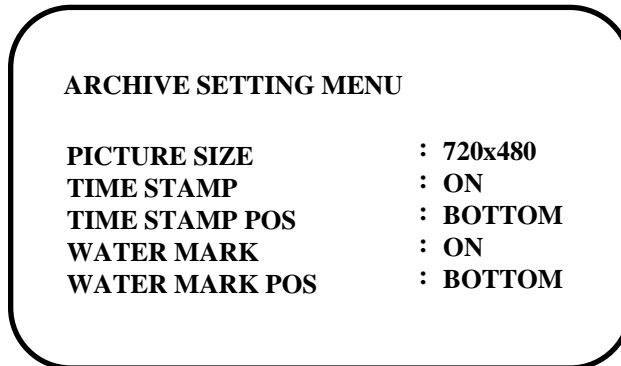
(1) PICTURE SIZE :

Selects picture size for copying image to CF card

Big size:720x480

Small size:352x240

(2) TIME STAMP :

ON: The time stamp will show on the picture when copying image to CF card.

OFF: The time stamp will not show on the picture when copying image to CF card.

(3) TIME STAMP POS:

BOTTOM: The time stamp will show on the bottom

TOP: The time stamp will show on the top

(4) WATER MARK:

ON: Shows a water mark on the picture when copying image to CF card.

OFF: This erases the water mark on the picture when copy image to CF card.

(5) WATER MARK POS:

BOTTOM: Water mark will show on the bottom

TOP: Water mark will show on the top
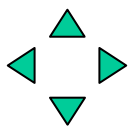
: Press ◀ or ▶ to move the cursor to the left or right.

: Press ▲ or ▼ or Jog Dial to change the value.

6.7 NETWORK SETTING MENU

```
NETWORK SETTING MENU

IP ADDRESS                 :  192.168.010.005
NET MASK ADDRESS           :  255.255.255.000
GATEWAY ADDRESS            :  192.168.010.001


USER-MAME        PASSWORD            LEVEL
 SUPER            EDSR100             SUPER
 GENERAL          EDSR100             GENERAL
 GUEST            EDSR100             GUEST
```

In the NETWORK SETTING MENU, we define

(1)   IP ADDRESS : 192.168.010.005

(2)   NET MASK ADDRESS: 255.255.255.000

(3)   GATEWAY ADDRESS: 192.168.010.001

(4)   USER-MAME PASSWORD LEVEL

The "EDSR100 Login"page will show on the screen when connect to EDSR100.

The Password Setup allows the administrator to set the new Login name and password with access level "Super","General" or "Guest".

The system allows up to four users connected at same time with different access levels.

For "Super " , the user can view live/playback video and control EDSR100 operation.
For "General", the user can view live and playback video.
For "Guest", the user can only view live.
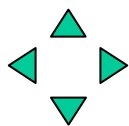
: Press ◀ or ▶ to move the cursor to the left or right.

: Press ▲ or ▼ or Jog Dial to change the value.

6.8 SYSTEM SETTING MENU

```
SYSTEM SETTING MENU  ( V 1. 20  2002/12/05)

PASSWORD  ENABLE      : NO
PASSWORD              : 888888
VIDEO  INPUT          : COMPOSITE
PLAY WITH AUDIO 1     : ON
PLAY WITH AUDIO 2     : ON
DISK RENEW            : NO
FIELD CODE LINE       : 20
SYSTEM  UPDATE        : NO
LOAD DEFAULT          : NO
CF RENEW              : NO
PLAY MODE             : FIELD
```

(1) PASSWORD ENABLE :

    YES/NO : User can set the PASSWORD ON or OFF to enter the system setting menu.

    YES: Selects the PASSWORD to enter the system setting menu .

    NO: Turns off the PASSWORD to enter the system setting menu.

(2) PASSWORD :

    When selecting YES for PASSWORD ENABLE, to enter the system setting menu a password

    is required. The code is six digits long and can be a digit from 1 to 8.

    Once you have activated the password, whenever you press the menu button in live mode or stop button in

    record mode the system will ask you to enter the password.

```
PASSWORD:  ******
```

    Therefore, be sure to make a note of the password.

MENU

When the user enters a password, the 8 keys on the front panel will stand for 1 to 8 .

KEY → 　1　2　3　4　5　6　7　8
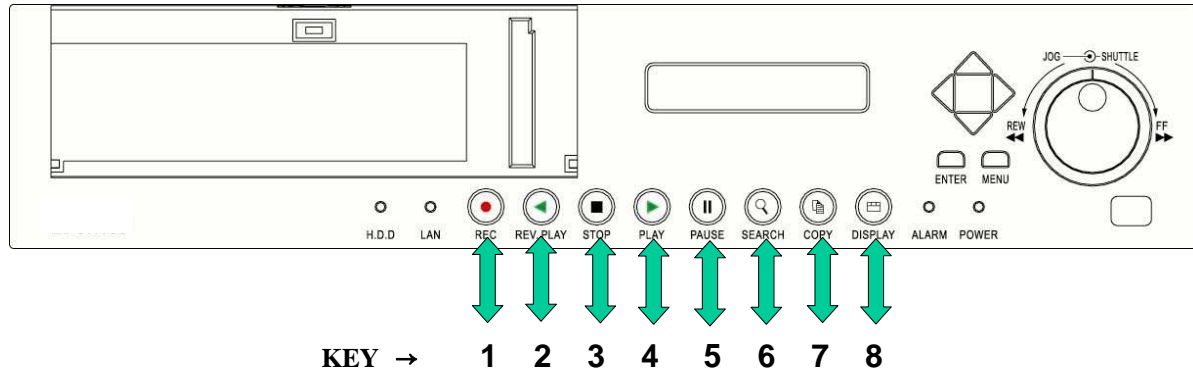
Example: PASSWORD 888888

　　　　User can press DISPLAY key six times to enter the system setting menu.

(3) VIDEO INPUT :

　　　　COMPOSITE : Selects the video input from the BNC connector.

　　　　S-VIDEO : Selects the S-VIDEO from S-VIDEO connector.

(4) PLAY WITH AUDIO 1

　PLAY WITH AUDIO 2 :

　　　　ON/OFF : Play back with or without audio.

(5) DISK RENEW :

　　　　YES/NO : Activates the Renew HDD option.

　　　　YES : The double check dialog will appear on the screen.
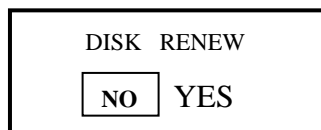
Press　ENTER　key to NOT renew HDD and Exit.
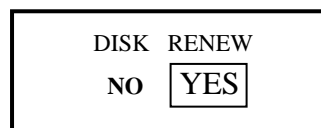
If not, press ▷ key to move the cursor to YES, and then press

key to Renew HDD.

ENTER

DISK RENEW

NO　YES

DISK RENEW

NO　YES
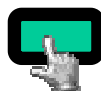
(6) FIELD CODE LINE : When the system is connected to the Multiplexer, it is used to adjust the field code
of the Multiplexer.

> The values: 00~20
>
> The default value is 13, it is suitable for most of the multiplexers.
>
> If the field code line appears on the top of each playback channel, decrease the value.
>
> If multiplexers can not playback properly ,increase the value.

(7) SYSTEM UPDATE :

> **YES/NO :** Updates the system.
>
> **YES :** Copy the update files into Compact Flash card ON PC and insert the
> Compact Flash card into the slot, and then press ENTER key to
> update system.
>
> **Notice:** After the system is updated successfully, be sure reboot the system.

(8) LOAD DEFAULT :

> **YES/NO :** Load the Load System.
>
> **YES :** The double check dialog will appear on the screen.
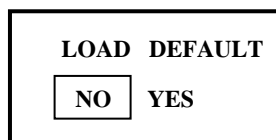
```
LOAD  DEFAULT
  NO   YES
```
Press [ENTER] **key to NOT load default and Exit.**

ENTER

```
LOAD  DEFAULT
  NO   YES
```
If not, press ▷ **key to move the cursor to YES, and then press**
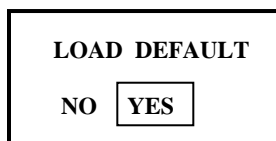
[ENTER] **key to load default.**

ENTER

(9) CF RENEW:

> **Two of modes for choice, YES or NO.**
>
> **YES: will format CF card**
>
> **NO: will not format CF card**

(10) PLAY MODE :

> **Two of Modes for choice, FIELD or FRAME**
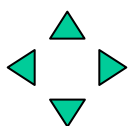
: Press ◁ or ▷ to move the cursor to the left or right.

: Press ▲ or ▼ or Jog Dial to change the value.

7.1 INSTANT RECORDING

■ **Press Record key to start the recording immediately.**
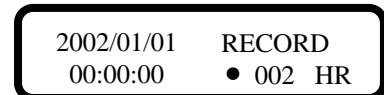
Video out

REC

When pressed, the pictures being monitored will be recorded in the HDD.

•The recording rate and recording quality are set in the Record Set menu

• " RECORD " appears in the operating display

• " RECORD" appears in the LCD display. (Press DISPLAY key to show the message on the screen)

```
RECORD
● 002  HR
```

LCD Display

```
2002/01/01    RECORD
00:00:00      ● 002  HR
```
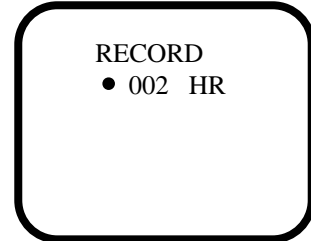
STOP

Press Stop key to stop recording.

• Stop key can be activated only in recording mode.

•When the HDD is full, the machine will Stop recording automatically or Overwrite from the beginning of the HDD. It depends on the setting in HDD setting

7.2 ALARM RECORDING

The monitor image will automatically record when alarm occurs and stops recording at the end of the alarm duration period.
Instant recording and timer recording will stop when an alarm occurs.

Press MENU key and turn the jog dial to select the ALARM RECORDING SETTING MENU.

MENU

■ **RECORDING OPERATION:**

ON: Enables alarm recording,
OFF :Disables alarm recording.

■ **RECORDING SPEED:**

Set the recording speed when alarm occurs.

■ **RECORDING QUALITY:**

In alarm duration, the recording quality can be set which is different from instant or timer recording.

■ **ALARM – IN TYPE:**

Select the type of alarm-in input to be Normal Close (N.C.) or Normal Open (N.O.)

■ **ALARM – RESET TYPE:**

Select the type of alarm-reset input to be Normal Close (N.C.) or Normal Open (N.O.)

■ **ALARM DURATION TIME:**

Alarm duration from 10 seconds to NON – STOP.

■ **PRE-ALARM OPERATION:**

ON: Enables pre-alarm recording,
OFF: Disables pre-alarm recording.

■ **RECORDING SPEED:**

Set the recoding speed in pre-alarm duration.

Notice:
The recording quality in pre-alarm duration is the same as recording quality before alarm occurs. If the recorder
is not recording before alarm occurs, the recording quality in pre-alarm duration will be the same as instant
recording quality.

8.1 NORMAL PLAYBACK

(1) Playback

PLAY

Press the PLAY key to start playing back the stored image/audio from the last SEGMENT.

REV.PLAY

Press the REV.PLAY key to start reverse playing back the stored image/audio from the last segment.
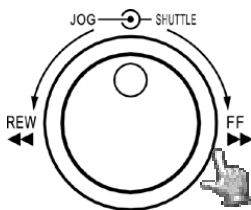
(2) STOP

STOP

Press the STOP key to stop playing back.

(3) Fast Forward/Reverse Playback

PLAY

Press the PLAY key to start playing back.

Turn the shuttle dial clockwise and fast forward playback starts.
The speed will be shown on the LCD at the right upper corner of the screen.
>> 2, 4, 6, 8, 16, 32, 600X

Turn the shuttle dial counterclockwise and fast reverse playback starts.
 The speed will be shown on the LCD.
<< 2, 4, 6, 8, 16, 32, 600X

(4) Slow Forward/Reverse Playback

PAUSE

Press PAUSE key to freeze the playing back picture.
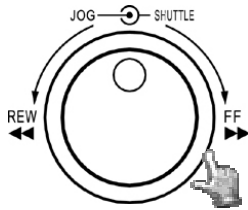
Turn the shuttle dial clockwise and slow forward playback starts.
The speed will show on the LCD at the corner of the screen.
>> 1/2, 1/4, 1/6, 1/8, 1/10, 1/16, 1/32

Turn the shuttle dial counterclockwise and slow reverse playback starts.
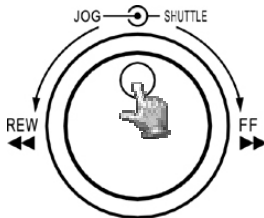The speed will show on the LCD at the corner of the screen.
<< 1/2, 1/4, 1/6, 1/8, 1/10, 1/16, 1/32

(5) Frame/Field advance Forward/Reverse

PAUSE

Press PAUSE key to freeze the picture.

Turn the jog dial clockwise to advance the still image Frame/Field by Frame/Field .

Turn the jog dial counterclockwise to rewind the still image Frame/Field by Frame/Field .

The Frame/Field feed speed will increase if the jog dial is turned quickly.

8.2 SEARCH PLAYBACK

(1) Segment Search Playback

SEARCH

Press the SEARCH key to enter the Search menu.

SEARCH MENU

BY SEGMENT LIST
BY ALARM LIST
BY DATA TIME

Press the ▼▲ keys to move the cursor to BY SEGMENT LIST and press ENTER key to select file search.

SEGMENT SEARCH

1 PA   2002/04/24   19/03/29
2   T   2002/04/25   12/30/30
3   T   2002/05/20   12/00/00

PA : PRE-ALARM RECORD
 T : TIMER RECORD

Press the ▼▲ keys to move the cursor to the segment you want to playback. Press Enter to select the segment.
When the selection list is full, turn the jog dial clockwise to select next page list for search other list.
After the starting time is confirmed, press Enter to start playing back.

(2) Alarm Search Playback

Press SEARCH key to enter the Search menu.

SEARCH

```
SEARCH  MENU

BY   SEGMENT  LIST
BY   ALARM   LIST
BY   DATE   TIME
```

Press the ▼▲ keys to move the cursor to BY ALARM LIST and press ENTER
key to select alarm search.

```
ALARM  SEARCH

   1  PA   2002/04/24   19/03/29
   2    T   2002/04/25   12/30/30
   3    T   2002/05/20   12/00/00
```

PA : PRE-ALARM RECORD
 T : TIMER RECORD

Press the ▼▲ keys to move the cursor to select the alarm image to be played back.
When the selection list is full, turn the jog dial clockwise to select next page for search
other list.
The alarm image will be played back from the pre-alarm period and stop at the end of alarm
duration.

(3) Date/Time Search Playback

Press SEARCH key to enter the Search menu.

SEARCH

SEARCH MENU

BY   SEGMENT LIST
BY   ALARM   LIST
BY   DATE/TIME

Press the ▼▲ keys to move the cursor to BY DATE/TIME and press ENTER key to
select file search.

DATE/TIME SEARCH

YEAR/MM/DD HH:MM:SS
2002   04   24   19   03   35

Press the ◀ ▶   keys to move the cursor.

Press the ▼▲ keys to increase/decrease the data.
Press Enter and the playback starts from the date/time set in the menu.

Notice: If there is no image stored in the date/time specified then the machine will
start playing back from the nearest set time automatically.

9. COPY

Insert a Compact Flash card into the Compact Flash slot on the front panel.

When inserting the Compact Flash card, make sure that the direction of insertion is correct.
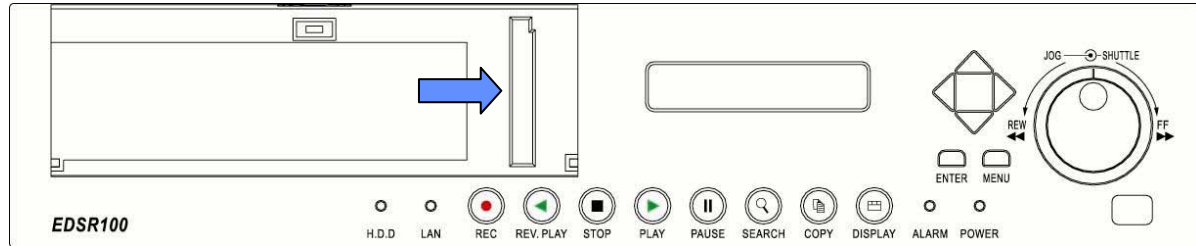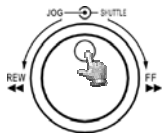

9.1 STILL IMAGE COPY

PLAY

Press the PLAY key to start playing back.

PAUSE

Press the PAUSE key to freeze the picture.

Turn the jog dial clockwise or counterclockwise to move to your desired image of choice .

COPY

While the image to be displayed as your desired image of choice ,
press the COPY key. The " Copying …" will be shown on the screen during
the process. The " Success" will be shown on the screen after file copied

Notice: Copied images are stored as a single picture.
Copied files are saved as .JPG file.

COPY

9.2 COPY TO MOVIE FILE

Press the PLAY key to start playing back.

PLAY

Press COPY key and then the copy menu appears.

COPY

```
┌─────────────────────────────────┐
│ COPY TO MOVIE FILE              │
├─────────────────────────────────┤
│                                 │
├─────────────────────────────────┤
│ Press COPY      To Step Copy    │
│ Press PLAY      To Continue Copy│
│ Press PAUSE     To Stop Continue│
│ Press SEARCH    To End Copy     │
│ Press STOP      To End Play     │
│                                 │
└─────────────────────────────────┘
```

Press PLAY key to continue Copy Movie File.

PLAY

COPY

PAUSE

Press the PAUSE key to stop continue copy.

SEARCH

Press SEARCH key to end copy.

STOP

Press STOP key to end play.

Notice: Copied images are stored as a movie picture.
Copied files are saved as .MOV file.
Use QuickTime to play the retrieved .MOV files.
You may download QuickTime at www.apple.com.
The playback version for QuickTime is free.

37

RS232 | **This Digital Single Channel Recorder may be controlled by a computer or a terminal via the standard D-SUB 9-pin RS-232 connector.**

■ **D-SUB 9-pin connector specifications**

```
  1   2   3   4   5


  o   o   o   o   o
    o   o   o   o

  6   7   8   9
```
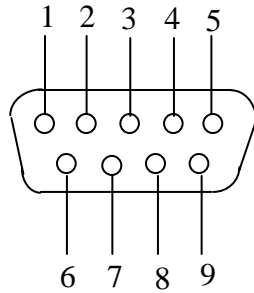
■ **The pin assignment of the 9-pin D-SUB connector**

EDSR100			HOST	
PIN #	NAME		PIN #	NAME
1	NOT CONNECTED		1	NOT CONNECTED
2	TXD	→	2	RXD
3	RXD	←	3	TXD
4	NOT CONNECTED		4	DTR
5	GROUND	—	5	GROUND
6	NOT CONNECTED		6	DSR
7	NOT CONNECTED		7	RTS
8	NOT CONNECTED		8	CTS
9	+5V		9	NOT CONNECTED

10.1 Transmission setting

The transmission setting is 9600 baud rate, 8 data bits, 1 start bit, 1stop bit and no parity.

10.2 Remote Control Protocol

 A computer or a terminal can be used to control the unit by sending three character ASCII commands through RS232 connector, these ASCII commands are started with 'K' or 'k'. There are 30 ASCII commands mapped to the 30 keypads in the front panel.

The 30 ASCII commands are shown on the following table.

Remote Control Command Table		
ASCII CODE	**FUNCTION**	**Keypad in front panel**
K00	Start Recording	**REC**
K01	Reverse Playing back	**REV. PLAY**
K02	Stop Recording and Playing back	**STOP**
K03	Playing back	**PLAY**
K04	Pause the playback picture	**PAUSE**
K05	Search playback	**SEARCH**
K06	Copy picture into CF card	**COPY**
K07	On screen display	**DISPLAY**
K08	Increase data	**UP** △
K09	Move cursor	**LEFT** ◁
K10	Move cursor	**RIGHT** ▷
K11	Decrease data	**DOWN** ▽
K12	Confirm the selection	**ENTER**
K13	Enter Setting Menu	**MENU**
K14 – K20	Fast reverse playback speed	**<< 2 - 600 X, 1/2 –1/32**
K21 – K27	Fast playback speed	**>> 2 - 600 X, 1/2 –1/32**
K28	Rewind the still image	**JOG -REW**
K29	Advance the still image	**JOG -FF**

11. Remote Controller

(Optional)

■ The remote controller is an accessory to enhance the handy operations of EDSR100 (Figure 1). You can do all the settings and operations by the remote controller. The effective distance is up to 10 meters without any obstacles. The keypad functions are as same as the front panel of the EDSR100 .
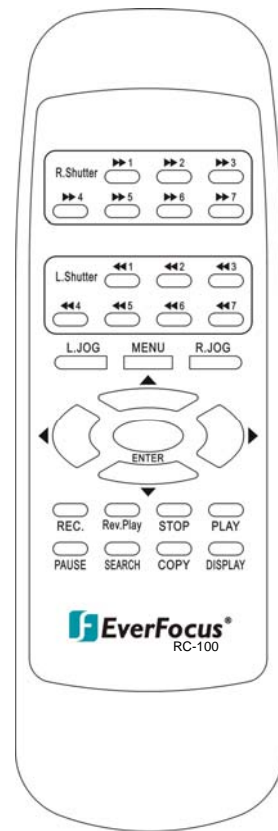

Figure 1

Appendix-A

12. APPENDIX- A/Time Lapse Mode Recording Time

12.1 When Recording with an 80-GB HDD
(Estimated with typical image-low noise level)

Lower   : 15 kB
Low   : 20 kB
Basic   : 25 kB
Standard : 30 kB
High   : 35 kB
Superior : 40 kB

NTSC						(system storage:80GB)	
Recording Speed (Hour)	Recording Rate (field/Sec)	PICTURE QUALITY					
		LOWER	LOW	BASIC	STANDARD	HIGH	SUPERIOR
2	60	24H	18H	14H	12H	10H	9H
6	15	98H	74H	59H	49H	42H	37H
12	8.571	172H	129H	103H	86H	74H	64H
24	4.615	321H	240H	192H	160H	137H	120H
48	2.4	617H	463H	370H	308H	264H	231H
72	1.622	913H	685H	548H	456H	391H	342H
96	1.224	1210H	907H	726H	605H	518H	453H
168	0.706	2098H	1573H	1259H	1049H	899H	786H
480	0.249	5949H	4462H	3569H	2974H	2549H	2231H
720	0.166	8924H	6693H	5354H	4462H	3824H	3346H
960	0.125	11851H	8888H	7111H	5925H	5079H	4444H

PAL						(system storage:80GB)	
Recording Speed (Hour)	Recording Rate (field/Sec)	PICTURE QUALITY					
		LOWER	LOW	BASIC	STANDARD	HIGH	SUPERIOR
3	50	29H	22H	17H	14H	12H	11H
6	16.667	88H	66H	53H	44H	38H	33H
12	10	148H	111H	88H	74H	63H	55H
24	5.556	266H	200H	160H	133H	114H	100H
48	2.941	503H	377H	302H	251H	215H	188H
72	2	740H	555H	444H	370H	317H	277H
96	1.515	977H	733H	586H	488H	419H	366H
168	0.877	1689H	1266H	1013H	844H	724H	633H
480	0.311	4763H	3572H	2858H	2381H	2041H	1786H
720	0.207	7156H	5367H	4294H	3578H	3067H	2683H
960	0.156	9646H	7122H	5698H	4748H	4070H	3561H

Reference:24H=1 day.168H=1 week, 720H=1 month,8760H=1 year

12.2 When Recording with a 160-GB HDD
(Estimated with typical image-low noise level)

Lower : 15 kB
Low : 20 kB
Basic : 25 kB
Standard : 30 kB
High : 35 kB
Superior : 40 kB

NTSC						(system storage:160 GB)	
Recording Speed (Hour)	Recording Rate (field/Sec)	PICTURE QUALITY					
		LOWER	LOW	BASIC	STANDARD	HIGH	SUPERIOR
2	60	49 H	37 H	29 H	24 H	21 H	18 H
6	15	197 H	148 H	118 H	98 H	84 H	74 H
12	8.571	345 H	259 H	207 H	172 H	148 H	129 H
24	4.615	642 H	481 H	385 H	321 H	275 H	240 H
48	2.4	1234 H	925 H	740 H	617 H	529 H	463 H
72	1.622	1826 H	1370 H	1096 H	913 H	782 H	685 H
72	1.224	2420 H	1815 H	1452 H	1210 H	1037 H	907 H
168	0.706	4196 H	3147 H	2518 H	2098 H	1798 H	1573 H
480	0.249	11899 H	8924 H	7139 H	5949 H	5099 H	4462 H
720	0.166	17849 H	13386 H	10709 H	8924 H	7649 H	6693 H
960	0.125	23703 H	17777 H	14222 H	11851 H	10158 H	8888 H

PAL						(system storage:160GB)	
Recording Speed (Hour)	Recording Rate (field/Sec)	PICTURE QUALITY					
		LOWER	LOW	BASIC	STANDARD	HIGH	SUPERIOR
3	50	59H	44H	35H	29H	25H	22H
6	16.667	177H	133H	106H	88H	76H	66H
12	10	296H	222H	177H	148H	127H	111H
24	5.556	533H	400H	320H	266H	228H	200H
48	2.941	1007H	755H	604H	503H	431H	377H
72	2	1481H	1111H	888H	740H	634H	555H
96	1.515	1955H	1466H	1173H	977H	838H	733H
168	0.877	3378H	2533H	2027H	1689H	1447H	1266H
480	0.311	9527H	7145H	5716H	4763H	4083H	3572H
720	0.207	14313H	10735H	8588H	7156H	6134H	5367H
960	0.156	18993H	14245H	11396H	9496H	8140H	7122H

Reference:24H=1 day.168H=1 week, 720H=1 month,8760H=1 year

13. APPENDIX-B/SECURITY LOCK SETTING

REC

Press REC key 5 times during record mode, then all the keys on the front panel will be locked.
 (Password must be Enable on System Setting Menu)

STOP

Press STOP key, the system will ask for the password. If you enter a correct password, the locked keys will be released.
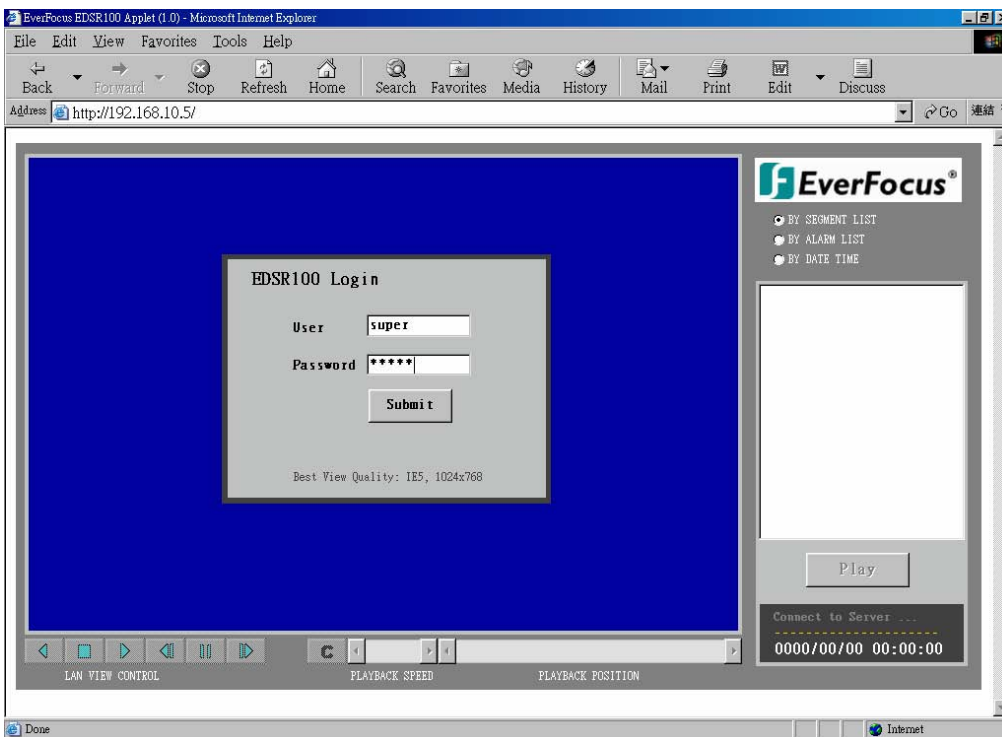
14. APPENDIX-C/View From Internet/Intranet

(1) Basic Operations & Login Display:

Go to the Internet Explorer, key in the network IP,
for example,
http://192.168.10.5 (must be same IP as Digital Single Channel Recorder Network Setting Menu)

The "EDSR100 Login"page will show on the screen.

User must enter the correct user-name and password that setting on EDSR100 Network Setting Menu.

for example:
Enter ADMIN for user name and ADMIN for password and then
Click on "submit" to enter to system.

Appendix-C

(2) Main Screen
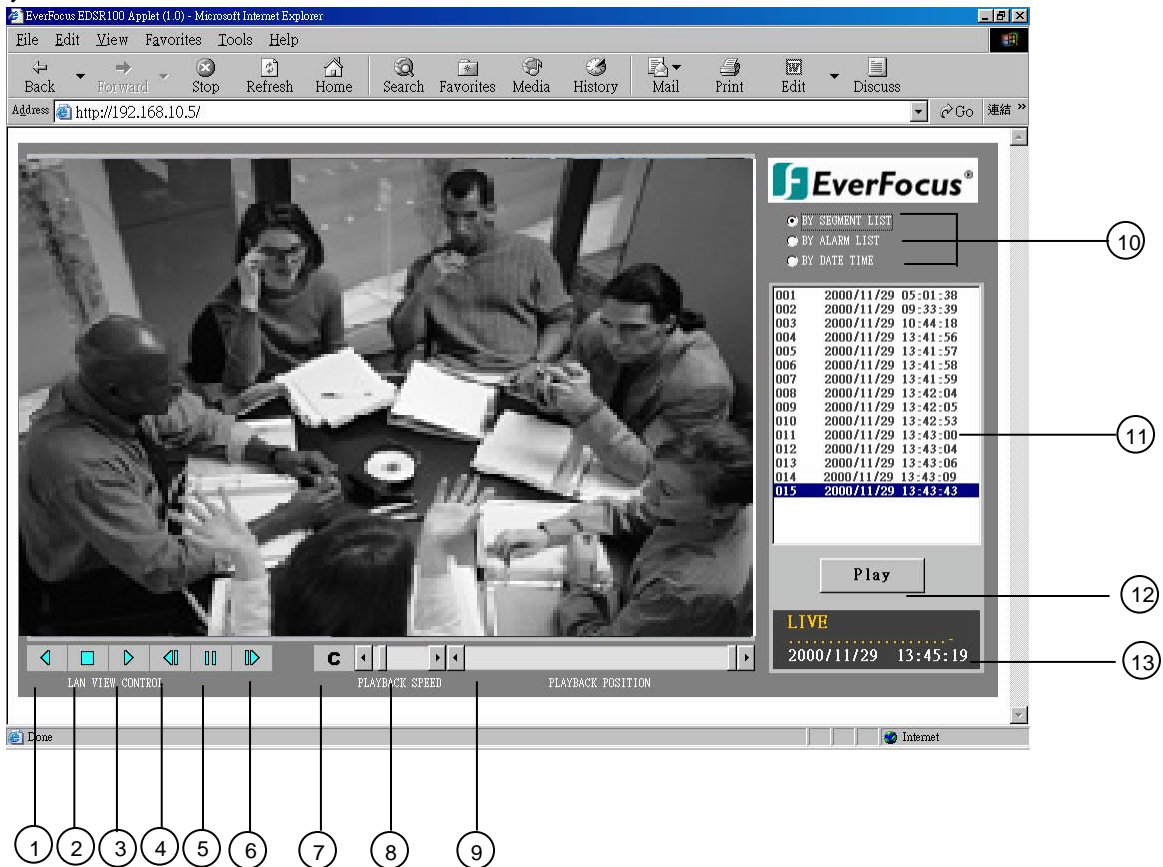
The above diagram is the main screen display.
The icons on the lower corner of the screen are mainly for control and configuration,
those on the right corner are for status indication.
If any icons are grayed, it means that the specific function is not accessible in the current mode.

The followings are a brief description for each of the icons.

1 **REV. PLAY :** Reverses Video display

2 **STOP :** Press this key to stop Video display..

3 **PLAY:** Playing back the Video display.

4 **Step Forward** the Video display.

5 **Step Backward** the Video display

6 **PAUSE:** Press this key to pause the Video display.

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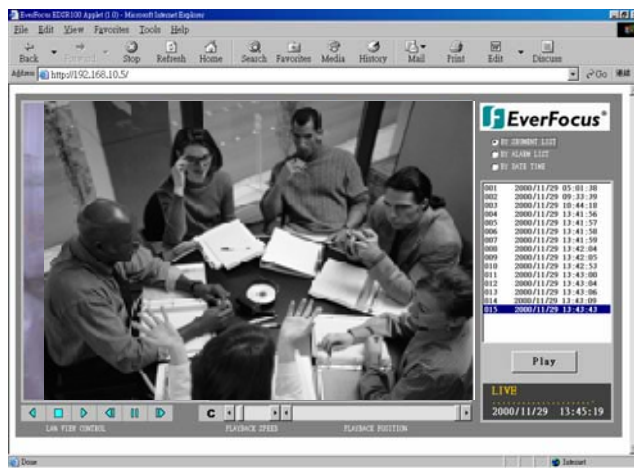⑦ **C** Control Mode: This key will switch user to direct remote control mode.
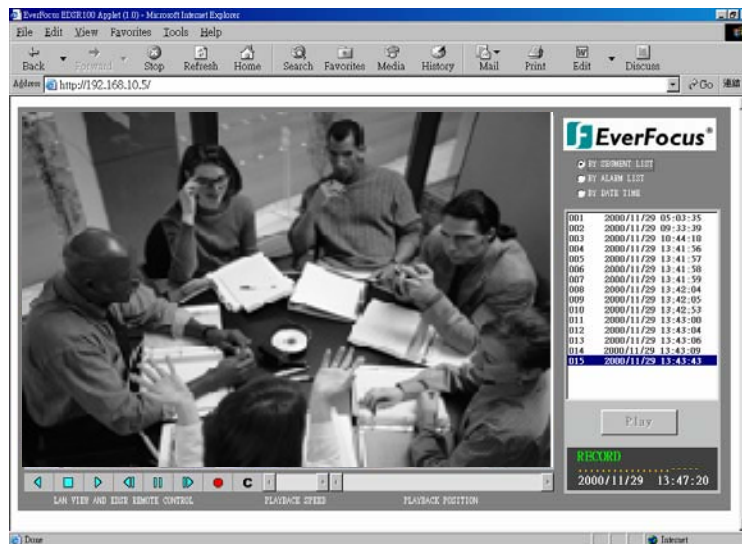
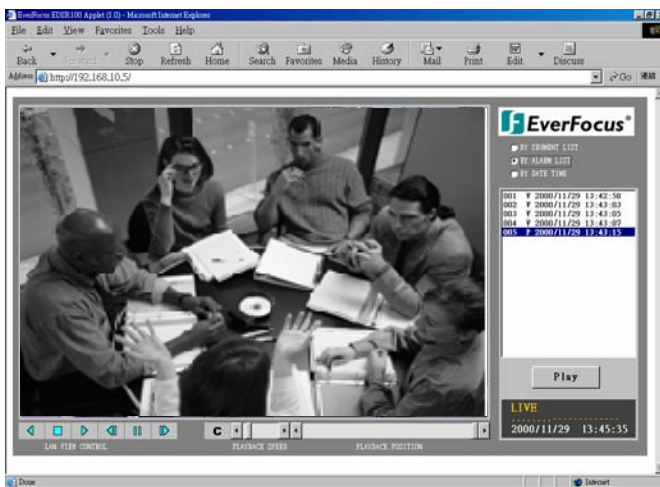**Note: C Control Mode which only allow use with access level "Super" user.**.

⑧ Control for Playback Video Speed

⑨ Control for Playback Position
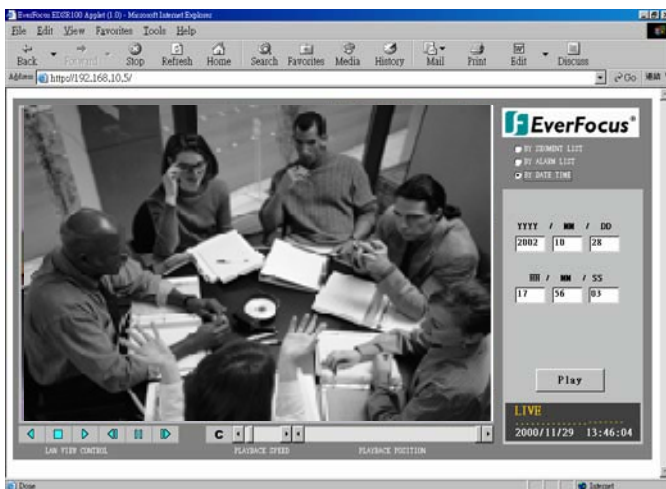
⑩ The system allows up to 3 types to select for play video by segment, alarm list and date time.

(play video to select by segment list)

(play video to select by alarm list)

(play video to select by Date time)

⑪ Use the mouse to show all the picture lists.

⑫ Use the mouse to play the video.

⑬ Present situation of system and time in military hour format.

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