AVerMedia® EB1004 BAK
Real-time Security DVR

Operation Manual

FCC NOTICE

This device has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial, industrial or business environment. This equipment can generate, use and radiate radio frequency energy and, if not installed and used in accordance with the instruction, 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 the separation 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.

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.

CAUTION ON MODIFICATIONS

To comply with the limits for the Class A digital device, pursuant to Part 15 of the FCC Rules, this device must be installed in computer equipment certified to comply with the Class A limits. All cables used to connect the computer and peripherals must be shielded and grounded. Operation with non-certified computers or non-shielded cables may result in interference to radio or television reception.

Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

CE NOTICE

This is a Class A product.

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WARNING

TO REDUCE RISK OF FIRE OR ELECTRIC SHOCK,

DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

⚠

CAUTION

DO NOT DISASSEMBLE THIS PRODUCT.PLEASE REFER TO YOUR

LOCAL DEALER IF THERE IS A PROBLEM.

Table of Contents

2

Chapter 1 Introduction

EB1004 BAK is a stand-alone, non-PC based DVR unit that provides real-time monitoring and digital recording of surveillance video. Up to four video cameras and four sensor devices can be hooked up to this DVR unit. It is also equipped with an output relay that allows connection of an alarm device.

Surveillance, digital recording and playback are controlled through the front panel buttons. Users can connect EB-1004 BAK to a PC to trace back video files, and even save image as both BMP and AVI files. With the on-screen-display (OSD) menu, you can customize video recording settings, sensor and alarm settings, password protection, hard drive recycling, and more.

Surveillance video is recorded in high-quality Motion-JPEG format. Two recording modes are available. **EACH** mode records video from each video camera in 640 x 224 resolution at 7.5 fps. **QUAD** mode records video in 320 x 112 resolution and up to 30 fps/25 fps (NTSC/PAL).


EB1004 BAK provides a removable hard disk bay for installing one hard drive and an internal slot for installing a second hard drive.

1.1 Features and Specifications

- Non-PC stand-alone security digital video recorder

- 4 composite video inputs and 1 composite output

- VGA output for LCD monitor display

- Front panel buttons and OSD control

- Motion-JPEG video compression

- Factory defaulted to NTSC or PAL

- Supports 2 hard drives (not included)

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- Full-screen resolution:
  Display: 720 x 480 (NTSC), 720 x 576 (PAL)
  Recording: 640 x 224 (NTSC), 640 x 272 (PAL)

- Display and recording frame rate:
  Quad mode: 30/25 fps (NTSC/PAL) per channel, total of 120/100 fps (NTSC/PAL)

- Scheduled recording (00:00~23:00 set by hour)

- Search for recorded videos by date/time/event

- Input/Output: 4 sensor inputs and 1 relay output control

- Motion detection recording.

- Removable HDD bay

- 1 USB 2.0 Port

- Application CD (for Windows 2000/XP)

4

1.2 Front Panel
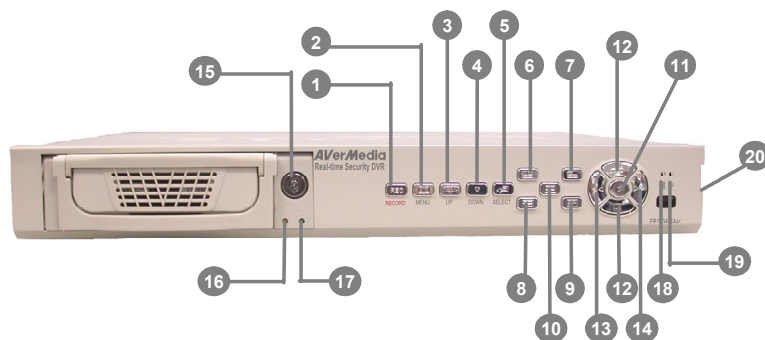
1. ⟨REC⟩ **REC :** Start video recording.

2. ⟨📖⟩ **MENU :** Open/Close the OSD main menu or subsequent submenus.

3. ▲ : Go up one item.

4. ▼ : Go down one item.

5. ⟨↵⟩ **SELECT :**

    (a) Cycle through various options in a selected menu item.

    (b) Open a submenu

6. ⟨⊞⟩ :

    (a) Display Channel 1 in full-screen.

    (b) Pressing this button is equivalent to entering the number "1" when in the OSD menu.

7. ⟨⊞⟩ :

    (a) Display Channel 2 in full-screen.

    (b) Pressing this button is equivalent to entering the number "2" when in the OSD menu.

8. ⟨⊞⟩ :

    (a) Display Channel 3 in full-screen.

    (b) Pressing this button is equivalent to entering the number "3" when in the OSD menu.

9. ⟨⊞⟩ :

    (a) Display Channel 4 in full-screen.

    (b) Pressing this button is equivalent to entering the number "4" when in the OSD menu.

10. ⟨⊞⟩ :

    Display cameras in quad screen.

11. ► :

    (a) Display the Playlist.   (b) Play back a recording.

12. ❙❙ / ■ :

    (a) Pause playback.   (b) Pause/Stop recording.

13. ◄◄ : Fast reverse during playback.

5

14. ⏭ :

(a) Fast forward during playback.

(b) Switch between the play list and the date/time search controls.

15. Removable hard disk rack with lock

⚠ **CAUTION**

BEFORE REMOVING THE REMOVABLE OR INTERNAL HARD DISK, POWER OFF THE DVR UNIT FIRST.

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16. Removable Hard disk LED

17. Removable Power LED

18. Internal Hard Disk LED

19. DVR Power LED

20. USB2.0 Socket

1.3 Back Panel
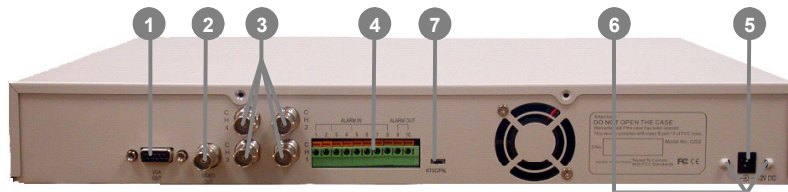
1. **VGA OUT (15-pin D-Sub):** VGA output for connection to a VGA monitor.

2. **VIDEO OUT (BNC):** Composite video output for connection to a television monitor.

3. **CH1 ~ CH4 (BNC) :** Composite video input for connection of up to four video cameras. (Video input : V = 1 Vp-p)

4. **Sensor Inputs and Relay Output:** For connection of up to 4 sensor devices and 1 alarm device. (Relay : 1A @ 125V AC/30V DC)

5. **Power Socket:** For connecting the power adapter. (12V @ 4.2A)

6. **Ω Hook:** Fix the power adapter after it is plugged into Power Socket.

7. **NTSC/PAL Switch:** Switch to your local video system.

6

1.4 Setting Up the DVR Unit

1.4.1 Installing Hard Drives

Before you install hard drives, please adjust the jumpers' setting according to the instructions on your hard disk label.

The DVR unit allows you to install up to two hard drives (a master and slave drive).

Install one hard disk in a removable hard disk drawer as HDD A and the other hard disk inside DVR unit as HDD B. Fix the hard disks as the right picture shows.
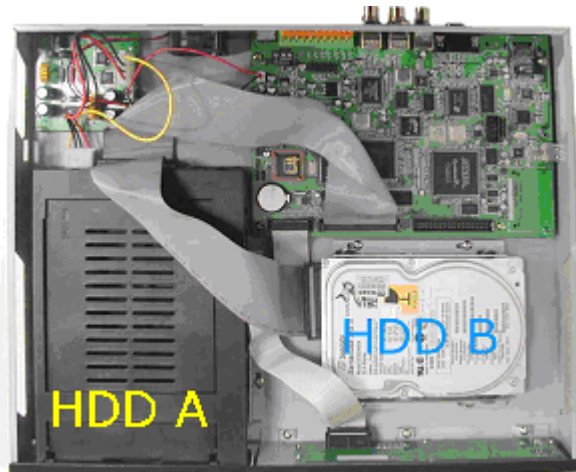
🛈 The minimum hard disks capacity should be 40GB/ 7200RPM.

🛈 When you only install ONE hard disk in your DVR, Western Digital (WD), Hitachi and Seagate hard disks are recommended. When you install 2 hard disks, please use 2 WD or 2 Hitachi hard disks inside the DVR. A hard disk compatibility issue may occur due to different hard disk models.

For more information of the recommended hard disk list, please go to http://www.avermedia.com/nvd/hardware-recom.htm

7

1.4.2 Install the Hard Drive in a Removable Case

1. After unlock the removable hard disk drawer, remove the removable hard drive drawer from the case.

2. Remove the upper cover of the drawer.

3. Connect the power connector to the hard drive as the right picture shows.

4. Connect the hard disk connector into the inner tray's slot.

5. Close the upper cover. Slide the drawer into the removable hard drive case, and lock the drawer.

6. Power on the unit to see the LED indicators on the front side of the removable hard disk holder. If the LED indicators light up, you may use the hard disk.

1.4.3 Install a Removable Hard Drive Case in a PC (Optional)

For users who purchase an optional hard drive case, please follow the steps to install the case in a PC.

1. Power off your PC and remove the cover of your PC.

2. Remove a front cover and free a 5 1/4" drive bay. Insert the hard disk holder. Mount the hard disk holder, screw up the holder, and connect the IDE slot and power connector from PC's motherboard.

3. Remove the drawer of the removable hard disk case. Please refer to **1.4.2 Install the Hard Drive in a Removable Case** to install the hard drive.

4. Slide the drawer into the removable hard disk case, power on the PC and check the LED indicators. If the LED indicators light up, it is ok to use the hard drive in the removable case.

1.4.4 Connecting Devices

At the back panel of the DVR unit, you can connect up to four video cameras, four sensor devices, and one alarm device. You can connect a VGA monitor or a television monitor as a display device. Use a USB cable to connect to a PC if it is necessary.
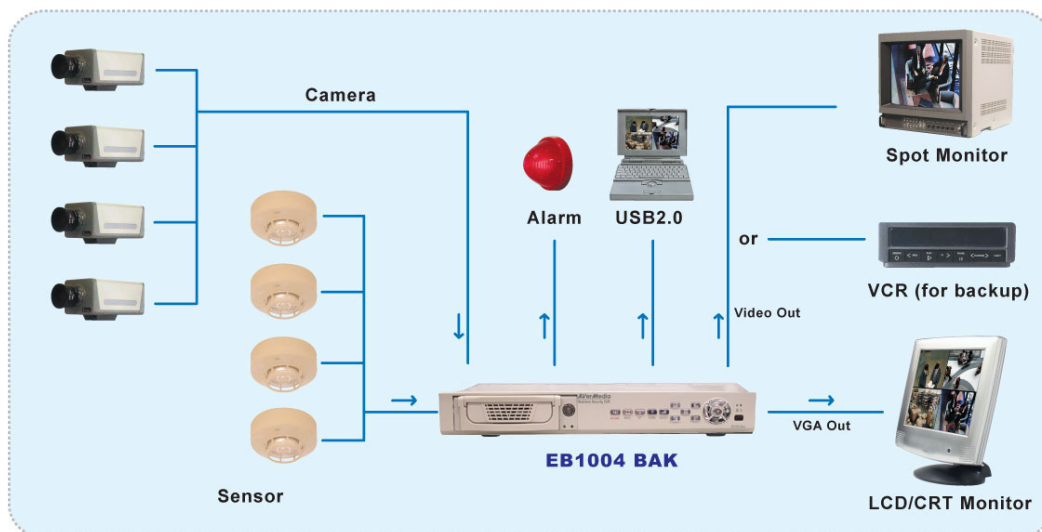
Connecting cameras, sensors, alarm, and display device

9

1.4.4.1 Basic Devices

- **Cameras**

    Connect the video output of each video camera or composite video source to the **CH1 ~ CH4** connectors.

- **VGA monitor**

    Connect a VGA monitor to the VGA OUT connector of the DVR unit to use as a display for video surveillance and playback.

- **Power adapter**

    Plug the provided 110V AC or 220V power adapter into the DVR unit's power socket.

1.4.4.2 Optional Devices

- **Television monitor**

    Use a BNC-to-RCA adapter to connect a regular TV monitor to the DVR unit's VIDEO OUT connector.

- **Sensors and alarm device**
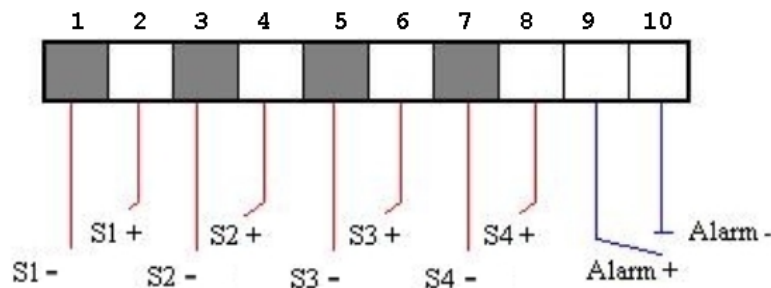
Connect up to four sensor devices to the terminals that are numbered 1 to 8 at the back panel. Each pair of terminals is for the ground (-) and positive (+) input voltage. For instance:

Terminal 1 : Connect to the ground (-) wire of Sensor 1
Terminal 2 : Connect to the positive (+) wire of Sensor 1

    ....

    ....

Terminal 7 : Connect to the ground (-) wire of Sensor 4
Terminal 8 : Connect to the positive (+) wire of Sensor 4

Connect an alarm device to the terminals that are numbered 9 and 10:

Terminal 9 : Connect to the positive (+) wire of the alarm device

Terminal 10 : Connect to the ground (-) wire of the alarm device

- **Desktop/Laptop computer**

    Connect EB1004 BAK to a PC with a USB cable. Insert the USB connector to PC's USB socket.

Chapter 2 Operating the DVR Unit

2.1 First Time Use

Connecting the DVR unit to a power outlet automatically turns on its power. When you install new hard disks in your DVR, the system will detect hard disks status and show "HDD FORMAT SELECT(YES) /MENU(NO)". Press ⏎ to format hard disks.

```
V1-0-07
 HDD Checking …
 MASTER
      123593 MB
 SLAVE
      123593 MB
      HDD FORMAT
      (SELECT) YES/(MENU) NO
```

The system will show "ARE YOU SURE PLAY(FORMAT)/STOP(NOT FORMAT)" to confirm again. Press ► to format hard disks and you will see "HDD FORMATTING" on the DVR screen.

```
V1-0-07
 HDD Checking …
  MASTER
          123593 MB
  SLAVE
          123593 MB
   HDD FORMAT
    (SELECT) YES/(MENU) NO
   ARE YOU SURE
  (PLAY) FORMAT/(STOP) NOT FORMAT
```

When the DVR screen shows "NEW HDD Format completed", the formatting is completed.

```
V1-0-07
 HDD Checking …
  MASTER
          123593 MB
  SLAVE
          123593 MB


  HDD FORMATTING


  NEW HDD Format completed
```

12

ⓘ Sometimes the system has trouble detecting the hard disks, it shows "Turn off and on the DVR" on the screen.

Turn off and on the DVR

Follow the instruction to unplug DVR. Reboot and the system will show the normal first time use screen.

After you format the hard drive(s), please enter the default password before you enter the main menu. The factory default password is "111111". Use the following front panel buttons to input a numeric password:

 For "1"   For "2"   For "3"   For "4"
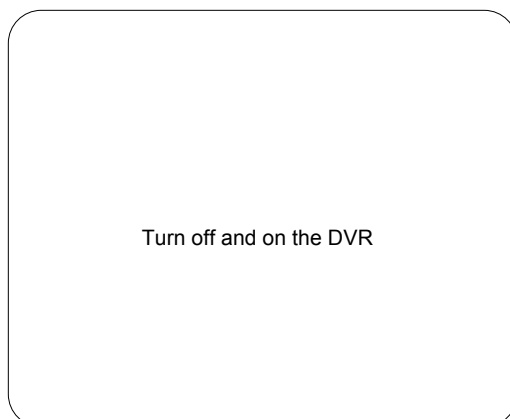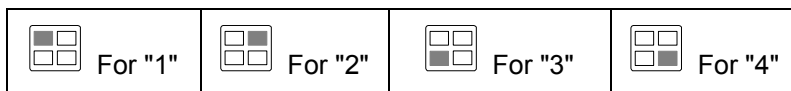
ⓘ You can go to SUBMENU to change the password, and enable the PASSWORD SETUP function. The default PASSWORD SETUP setting is NO.

2.2   Surveillance Screen

Surveillance video can be viewed and recorded in two screen modes: **EACH** mode and **QUAD** mode.

Under the **EACH** mode, video from the video cameras is recorded in full-screen resolution, but each video takes turns in being recorded (from one camera to the next). Each of the surveillance videos is recorded only at a maximum frame rate of 7.5fps. When viewing live video using **EACH** mode, you can switch between full screen and quad screen.

Whereas in **QUAD** mode, video from the video cameras is recorded at a lower resolution, yet each video is recorded in full frame rate, full motion. Videos recorded in **QUAD** mode can only be played back in **QUAD** mode.

13

EACH mode	QUAD mode

Use the following front panel buttons to select the desired video camera to display in full screen:

▣	▣	▣	▣
CH1: Camera 1	CH2: Camera 2	CH3: Camera 3	CH4: Camera 4

Note: The recording mode can be selected in the OSD main menu.

2.3 Video Recording and Playback

When you are back to the preview mode, the system will start to record the video automatically when it detects a 10-second idleness. When "PASSWORD SETUP" is enabled, you need to enter the password after clicking the STOP button. Please enter your password. The system stops recording when the authentication is confirmed.

2.3.1 To record surveillance video

1   To customize recording settings, press 📖 and choose the desired recording settings. Refer to the section, "Setup Menu" for details.

2   Press the REC button. During recording, the screen shows the following:

3   To stop the recording, press ■.

2.3.2 To play back the recorded video

1   Press ▶ to display the Playlist:

2   If you want to switch to the other hard drive or search for a range of video recordings, press ▸▸. The ">" arrowhead cursor will then move up to the top of the screen.
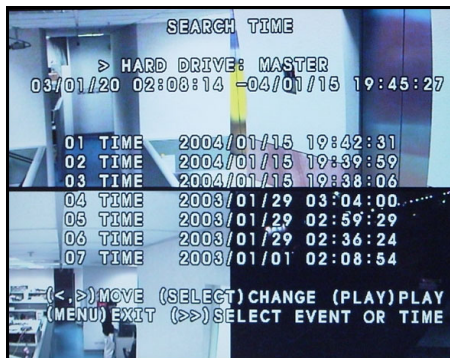
3   Press ⏎ button to switch between the MASTER and SLAVE drives.

4   Press ▾ to move down to the recording date and time entries.

5   Press ▾ or ▴ to move through each item in the recording date and time entries. While on an item such as the month, press ⏎ button repeatedly to cycle through the numbers, and stop pressing the button when you have reached the desired number.

6   Press ▸▸ to move the cursor back to the Playlist,

7   Press ▾ or ▴ to move up or down in the Playlist.

8   When you have selected the desired video recording, press ▶ to play back.

9   To fast forward through the video, press ▸▸. To fast reverse, press ◂◂.

10 Press ❚❚ to pause playback, or press ■ to stop playback.

15

Chapter 3 Setup Menu

```
          MAIN MENU

> CAMERA SELECT              1234
  RECORD SELECT              1234
  RECORD MODE               EACH
  RECORD FRAMERATE            30
  VIDEO QUALITY            NORMAL
  RECORD SCHEDULE
  SUBMENU
  HARD DRIVE SETUP
  SENSOR SETUP

     PRESS (< , >), THEN(SELECT)
     PRESS (MENU) TO EXIT
```

```
           RECORD SCHEDULE

    v
  + T T T S S S S T T T T M M M M T T T T T +
  |      |      |      |      |      |      |      |      |
  0      3      6      9     12     15     18     21    24


      PRESS (< , >), THEN(SELECT)
      PRESS (MENU) TO EXIT
```

```
             SUB MENU

> PASSWORD CHANGE
  TIME SET
  VGA SETUP
  MOTION SETUP
  PASSWORD SETUP              NO


     PRESS (< , >), THEN(SELECT)
     PRESS (MENU) TO EXIT
```

```
CURRENT  PASSWORD:


NEW      PASSWORD:


CONFIRM  PASSWORD:
```

```
              TIME

     2004/01/10  15:30:25
             ^


   PRESS (< , >),THEN(SELECT)
   PRESS (MENU) TO EXIT
```

```
           VGA SETUP

> RESOLUTION    1024 ^ 768
  REFRESH RATE       60HZ


  PRESS (< , >), THEN(SELECT)
  PRESS (MENU) TO EXIT
```

```
          MOTION SETUP

MOTION CAMERA          _ _ _ _
MOTION SENSITIVITY       05
MOTION RECORD TIME       05


  PRESS (< , >), THEN(SELECT)
  PRESS (MENU) TO EXIT
```

```
          HARD DRIVE SETUP

> OVERWRITE ENABLED        YES
  MASTER HDD SIZE       80072MB
  MASTER HDD USED     16014MB 20%
  MASTER HDD FORMAT
  SLAVE HDD SIZE            N/A
  SLAVE HDD USED           N/A
  SLAVE HDD FORMAT

     PRESS (< , >), THEN(SELECT)
     PRESS (MENU) TO EXIT
```

```
           SENSOR SETUP

> SENSOR RECORD TIME        15
  ALARM OUT TIME            05

  CHANNEL-1   TYPE:NORMAL-CLOSE
  CHANNEL-2   TYPE:NORMAL-OPEN
  CHANNEL-3        NOT INSTALLED
  CHANNEL-4        NOT INSTALLED

     PRESS (< , >), THEN(SELECT)
     PRESS (MENU) TO EXIT
```

16

1   Press ⌖ button to display the OSD main menu.

```
┌─────────────────────────────────────┐
│              MAIN MENU              │
│                                     │
│  > CAMERA SELECT            1234    │
│    RECORD SELECT            1234    │
│    RECORD MODE              EACH    │
│    RECORD FRAMERATE          30     │
│    VIDEO QUALITY          NORMAL    │
│    RECORD SCHEDULE                  │
│    SUBMENU                          │
│    HARD DRIVE SETUP                 │
│    SENSOR SETUP                     │
│                                     │
│     PRESS (< , >), THEN(SELECT)     │
│     PRESS (MENU) TO EXIT            │
└─────────────────────────────────────┘
```
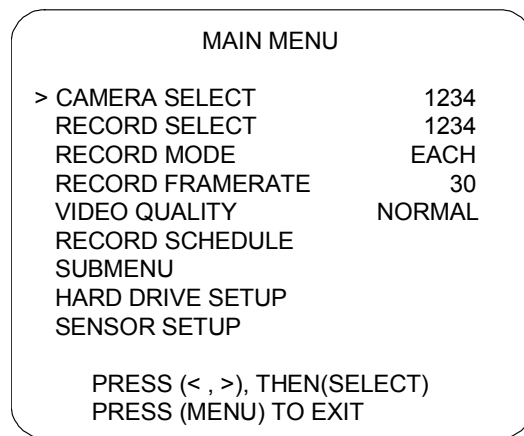
2   Press ▼ or ▲ to move up or down through the items in the menu. The ">" arrowhead cursor moves as you press these buttons.

3   The first five items in the menu provide selectable settings. Press ⏎ to repeatedly cycle through the available settings. Stop pressing the button when you have chosen the desired setting.

4   The last four items in the menu are second-level menus. Press ⏎ to display the corresponding menu.

5   When you are in a second-level menu, press ⌖ to return to the main menu.

6   To close the main menu and return to the surveillance screen, press ⌖ again.

🛈 When you are back to the preview mode, the system will start to record the video automatically when it detects a 10-second idleness. If you already adjust the PASSWORD SETUP to YES, please enter the password to interrupt the recording before clicking the STOP button. The system stops recording when the authentication is confirmed.

3.1 CAMERA SELECT

This determines which of the cameras will be displayed on the surveillance screen. Use the following front panel buttons to individually switch on or off each of the camera displays:

17

⊞	⊞	⊞	⊞
CH1: Camera 1	CH2: Camera 2	CH3: Camera 3	CH4: Camera 4

You can also press ⏎ to cycle through different camera display combinations. For instance:

(1 2 3 4) : Switch on all camera displays.

(1 - - 4) : Switch on camera display 1 and 4 only.

(- 2 3 -) : Switch on camera display 2 and 3 only.

(- - - -) : Disable all camera displays.

3.2 RECORD SELECT

This determines which of the cameras surveillance video will be recorded from. The way to select cameras is the same as CAMERA SELECT.

Note: Only the enabled camera displays in the CAMERA SELECT item can be selected for recording.

3.3 RECORD MODE

There are two recording modes to choose from: **EACH** and **QUAD**.

When you choose the **EACH** recording mode, you can view each camera display in full-screen during the recording process by using the following front panel buttons:

⊞	⊞	⊞	⊞
CH1: Camera 1	CH2: Camera 2	CH3: Camera 3	CH4: Camera 4

Likewise, when you finish recording, you can also play back the recorded video in full-screen by using the above buttons.

While you are viewing or recording video in full screen, press ⊞ to switch the display back to quad screen.

Note: Refer to the section "**2.2 Surveillance Screen**" for details on the differences between **EACH** and **QUAD** modes.

18

3.4 RECORD FRAME RATE

This sets the number of images per second of video that is recorded.

By default, frame rate is set at 30 fps for NTSC, 25 fps for PAL. There are 8-9 different frame rates you can choose from.

3.5 VIDEO QUALITY

There are three video quality settings to choose from: BEST, GOOD or NORMAL.

Choosing NORMAL allows you to record more on hard drive, but the quality of recorded video images is moderate.

Recording hours on 120GB hard drive are approximately as follows:

Video Signal	Display Format	Video Quality	30 fps	15 fps	7 fps	1 fps
NTSC	QUAD mode	BEST	41 hrs	83 hrs	178 hrs	1248 hrs
		GOOD	53 hrs	106hrs	227hrs	1589hrs
		NORMAL	65hrs	129hrs	277hrs	1942hrs
	EACH mode	BEST	71 hrs	141hrs	302hrs	2118hrs
		GOOD	93 hrs	186 hrs	399 hrs	2796hrs
		NORMAL	116hrs	233hrs	499hrs	3513hrs
PAL	QUAD mode	BEST	44 hrs	87hrs	187hrs	1311hrs
		GOOD	55 hrs	110hrs	236hrs	1590hrs
		NORMAL	67hrs	134hrs	286hrs	2005hrs
	EACH mode	BEST	71 hrs	143hrs	305hrs	2139hrs
		GOOD	94hrs	188hrs	402hrs	2819hrs
		NORMAL	125hrs	251hrs	536hrs	3783hrs

*The data size may vary depending on the complexity of video scenes.

19

3.6 RECORD SCHEDULE

By default, the DVR unit is customized for continuous 24-hour video recording. If you prefer to record video only at certain time schedules within a day, you can choose specific recording hours. If the DVR unit is connected to sensor devices, you can also customize the unit to initiate video recording only when the sensors detect an event.

```
                    RECORD SCHEDULE

      v
     +TTTTTTTTTTTTTTTTTTTTTTTT+
      |   |   |   |   |   |   |   |   |
      0   3   6   9  12  15  18  21  24


        PRESS (< , >), THEN(SELECT)
        PRESS (MENU) TO EXIT
```

To customize the recording schedule:

1   Each number in the RECORD SCHEDULE menu represents the time schedule (in hours) for recording, and the "v" cursor indicates the time that is selected. Press ▼ or ▲ to move through the time schedules.

2   Press ⏎ repeatedly to cycle through these settings:

(T) For automatic non-stop video recording

(S) For sensor recording. The DVR unit initiates recording only when the attached sensor devices detect motion from the video cameras.

(M) For motion recording. The DVR unit initiates recording only when motion is detected from video cameras.

(-) Disables recording at that time schedule.

3.7 SUB MENU

The SUB MENU allows you to enable password setup, change the password, system date and time, motion setup, and VGA display settings.

```
                    SUB MENU

        > PASSWORD CHANGE
          TIME SET
          VGA SETUP
          MOTION SETUP
          PASSWORD SETUP              NO


             PRESS (< , >), THEN(SELECT)
             PRESS (MENU) TO EXIT
```

3.7.1 PASSWORD CHANGE

To change the password:

1.   Input the prompted information:
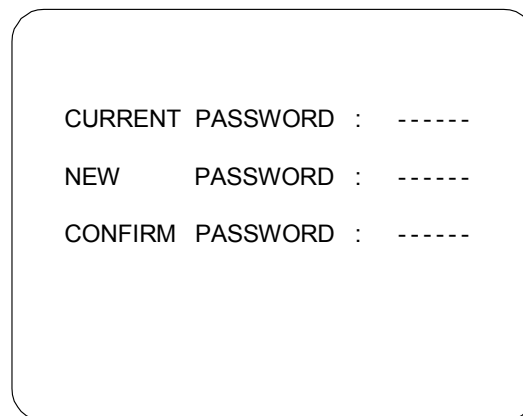
```
        CURRENT  PASSWORD  :    ------

        NEW        PASSWORD  :    ------

        CONFIRM  PASSWORD  :    ------
```

The factory default password is "111111". Use the following front panel buttons to input a numeric password:

For "1"	For "2"	For "3"	For "4"
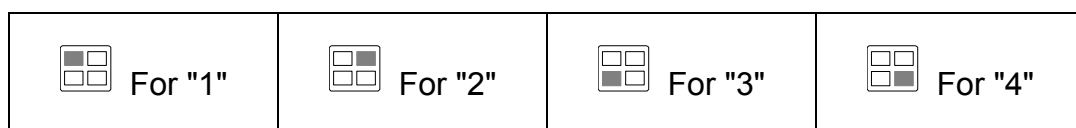
2. The "Password changed" message is then displayed. This message flashes three times, and then you will be returned to the SUB MENU.

Note: You will be prompted to enter the password when you attempt to format the hard drive(s) in the HARD DRIVE SETUP menu.
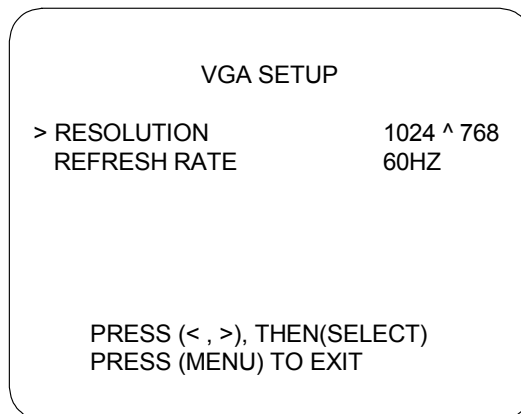
21

3.7.2 TIME SET

```
                TIME


         2004/01/10  15:30:25
                  ^



     PRESS (< , >), THEN(SELECT)
     PRESS (MENU) TO EXIT
```

To change the system date and time:

1. Press ▼ or ▲ to move through the "year/month/day" and "hour:minute:second " entries. The "^" cursor indicates the entry that is selected.

2. Per selected entry, press ⏎ repeatedly to cycle through the numbers. Stop pressing the button when you reach the desired number.
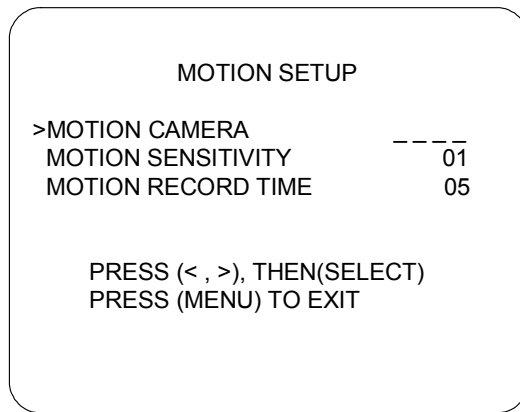
3.7.3 VGA SETUP

```
            VGA SETUP

     > RESOLUTION        1024 ^ 768
       REFRESH RATE      60HZ




       PRESS (< , >), THEN(SELECT)
       PRESS (MENU) TO EXIT
```

Set RESOLUTION and REFRESH RATE based on the supported display mode and refresh rate of the VGA monitor that is connected to the DVR unit. Different monitors support different refresh rates:

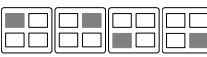| Resolution	Refresh Rate Frequency (Hz)
640 x 480	60, 72, 75, 85
800 x 600	60, 72, 75, 85
1024 x 768	60, 70, 75, 85
1280 x 1024	60

Note: The best refresh rate for LCD monitor is 60Hz.

3.7.4 MOTION SETUP

```
            MOTION SETUP

>MOTION CAMERA            _ _ _ _
 MOTION SENSITIVITY          01
 MOTION RECORD TIME          05


    PRESS (< , >), THEN(SELECT)
    PRESS (MENU) TO EXIT
```
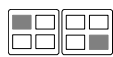
To change MOTION CAMERA,

1. Press ▼ or ▲ to move the arrowhead cursor to MOTION CAMERA in the menu.

2. Press the channel buttons to select cameras that you want to setup.

To setup all cameras, press [▣▣][▣▣][▣▣][▣▣]. You will see the screen shows MOTION CAMERA 1 2 3 4. Press the same button again to cancel the setting.

To setup channel 1 and 4 only, press [▣▣][▣▣]. You will see the screen shows MOTION CAMERA 1   4. Press the same buttons again to cancel the setting.

To setup channel 2 and 3 only, press [▣▣][▣▣]. You will see the screen shows MOTION CAMERA   2 3 . Press the same buttons again to cancel the setting.
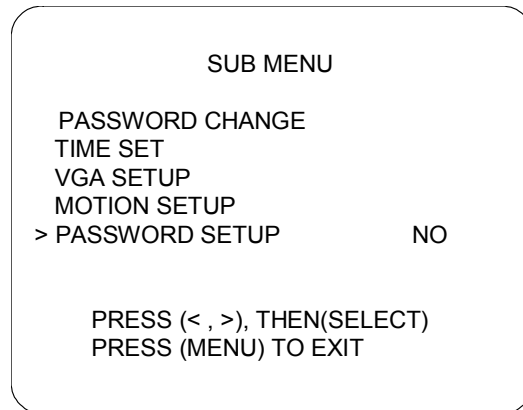
To adjust MOTION SENSIVITY,

1. Press ▼ or ▲ to move the arrowhead cursor to MOTION SENSITIVITY in the menu.

2. Press [↵] repeatedly to cycle through the numbers. The sensitivity level ranges from 1 to 10. Level 10 is the least sensitive one and Level 1 is the most sensitive one.

To setup the MOTION RECORD TIME,

1. Press ▼ or ▲ to move the arrowhead cursor to MOTION RECORD TIME in the menu.

23

2. Press ⏎ repeatedly to cycle through the numbers. The time setting ranges from 5 to 30 seconds. Stop pressing the button when reach the desired numbers.
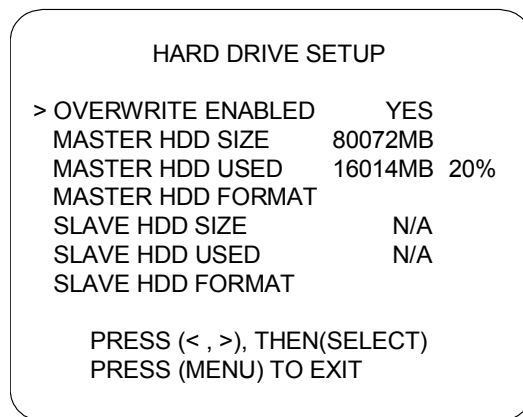
3.7.5 PASSWORD SETUP

```
                    SUB MENU

    PASSWORD CHANGE
    TIME SET
    VGA SETUP
    MOTION SETUP
  > PASSWORD SETUP              NO


        PRESS (< , >), THEN(SELECT)
        PRESS (MENU) TO EXIT
```

You can change the PASSWORD SETUP setting under the SUB MENU to enable PASSWORD SETUP. PASSWORD SETUP function protects your system from someone who intends to interrupt the recording or change the settings.

The default setting for the PASSWORD SETUP is NO. Please move the arrow cursor to PASSWORD SETUP and press ⏎ to adjust the setting to YES, and press ⌒ to return to MAIN MENU. After the function is enabled, the system will request for the password before you enter MAIN MENU or stop the recording. After the password confirmation, you are able to stop the recording or enter the MAIN MENU to change the setting.

24

3.8 HARD DRIVE SETUP

```
                HARD DRIVE SETUP

> OVERWRITE ENABLED          YES
  MASTER HDD SIZE        80072MB
  MASTER HDD USED        16014MB  20%
  MASTER HDD FORMAT
  SLAVE HDD SIZE               N/A
  SLAVE HDD USED               N/A
  SLAVE HDD FORMAT

      PRESS (< , >), THEN(SELECT)
      PRESS (MENU) TO EXIT
```

3.8.1 OVERWRITE ENABLED

This allows old video recordings on the hard drive(s) to be automatically overwritten with new recordings when hard drive space is full.

Press ⏎ to enable or disable this feature (i.e., choose YES or NO).

3.8.2 MASTER HDD SIZE and MASTER HDD USED

These items show the MASTER hard drive capacity and the amount of disk space that has been used up by the video recordings.

3.8.3 MASTER HDD FORMAT

Press ⏎ on this menu item to reformat the MASTER hard drive. You will then be prompted to enter the password. If an invalid password is entered, you will not be allowed to format the hard drive.

Note: All recordings on the MASTER hard drive will be deleted when you reformat the hard drive.
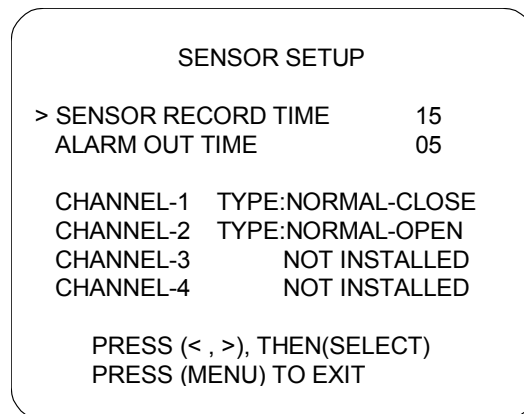
3.8.4 SLAVE HDD SIZE and SLAVE HDD USED

These items show the SLAVE hard drive capacity and the amount of disk space that has been used up by the video recordings.

3.8.5 SLAVE HDD FORMAT

Press ⏎ on this menu item to reformat the SLAVE hard drive. You will then be prompted to enter the password. If an invalid password is entered, you will not be allowed to format the hard drive.

Note: All recordings on the SLAVE hard drive will be deleted when you reformat the hard drive.

3.9 SENSOR SETUP

```
        SENSOR SETUP

> SENSOR RECORD TIME       15
  ALARM OUT TIME           05

  CHANNEL-1   TYPE:NORMAL-CLOSE
  CHANNEL-2   TYPE:NORMAL-OPEN
  CHANNEL-3        NOT INSTALLED
  CHANNEL-4        NOT INSTALLED

    PRESS (< , >), THEN(SELECT)
    PRESS (MENU) TO EXIT
```

3.9.1 SENSOR RECORD TIME

This determines the duration of sensor recording (in minutes) in the event that the sensor devices detect an event. There are 6 selections to choose from.

3.9.2 ALARM OUT TIME

This determines the duration of sound (in minutes) that is set off when the alarm device is triggered.

3.9.3 CHANNEL-1 ~ CHANNEL-4

These correspond to the four sets of sensor inputs on the DVR unit. Customize these according to the initial state of the attached sensor devices. There are three states to choose from:

NOT INSTALLED : Indicates that the channel does not have a sensor device connected.

NORMAL-OPEN : Indicates that the initial state of the sensor device is Normal-Open. When the sensor device detects an event and its state changes to Normal-Close, video recording is initiated.

NORMAL-CLOSE: Indicates that the initial state of the sensor device is Normal-Close. When the sensor device detects an event and its state changes to Normal-Open, video recording is initiated.

Chapter 4 Connect to a PC

EB1004 BAK provides a convenient tool to trace back the recorded surveillance video, catch specific images and save as AVI files. With the EB-DVR Playback Application, users can play back the surveillance video, catch images and backup all recorded images easily .

4.1 First Time Use

Connecting DVR unit to a power outlet automatically turns on its power.

ℹ️ If the user needs to save the recording data as AVI files or watch HDD A's data, please follow the steps to connect your PC and DVR unit with an USB cable after installing the playback application.

1. Press Stop button if DVR is recording.

2. Press ⌕ on the DVR front panel to enter MAIN MENU.

3. Connect the USB cable to your PC and DVR unit.

4. Execute EB-DVR Playback Application to play or backup the recording data of HDD A. To play the data of HDD B, please place HDD B in a removable hard disk drawer and insert it into the removable hard disk tray of DVR or your PC.
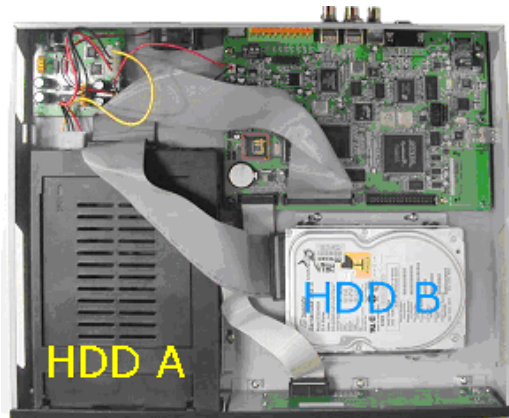
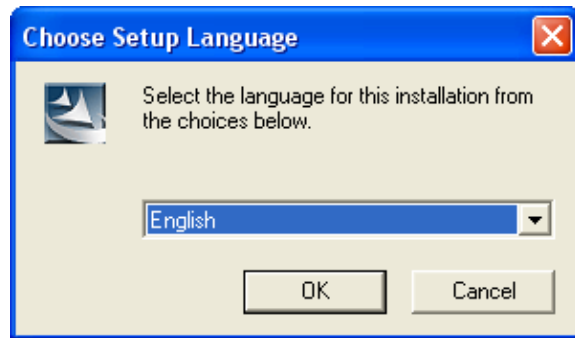After you finish the play/backup task, please follow the step to unplug the USB cable:

1. Close the playback application.

2. Unplug the USB cable.

3. Return to Each mode or Quad mode.

27

Follow the instructions to install the driver:

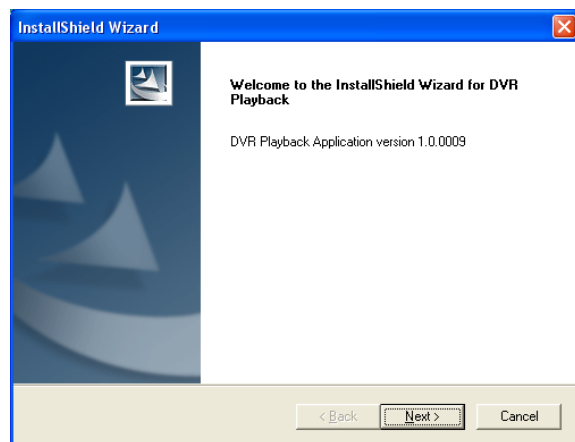1. Select a language. Click **Next** to continue the installation.

2. Insert the CD driver into CD-ROM's plate. It will auto-run. You will see the screen on the right side.

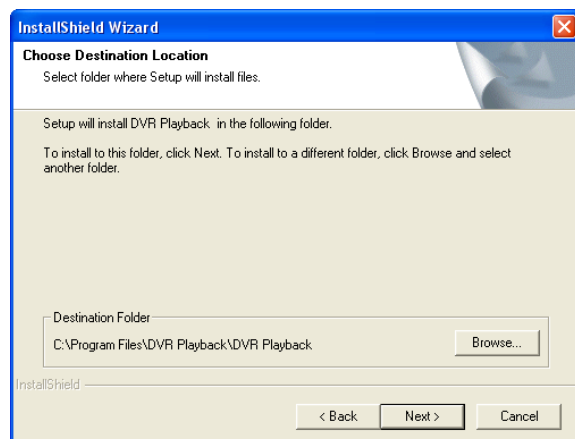   **Note:** The application supports Windows 2000/XP only.

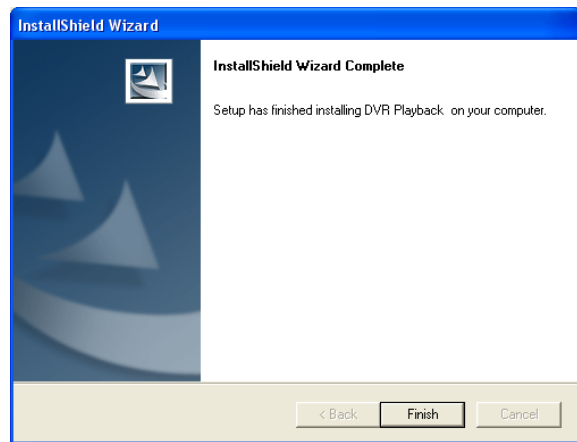3. Click **Next**. Follow the steps to finish the installation.

4. Please click **Browser..** to change the directory if it is necessary. Click **Next** to continue the installation.

   Note: You can see the DVR-Playback Application version on the top of this screen when you install this application.

28

5. Click **Finish** to complete the installation.

4.2 Operating EB-DVR Playback Application

Click ![icon] to run the application. Select the hard disk and then select a proper video system according to your local video system. Click **OK**.


⚠ **Attention:**

Make sure you enter the Main Menu before use the USB function.

If you select an inappropriate video system, the video will not be normal. Please exit the playback application and then run it again. Select the hard disk and a proper video system according to your local video system.

When backup data via a USB cable, please ensure the jumpers settings of hard disks to follow the table below.
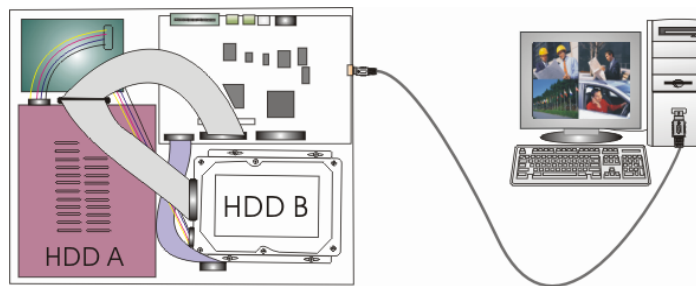
Jumpers Adjustments		Backup HDD data via a USB Cable
HDD A	**HDD B**	
WD (Slave)	WD(Master)	HDD A
	Hitachi (Master)	HDD A
Hitachi(Slave)	WD(Master)	HDD A
	Hitachi(Master)	HDD A
Maxtor(Master)	WD (Slave)	HDD A
	Hitachi(Slave)	HDD A
	Seagate (Slave)	HDD A
	Maxtor(Slave)	HDD A
Maxtor (Slave)	WD (Master)	HDD A
	Hitachi(Master)	HDD A
Seagate(Master)	WD (Slave)	HDD A
	Hitachi(Slave)	HDD A
	Maxtor (Slave)	HDD A
Seagate (Slave)	WD (Master)	HDD A
	Hitachi(Master)	HDD A
	Maxtor(Master)	HDD A
WD (Master)	N/A	HDD A
Hitachi(Master)	N/A	HDD A
Maxtor(Master)	N/A	HDD A
Maxtor(Slave)	N/A	HDD A
Seagate(Master)	N/A	HDD A

The sequences of the DVR hard disks will vary depending on the hard disk numbers in your PC. As the following illustrations show, please select a proper hard disk sequence according to the real situation when you run the playback application.
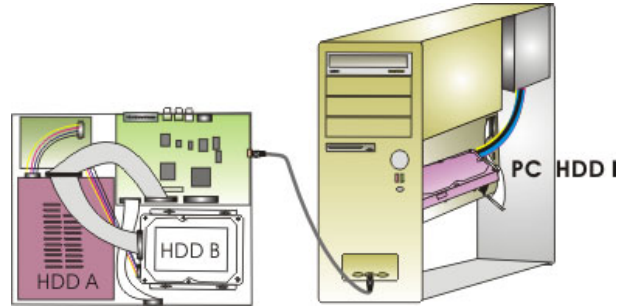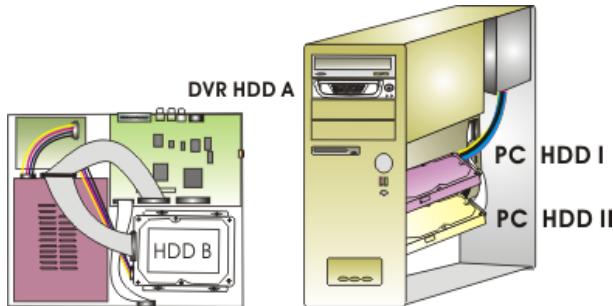
Case 1:
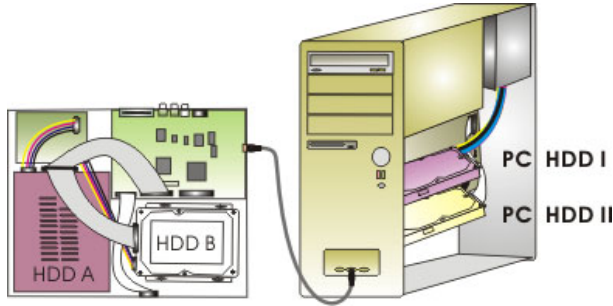
The sequence of HDD A will be **HDD2**.
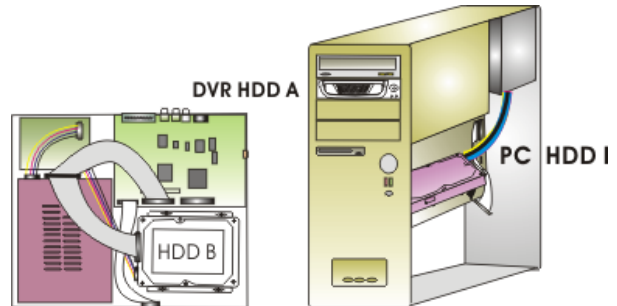

Case 2:

The sequence of HDD A will be **HDD1**.

Case 3:

The sequence of HDD A will be **HDD2**.
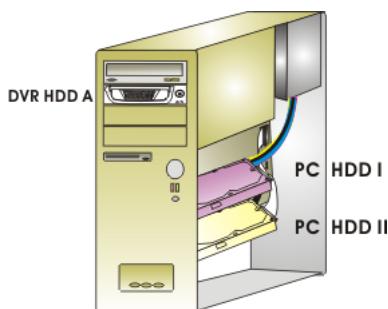

Case 4:

The sequence of HDD A will be **HDD1**.

Case 5:
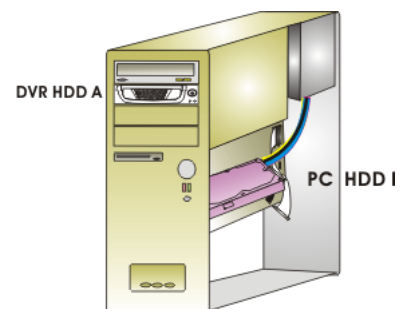

Insert HDD A into the PC. The sequence of

Case 6:

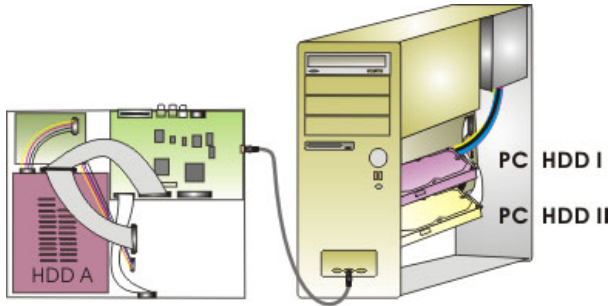Insert HDD A into the PC. The sequence of

31

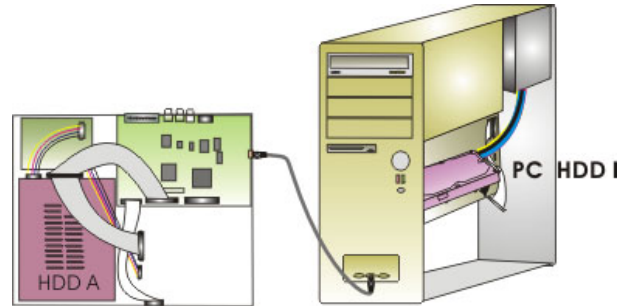HDD A will be **HDD2**.

HDD A will be **HDD1**.

Case 7:

Place HDD B in the removal hard disk drawer. The sequence of HDD B will be **HDD2**.

Case 8:

Place HDD B in the removal hard disk drawer. The sequence of HDD B will be **HDD1**.


32

You will see EB-DVR screen as followed.

1. Channel 1- Channel 4: Switch between cameras.

2. Change Driver: Switch between different hard disks.

3. Event List: Display all the recorded events stored in hard disks.

4. Play: Play the recorded video.

5. Backward play: Play the video backward.

6. Pause: Pause the playback.

7. Play one frame: Display a forward static frame.

8. Back one frame: Display a backward static frame.

9. Forward Search: Fast play the recorded video to search an appointed image.

10. Stop: Stop the playback

11. Snapshot: Save the present screen as a BMP file.

12. Print: Print the current display.

13. AVI file: Record an appointed video and save it as an AVI file.

14. Version Identification: Press Ctrl + Alt + V buttons to see the product version if you need this when you contact with customer service.

33

⚠ **Attention:**

When you want to read the data in the HDD A via a USB cable directly without removing the hard disk, follow the following picture to connect the hard disks in the DVR.
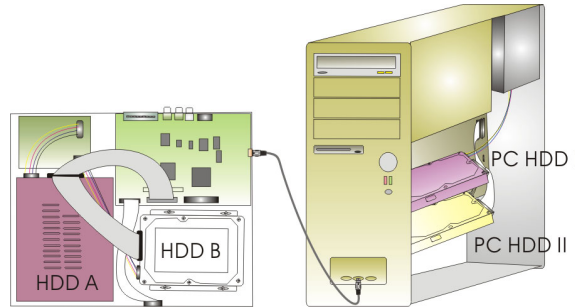
When you need to read HDD B via a USB cable. Please plug the middle connector of IDE cable in HDD B and the other connector to HDD A as the following picture. Without removing the hard disk, your PC can read the data in HDD B.
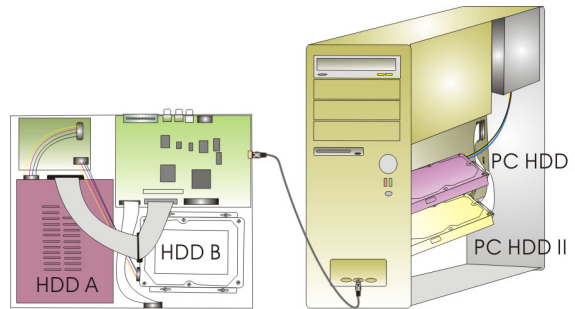
Use the playback application to play the video data by PC.

4.2.1 Channel Selection

This determines which of the cameras will be displayed on the surveillance screen.

Choose an appointed channel to display the surveillance screen by clicking the channel icon. Click once to show a full-screen display. To show a quad screen, click the same icon again.

4.2.2 Video Playback List

After selecting the appointed hard drive, click 📂 to select an event and click OK to play back the appointed surveillance.

When you click the Event List icon, it pops-up an event table as the following illustration shows. You will see the table shows Record mode, Start time and End time of each event. Record Mode can be "T", "M" or "S". "T" represents **Total Recording**, which means the camera keeps on recording continually. "M" means **Motion Recording**, which means the recording starts once the camera detects motion. "S" represents **Sensor Recording**, which means the camera records when

34

the sensor detects an event.

Event List enables you to playback any recorded event anytime.

Record Mode

Start Time

End Time
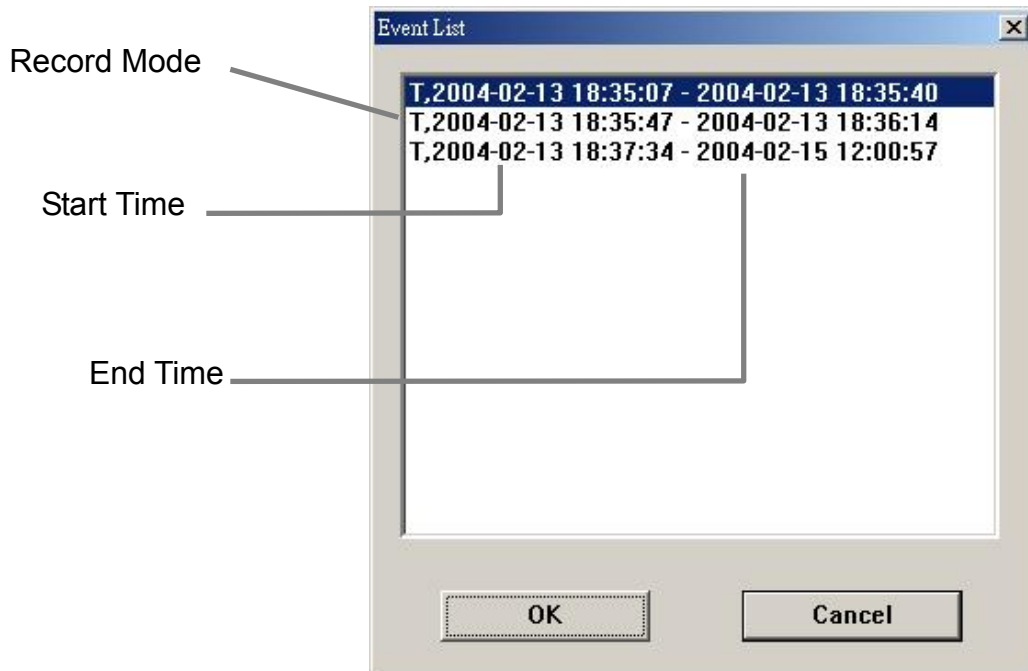
When you decide which event to play, click ▶ to display the video or click ◀ to display a recorded dynamic event reversely. Click ▶▶ to search the appointed video. Users can select the forward search mode fast play at 2X, 4X or 8X speed. Click once to fast play the video at 2X. Click twice to fast play the video at 4X. Click 3 times to fast play the video at 8X. Click the same button to cycle through different fast play modes. The following picture shows the video is played at 8X.

There are four fast play modes: X0, X2, X4 and X8. **"2004-02-04 17:59:56 X8"** means the record is played at X8.

Click ▶| to see a forward static play. To see a backward static display, click |◀.

35

Click ▮▮ to pause the playing.

Click ▬ to stop the video.

4.2.3 Catch Images and Video

EB-1004 BAK Playback Application provides functions to output both dynamic and static images. Users can easily catch a static screen and save it as a BMP file, or save some fragment of recorded video as an AVI file.

4.2.3.1 Snapshot

Click 📷 to save the desired screen as a BMP file. Users can keep a full-screen snapshot or a quad screen snapshot. This function allows to preserve static images.

4.2.3.2 Print

Click 🖨 to print the screen. Users can switch to a specific channel and print out the image during the surveillance. Printing is allowed in a display of full-screen mode or quad mode.

4.2.3.3 Save as AVI Files

Users can backup or catch the data in DVR unit's hard disks by saving the recorded video as AVI files and play the files by Windows Media Player.

Click ↗ to save an appointed surveillance video. After clicking the icon, a window shows to request the file name and directory. Click **Save** to start the recording. Click ↗ again to finish the recording.

36

Warranty Notice

LIMITED WARRANTY

AVerMedia TECHNOLOGIES, Inc. warrants this product to be free of defects resulting from faulty manufacture or components under the following terms:

WARRANTY LENGTH

Labor is warranted for (1) one year from the date of purchase.

Parts are warranted for (1) one year from the date of purchase.

Replacement products will be warranted for the remainder of the one year warranty period or (30) thirty days, whichever is longer.

WHO IS PROTECTED

This warranty is enforceable only by the first consumer purchaser.

WHAT IS AND IS NOT COVERED

Except as specified below, this warranty covers all defects resulting from faulty manufacturing of this product. The following are not covered by the warranty.

1. Any product on which the serial number has been defaced, modified, or removed.

2. Damage, deterioration, or malfunction resulting from :

    A. Accident, abuse, misuse, neglect, fire, water, lightning, or other acts of nature, commercial or industrial use, unauthorized product modification, or failure to follow instructions included with the product.

    B. Misapplication of service by someone other than the manufacturer's representative.

    C. Any shipment damages. (Claims must be made with carrier.)

    D. Any other cause which does not relate to a product defect.

3. Cartons, cases, batteries, cabinets, tapes, or accessories used with product.

4. AVerMedia does not warrant that this product will meet your requirements; it is your responsibility to determine the suitability of this product for your purpose.

WHAT WE WILL AND WILL NOT PAY FOR

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1. Removal or installation charges.

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3. Any incidental charges.

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37

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