

MobileAVX Operation Manual



Contents

01. What is MobileAVX?

02. MobileAVX Specifications

03. Hardware Connection Guide

- 1) MobileAVX Components
- 2) Loading & Unloading Removable HDD
- 3) Front Connections
 - Video Out
 - Audio Out
 - USB 2.0 x 2
 - 10/100 BaseT Ethernet Port
 - IR Receiver for Remote Controller
- 4) Rear Connections
 - DC Power In
 - DC Power Out
 - Camera In
 - Audio In
 - GPS Receiver In
 - Sensor In
 - Alarm Out
 - PTZ Control

04. Anti-Shock & Vibration Absorber Installation

05. Set-up and Operation of MobileAVX

System Setup

01. System Setup
02. Camera
03. Record
04. Sensor
05. Motion
06. Communication
07. Etc
08. Ending SETUP MENU

System Operation

01. Search
02. Playback Control in SEARCH Mode
 - Date & Time
 - Backup

06. Installation of Docking Station and Client Viewer Software

01. Introduction
02. Docking Station and Client Viewer Software Installation

07. MobileAVX Client Viewer Software Operation

01. Screen Overview
02. Selection of Date & Time
03. Channel Selection
04. Playback Control
05. Screen Control
06. Extended Feature Buttons on the Top

1. What is MobileAVX?

The MobileAVX is highly reliable and stable security device for preventing accidents and crimes in moving vehicles. The MobileAVX can be installed in all kinds of vehicles such as bus, taxi, ship and aircraft. It continuously records high quality videos and audios together with GPS information and sensor event at the same time. When we need to see the recorded data in MobileAVX, we simply take out the removable HDD and connect it to PC using docking station. We can freely playback the recorded data and also we can search events occurred in the vehicle.

The MobileAVX is designed for anti-shock and vibration running in moving vehicles with very special shock and vibration absorber chassis. It uses unique 3D wire spring to install it in vehicles. It is the reason that the hard disk drive is the largest capacity of digital storage media and it is the lowest price in the market up to today. However, the HDD is very weak against the shock and vibration. So the key reliability of mobile DVR product is how we can prevent the shock and vibration for safe running the HDD in vehicles. MobileAVX is the unique product to cover the shock and vibration perfectly running in the vehicle.

We provide Viewer Software with MobileAVX. It runs on existing WindowsXP basis PC. Using the viewer software, you can playback the recorded videos and audios, and search some events such as driven speed and some sensors activities during recording very easily. Please refer the detailed software features in chapter 4. in this manual.



2. MobileAVX Specifications

Features	Descriptions
Mobile AVX System	Embedded Linux System
Processor	200MHz PowerPC CPU
Camera Input	Four(4) Channel of PAL or NTSC
Audio Input	Four(4) Channel
Display Speed	120 fps @ 320 x 240 res.
Recording Speed	120 fps @ 320 x 240 res. / 30 fps @ 720 x 480 res. for one Channel
Storing Data Format for Video	MPEG-4
Storing Data Format for Sound	MPEG-4
External Input / Output	MIC x 4, GPS , F/R Door Open Sensor, IR Sensor & extra Input
	4 x Alarm Out
	1 x Camera Loop Output
	4 x DC 12V Output for Cameras Power
Storage Interface	EIDE Type HDD (80GB, 120GB, 160GB, 250GB & 400GB)
Network Interface	10/100 BaseT Ethernet
USB Port	2 x USB 2.0 Ports
Serial Port	RS-232C Interface
Chassis Mount	Perfect Ruggedized Anti-Shock & Vibration Absorber
Operation Power	DC12V/5A or DC24V/2.5A
Dimension	Main Unit : 133(W) x 78(H) x 220(D) mm
	Including Absorber : 255(W) x 152(H) x 255(D) mm
Weight	3.3Kg including 160GB HDD and Anti-Shock & Vibration Ansorber
Viewer System	Existing PC with optional Docking Station on VGA Monitor
Docking Station (optional)	Using Docking Station, Playback on PC Monitor

3. Hardware Connection Guide

1) MobileAVX Components

MobileAVX is consisted of the following units.

- 1) Main Unit
- 2) Removable HDD
- 3) Anti-Shock & Vibration Absorber
- 4) GPS Receiver
- 5) Docking Station



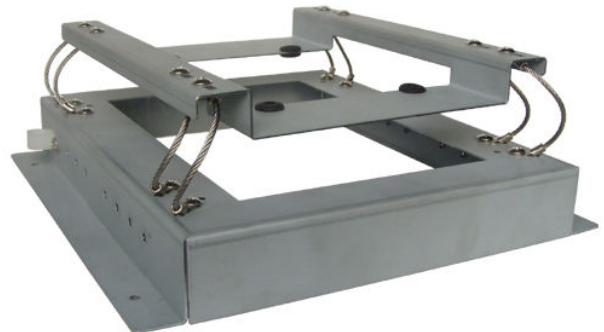
Main Unit



Removable HDD



Docking Station



Anti-Shock & Vibration Absorber



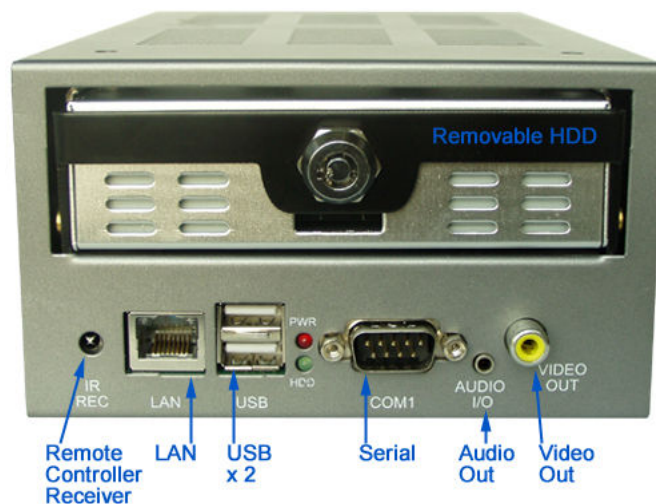
GPS Receiver

2) Loading & Unload Removable HDD

- 1) Using the key, open the removable HDD lever to bottom direction.
- 2) Load it to inside of main unit and slide it to rear direction of main unit in slow and soft.
- 3) If the removable HDD is reached to end of main unit, close the lever to upper direction.
- 4) Lock the key finally.
- 5) **For unloading it, you can do it in reverse sequence.**



3) Front Connections



- 1) **Remote Controller Receiver** : All system operation is being done by remote controller.
- 2) **LAN Port** : Supports 10/100 BaseT Ethernet TCT/IP
- 3) **USB Port** : Support 2 USB 2.0 ports for upgrade the firmware or simple data back-up.
- 4) **Serial Port** : This port is not available for the connection of GPS receiver on rear side.
- 5) **Audio I/O** : This port is being used to playback the recorded audio with images.
- 6) **Video Out** : Monitoring camera input images and recorded images on TV monitor.

4) Rear Connections

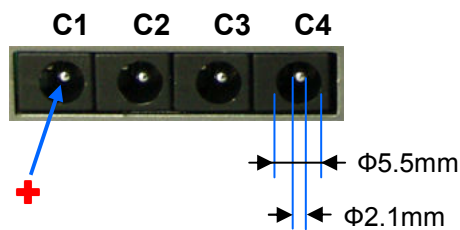


- 1) **Main Power** : MobileAVX can run with the input of DC12V/3.5A or DC24V/1.75A power.



Caution : This is the DC power input. So the Plus(+) and Minus(-) shouldn't be changed. If it is changed, MobileAVX gets big damages.

- 2) **DC Power Out** : This DC12V / 500mA power out is used for supplying camera power.



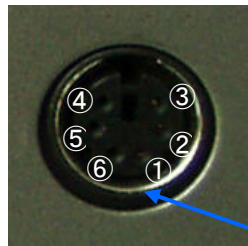
- 3) **Camera In** : Please use standard 75Ω BNC connector for camera inputs.



- Number of channels : Four channels
- Type of input : Color camera (NTSC, PAL) / Black and White camera (NTSC, PAL)
- Connection method : By four BNC jacks for video input
- Video signal range : Any commercial grade video, 1V_{p-p} at 75 Ω ground

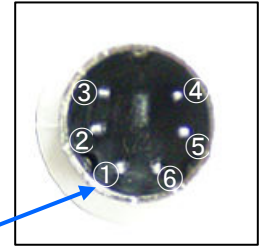
4) **Audio In** : MobileAVX supports 4 channels of audio input.

Please use the provided audio input connector as follows.



Rear Panel

- ① : Audio #1 - Gray
- ② : Audio #2 - White
- ③ : Ground - Green
- ④ : Ground - Yellow
- ⑤ : Audio #3 - Red
- ⑥ : Audio #4 - Black



Audio Connector

Shield

- Number of channels : Four channels
- Signal range : 0V ~ 3V
- Sampling bit number : 8 bit
- Sampling frequency : 8KHz

5) **GPS Receiver** : Just connect the jack of GPS Receiver to this connector.

- GPS Receiver is provided with MobileAVX.

6) **Digital I/Os - Sensor In, Alarm Out & PTZ Control Connection :**

Sensor In : 4 channels of digital sensor inputs
Relay or Voltage type.

Alarm Out : TTL level digital On/Off signal out

PTZ Control : RS-485 interface for PTZ control.



Sensor In

S4

S3

S2

S1

GND

Alarm Out

A4

A3

A2

A1

GND

- TX

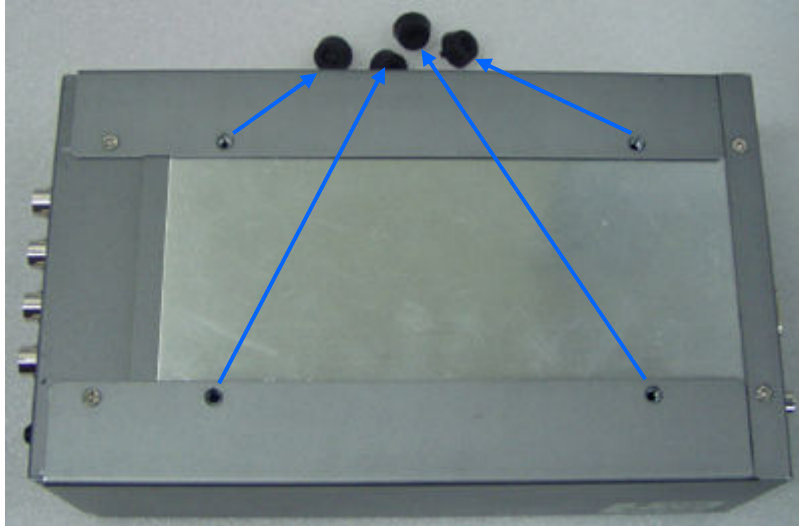
+ TX

PTZ Control

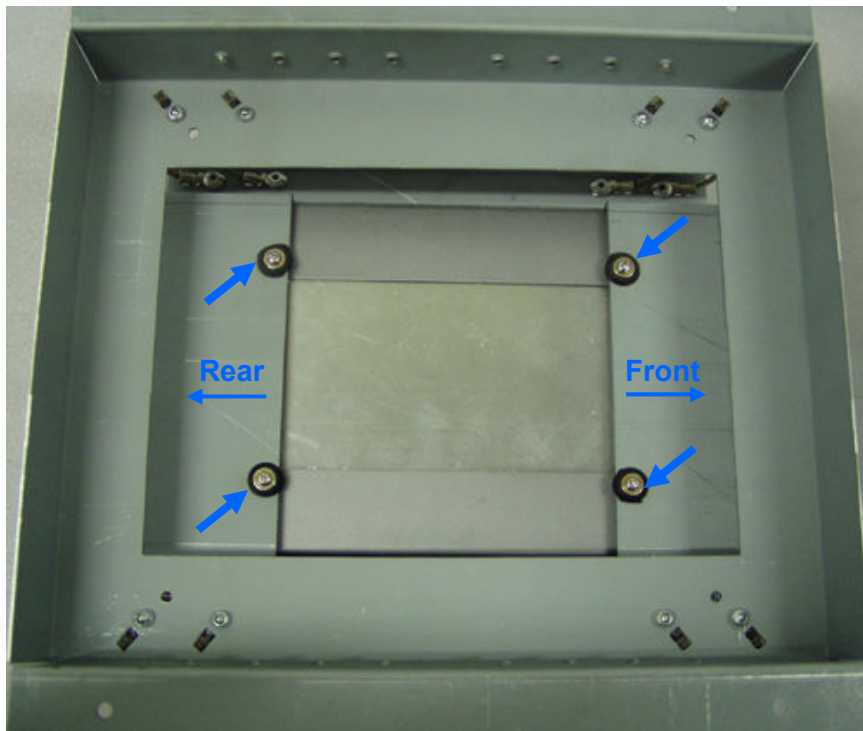
4. Anti-Shock & Vibration Absorber Installation

You need to assemble the MobileAVX Main Unit and Anti-Shock & Vibration Absorber as following sequence.

- 1) Remove 4 rubbers with screw from the bottom side of MobileAVX Main Unit



- 2) Turn the upside of Anti-Shock & Vibration Absorber to down and place it on the bottom of MobileAVX Main Unit.



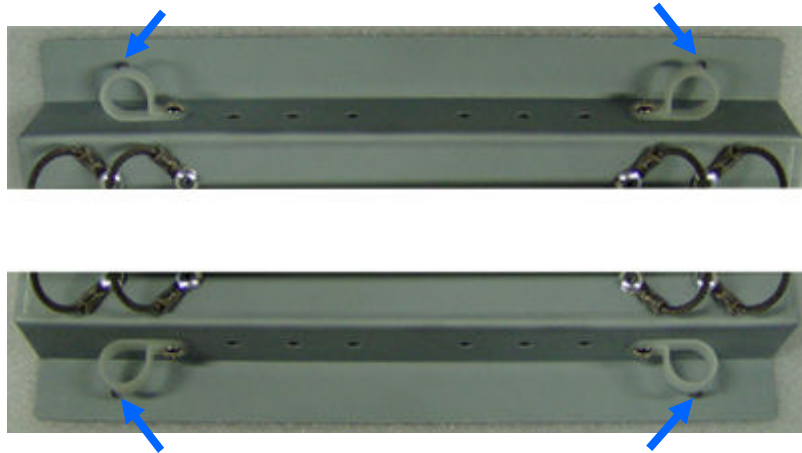
- 3) Fasten the screw tightly.

4) After assembly, its shape is as follows.

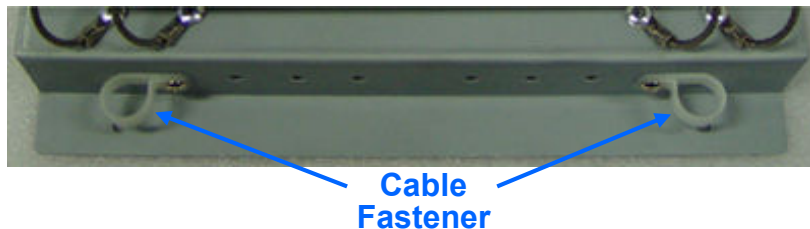


5) Place the assembled MobileAVX on the flat location what you want to install in the vehicle.

6) Fix the MobileAVX Anti-Shock & Vibration Absorber on it by screwing 4 places.



7) Wiring required cables such as power, camera, sensor and GPS, then connect it to rear panel of MobileAVX Main Unit. After wiring and connecting required external interfaces, fasten cables using provided fasteners beside of the Anti-Shock & Vibration Absorber.



8) **Caution :** When you fasten the wired cables, be sure that it shouldn't be tight from the rearconnection panel of MobileAVX. The shock and vibration can be transmitted to MobileAVX Main Unit. So its cable length should be enough loose between the rear panel of MobileAVX and cable fastener.

5. Set-up & Operation of MobileAVX

After you install the MobileAVX and connect the required external devices to MobileAVX, you need to set the system features and functions for your own application using remote controller. The only way to control the MobileAVX is to use the remote controller, so you need to keep the remote controller safely.

At the delivery, the MobileAVX was set in Factory Default value. Now, you can change the features and functions with seeing the SETUP OSD MENU on analog monitor (standard TV monitor).

Remote Controller :



Menu : Getting in **SETUP** menu screen or change characters to capital & small, numbers or special characters in **SETUP** menu.

This key also ends the **SETUP** menu after you finish the set values.

ESC : Returns back from your current **SETUP** position to previous step.

Quad : Switching monitoring mode for each full screen and quad screen

Search : Searching and Playback the recorded video & audio data

Enter : For entering to sub-Menu or selecting parameters.

Direction buttons : Move cursor position, change the value or control playback speed and direction.

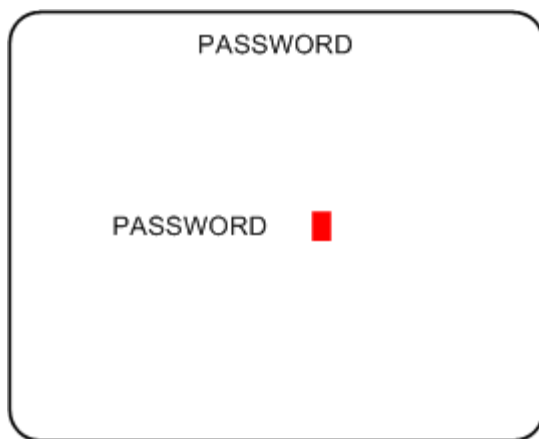
System Set-up

- The default password is not assigned. Just push the ENTER button to enter SETUP MENU.
- Some case, MobileAVX will be rebooted automatically if you change the SETUP value.

01. SYSTEM SETUP

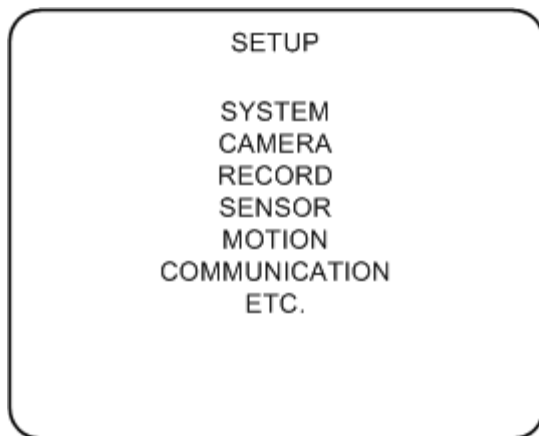
To set the MobileAVX running environment, push the MENU button on remote controller, then the following screen is appeared on monitor.

- **PASSWORD**



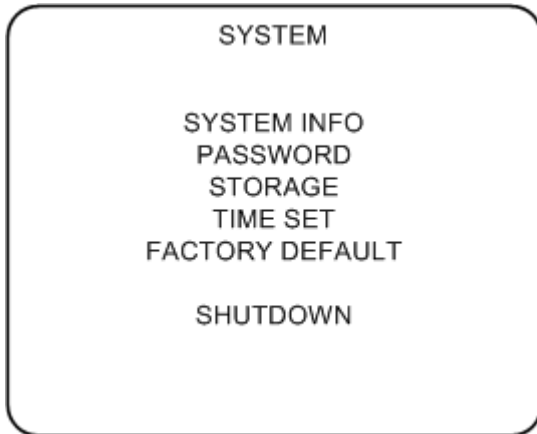
The password has not been set at factory, so the default password is null character. At beginning, just push the **ENTER** button, then you can pass the PASSWORD screen. You can set and change this password in the **PASSWORD** menu.

- **SETUP**



This is the top page of all **SETUP** menu structure.

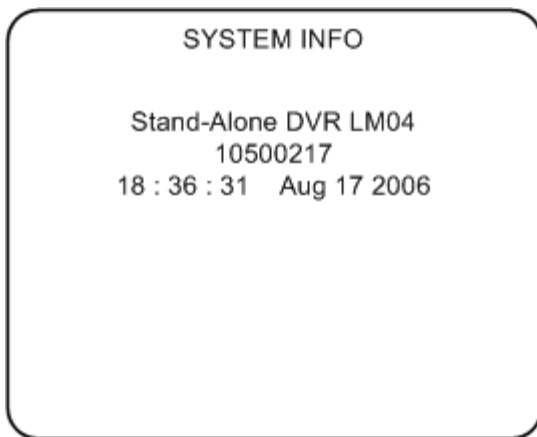
● **SYSTEM**



You can see, set or change the basic system information and configuration of currently set parameters of MobileAVX. Please refer the detailed descriptions of each menu as follows.

Before off the power, selecting **SHUTDOWN** menu, the the system will be halted. It is the safe way to finish the MobileAVX. If you just trun off the power of MobileAVX, there is a possibility to loose some data at some time.

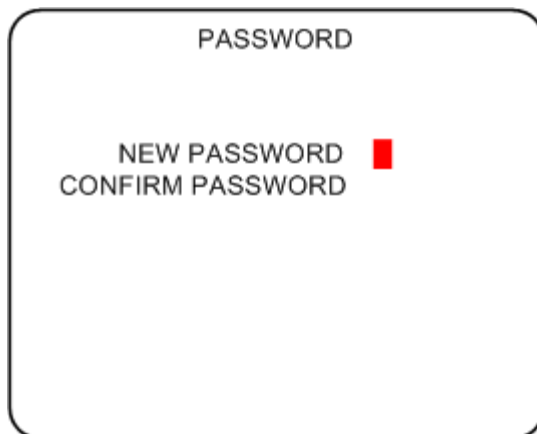
● **SYSTEM INFO**



If you select **STSTEM INFO** in the above SETUP menu, you can see the current software version of MobileAVX, currently set time & date.

This menu is just showing the current status. You can change the date & time in the **TIME SET** menu.

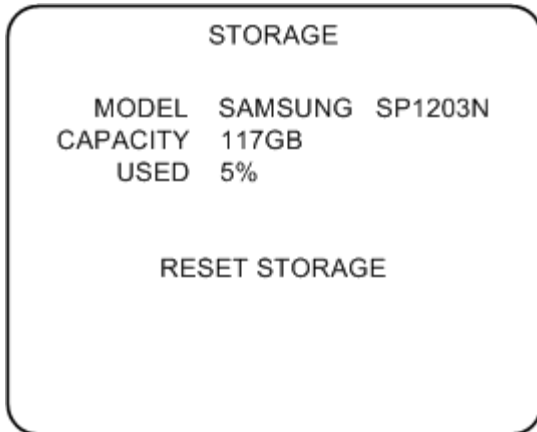
● **PASSWORD**



You need to enter the correct password for entering into the **SETUP** screen. While you are setting password, you can also change the character of capital & small, numbers or special characters by clicking **MENU** button.

This password should be needed to access MobileAVX from Client Viewer software over the network.

● **STORAGE**

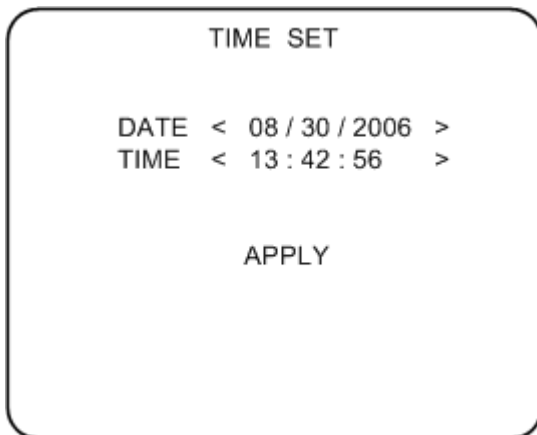


The Hard disk drive model, capacity and used space information are displayed on screen.

◆ **RESET STORAGE**

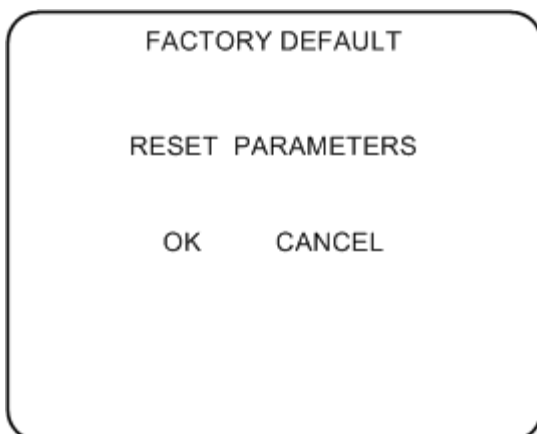
This function initializes and erases the existing recorded data from hard disk.

● **TIME SET**



You can set system date & time using this menu. After enter the date and time, click **APPLY** button

● **FACTORY DEFAULT**



You can reset all set-up parameters to the factory default value.

02. CAMERA

CAMERA		
VIDEO TYPE	< NTSC >	
RESOLUTION	< CIF >	
CHANNEL	< 1 >	
BRIGHTNESS	< 0 >	
CONTRAST	< 0 >	
HUE	< 0 >	
SATURATION	< 0 >	
TITLE	< CAM#1 >	

- **Video Type**

It supports two video signal types.

- NTSC & PAL.

You can check it with camera manual.

- **Resolution (2 types)**

CIF: 352 x 240 (288)

D1: 720 x 480 (576)

- **Channel (1 ~ 4)**

Select camera channel to adjust.

- **Brightness (-10 ~ +10)**

You can adjust the brightness of each camera image.

- **Contrast (-10 ~ +10)**

You can adjust the contrast of each camera image

- **Hue (-10 ~ +10)**

You can adjust the hue of each camera image.

- **Saturation (-10 ~ +10)**

You can adjust the saturation of each camera image.

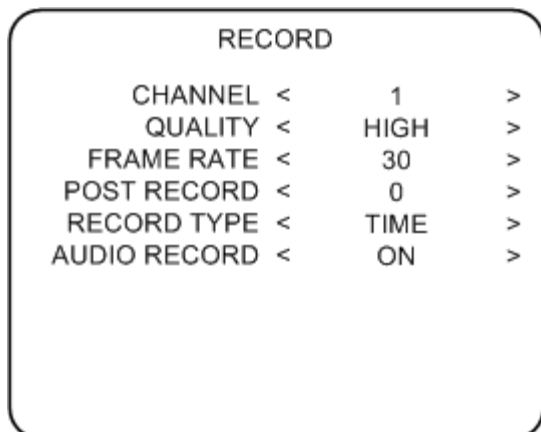
- **Title (up to 16 characters)**

You can type in the camera name by using front panel button or remote controller.

Its maximum is 16 characters.

This text is being displayed on recorder's screen and remote viewer's screen.

03. RECORD



- **Channel** (1 ~ 4)
You can select camera channel for setting recording conditions
- **Quality** (3 choices)
You can set recording quality level with **Low, Medium** and **High**.
Before set recording quality level, you have to check the available storage space.

If you select the quality in **High**, the recording frame data size becomes bigger than Low. It means MobileAVX Guard needs more capacity to record high quality images.

- **Frame Rate** (8 choices)
Frame rate is as same as FPS [frame per second].
You can select how many frames to be recorded in a second.
You can select the following values in this menu.
- 1, 2, 3, 5, 6, 10, 15, 30 fps
- **Post Record** (0 ~ 60)
You can set how long you will record the data into HDD after the detection of motion and/or sensor event. Its range is from 0 to 60 seconds.
- **Record Type** (4 choices)
No Recording : Do not record and only monitor the videos from cameras on TV
Time : Continuous recording
Motion : Recording is automatically started if any movement is detected in the designated area.
Sensor : Recording is automatically started if any event signal is detected from sensors.
- **Audio Record** (ON / OFF)
The MobileAVX supports Audio Recording on 4 channels of Audio Input.
You can select a camera channel to match Audio Input.

04. SENSOR

```
SENSOR
CHANNEL < 1 >
TYPE < NORMAL OPEN >
ACTION < NONE >
ACTION RELEASE < 0 >
```

- **Channel** (1 ~ 4)

You can select camera channel which is related to the sensor

- **Type** (NORMAL OPEN / CLOSE)

There are two types of sensor.

One is closed circuit type that will be opened if the sensor detects event signal.

The other one is opened circuit type that will be closed if the sensor detects event signal.

So you need to check the sensor type before set it in this menu.

- **Action** (13 choices)

When MobileAVX detects Sensor Event Signal, MobileAVX transmits its input signal to the appropriate Digital Out [Alarm] channel or call the appropriate PTZ preset number.

- **Action Release Time** (9 choices)

You can select the sensor event releasing time of Digital Out Signaling.

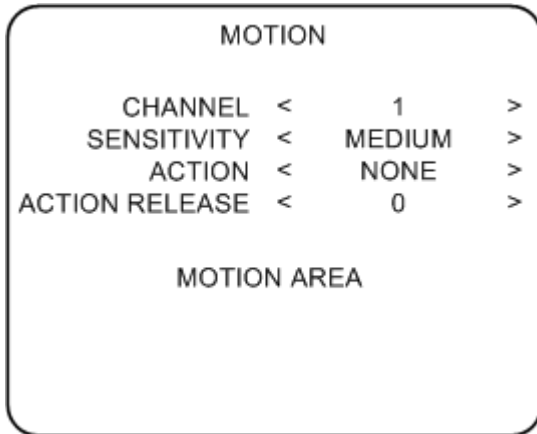
The Digital Output Devices like alarm, lights, etc. works for selected time duration.

After the selected duration time, all the alarm output actions will be stopped.

You can select the following and it unit is second.

- 0, 1, 2, 3, 5, 10, 20, 30, 60 seconds

05. MOTION



- **Channel** (1 ~ 4)

You can select camera channel which you want to adjust the configuration of each camera channel's motion detecting property of Sensitivity, Action and Action Release.

- **Sensitivity** (LOW / MEDIUM / HIGH)

You can set the sensitivity of motion detection levels of LOW/MEDIUM/HIGH.

- **Action** (5 choices)

When MobileAVX detects motion detection, MobileAVX transmits its action to appropriate Digital Out [Alarm] channel.

Its choices are as follows.

- NONE, DO 1, DO 2, DO 3, DO 4

- **Action Release** (9 choices)

You can select the motion detection event releasing time of Digital Out Signaling.

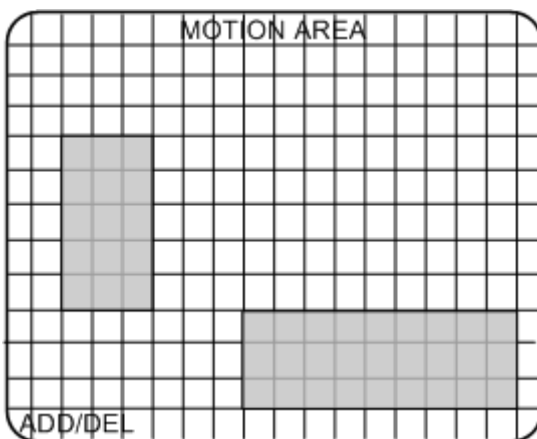
The Digital Output Devices like alarm, lights, etc. works for selected time duration.

After the selected duration time, all the alarm output actions will be stopped.

You can select the following and its unit is second.

- 0, 1, 2, 3, 5, 10, 20, 30, 60 seconds

- **MOTION AREA**

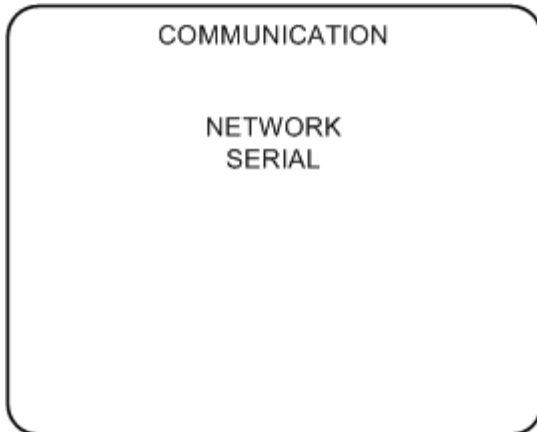


You can define some area to detect the motion in this area only. The **MENU** button toggles addition and deletion function of motion detection area. To add the motion detection area, locate the cursor to the start position of detection area by using the **DIRECTION** key and push the **ENTER** button and move the cursor to opposite position, then push the **ENTER** button again. After that, you can see the box of defined motion detection area. To delete

the motion area, push the **MENU** button at first, then it turns the deletion mode of motion detection area and remaining operation is the same way when you add the motion detection area.

There is not much chance to use this function in vehicle because of the input camera images are continuously being changed during driving vehicle.

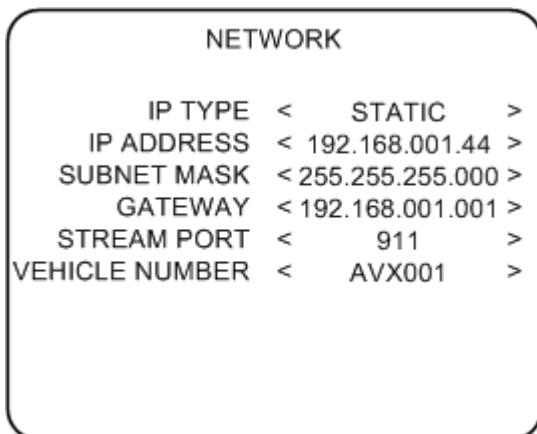
06. COMMUNICATION



You can set MobileAVX communication network environment and serial communication environment for GPS receiver interface.

You can setup the network environment, but the client access through network interface will be supported later.

- **Network**



If you want to access MobileAVX over the network, you need to set proper network parameters in this menu. Using provided Client Viewer Program, you can access MobileAVX from remote site and also you can access multiple MobileAVX by using Client software running on MS WinXP basis PC. You can also set MobileAVX network parameters using "IPSetup.EXE" program from your PC.

If you set the MobileAVX network parameters

from the PC, you need to reboot the MobileAVX in manual again.

The network properties of MobileAVX need to be configured properly to connect your existing network environment. Followings are default setting at factory.

Default IP address	192.168.0.11
Default Subnet Mask	255.255.255.0
Default Gateway	192.168.0.1
Stream port	911

- **IP Type (STATIC / DHCP)**

You can choose Static IP or DHCP.

In DHCP case, MobileAVX network configurations are set automatically.

In Static IP case, you need to set each parameter properly for your existing network environment.

■ **IP Address**

Prior to set IP address, ask your network administrator for it.

■ **Subnet Mask**

Prior to set subnet mask, ask your network administrator for it.

■ **Gateway**

Prior to set gateway, ask your network administrator for it.

■ **DDNS Host Name**

Prior to set DDNS host name , ask your network administrator for it also.

■ **Vehicle Number**

You can enter the unique ID to identify each vehicle.

● **Serial Interface for GPS Receiver**

SERIAL			
COM PORT	<	COM1	>
BAUD RATE	<	9600	>
PARITY BIT	<	NONE	>
DATA BIT	<	8	>
STOP BIT	<	1	>

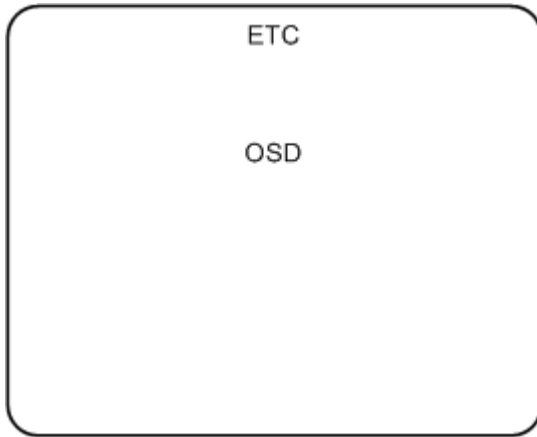
You need to set this serial communication for the GPS Receiver interface.

You do not need to change those parameters because of the interface spec of provided GPS is same as this default value.

During driving vehicle, the GPS information is being displayed and recorded on camera #1 screen automatically and continuously.

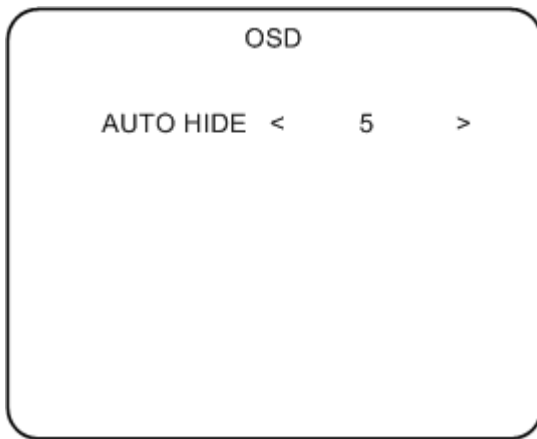
If you are located at the place which you do not receive the GPS data such as tunnel or underground, the GPS information will not be displayed or recorded.

07. ETC



You can control the disappearance of OSD on screen during the normal operation.

● **OSD**



You can hide the OSD viewing on screen during the normal operation.

The value range is 0 to 60 seconds. The OSD contents will be disappeared after the time you set.

08. Ending SETUP MENU



After you finish the set of parameters, you need to push **ESC** continuously until the top of **SETUP** screen is appeared.

To finish the **SETUP** work, push the **MENU** button, the confirmation screen will be appeared as left.

If you select **OK**, MobileAVX will save the changed SETUP parameters in the system, then the MobileAVX tries to reboot the system automatically.

If you select **CANCEL**, MobileAVX will not save the changed SETUP parameters, then continues the work before entering the SETUP menu.

If you do not change any parameter in the SETUP menu, this screen will not be shown, then automatically returns to the screen before entering the SETUP.

During the SETUP operation, the MobileAVX continues the work with the previously set SEUP parameters. You can store data into HDD, display on screen and allowing the remote access from remote site simultaneously during SETUP operation.

System Operation

01. SEARCH

If you press the **SEARCH** button on remote controller, MobileAVX instantly displays the recorded data on screen. To stop SEARCH mode and return to previous monitoring mode, just push the **SEARCH** button again.

If you want to switch 4 channels of recorded data during playback, push the **QUAD** button in sequence, then the each channel will be show on screen.

02. Playback Control in SEARCH Mode

You can control the displayed videos to Backward and Forward direction using **LEFT** and **RIGHT** direction buttons in SEARCH mode.

Play speed is able to be changed by **UP** and **DOWN** buttons.

The playback speed can be controlled by pushing **UP & DOWN** button. If you push the **UP & DOWN** button 2, 3, 4, & 6 times continuously, its playback speed becomes 2, 3, 4, 5 and 6 times faster or slower than normal playback speed.

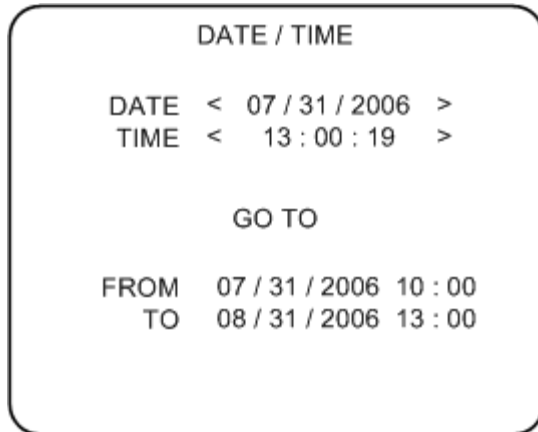
Moreover, if you press the **ENTER** button during playback in SEARCH mode, MobileAVX will pause the playback. To release the PAUSE status, you can push **LEFT** or **RIGHT** button. If you push **LEFT** button, it will display it backward direction from the point of paused point. The **RIGHT** button displays it forward direction.

In the SEARCH mode, you can control and change the search condition by pushing the **MENU** button and you can see the following screen.



You can select the SEARCH conditions and also you can backup video data into USB storage devices such as USB memory card, USB HDD and etc. by selecting the menu on this screen.

- **DATE / TIME**

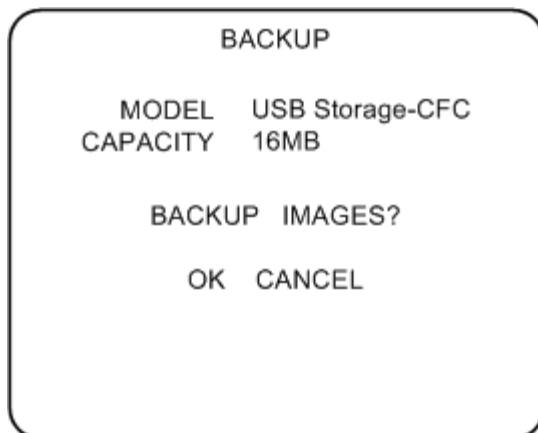


You set the playback start point by selecting the date and time in this screen. After you select the **DATE** and **TIME**, push the **GOTO** by **ENTER** button, it will start to playback the recorded images instantly.

Be sure that you should select the date and time in the range of FROM to TO on the bottom line of screen. It shows date & time what the data is

recorded in the HDD of MobileAVX.

- **BACKUP**



This menu can support you to backup easily any simply in **AVI format** into USB storage devices such as USB flash memory, USB HDD and etc.

When you select the OK menu, the backup is being performed **from** the point of selected in previous DATE & TIME menu **until** the available space of USB storage device becomes full. This backup function is too easy and simple. We

eliminate the complex and relatively difficult backup functions.

Before doing the backup, you have to check USB storage devices whether it is formatted in FAT32 or not. MobileAVX can support only FAT32 format of USB storage devices.

Some cases, MobileAVX cannot recognize the available space of USB storage device to be connected if the USB storage device has no compatibility with USB 2.0. In this case, you need to reboot the MobileAVX if the available space of connected USB storage device is shown in 0 MB. If the available space is shown in 0 MB again after the reboot, you cannot use that USB storage device for backup operation.

- How to define the start point of recorded data for back-up
 - i. Press **MENU** button in SEARCH mode and select **DATE / TIME**.
 - ii. Set date and time when you want to start **DATE / TIME** for backup, and then select **GOTO** menu.
 - iii. MobileAVX instantly playbacks the recorded data from the selected date and time. During playback the recorded data on monitor, you can enter the **BACKUP** menu by pushing **MENU** button, and then you can perform the backup by selecting **AVI BACKUP** menu.

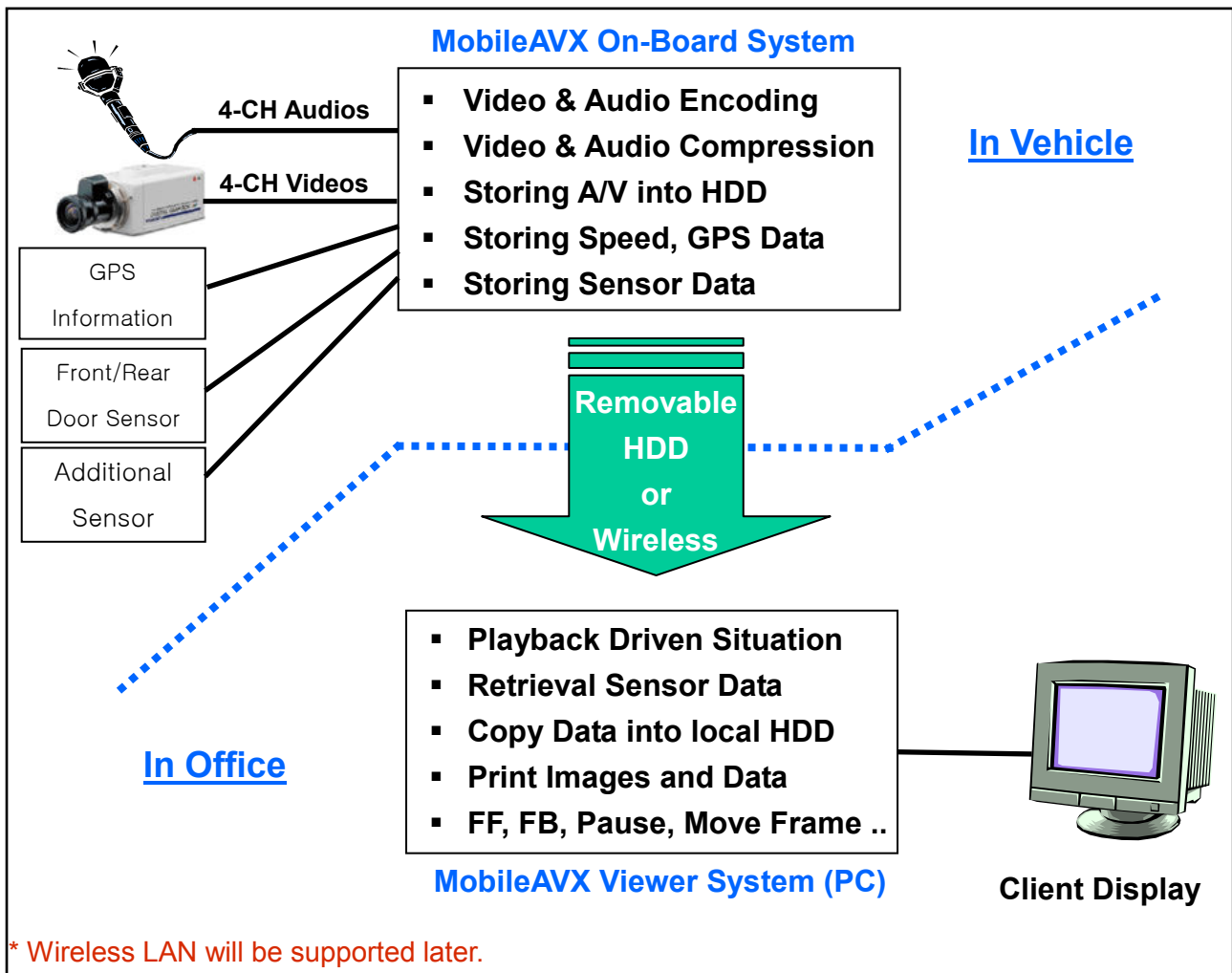
This AVI Backup takes little bit longer time because of the original MPEG-4 file is being converted to AVI format during the backup.

The data what you did the backup can be shown on PC directly by using MS Windows Media Player or other movie player. You may need to install some CODEC software in your PC to playback it on PC and you can easily get the unified CODEC software from the internet.

6. Installation of Docking Station and Client Viewer Software

01. Introduction

MobileAVX is designed in two functional components. One is **On-Board System** and the other one is **Client Viewer System**. The **On-Board System** is doing the work for only recording videos, audios and some sensor events which include GPS information, front/rear door open status and additional sensors status in vehicle. After record data during driving, bring the removable HDD from On-Board System to office and you can see the driven situation from the recorded data in removable HDD by using existing WinXP basis PC. This is the **Client Viewer System**. To read the removable HDD in office, you need the optional product called **Docking Station** which will be connected to PC.



02. Docking Station and Client Viewer Software Installation

As described in previous page, the **Docking Station** is needed to read data in removable HDD by using PC in office. The **Docking Station** is connected to the PC using USB interface. The supplied **Docking Station** is consisted of station unit, AC to DC adapter and USB interface cable. You need to supply the power to Docking Station separately and the power adapter is the standard packing with Docking Station.



< Loading & Unloading the Removable HDD in Docking Station >

1) Docking Station Installation Environment

- ① The PC should have only one physical hard disk drive.
- ② If your PC has two disk drives, the Docking Station cannot work properly.
- ③ Remove all removable disk drive such as USB flash memory card from the PC.

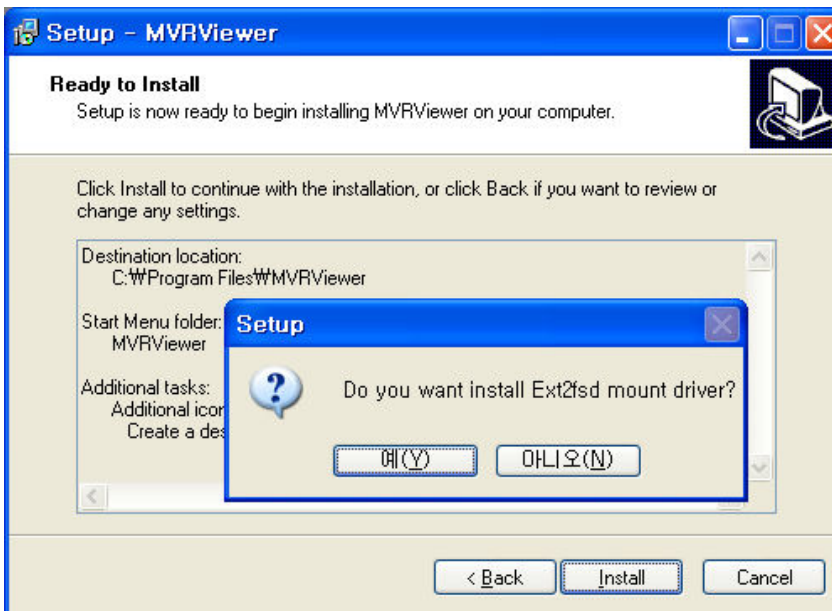
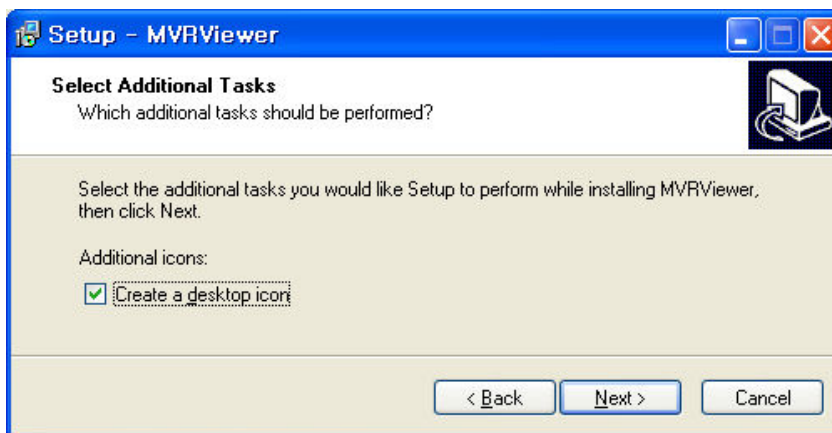
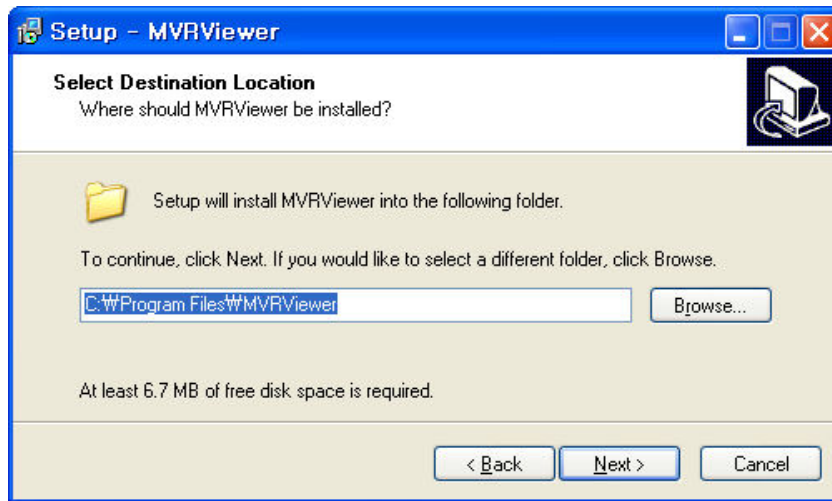
2) Docking Station Connection to PC

- ① Turn off the power switch of Docking Station.
- ② Connect the power cord and USB interface cable to PC USB port.
- ③ Turn on the power switch of Docking Station

3) Installation of Docking Station Driver and Client Viewer Software

- ① Insert the Client Viewer Software CD in CD drive of PC.
- ② The **setup** program automatically runs as following sequences.



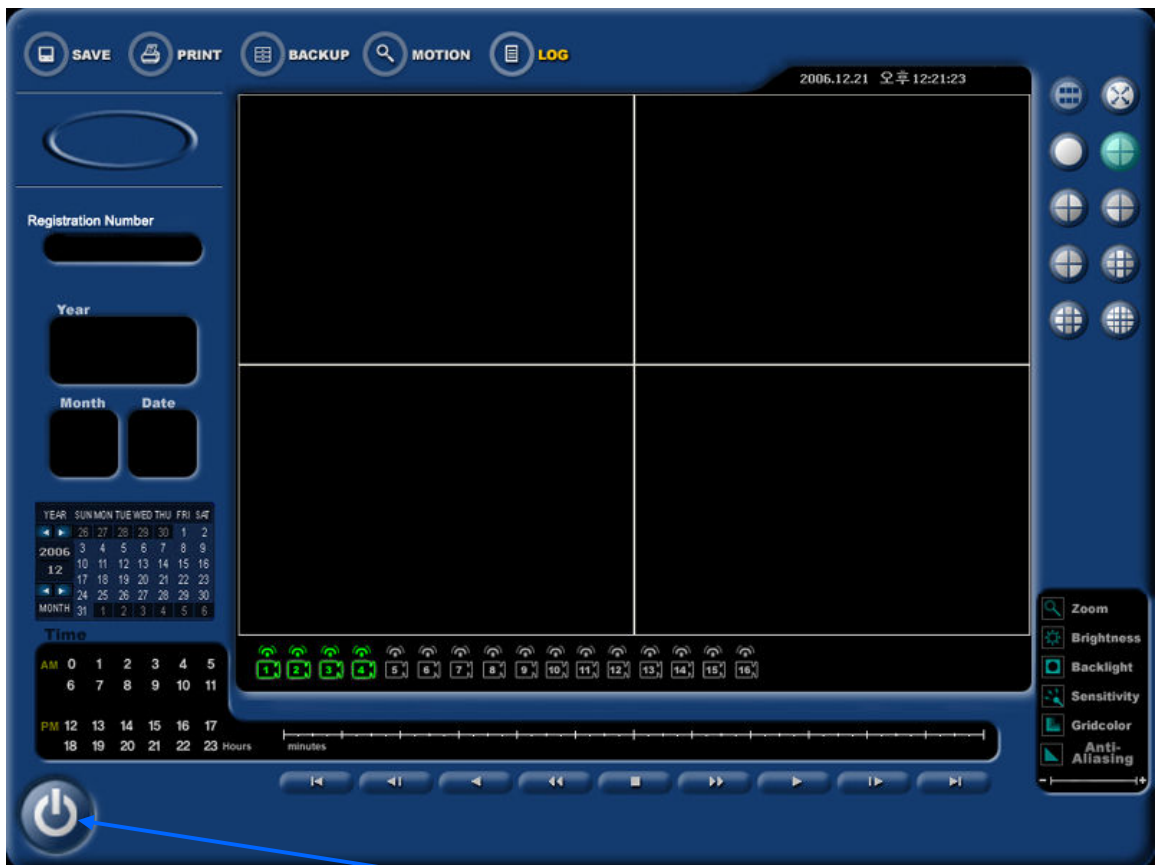


- ③ You should click the **Install**, then again click **Yes** button to install the Docking Station successfully at this step.



④ Click the **Finish** button, then you can finish the **Docking Station** driver and **Client Viewer Software** installation in your PC.

⑤ When you click the **Finish** button, you can see the **Client Viewer** window as follows.



⑥ You can close the window by clicking the **Power Off Icon** located at left bottom side of window.

4) Load Removable HDD into Docking Station

- ① Unlock the key of removable HDD
- ② Open the lever to horizontal position.
- ③ Insert it in the tray of Docking Station.
- ④ Push and slide it rear direction until it positions to end.
- ⑤ Close the lever and lock the key.
- ⑥ Turn the power switch **ON**.
- ⑦ Run **Client Viewer** software.



5) Unload Removable HDD from Docking Station

- ① After you finish the Client Viewer software, you need to remove the “**USB Large Storage Device**” from your PC safely before unloading the removable HDD from Docking Station.
- ② Place the cursor on the icon of “**Remove Hardware Safely**” located on right bottom side of your PC.
- ③ A small icon description of box will be shown → “**Remove Hardware Safely**”
- ④ Click the left button of mouse, then “**Remove USB Large Storage Device Safely**” message box is shown again. At this time, click this message box by left button of mouse.
- ⑤ New message box will be shown as follows.



- ⑥ When the above message is shown on the PC monitor, turn the power switch **OFF**.
- ⑦ Unlock the key of removable HDD
- ⑧ Open the lever to horizontal position.
- ⑨ Draw the removable HDD from Docking Station.

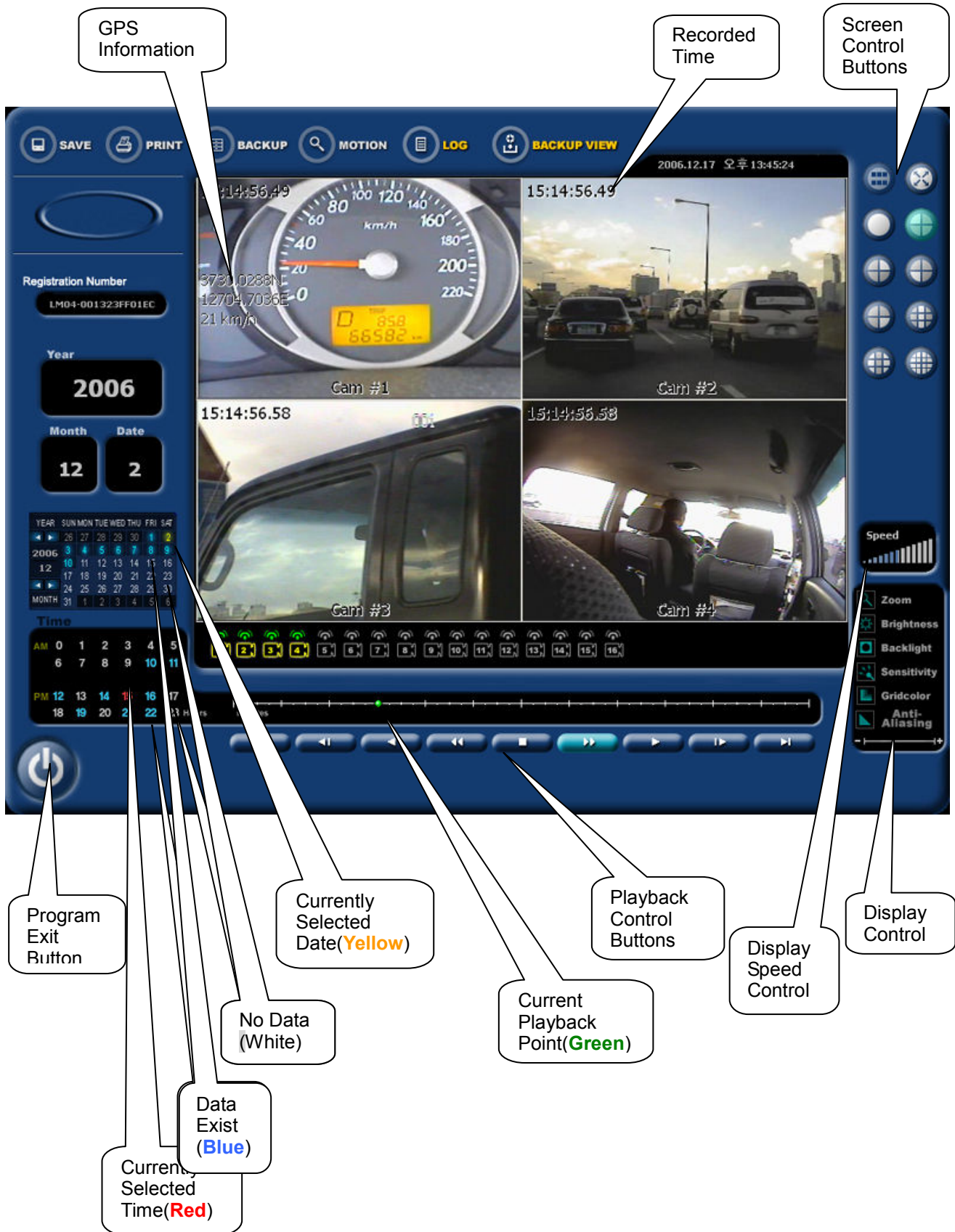
Caution : *That icon is not appeared if the MobileAVX ‘Removable HDD’ is not inserted in the Docking Station even you turn the power switch ON.*

7. MobileAVX Client Viewer Software Operation

MobileAVX
Client Viewer Software
Operation Manual
Version 5.0



01. Screen Overview



02. Selection of Date & Time

Date ;

- White Color : No data.
- Blue Color : Data exist.
- Yellow Color : Currently selected date.

Time ;

- White Color : No data.
- Blue : Currently selected time.
- Red Color : Currently selected time.

Green Dot ; Currently displayed point in minute.
- You can move the point when the display is stopped.

03. Channel Selection

Once you select the date & time, all of 4 channels data is automatically displayed. If you click a window of channels by left button of mouse once, only the selected channel is being displayed in red outline and other channels are stopped. Also 4 functions menu buttons marked in red box on above picture will be available. If you click the selected window once again, it has been released and all 4 channels are being displayed again.

04. Playback Control



- ① **Start** : Jump to the start point in selected time.
- ② **Backward 1 Frame** : Display 1 frame backward in frame unit.
- ③ **Play Backward** : Playback in reverse sequence in normal speed.
- ④ **Fast Backward** : Fast playback in reverse sequence.
- ⑤ **Stop** : Pause function.
- ⑥ **Fast Forward** : Fast playback in forward sequence.
- ⑦ **Play Forward** : Playback in forward sequence in normal speed.
- ⑧ **Forward 1 Frame** : Display 1 frame forward in frame unit.
- ⑨ **End** : Jump to the end point in selected time.



When you click the **Fast Forward** or **Fast Backward** button, the display speed control icon will be shown as left. You can control the display speed by clicking the bar.

05. Screen Control

You can manipulate the playback screen in various views.

At the start time, the screen is divided in 4 windows to show 4 channels at the same time. There are screen control buttons are upper right position of the window. You can show it in 1, 4, 9, 16 channels of screen mode by selecting one of screen control buttons.



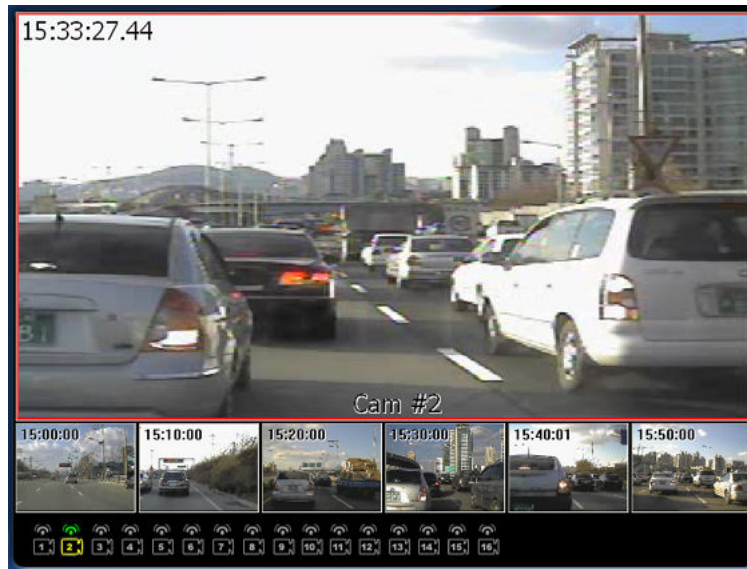
In single screen mode, you can also control various screen properties are available. You can manipulate the display status to see the recorded data in easy and detail for your own purpose.

- ① **Zoom** : Control zoom in & out by mouse wheel
- ② **Brightness** : Control brightness by mouse wheel.
- ③ **Backlight** : Backlight is adjusted on image.
- ④ **Sensitivity** : Control motion sensitivity in up & down.
- ⑤ **Grid Color** : Change grid color of motion detection area.
- ⑥ **Anti-aliasing** : Change the image in smooth.
- ⑦ **Zoom Bar** : Shows the set property level in bar position.



Thumb-nail Screen Mode

You can show a channel in full screen on the top and 6 small screens on the bottom in 10 minutes interval for selected time in a hour basis. You can easily jump the playback point by clicking one of 6 small screens in every 10 minutes. It is very useful function to verify the recorded images for some car accidents.



06. Extended Feature Buttons on the Top



There are 6 useful features are available on the top of **Client Viewer** window.

- ① **SAVE** : Save current image cut in JPG format in local disk.
- ② **PRINT** : Print out the current image cut to printer
- ③ **BACKUP** : Backup motion pictures for selected time range in local disk
- ④ **MOTION** : Retrieve motion detected events.
- ⑤ **LOG** : Retrieve all events during the operation or MobileAVX.
- ⑥ **BACKUP VIEW** : Playback the data which was stored in DAT device again.

1) SAVE

You can save the image cut of selected channel into local disk in JPG format.

If you click the **SAVE** button during playback, it will be paused automatically, then performs the **SAVE** operation. You need to enter the data path of disk storage which you want to save the image cut. The stored image name is automatically generated as follows, but you can change it by yourself.



**Auto-Generated
Image Name:**

Cam02_20061202_153840_46

2) PRINT

You can print the image cut of selected channel to printer directly.

If you click the **PRINT** button during playback, it will be paused automatically, then performs the **PRINT** operation



3) BACKUP

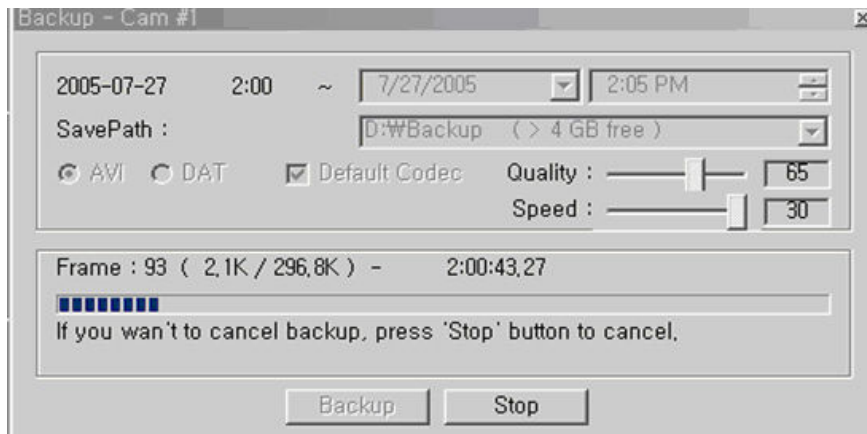
① AVI Backup

You can save the selected range of motion pictures into your local disk in AVI format. The total capacity of selected data cannot be exceeded 600MB.

You can do the backup in following sequences.

- Pause the playback of selected channel.
- Position the start point by moving the green dot on minute scale bard using left button of mouse.
- Click the **SAVE** button on the top
- Select the end time in the column of **Backup** box.
- Select **Save Path**.
- Check **AVI** and required column.
- Click **Backup** button finally.

You can playback the backup file in AVI format easily by using Windows MediaPlayer or other video player program. Some case, you may need to install the unified CODEC program to playback it by general video player and You can easily search the CODEC program from the internet.



② DAT backup

You can also backup the recorded motion picture data file in raw data format into your local disk. You can playback the DAT format backup file by clicking the **BACUP VIEW** icon on the top of **MobileAVX Clinet Program** window.

This function is not used almost nowadays.

4) MOTION

Some case, you may need to retrieve images which were stored by motion detection with the definition of motion detection area. You can search it using this function.

① Define Motion Detection Area

The motion detection area is defined in center of the window in default when you start the motion searching function. You can redefine the motion detection area by clicking left and right button of mouse.



Erase Motion Detection Area

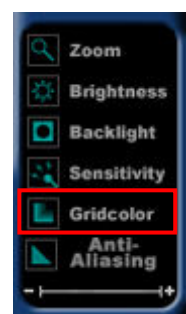
- Position the cursor on the start point of motion area
- Click **Right** button of mouse and drag the cursor to opposite position of the motion detection area which you want to erase the default motion detection area.
- Just release the **Right** button, then the default motion detection area is removed on the window.

Define New Motion Detection Area

- Place the cursor on the start position which you want to define the new motion detection area.
- Click the **Left** button of mouse and drag the cursor to the opposite position of new motion detection area.
- Just release the **Left** button of mouse, then the new motion detection area is shown on the window.

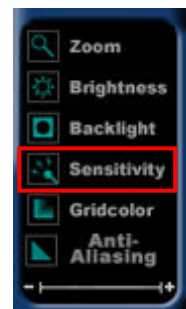
② Change Color of Motion Detection Area

The grid color of motion detection area is not be seen clearly caused by the overlapped on image. You can change the grid color by clicking the **Grid Color** button on right bottom side of **Client Viewer** program window.



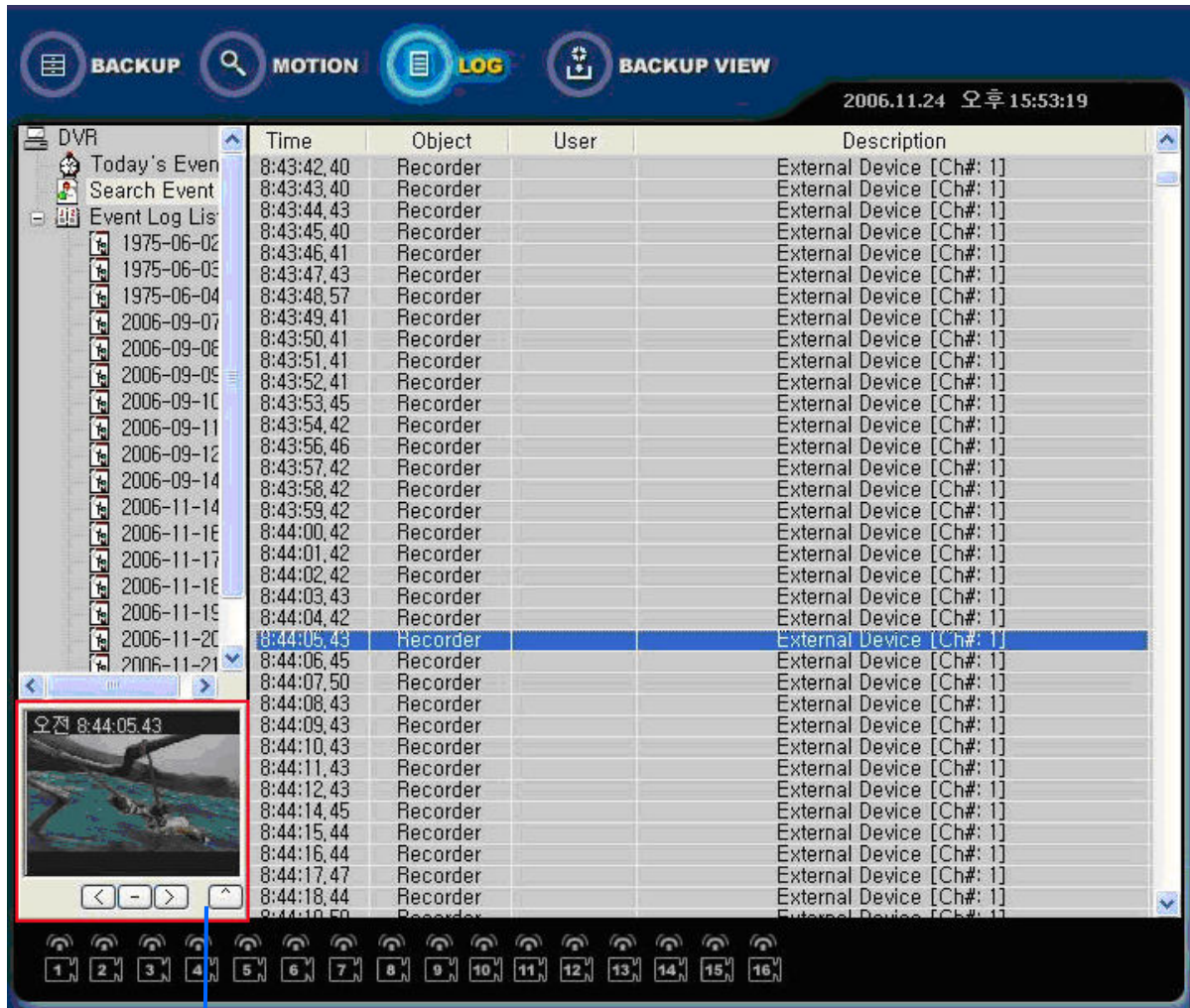
③ Change Sensitivity of Motion Detection

Also you can change the sensitivity level by clicking the **Sensitivity** button on right bottom side of **Client Viewer** program window.



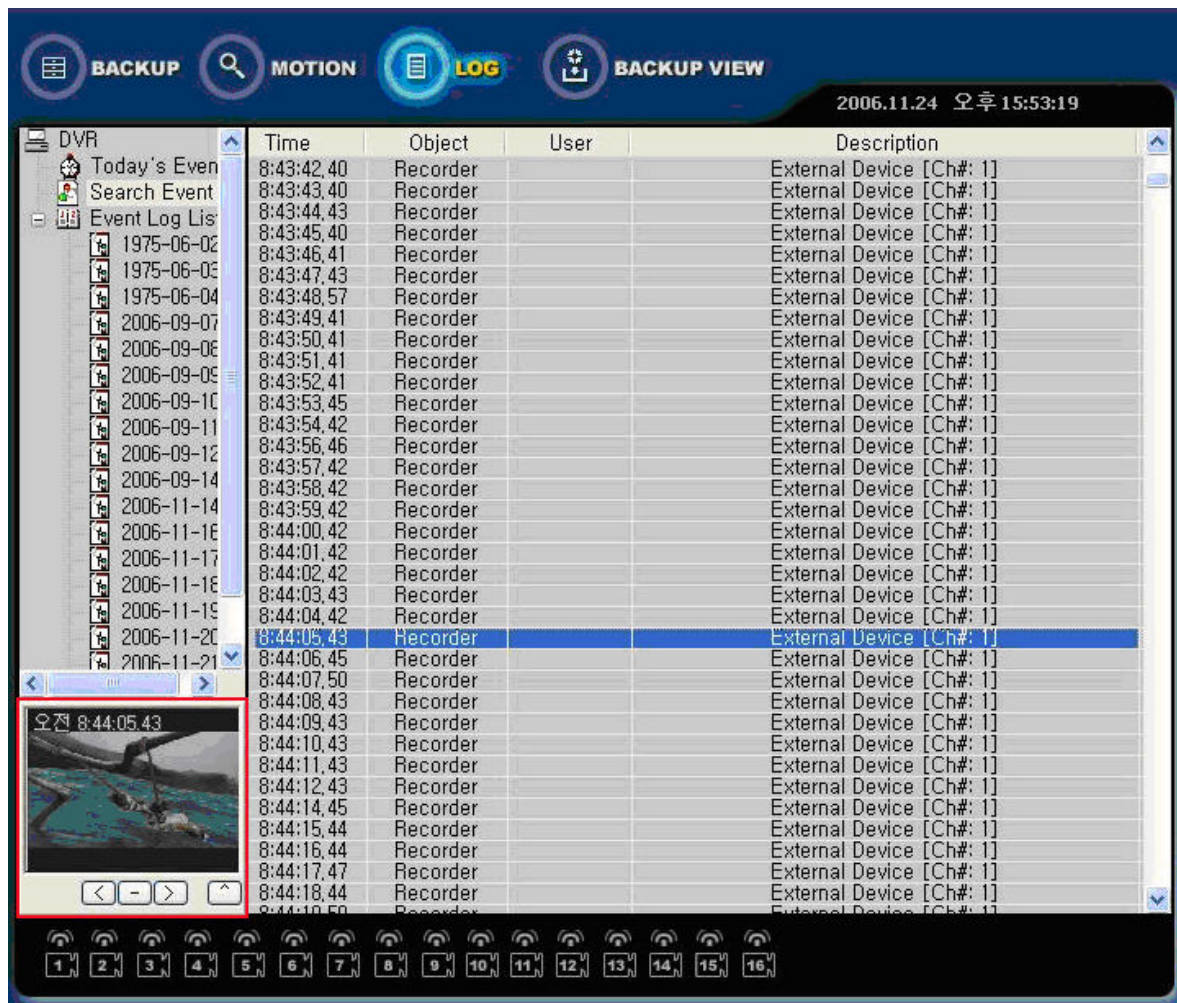
5) LOG

MobileAVX stores all information of system operation status, date & time basis events, sensor events, motion detection events and GPS data. Using this **LOG** function, you can search and retrieve stored data very easily. Click **LOG**, you can see all event list as follows.



If you click one of listed events, the stored images will be displayed in small pop-up box and you can also control its playback controls by clicking the button. If you click “^” button, it shows in 32-x 240 size.

- ① **Today's Event** : List today's events
- ② **Search Event** : You can search by various ways entering some keyword, motion, sensor and conditions. When you click **Search Event**, the search condition entering box will be pop-up.
- ③ **Event Log List** : List event logs in date sequence.



need to enter the range of data & time and to check multiple conditions, then click **Search** button. All events are listed that related to you checked conditions on the window.

If you want to search some information related to GPS, you need to check the **Recorder External Device** and enter the **keyword** what you want to search. You can search it in more detail and easy.

You can print and save the retrieved log list to printer and your PC.