AVerMedia[®] AVerDiGi EB1304 MPEG4

Operation Manual





FCC NOTICE (Class A)



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.

Federal Communications Commission Statement

NOTE- This equipment 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 when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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.

Changes and modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment.

European Community Compliance Statement (Class A)



This product is conformity with the protection requirements of EU Council Directives 89/336/EEC amended by 92/31/EEC on the laws of the Member States relating to electromagnetic compatibility.

Warning - This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures to correct this interference.

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THE MARK OF CROSSED-OUT WHEELED BIN INDICATES THAT THIS PRODUCT MUST NOT BE DISPOSED OF WITH YOUR OTHER HOUSEHOLD WASTE. INSTEAD, YOU NEED TO DISPOSE OF THE WASTE EQUIPMENT BY HANDING IT OVER TO A DESIGNATED COLLECTION POINT FOR THE RECYCLING OF WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT. FOR MORE INFORMATION ABOUT WHERE TO DROP OFF YOUR WASTE EQUIPMENT FOR RECYCLING, PLEASE CONTACT YOUR HOUSEHOLD WASTE DISPOSAL SERVICE OR THE SHOP WHERE YOU PURCHASED THE PRODUCT.

Battery Safety Information

- Store the batteries in a cool dry place.
- Do not dispose of used batteries in domestic waste. Dispose of batteries at special collection points or return to point of sale if applies.
- Remove the batteries during long periods of non-use. Always remove exhausted batteries from the remote control. Battery leakage and corrosion can damage this remote control, dispose of batteries safely.
- Do not mix old and new batteries.
- Do not mix different types of batteries: alkaline, standard (carbon-zinc) or rechargeable (nickel-cadmium).
- Do not dispose of batteries in a fire. The batteries may explode or leak.
- Never short circuit the battery terminals.



WARNING

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



CAUTION

IF THERE IS ANY DAMAGE, SHORTAGE OR INAPPROPRIATE ITEM IN THE PACKAGE, PLEASE CONTACT WITH YOUR LOCAL DEALER. WARRANTY VOID FOR ANY UNAUTHORIZED PRODUCT MODIFICATION.

Table of Contents

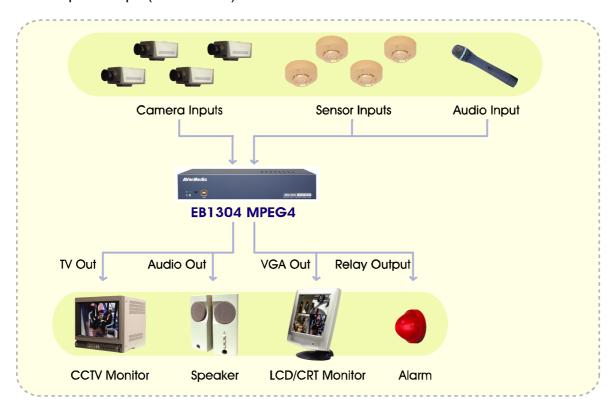
Chap	ter 1 Introduction	1
1.1	Package Content	2
1.2	Features and Specifications	2
1.3	Front & Side Panel	3
1.4	Back Panel	4
1.5	Setting Up the DVR Unit	4
1.5	5.1 Installing the Hard Disk	4
1.5	5.2 Connecting Devices	6
1.5	5.3 Connecting the Sensor/Relay device	7
Chap	ter 2 Operating the EB1304 MPEG4	8
2.1	Using the EB1304 MPEG4 for the First Time	8
2.2	Surveillance Screen	8
2.3	Playback the Video	9
2.3	3.1 To Playback Video	9
Chap	ter 3 OSD Navigation Tree	11
3.1	Remote Control Function	12
3.2	Menu Function	13
Chap	ter 4 Warranty Notice	18

Chapter 1 Introduction

EB1304 MPEG4 is a 4-channel stand-alone 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.

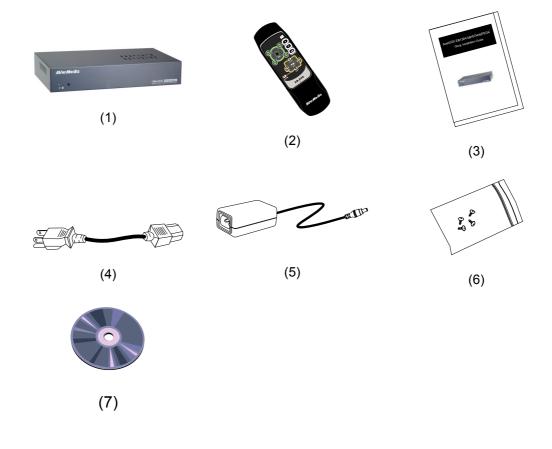
Surveillance and digital recording are controlled through the remote control. With the On-Screen-Display (OSD) menu, user can customize video recording setting, sensor and alarm settings, password protection, hard drive recycling.

Surveillance video is recorded in high-quality MPEG4 format. Two recording modes are supported, **D1** Mode can record video from each video camera in 720 x 480 resolution at 60fps and **CIF** Mode can record video in 360 x 240 resolution and up to 120 fps/100 fps (NTSC/PAL).



Connecting cameras, sensors, alarm, and display device

1.1 Package Contents



- (1) AVerMedia® AVerDVR EB1304 MPEG4 unit
- (2) Remote Control (batteries included)
- (3) Quick Installation Guide
- (4) Power Cord
 - * The power cord varies depending on the standard power outlet of the country where it is sold
- (5) Power Adapter
- (6) DVR accessories (including 4 screws)
- (7)Software CD (User Manual included)

1.2 Features and Specifications

- Non-PC stand-alone security digital video recorder
- 4 composite video inputs and 1 composite output
- VGA output for LCD and CRT monitor display
- OSD control
- MPEG4 video compression

Auto-detect NTSC or PAL video system

Supports 1 hard disk drive (not included)

Full-screen resolution:

Display: 720 x 480 (NTSC), 720 x 576 (PAL)

Recording: 720 x 480 (NTSC), 720 x 576 (PAL)

■ Display and recording frame rate:

D1 mode: 60/50fps(NTSC/PAL)

CIF mode: 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

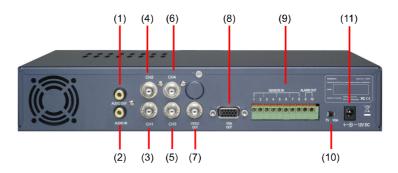
■ Multiple language operation screens

1.3 Front Panel



Name	Function
(1) DVR Power LED	: Light when the unit is on
(2) HDD LED	: Indicate the hard disk running state. Light when the HDD is running
(3) IR Sensor	: Receive the signal from the remote control to operate the unit

1.4 Back Panel



Name		F	unction
(1)	Audio Out	:	Output the audio signal to a speaker
(2)	Audio In	:	Input the audio signal from a microphone or audio output device. The audio is embedded with channel 1
(3)	CH1	:	Input the video camera signal and display it on channel 1
(4)	CH2	:	Input the video camera signal and display it on channel 2
(5)	CH3	:	Input the video camera signal and display it on channel 3
(6)	CH4	:	Input the video camera signal and display it on channel 4
(7)	Video Out	:	Output the video signal to a TV
			The DVR unit support 2 video output ports and you can only select to output the video either from the VGA OUT or VIDEO OUT
(8)	VGA OUT	:	Output the video signal to a CRT or LCD monitor
(9)	Sensor In & Alarm Out	:	Support up to 4 sensor device and 1 relay device (Relay: 1A @ 125V AC/30V DC)
(10)	TV-VGA	:	Switch to select the video output. Make sure to set the video output before turning on the unit
(11)	12V DC	:	Connect the power adapter into this port

1.5 Setting Up the DVR Unit

1.5.1 Installing the Hard Disk

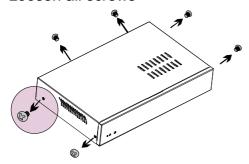
The DVR unit allows you to install one hard disk. Before installing the hard disk, make sure to set the hard disk master jumper setting. Adjust the jumper setting according to the instructions on the hard disk label.



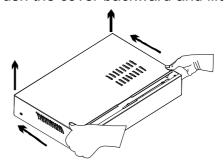
Use 40GB/ 7200RPM IDE hard disk or larger is recommended

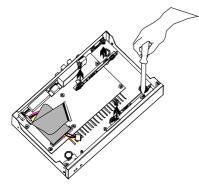
Follow the illustrated instructions below to install the hard disk:

1. Loosen all screws

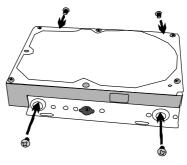


2. Push the cover backward and lift

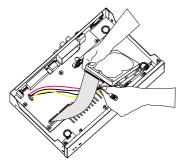




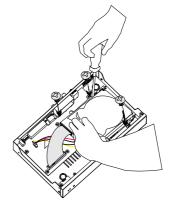
3. Loosen the hard disk rack 4 screws 4. Secure the brackets on the hard disk



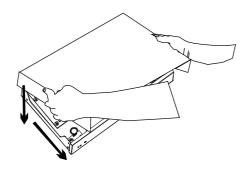
5. Connect the end of the IDE cable and the power connector to the hard disk



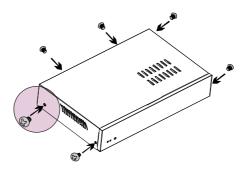
6. Secure the hard disk inside the unit then replace unit cover



7. Push the cover forward



Secure the cover 8.

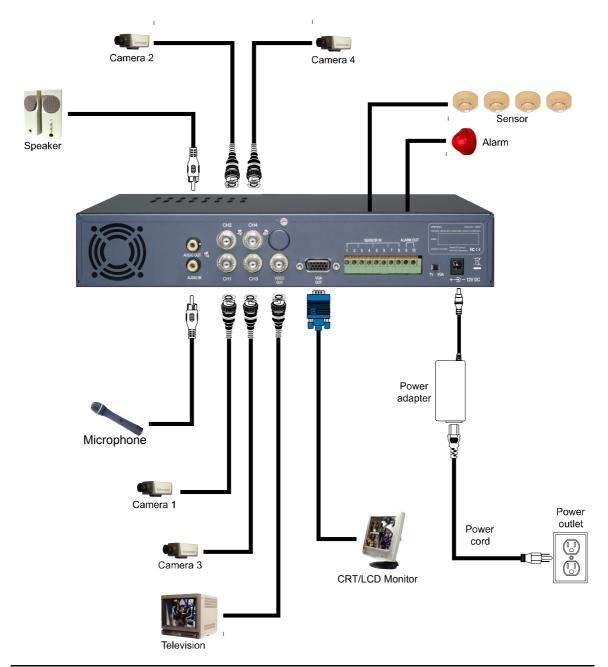


9. You may now connect all the cables. When the power is connected, the Power LED light 🕁 turns on

1.5.2 Connecting Devices

The back panel of the DVR unit, you can connect up to 4 video cameras, 4 sensor devices, 1 alarm device and output video to a TV or CRT/LCD monitor.

Follow the illustration below to make the connection:

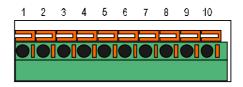




- The DVR unit support 2 video output ports and you can only select **ONE** to output the video either from the VGA OUT or VIDEO OUT.
- Each time you change the video display output, the power must be **UNPLUGGED** and **PLUGGED** to reset.

1.5.3 Connecting the Sensor/Relay device

The Sensor and Alarm ports enable you to connect (4) sensor inputs and (1) relay outputs. Just connect the external sensor and relay pin directly to the pinhole. Check the table below and locate which pinhole is assigned to sensor input and relay output.



1.5.3.1 I/O Card Sensor and Relay pinhole allocation:

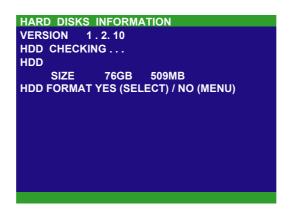
The signal from the sensor (i.e., infrared sensors, smoke detectors, proximity sensors, door sensors, etc.) is being transmitted to the unit and this triggers the system to respond and send signal to relay device (i.e., alarm, telephone etc).

Pin#	Definition
1	Sensor 1 positive pole signal
2	Sensor 1 negative pole signal
3	Sensor 2 positive pole signal
4	Sensor 2 negative pole signal
5	Sensor 3 positive pole signal
6	Sensor 3 negative pole signal
7	Sensor 4 positive pole signal
8	Sensor 4 negative pole signal
9	Relay negative pole signal
10	Relay positive pole signal

Chapter 2 Operating the EB1304 MPEG4

2.1 Using the EB1304 MPEG4 for the First Time

Upon connecting the power, the unit automatically detects the status of the hard disk. The hard disk must be formatted before you can use it with EB1304 MPEG4. If you are prompt to format the hard disk, press (select) for **YES** to format the hard disk and (menu) for **NO** to remain unchanged.



Before starting record video, adjust the date first. Press to call up the OSD menu, and then use and or and and select **Submenu**. And then, press or again to make a selection. And then, use and or play and play to adjust the date and use or play and play buttons to move the selection to the left and right.

2.2 Surveillance Screen

To know if the channel is being recorded, the "●" record symbol would appear beside the channel number. The ● (microphone) and ● (speaker) indicate that the audio is available. The information below the screen shows the current date and time, recording mode (record schedule setting), and the percentage of the used hard disk space.





Full Screen Preview

4-Channel Preview

When you are in full screen preview, press the following buttons on the remote control to switch to different channel, or preview all 4 channels:











CH1: Camera1

CH2: Camera 2

CH3: Camera 3

CH4: Camera 4 QUAD: 4-Channel

Playback the Video 2.3

If the unit is recording the video, you may have to stop video recording in order to do video playback. To stop video recording, press ____.

2.3.1 To Playback Video

1. Press PLAY

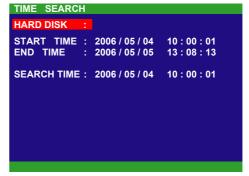
2. Use the and or or and and select TIME SEARCH or EVENT LIST. Then, press or to make a selection.



TIME SEARCH (search by date and time):

Use the and or and and stop buttons and select **SEARCH TIME**. Then press or again to make the selection.

2. In the SEARCH TIME, user may now select the date and time from where you want to begin the video playback.



time. Then press or play again to make the selection.

3. To start video playback, the time in second must be set. Use the move the selection to the left most. Use the and pown or pause and select the time in second. Then press select or plays.

EVENT LIST (search by condition):

- 1. Use the and or and and stop buttons to select from the list. Press again to make the selection.
- Listed below are the following recording conditions:

EV	ENT LIST		
S	2006 / 05 / 03	13:26:34	13:26:50
Α	2006 / 05 / 03	13:00:01	13:16:46
Α	2006 / 05 / 03	12:00:01	13:00:01
В	2006 / 05 / 03	11:48:37	12:00:00
Α	2006 / 05 / 03	11:30:23	11:31:18
Α	2006 / 05 / 03	11:29:47	11:30:13
В	2006 / 05 / 03	11:28:55	11:28:58
s	2006 / 05 / 03	11:28:33	11:28:55
Α	2006 / 05 / 03	11:25:41	11:28:32
Α	2006 / 05 / 03	11:23:26	11:23:30
\mathbf{v}			

A - Always Recording

It records non-stop and automatically continue recording when interrupted

S - Sensor Recording

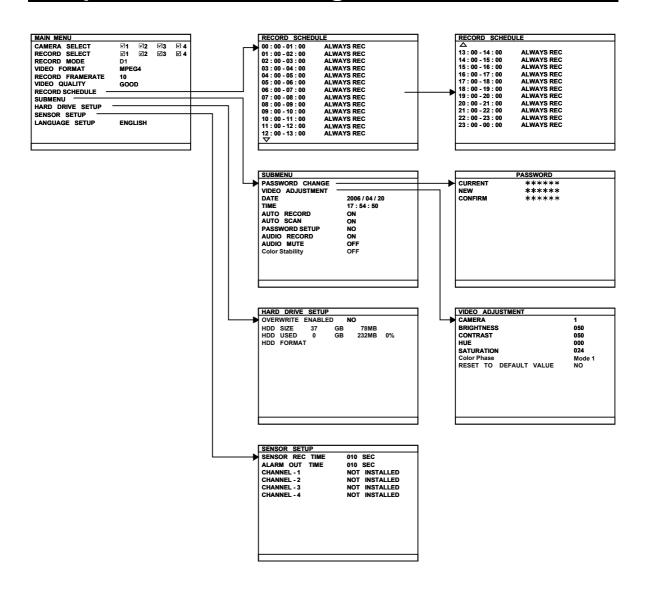
It records when the sensor has activated

B - Button Recording

It records when the RECORD record button is pressed

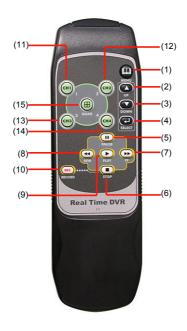
3. The "▶" play symbol would appear beside the channel number when you are previewing in playback mode.

Chapter 3 OSD Navigation Tree



3.1 Remote Control Function

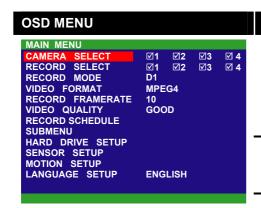
Use the Remote control to operate the OSD menu on surveillance screen.



Butto	n	Function
(1)	MENU	To enter the OSD Main menu / exit from the main menu or sub-menu display
(2)	UP	To go up and down and select the items in the menu list or
(3)	DOWN	change the settings
(4)	SELECT	Make a selection / Enter sub-menu
(5)	PAUSE	To go up and down and select the items in the menu list or
(6)	STOP	change the settings
(7)	FF	To move the selection to the left and right
(8)	REW	
(9)	PLAY	Make a selection / Enter sub-menu
(10)	RECORD	Start video recording
(11)	CH1)	Switch to Channel 1
(12)	CH2	Switch to Channel 2
(13)	СНЗ	Switch to Channel 3
(14)	СН4	Switch to Channel 4
(15)	QUAD	Switch to QUAD mode

3.2 Menu Function

If the unit is currently recording the video, user may have to stop video recording to change the settings. Use remote control to navigate in the OSD menu. The red frame turns yellow when you are making a selection.



Description

CAMERA SELECT:

Enable/disable the channel number to display the video on the surveillance screen.

RECORD SELECT:

Enable/disable the channel number to record video.



The channels that are enabled in the camera select setting can only be set for video recording.

RECORD MODE:

Select D1/CIF recording mode.

Under **D1** mode, the video recording is in full screen resolution and takes turns from one channel to the next one. Each channel is recorded only at a maximum frame rate of 15fps. You can switch to view the video in single full screen or quad screen.

Whereas in **CIF** mode, video recording is at a lower resolution, but each video is recorded in 30fps/25fps (NTSC/PAL). You can only view the video in quad screen.

VIDEO FORMAT:

The recorded video is in MPEG4 format.

RECORD FRAME RATE:

Set the number of frames per second to be recorded. Refer to the table below for the available record frame rate settings. The higher the frame rate is, it uses more hard disk space.

Video Standard Record Mode	NTSC	PAL
D1	60, 20, 4	48, 20, 4
CIF	120, 60, 40, 20, 4	100, 48, 20, 4

VIDEO QUALITY:

Select the video quality setting from BEST, HIGH, GOOD, NORMAL or LOW.

Choosing NORMAL allows you to record more hours but the quality of the recorded video is moderate. For more information about the recording time, please visit our website and look for EB1304 MPEG4.

LANGUAGE SETUP:

Select from the available language

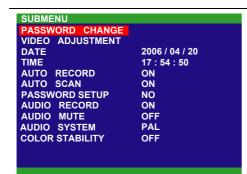
OSD MENU RECORD SCHEDULE 00:00-01:00 ALWAYS REC 01:00-02:00 ALWAYS REC 02:00-03:00 ALWAYS REC 03:00-04:00 ALWAYS REC 04:00-05:00 ALWAYS REC 05:00-06:00 ALWAYS REC 06:00-07:00 ALWAYS REC 07:00-08:00 ALWAYS REC 08:00-09:00 ALWAYS REC 09:00-10:00 ALWAYS REC 10:00-11:00 ALWAYS REC 11:00-12:00 ALWAYS REC

Description

RECORD SCHEDULE:

By default, in 24 hours, the recording schedule is set to always record every hour. Refer to the table below to customize the recoding condition.

Condition	Description
NO REC	Disable video recording.
ALWAYS REC	Record non-stop.
SENSOR REC	Start recording when the sensor has activated.



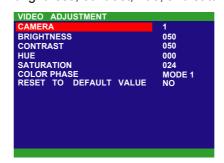
PASSWORD CHANGE:

Set a security combination number. This is a security measure that prevents formatting of the hard disk or changing the system settings. The factory default password is 111111.



VIDEO ADJUSTMENT:

Select the camera number and set to adjust the video brightness, contrast, hue, and saturation value.



DATE:

Set the current date.

TIME:

Set the current time.

AUTO RECORD:

Enable/disable auto continue recording when interrupted (i.e., power breakdown, video playback or configuration setup). It continue recording after 10 second of idleness. This is applicable in Always Record mode.

AUTO SCAN:

Enable/disable auto cycle switch to display the next channel when in full screen preview.

SUBMENU PASSWORD CHANGE VIDEO ADJUSTMENT DATE TIME AUTO RECORD AUTO SCAN PASSWORD SETUP AUDIO RECORD AUDIO RECORD AUDIO RECORD AUDIO MUTE AUDIO SYSTEM COLOR STABILITY OFF

Description

PASSWORD CHANGE:

Enable/disable full system password protection. This would prevent unauthorized user to stop video recording, change system settings and formatting the hard disk.

AUDIO RECORD:

Enable/disable audio recording. To record sound, make sure the mic is connected to the unit.

AUDIO MUTE:

Enable/disable to hear audio sound. To hear sound, make sure the unit is connected to a speaker.

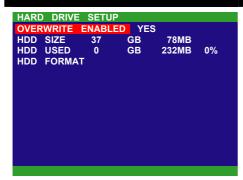
AUDIO SYSTEM:

Select the audio system — PAL or NTSC

COLOR STABILITY:

Enable/disable the color stability which display on Surveillance Screen.

OSD MENU



- * HDD SIZE shows the total capacity of the hard disk.
- * HDD USED shows the amount of space that has been used.

Description

OVERWRITE ENABLED:

Enable/disable replacing the earliest record when the hard disk space runs out. By default, the HDD overwrite setting is enabled.

HDD FORMAT:

For security purpose, you may have to enter the password to format hard disk.

To format hard disk:

- 1. Use the and or and stop or buttons to go up and down and select HDD FORMAT. Then press or play.
- 2. In the CHECK PASSWORD screen, press or PAUSE and buttons to select the security

combination number. Press or PLAY button again to make the selection. Repeat till you key in the last number.

To move the selection to the left and right, use and and buttons.



- 3. After entering the last number, the system will format the hard disk.
- 4. It is done when the "HDD FORMAT COMPLETED" appears.





Formatting the hard disk will permanently delete all the records and can no longer be retrieved.

OSD MENU

SENSOR SETUP SENSOR REC TIME 010 SEC ALARM OUT TIME 010 SEC CHANNEL - 1 NOT INSTALLED CHANNEL - 2 NOT INSTALLED CHANNEL - 3 NOT INSTALLED CHANNEL - 4 NOT INSTALLED

Description

SENSOR REC TIME:

Set the amount of time (in second) to record when the sensor has been triggered.

ALARM OUT TIME:

Set the amount of time (in second) to continue sending the alarm once activated.

CHANNEL 1~4:

Customize the initial state of the attached sensor. Refer to the table below to customize the sensor state.

Condition	Description
NOT INSTALLED	Indicates that there is no sensor connected.
NORMAL OPEN	Indicates that the initial state of the sensor is normal open. Video recording initiate when there is a changes in the sensor state.
NORMAL CLOSE	Indicates that the initial state of the sensor is normal close. Video recording initiate when there is a changes in the sensor state.

Chapter 4 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 :

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.

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

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

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

We will pay labor and material expenses for covered items. However, we will not pay for the following:

- 1. Removal or installation charges.
- 2. Shipping charges.
- 3. Any incidental charges.

EXCLUSION OF DAMAGES

THE MANUFACTURER'S SOLE OBLIGATION AND LIABILITY UNDER THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT OF A DEFECTIVE PRODUCT AT OUR OPTION. THE MANUFACTURER SHALL NOT, IN ANY EVENT, BE LIABLE TO THE PURCHASER OR ANY THIRD PARTY FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGE (INCLUDING, BUT NOT LIMITED TO, DAMAGES RESULTING FROM INTERRUPTION OF SERVICE AND LOSS OF BUSINESS) OR LIABILITY IN TORT RELATING TO THIS PRODUCT OR RESULTING FROM ITS USE OR POSSESSION.

LIMITATIONS OF IMPLIED WARRANTIES

There are no other oral or written warranties, expressed or implied, including but not limited to those of merchantability or fitness for a particular purpose. Any implied warranties are limited in duration to one year from the date of purchase.

STATE LAW AND YOUR WARRANTY

This warranty gives you specific legal rights, and you may also have other rights granted under state law. These rights vary from state to state.

CONTACT INFORMATION

http://www.avermedia.com http://www.averdigi.com