REVEAL®

JUST VIEW IT ®

Operating Instructions for REC02U
HD 4-CH Dual SD Card Hybrid HD MDVR

Please read this manual completely before operating the SYSTEM

Product Note:
SET THE TIME ZONE
Properly install (2) Class 10 256GB SD cards (Not included)
(1) 128GB Class 10 SD Card currently factory installed
Become familiar with retrieving video

VERITY®

Contents

ABOUT US

Verity does not just buy systems off the shelf overseas, put our logo on them, and ship them out. We work with engineers, some at our location in Mishawaka, Indiana to design camera systems to meet the safety needs of several industries.

Where some companies just fall for the latest trend and bring untested safety equipment to the market, we perform the needed testing and often help factories make a better product for which we employ the ODM (original design manufacturing) method. We employ global engineers which help us offer the latest technologies.

One step of every project we do is: "How will we defend it in court?" By doing extensive testing, we know our product is the best. We make our products Verity Safe™.

Optional
IR Extender
Control
Panel

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Verity products are intended to be installed as a supplement, and our observation systems and/or products are not intended to be a substitute for mirrors or other standard motor vehicle equipment which may be required by law. Verity products promote improving vehicle/driver operations. Our products are no substitute for proper driving techniques, observance of traffic laws, and motor vehicle safety regulations.

Installation Location
It is unlawful in most locals for any person to drive a motor vehicle equipped with a television viewer/screen located at any point forward of the back of the driver's seat (or in any location that is visible, directly or indirectly-to the driver) while operating the vehicle. Our systems are designed to be used primarily as a rear observation device.

DO NOT OPEN ANY COMPONENT. There are no serviceable parts inside any Verity product. Opening the product will break the tamper indicators and void the warranty. If a problem should arise, please contact our technical support 574-807-6004. For faster response, fill out a service ticket found on our website. www.veritysafe.com

WARNING

♦ Do not pull cables tightly and add tension to them. A drip loop is required where applicable.

♦ Do not place cables where they can be crushed in any manner.

CAUTION

♦ To avoid damage to the electronic circuit, stop using this product while doing welding work to the vehicle and/or trailers.

♦ When cleaning monitors and cameras, use a damp lint-free cloth only.

♦ Connect this unit only to other compatible Verity components.

♦ Although our products have built-in surge and cross polarity protection, make sure all cables are connected properly. Improper cable connections may damage the camera and the monitor.

♦ Cables should not be allowed to touch hot or rotating parts, such as the engine or exhaust.

♦ Do not locate the monitor near heat-generating vents or devices.

♦ Turn off power to the monitor when connecting the camera.

Monitors are not designed to be waterproof. (Our SM07F waterproof monitor is the exception). Exposure to water, such as rain, may damage the unit.

SYSTEM FEATURES

Features:

H.265/H.264 image compression encoding

4 channels of D1/960H/AHD 720P simultaneous audio and video recording/replaying

4- channel of 960H + 1- channel IPC 1080P HD camera full-framed recording

Air video interface is used to provide high reliability and strong anti-seismic property

Records 8 seconds after power failure

Two SD cards supported 256 GB for each. 2 x 256GB = 512GB storage

Unique inputs: 1 RS485 interface, 2 RS232 interfaces

8V-36V wide voltage DC supply

High/low-temperature resistance, operating under -25℃ / +75℃

System

Language: English / Chinese

Operation Interface: Graphical User Interface (OSD menu）

Two-Level Password Security: Administrator & User

Video

Video-Input: Supports 4 channels CIF/HD1/D1/960H/720P camera video input

Supports 2-CH 720P AHD + 2-CH 960H analog mixing Video input

Supports 1-CH 720P/1080P IPC + 4-CH 960H/D1/CIF Video input

Note: 4 channels 720P AHD or 1-CH 720P/1080P IPC + 4-CH 960H Video input will require high speed SD card (> 80Mb/S, Class 10 or higher)

Video Output 2 Channels: front panel 3.5mm Jack, 4-pin rear panel on 24 pin I/O Port.

Video Display: Single picture, 1~5 pictures

Signal System: PAL / NTSC - PAL@100 frame 720P/sec; NTSC@120 frame 720P/sec

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Audio
Audio Input: 4 Channels
Audio Output: 2 Channels - Front Panel 3.5mm Jack, Rear Panel on 24pin I/O Port
Recording & Storage
Image Resolution: CIF / HD1 / D1 / 960H / 720P
Video Coding: ISO14496-10 Industry Standard
Video Bit Rate: CIF (Common Intermediate Format): 1536Kbps ~ 128Kbps
HD1/D1: 2048Kbps ~ 400Kbps
960H: 2048Kbps ~ 400Kbps
720P: 4096Kbps ~ 400Kbps
Select from 8 Levels of video image quality ranging from 1(Highest) to 8 (Lowest)
Audio Bit Rate: 40Kbps
Storage: 2 SD Card Slots, Up to 256GB each, Class 10 or higher SD card required
Alarm
Alarm Input: 8 Channels, select trigger for either less than 1VDC or greater than 5VDC
Alarm Output: 1 Channel, 12V output
Communication Ports
RS485: 1 Port for PTZ controller or data device usage
RS232: 2 Ports for communication or data usage
RJ45 Network: 1 Port of RJ45, for connection to an IP camera with a maximum of 1080P
Software
PC Playback A/V, files available for playback on PC. Limited playback is also available on MDVR
Software Upgrade: via SD card
Power
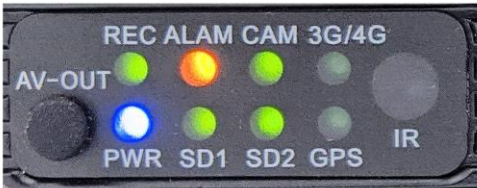Voltage Input: +8V~+36V   8～36, DC
Voltage Output: 12V (+/-0.2V) , Max 3A
Video Output Voltage: 2VP-P CVBS output analog signal
Dimensions
170 x 142 x 50mm including security cover 170x187x50mm

SYSTEM OVERVIEW

SIM A slot does not apply to the REC02U

Metal Connector Tamper-resistant Cover

Security cover helps prevent tampering or damage to the cable connection on the back of the MDVR.
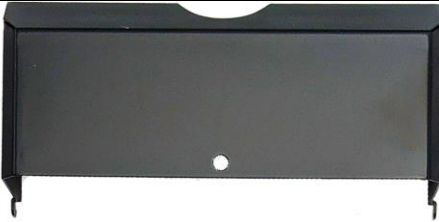

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SYSTEM OVERVIEW

DVR	REMOTE
CABLE CONNECTION COVER	FRONT A V CABLE
AV OUT / SENSORS	POWER CABLES
KEYS & ACCESSORIES	MANUAL

REMOTE OVERVIEW

POWER

LOGIN

NUMBER KEYS

ENTER

DIRECTION

RETURN

CANCEL DELETE

INFO

PLAYBACK

4-IMAGE FORMAT

PAUSE STEP

FRAME

PTZ

VERITY

SHORT CUT TEST
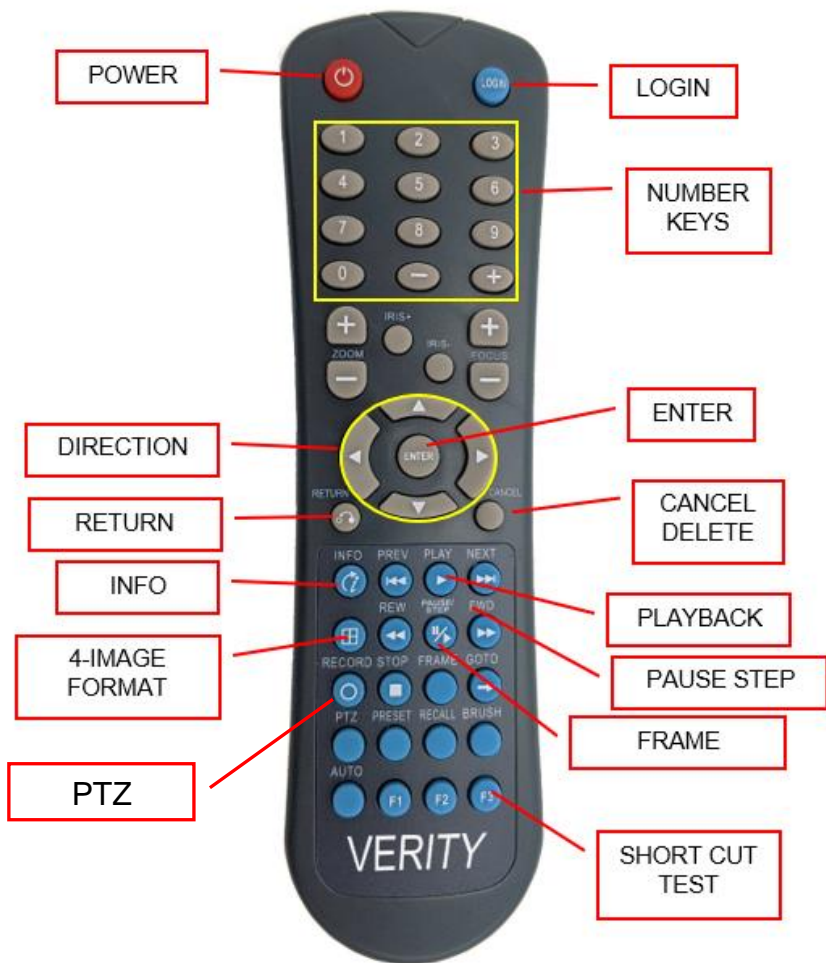
LOGIN: When the recorder is set with a password, press the Login key to input your Password.

KEY POINT: Because of security reasons, the DVR does not provide password recovery and reset features.
Always keep a copy of your password written down.

INFO: Check information

Quad 4 Image Format: Number keys 1, 2, 3, 4 on the monitoring interface, are used to switch between quad view and single view; press the Quad View key to display 4 screens. You can press number 1/2/3/4 to display channel 1, channel 2, channel 3 and channel 4, respectively.

RETURN: Return to the previous menu, and finally exit from the setup menu to the monitoring interface.

PAUSE/STEP: Used to pause playing or play images at a single step. Press the key again to recover normal play speed.

FRAME: Press this key to play a video in a frame rate.

PLAY: Press this key to start playing (search the video file to be played and select, then press the key to play it.)

FWD   Forward key in four grades: 2X,4X,8X,16X

REW   Rewind key in four grades: 2X,4X,8X,16X

NEXT: Page down or roll to the next file

PREV: Page up or roll to the previous file

PTZ: Auto, preset, call, zoom +, zoom -, focus +, focus -, aperture +, aperture -, PTZ, PRESET, RECALL,

BRUSH: F1, F2, F3, F1 is a key to start functional test

Important: Make sure the remote is facing the front of the DVR during remote operations.

If you install the DVR behind a wall or in a cabinet, the IR remote will not work.

For these applications, our IR extender will allow you to place the DVR hidden behind a wall and use our ADD02CP. This IR/LED panel has a 16 foot extended cable. This panel provides feedback on the operation of the DVR. Never miss another recording due to issues that may occur over the years.

PWR: Power on light.
REC: Record light recording.
HDD: For hard drive units flashes when recording.
ALM: Indicates an "Alarm" event.
V-LOSS: Video loss light: flashes when video loss.
ERR: Error light
IR: IR receiver
   The instructions for the ADD02CP will ship with the item.

USER LOGIN

Click the login button on the remote; the login interface will appear. Please input your User Name, Password, and the menu will show up.

The default UserName is **admin**, with a default password of **888888**.
If you have not set these values, you can use the right arrow button to pass through these.

To change the Password
To change the Password, In the Master menu, Click BASIC
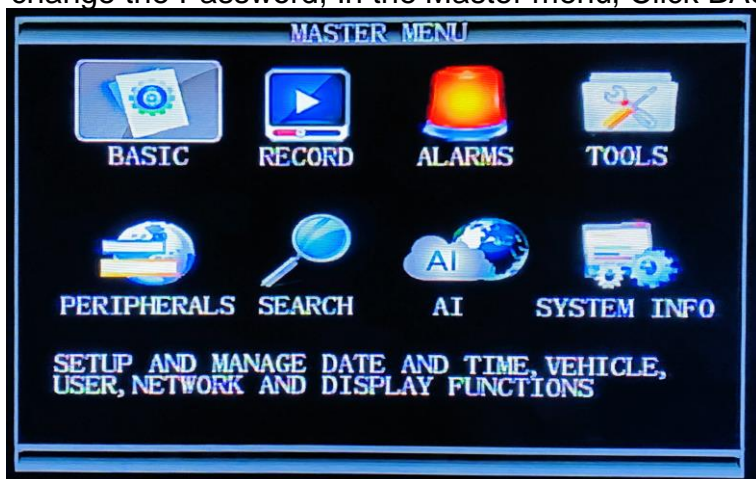
PASSWORD SETUP

Then Click USER in the **Basic Setup** Screen

Password Set Up

1 Password on/off
2 ADD a user
3 MODIFY a user
4 DELETE a user
5 SAVE a user

IMPORTANT NOTE for security reasons, there is NO retrieval option for passwords.
WRITE THE NEW PASSWORD DOWN!

MODIFY / ADD USER

When you add/modify a user, write down the password and keep in a safe place (it cannot be retrieved). Enter NAME, set LEVEL, add PASSWORD, and CONFIRM it. Click SAVE.

There are two levels of users:
System user: Grants unlimited access and change

privileges, including creating User Accounts, Passwords, and restricted access Rights
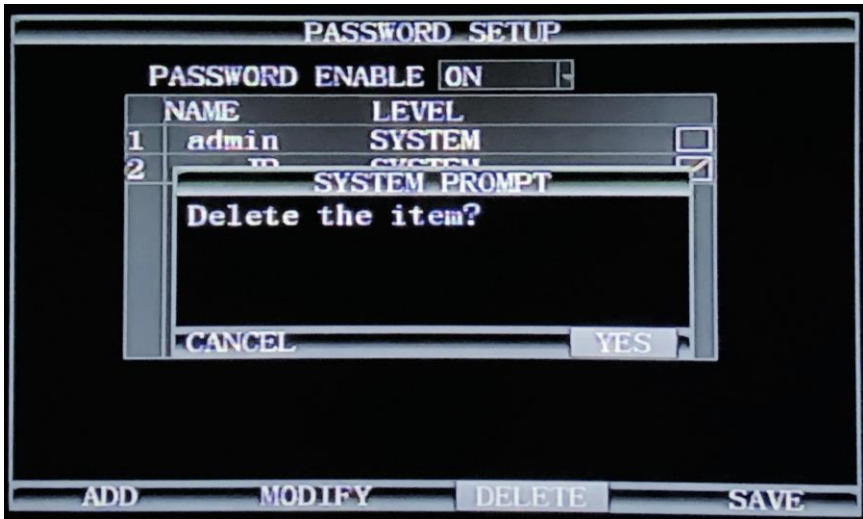**General user:** Provides Password, limited rights
Password: 6 digits (numbers only)
 *Confirm the new settings are correct and save the file.

Note: When working with users in the opening screen, you need to select a user if you wish to modify or delete that user.

DELETE USER

NOTE: Once a USER is deleted, it CANNOT be undeleted.

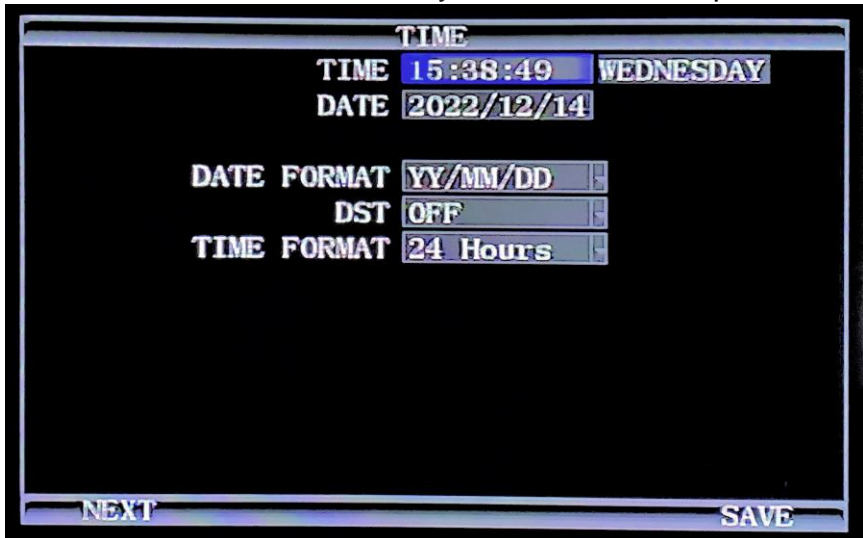# DATE AND TIME

Click on
BASIC

Click on
TIME

DATE TIME: THIS IS IMPORTANT for timestamping when recording. This is also necessary to allow for file searching by date and time.
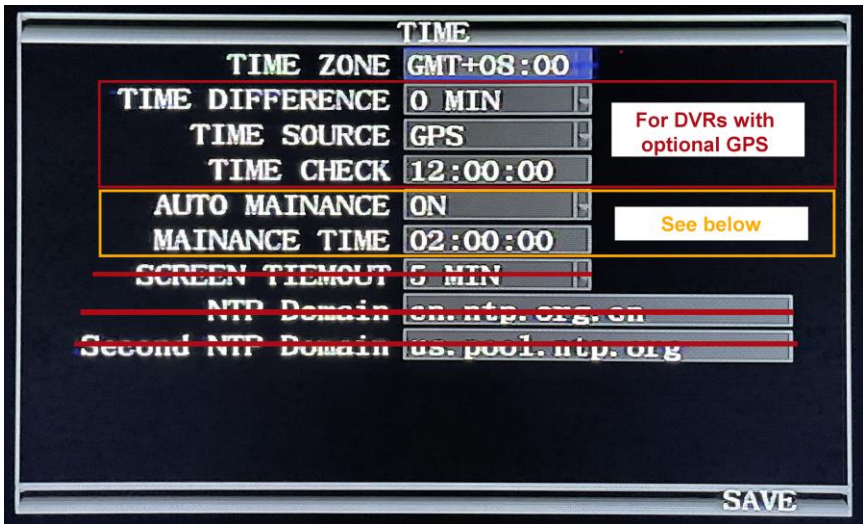**Date Format:** Selectable
DST Switch: used to sets the parameters for the daylight saving time option.
Time Format: 24 clock/military time or 12 hr. am/pm

Set Time Zone and Maintenance

TIME

TIME ZONE	GMT+08:00
TIME DIFFERENCE	O MIN
TIME SOURCE	GPS
TIME CHECK	12:00:00
AUTO MAINANCE	ON
MAINANCE TIME	02:00:00
SCREEN TIEMOUT	5 MIN
NTP Domain	cn.ntp.org.cn
Second NTP Domain	us.pool.ntp.org

For DVRs with optional GPS

See below

SAVE

1. It is advised to enable the auto-maintenance feature when the device is operating for a prolonged time, allowing the device automatically restarts within the set maintenance time. **NOTE: The DVR will reboot during this time. It will stop recording during the quick reboot.**

VEHICLE SETUP

To access, use the following:

Click on
BASICS

Click on
VEHICLE

Enter information related to the driver and company. **The DEVICE NUMBER is the only field required to have data entered.**
SERIAL NUMBER: predetermined, no input needed
BRANCH NAME: Company name (up to 20 characters)
OFFICER NAME: Driver name or ID (Up to 20 characters)
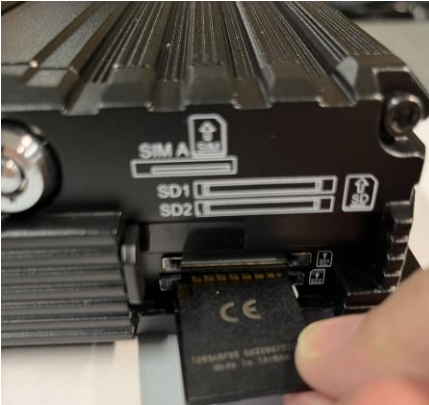**SIM NUMBER**: phone number for a MDVR contained SIM Card if installed

INSTALL SD CARD

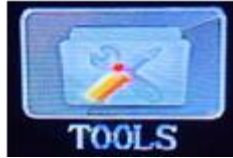Install SD Card 1: label side **facing up**

Install SD Card 2: Label side **facing down**

FORMAT SD CARD

To access, use the following:

Click on
TOOLS

Click on
FORMAT

NOTE: SD card must be formatted in the DVR.
FORMAT allows for the formatting of the SD card.
This screen also supplies information about space available
and space used.

FORMAT

MEDIA	TOTAL	USED	FREE	OPTIONS
SD1	123.5G	3.2G	120.3G	☑
SD2	123.5G	0.5M	123.5G	

SD Total Space   Used Space   Free Space

FORMAT

IMPORTANT NOTE: when formatting SD card, the data on
the SD card will be erased.

SD status is preselected to show on the screen. (see
settings to change)
Text next to the SD will show:

       Unformatted   Recording
         Standby   No Space

Channel recording status:
If the channel icon is not in a red box "CH1", that channel is not recording.

If the channel icon is in red box, that channel is recording.
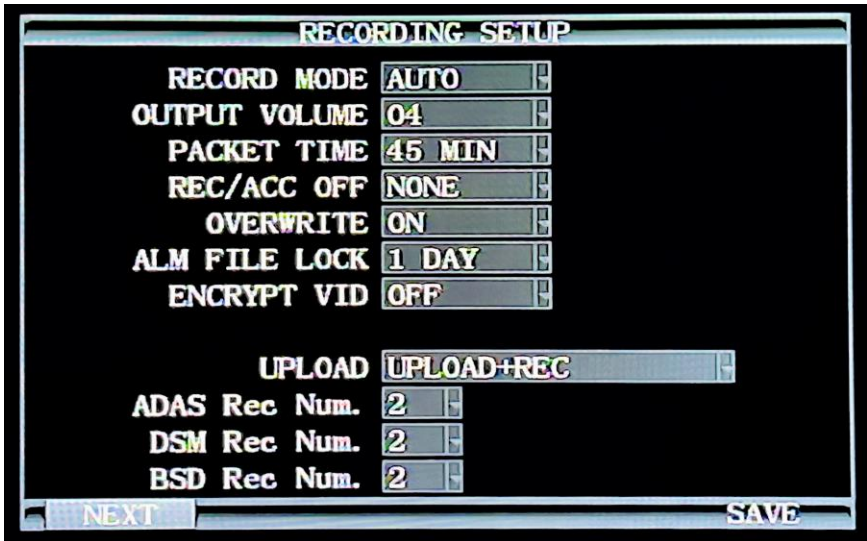
Not recording	Recording
CH1	CH1

RECORD SETUP

To access, use the following:

Click on **RECORD**

Click on **RECORDING**

Key settings that apply:

Packet Time: Playback file sizes. Select from 5, 15, 30, 45, and 60-minute files. The factory Default is 30 mins.
Overwrite: allows the MDVR to continue recording over the oldest file. This starts when only 2GB is available.

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The Recording Schedule may be determined by the vehicle OEM
To access, use the following:

Click on
RECORD

Click on
SCHEDULE

The default setting is to record whenever the MDVR is powered. The first option allows for setting the same period of time for all seven days of the week. The following enables setting a period of time for each day.

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MAIN STREAM (RECORDING) SETUP

To access, use the following:

Click on **RECORD**

Click on **M-STREAM**

RES: Must Be 960H
FPS: Frames per second: 25 fps is recommended
PIC QUALITY: Quality level of video 1= Best to 8=Lowest Quality

SEARCH

Click on
SEARCH

Click on
VIDEO

There are two types of searches.
LOG SEARCH: covers events such as: on–off, menu
adjustments, etc., and Video searches.
VIDEO SEARCH: Helps find the desired date/ time range.
Dates with recordings will be highlighted

When a time frame is selected, it will open the Video Search List

	CH	TYPE	START	END	PIXEL	PATH	SIZE	
1	1	NORMAL	00:00:00	00:45:00	960H	SD1	37M	☐
2	2	NORMAL	00:00:00	00:45:00	960H	SD1	32M	☐
3	3	NORMAL	00:00:00	00:45:00	960H	SD1	32M	☐
4	4	NORMAL	00:00:00	00:45:00	960H	SD1	32M	☐
5	1	NORMAL	00:45:00	01:30:00	960H	SD1	37M	☐
6	2	NORMAL	00:45:00	01:30:00	960H	SD1	32M	☐
7	3	NORMAL	00:45:00	01:30:00	960H	SD1	32M	☐
8	4	NORMAL	00:45:00	01:30:00	960H	SD1	32M	☐

VIDEO SEARCH LIST

DATE 2022/12/15   Display mode FILE LIST

FIRST   LAST   NEXT   PREV
ALL   INVERSE   EXPORT

WARRANTY

LIMITED ONE (1) YEAR WARRANTY

1. CSS products' warranties are not transferable. The warranties apply to the retail consumer for one (1) year and covers against defects in material and workmanship on Verity systems. We do not warranty our cables which are QC tested at three different stations before shipping. All components must be installed in compliance with all Federal, State, and Local government requirements. Warranty is limited to the United States of America and Canada.

2. Defective components will be replaced or repaired, based on a CSS evaluation of the component. In-bound shipping charges, based on the CSS rate allocated in the RMA (returned merchandise agreement), will be covered once the component has been deemed defective at the CSS warranty facility.   The pre-assigned in-bound freight will be supplied upon return of product. All repaired/replaced warranty parts shall be for the remaining duration of the original warranty time period.

3. CSS takes pride in our products and will aid in the processing of your components:
   a) All warranty claimants must have consulted our technical support department for trouble shooting and the acquiring of an RMA**.**   Contact can be made via email at tech@verityrvs.com or call 574-807-6002.
   b) When the warranty claim is made, the consumer must establish the warranty start dates by presenting documentation regarding the date of retail purchase (e.g., bill of sale).
   c) Service performed by non-authorized service personnel may void all warranty claims.
   d) CSS will make no payments for system removal / system re-installing, mileage allowance, or transportation expenses.

The limited warranty does not cover damage resulting from misuse, accident, modification or alteration to hardware or software, tampering, unsuitable physical or operating environment beyond product specifications, improper maintenance, or failure caused by a product for which CSS is not responsible. There is no warranty for any product with removed or altered identification labels. CSS DOES NOT PROVIDE ANY OTHER WARRANTIES OF ANY KIND, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. SOME JURISDICTIONS DO NOT ALLOW THE LIMITATION OF IMPLIED WARRANTIES, SO THIS LIMITATION MAY NOT APPLY TO YOU.

4. This warranty gives you specific legal rights, and you may also have other rights that vary from state to state.

Technical Support

A service ticket can be filled out online to supply the quickest service. The service ticket can be easily found on our web site: www.verityrvs.com or use the code to the right. Please have the serial number, which is found on the top of the DVR, when contacting the service department. We take great pride in delivering the most dependable product in the industry. Each item was 100% QC tested and then we randomly recheck another up to 10% before it leaves our hands to you. We have a .034% issue rate with this product.

Email Tech Support:
Tech@verityrvs.com
Phone Tech Support: 574-807-6004

Note: if you are an OEM, Fleet fire/rescue customer in need of tech support after hours or on weekends, leave a message, and a technician will return your call as soon as one becomes available.

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We at Verity would like to personally thank you for purchasing our product. Our company strives to supply the best products at a fair price. We care that you enjoy a safe driving experience.