

Car Digital Hard Disk Recorder

User Manual



Before the installation and use, be sure to read the Manual, so you can properly use and protect your machine. The statement in front of the matters to the attention of the installation and use, please read first.

➤ **Attention**

- To protect your rights ,before using and installing this product, please carefully read the contents of the manual.
- This product is use for car inside, in order to prevent short-circuit or the risk of electric shock, do not be the machine on the rain or humidity environment.
- Event of any solid or liquid into the enclosure, immediately disconnect the power machine, and requested the qualified technical staff to be examined then start-up again.
- This product is high-tech equipment, machines can not be repair by user even very small original part. Once failure occurrence, machine must be repaired by qualified technical personnel, or contact with the dealer.

➤ **Installation environment**

- Use of the recorder 8-36 V DC power supply, to be confirmed in the use of the local power supply.
- If the machine not be used long-term, completely disconnect the video' s power supply.
- Please select the appropriate location of the installation, so that the air can flow freely around the machine to prevent overheating machine.
- Machine can not be installed on the radiators, ventilation Road near heat or direct sunlight, and too much dust, or mechanical vibration or impact areas.

➤ **Packing List**

Name	Count
Four channel HDD Recorder	1
User manual	1
Certificate of Quality	1
Remote control	1
Connection port	3
PC view soft disk	1

Note: This product specification or parameters change without notice.

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I. Product Overview

- This equipment is designed for car safety design of a four-channel embedded digital hard disk video recorder, it is embedded processor and embedded operating system, combining video / audio compression / decompression, GPS, car recorder, the capacity hard disk storage technology, the system has high intelligence and high stability. Use for bus, ship, train, and other areas of security.

II. Features

2.1 Operating system

- Embedded linux operating system, the elimination of a virus infection, more stability.
- Chinese and English menu to switch.

2.2 Video Compression standard

- MPEG2/MPEG4 Video formats, excellent screen, and the best bitstream.

2.3 Surveillance and video processing

- surveillance: 4 channels D1 video (PAL: 720 * 576, NTSC: 720 * 480)
- Recorder: Total resources 50 PAL, 60 NTSC . 4 channels D1 video storage alone.
- Three record modes: according to car' s automotive sensor **alarm record**, motion detection record, manual record; **support 4 channels video and 2 channels audio record.**
- Video quality: a total of eight adjustable
- Specially designed for video file system can improve the life of hard drive.
- Can not be artificially modified disk storage of video&audio data, as evidence of the high credibility.

2.4 Playback and search

- Playback is according to time or event.
- Support the four channels video and one channel audio to playback at the same time.
- Can be one channel or four channels amplification to palyback at the same time.

2.5 Hard drive and backup

- Pull style of hard drive box, Support 2.5-Inch notebook hard drive.
- Apply to Samsung, Hitachi SATA series of notebook drives.

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- Use the USB interface back up or hard drive box **direct** connected to your computer for backup.

2.6 Control

- Remote control.
- Double video processor MPEG2, MPEG4 nuclear, double MCU control, ensure the product stability.

2.7 Designed to prevent vibration

- Non-fixed, suspended Hard Drive **shakeproof** protection, excellent damping.
- Specially SATA hard drive box connector design, reliable contaction
- Besides hard drive, the equipment' s circuit board and electronic component are deal with **shakeproof** and reinforcement.

2.8 Others

- Network software upgrades and maintenance is simple
- Password-protected keep data **away from destroy**.
- Record data is store in the U-disk, simple operation
- Real-time and trigger video record is **selection**
- Prevent impulse voltage, Low voltage supply protection
- Time-lapse turn off the machine function(default: 5 minutes)
- Real-time clock

III. The electrical parameters and the interface(standerd interface)

- Dimension: 183 * 175 * 42 mm G.W:1.6 KG
- Power input :DC 8 - 36 V (the machine can output 12V to the camera, input power supply need 12-36 V), less than 15W power(include moving hard drive' s power 4W)
- Power output: a DC12 V, 2A power output interface(supply the power to videocam),
- Video&audio signal input: 4 channel video, 2 channel audio.
- Switch input: 9 channel
- Speed sensor input: 1 channel
- Infrared remote control interface: 1 channel
- Network interface: one 10M/100M RJ interface (use for late maintenance)
- Hard drive interface: 1 SATA interface

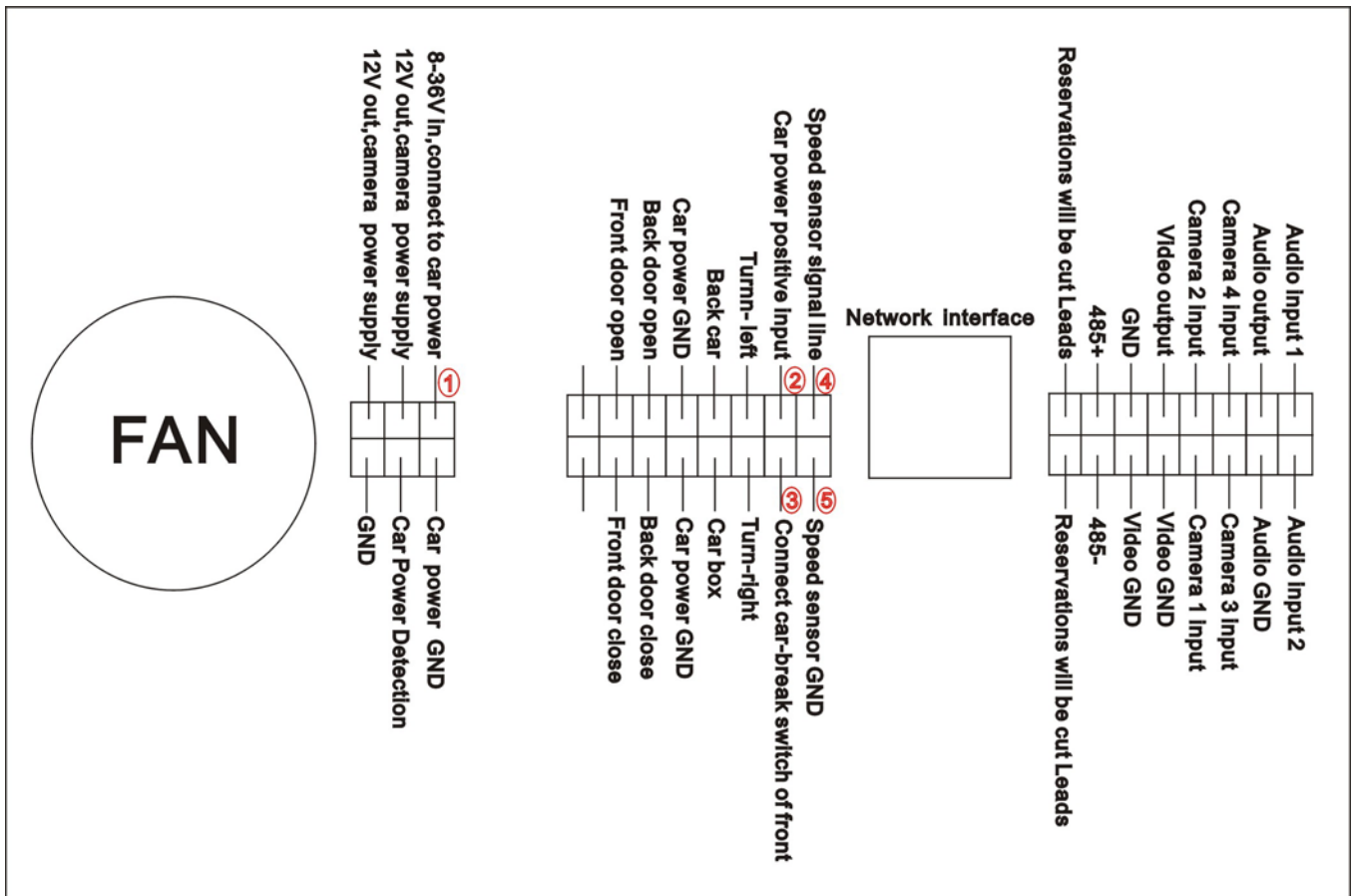
- USB HOST interface: 2 channel. The one is connect with USB disk to backup video file.
The other is use for store the car's running.(use for the car which has recorder)

IV. Optional features as follows

- PTZ
- Car running data record function
- GPS module

V. Installation instruction

5.1 External interface wiring instruction



- ① Not have car running record function, machine should not connect to the 16Pin interface.
- Not have PTZ, the machine need clip the line which connect 485+ and 485-.
- ②, ③ is connect with the brakes light's positive and negative ②: positive ③: negative
- ④, ⑤ Use the car's speed sensor, only connect ④, ⑤ line to speed sensor signal line, neutral line; if customer add a line to the speed sensor by themselves, please use the original power for speed sensor power supply

5.2 HDD Installation instruction

- Be sure power switch is turn on or turn off , if turn on , please use the key , turn the indentation on the “turn off” position.
- Pull the front panel of the hard drive box, Carry out the hard drive and drop it on the table.
- Set down the two screws of the hard drive by cross-screwdriver.
- Drop the underbacker of hard drive box, and then check the line which on top of the underbacker is OK or not.
- Bring here the SATA hard drive which need installation, connect the line joint of hard drive box to the hard drive . Please note the heading of the line while connecting. Be sure all of the connecting is complete done.
- Put the hard drive in the hard drive box. the obligate line of hard drive need longer, the line of hard drive need lay on the right position .
- let the four white screws of this machine through the center hole of the four shockproof rubber pads. fix hard drive on the four holes of hard drive box., do not the screws too taut, leave little space for hard drive to moving. So it can reach a perfect effect.
- Insert the hard drive underbacker which have hard drive to the hard drive topbacker, and then, Use cross screwdriver and the screw to fix the underbacker and the topbacker.
- Aimed the hard drive box toward the groove of the front board, level push, Please note the face and back while pushing. Upturned the silk-screen is the right position.
- Wring the lock of the front board by key, Turn the groove on the “turn on” position, lock hard drive box to prevent hard drive move out.

Note:Hard drive fixing lock besides fix the hard drive, also take the place of host power switch . So do this operation, be sure all lines are complete connection Otherwise, if car ‘s power have been connected with the standrad input voltage, the machine should be estroyed. So propose while installtion, if the line have not be complete connected, please stop to do this step, More careful while installing. The hard drive can not roll out even have not be locked.



Note: the installation of a new opportunity to requested a formatted hard drive, **normal** work must starting after the panel SELECT button be formatted.

VI. Use instruction


6.1 Front panel instruction







- **LED**
 - ✓ **PWR LED:** lighting while work starting ,Power LED
 - ✓ **RUN LED:** Working normal LED flashing
 - ✓ **HDD LED:** When recorder, playback, video data backup LED flashing
 - ✓ **USB LED:** Video backup interface working normal LED flashing
 - ✓ **U Disk LED:** CAR DATA interface data storage complete flashing (Use for having car drive record function only)
- **Key and other Descriptions**

- ✓ SELECT: Use for the hard drive formatted after new hard drive installation ,
formate hard drive need press one time only, after the commencement of normal
start-up, no longer be able to format the hard drive.
- ✓ IR: infrared receiving window
- ✓ LOCK: while removing the hard drive, use machinery wear the key to unlock in
order to remove hard drive, unlock after machine auto-disconnect the power,
the power auto-connect after locked .
- ✓ CAR DATA: store the data of car drive record via USB disk (Use for having car
drive record function only)
- ✓ VIDEO BACKUP: Playback the video data of hard drive via USB .
- ✓ recommen to use the Sandisk brand for the USB disk , the minimum volume 256
M, must support the FAT32 file system

6.2 Remote control operation instruction

- : Record key
- : Lead to menu
- : ①After entering sub-menu button to confirm, modify key parameters select .
②Single-aisle display at PTZ into control mode, press 'MENU' key to exit
- : Play key
- : ①Backward. ②Into menu mode, press left key.
- : ①Forward. ②Into menu mode, press right key.
- : Pause
- : Stop
- : ①Into menu mode, press up key. ②Into surveillance, record, playback mode,
press 'mute' key.
- : ①Into menu mode, press down key. ②Into surveillance, record, playback mode,
switch audio channel .
- : ①Recording video or play, screen zoom display in first channel. ②System

default password: six this key.

- : ①Recording video or play, screen zoom display in first channel. ②Set System password
- : ①Recording video or play, screen zoom display in first channel. ②Set System password
- : ①Recording video or play, screen zoom display in first channel. ②Set System password
- : ①Four channels display. ②Set System password















6.3 Menu Setup instruction

- CHANNEL SETUP: The channels of the videocam turned on or off settings.
- RECORD SETUP: The channels of the video turned on or off settings.
- RECORD FRAMERATE: The channels of the video frame-rate adjustment settings, (PAL: 50 frames;NTSC: 60 frames)
- VIDEO QUALITY: The selection of video quality settings, (a total of eight levels, LOWEST-HIGHEST)
- RECORD SCHEDULE: Different time video mode supply to settings.
White box: No record
Red box: record
S box: sensor trigger video record
- SENSOR SETUP: You can setup various channels of video alarm mode
 - ✓ Alarm record time: you can setup alarm when the video for 5 - 30 seconds
 - ✓ Alarm time: Alarm output can be set to “turn off ”, “turn on” or “5—30” seconds, three modes.
 - ✓ Alarm settings: The channel can be set alarm mode.
 - ✓ Displacement settings: You can setup the channel displacement ON or OFF, and the displacement of regional settings
- HARD DRIVE SETTINGS: You can set up and searchfor relevant information




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- ✓ Over write : You can setup if the hard drive need recycle over write or not.
(set to “off” does not overwrite, set to “on” recycle overwrite)
 - ✓ Hard drive model: display the current hard drive model
 - ✓ Hard drive volume : display the current hard drive volume.
 - ✓ Hard drive format :Lead to format screen, **type** in user key ,and then, format hard drive and delete the video file.
 - MISCEUANEOUS SETUP: the system can be related to change or adjust the settings
 - ✓ Password settings:You can change or set the user key(the **original password** is six “1”, change of your password must remember, **Once** you forget your password this machine will not be able to normal operations, it must return to the manufacturer.
 - ✓ Time settings: you can setup system time.
 - ✓ Hide channel: you can setup “OFF” or hide a certain channel
 - ✓ Audio port settings: you can select audio ports on each video channel(only in the video recording state,it can be record)
 - ✓ PTZ settings: there are only installed in PTZ control the machines to use
 - ✓ Language settings: the menu can be set to ‘Chinese’ or ‘English’
 - ✓ Video standard: the menu can be set video standard to ‘PAL’ or ‘NTSC’ ,after Setting you must restart the machine,now the setting is available.
 - NETWORK SETUP: (only use for software upgrades, customer need not to do any settings and Use)
 - VIDEO BACKUP: users in the use of U-disk drive backup machine in the storage of video information to the relevant settings
 - ✓ Start: Setting up video information to back up the starting time
 - ✓ End: Setup video information to back up the time of the end of time
 - ✓ Volume: dispaly you have to back up the information capacity
 - ✓ Document: the current display you want to back up the file name
 - ✓ CD / DVD backup: (temporary absence of such function)
 - ✓ USB backup: the use of U-disk backup and display the progress of backup
 - CAR LICENSE: you can setup their license plates

- RESET MENU: select to enter the setting interface, type in user password will be set up automatically and return to the initial default settings







6.4 Playback and search video files instruction



- Surveillance (video) model, push , into the playback mode, playback of video of a recent paper.
- In playback mode, push , into the menu, for the , to move your cursor to the 'events', then push , on entering the list of the time of the events, push  or , you have to choose events of time, push  to start playing.
- In playback mode, push , into the menu, for the , to move your cursor to the 'time', then push , on entering the list of the time of the incident, push , , , located You have to see the point in time, push  set to start from the point in time you start playing.

6.5 PTZ settings instruction

- Bitrate settings(default 9600 bits)
- Data settings(default 8 bits)
- Data parity bit (default NULL)
- Stop bit (default 1 bit)
- Communication agreement(default PELCO-D)
- Camera channel number (1-4): camera address (default 1, press  or  key to change the value.
- Other settings press  to change .

6.6 PTZ control operation instruction

- Surveillance (video) model, press , into PTZ model, press  again, vision turn wide or narrow.
- Press , camera turn left, Press , camera turn right;
- Press , camera moving down, Press , camera moving up.

- Press , camera auto-moving left to right. Press random key to stop moving.;
- Press , Enter PTZ model.

6.7 Video data volume

Video and video-related settings see the table below the required volume:

VIDEO QUALITY	Total record frame	Data size per hour	Total record frame	Data size per hour
HIGHEST	28 frame	1600 MB	48 frame	3200 MB
HIGHER	28 frame	1300 MB	48 frame	2800 MB
HIGH (default)	28 frame	1200 MB	48 frame	2300 MB
BETTER	28 frame	1100 MB	48 frame	2000 MB
NORMAL	28 frame	800 MB	48 frame	1600 MB
LOW	28 frame	700 MB	48 frame	1400 MB
LOWER	28 frame	600 MB	48 frame	1100 MB
LOWEST	28 frame	500 MB	48 frame	900 MB

Note: Based on your users to matching the conditions of application of the appropriate drive and related settings.