4ch AHD SD Mobile DVR

USER MANUAL
Model Name: NDDVR-300

Version 1.0

Introduction

The manual is about the features and specifications of one kind of car DVR, it is an integration of “4 monitoring and recording “, “Million Pixels Digital&Analog mixed car DVR”, “wireless data transmission “.

In the manual it describes the functions and considerations of the modules ,the connector signal definitions in the back panel, the interface definition and user’s operations.More details,please check following directory.

State:

This manual may exist any technical describe inaccurate or misprint,also the contents will be update unscheduled without notice,new contents will be added in next version;

We’re subject to improve or update product description or program,if any difference,all depend on real goods,please understand.

1 Parts list

No	Name	Quantity	Unit	Device Type		
				Basic	Basic+WIFI	Remark
1	MDVR	1	set	✔	✔	
2	Remote Control	1	pcs	✔	✔	Optional
3	Keys	2	pcs	✔	✔	
4	WIFI antenna	1	pcs	✘	✔	

2 Product introduction

2.1 Product features

H.264 Compression Mode, Support 4CH real-time 1080P Million Pixels AHD input and Analog Standard Definition camera input, or 2CH HD input + 2CH SD input; Exclusive pre-allocate DVR Special File System Technology,Solving repeatedly wipe cause file fragmentation, solving SD card file system collapse, data loss and cannot find SD card and file garbled, ensure the integrity of the data. 8-33V Adaptive Wide Voltage input, Super Low Power Consumption Design; SD card storage (maximum support two pieces 128GB SD card.) It can be completely resist car Vibration,Dust and others cause data corruption; Support GPS/BD/G-SENSOR ; High Reliability Aviation plugs,High Cost Performance with reliable stability,simple and clear operation menu .

- HIS Solution,H.264 Compression Mode, Many stream recording,4CH Video+2CH Audio Input, Compatible with **4CH 1080P/720P Mega Pixels Analog High Definition Camera input /2CH AHD High Definition + 2CH Standard Definition mixed input / 4CH Analog Standard Definition Camera input.**
- Real-time HD Video Recording, 1080P/D1/HD1/CIF for Optional,Adjustable Frame Rate Quality.
- **Professional Power Design for all kinds of Vehicles, 8-36V DC; Wide Voltage,** Over-load,Over-voltage,Short Circuit,Reverse Protection,Suitable for all kinds of vehicles.
- Support DC 12V/2.5Amp output, it can offer power for cameras,mini monitor and some peripheral device.
- **SD card Data record storage (maximum support 128GB SD card.)** It can be completely resist car Vibration,Dust and others cause data corruption;
- Watchdog Abnormal will trigger Restart Protection Function . It can better protect Device and Video.
- **Exclusive pre-allocate DVR Special File System Technology,**Solving repeatedly wipe cause file fragmentation, and ensure the integrity of the data.
- **By accidents power-off protection function**.Unique UPS Technology ensures the integrality of record when power failure occurs,even can for 10-15s.
- Flame out Time-lapse Video Recording Function (Highest support long delay time 24 hours.)
- Auto Recording,Time Recording,Alarming Recording Modes for Different Request.
- Display vehicle traffic status, Vehicle numbers ,Route, Super-low speed vehicle Information, Convenient management..
- Support WIFI connection
- All Aviation plugs, Super stable, High Anti-shock,Easy installation Plug in and out.
- Unique WINDOWS 8 interface, Easily Smart GUI Interface, Fluent system interface is intuitive and perfect.
- **Support SD card Remote Software Upgrade/OTA remote upgrade automatically**, partition backup technology upgrade don't crash.
- Can be batch functional customization according to customer's requirements;

2.2 Main Functions

Main	Sub-Item	Instructions
Recording Sub-System	Video Channel	4Channel video + 4Channel Audio recording synchronously；
	Resolution	Support 4*1080P(1280*1080),4*D1(704*576),4*HD1(704*288), 4*CIF（352*288）； Each channel is individually adjustable.
	Image Quality	0-7 levels, 0 is the highest level.
	OSD	Overlays information such as date time and vehicle ID
	Loop Rec	Support SD card loop recording, loop cover previous video
	Record Mode	Timed recording, alarm trigger recording and manual recording
	Preview	Support 1 channel and 4 channels preview. Support enlarge video image when alarm trigger and video rear view trigger；
	Disk overwritten	Space pre-allocated Support disks overwritten function.
Playback System	Video Search	Search video files anytime per day, type(n/a)
	Playback	Support 1 to 4 channels playback.
		Support forward and backward play at the speed of: x2 ,x4,x8,x16.
		Support alarm spot search and time search.
GUI	Graphical User Interface	Setup system parameters with the remote control.
Optional	Network	Can expand WIFI module,support 801.2b/g/n
Others	ON/OFF	System delay-time power on/off;
	File System	DVR special file recording System Technology,Exclusive car record file system,space pre-allocate,4ch single file Record,cyclic covering； To avoid the storage of the media causes file fragments, with high reliability and high stability；

2.3 Parameter Sheet

Item		Parameter
OS		Linux
Language		Chinese/English/Others (can be customized)
Video Compression		H.264 Compression Mode
OSD		Overlays information such as date time and vehicle ID
GUI	Graphical User Interface	Can connect to external LED screen. Setup system parameters with the remote control.
Video Record System	Video Input	4CH 1080P AHD/ 4CH standard definition /2CH high definition+2CH standard definition mixed video input ,aviation plug.
	Video Output	1CH CVBS

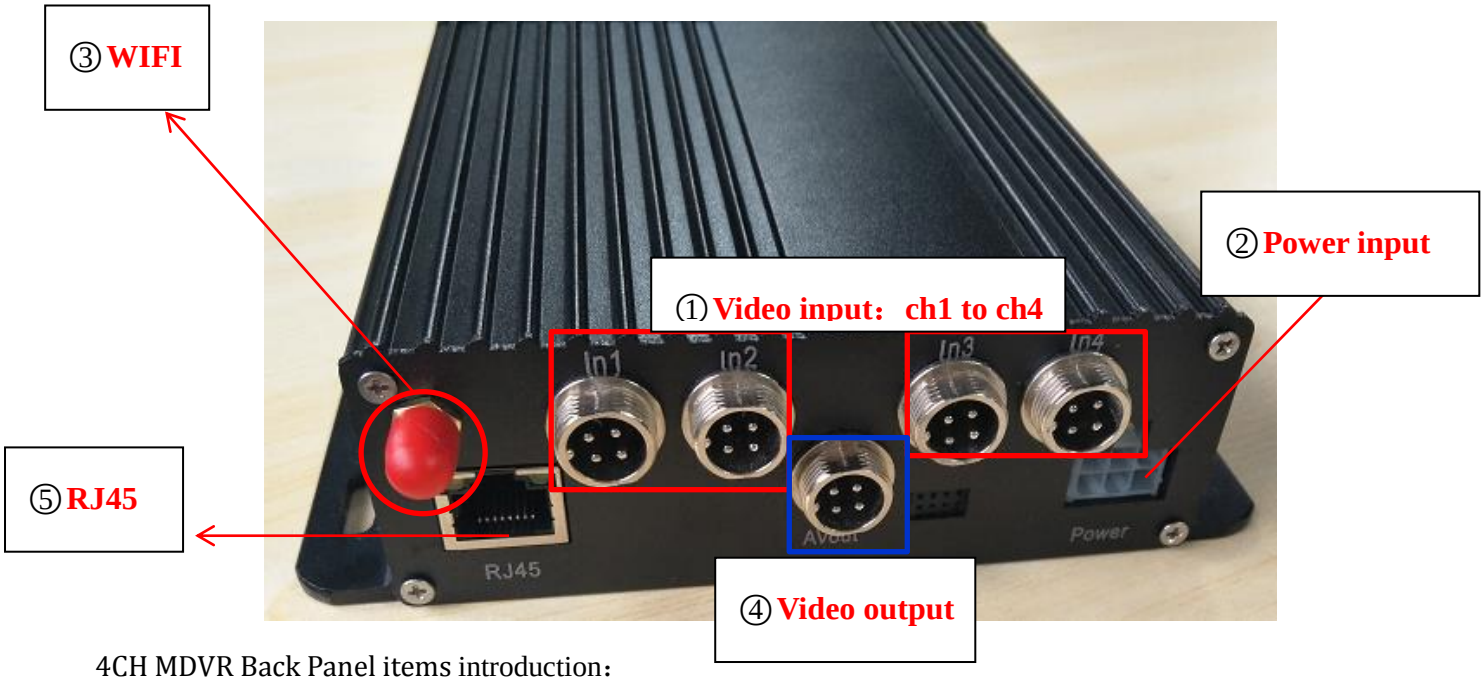
	Preview	Support 1 channel and 4 channels preview.,Support Manual/Alarm Trigger full screen preview
	Resolution	1080P/D1/HD1/CIF, MAX:4 channels of 1080P
	Video Quality	0-7 levels, 0 is the highest level, 7 is the lowest level.
	Video Standard	PAL: 100f/s , CCIR625 line,50field; NTSC: 120f/s, CCIR525 line,60field; CIF: 256Kbps ~ 1.5Mbps, multi levels video quality optional; HD1: 600Kbps ~ 2.5Mbps, multi levels video quality optional; D1: 800Kbps ~ 3Mbps, multi levels video quality optional; 720P : 1Mbps~4Mbps, multi levels video quality optional; 1080P: multi levels video quality optional;
	Record Mode	The default setting is auto recording after power on. Timed recording, alarm trigger recording and manual recording are supported.
Audio	Audio Input	4CH ,Aviation Plug
	Compression	G.726 compression, 8KB/s speed
Wireless transfer		Support Built-in/External WIFI
G-Sensor		Support G-sensor(Optonal)
Video Storage	Storage	1pieces SD Card,each max 128GB SD Card,
	Upgrade	Support USB flash disk updating,SD card upgrade , OTA remote upgrade automatically
	File Format	H.264 General video format
	USB	Front panel supports USB port, support USB flash disk upgrade to backup; hard disk box USB port, can back up video data
Video Playback	Video Search	Search video by Record Time/Record Type etc
	Playback	Max support 4CH Replay /Stop/Fast Forward/Fast Reverse at same time
		Support x 2,x4,x8,x16. fast forward or fast backward play
Safety Management		User/Admin 2 Levels Different Passwords , support screen lock
Voltage & Power Consumption	Power Management	Adaptive wide power input, support Wide Voltage, Over-load、Over-voltage、Short Circuit、Reverse Protection..Support Time Setting/Delay power off
	Voltage Input	DC:+10V ~ +33V
	Voltage Output	+12V@2A
	Power-off Protection	UPS Technology,All video information can be saved automatically when the power is cut off, and make sure that all the files can not be damaged.
	Power Consumption	Normal Working ＜5W Stand-by Status ＜0.5W
Working Environment	Temperature	-20℃ to +70℃
	Humidity	20% to 80%

***** Above parameters any changes,please refer to actual product *****

2.4 Front Panel

** Status LED will alternate loop flash when device power on, it will quick loop flash when device is upgrading **

2.5 4CH MDVR Back Panel



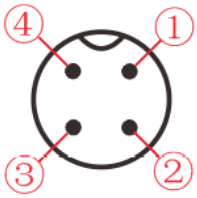
4CH MDVR Back Panel items introduction：

Item	Name	Silk screen	Functional Specification
①	**Video&Audio Input interface**	IN1-IN 4	1-4Channels, with DC 12V output,
②	**Power Input interface**	POWER	Input Voltage DC 8-33V,

③	**WIFI Antenna Port**	WIFI	
④	**Video&Audio Output interface**	AV OUT	Video&Audio output interface, with DC 12V output
⑤	**RJ45**	RJ45	It's used for connecting network cables

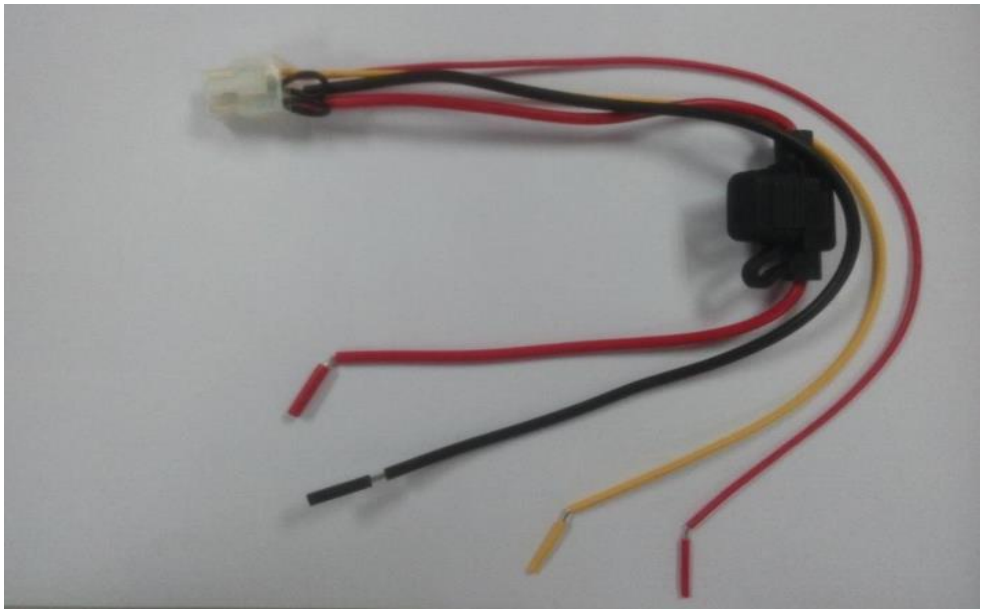
The 4CH MDVR support channel AV1~ AV4, it's Video&Audio Input interface use 4 Pin aviation plug,

PIN DESCRIPTION



4 Pin aviation plug

4 Pin aviation plug	
PIN	**FUNCTION**
1	+12V
2	GND
3	Audio Input/output
4	Video Input/output



Power cable pin definitions

Color Line	Name	Description
Red	DC+	Power-Positive

Black	DC-	GND
Yellow	ACC	ACC
Red	12V-OUT	12V output

Wiring: red and black wire are connected directly to the car battery. Red wire to positive, black to negative. Yellow line contacts FireWire, ignition switch mode is set to mode. The DVR device turns on when the vehicle power on,DVR turn off automatically the vehicle power off. Yellow line connected to the car keys to open the position (that is, before the automobile starter motor gear) all the dashboard lights.

Note: 1) Before connecting wires,one need to make sure the battery voltage is between 6V ~ 36VUU, otherwise it will be burned;

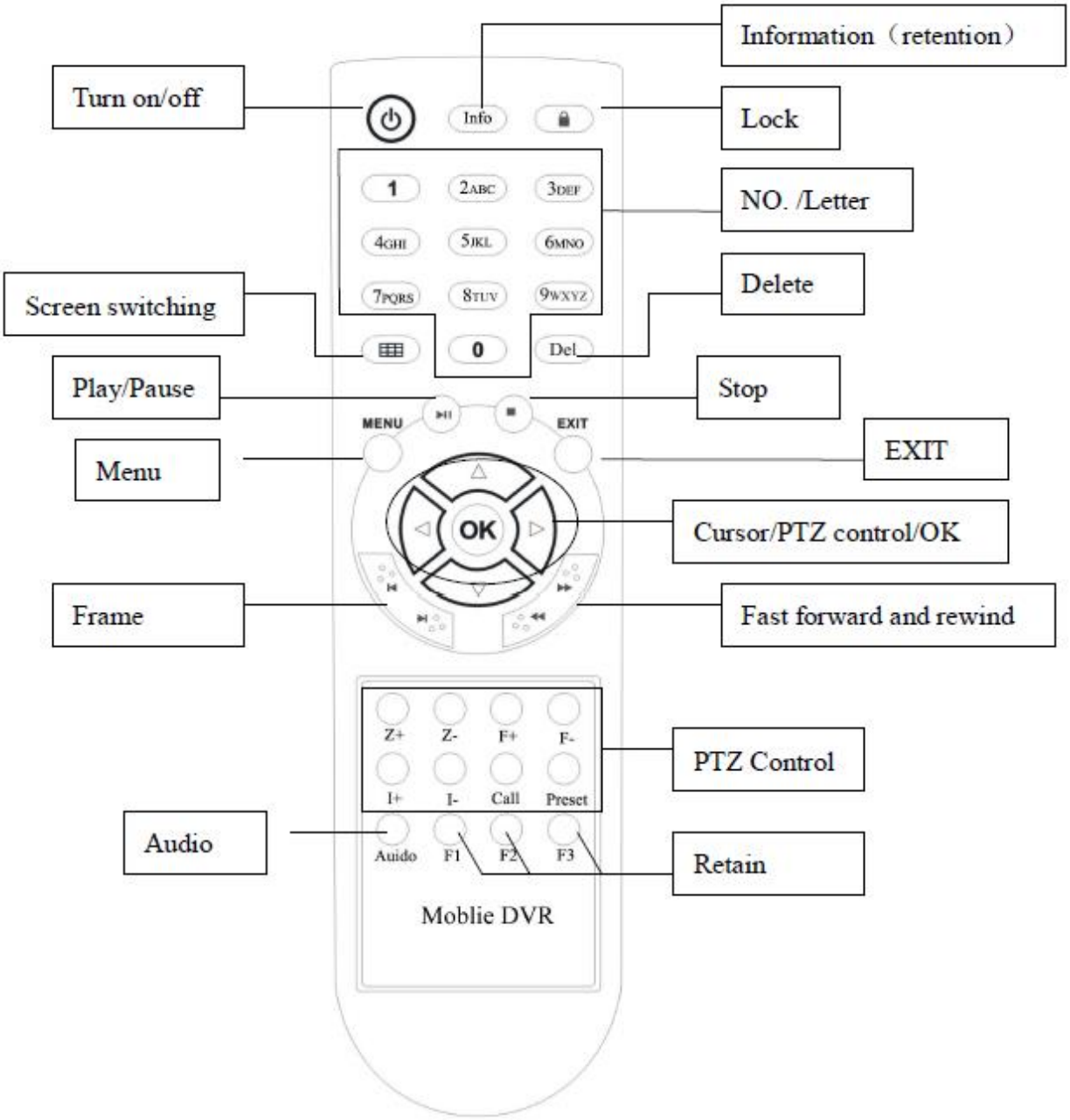
2) After connecting the cable, pay attention to insulation of the line between lines to prevent short circuit and burned out the battery;

3) yellow line must be connected to the firing line, otherwise the device will not support the ignition switch;

4) Special Note: 12V-OUT line can not be connected to the power input by mistake, which can not be connected to ground by mistake;

5) Note: DVR installation must be connected to battery positive and negative directly, can not be done with ground grounding, grounding will produce negative glitch host running. Positive and negative power supply line diameter must be Φ1.5 above.

2.6 Remote Control



System Key

【⏻】: Turn on/ off key

【Info】: Info. Key (retain)

【🔒】:Lock. Press this key to lock remote input after exiting menu.

【▦】: Switch 1~4 screens. Number keys 1~4 can do this too.

【**Del**】:Delete key.

【Number/Letter】Input key, you can input the number value to select a single channel preview.

Menu-key Function Description

【**MENU**】Start/Login/Exit menu

【**EXIT**】Back to the previous menu

【△】 Last program

【▽】Next program

【◁】Modify the current item/last subproject

【▷】Modify the current item/next subproject

【**OK**】Confirm

Play Keys

【⏯】:Play/Pause

【■】: Stop

【⏩】:Fast forward. 1/2/4/8/60

【⏪】: Rewind. 1/2/4/8/60

【⏭】: Frame forward

3 Device Installation

3.1 Power Cable Connection

This MDVR use DC power supply, Wide operating range 10 to 33V

★ Use ignition switch to control video record delay time working

Red wire connect positive of the car battery, black wire connect negative,while yellow wire connect independent ignition switch or independent positive.

★ Do not use ignition switch to control video record delay time working(Office Test also using this mode)

The red and yellow wire connect together to connect the battery positive,Black wire to connect the battery negative .

✧ Attention

1. The recorder is DC power supply; please attention the positive and negative polar.
2. The voltage is 8V~36V.Do not insert voltage that beyond this range. Under low voltage the recorder doesn't work, under high voltage will be harm to the recorder.
3. Please make sure the recorder is connect with the car power directly. Do not connect with the generator, the instantaneous voltage will harm to the recorder.
4. The initial power will beyond 30W when the DVR connect with the Camera (the consumed power is different due to the connect with different device), the power supply must beyond 30W.
5. The power cables must can stand beyond 60W.(For example, when the output voltage of car is 12V,the power cables must can bear 5A or more).
6. Please put the cover on the cables, the cover must be wear-resistant, heat-resistant, water-proof, grease-proof, in case of short circuit and open circuit.
7. Please install a 10A fuse box near the battery output positive polar for fear of the short circuit will damage the power supply.

4 Operation Interface Setup

4.1 User Loading

When the password switch is set to "Off": The host start and press [OK] key, will direct access to the main menu..

When the password switch is set to "On": Move the cursor to "landing" column, Press [OK] key, then can enter the main menu.

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The administrator default password is 111111(or device number –before changed the password available);
User default password is 000000, only have query permissions;

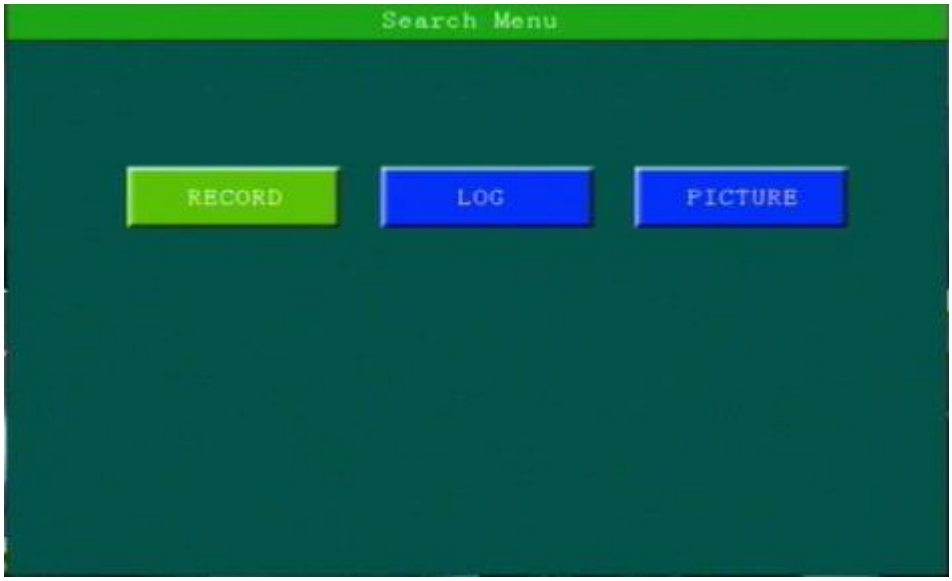
****

4.2 System Main Menu

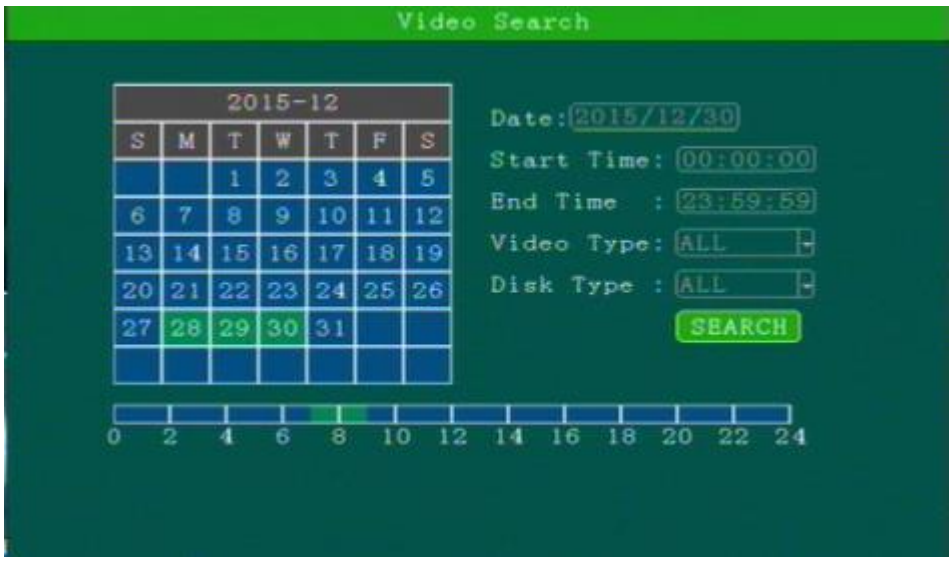
The main menu includes: Search, System setup, Rec setup, Network setup, Alarm setup and Peripheral, System Information, as below:

4.3 Search

Query menu includes: Record, Log and Picture,



2.1.1 Video Search



**** Green color display indicates current day and time exist video file ****

"Search Date": Press the number key to enter date, default is current date.

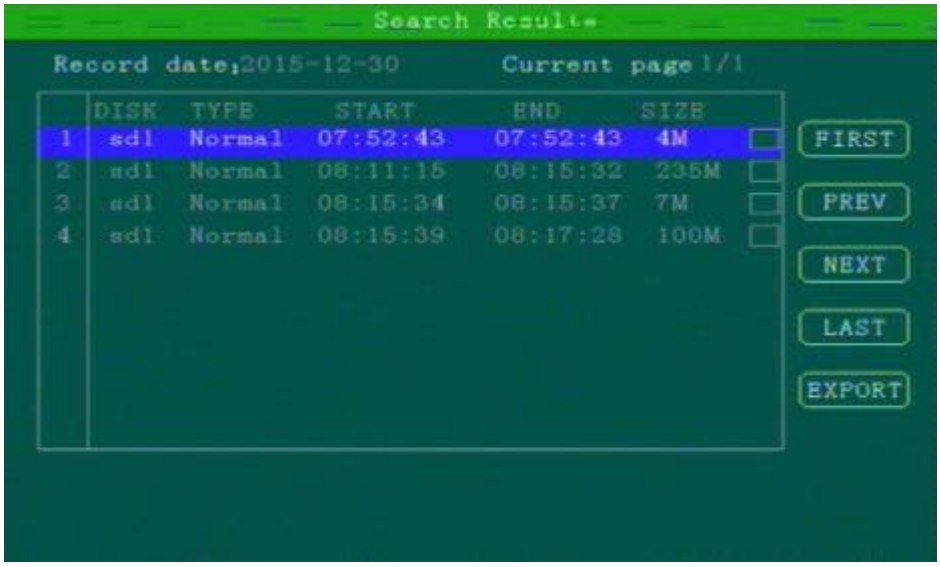
"Start Time": Press the number key to enter date, default is 00:00.

"End Time": Press the number key to enter date, default is 23:59.

"Record Type": Press the [OK] button to select the query type: All videos \Alarm recording. Default is All videos.

"Storage Media": Press the [OK] button to select: all disks, disk 1, disk 2.

"Search":Move the cursor to "Search" button, press the [OK] key to enter the search results interface.

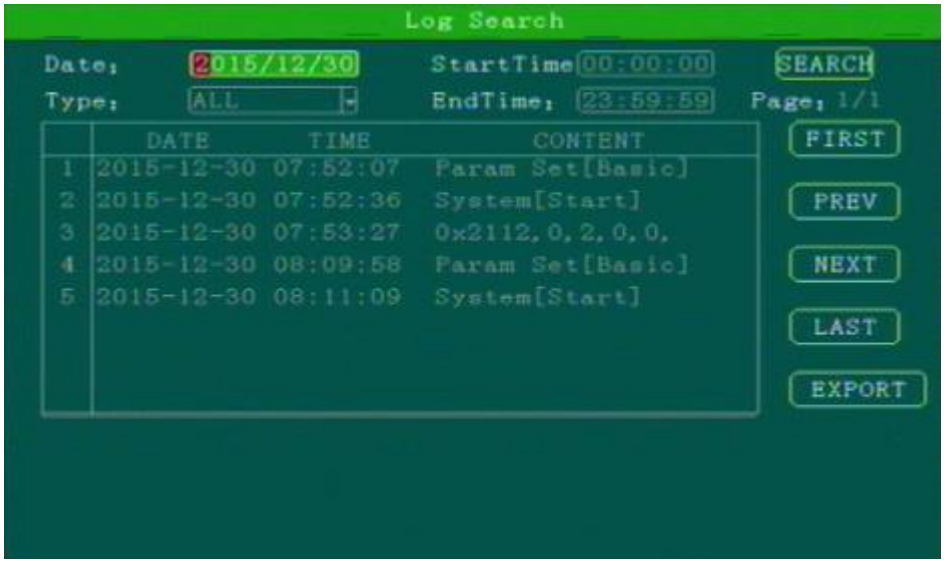


Press the arrow keys to select the video you want, press the ⊕ ⊖ keys to quickly flip, press ◀◀ ▶▶ to turn to first page or last page, press the play button to play the video, press [ESC] key to return to the previous menu。

Press the arrow keys to select “Home”, “Previous”, “Next”, “Last” and press [OK] button to display the next page information.

2.1.2 Log Query

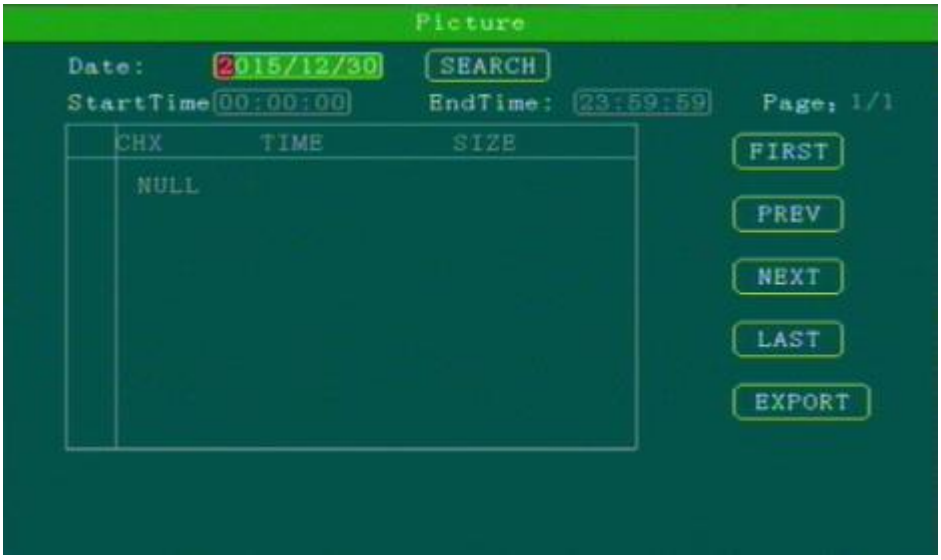
This menu is to query device operation and working log , you can choose the same type log via log categories.



When select a single log, press the ⊕ ⊖ keys to quickly flip over, and press ◀◀ ▶▶ to turn to first page or last page.

2.1.3 Picture Search

This menu is mainly for searching the screenshot pictures.



Zoom up single full screen will auto screen capture by default , it will be triggered by the alarm linkage or manually operate.

**** Pictures and device log all save in the second partition ****

4.4 System Setup

Under System Setup menu includes: Power, time setup, user setup, terminal setup (menu setup and modifying need to choose save to take effect)

2.4.1 Terminal Setup

By remote control input settings: device number, phone number, license plate number, the provincial domain ID, the City ID, terminal type, manufacturer ID, terminal ID, the device management (data in accordance with the Department of standards, Chinese input can use the soft keyboard input)

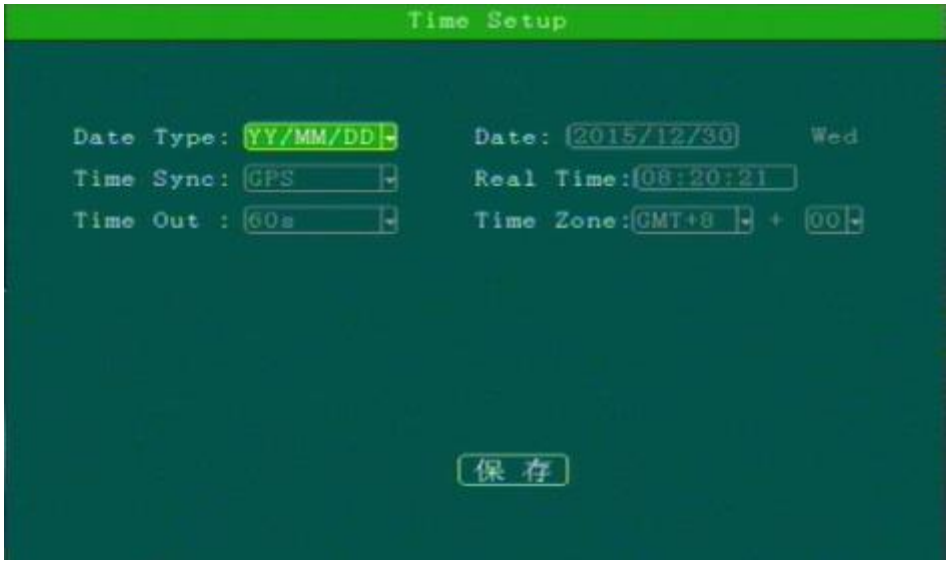
2.4.2 User Management

"Password Enable": You can enable or disable password authentication to access the menu.
Modify or setup password of users and the administrator by remote control.

**** ADMIN Pass : 111111, USER Pass : 000000 ****

2.4.3 Time Set

This menu is to setup device parameters, such as date and time, etc.



"Date Type": Different date format for choosing.

"Date": Press the number keys to enter current date.

"Time Synchronization": calibration mode: GPS, NTP and other school models available.

"Time Zone": Setup the time zone of the location of the device

"Timeout": optional remote control does not operate the exit time

"Real Time": Press the number key to enter the current time

2.4.4 Power Management

This menu is to setup Power management modes and power distribution.

"Power mode":press the number keys to select the type, the default is ignition mode.

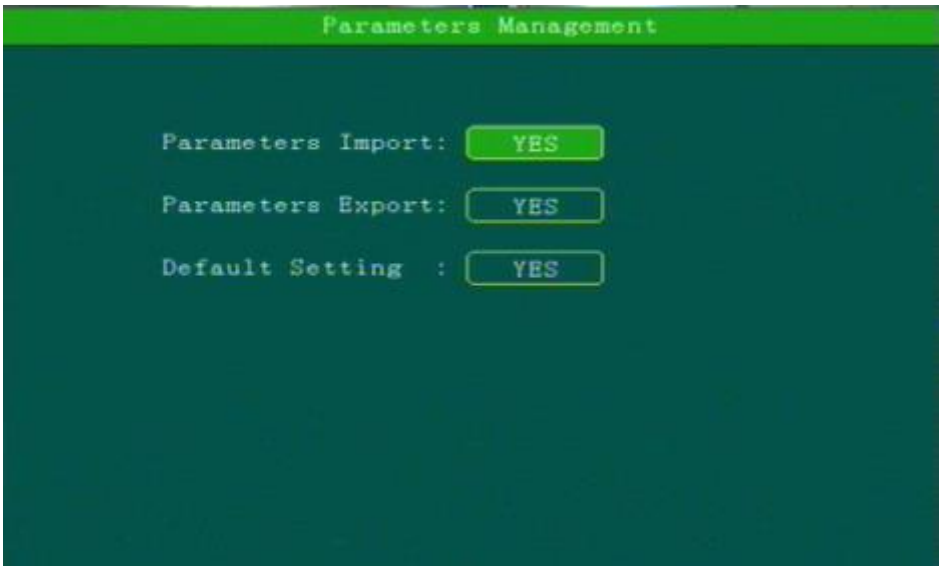
"Delay Off": Press the number keys to enter the time, the default is 5 minutes, can be set to 1440 minutes

"Screen time": Press the number keys to enter the time, the default is 60 minutes, can be set to 0-1440 minutes

"Power On": Press the number key to enter time, setup the timer start time

"Power Off": Press the number key to enter time, setup the timer off time

2.4.5 Parameters Management



"Import":Import parameters from HDD or SD Card to current device.Import the system configuration parameters which has set up and restore the factory settings to the factory states

"Export":Export current device parameters to HDD or SD Card;

"Default":Default to factory setting; This operation will clear all the setting on the device.

If quantity Devices with same setting,please using Parameter Export/Import for configuration, after setting one device, export these parameters to U-Disk or SD Card then import to other rest devices to be fast setting.

2.4.6 FORMAT

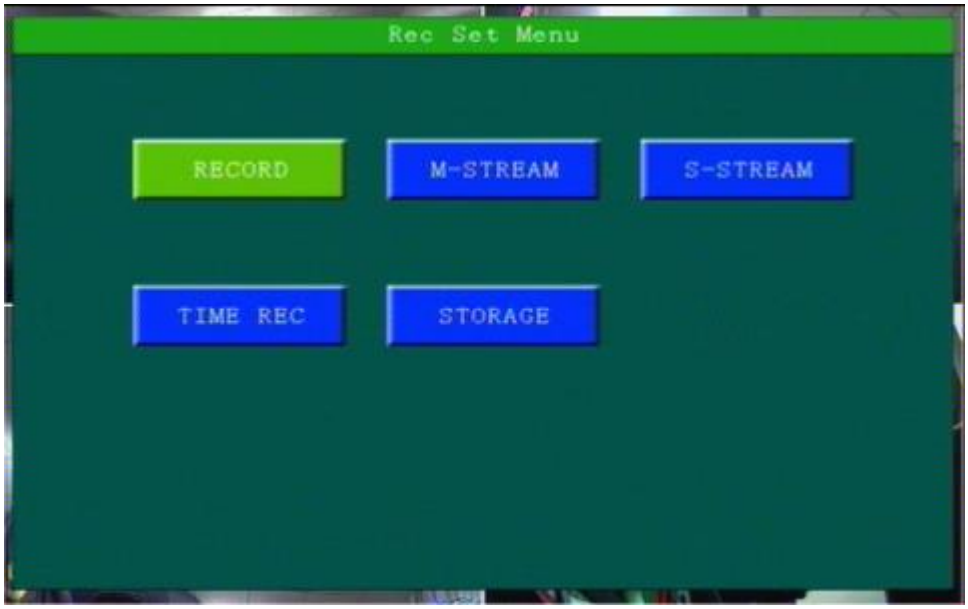
Format Disk choice, device will reboot disk after confirming, log and pictures and other related info will be reserved.

Attention:

Device will format automatically when it starts, new SD card, can be formatted on the computer, in general, it doesn't need format disk in DVR by manual.

2.5. REC Setup

Recording setup menu includes: basic setup, Main stream, Sub stream, time recording, Storage management(configuration and modification must select Save to take effect)



2.5.1 Basic Setup

This menu is to setup the basic video, audio and video parameters and can change into standard definition, AHD high definition and mixed mode.

“Video Type”: PAL / NTSC, press [OK] key to select.

“Record Mode”: Auto / timer / alarm recording, press [OK] key to select.

“Camera Type “: Can switch the status of standard definition , high definition or mixed camera input.

“Resolution”:Set the resolution of VGA output.

“ Layout”: optional: Single, 2-channel, 4 grids, nine grids and other video channel layout.

“Packket time”:The time of a single record file.

Attention :

If the camera type and DVR setting mode(AHD HD/Analog/Mixture) don't match, then it will show "video lost", In Mixture mode, 1,2CHANNEL is AHD high definition input, 3,4CHANNEL is analog standard definition input;

2.5.2 Main Stream

This manual is to setup the code stream and definition of video channel.

"Enable": open or close the channel of pre-recording function, press [OK] key to select.

"Resolution": CIF, HD1, D1 and 1080P resolution for choosing, press [OK] key to select.

"FPS": 1-25 frame (P standard), 1-30 frame (N standard) channel recording frame rate for choosing.

"Image quality" setup video quality under different resolution, 4-speed adjustable.

"Audio" setup the audio recording on or off.

****

According to the storage space and quality requirements, the resolution of each channel and stream can be configured individually

****

2.5.3 Sub-stream

This menu is used to set the parameters of the transmission stream.

"Resolution" Setup the transmission resolution, press [OK] key to enter.

"FPS" Setup the transmission time frames, press [OK] key to enter.

"Image quality" setup transmission quality grade, press [OK] key to enter.

****

Sub-stream is the code stream which device upload via 3G/4G, high definition main code stream can be chose in the client-side platform

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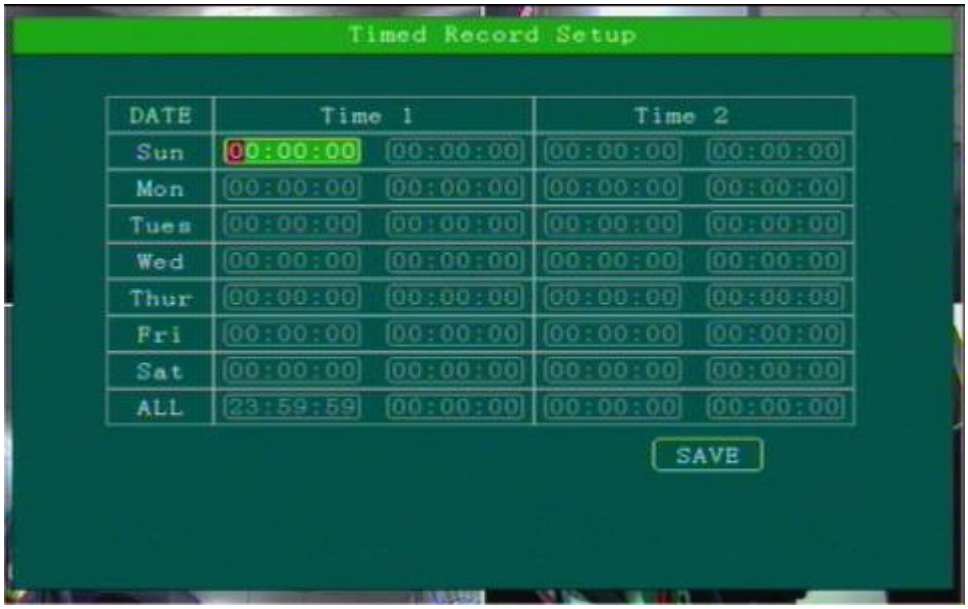
2.5.4 Time Record Setup

Setup the timer recording time periods, everyday can be set to two periods.



Move the cursor to "Timing Recording" and press [OK] button to set up the following timing list.

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Timer recording start time is before the end time.

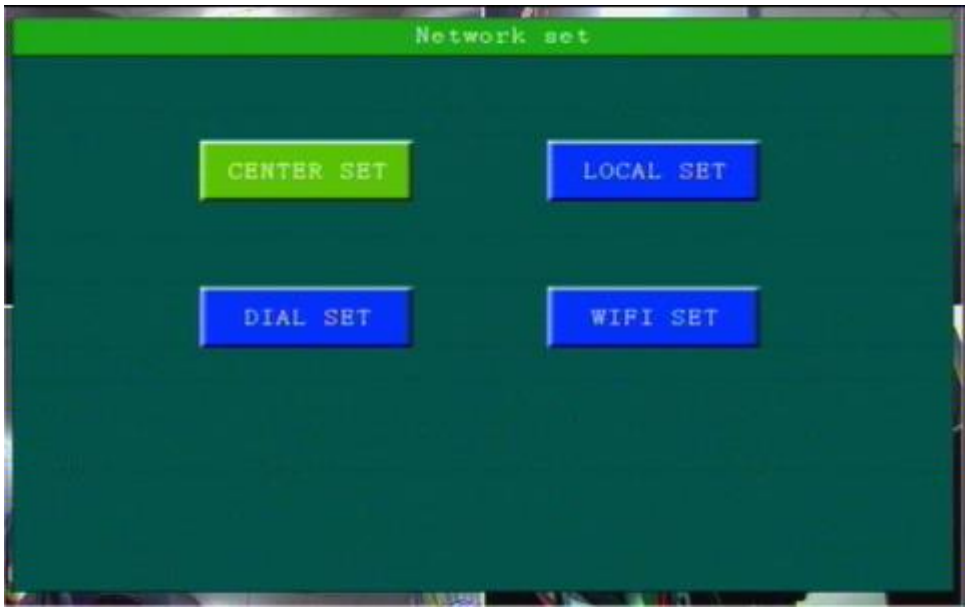
****

2.5.5 Storage management

"pre-recorded": pre-recorded alarm recording time of 0-60 seconds to setup, press number keys to setup.
"Alarm delay": alarm delay recording time, 120-3600 seconds to set up, press number keys to setup.
"Alarm Fime": The storage time of alarm file, 3-45 days to set up, press number keys to setup.

2.6. Network Set

Including: Center setup,Local Network , dialing setup,WIFI setup.



2.6.1 Center Setup

Set Server IP and Port ;

"Monitoring Center":Set 3G /4G Video Center IP or domain,port information etc,

"Network Type":Set 3G network type, IP address/Domain optional;

"Center IP":3G Server IP/Domain setup. Press right key to enter keyboard interface,input the numbers via remote controller,then press [OK] for setting,;

"Port":Communication port between 3G device and Server,must be same with server configuration;

Remind:

In " Info " interface, W connected : it means device connected server already; B connected : it means device connected ministerial standard platform already, Connected : it means two platforms both connected device successfully.

2.6.2 Local Network Setup

Device Local Network setup

"IP"\"Mask"\"Gateway"\ "DNS1" \"DNS2"\"MAC":IP,Mask,Gateway,MAC setting for LAN network testing.

Attention:

When net cable directly connect to the device, only can use 4PIN definition net cable (please see more definition in the addenda), otherwise it will lead device dead.

2.6.3 WIFI Setup

"WIFI-EN":WIFI On/Off Setting,Press [OK] for choosing;
"Encr-EN": WIFI encryption ON/Off Setting,press [OK] for choosing;
"Au-Mode": WIFI Authentication mode setting,Please choose same one with your router,
"Enc-Type": WIFI Encryption type setting,Please choose the one same with your router,
"IP"\"Mask"\"Gateway":WIFI IP/Mask/Gateway setting
"SSID": Input Your WIFI SSID,
"PWD": Same with your WIFI password,

****

According to the specific configuration of WIFI network environment, please pay attention to check the accuracy of the characters and the IP address.

IP address set by WIFI and local network can not be in the same network segment.

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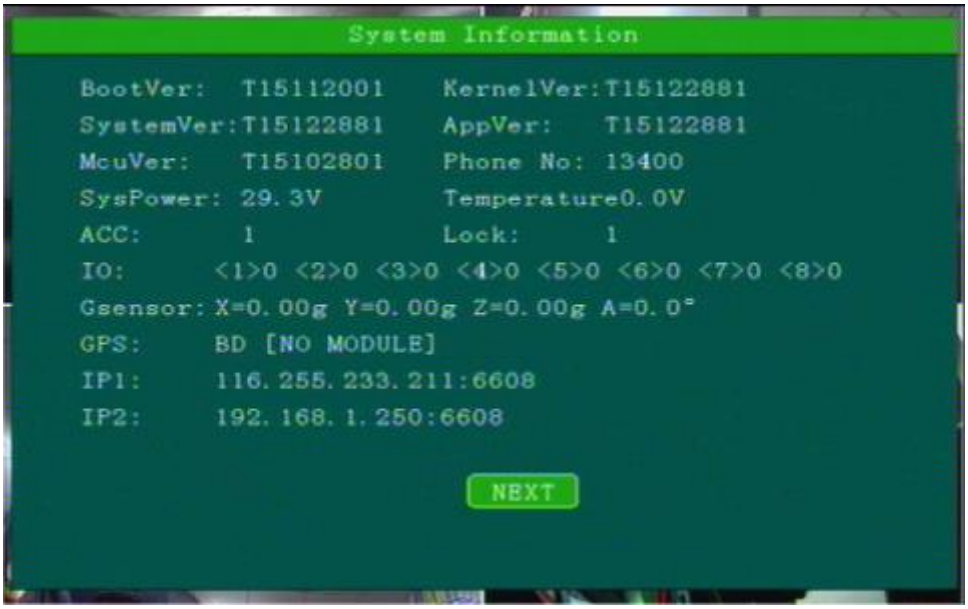
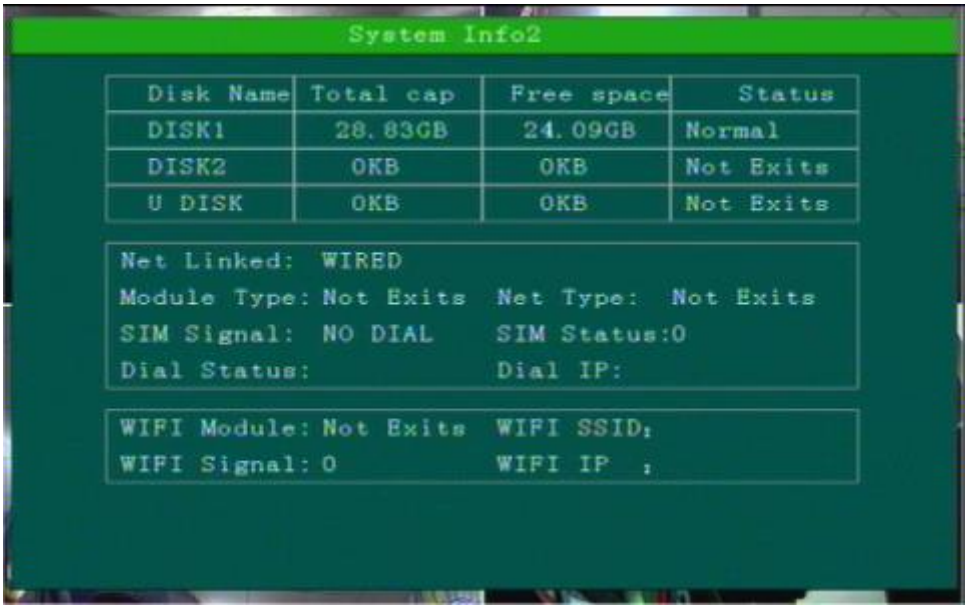
2.7. System Info

System Info have 2 parts for detail information;can view by menu or Press INFO.


System Information
BootVer: T15112001
KernelVer:T15122881
SystemVer:T15122881
AppVer: T15122881
McuVer: T15102801
Phone No: 13400
SysPower: 29.3V
Temperature0.0V
ACC: 1
Lock: 1
IO: <1>0 <2>0 <3>0 <4>0 <5>0 <6>0 <7>0 <8>0
Gsensor: X=0.00g Y=0.00g Z=0.00g A=0.0°
GPS: BD [NO MODULE]
IP1: 116.255.233.211:6608
IP2: 192.168.1.250:6608
NEXT


System Info2
Disk Name | Total cap | Free space | Status
DISK1 | 28.83GB | 24.09GB | Normal
DISK2 | 0KB | 0KB | Not Exits
U DISK | 0KB | 0KB | Not Exits
Net Linked: WIRED
Module Type: Not Exits
Net Type: Not Exits
SIM Signal: NO DIAL
SIM Status:0
Dial Status:
Dial IP:
WIFI Module: Not Exits
WIFI SSID:
WIFI Signal: 0
WIFI IP :

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

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. 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. However, there is no guarantee that interference will not occur in a particular installation.
If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
-- Reorient or relocate the receiving antenna.
-- Increase the separation between the equipment and receiver.
-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-- Consult the dealer or an experienced radio/TV technician for help.

Warning: changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment

Radiation exposure statementy this equipment compliance with FCC radiation exposure limits set forth for anuncontrolled environmenty this equipment should be installed and operated and operated with minimum distance 20cm between the radiator and your body