

# 4-CH Cab Anti-Vibration DVR

## User Manual

Ver. 1.0.0



Model number: 30010713

The reliable non-OS base Digital Video Recorder

P/N number: F40071000

**Thank you** for purchasing our Video Recorder System. Please read this manual before installation.

**For customer support**, contact your dealer, keep your Invoice for further support.



**Do not open/modify** the device, as it may cause damage to the unit and void the Warranty. For internal repairs, consult your dealer or an Authorized Service Center.



**Do not use** any accessories other than what comes with the unit otherwise, it would void the warranty.



**Protect from humidity.** Do not put it in water and be careful to protect it from rain, sea water, or high humidity environment etc.



**Protect from high temperatures**

To avoid damage or mis-operation of the device, only use in temperature of 0 ~ +40°C.



**Do not bring** the device suddenly from a hot to a cold place, or vice versa. This may cause damaged to the inside of the unit by creating condensation.



**EU Environmental Protection**

The symbol of crossed-out garbage shows that this product should not be treated as household waste, and it falls into the category of *electric /electronic* equipment for recycling. This electronic device should not be disposed in a regular trash. We strongly advice you to contact related authorization before you dispose this product.

# Package Content



4ch Cab DVR x1



Remote controller x1



Camera cable with jack \*4



Screw \*4



SATA HDD cable x1



Shock Proof Rubber with screws x2



HDD power cable x1

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# Quick Guide

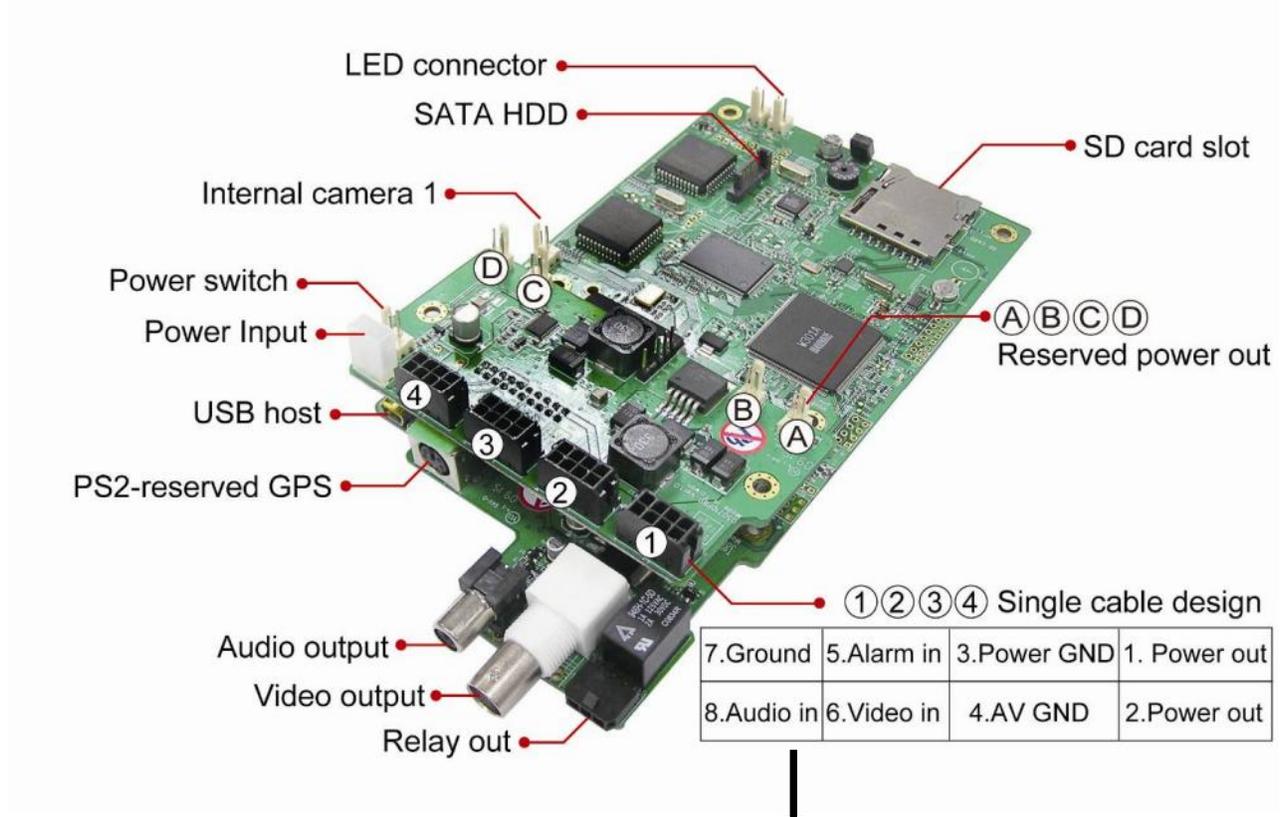
**Step 1: Connect Camera signals:** Connect camera signal cable to 8-pin micro-fit signal jack for external camera. For camera 1, you can connect internal camera cable to 2-pin Molex and connect power cable to 2-pin Molex power jack (A), (B), (C), or (D)

**Step 2: Storage:** Either insert SD card into SD card slot or connect SATA cable with HDD

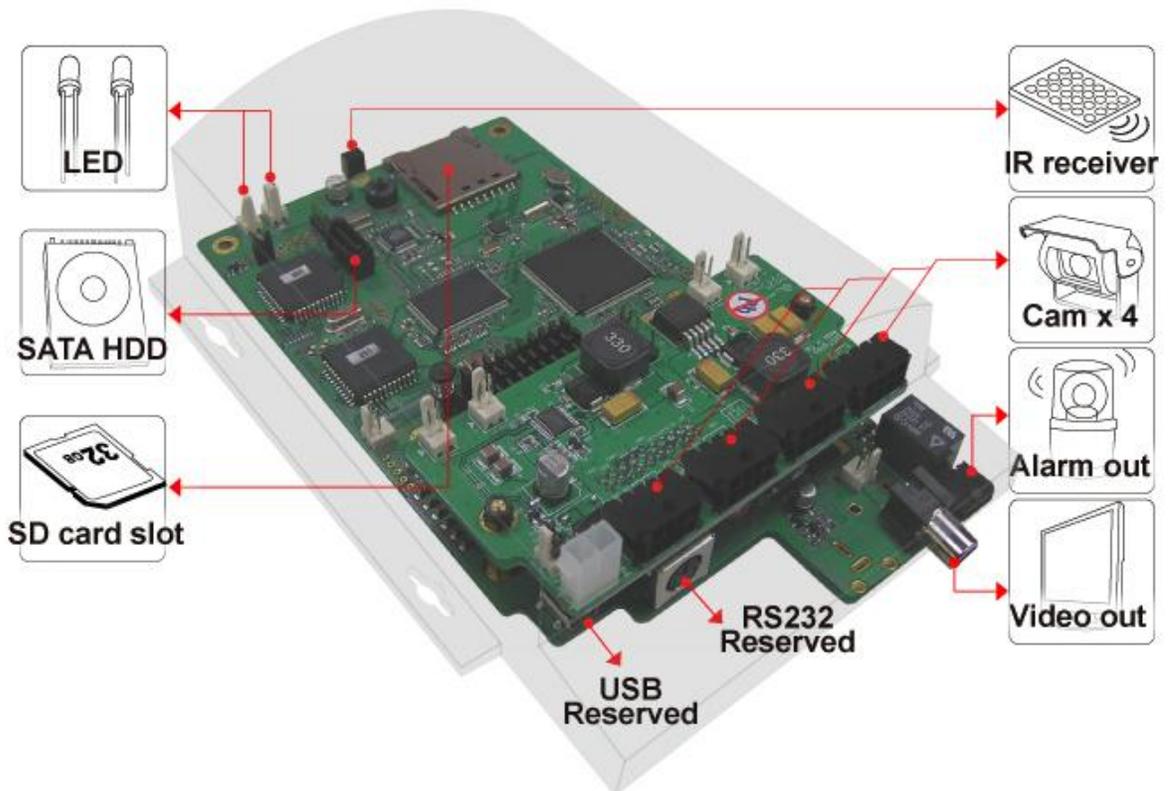
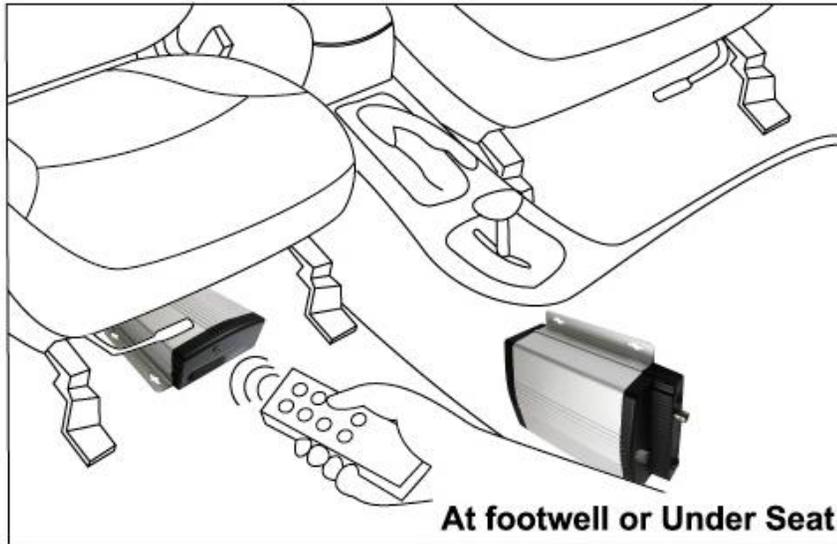
**Step 3: Connect the Power:** Plug Mini-fit into Power input jack, and Connect Mini-fit wire with AC adapter (#30010712) or with power supply directly (#3001 0710, #30010711)

**Step 4: Power on the unit:** For #30010710: Short Power switch to power on the device and it will start to work according to the schedule. For #30010711 and #30010712, please close the case to power on the unit and start to work according to the schedule.

## #30010710-Board Introduction



7. Ground (Orange wire)	5. Alarm in (Blue wire)	3. Power GND (Blue & White wire)	1. Power out(12V) (Green & White wire)
8. Audio in (Orange & White wire)	6. Video in (Brown wire)	4. AV GND (Green wire)	2. Power out(12V) (Brown & White wire)



# Hardware Installation

## 1.1 Casing Installation

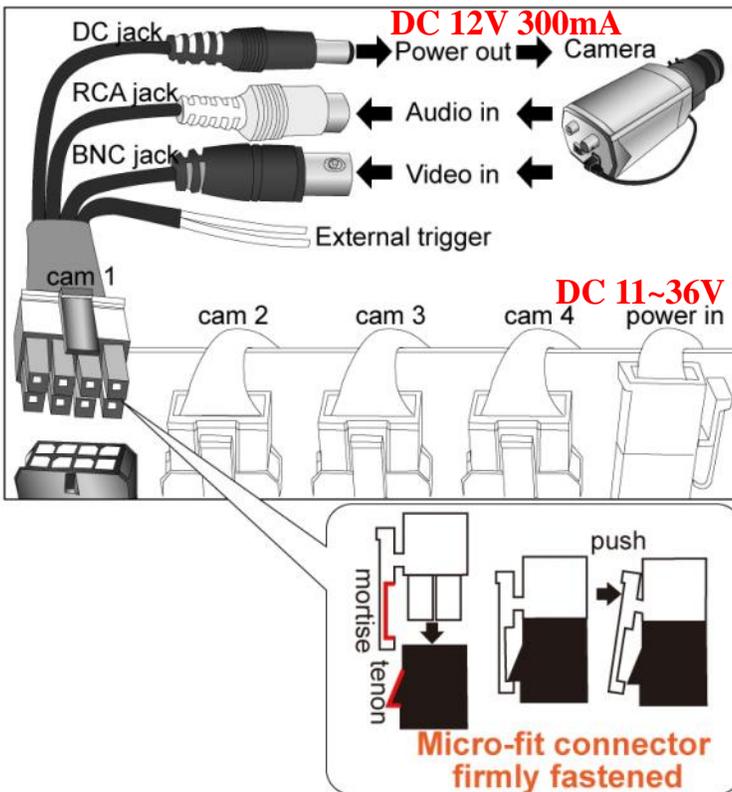


Fasten four screws into the holes

\* Install the DVR on the location you desire such as the footwell, truck, bus ceiling, UN and so on

## 1.2 Camera Installation

### External camera cable connection



1. Plug the connector of Cam 1 to the 8-pin jack on the back of device. Our connector of camera is 8-pin single cable design.

2. Connect RCA (Audio in)/ BNC (Video in)/ Power out (DC 12V 300mA) to camera.

3. External trigger  
Normal close (NC): lead to short circuit and to activate the trigger  
Normal open (NO): deactivate the trigger

## 1.3 Storage

### 1.3.1 SD Card Storage



Insert the SD card into SD card slot

\* Notice that the DVR will format the SD card if the SD card has not been used by DVR before or DVR cannot recognize the SD card. Therefore, please backup the content in the SD card before inserting to DVR.

### HDD Installation

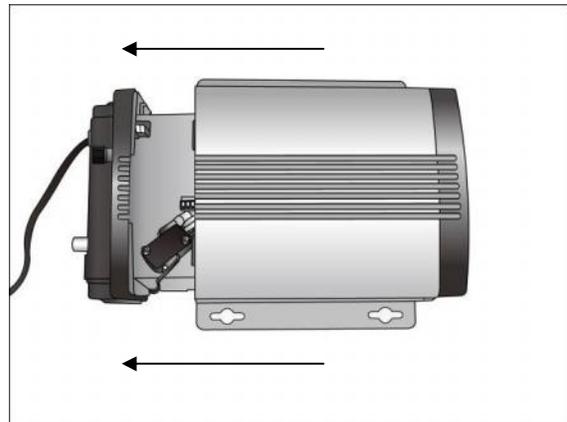
#### 1.3.2 SATA Hard Disk Storage

(1)



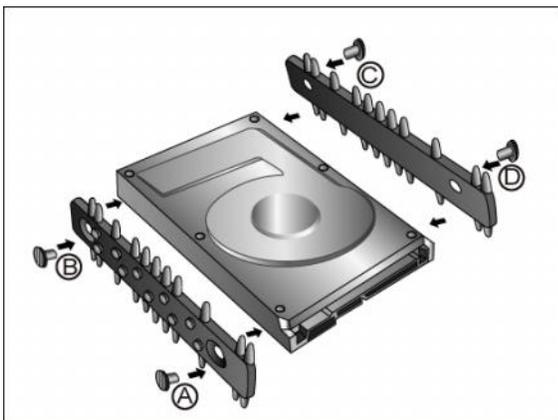
Loosen the screws in (A) and (B)

(2)



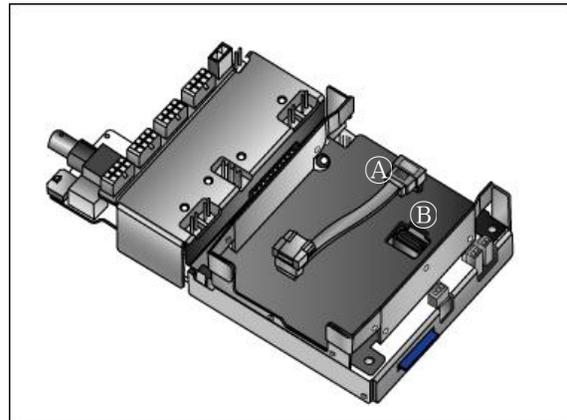
Open the casing to place HDD

(3)



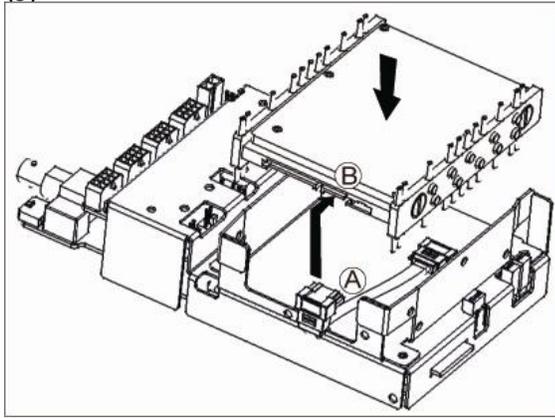
Connect HDD and Shock Proof Rubber with screw (A), (B), (C), and (D)

(4)



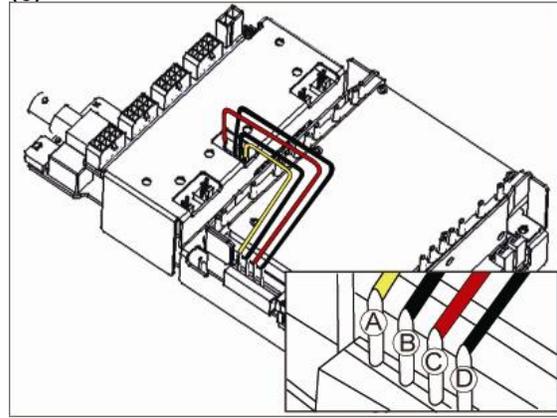
Connect SATA cable (A) to slot (B)

(5)



Insert SATA cable (A) to slot (B) in  
HDD  
Put HDD into the HDD tray

(6)



Connect HDD power cable  
\* (A) for 12V  
\* (B), (D) for Ground  
\* (C) for 5V

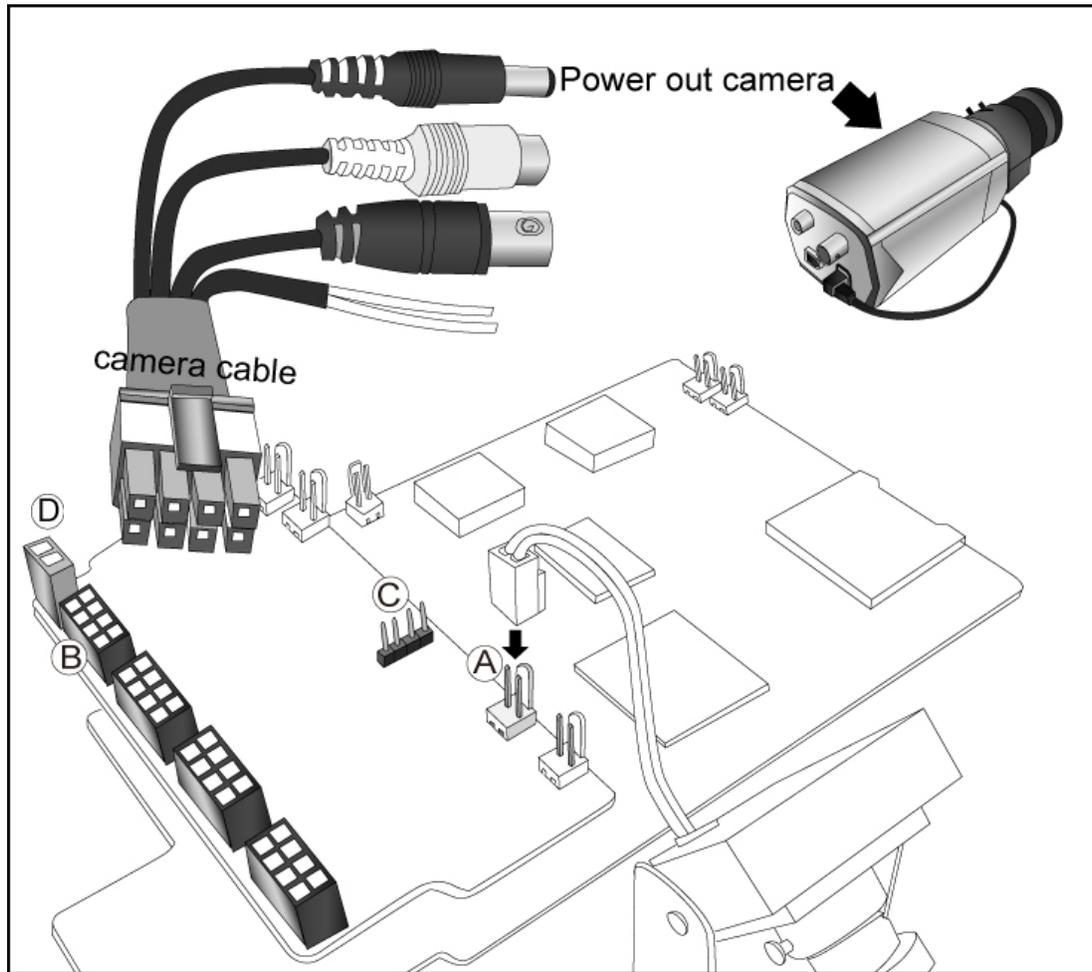
\* Either HDD or SD card can work at the same time. HDD is first priority if HDD is installed on device.

### HDD Compatible Chart

The following hard disk models have gone through the test with DVR 30010713.

Brand	Model number	Size	Interface	Capacity
Fujitsu	MJA2500BH	2.5"	SATA	500GB
	MJA2320BH	2.5"	SATA	320GB
	MJA2250BH	2.5"	SATA	250GB
	MHZ2320BH	2.5"	SATA	320GB
	MHZ2250BH	2.5"	SATA	250GB
	MHZ2160BH G2	2.5"	SATA	160GB
	MHY2080BH	2.5"	SATA	80GB
Seagate	ST96812AS	2.5"	SATA	60GB

## 1.4 Power Installation



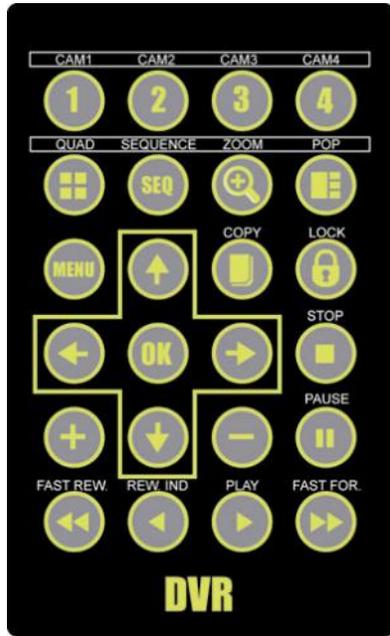
- Ⓐ Extra power supply: DC 12V 200mA
- Ⓑ Power out external camera: DC 12V 300mA
- Ⓒ Power out SATA HDD: 5V / 12V
- Ⓓ Power supply : white → power in (+)  
black → ground

### Power Supply

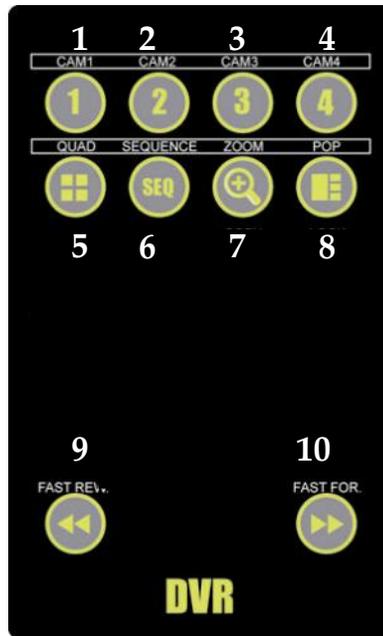
Recommended power input: 16~30V (\* the max. power surge protection up to 40V)

Power Input	Connector Jack	Power Output
15V ↑	Ⓒ For SATA HDD: 5V	5V
	Ⓒ For SATA HDD: 12V	12V
30V	Ⓐ Extra power supply: DC 12V 200mA	12V
	Ⓑ For external camera: DC 12V 300mA	12V
12V	Ⓒ For SATA HDD: 5V	5V
	Ⓒ For SATA HDD: 12V	9.6V
	Ⓐ Extra power supply: DC 12V 200mA	9.6V
	Ⓑ For external camera: DC 12V 300mA	9.6V

# IR Remote Controller



## Numeric Key



	Button	Function	Description
Password		0000	Universal password: UP/UP/DOWN/DOWN/+/+/-/-
Live mode		Camera 1	Camera 1 full screen display
		Camera 2	Camera 2 full screen display
		Camera 3	Camera 3 full screen display
		Camera 4	Camera 4 full screen display
		Quad	Quad display mode
		Sequence	Auto sequence display mode
		Zoom	Digital Zoom, x2
		POP	Picture On Picture * In POP mode, press  to change channel

Group: Live, No Key Lock

		Lock	Key lock * Please refer to “Key Lock Setting” in OSD Menu and change mode to “ON”. In live mode, press  to get it function	
MENU mode		MENU/Exit	Menu mode or Exit to last page	Group: KEY LOCK
		UP		
		DOWN		
		LEFT		
		RIGHT		
		Confirm		
		Plus	Adjust Value	
		Minus	Adjust Value	
<b>PLAY</b>		Search	Search mode	Group: KEY LOCK
		Pause	Pause playback, press again to play frame by frame	
		Copy	Press Copy button after active pause when in playback mode, system will copy file to USB Device. * Currently, the remote controller does not support copy function.	
		Rewind	Rewind playback	
		Fast forward	Fast forward play 2/4/8 times	
		Fast rewind	Fast rewind play 2/4/8 times	
		Stop	1. Stop playback 2. Stop backup	

# OSD Operation

## Display Information (SD card inserted)

		83% FS MP4L 8F	
1	2		
3	4		
A1			
REC	CONT ID12345	2008/07/31	12:14:50AM

1. 83%: SD Card free capacity
2. FS: Full Stop (appear only when SD card is inserted)
3. MP4L: compression format
4. 8F: frame rate
5. A1: audio 1
6. REC: recording mode
7. CONT: continuous recording mode
8. ID 12345: DVR ID
9. 2008/07/31: date
10. 12:14: 50AM: time

		83% OW JPEG 8F	
1	2		
3	4		
A1			
REC	CONT ID12345	2008/07/31	12:14:50AM

1. 83%: SD Card free capacity
2. OW: overwrite (appear only when SD card is inserted)
3. JPEG: compression format
4. 8F: frame rate
5. A1: audio 1
6. REC: recording mode
7. CONT: continuous recording mode
8. ID 12345: DVR ID
9. 2008/07/31: date
10. 12:14: 50AM: time

## (SD card not inserted)

		00% MP4L 8F	
1	2		
3	4		
A1		SDC UNLOCK	
CONT ID12345		2008/07/31	12:14:50AM

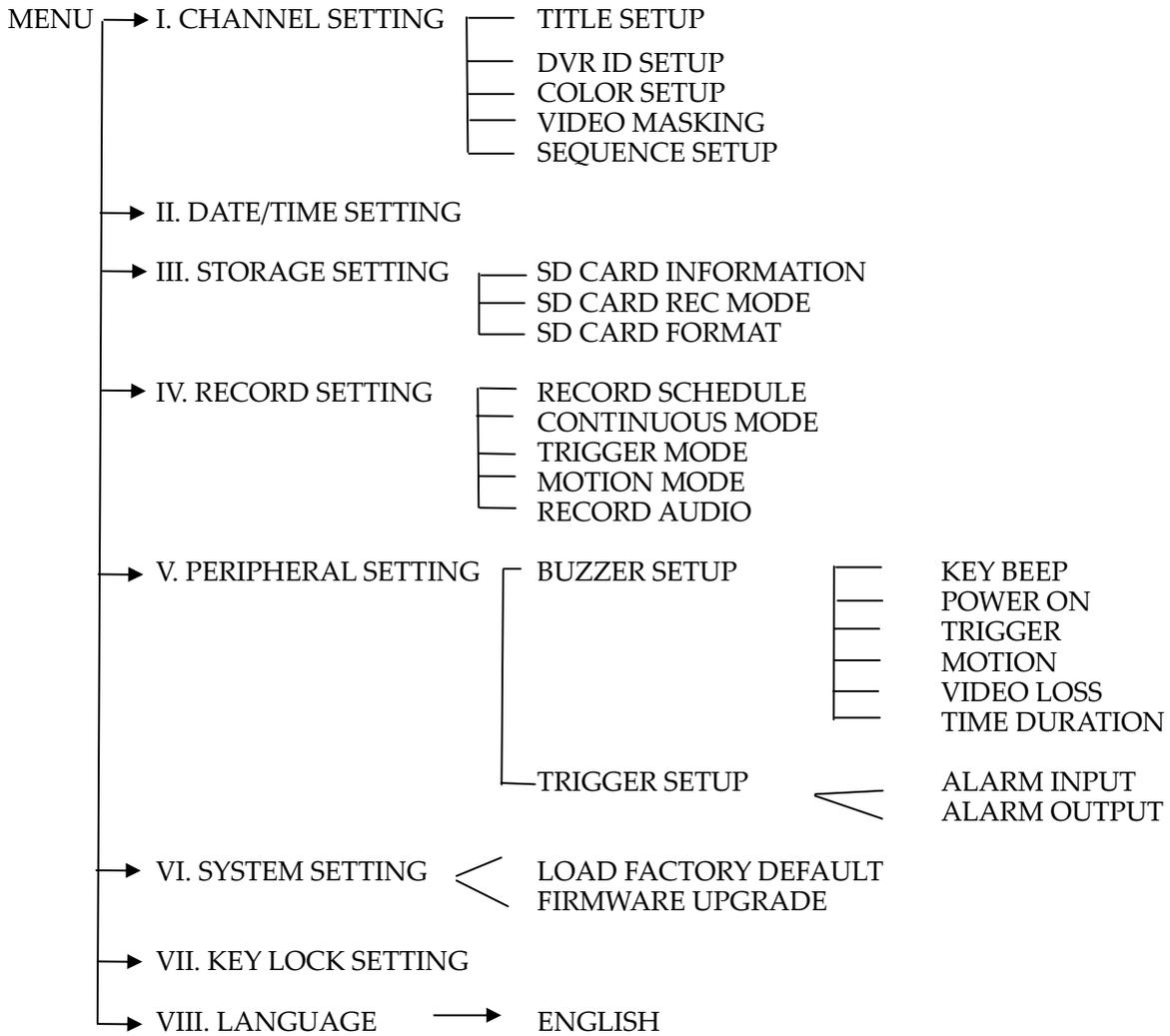
1. 00%: SD Card free capacity
2. MP4L: compression format
3. 8F: frame rate
4. A1: audio 1
5. CONT: continuous recording mode
6. ID 12345: DVR ID
7. 2008/07/31: date
8. 12:14: 50AM: time
9. SDC UNLOCK: SD card not inserted

## Display Information (Camera 1)

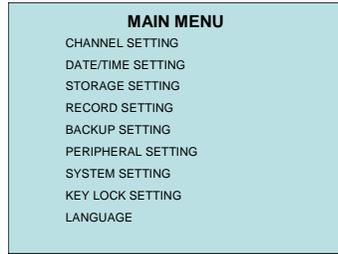
CH 1	00% MP4L 8F		
1			
A1	SDC UNLOCK		
CONT ID12345		2008/07/31	12:14:50AM

1. CH 1: Camera channel
2. 00%: SD Card free capacity
3. MP4L: compression format
4. 8F: frame rate
5. A1: audio 1
6. CONT: continuous recording mode
7. ID 12345: DVR ID
8. 2008/07/31: date
9. 12:14: 50AM: time
10. SDC UNLOCK: SD card not inserted

# OSD Menu Structure Tree

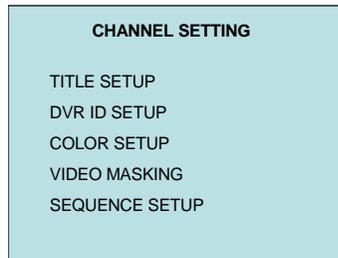


## MENU OPERATION

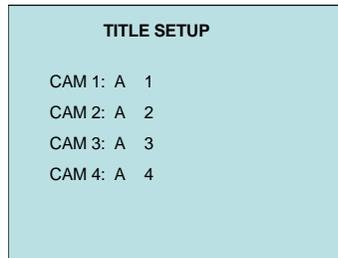


1. Press  to enter MAIN MENU
2. Press   to select item
3. Press  to enter the selected item

## I. CHANNEL SETTING

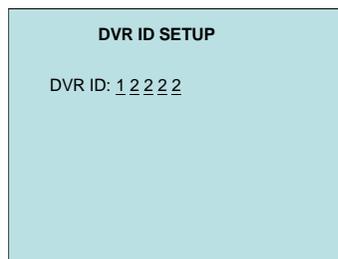


1. Press   to select item
2. Press  to enter the selected item



The title of the camera can be changed from A~Z, 0~9.

1. Press   to select item
2. Press   to change value from A to Z and from 0 to 9
3. Press   to change cursor



The title of the camera can be changed from 0~9.

1. Press   to change value from 0 to 9
2. Press   to change cursor

COLOR SETUP	
CAM	01
BRIGHTNESS	32
CONTRAST	32
SATURATION	32
HUE	32
GAIN	32
	(1-63)

1. Press   to select item
2. Press   to change value

VIDEO MASKING	
CH	VISIBLE
CAM1	ON
CAM2	ON
CAM3	ON
CAM4	ON

1. Press   to select item
2. Press   to change mode (On/ Off)

SEQUENCE SETUP	
FULL SCREEN:	01 SEC

1. Press   to change value

## II. DATE/TIME SETTING

DATE/TIME SETTING										
DISPLAY FORMAT:	YYYY/MM/DD									
TIME FORMAT:	12H									
DISPLAY POSITION:	BOTTOM RIGHT									
ADJUST DATE/TIME										
19	:	13	:	56	:	2009	/	06	/	26
HOUR	MIN	SEC	YEAR	MON	DAY					

1. Press   to select item
2. Press   to change value

\* Display Format: YYYY/MM/DD, MM/DD/YYYY, or DD/MM/YYYY.

\* Time Format: 12H/ 24H

\* Display Position: Bottom right/ Top left

## III. STORAGE SETTING

STORAGE SETTING	
INFORMATION	
REC MODE:	FULLSTOP
FORMAT	

1. Press   to select item

**SD card information:** Press  to enter

**SD card rec mode:** Press   to change mode (Fullstop/ Overwrite)

SD card format: Press  to enter

**SD CARD INFORMATION**

DRIVE: HD  
SIZE: 007.9 GBYTES  
FREE SIZE: 005.6 GBYTES

**SD CARD FORMAT**

FORMAT DEVICE: SD  
START FORMATTING: NO

1. Press   to change mode
- \* Format device: SD/ HDD/ USB

#### IV. RECORD SETTING

**RECORD SETTING**

RECORD SCHEDULE  
CONTINUOUS MODE  
TRIGGER MODE  
MOTION MODE  
RECORD AUDIO: OFF

1. Press   to select item
2. Press  to enter the selected item
3. As for "RECORD AUDIO", press   to change mode (On/ Off)

**RECORD SCHEDULE**

AM PM  
0 - 3 - - 6 - - 9 - - 0 - - 3 - - 6 - - 9 - -  
CCCCCCCCCCCCCCCCCCCCCCCC  
C: CONTINUOUS MODE  
M: MOTION MODE

1. Press   to select item
2. Press   to change value

**CONTINUOUS MODE**  
 RECORD QUALITY: SUPER  
 RECORD SELECT  
 CH01: ON  
 CH02: ON  
 CH03: ON  
 CH04: ON  
 FRAME RATE SETUP

1. RECORD QUALITY: Press   to change mode from SUPER (Best), EXTRA, to HIGH
2. RECORD FPS(recording frames per second)
3. Frame rate adjustable by user as follow :

<b>NTSC</b>		
4 CH	JPEG 2/4/8/15/30/60	MP4L 2/4/8/15/30/60
3 CH	JPEG 2/4/8/15/30/60	MP4L 2/4/8/15/30/60
2 CH	JPEG 1/2/4/8/15/30/60	MP4L 1/2/4/8/15/30/60
1 CH	JPEG 0.5/1/2/4/8/15/30/60	MP4L 0.5/1/2/4/8/15/30/60
<b>PAL</b>		
4 CH	JPEG 2/6/12/25/50	MP4L 2/6/12/25/50
3 CH	JPEG 2/3/6/12/25/50	MP4L 2/3/6/12/25/50
2 CH	JPEG 1/2/3/6/12/25/50	MP4L 1/2/3/6/12/25/50
1 CH	JPEG 0.5/1/2/3/6/12/25/50	MP4L 0.5/1/2/3/6/12/25/50

**FRAME RATE SETUP**  
 COMPRESSION FPS: MP4L 8

1. Press  to change value.

**TRIGGER MODE**  
 RECORD QUALITY : SUPER  
 COMPRESSION FPS : JPEG 30  
 POST RECORD : 5 SEC  
 PRE RECORD : ON

1. RECORD QUALITY: Press   to change mode from SUPER (Best), EXTRA, to HIGH
2. RECORD FPS(recording frames per second): Press   to change value
3. PRE RECORD: Press   to change mode (On/ Off)

<b>NTSC</b>		
4 CH	JPEG 2/4/8/15/30/60	MP4L 2/4/8/15/30/60
<b>PAL</b>		
4 CH	JPEG 2/6/12/25/50	MP4L 2/6/12/25/50

**MOTION MODE**  
 RECORD QUALITY : SUPER  
 COMPRESSION FPS : JPEG 30  
 POST RECORD : 5 SEC  
 PRE RECORD : ON  
 MOTION DETECTION SETTING

1. RECORD QUALITY: SUPER(Best), HIGH, NORMAL, STANDARD
2. RECORD FPS(recording frames per second)

<b>NTSC</b>		
4 CH	JPEG 2/4/8/15/30/60	MP4L 2/4/8/15/30/60
<b>PAL</b>		
4 CH	JPEG 2/6/12/25/50	MP4L 2/6/12/25/50

MOTION DETECTION SETTING	
AREA SETTING	: CH 01
SENSITIVITY	: 01
( 1: MOST SENSITIVE)	
MOTION SCREEN POP	: ON
RELAY OUT	: ON

1. Press   to select item
2. Press   to change value
3. In the item, "AREA SETTING," press  to enter

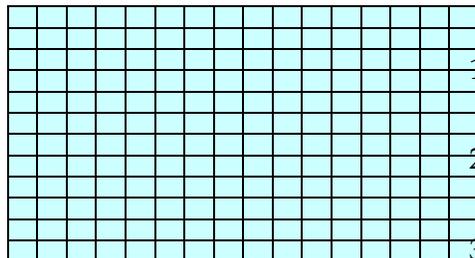
## SELECTION OF MOTION AREA

MOTION DETECTION SETTING	
AREA SETTING	: CH 01
SENSITIVITY	: 01
( 1: MOST SENSITIVE)	
MOTION SCREEN POP	: ON
RELAY OUT	: ON

- \* For Motion Detection Area Setting, please press   to select channel of AREA SETTING and press  to enter area selection.

MD AREA SETTING DESCRIPTION	
1.MOTION EFFECTIVE	: GREEN CELL
2.MOTION NONEFFECTIVE	: CLEAR CELL
3. CURSOR COLOR IS BLACK	
PRESS <u>ENTER BUTTON</u> TO MD AREA SETTING	

1. Press  to enter MD AREA SETTING



1. Press   to select item
2. Press   to change value
3. Press  to select all cells or disable all cells

## V. BACKUP SETTING

BACKUP SETTING	
HDD:	YY / MM / DD HH: MM
BEGIN:	09 / 07 / 28 14: 14
END:	09 / 08 / 12 18: 20
USB BACKUP	
BEGIN:	09 / 08 / 12 18: 20
END:	09 / 08 / 12 18: 20
USB BACKUP: NO	

1. Press   to select item
2. Press   to change value

\* If the USB storage capacity is not enough for backup, the screen will show "INPUT NEXT" in OSD and beep. Please change another USB device and press

 to continue the backup.)

## VI. PERIPHERAL SETTING

PERIPHERAL SETUP	
BUZZER SETUP	
TRIGGER SETUP	

1. Press   to select item
2. Press  to enter the selected item

BUZZER SETUP	
KEY BEEP	: ON
POWER ON	: ON
TRIGGER	: ON
MOTION	: ON
VIDEO LOSS	: ON
TIME DURATION:	02 SEC

1. Press   to select item
2. Press   to change value

TRIGGER SETUP	
TRIGGER INPUT SETUP	
TRIGGER OUTPUT TIME:	01 SEC

1. Press   to select item
2. Press  to enter the selected item

TRIGGER INPUT SETUP			
TRIGGER IN STATUS	OUT	FULL	
CH 01	NC	ON	ON

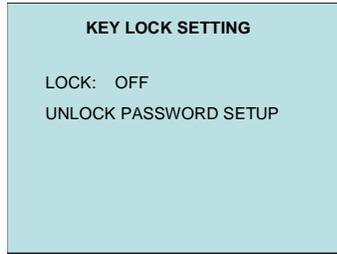
1. Press   to select item
2. Press   to change value

## VII. SYSTEM SETTING

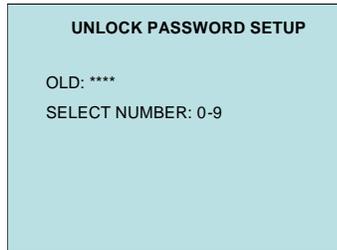
SYSTEM SETTING	
LOAD FACTORY DEFAULT	: NO
FIRMWARE UPGRADE - USB	: NO
FIRMWARE UPGRADE - SD	: NO
30010710	: 021
JAYS	: 008
SKL	: 013
PRESS ENTER KEY TO RUN	

1. Press   to select item
2. Press   to change mode (Yes/ No)

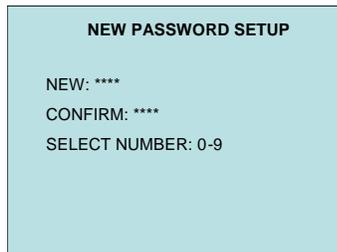
## VIII. KEY LOCK SETTING



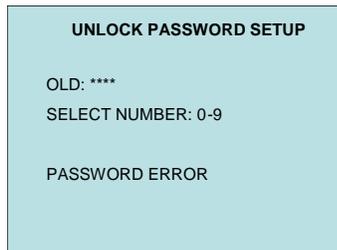
1. Press   to select item
2. Press   to change mode (On/ Off)



1. Key in Password (Default is 0000)

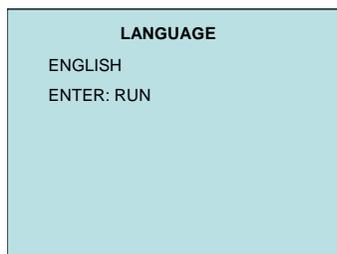


1. Key in the new password
2. Confirm the password



1. Password Error, please key in password again or press  to exit

## VIII. LANGUAGE



1. Press   to change mode (English/ Portuguese)

## PLAYBACK MODE

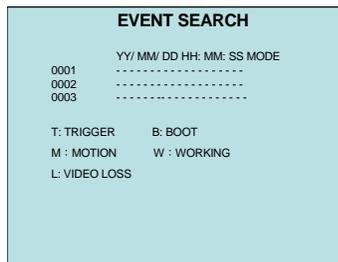


In the Playback screen

1. Press  to enter SEARCH MENU
2. Press   to select item
3. Press  to enter the selected item



1. Press   to select item
2. Press   to change value
3. Go to "RUN" and press  to playback video



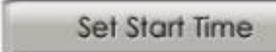
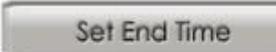
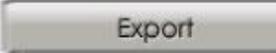
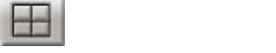
1. Press   to select event
2. Press  to playback the selected event

## PC Player

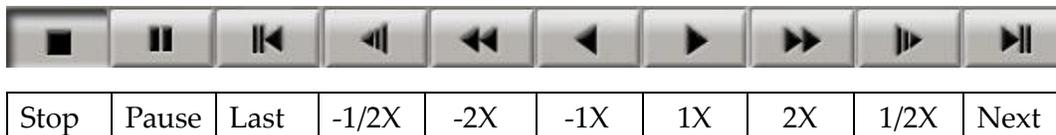
The PC Player interface displays a multi-camera playback view. The main display area shows four camera feeds. On the right side, there is a vertical menu with buttons for 'Search Files', 'Backup', and 'Admin'. Below the main display, there is a playback control bar with various playback controls (play, stop, previous, next, full screen, etc.) and a progress bar. At the bottom, there is a file information panel showing 'Start Time', 'End Time', 'NTSC', and '1X'.

Labels on the right side of the image point to the following components:

- Software version
- Player function button
- Playback display area
- Playback control bar
- Playback function button
- File information

	Search Files		Backup DVR file
	Login		Time/ Date top left
	Time/ Date on		Change account and password
	Select Path		Enter
	Set Start Time		Set End Time
	Export backup file		Cancel
	Select video channel		Select audio channel
	4 split display		Save JPEG picture
	Print		Multiply 32 times the original speed
	Enhance the resolution		Audio adjust
	Mute		

Playback control bar:



File information:

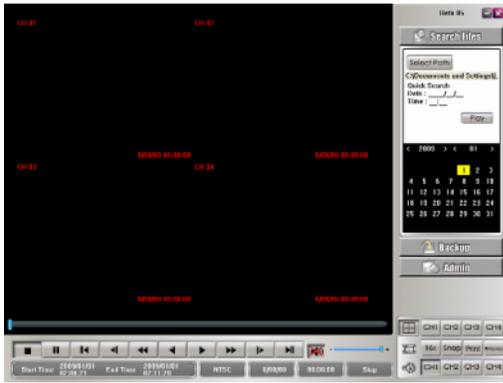


\* Computer Requirement: Dual Core CPU or above , 1GB RAM or above

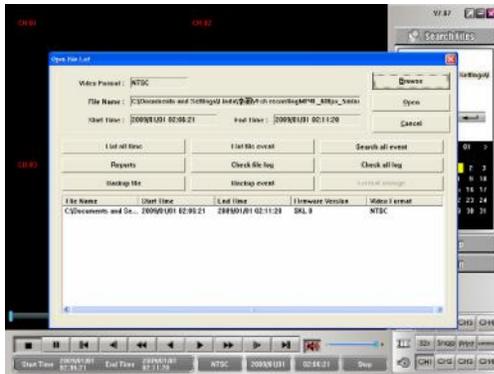
\* Operation System Requirement: Windows XP or above

## Operation procedure

### Search Files



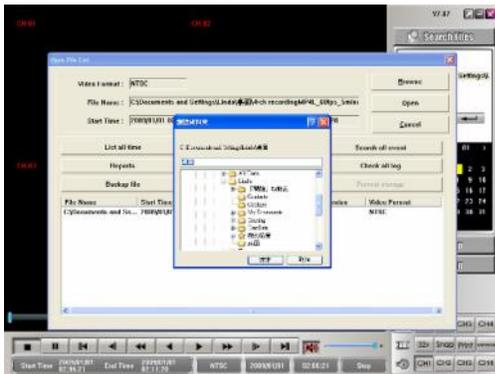
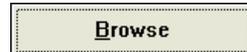
Click



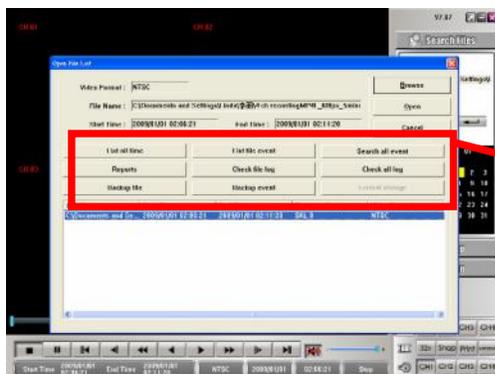
Press



and then press



Select a folder with DVR files and press "OK"



Double click the selected recording file to playback or click the selected recording file and press "Open" to playback.

File searching method:

- \* List all time : list all the recording sessions in the folder you browse.
- \* List file event : list the event which you select in "List all time"
- \* Search all event : list all the events in the folder you browse (max. 1000 events)
- \* Reports : to convert event list into CSV file.

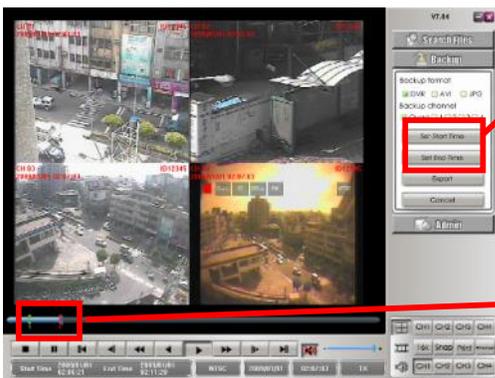
- \* Check file log : list the boot and working log which you select in "List all time"
- \* Check all log : list the boot and working log in the folder you browse
- \* Backup file : to backup the file you selected
- \* Backup event : to backup the event you selected
- \* Format storage : Format SD card easily

## Backup Files

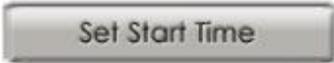


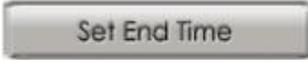
Press  and choose backup format (DVR/ AVI/ JPG) and choose backup channel.

- \* Backup as DVR format: Can only backup four channels
- \* Backup as AVI/ JPG format: backup four channels or individual channel



During the playback, you can press

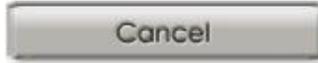
 to set start time to backup file.

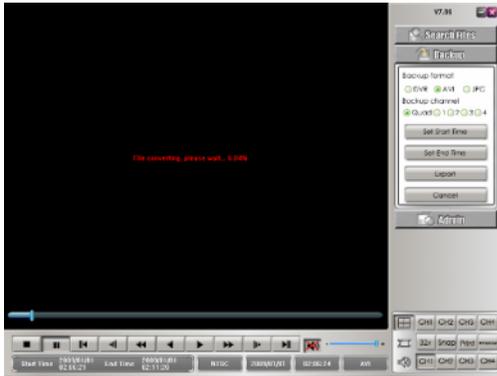
Then, press  to set end time to backup file.

- \* Green bar: backup start time
- \* Red bar: backup end time



Press  to export backup file to PC, or

Press  to cancel Backup Start time and End time



The percentage of backup process.

## Playback Files



Press **CH1** . **CH2** . **CH3** . **CH4** to playback single channel or Press  to playback four channels in the display area



Move the mouse cursor to the place you want to enlarge. Right click to zoom in. Right click again to get back to the original scene.

## Admin



Click  and key in account and password.

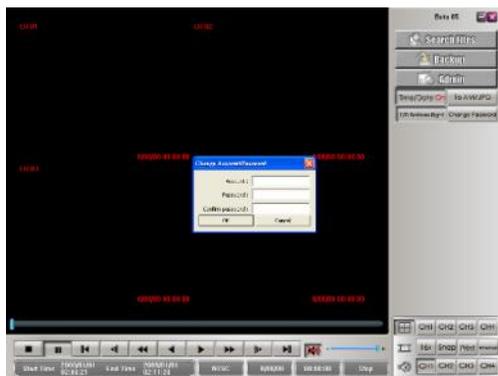
**Default: root/ root**



Press **Time / Date On** to show or hide the time/ date stamp.



Press **Time / Date Top Left** to show time/ date on top left or bottom right.



Press **Change Password** to change account and password in Admin area.

## System information

### LED status

Red LED  <b>On</b>	Green LED  <b>On</b>	Power on, and SD card or SATA HDD works normal
	Green LED  <b>Off</b>	Power on, but no recording (SD card not inserted/ SATA HDD not installed/ SD card or SATA HDD abnormal)
Red LED  <b>Off</b>	Green LED  <b>Off</b>	Power off

## Recording Time of Memory Capacity

(The actual recording time will vary from image complication and frame rate setting.)

Storage capacity	High	Super	Extra
1GB/ 60fps	MP4L: 0.29 hr JPEG: 0.19 hr	MP4L: 0.28 hr JPEG: 0.15 hr	MP4L: 0.22 hr JPEG: 0.14 hr
4GB/ 60fps	MP4L: 1.12 hrs JPEG: 0.73 hr	MP4L: 1.06 hrs JPEG: 0.64 hr	MP4L: 0.85 hr JPEG: 0.51 hr
8GB/ 60fps	MP4L: 2.25 hrs JPEG: 1.45 hrs	MP4L: 2.11 hrs JPEG: 1.29 hrs	MP4L: 1.72 hrs JPEG: 1.03 hrs
16GB/ 60fps	MP4L: 4.41 hrs JPEG: 2.92 hrs	MP4L: 4.23 hrs JPEG: 2.59 hrs	MP4L: 3.42 hrs JPEG: 2.05 hrs
100GB/ 60fps	MP4L: 27.98 hrs JPEG: 18.26 hrs	MP4L: 26.52 hrs JPEG: 16.02 hrs	MP4L: 21.27 hrs JPEG: 12.47 hrs

# Specification

Talitor 4ch Vehicle DVR	
Operating System	Non-OS
Video input format	NTSC or PAL (Auto detect)
MENU OSD	English, Portuguese, Customization-able
Time Date Stamp Format	(1) yyyy-mm-dd, (2) dd-mm-yyyy, (3) mm-dd-yyyy, 3 formats selectable by OSD
Channel Tittles	Enable to be renamed by user, 4 characters
Compression Format	Enhanced JPEG/MPEG-4 Like (Dual mode recording)
Video	4 In (CVBS) 1 Out (CVBS)
Display Resolution	720x480 @ NTSC 720x576 @ PAL
Display Frame Rate	30 fps @ NTSC /25 fps @ PAL (per channel)
Total Record Resolution	720x480 @ NTSC 720x576 @ PAL
Record Frame Rate	NTSC: 60 fps @ 720x480 PAL: 50 fps @ 720x576
Fast/Slow Playback	Yes
Motion Detection Record	1. Motion detection area can be defined in 192 grids and sensitivity can be select 2. Each channel can be triggered by motion detection independently
Recording Quality	3 Levels adjustable (Super, High, Extra)
Video Recording Mode	Schedule continuous, Schedule motion, Schedule alarm
Time/Date Stamp	Yes, format and position adjustable
IR Remote Controller	Yes
Audio	4 channel Input/ 1 channel Output
Alarm Input	4 sets of external triggering signal interface
Relay Output	1 relay output
Event Recording	Post-event recording 5 seconds, Pre-event recording 2 seconds
Power In	12V~30V DC (surge protection up to 40V@2 seconds.)
Power Out	12VDC, 4 output @ 200mA for internal accessory 12VDC, 4 channel @ 300mA for external camera
Timer Battery	RTC Battery lasts for 30 days after power is off
LED	Power (Red)/Recording (Green)
Firmware Upgrade	Yes, through SD card or USB drive
Quad/Sequence	Yes
Peripheral setup	Buzzer setup/ Power switch
SD Interface	Yes, (SDHC class 6 recommended, support up to 32 GB,)
SATA Interface	Yes, support 2.5" SATA HDD up to 500GB
Backup	To USB drive or on PC software
Dimensions	180x100mm (main board) + 52x100mm (power board)
Reserved	RS232 (for GPS)