

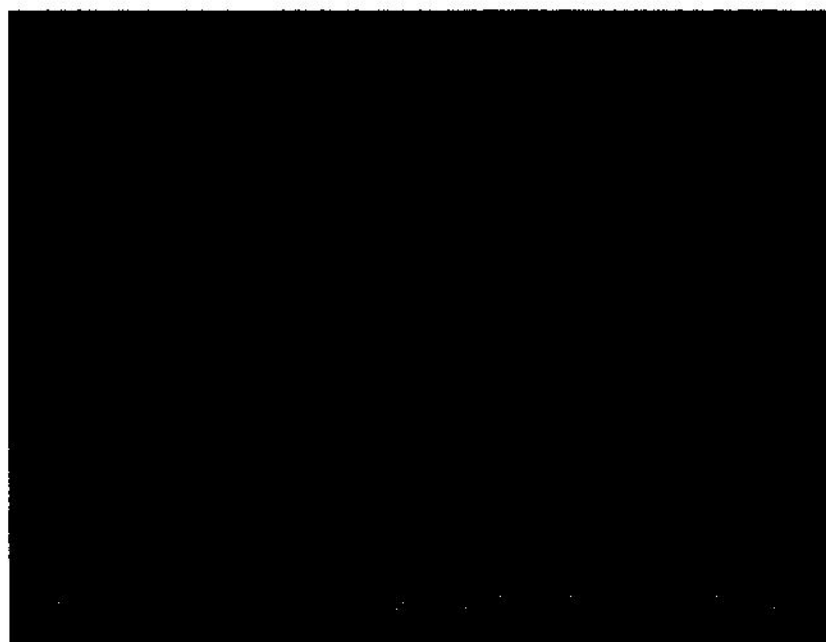
■: means this channel is recording now.

EACH: record mode.

[M]: current work hard drive is master hard drive. [S], slave

(-): normal record, (T): time record, (S): alarm record.

3. Screen Display While Playing



EACH: record mode.

[M]: current work hard drive is master hard drive. [S], slave

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APPENDIX A: SERIAL PORT PROTOCOL25

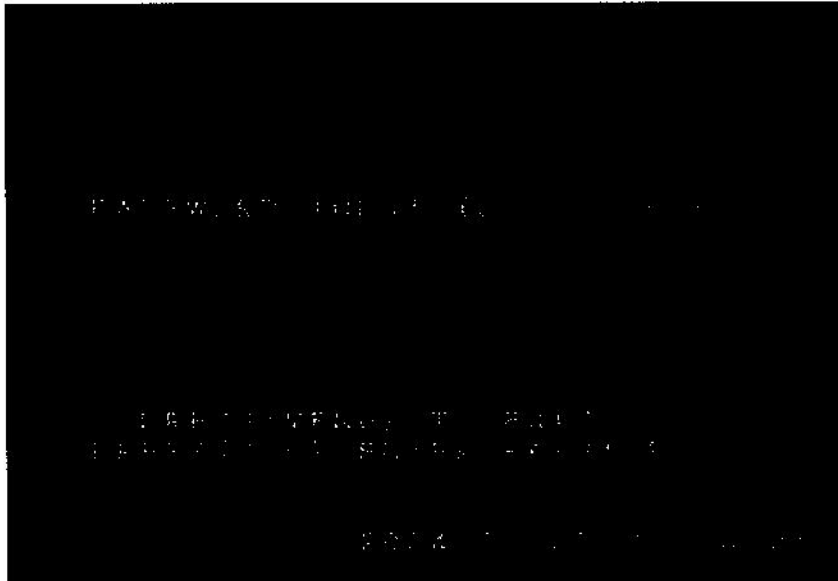
APPENDIX B: RECORD TIME FOR 40G HARD DISK(HOUR)27

System Setup

Before using the video recorder, the first step is to set up the system according to user's needs; otherwise the machine will run with the default setup.

1. Access Menu

System setup is achieved through entering menu, and then setting up on each option's window. The method to access the menu is at the idle state (stop state), to push menu button on the front panel, it will display password input window.



The password is a random combination of 6 digits of "0-9". The default is "111111". To enter the menu below, you have to input the correct password by pushing the digital buttons. If the password you input is incorrect, the system will automatically return. If you don't want to input the password but give up the operation, you can push menu button to return. While inputting the password, in order to avoid being revealed to stander-bys, the password you input is displayed on the screen as "*" signs.



To change the password, please refer to "password change".

2. Setup Methods of menu

While choosing in system setup menu or in various setup windows, push upward button or downward button, the cursor will move among those options, continuous pushing will make the cursor move among the options one by one, and it can recur.

While choosing digital fields (e.g. year, month, day, hour, minute, second etc), push leftward button or rightward button, the cursor can move leftward or rightward among the several digits of one field, continuous pushing will make it move among digits one by one, and it can recur.

Please push "+" or "-" button to change the value that the cursor point to.

3. Camera Select

Push 1,2,3,4 or +- button to open or close the channels, for example,

When you choose (- - - -), all cameras will be disabled.

When you choose (1 2 3 4), all cameras will be operational.

When you choose (- - - 4), only camera 4 will be operational.

When you choose (1 2 - 4), cameras 1, 2, and 4 will be operational.

If you open or close one camera, the camera record is automatically opened or closed.

4. Record Select

Selecting camera channel on RECORD SELECT menu is as same as CAMERA SELECT options. Please remind that only selected camera will record events during recording period.

5. Record Mode

There are two different record modes: EACH and QUAD.

When you set as "EACH" mode, you can view each image displayed in a single full screen by using the key buttons on the front of the DVR box. When you set as "QUAD" mode, you can only see the images from the cameras in a quad screen, which shows four sections on the single TV screen, in this mode the playback is real time record.

6. Record Frame Rate

Factory default setting is 30 (25 for PAL), Which means DVR records the events at the speed of 30 shots of frames per second. The higher the record frame rate, the more natural look will be displayed on the screen when you playback. The lower the record frame rate, the more you can save the space on the hard disk drive.

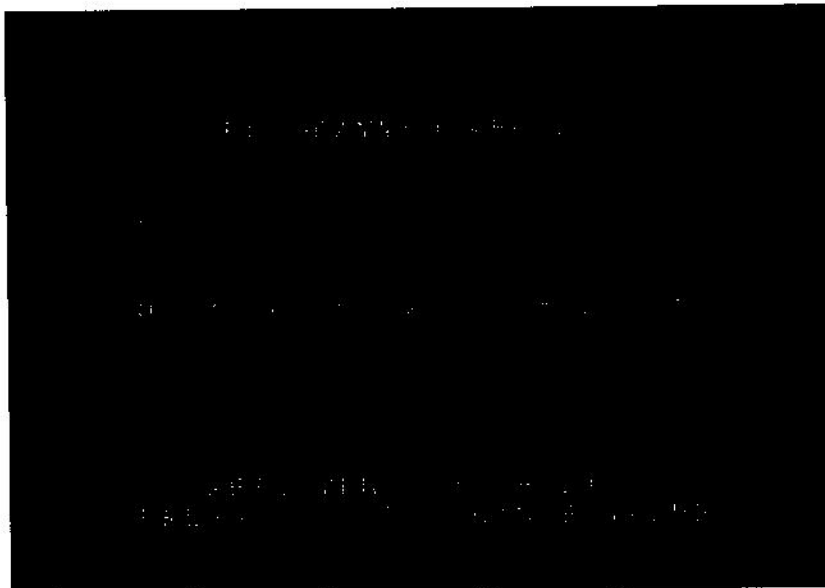
There are 10 different record frame rate sets that you can choose.

7. Video Quality

There are three different video quality settings: NORMAL, LOW, HIGH. The higher the video quality, the clearer images when you playback. The lower the video quality, the more you can save the space on the hard disk drive.

8. Record Schedule

When the cursor moves to record schedule, please push enter button, the record schedule window will appear, which is illustrated as below. You change a recording schedule during a day (24-hour period) using this option.



0-24 instead of 24 hours of a day, each hour can be setup to one of three states: T (time), S (sensor), - (normal).

(T) this period is time scheduled, in time scheduled state (push the schedule button), this period will record automatically.

(S) this period is alarm scheduled, in alarm scheduled state (push the alarm button), this period will record automatically when there is an alarm input.

(-) this period will not record unless you push the record button.

Push leftward button or rightward button to move the cursor, push "+" or "-" button to change the value.

9. Hard Drive Setup

When the cursor moves to HARD DRIVE SETUP, then push enter button, the hard drive setup window will appear, which is illustrated as below. Push upward or downward button to move the cursor, push "+" or "-" button to change the value, push enter button to select.

OVERWRITE ENABLED: If you choose YES, recording continues and overwrite previous recording when hard disk drive space is full. If you choose NO, the recording session stops when all hard disk drive is full for recording.

MASTER HDD SIZE: It shows the size of the primary hard disk drive is full for recording.

MASTER HDD USED: It shows the space used on the first hard disk drive for recording.

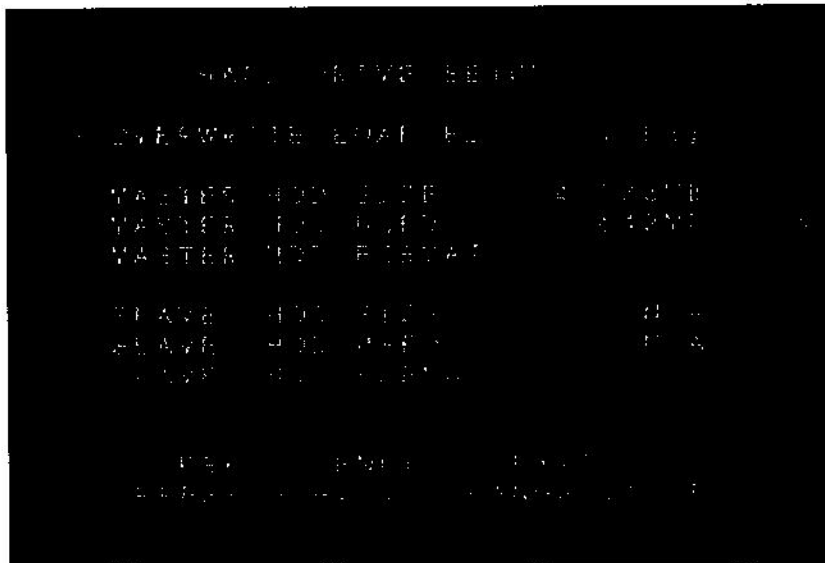
MASTER HDD FORMAT: If you format the hard drive, it will erase all the data recorded on the first hard drive.

SLAVE HDD SIZE: It shows the size of the secondary hard disk drive is full for recording.

SLAVE HDD USED: It shows the space used on the secondary hard disk drive for recording.

SLAVE HDD FORMAT: If you format the hard drive, it will erase all the data recorded on the secondary hard drive.

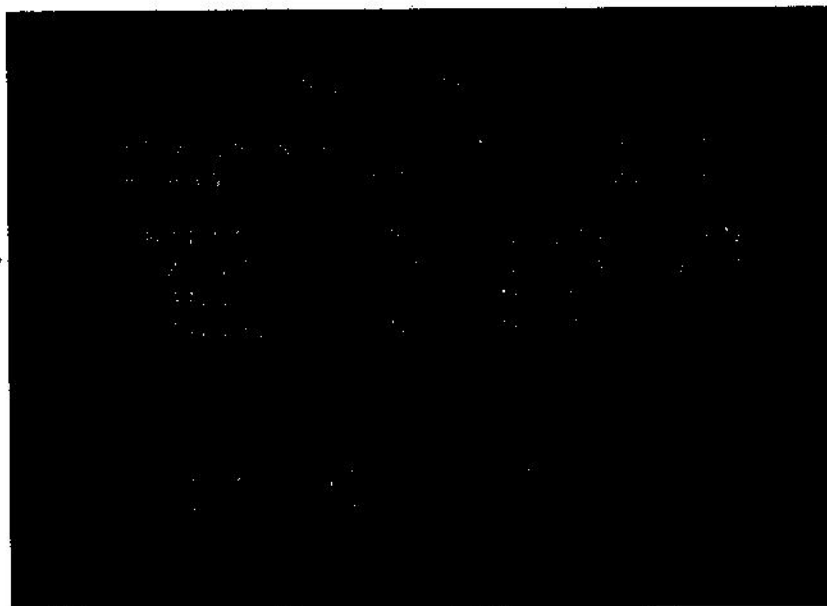
N/A means there is no secondary hard drive.



You must enter correct password to format hard drive.

10. Sensor Setup

When the cursor moves to **SENSOR SETUP**, then push enter button, the sensor setup window will appear, which is illustrated as below. Push upward or downward button to move the cursor, push "+" or "-" button to change the value.

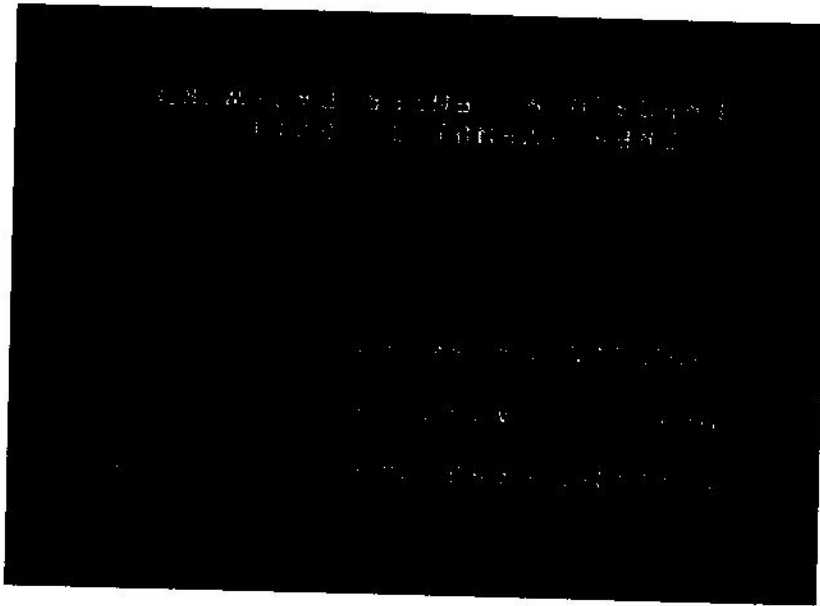


SENSOR RECORD TIME: The number indicates how long sensor recording will last after the sensor indicates the movements or other things happens in front of the camera.

ALARM OUT TIME: It controls how long the alarm will last after it sets off.

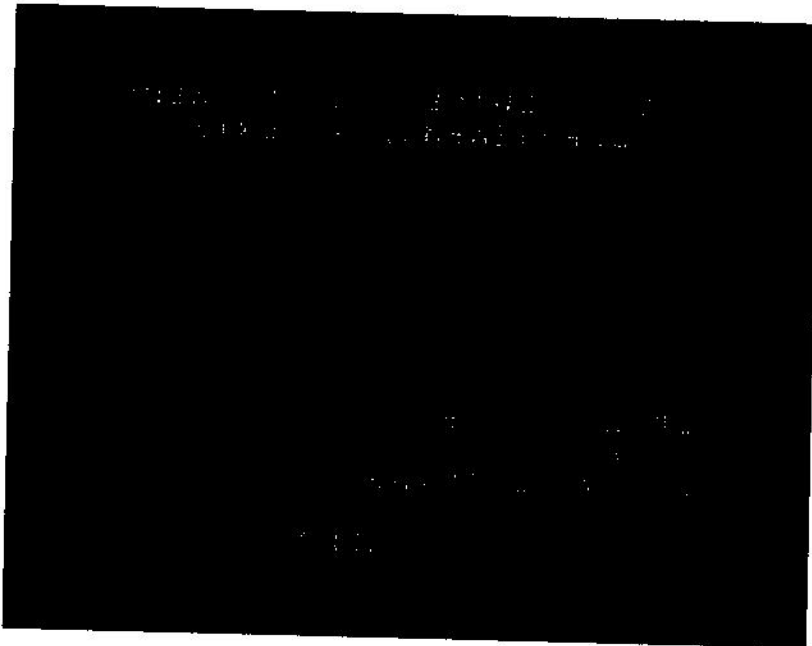
There are three different modes for sensor setting:

NORMAL-OPEN: if the cable line connected to the sensor is in short circuit, the sensor recording starts.



When the cursor moves to PASSWORD CHANGE, then push enter button, the password change window will appear, which is illustrated as below.

12. Password Change



When the cursor moves to SUB MENU, then push enter button, the sub menu window will appear, which is illustrated as below, including PASSWORD CHANGE, TIME SET, PROTOCOL SET. Push select button to enter each sub menu.

11. Sub Menu

recording starts.

NORMAL-CLOSE: if the cable line connected to the sensor is cut off by an intruder, the sensor

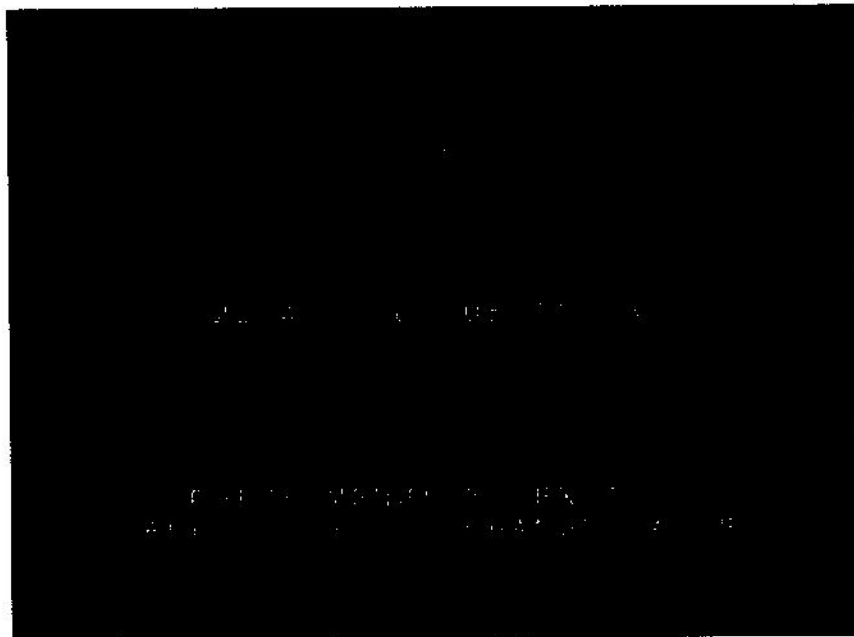
NOT-INSTALLED: the sensor recording does not work.

To change password, you have to input six digits of current password, then input six digits of new password you want, then confirm the password, the confirm password must be same as the new password you input. When the new password is accepted, the board will flash the following screen message: "Password changing ! ! !", the message will blink 5 times. Then the "SUB MENU" will return. If the password is not accepted, you will receive a message that informs you. The "SUB MENU" returns. You may try again by repeating the same steps.

The system's default password is "111111", In order to ensure system security, modifying the password is recommended strongly. Keep the password at a safe place is always very helpful.

13. Time Set

When the cursor moves to TIME SET, then push enter button, the time set window will appear, which is illustrated as below.



Push leftward button or rightward button to move the cursor, push "+" or "-" button to change the value.

14. Protocol Set

When the cursor moves to PROTOCOL SET, then push enter button, the protocol set window will appear, which is illustrated as below. Push upward or downward button to move the cursor, push "+" or "-" to change the value.

BAUDRATE: Can change form 1200bps to 19200bps. The default is 9600bps.

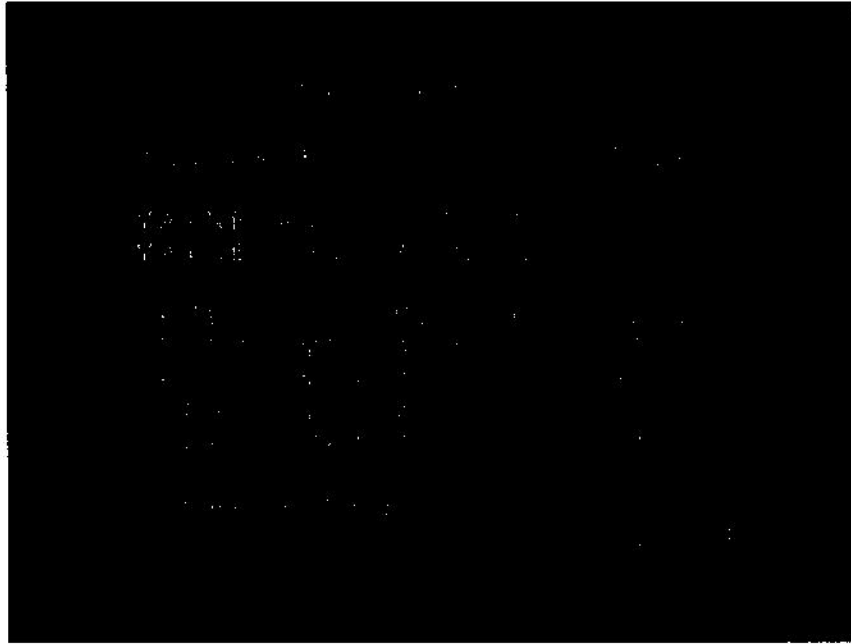
MAINBOARD PROTOCOL: The protocol that computer or keyboard control DVR, please refer to appendix A. The default is PTC1.

MAINBOARD ADDRESS: The address of the DVR for the mainboard protocol, can change from

0x00 to 0xff, default is 0x01.

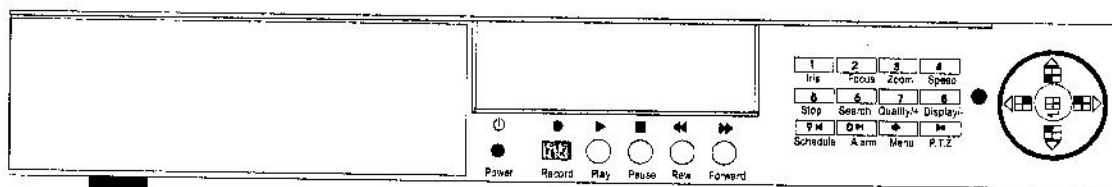
SPEEDDOME PROTOCOL: The protocol that DVR control speeddome, include pelco-p, pelco-d, cop-02, lilin, default is pelco-p.

SPEEDDOME ADDRESS: changable form 0x00 to 0xff, the default is 0x01. The default addresses of speeddome1 to speeddome4 are 0x01, 0x02, 0x03, 0x04.



Buttons On the Front Panel

The front view of the video-recorder is illustrated as below.



1. Recording/Playing Control Buttons Area

Record: It is manual recording button. Push this button to record video on hard disk, Re-push this button or push stop button, it will stop recording. So, this button is the switch button of manual recording and stopping recording operations. Recording and stop will work simultaneously on four channels' images. This button doesn't work while Time recording and Alarming recording.

Play: Push this button to start playing the video stored in hard disk, Re-push this button or push stop button, it will stop playing So, this button is the switch button of playing video and stopping playing operations. Playing and stop will work simultaneously on four channels' images. This button doesn't work while Time recording and Alarming recording.

Pause: Push this button to stop playing temporarily; push play button to continue to play.

Rew: Fast backward button. Push this button to start fast backward playing till push play button to start normal playing from the present position.

Forward: Fast forward button. Push this button to start fast forward playing till push play button to start normal playing from the present position. The fast backward has three speeds; every time you push the button will change the speed from slow to fast and then back to slow.

2. Function Control Area

Iris/1 button: While PTZ control state, push this button to select iris control. While inputting numbers, this button is used as numer key of "1".

Focus/2: While PTZ control state, push this button to select focus control. While inputting numbers, this button is used as numer key of "2".

Zoom/3: While PTZ control state, push this button to select zoom control. While inputting numbers, this button is used as numer key of "3".

Speed/4: While PTZ control state, push this button to select iris control. While inputting numbers, this button is used as numer key of "4".

Stop/5: While recording or playing video, push this button to stop recording or playing. This button

doesn't work while Time recording and Alarming recording. While inputting numbers, this button is used as numer key of "5".

Search/6: Push this button to enter search menu. While inputting numbers, this button is used as numer key of "6".

Quality/7/+: Push this button to change picture quality. While inputting numbers, this button is used as numer key of "7", When in system setup menu, this is an increase button.

Display/8/-: Push this button to display current information on the screen. When in system setup menu, this is a decrease button. While inputting numbers, this button is used as numer key of "8".

Schedule/Previous segment/9: Press this button, the system starts the time setting function. Push "Time setting" button once to stop time setting operation. While playing, push this button, the system will jump directly to the head of the previous video segment and then begin to play. While inputting numbers, this button is used as numer key of "9".

Alarm/Next segment /0: This button is used to put on guard, push one time to put on guard, push again to remove guard. While playing, push this button, the system will jump directly to the head of the next video segment and then begin to play. While inputting numbers, this button is used as numer key of "0".

Menu/First segment: Push this button to enter system setup menu. While playing, push this button, the system will jump directly to the first segment and then begin to play

PTZ/Last segment: Push this button to enter PTZ control state, push once to control first speeddome, repush to second speeddome, then third, then forth, then quit PTZ control. While playing, push this button, the system will jump directly to the last segment and then begin to play.

3.Channel Choosing Control Area

First channel/up: Push this button to see full screen display form channel 1. While selecting menu items, push this button to move up the cursor.

Second channel/down: Push this button to see full screen display form channel 1. While selecting menu items, push this button to move down the cursor.

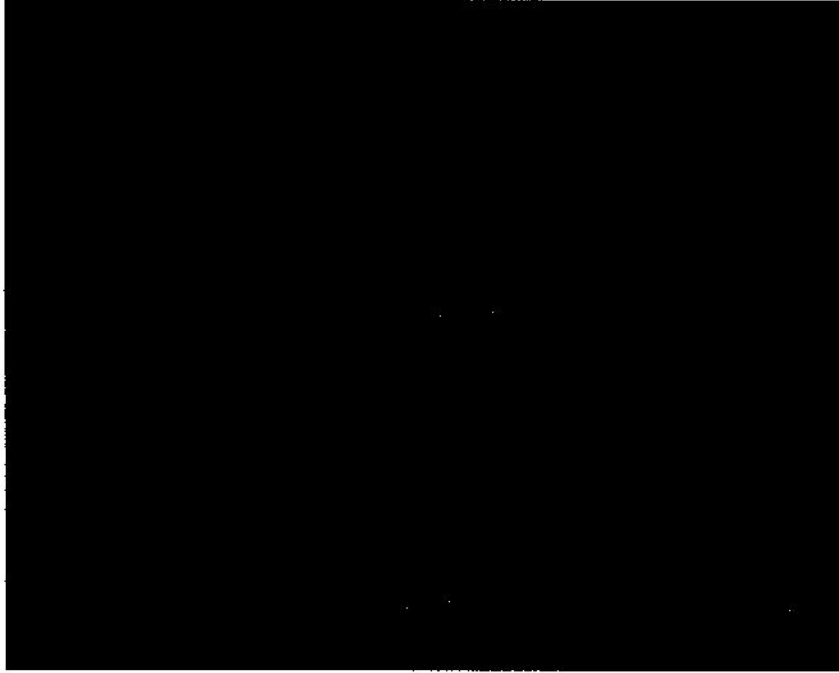
Third channel/left: Push this button to see full screen display form channel 1. While selecting menu items, push this button to move the cursor leftward.

Forth channel/right: Push this button to see full screen display form channel 1. While selecting menu items, push this button to move right the cursor.

Quad/enter: Push this button to see full screen display form channel 1. While selecting menu items, push this button to select the item.

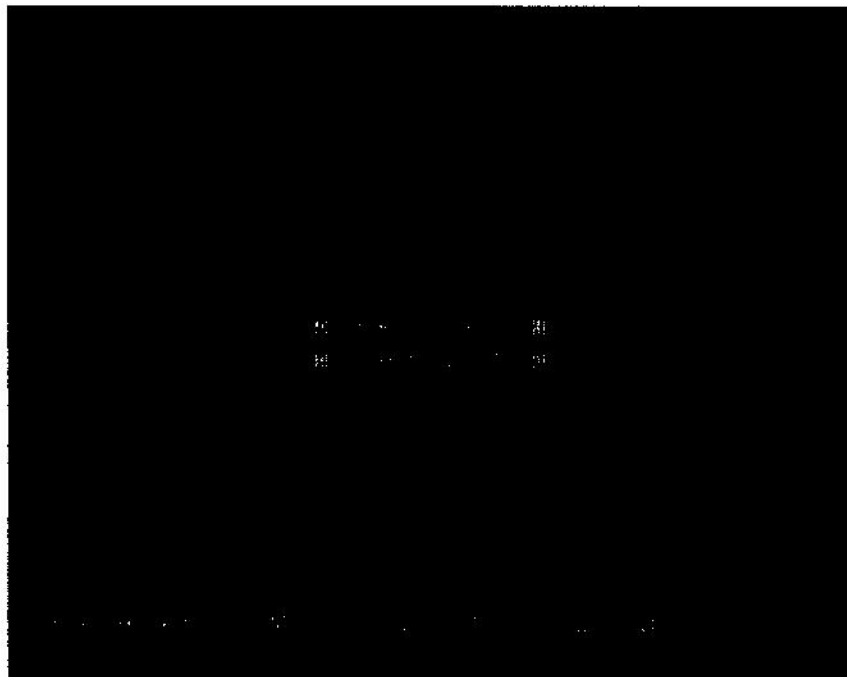
Display statuses while running

1. Screen Display While Running



CH1-CH4 are the names of four channels. "OFF" means the fourth channel is set disabled.

2. Screen Display While Recording



Security Notice

● Power supply

This Digital-Video-Recorder applies AC 90-240 voltage indoor power supply. The voltage of the power must be verified before using.

When the machine is not in use for a long time, pull out the plug from the socket and disconnect the power.

● Security

This machine is indoor equipment; in order to avoid dangers of short circuit or electric shock, please do not expose the machine in rain or moist environment. In case any solid or liquids get into the machine's case, please cut off the power supply immediately, and ask for qualified technicians to check the machine before restart.

This machine is precise instrument; do not attempt to repair any unit of the machine by yourself without technical aids. When there is any malfunction with the machine, please ask for qualified technicians to examine and repair, or contact the dealers in your area.

● Installation

Please choose appropriate site to install the machine, to ensure well ventilation around the machine to avoid the machine excessively hot. The machine cannot be installed near radiator and ventilating trunk etc. heat sources, or under straight sunshine, or dusty places or anywhere there is a chance for mechanical librations or impact.

● Advice

While recording TV programs or VCD programs, please don't pirate the third-party's authority and/or any other relative rights.

Features of this DVR

- Video input: 4channels, video output: 2 channels.
- May choose any one of the four video channels for surveillance and recording; as well as four channels recording simultaneously.
- Three optional levels of image quality: high, normal, low. Frame rate change enable for recording.
- Compression mode: Modified MJPEG.
- Compatible with NTSC and PAL format.
- Support alarm recording and time recording.
- Multi-function searches: be able to distinguish alarm records and time record from ordinary records; be able to search by time or by segment (previous segment, next segment, first segment and last segment, etc.).
- Support various playback modes: pause, and 2X/3X/4X fast forward and backward play.
- Automatic spot protection when power-off, automatic resume when power on.
- Four alarm input and one alarm output.
- Equipped remote device
- P.T.Z control enable.
- Totally independent from PC platform, thoroughly keeping away from shutdown caused by inappreciative operations, complicated management and operation, and virus infection.