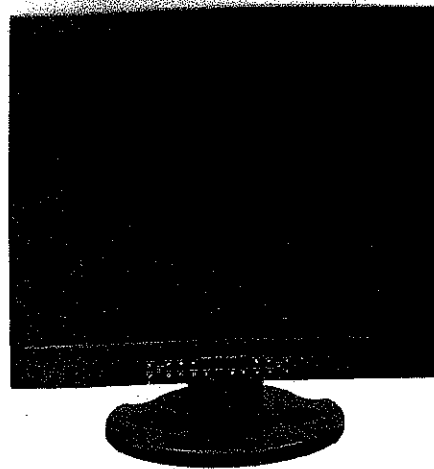


# *LCD With Built-in DVR*

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## *User Manual*



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<div style="display: inline-block; border: 1px solid black; padding: 5px; text-align: center;"> <p><b>CAUTION</b></p> <p><b>RISK OF ELECTRIC SHOCK</b></p> <p><b>DO NOT OPEN</b></p> </div>
<p><b>CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE THE BACK. NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL</b></p>

### Graphic Symbol Explanation



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated 'dangerous voltage' within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

**Warning – To Prevent Fire Or Shock Hazard, Do Not Expose This Monitor To Rain Or Moisture.**

**This Product Must Be Earthed.**

**Product Specification Is Subject To Change Without Notice.**

## IMPORTANT SAFEGUARDS

### Caution

Power source is dedicated on the rear of the set. It contains high voltage Parts. If you remove the cover, it may cause fire or electric shock. Do not remove the cover by yourself.

- 1. Read Instructions:** All the safety and operating instructions should be read before the appliance is operated.
- 2. Follow Instructions:** All operating and use instructions should be followed.
- 3. Cleaning:** Unplug this monitor from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
- 4. Water and Moisture:** Do not use this monitor near water, for example, near a bathtub, wash bowl, kitchen sink, laundry Tub, in a wet basement, or near a swimming Pool, and the like.
- 5. Accessories:** Do not place this monitor on an unstable stand, tripod, bracket, or table. The monitor may fall, causing serious injury to a child or adult, and serious damage to the appliance. Use only with a cart, stand, tripod, bracket, or table recommended by supplier, or sold with the monitor.
- 6. Ventilation:** Slots and openings in the cabinet are provided for ventilation and ensure reliable operations of the monitor and to protect it from overheating, and these openings should never be blocked by placing the monitor on a bed, sofa, rug, or other similar surfaces. This monitor should never be placed near or over a radiator or heat register. This monitor should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or supplier instructions have been adhered to.
- 7. Object and Liquid Entry:** Never push objects of any kind into this monitor through openings as they may touch dangerous voltage points or short-out parts that would result in a fire or electric shock. Never spill liquid of any kind on the monitor.
- 8. Repair (Servicing):** Do not attempt to repair this monitor yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer to qualified service personnel.
- 9. Replacement Parts:** When replacement parts are required, be sure the service technician uses replacement parts specified by supplier or have the same characteristics as the original parts. Unauthorized substitutions may result in fire, electric shock or other hazards.
- 10. Safety Check:** Upon completion of any service or repair to this monitor, ask the service technician to perform safety checks to determine that the monitor is in proper operating condition.
- 11. Retain Instructions:** The safety and operating instructions should be retained for future reference.

# Chapter One Production Summarize

## 1.1 Production Summarize

The equipment is a kind of small channels digital monitoring products which is specially designed for security industry. It adopted the embedded processor and operating system and also integrated the most advanced technologies in IT field, such as using MPEG-4 video and audio compressing / decompressing, recording by hard disk with big volume, TCP/IP network and other technologies. The code solidity in FLASH has changed the traditional mode of Monitor with DVR. It integrated the Monitor with DVR instead, which not only becomes more convenient for users to operate but also makes the system run more stable and convenient for maintenance.

## 1.2 Products Properties

- LCD Monitor combine perfect with DVR Hard Disk Recorder. Adopting the high-speed embedded micro-controller and also real time operating system, the system has a super-high stability, high durability, without crash phenomenon and also easy for maintenance.
- It's easy for users to follow up and maintaining as the integration of Monitor with DVR.
- Two levels of password protection from administrator and operator guarantees the safety of the system.
- The system operating adopted the OSD graphical interfaces, which is more convenient for users to master.
- The video compressor adopts the pure hardware MPEG-4 Changeable stream or MPEG-4 fixed stream, supporting the HD1 and CIF resolution recording in each channel, the frame rate for recording is adjustable, with high sharpness but super-low hard disk space used.
- Adopting FAT32 format to store, and can locate one block IDE hard disk with big volume;
- Four channels video input, two channels video output, one channel VGA output; Two channels audio input. Two channels audio output and plus speaker output too.
- Three channels alarming input, one channel linkage alarming output and one channel troubles alarming output.
- Real time monitoring and playback for any single picture, dual views and built-in quad mode pictures.
- The system supports turning on and off the machine automatically. Once the power is off, it will return automatically when the power turns on; Alarming can also start automatically when the video signal is missing. This all guaranteed the realization of no-man watch.

- Hand-operated, fix time, alarming linkage, Motion detecting recording and so on, With various recording methods, the volume of the hard disk is effectively saved at the time that users have finished the preset function.
- Motion detecting recording function, can setup more than 192 detecting areas independently.
- The system supports pre-alarm recording and alarm prolong recording functions, which guaranteed the integrality of alarm recording materials.
- With  $\times 2$ 、 $\times 4$  times fast forward/ fast backward play functions and  $\times 1/2$ 、 $\times 1/4$ 、 $\times 1/8$  times speed slow backward play, pause and frame play and also others play control functions.
- The system supports PAL/NTSC systems, which can be used universally.
- Brightness, contrast, Color and Tint can be setup independently for each channel.
- Perfect alarming log and operating log realizes the convenient analysis and searching.
- RJ-45 universal network telecom interface, network transmitting ways include ADSL, ISDN, LAN and CAN and so on;
- Adopting the client software to realize the long-distance monitoring and playback on net, supporting TCP/IP、UDP/IP and many other net transport protocols.
- RS-485 interface equipped with the system can be used for control decoder, fast ball and other outer equipments, with various decode protocols available, and can also expand those various decode protocols.
- VGA output has  $720 \times 480$ 、 $1280 \times 720$  and  $1920 \times 1080$  three modes for choice, the picture is more clear by adopting progressive scanning.
- Supporting IDE hard disk material backup.
- Equipped USB2.0 interface to the system, which will be more convenient for downloading and saved as other files of the materials in hard disk.

## System Installation

### 2.1 Installing Manual for hard disk

#### Installation Clew

Equipment does not contain Hard Disk When leave factory, hard disk will configure installation according to video record plan, selecting suitable hard disk according to video record plan, and operate strictly according to hard disk box manual instruction book steps. This product only support one big capability hard disk.

#### Installation Tool:

A handful of Cross Screwdriver

#### Hard disk installation Step:

- 1、 Hard disk fasten frame is located in hard disk monitor back, please break out hard disk fasten box first.
- 2、 Check hard disk box's manual instruction book, sort and count hard disk box attachment.
- 3、 When install hard disk, please check whether it has been installed wholly.

**Remind:** After hard disk installation is done, format is needed. When equipment hasn't installed hard disk or no format after installing hard disk, system contain only monitoring function, video function can't run normally. Format hard disk operate refer to third system operation manual

**Note:** please set the hard disk at "Master" mode when connect the hard disk to DVR.

### 2.2 Installation Environment

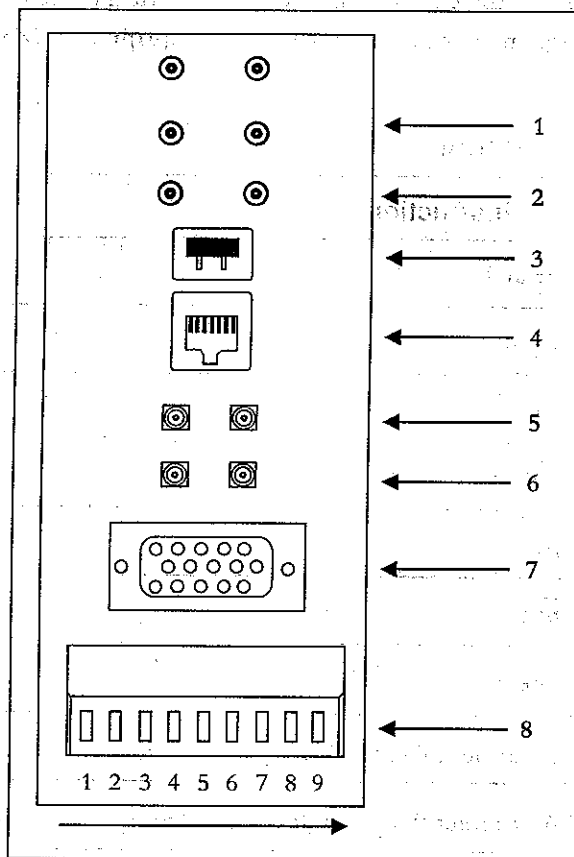
Embedded digital hard disk monitor is exactitude equipment, in order to insure the safe using of monitor and obtain satisfactory using performance, and extend monitor use longevity, when customers are selecting monitor installation place, they are strongly recommended to consider below factor:

- (1) Before supply power to DVR, please make sure input voltage match DVR input voltage.
- (2) Please don't place monitor in wet or drench place.
- (3) Monitor should place and install in horizon.
- (4) Monitor should avoid installing in the acuity shaky place.
- (5) Monitor installation should avoid being direct irradiation by sunshine, and apart from hot source and high temperature environment. Monitor normal working temperature field is from 5 centigrade degree to 50 centigrade degree.
- (6) When monitor is being installed, its back panel should keep away from other goods or keep distance at least 15cm from wall, in order that the fan can scatter hot.
- (7) The installation place inside monitor should not store the chemical goods which are likely to generate causticity volatilization gas, in case of affecting monitor use longevity.
- (8) Monitor should avoid be installed in the overfull atomy place, environment should keep clean.
- (9) Make sure that monitor connect ground while it is using.
- 10) Make sure that monitor should connect to the other equipment in installation.

### 2.3 Note Proceeding

- (1) Be sure not to touch power and monitor by wet hands.
- (2) Don't splash the liquid upon monitor in case of short inside the machine or catching fire.
- (3) Make sure not pile up other goods upon monitor.
- (4) While cleaning monitor, please use soft dry cloth to wipe, chemical solvent is not allowed to use.
- (5) After monitor's power line is connected to power jack, even if monitor isn't started, it will have voltage inside.
- (6) If machine does not use in long term, better power off monitor, and pull out power line upon power jack.

## 2.4 Switch board interface



### Switch board interface definition

Serial Number	Name	Instruction
1	Video Input	Connect four line camera respectively, standard BNC interface.
2	Video Output	Connect Monitor or monitor panel wall, standard BNC interface.
3	USB interface	Connect PC equipment, used to backup local video record data
4	Network Interface	Connect to Ethernet equipment, such Ethernet switcher, Ethernet HUB
5	Audio Input	One-two audio signal input, standard BNC interface.
6	Audio Output	Connect Audio output equipment, standard BNC interface
7	VGA interface	Connect VGA display equipment, such Computer VGA display. VGA output and BNC output operation method: By pressing [F4] of remote controller will switch display output and monitor output. Resolution respectively are 720×500、1024×768、1280×780
8	Alarm Input, output/RS-485	Alarm setting please see alarm port pin definition instruction RS-485 connect to Pan/Tilt



**Note:** Direct video output and VGA output design is only used in the situation below, that just need video record function and no need display image, or equipment installation place temporarily are not suitable to display monitoring image, need outer linkage display equipment. Meanwhile it can also have the function of saving electricity.

#### Alarm input,output/RS-485 instruction:

Serial Number	Instruction
1	1 Alarm input 1
2	2 Alarm output 2
3	Ground line
4	Alarm input
5	Alarm input
6	Alarm input
7	Ground line
8	RS-485B connect Pan/Tilt decoder/Dome
9	RS-485A connect Pan/Tilt decoder/Dome

### 2.4.1 Alarm Hookup

#### (1) Alarm Input Hookup format

When alarm trigger input is decibel output, DVR monitor alarm input connect format is below:

- A. When alarm trigger normal output is high decibel (5V), alarm output low decibel (0V), now should set DVR to open alarm (NO)

**Instruction:** Alarm interface should make common ground with alarm, and connect all three channel alarm input to alarm or connect +5V voltage. when alarm trigger alarm, it is low decibel, then trigger alarm.

- B. When alarm trigger normal output is low decibel (0V), alarm output high decibel (5V), temporarily should set DVR to open alarm (NC)

**Instruction:** Alarm interface must be common ground of alarm, and connect to alarm input interface to alarm output (Can connect to whole or any selection). When alarm trigger is on, it is high decibel, then trigger alarm.

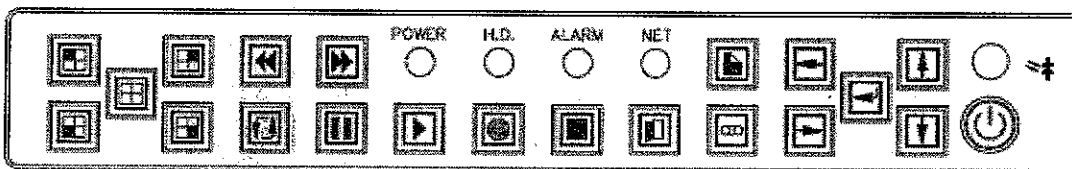
#### (2) Alarm output

Two channel alarm output, one channel connect alarm output, another channel is error alarm output, when no alarm output is low decibel, and alarm output is available will be high decibel.

# Chapter 3 System Operating Manual

## 3.1 Instructions for front panel and remoter control unit

### 3.1.1 Front Panel



Type	Icon	Name	Instruction
Status		[ NET ]	When network connection is ok, it displays green, and when data is transferring it flashes
		[ ALARM ]	The alarm light will be on once the alarm is started
		[ H.D. ]	The light flashes when Hard Disk reads and writes
		[ POWER ]	When standby red light on, Power on green light on
Switch Key		[Switch/POWER]	Equipment Switch Key
Function Key		[ MENU ]	Preview mode switch to menu mode
		[ CHECK ]	Check menu key, used for inquire about hard disk data information
		[ ESC ]	Esc key, directly exit to previous menu from operation menu.
		[ REN ]	Back playback image
		[ FORWARD ]	Forward playback image
		[ QUAD ]	used for switching image among quad, double and single image.
		[ PAUSE/SETP ]	Press first time will pause playing image, continue pressing, a frame image will play every time pressing
		[ PLAY ]	Local playback shortcut key
		[ REC ]	Manual video record shortcut key
Direction Key		[ UP ]	Upper cursor direction motion key/ Pan/Tilt direction motion key
		[ DOWN ]	Lower cursor direction motion key, Pan/Tilt direction motion key
		[ LEFT ]	Left cursor direction motion key, Pan/Tilt direction motion key
		[ RIGHT ]	Right cursor direction motion key, Pan/Tilt direction motion key
Control Key		[ ENTER ]	Denote selection conform key, while selecting menu bar press this key will enter into sub-menu; While replaying image data, press one time will display system current time.
Farmland Word Key		—	Switch to first channel image
		—	Switch to second channel image
		—	Switch to third channel image
		—	Switch to fourth channel image
		—	Switch to four channel image

### 3.1.2 Remote control

#### Remote Control



#### Remote Control press key and function introduction.

##### (1) Digital-Key Area

**[0-9] Button:** Digital buttons, used for using digit input or video switch, when under the built-in quad state, press 1、2、3、4 digit buttons mean to switch the picture output to the first, second, third and fourth channel video single picture;

**[+]、[-] Button:** Adjusting the simulating parameters;

##### (2) Menu operation key area.

**UP :** Upper cursor direction motion key/ Pan/Tilt direction motion key

**DOWN:** Lower cursor direction motion key/ Pan/Tilt direction motion key

**LEFT:** Left cursor direction motion key/ Pan/Tilt direction motion key;

**RIGHT:** Right cursor direction motion key/ Pan/Tilt direction motion key;

**[ ENTER ] Key:** choosing the menu items, and press this button to enter into the selected sub-menu;

Pressing this button can display the real time of the system when show the playback for the image material;

##### (3) Pan/Tilt control function key area

**[ ZOOM+ ]、[ ZOOM- ] Button:** Adjust the distance of the picture;

**[ APERTURE+ ]、[ APERTURE- ] Button:** Adjust the brightness of the picture;

**[ FOCUS+ ]、[ FOCUS- ] Button:** Adjust the sharpness of the picture;

**[ AUTO ] Button:** Control automatically;

**[ RECALL ] Button:** Pan/Tilt Remote control, and standby key;

**[ PRESET ] Button:** Preset control to Pan/Tilt, standby button;

**[ SWITCH ] Button:** Washer switch and light assistant switch control.

##### (4) Play video function key area:

**[ PLAY ] Button:** Play the currently recorded pictures;

**[ SLOW ] Button:** Play the images slowly, at speed of  $\times 1/2$ 、 $\times 1/4$ 、 $\times 1/8$  times, or press **[ play ]** button to return to normal playing speed;

**[ PAUSE/SETP ] Button:** Press one time of the picture paused at the first time, and then press continuously, a frame of picture will be played when press it per time, press **[ Play ]** button to return to normal speed of playing;

**[ FWD ] Button:** Play fast forward of the playback picture, at the speed of  $\times 2$ 、 $\times 4$  times, press **[ Play ]** Button to return to the normal speed of playing;

**[ REV ] Button:** Play fast backward of the playback pictures, at speed of  $\times 2$ 、 $\times 4$  times, press **[ Play ]** Button to return the normal speed of playing;

(5) Other function key area

**【 POWER/ON 】** Button: or turning on and off the machine ( Standby and start ) ;

**【 LOG IN/LOCK 】** Button: get the operating rights, to type in the password and lock operation;

**【 CHECK 】** Button: For reviewing recording data, log, state of hard disk, information of software edition and so on;

**【 PLAYBACK 】** Button: For reviewing recording materials, log, state of hard disk, information of software edition and so on;

**【 QUAD 】** Button: For switching pictures among built-in quad, dual views and single picture;  
Its order is: Channel1 → Channel 2 → Channel 3 → Channel 4 → Dual views  
(Channel 1-Channel 2) → Dual views (Channel3-Channel 4) → Built-in  
quad → Channel 1

**【 ANALOG 】** Button: display the brightness, contrast, colour and tint, adjusting its parameters together with the adjustment of **【 + 】**、**【 - 】** button ( This operation need to be realized only when under single picture and this channel should be under non-recording state ) ;

**【 EXIT 】** Button: Exit button, exit from the operating menu to last selected menu directly.

**【 CF 】** Button: Enter into the standby menu for recording data copy the material in hard disk to the outward connected memory equipment ( hardware with CF card connector is needed )

**【 LANGUAGE 】** Button: Enter into "language selection" menu directly to set the language.

**【 NET 】** Button: Standby button;

**【 RECORD 】** Button: Start the four channels hand-operated recording when under the four channels monitoring state, start dual views hand-operated recording when under two channels monitoring state; start the single channel hand-operated recording when under the single channel monitoring;

**【 STOP 】** Button: Stop the hand-operated recording ( operating way is the same with that for **【 recording 】** button ) ;

**【 SETUP 】** Button: When login the system normally, press this function button to enter into the menu setting of the system;

**【 F1 】** Button: For pick time play on the recorded pictures;

**【 F2 】** Button: Press this button to enter into the control menu of Pan/Tilt under the single channel picture.

- Press left, right, up and down buttons can do according adjustment to platform camera;
- Press **【 Zoom+ 】**、**【 Zoom- 】** Button: Adjust the distance of the picture;
- Press **【 Aperture+ 】**、**【 Aperture- 】** Button: Adjust the brightness of the picture;
- Press **【 Focus+ 】**、**【 Focus- 】** Button: Adjust the sharpness of the picture;
- Press **【 Washer Switch/Light 】** Button: Go on controlling washer switch/light;
- Press **【 Auto 】** Button: Control automatically;
- Press **【 Transfer 】** Button: Go on transferring control to Pan/Tilt, standby button;
- Press **【 Preset 】** Button: Preset control to Pan/Tilt, standby button; Press again of the **【 F2 】** button or **【 Exit 】** button to exit the setting for the Pan/Tilt control menu;

**【 F3 】** Button: Standby Button.

**【 F4 】** Button: switch between the monitor and VGA output;

Operation method: Press **【 F4 】** button upon remote control to switch between output of monitor and output of display under monitoring. Its order is: output of monitor → VGA 1 → VGA 2 → VGA 3; There are three states for VGA output, which can be adaptable for different VGA standard.

## 3.2 System on/off

### 3.2.1 System turn on

Connect power line to power, and open power switch, system will enter into standby status, power indicator light—red light will be on constantly

Press remote control [turn on/Power off] button, system start, it will display four channel monitoring picture upon monitor screen, the digit displayed in each picture means corresponding video input channel number, at the middle of the top screen will display current system time.

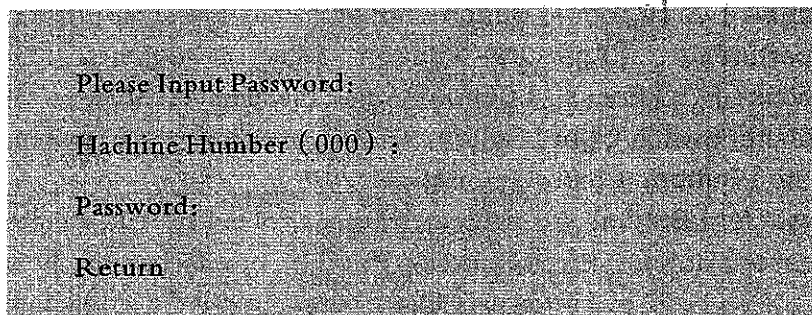
- Note:**
- 1) If time for timing recording has been setup in this machine (or at high peak period), and power is just connected during this period, then the machine will start automatically enter into monitoring picture status. It's no need to press [ on/off ] button again to start the machine.
  - 2) If there are no display of video input channel Number upon the screen and the real time for the system, please press [ ENTER ] button in the remote control unit or panel, then they will be appeared.
  - 3) If the hard disk has not been installed before turning on the machine, or the hard disk is not detected in the primary period when turn on the machine, the hard disk video recorder will generate alarm sound from buzzer, login the system will eliminate the alarm. If password function isn't unlocked, only need to press ENTER button in monitoring picture.

### 3.2.2 System Login

**Note:** pre-delivery code for this equipment is: 000, the default password for administrator is 88888888, and it is 00000000 for operator. Administrator has all of its operating rights. In order to make sure the safe running of the system, administrators should change its code and default password of the machine in time.

When the host machine is started, user can only operate the system when login (if the password is effective). If there are no operations within 100s after logging in, the system will enter into lock state!

When the machine is just started or under lock up state, press the [ Login/Lock ] Button on Remote Control Unit, there will appear login interface in the screen



type in the according code of the machine (Pre-delivery setup: "000"), and then type in the password (password for administrator or operator of this machine)

- (1) If correct operator's password is typed in, there will show " Password Correct" at the right below, and then after [Return] for confirmation, operators can operate each items within the permitted field (the default password for operator is: 00000000)

- (2) If correct administrator's password is typed in, there will show "Password Correct" at the right below of the screen, and then after [Return] for confirmation, administrator can do all of the operations in the machine (The default password for administrator is: 88888888).

**Note:** There are two password management for administrator and operator, different operating range will be permitted by inputting different password.

Operator can do different operation related to playing, but can't stop video record, can't do any setting and modification to video recorder, only can inquiry some system information; administrator can do all of these function operation to this machine.

- Under lock status, only by inputting serial number and password again can't make operation to this machine.
- After login to system, please format to the installed hard disk, detail operation please see below "hard disk format" item.

### 3.2.3 System Off

When the system is under monitoring state, please press twice of the [on/off] button in the remoter control unit if you want to turn off the system, the system will change into standby state from running state when it is off; If you want to restart the system, please press the [on/off] button in the remote control.

If the system is under recording state, turn off or cut power suddenly, and then turn on the power to make the machine enter into standby state after that, the machine will start automatically, the recorded files will redisplay its chapters.

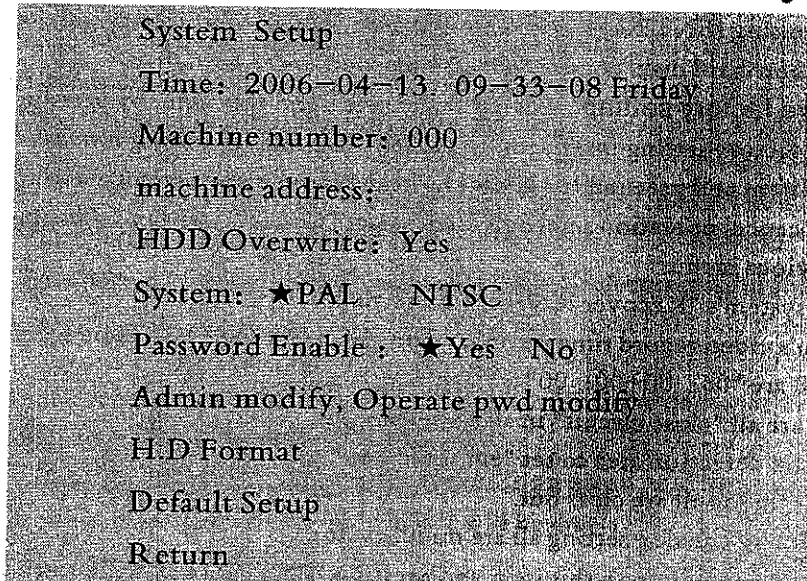
**Note:** The turn off operation can be also done when machine is under recording and playing state.

## 3.3 System function setting

When the system is running, press [setup] button to enter into the OSD main setting menu managed by host machine, move the "△、▽、◀、▶" directional buttons in the remote control unit or panel to be on the position needed setting (the character information below on the selected logo will be displayed at the state of anti-white colour), Press [ENTER] to enter into the according menu, and will be explained one by one followed.

### 3.3.1 System set

while bottom), Press [ENTER] button to enter into its setting interface of this item; after entering into the sub-menu, move the cursor up and down to the position of items needing correcting.



**Moving direction key to wanted setting item and press enter into setting status**

(1) **Time:** Can do adjustment to the item of year, month and date, [Week] item will automatically adjust according to setting year, month and date; Moving cursor to corresponding item, by pressing [ENTER] or input digit directly will do adjustment. By using digit will do adjustment to the year, only inputting latter two digit is ok, selection scope is between 00-99.

Hour, minute and second adjustment operation method is the same as date setting.

(2) **Machine's serial number:** Scope of input number is from "000" to "999". Machine's serial number has already setting for "000" when the machine leaves of the factory. You need to input this number when the system is running.

(3) **Machine's address:** Method of input is according to the area code by input words manually.

Move the mouse to the "address" topic and press enter to get into the area code input and press enter again when you have finished.

**Note:** The length limit of input words is 8 characters or 4 words (look at the appendix for area code).

(4) **Cover H.D when it has no more space:** Moving cursor upon corresponding item, and pressing [ENTER] key can change this item setting. "Turn On" or "Off". "Turn On" means after no more space in hard disk (when hard disk remaining space is 2G), it will do record as well as deleting the earliest recorded file, recycle cover do video record. "Turn Off" means after no more space, it will stop video record, and send out light and sound signal (when remaining space is 200M-1G) or error alarm (when hard disk remaining space is smaller than 200M).

(5) **Image Standard:** The video frequency can be exchanged when moving the mouse left and right. When you press enter, the five-pointed star will be appeared in front of the corresponding standard.

(6) **Modify administrator password:** move the cursor upon this item, and press [ENTER] key will enter into administrator password setting interface, at this time by pressing digit key to input new administrator password, and input once again, return will save.

**Note:** Only administer has the authority to do this operate. The controller doesn't have the authority for this.

(7) **Modify operator password:** moving cursor upon this item, and press [ENTER] key will enter into operator password setting interface, at this time by pressing digit key to input new operator password, and input once again, return will save.

**Note:** please be careful to keep password, never forget, lose or tell the other people who have nothing to do with it.

(8) **Hard disk format:** entering into this menu under stop video record status, and after inputting hard disk number (CF card as hard disk three) according to the screen's note, moving the cursor to "start" place, after pressing [ENTER] key and conforming, can go on formatting to hard disk.

**Note:** if it's a new hard disk, current format is needed to the hard disk.

(9) **Recover leave factory setting:** moving the cursor upon this item, by pressing [ENTER] key will recover leave factory setting interface. If recover leave factory setting is needed, by moving cursor to "conform" item and pressing [ENTER] key can recover leave factory setting, and exit to previous menu; When cancel operation s needed, then select "Cancel" item and pressing [ENTER] key will return to previous menu.

Besides, after system's "Recover leave factory setting"

- Job task menu's video record time setting, "date" all are "2000-00-00"; "Time segment 1" and "Time segment 2" all are "00: 00-00: 00".

- Input format are all "close circuit" in alarm setting.

- Moving motion detection area to set "empty screen".

- Alarm, operation log all are clear out.

- Brightness, contrast analog setting all are middle value.

(10) **Return:** moving cursor upon this item and pressing [ENTER] key will return to main menu.

### 3.3.2 Channel set

Channel parameter setting contains setting to channel, such as title (channel name), screen display, clock insertion, menu envelop, detail please see below picture:

Channel setup					
CH	Title	CH Name	Time Insert	Hask	CH View
1		Allow	Top	Allow	Allow
2		Allow	Top	Allow	Allow
3		Allow	Top	Allow	Allow
4		Allow	Top	Allow	Allow

(1) **Channel:** channel's valid status can manual turn off and turn on, switch according [ENTER].

Channel digit code have "X" code, means stop coding to this channel, and this channel will be invalid channel; contrarily, system acquiescence this channel valid, can do video record to this channel.

**Note:** not coding to channel, means this channel can make video record, while replaying video record, can't see this channel's video record; if this channel has image signal input, inputting image can also be seen under monitoring status. But, if the channel image signal is lost, if basic setting sound switch turn on, will turn on buzzer resound.

(2) **Title:** manual input character by using area code, the method is that move cursor to this item, and pressing [ENTER] will enter into area code inputting status, after inputting is done, pressing [ENTER] key once again, will exit to area code inputting status.

**Note:** the biggest inputting character length is 8 characters or 5 Chinese characters.

(3) **Screen display:** with [turn on/off] two selection item for user to select, by selecting [turn off] under monitoring menu, will display channel's title; selecting [turn on] under monitoring menu, will not display channel's title.

(4) **Clock superposition:** [turn on up/turn on down /turn off] three selection item for user to select; select [turn on up], system will envelop time below corresponding channel's replaying menu; by selecting [turn on down], system will envelop time below corresponding channel's replaying menu. Selecting [turn off], system will not envelop time to the channel.

**Note:** system will only envelop time to corresponding channel's code, that is, enveloping time information to the channel will be invisible under monitoring menu. Only replaying image data, can see enveloping time information

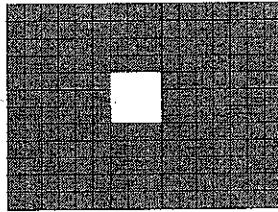
If user need know system time under monitoring status, please be sure system is under monitoring menu, pressing upon remote control's [ENTER] or base board panel's [conform] key, system time will be displayed upon whole screen's middle, besides, every channel's channel number, will be displayed bottom left corresponding menu.

(5) **Menu envelop:** [turn on/turn off] two selection item for user to select, pressing [ENTER] key, will do switch among selection item. Menu envelop, means appointed field image inside envelop channel, in order not to be recorded into image data (replace by white color shield frame), so that can satisfy user's specific requirement; For instance, don't let video recorder record coffer password area's image situation.

**Note:** after finish setting envelop area, will return to mentoring menu, and display enveloping effect. While replaying this channel image data, envelop effect will be displayed (by using white color shield frame replace enveloped area) .



Envelop area setting's detail operation see below picture:



Under [Channel parameter setting] interface, moving cursor to wanted setting menu upon envelop channel selection item [Turn off]. By pressing [ENTER] upon remote control or panel [Conform] key, system will switch to single menu's monitoring mode, pressing upon remote control or panel [Conform] key, will display above picture one's white small block "□" in the middle of monitoring menu, this block will conform envelop area's four acme use mark. The method of enveloping area setting is two point location method, by using remote control or panel's direction key, and moving white small block to the first apical place, press [Conform] key to conform first apical place, at this time, at the middle of the menu will display a white small block, moving small block to second acme, that is first apical's diagonal envelop area, pressing [Exit] key will return to [Channel parameter setting] interface. Now, channel envelop's [Turn off] will automatically switch to [Turn on] selection item, means envelop setting is done, moreover, has been turn on. Pressing [Conform] key once again, switch selection item will switch to [Turn off], and stop turning on channel envelop.

**Note:** each channel can't setup multiple envelop area, only can setup one continued area.

(6) **Preview:** [Turn on/Turn off] two selection item for user to select, pressing [ENTER] key will do switch among selection item. When preview is turned on, means video inputting image is visible under monitoring status. When preview is turned off, corresponding channel will be gray screen under monitoring status, that is, video inputting image is invisible.

### 3.3.3 Alarm set

Alarm Setup			
Port	Alarm	Mode	Timing Setup
1	on	Close	Record Delay:030
2	on	Close	Output Delay:010
3	on	Close	Buzzer Duration:000
4	on	Close	I/O Alarm Out: On
Motion Alarm Out: on			
Return			

Alarm setting below:

- (1) **Port:** 1、 2、 3、 4 respectively represent outer I/O input four alarm inputting port.
- (2) **Setting Alarm:** [Turn on/Turn Off] two selection item for user to select.
- (3) **Input format:** [Open circuit/Close Circuit] two selection item for user to select, represent I/O alarm input signal two format, according to generation alarm signal's outer equipment to select while setting.

(4) **Alarm video prolong:** means when system receive alarm signal, video prolong time length (100-300 second) is adjustable.

**Note:** This item setting is also valid to the motion alarm video record format.

(5) **Alarm output prolong:** means when system receive alarm signal, alarm output signal status will keep time length, if system alarm output port connect to alarm light, alarm bell alarm equipment, output prolong means alarm light and alarm bell's opened time length; (0-300 second) adjustable.

(6) **Message sound keep prolonging time:** means when system receive alarm signal, the buzzer's resound length time. (0-300 second) adjustable.

**Note:** this item setting is also valid to the motion alarm generation signal.

(7) **I/O alarm output:** alarm output signal on and off, turn on, I/O alarm output is available.

(8) **Motion alarm output:** motion detection alarm output signal on and off, turn on, motion detection alarm output is available.

### 3.3.4 Work Set

Job task's content contains video record plan arrangement to system's each channel, and different channel's motion detection area's setting, each item's detail operation see below picture:

Record Setup		
Channel	Schedule	Motion Area
1	Setup	Setup
2	Setup	Setup
3	Setup	Setup
4	Setup	Setup
Return		

(1) **Channel video record time segment setting:** see above picture, moving cursor to corresponding channel [Video record time segment]'s [Setting] item, and pressing [Conform] key, will enter into below setting interface;

Channel Video Record Time Segment Setting				
Week	First-Period	Type	Second-Period	Type
XXX	00:00-00:00	Time	00:00-00:00	Time
×××	00:00-00:00	Time	00:00-00:00	Time
×××	00:00-00:00	Time	00:00-00:00	Time
×××	00:00-00:00	Time	00:00-00:00	Time
×××	00:00-00:00	Time	00:00-00:00	Time
×××	00:00-00:00	Time	00:00-00:00	Time
×××	00:00-00:00	Time	00:00-00:00	Time

(2) **Date:** With [Every day/Monday to Sunday/\*\*\*\*\*] several item selections for user. [\*\*\*\*\*] means no date and user can switch among different item selection according to [ENTER] key.

**Attention:** Date can have several repetition setting in order to satisfy multiple time segment setting needed within current date.

- (3) Time segment 1: Aim at the first time segment of this date and follow by this time segment job task type.
- (4) Time segment 2: Aim at the second time segment of this date and follow by this time segment job task type

**Note:** When go on time segment setting, the ahead "-" time must be smaller than behind "-" time. Below setting is wrong: "13.00-11.30" .

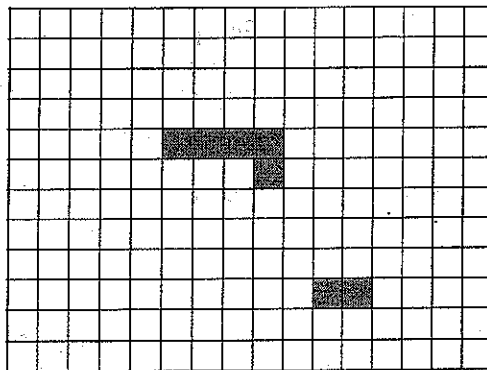
- (5) **Type:** With [Timing/Motion/Alarm] three item selections for user, user can switch among different item-selections according to [ENTER] key. [Timing] means this time segment channel is on video record state; [Motion] means this time segment channel can use video motion detection format to record video. When there have objects motion in appointed area, system will turn on video record for some time, while without object motion it will not record video. If in valid prolong time, with object motion will continue video record.

**[Alarm]** means when receiving from outer I/O alarm touching off signal, system will turn on video record, while no outer I/O alarm touching off signal is received, system will not record video.

**Attention:** By using "Motion" type to record video, the alarm signal that generates from video motion can take linkage to efficiency channel video record, while making linkage of alarm output, host will generate message sound signal (host buzzer sound).

Moving cursor to [RETURN] after finished setting video record time segment, and pressing [ENTER] to store return to [Job Task] interface.

- (6) Detection area setting



See above, entire screen is made up of 16 × 12 small area. Amaranth means no selection area, transparence means selected area, and purple small block means current cursor position. Operation method is, after enter into interface, purple small block is at the center position, mauve and transparence two color will flash by turns. By pressing [ENTER] confirm key purple small block will change to transparence, and that means it have entered to area selection state. Upon motion remote control or panel direction key, transparence small block motion area color will change to transparence, and that means this area is been selected. By pressing [EXIT] key will return to [Job Task] interface, area setting is done!

**Note:** Whatever format video record will only take linkage of efficiency video record.

**Video record priority:** Alarm video record, timing video record, motion detection, manual video record.

### 3.3.5 PIZ Set

Moving cursor upon [Piz Set] and pressing [ENTER] key can enter into quad channel Pan/Tilt port setting interface.

Pan /Tilt Port Setting			
Channel	Protocol	Baud Rate	ID
1	Dscp	1200	01
2	Pelco-D	2400	02
3	Pelco-P	4800	63
4	Pelco-P	4800	63
Return			

- (1) Channel: Denotes system's channel number.
- (2) Protocol: Denotes the communication protocol between system and decoder. Moving cursor to this selection item and pressing [ENTER] key can make selection among different protocol (Pelco-D/P/09-15/Dscp/FastDome/PIH1016-1017/JECFastD/RM110/Neocam) , Selected protocol must match to the protocol of decoder, only can it control front equipment correctly.
- (3) Baud rate: Denotes communication speed between system and decoder. Moving cursor to this item selection and pressing [ENTER] key can make selection among different baud rate (1200/2400/4800/9600), selected baud rate must match decoder's baud rate, only can it control front equipment correctly.
- (4) Pan/Tilt code: Moving cursor upon this selection item and pressing [ENTER] can make selection among different Pan/Tilt serial number (01-63), system's 01 code number match to decoder's first address code, that is address code "01"

After finish setting all item selection, move cursor to [RETURN] and press [ENTER] key will return to previous menu, and save Pan/Tilt parameter setting.

**Attention:** Pan/Tilt protocol, baud rate, Pan/Tilt serial number three items must be accordance with outer Pan/Tilt (quick ball) setting parameter.

- Pan /Tilt operation: After setting Pan/Tilt parameter correctly, press [F2] key upon remote control under single monitoring state, the top left corner of screen will display "an/Tilt control" character, temporality, we can operate this channel's Pan/Tilt by using press key upon remote control and panel
  - 【▲】、【▼】 Key: Lens up and down motion, display character: up and down;
  - 【◀】、【▶】 Key: Lens left and right motion, display character: Pan/Tilt left and right;
  - 【Change times +】、【Change time -】 Key: Adjust image far and near extent, display character: Change times + and change times -;
  - 【Aperture +】、【Aperture -】 Key: Adjust image bright and dark extent, display character: Aperture + and aperture -;
  - 【Focus +】、【Focus -】 Key: Adjust image clarity extent, display character: Focus + and focus -;
  - 【Automatic】 Key: Go along automatic control, display character: Automatic
  - 【Transfer】 Key: Pan/Tilt transfer control, display character: transfer 00, back key;
  - 【Pre-set】 Key: Pan/Tilt preset control, display character: preset 00, back key.
  - 【Washer switch/Light】 Key: Washer switch and light assistant switch control, display character: Washer switch;

Pressing [F2] and [Pan/Tilt] once more will exit Pan/Tilt operation, and return to single image monitoring state; Switch monitoring image and pressing [F2] key can enter into another channel Pan/Tilt operation.

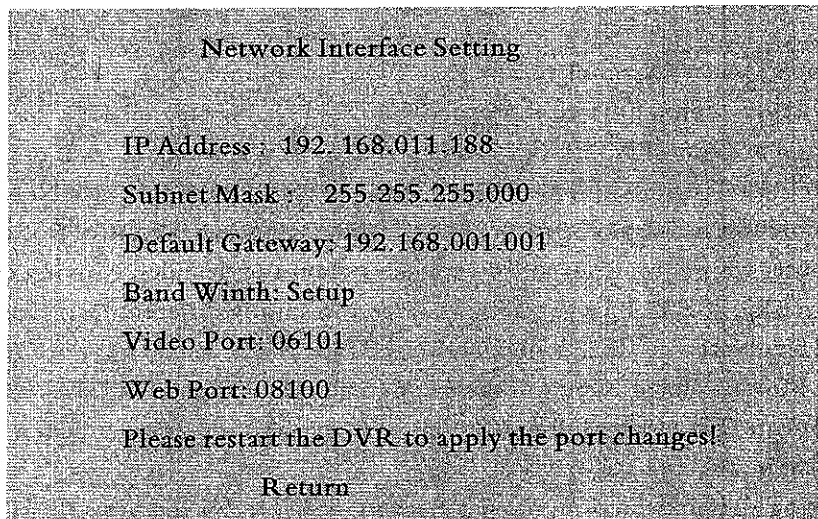
**Attention 1:** When go along Pan/Tilt operation, system can't startup manual video record function.

**Attention 2:** When go along Pan/Tilt operation, once system startup video record (timing or alarm startup), temporality can't affect Pan/Tilt operation.

**Attention 3:** When Pan/Tilt can't operate normally, Please check RS-485 (see "Alarm Port lead line definition" ) and Pan/Tilt parameter setting.

### 3.3.6 Network Set

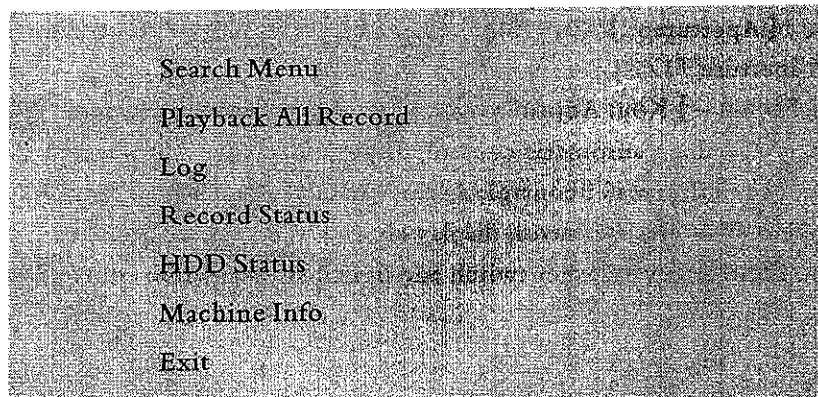
Moving cursor upon [network set] item and pressing [ENTER] key will enter into network interface setting in interface.



- IP address: Moving cursor upon this selection item and pressing [ENTER] key or inputting digit directly, set host IP address correctly according to host local network.
- Net mask: Moving cursor upon this selection item and pressing [ENTER] key or inputting digit directly, set host IP address correctly according to host local LAN.
- Default Gateway: setting according to IP address.

### 3.3.7 System Info

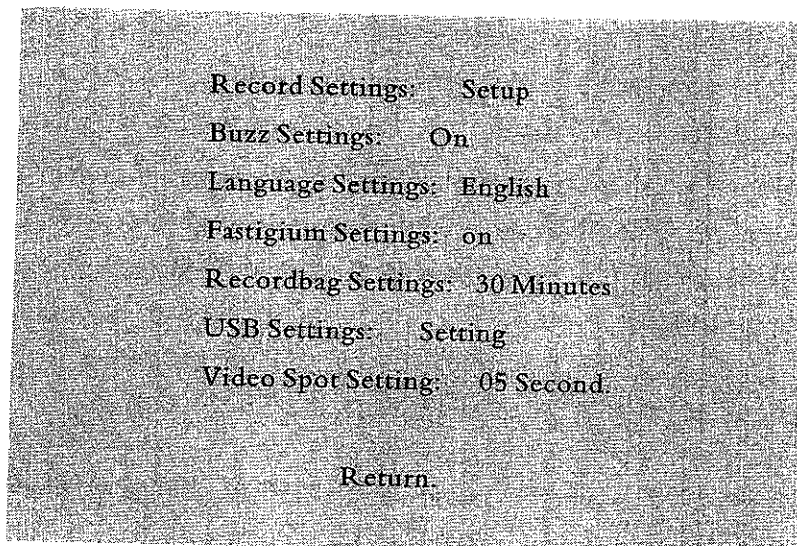
Moving cursor upon [System Info] and pressing [ENTER] key enter into system information setting interface.





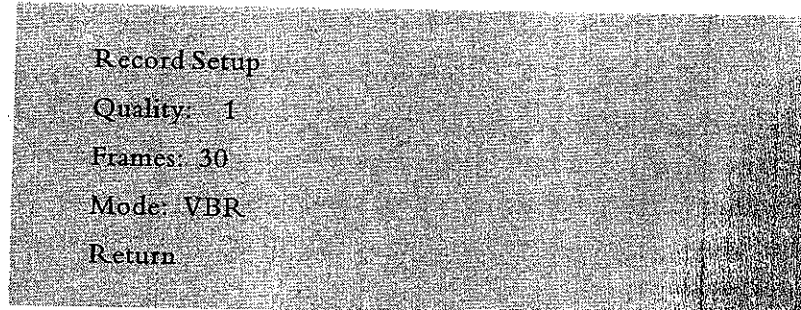
### 3.3.8 Basic Set

Moving cursor to [Basic Set] item (bottom color of character change to white means being selected) and pressing [ENTER] key enter to this item selection setting interface:



After entering into sub-menu, moving cursor up and down to wanted changing item.

(1) **Video record parameter setting:** Moving cursor upon this item and pressing [ENTER] key will enter to corresponding interface.



1) **Image quality:** Divide into "1-8" eight ranks. Moving cursor upon this setting item and pressing [ENTER] key can change this item's parameter

The smaller the digit, the better the image quality.

2) **Frame quantity:** When system has been set to PAL format, it can divide into "25, 12, 06" three ranks, when system has been set to NTSC format, it can divide into "30, 15, 08," three ranks. Moving cursor upon this item and pressing [ENTER] key will change its parameter.

3) **Format:** Moving cursor upon this item and pressing [ENTER] key can switch system's video record coding format: VBR、CBR。

**VBR:** Denotes changeable code flow's coding format, this coding format shows, image quality is invariableness, but data code flow's size can change according to moving object's scale inside, the larger the moving object occupied in image's scale, the larger the code flow.

**CBR:** Denotes fixed code flow's coding format, this coding format shows, image quality is invariableness, but image quality can change according to moving object's scale inside, the larger the moving object occupied in image's scale, the worse the image quality

(2) **Message Sound Switch:** When setting is turn on, hard disk error and password input error, machine buzzer will send out sound.

- (3) Language setting: Moving cursor to this item and pressing [ENTER] key can switch Chinese and English interface.
- (4) Peak segment setting: Moving cursor to this item and pressing [ENTER] key can enter into corresponding interface.

Fastigium Time Setup		
Week	First Period	Second Period
XXX	00:00-00:00	00:00-00:00
× × ×	00:00-00:00	00:00-00:00
× × ×	00:00-00:00	00:00-00:00
× × ×	00:00-00:00	00:00-00:00
× × ×	00:00-00:00	00:00-00:00
× × ×	00:00-00:00	00:00-00:00
× × ×	00:00-00:00	00:00-00:00
× × ×	00:00-00:00	00:00-00:00
× × ×	00:00-00:00	00:00-00:00

Return

There are [Every day/Monday to Sunday/\*\*\*\*\*] several item selections for user. [\*\*\*\*\*] means date and user can switch among different selection item according to [ENTER] key.

**Attention:** Date can have multiple reputation setting in order to satisfy multiple time segment setting need within this date. Machine will not automatically standby within this time segment.

- 5) **Packing time:** Moving cursor upon this item and pressing [ENTER] key to adjust, can select 30, 45 and 60 minutes packing time.
- 6) **USB 2.0 setting:** Moving cursor upon this item and pressing [ENTER] key to confirm will turn on USB interface.

**Instruction:** After turn on USE 2.0 setting can take DVR as equipment, and according to USB interface, will connect to PC computer (PC computer only need USB 2.0 interface), go along file's copy and data's back operation. After this machine select [Return], machine will restart.

- 7) **Video recycle time setting:** Moving this cursor upon this item and pressing [ENTER] key to adjust, can select 05、10、15 second's recycle time (Video1) .

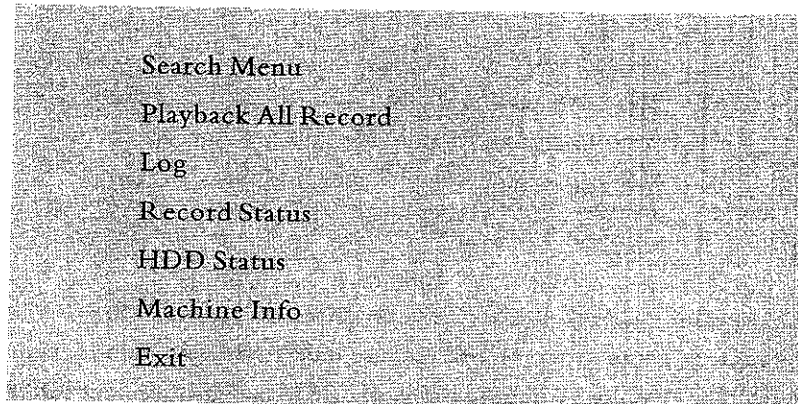
### 3.3.9 Exit

Moving Cursor upon this selection item, and pressing [ENTER] key, that is, save setting and exit to setting menu, exit to monitoring menu.

**Note:** system setting's all interface, as long as [Return] selection is available, it must be selected, and make storage to current page setting. If no selection to this item, directly pressing remote control or panel [Exit], system will directly return to monitoring interface.

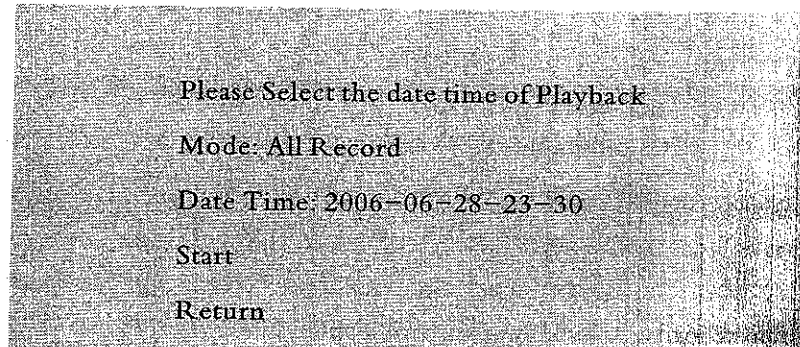
## Fourth Chapter Check Operation Manual

After running system, by pressing [Check] key will enter into inquiry menu, screen will display main menu, pressing direction key to select wanted check item, and press [ENTER] key enter into this item.



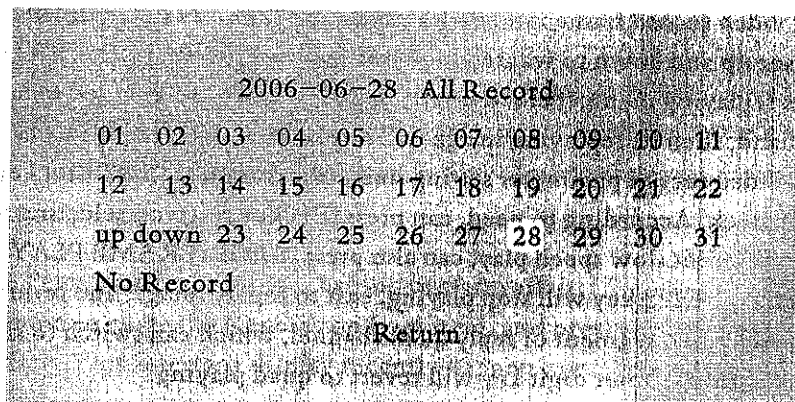
### 4.1 Playback All Record

Moving cursor to [Playback All Record] item, and pressing [ENTER] key will enter into image data interface:



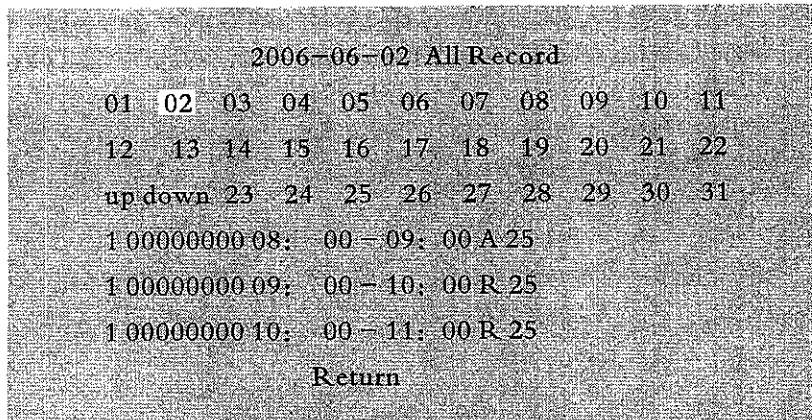
- **Format:** moving cursor upon this selection item, and pressing [ENTER] key can select different video record format to inquiry (All video record/Timing video record/Alarm Video record)
- **Date Time:** moving cursor upon this selection item, and pressing [ENTER] key or directly input digit, select wanted inquiry video record date and time;

Now inputting wanted inquiry video record format and date according to the cue of the screen, and moving cursor to "Start", by pressing [ENTER] key will enter into next menu;

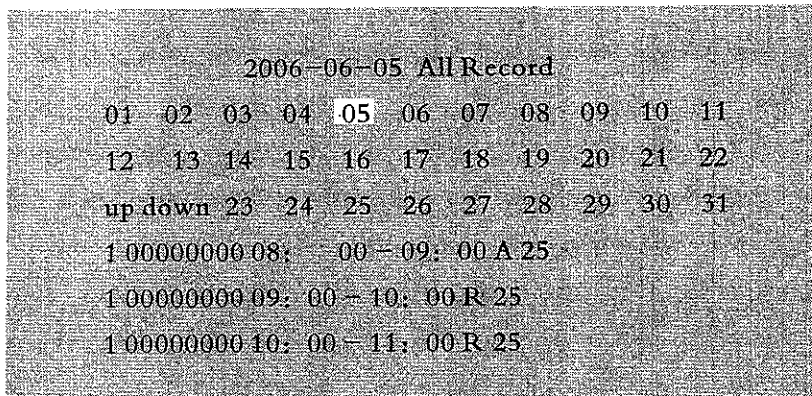




When selected date has no video record, screen will display : "current day no record"  
 When selected date has video record, it will display below interface



This menu display selected video record format, date and time video record. "01-31" digit means selected month No.1 to No.31, moving up and down cursor can select different date, and pressing [ENTER] key can check its record, the digit which is yellow date means current day have video record.



"1" means video record at which number hard disk

Note: this type can only install one hard disk.

"00000000" display channel title: this place display the first channel title name, the first channel title name is what, and this place will display what.

"08:00-09:00" display video record start and stop time: "-" ahead time means start time, later means end time;

"A" display video record format: "R" is timing video record; "A" is alarm video record; "M" is manual video record; "K" is motion detection video record;

"25" display video record frame rate. PAL format: 25/12/6, NTSC format: 30/15/8 ;

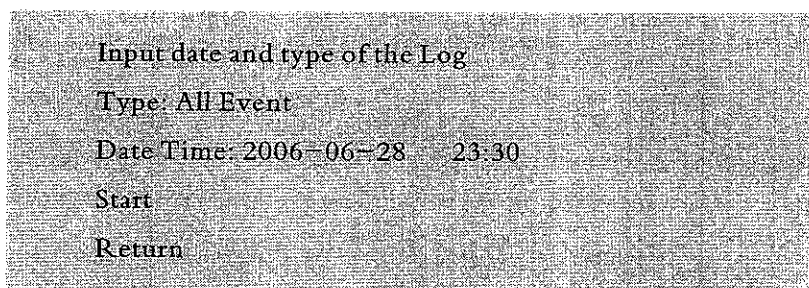
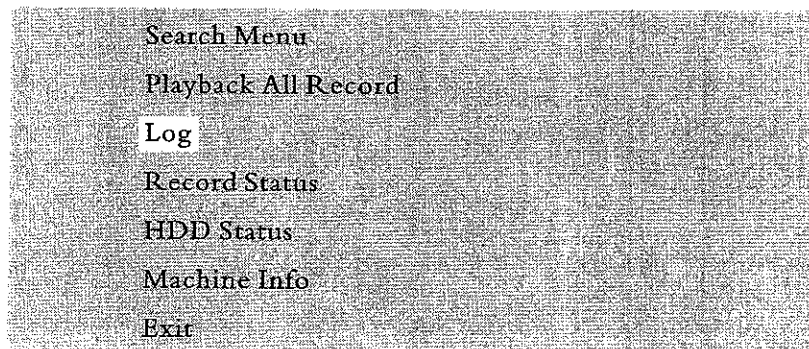
Moving cursor up and down to wanted inquiry item, and pressing [ENTER] key or [PLAY] key will enter into its replaying menu. If clock insertion start was set inside video record parameter setting item beforehand, then its replaying image will display the video record clock; If clock insertion wasn't set in video record parameter setting item, can also press [ENTER] key to display current video record clock. According to need, can press [F1] key to go on selecting play, and press [SLOW] key to go on different slow speed play, can also press [STOP/FRAME PLAY] key to go on playing frame, and press [EXIT] key will stop playing, exit to replay image, and return to previous menu.

Note: The valid video segment of reply quad channel, which can switch to single reply according to digit key 1,2,3,and 4. Other digit key will revert to quad playing.

Instruction: Replaying four channel valid video record segment,

## 4.2 Log

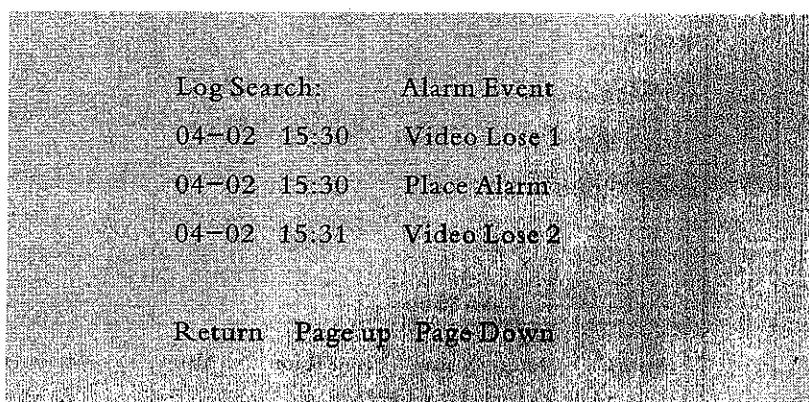
Moving cursor to [LOG] item, and pressing [ENTER] key will enter into inquiry log interface



**Format:** including all affairs, alarm affair, motion detection and operation affair; According to the need select check time and click start.

- (1) **All affairs:** Record all system operation and alarm record;
- (2) **Alarm affair:** [ENTER] key will enter into check alarm log interface. This interface will display the alarm situation that happens recently date. Moving cursor to "up" and "down" place, and pressing [ENTER] key to turn over page, that is, check its record page by page.

Alarm log will record exactly below alarm happen time: Video Lose/Place Setting/Password Error, in order analyze after that.



- (3) **Motion Detection:** Temporarily no record, belong to alarm affair;
- (4) **Operation Affair:** moving cursor to [Operation Log] item, and pressing [ENTER] key into inquiry operation log interface. This interface display recently happen operation situation:

Log Inquiry:		Operate Event
04-02	15:30	Manual Video Record
04-02	15:30	Restart
04-02	15:31	Pan/Tilt Control
04-02	15:35	Parameter Change 1-03
Return	Page up	Page Down

Moving cursor to "up" and "down" place, and pressing [ENTER] key to turn over page, so can check its record page by page.

**Note:** parameter change x-y y, X means large type (0-7 eight large type, 0:basic parameter setting), y y means small type (00 correspond to basic parameter setting's "year" change). Example: above parameter change 1-03, means video record parameter setting's "format" change.

### 4.3 Record Status.

Moving cursor to [Record Status] item, pressing [ENTER] key will enter into inquiry video record status interface, this interface display video record status, including video record mode, status, image quality, and frame rate.

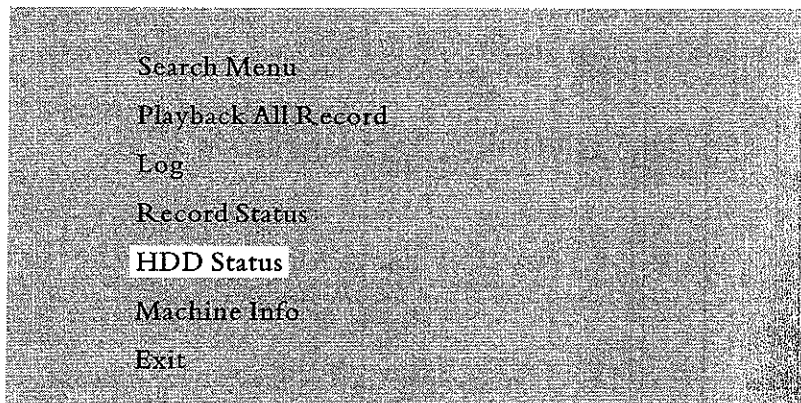
Search Menu
Playback All Record
Log
<b>Record Status</b>
HDD Status
Machine Info
Exit

Video Status					
Mode	Status	Image Quality	Frame Rate	Alarm	Motion Detection
Quad Menu	Video Record	1	25	Setting Alarm	on
Return					

- (1) **Mode:** display current start's image video record, video record has three types: Single image, double image, quad image.
- (2) **Status:** video record/sleep two status
- (3) **Image quality:** display video record data image quality
- (4) **Frame rate:** display video record frame rate information
- (5) **Alarm:** setting alarm/cancel alarm two status, start alarm video record, will be setting alarm, instead, will be cancel alarm
- (6) **Motion detection:** turn on/ turn off.

#### 4.4 HDD Status

Moving cursor to [HDD Status] item, and pressing [ENTER] key will enter into inquiry hard disk status interface, this interface will display current hard disk status, including hard disk's space and remain space.



HDD Status

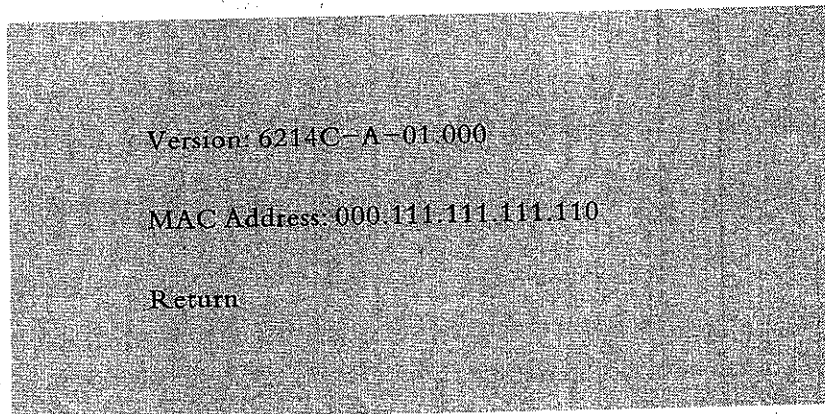
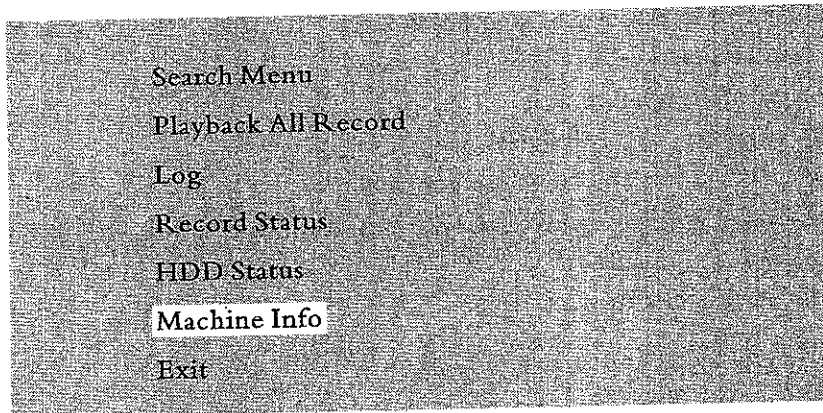
HDD	Status	Capacity	Free-Space
1	Video Record	160G	128,125MB
2	Sleep	040G	039,000MB
3	None	000G	000,000MB
4	None	000G	000,000MB

Return

#### 4.5 Machine Info

Moving cursor to [Machine Information] item, and pressing [ENTER] key will enter into inquiry machine information interface, this interface will display current software version and MAC address information.





**Software Version:** display machine type, software type, panel information and version information;  
**MAC address:** pressing [ENTER] key or inputting digit according to need can setup.  
**Note:** only super user can hold changing MAC address authority;

#### 4.6 Exit

Moving cursor to this selection item, and pressing [ENTER] key to confirm will exit to inquiry menu, and exit to monitoring image.

## The Fifth Chapter Other Function Operation Manual

### 5.1 IDE Hard Disk Update

Copy update program to hard disk according to connect to PC. After power off the machine, adjust the hard disk which had loaded updated program to primary disk, make sure that this primary will connect to the power jack's IDE port, first pressing any key and not relax, and connect electricity to the machine, after several seconds machine will alarm, indicating light and power indicating light will flash simultaneously (now can relax), means machine is under updating, at about one or two minutes later, update finished, channel indicating light and power indicating light stop flashing, machine will enter into standby status, means update finished, now can start system.

### 5.2 Nalog adjusting

Under stopping video record situation, and when system is under single channel monitoring image, can go on this channel's analog amount adjustable.

- **Brightness adjusting:** Pressing [ Adjust ] key, screen will appear brightness adjusting item. By pressing [ - ], [ + ] key will decrease or increase brightness.
- **Saturation:** When screen display brightness adjust item, by pressing [ Adjust ] key, screen will display saturation adjusting item, press [ - ] and [ + ] key, can decrease or increase hue.
- **Contrast adjusting:** When screen appear chromaticity adjusting item, press [ Adjust ] key once more, screen will appear contrast adjusting item. By pressing [ - ], [ + ] key will decrease or increase contrast.
- **Hue adjusting:** When screen appear brightness adjusting item, press [ Adjust ] key once more, screen will appear chromaticity adjusting item. By pressing [ - ], [ + ] key will decrease or increase hue.

### 5.3 Video record and video play

#### 5.3.1 Video record and video play

##### (1) Video record:

- **Manual video record**  
Pressing [ Video Record ] key, under quad image can start quad channel video record; under single image can start this channel's video record.  
Pressing [ Stop Record ] KEY, can stop all manual video record.
- **Timing video record**  
Detail please see [ Job task ].
- **Alarm video record**  
Detail please see [ Job task ].

**Note:** When alarm video record is turn on under standby status, coz hard disk start-up needs some time, so it need 10~20 second prolonging from receive alarm signal to begin video record. If avoid this problem is needed, can enter into [ Basic Setting ] menu to "high peak segment" and set time segment; Machine will not automatically go to standby within this time segment.

② Can select play all video record, manual video record, timing video record, motion video record, and alarm video record's image data. Details please see video record inquire.

● Play the latest video record data.

Pressing panel or remote control's [ Play ] key directly under direct image can play the recording video's image data in this channel (since this segment's beginning place play)

### 5.3.2 Select time play

When replaying some image data, pressing [ F1 ] key, upon screen will appear select time play menu. Input time (must be two digit), will begin to play from current replaying image segment's current time place.

### 5.3.3 Stop play

Pressing [Stop] upon panel or [ Exit ] key upon remote control, can stop current playing image data and return to previous interface.

### 5.3.4 Slow play

Pressing [ Slow ] key in normal playing will enter into slow playing state.

Pressing this key continually will separately play in four states: "×1/2", "×1/4", "×1/8", "Play".

Pressing [ Play video ] key in slow playing process, will recover current normal playing.

### 5.3.5 Stop and play frame after frame.

Pressing [ Stop/Frame play ] key, image still, stop playing.

When image is still, pressing [ Stop/Frame play ] per time, image will forward one frame.

When image is still or playing frame after frame, pressing [ Play video ] key will recover to normal playing.

### 5.3.6 Forward

(1) Pressing [ Forward ] key in normal playing will enter into forward playing state.

Pressing this key continually will separately play in three states: "Forward ×2", "Forward ×4", "Play"

(2) Pressing [ Back ] key in normal playing will enter into back playing state.

Pressing this key continually will separately play in three states: "Back ×2", "Back ×4", "Play".

Pressing [ Play video ] key in back playing process will recover normal playing.

## Main specifications for the system

Tube	17" 4:3 TFT/LCD	
Video	Video Input	Four Channels independent input 1.0V <sub>p-p</sub> , 75Ω BNC
	Video Output	Two Channels PAL/NTSC output, 1.0V <sub>p-p</sub> , 75Ω BNC, Multiple Video Signal One Channel VGA display interface output
	Video Display	Any Single picture, built-in quad display
	Video Standard	PAL system 25 frames/second CCIR625 lines 50 fields NTSC system 30 frames/second CCIR625 lines 50 fields
	System Resources	Real time recording resources, one or four channels play backward can be realized at the same time; one or four channels monitoring, network real time monitoring
Audio	Audio Input	Two channels independent input 600Ω RCA
	Audio Output	Two channels independent output 600Ω RCA
	Basic Output Gain	1.0-2.2V
	Recording Solutions	Volume and Image are Synchronized
	Audio Compression	PCM
System	Operating Language	Simple Chinese/ English
	Operating Interface	OSD menu
	Password control	Password for operators and administrators
Digital Processing and Storage	Image Compression	MPEG-4 Changeable bit streams/ Fixed bit streams
	Image format and resolution	D1 Format (704×576 pixels)
		Real time monitoring 704×576 pixels, VGA output 704×576 pixels
	Video current standard	ISO14496
	Audio current standard	PCM
	Audio code rate	8Kbyte/s
	Audio volume taken in H.D	28.8Mbyte/hour
	Internal Storage	One IDE hard disc , support H.D. with big volume of 250G or more
	Image quality	8 levels for adjusting: 1-8 levels, Maximum 1, Minimum 8
Date read and write way	Full duplex	



Alarming	Motion detecting	192 detecting areas can be set, and multiple levels sensitivity adjustable
	Alarm input	Three channels alarming ( On/off value ) input independently
	Alarm Output	Two channels alarm output
Interface	Serial interface	RS485 signal, pan tilt decoder can be connected outward.
	Network Interfaces (optional)	RJ-45 10M/100M Ethernet interface
Network	Network Protocol	Support TCP/IP, UDP/IP
	Network Transportation ways	Dial up access, ADSL, ISDN, LAN, CAN
	Browsing Solutions	Adopt the IE browser
Others	Power	AC90 ~ 240V, 50HZ ~ 60HZ
	Power Consumption	Max: 55W
	Working Temperature	0~40°C
	Max Brightness	300cd/m <sup>2</sup>
	Max Contrast	450:1
	Response Time Tr/Tf	Tr+Tf= ( 16ms )
	Visual Angle	170°/150°
	Weight	6.0Kg (exclude H.D.)
Dimensions (W×H×D)	383mm×335mm×105mm	