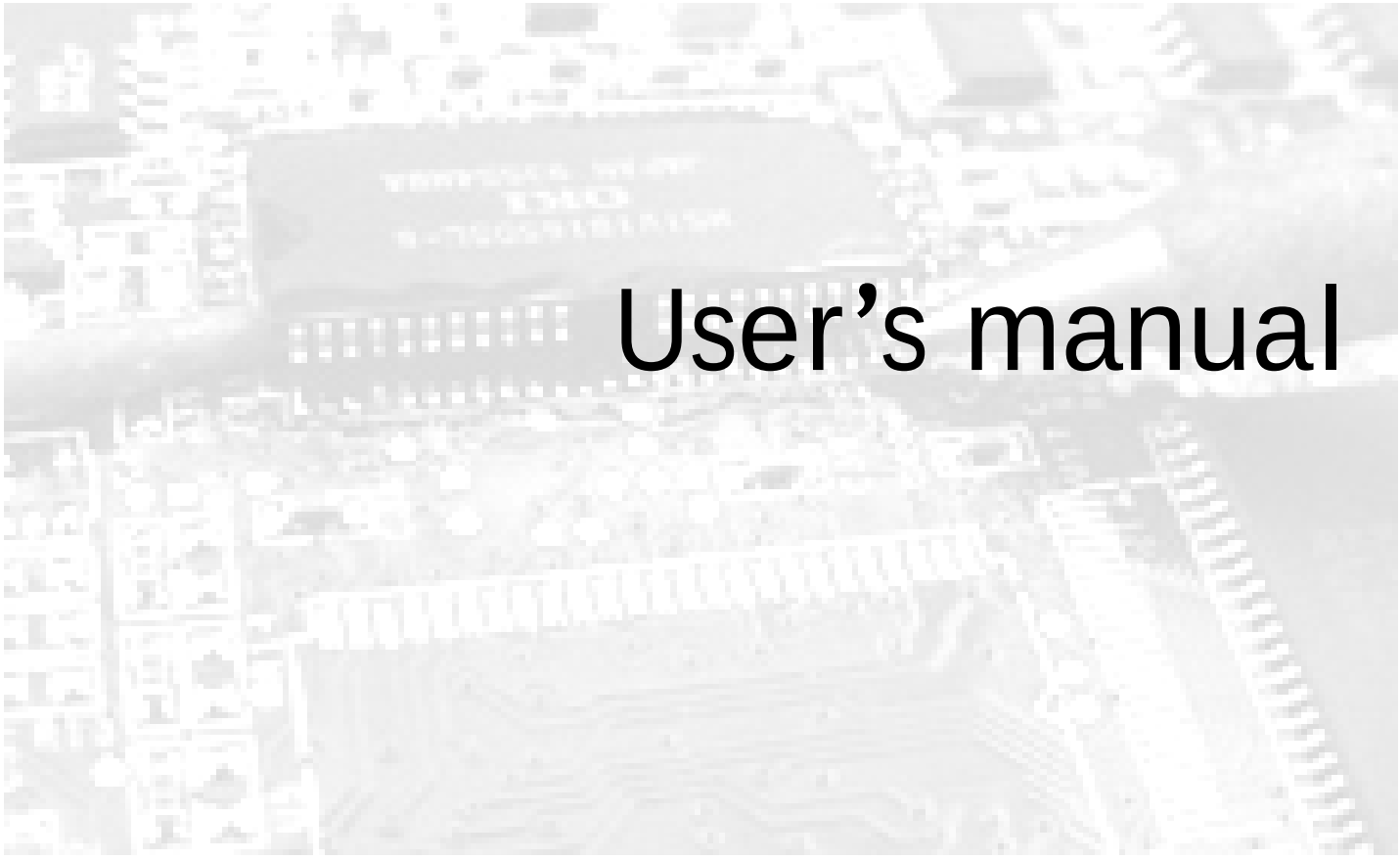
ICRealtime DVR



User’s manual

Chapter 1: Preface

Thank you for choosing our stand-alone MPGE4 Digital Video Recorder System! Please read carefully before proceeding on.

- Only our MPGE4 series DVR users will find this manual instructive with their operation.
- Contents described in this manual can be adapted to our CHANNEL 4, CHANNEL 8 and CHANNEL 16 MPGE4 DVRs.
- Operation on CHANNEL 8 is as same as on the CHANNEL 4, except that there are no keys to control functions of 9 images splitting and 6 images splitting on the panel of CHANNEL 4, Keys to control functions of 13 images splitting、16 images splitting are added on CHANNEL 16 on the basis of CHANNEL 8
- We take CHANNEL 16 as an example for description in this manual.
- Please kindly read this manual carefully and follow the instructions to set up the system before operation.
- This manual is written according to V1.1 of the mainboard sortware which is announced on 04/12/01.
- Any further inquiries please contact us or our authorized agents/dealers.

Contents are subject to change without notice when upgraded. Please turn to our website for any latest information and tech-support concerning products&operations.

Chapter 2: System Installation

2.1 Accessary List

1. Please make sure all the items listed as follows are included in when you unpack this unit.

Table1 DVR accessory list

NO.	Accessories	Quantity
1	POWER CABLE	1
2	Remote controller	1
3	5# battery supply for remote controller	2
4	Screws to fix HDD	1
5	HDD connection cable	4
6	RJ45 cable	1
7	Serial cable	1
8	Operator's manual	1
9	Software CD	1
10	Warranty card	1
11	QC passed certificate	1
12	Package list	1
13	DB25	1

2. Please contact your agent if anything missed.

2.2 Operation Environment

1. Our DVR operation requirements are descripted as follows:

Table2 DVR operation enviroment

Item	Description
ELECTROMAGNETISM	C series DVRs are complied with National Electromagnetism Radiation Standard and guarantee no harm to human body
TEMPERATURE	0℃ ～ 55℃

Humidity	10% ～ 90%
Air pressure	86kpa ～ 106kpa
Power supply	110 VAC, 60HZ
Power consumption	40W

2. Please kindly note the following issues during installation & operation of the machine:

- Do not expose directly under sunshine, keep away from heat sources and high temperature sites.
- Do not leave in humid places and never touch with wet hands.
- Never spill liquid of any kind on the unit to prevent short circuit and fire.
- Please place steady and don't put any other equipments on the unit.
- Avoid install in places shaking violently.
- Never use the unit when power supply is far beyond normal level

2.3 Appearance

& Channel 8 DVR structure

CHANNEL 8 DVR front panel layout is as following described.

Height： 2U

Size ： 430x100x440mm

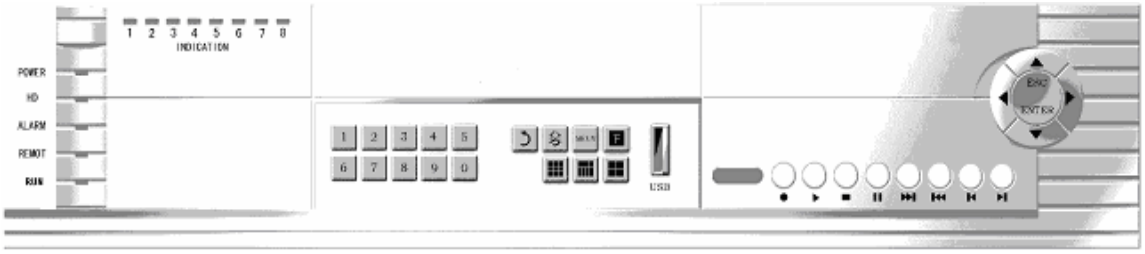


Figure 1 CHANNEL 8 DVR front panel layout

Indication light zone：

1—8：Indication light of recording state for each channel

POWER：Indication light for power supply

HDD：Indication light for hard disk

ALARM：Indication light for alarm

REMOT: Indication light for remote control

RUN：Indication light for system running

1. Front Panel：

From left to right: the keypad is devided into Numbers zone, display control zone, record/playback zone, and system control zone.

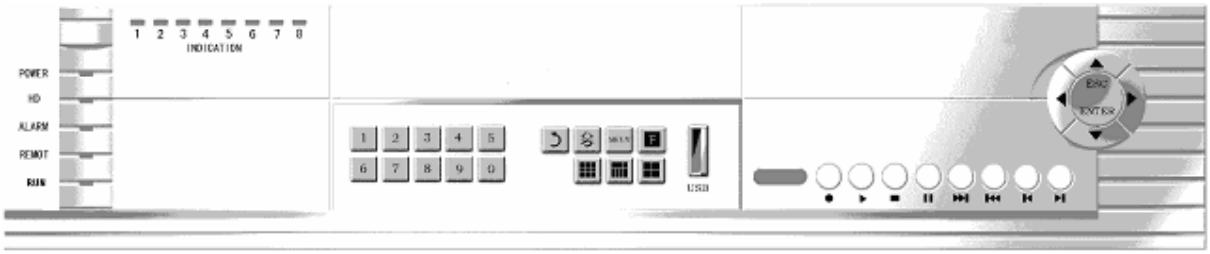


Figure 2 CHANNEL 8 DVR keypad distributions

% Note

Keys for 6-screen splitting and 9-screen splitting are not available on the front panal of CHANNEL 4

2. Connection ports on the back

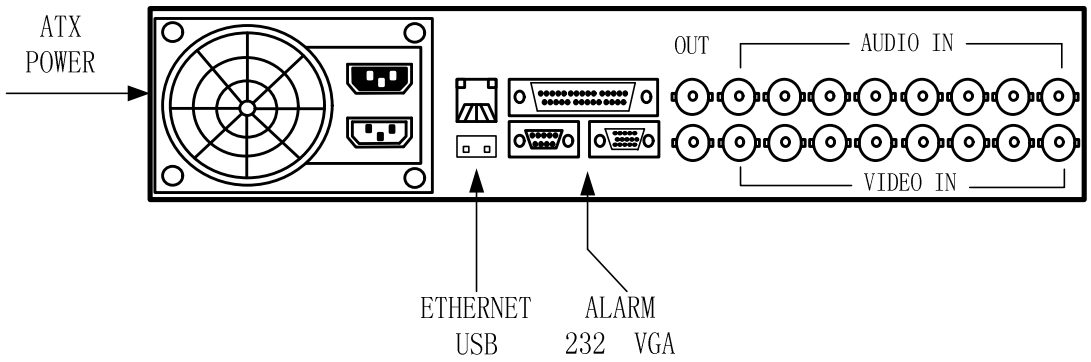


Figure 3 CHANNEL 8 DVR back panel layout

3. Audio, video, PTZ control and alarm input/output ports connection of CHANNEL 8 DVR

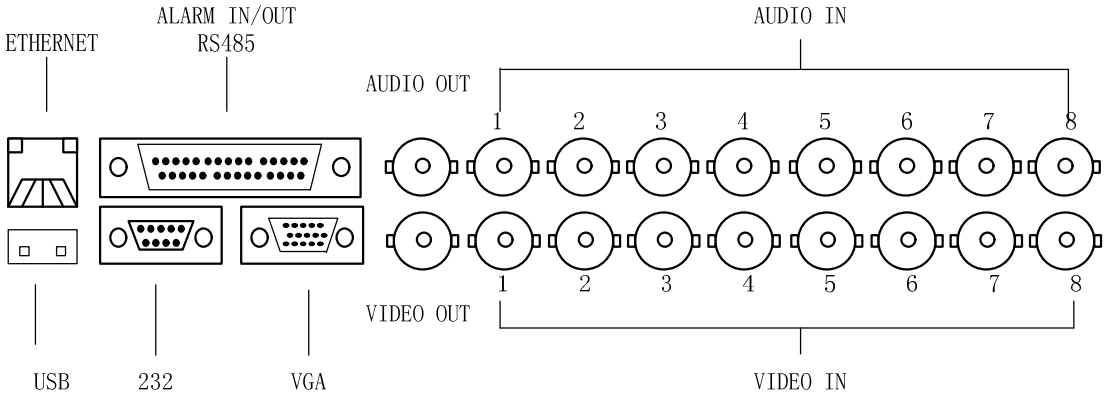


Figure 4 CHANNEL 8 DVR Input/Output Port Layout

% Note

CHANNEL 4 DVR has only 4 input channels respectively for alarm, video and audio.

& CHANNEL 16 DVR structure

CHANNEL 16 DVR front panel layout is as following described.

Height： 2U

Size： 430x100x440mm

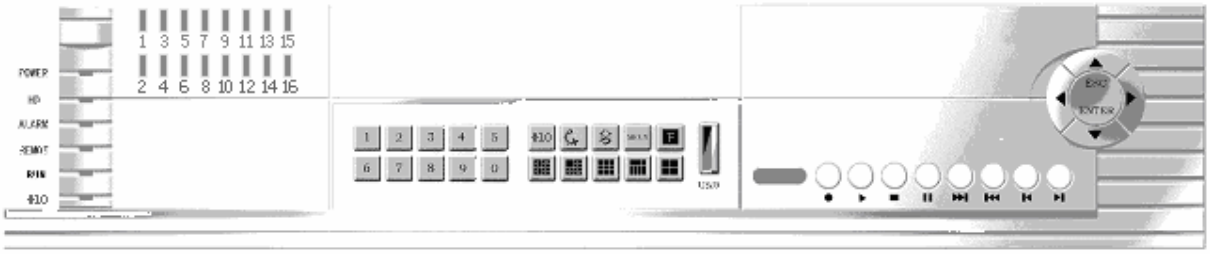


Figure 5 CHANNEL 16 DVR front panel layout

Indication light zone：

1—16：Indication light of recording state for each channel

POWER：Indication light for power supply

HDD：Indication light for hard disk

ALARM：Indication light for alarm

REMOT: Indication light for remote control receiving

RUN：Indication light for system running

+10: Indication light for add number ten

1. Front Panel：

From left to right: the keypad is devided into Numbers zone, display control zone, record/playback zone, and system control zone.

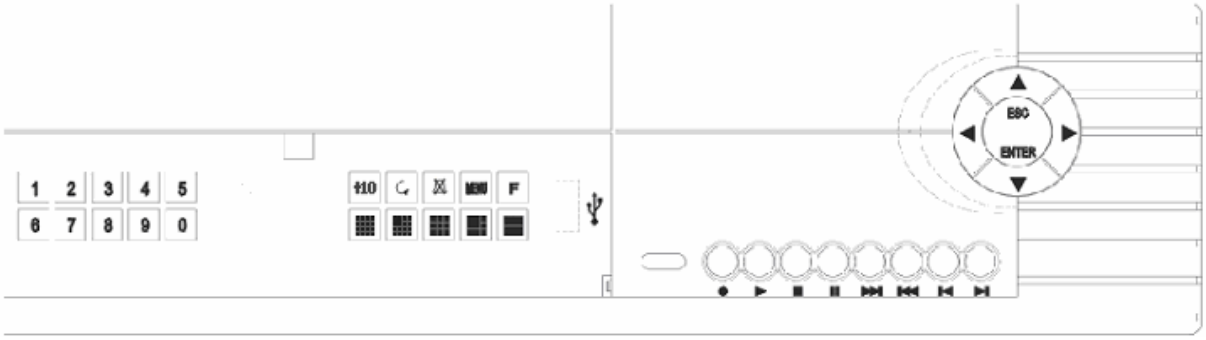


Figure 6 CHANNEL 16 DVR keypad distributions

2. Audio, video, PTZ control and alarm input/output ports connection of CHANNEL 16 DVR

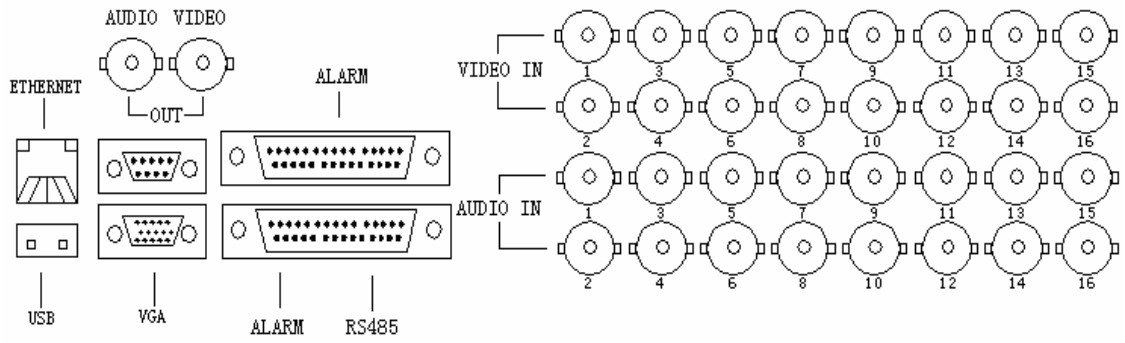


Figure 7 CHANNEL 16 DVR Input/Output Port Layout

2.4 Installation

& Hard disk Installation

Installation steps:

1. Dismantle the upper part of the HD bracket.

Figure 8 up part of HD bracket dismantle

2. Set the HD to work mode required, for example: master HD or slave HD.
3. Install the HD

Figure 9 Insert the HD

4. Fix the HD

Figure 10 Fix HD

5. Fix the upper part of HD bracket.

Figure11 Fix the HD Bracket

6. Install HD into the upper part of the bracket and fix it.

Figure 12 Fix HD

7. Connect HD data cable with IDE interface on the main board.
8. Connect HD data cable with IDE interface on HD.
9. Plug ATX power cable into HD

% Note:

One IDE interface supports Max. 2 HD only, one "Master" and the other "slave", You have to set it as "Master" mode when one HD is required, otherwise it cannot be recognized by the system.

& CHANNEL 4/8/16 Video input ports connection

1. CHANNEL 4 has 4 BNC video input ports at the back panel for direct connection with cameras.

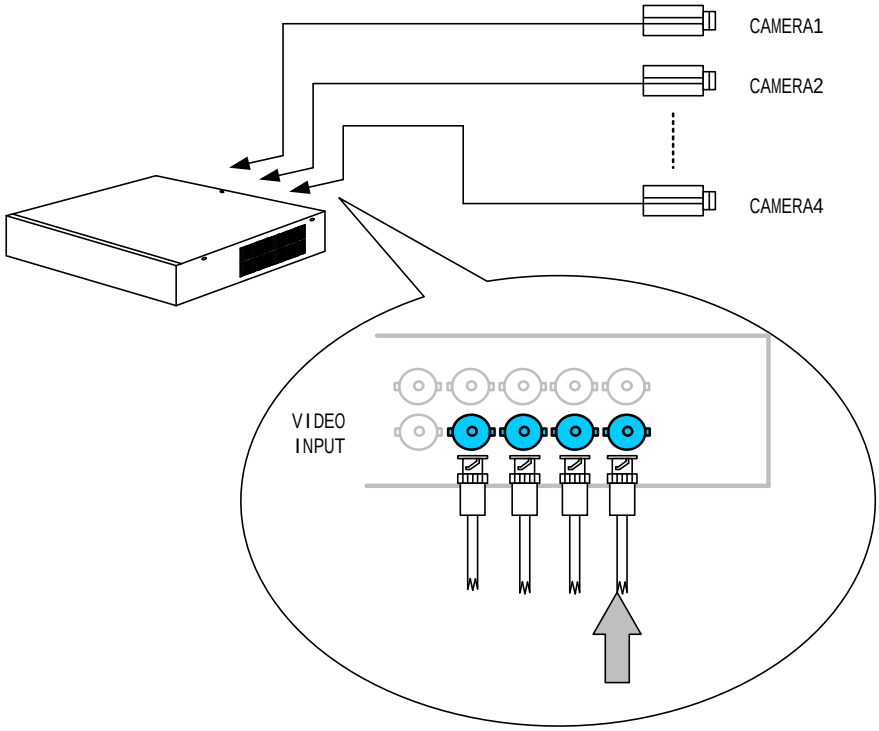


Figure 13 CHANNEL 4 camera connecting

2. CHANNEL 8 has 8 BNC video input ports at the back panel for direct connection with cameras as following described.

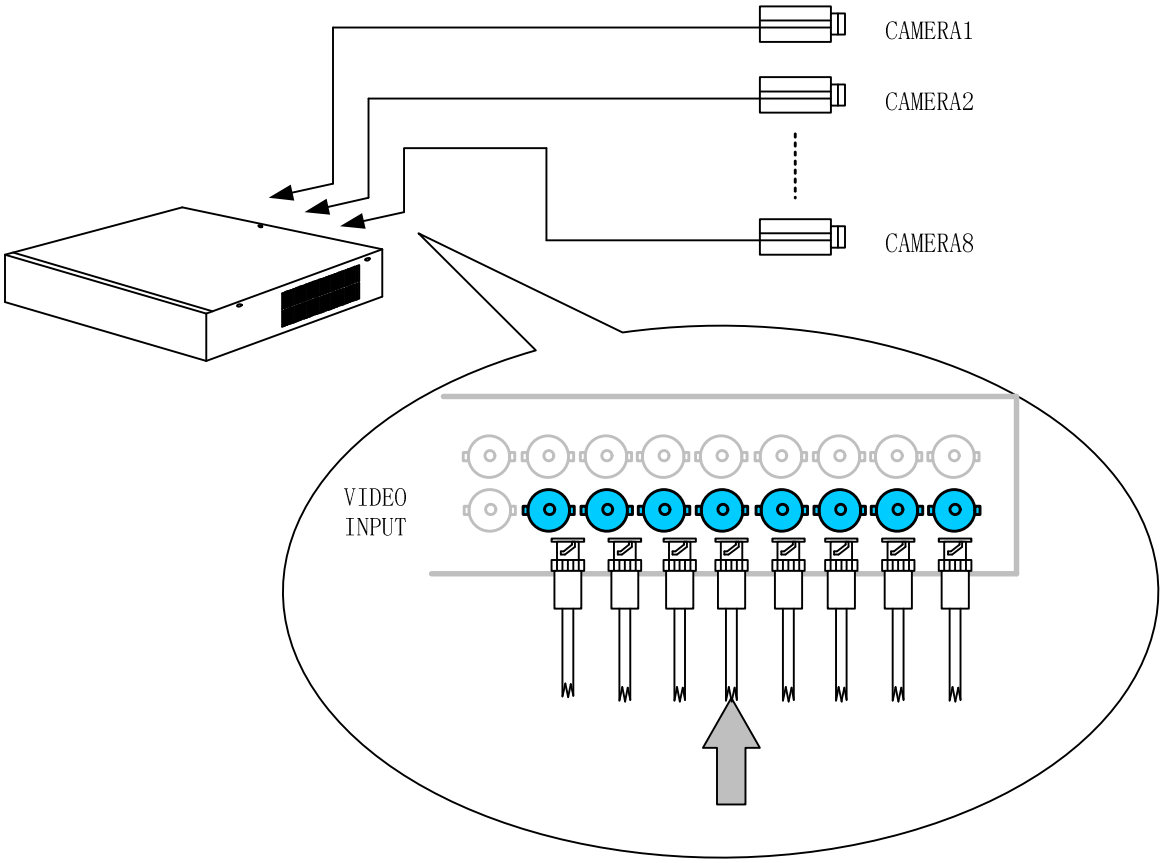


Figure 14 CHANNEL 8camera connecting

3. CHANNEL 16 has 16 BNC video input ports at the back panel for direct connection with cameras.

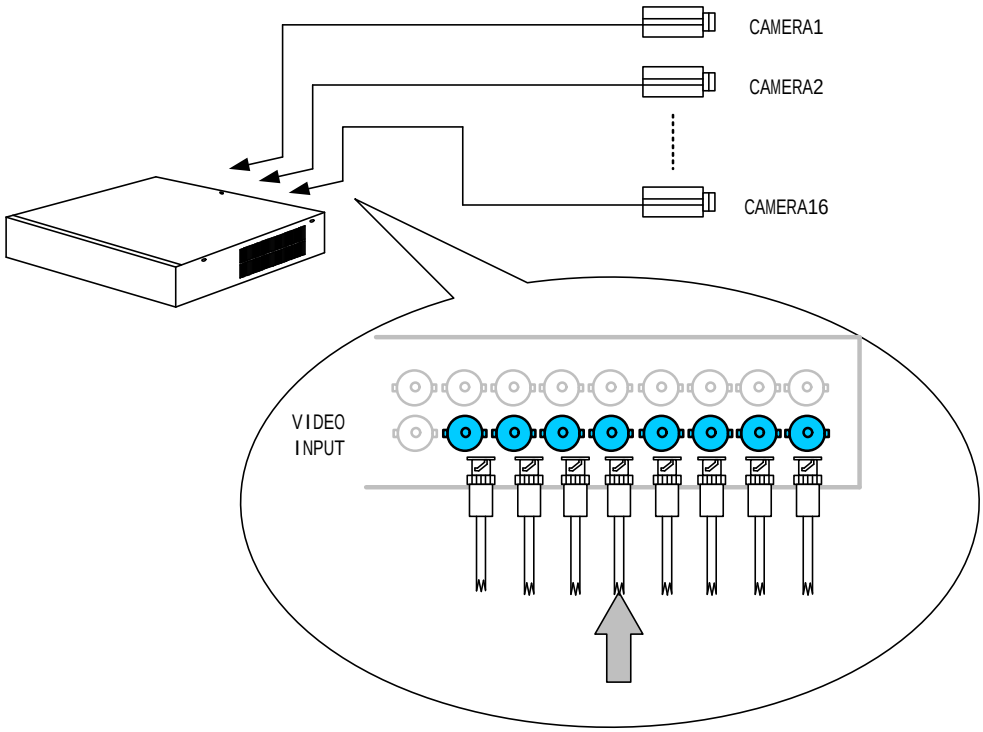


Figure 15 CHANNEL 16 DVR camera connecting

$ Note:

When it is unnecessary to use all the inputs, it is recommended to start from 1# video input port for easy system configuration,

& Video output ports connection

Video output port is in the middle part of the back panel, which is used to connect the recorder with monitor.

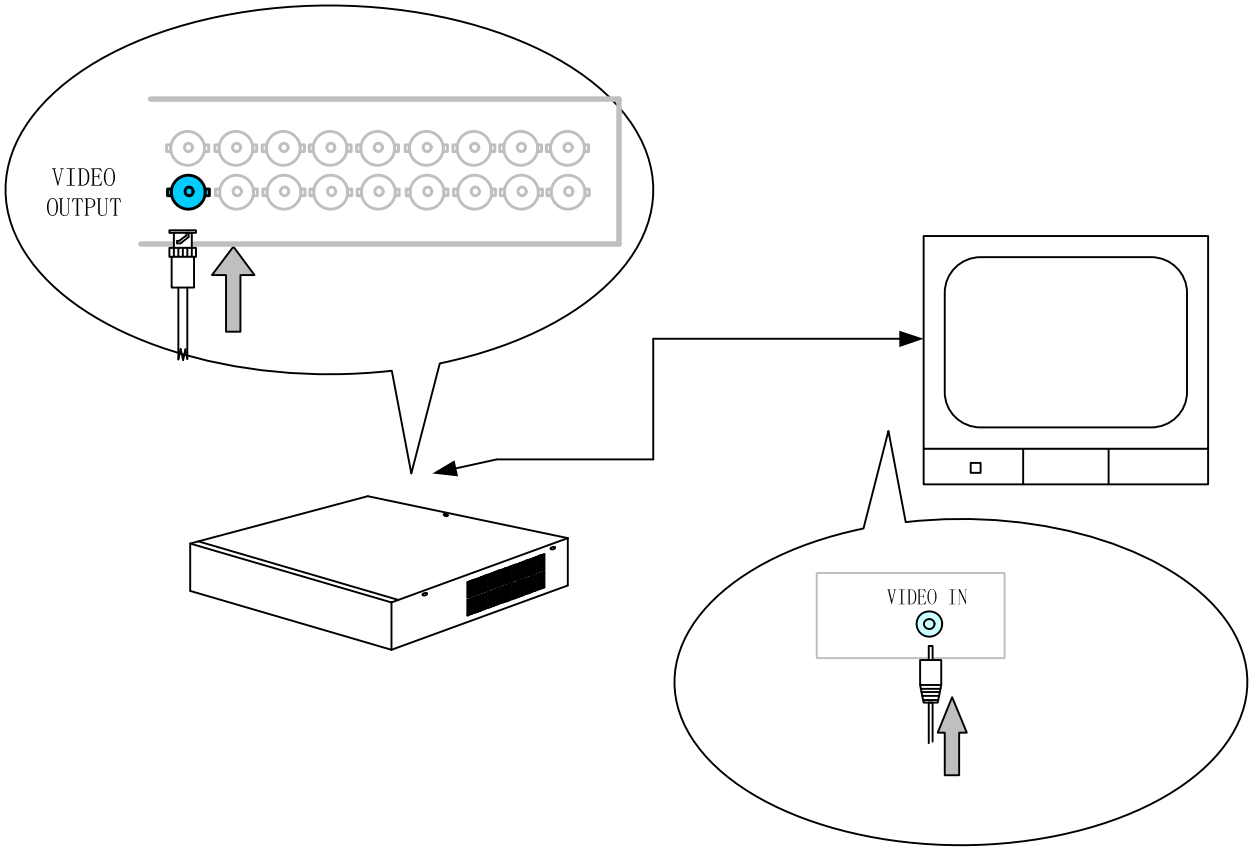


Figure 16 Video Output Connection

& Audio input ports connection

Audio/Video recording synchronization is available for DV series DVR .

1. CHANNEL 4 has 4 BNC audio input ports that are used to collect audio sources on site which corresponds to each video input port on the back panel.

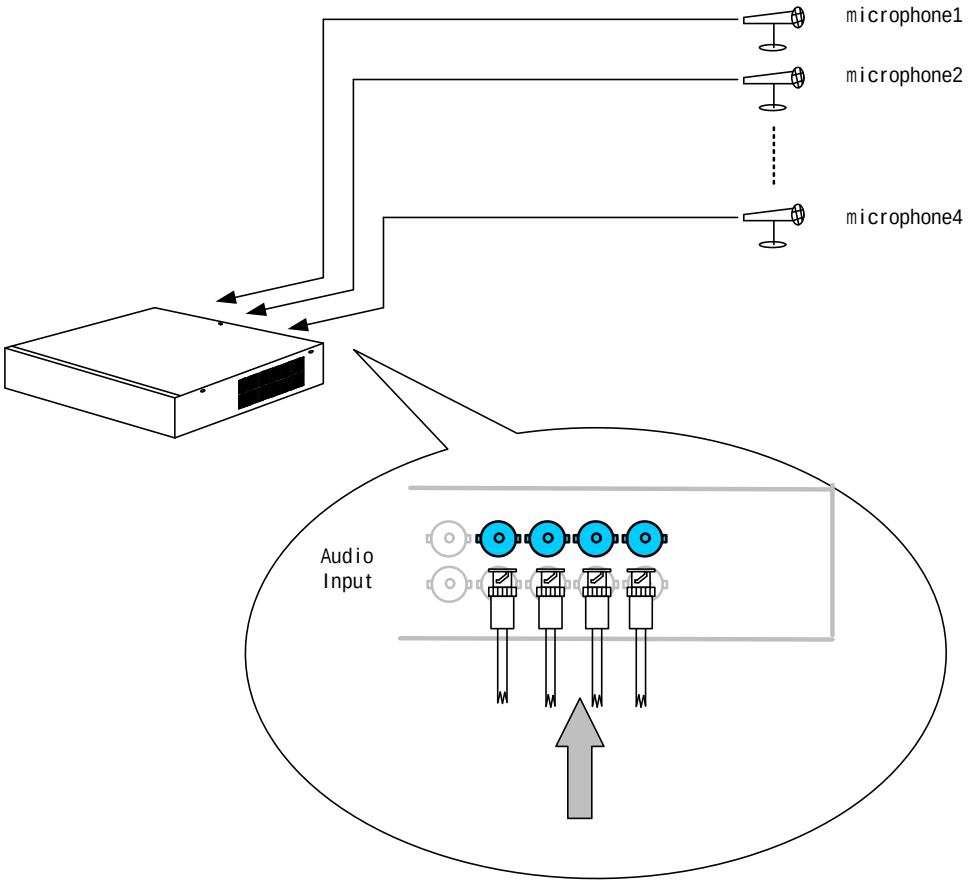


Figure 17 CHANNEL 4 Audio Input Connection

2. CHANNEL 8 has 8 BNC audio input ports that are used to collect audio sources on site which corresponds to each video input port on the back panel.

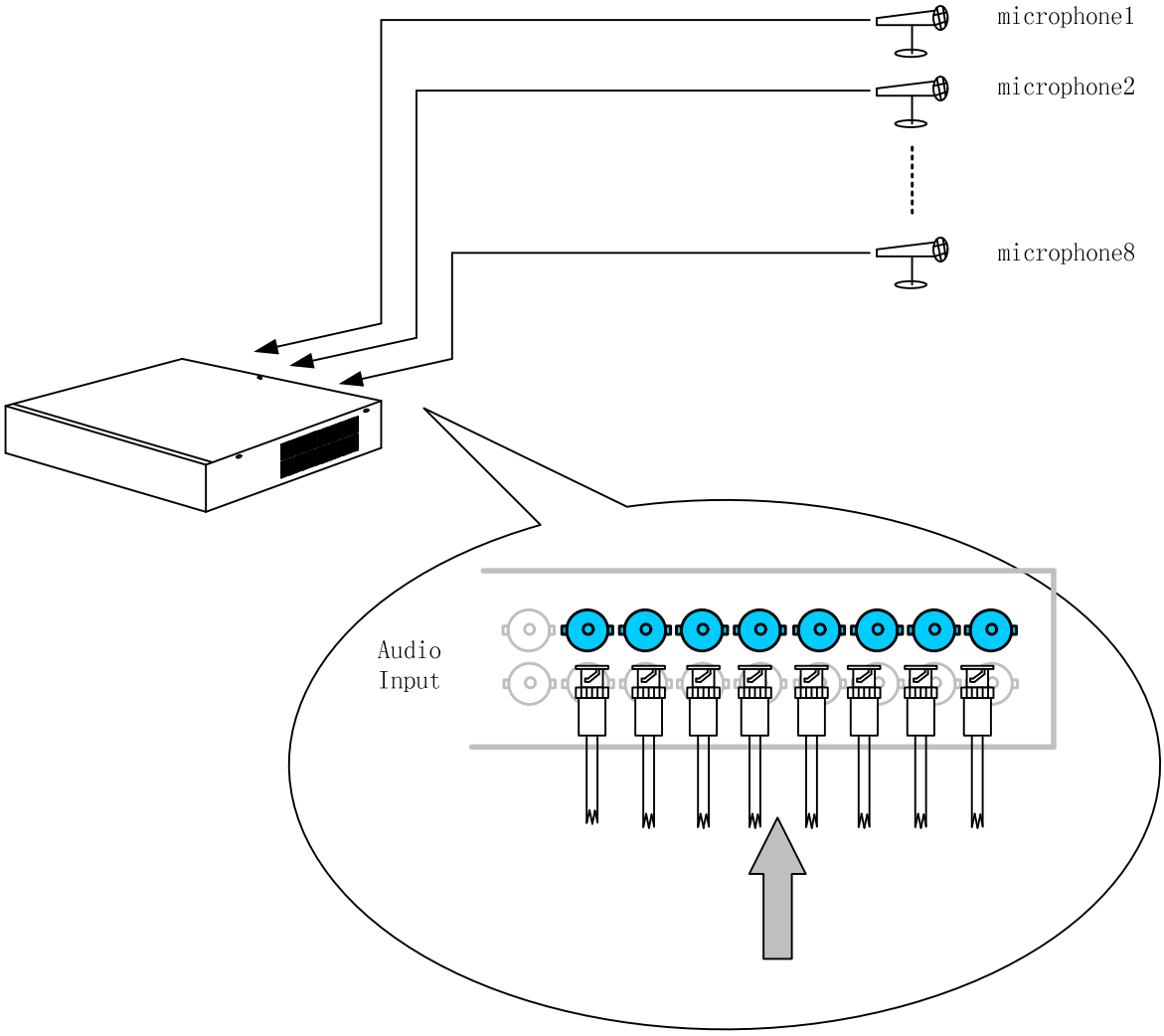


Figure 18 CHANNEL 8 Audio Input Connection

3. CHANNEL 16 has 16 BNC audio input ports that are used to collect audio sources on site which corresponds to each video input port on the back panel.

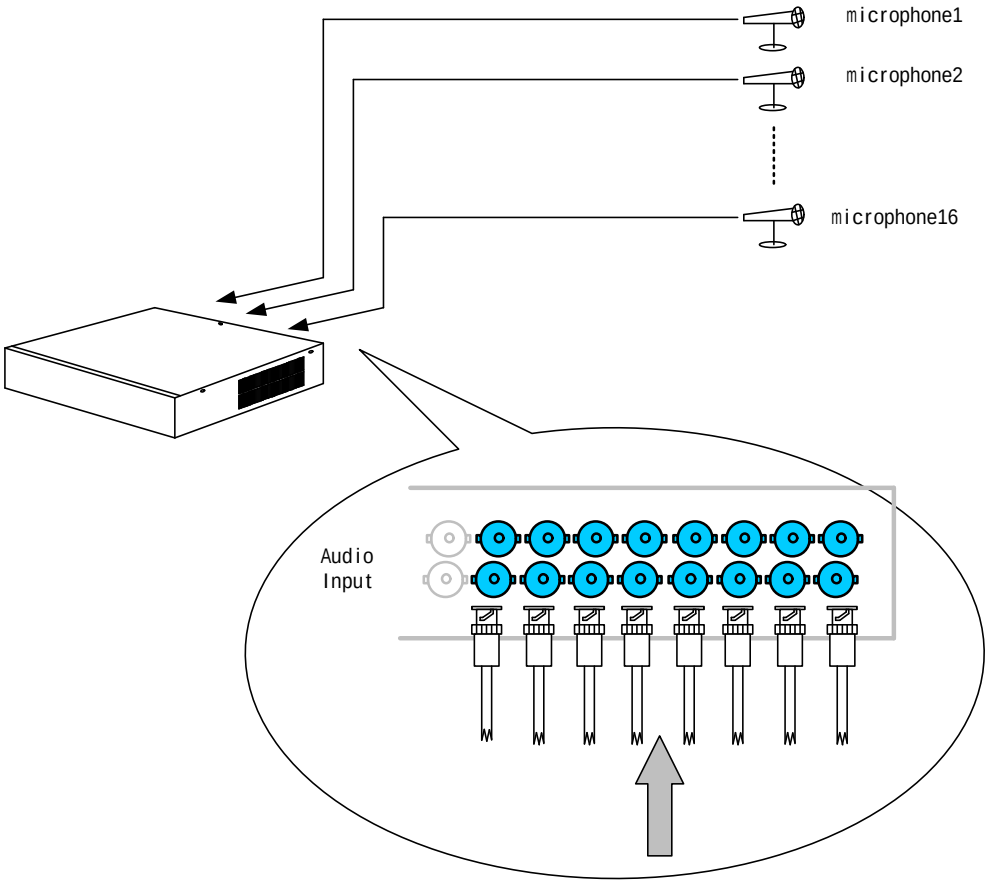


Figure 19 CHANNEL 16 Audio Input Connection

& Audio output port connection

CHANNEL4/8/16 provides one audio output port for connection to sound boxes, on-site audio and recorded audio data can be outputted through this port.

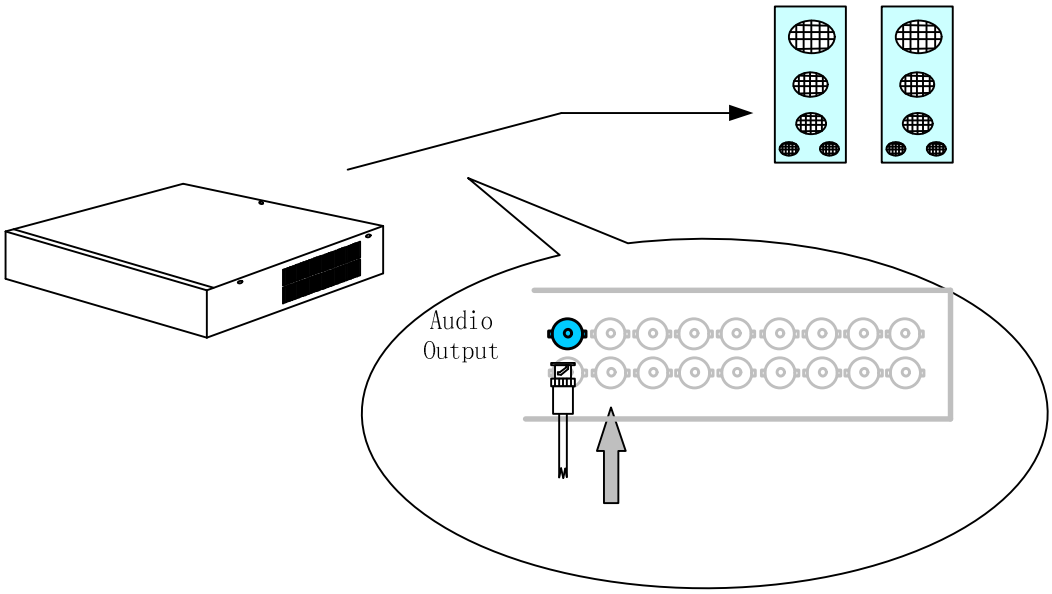


Figure 20 Audio Output Connection

& Sensor input ports connection

External sensor connected to the DVR alarm input ports outputs low/high voltage level, low level means alarm detected.Connecting as following figure, sensors connect to pin "Input" and "GND" respectively.CHANNEL 4 and CHANNEL 8 has eight alarm input ports while CHANNEL 16 has sixteen alarm input ports .

Sensor connection of CHANNEL 4 and CHANNEL 8 is as following which is connected through a DB25 connector:

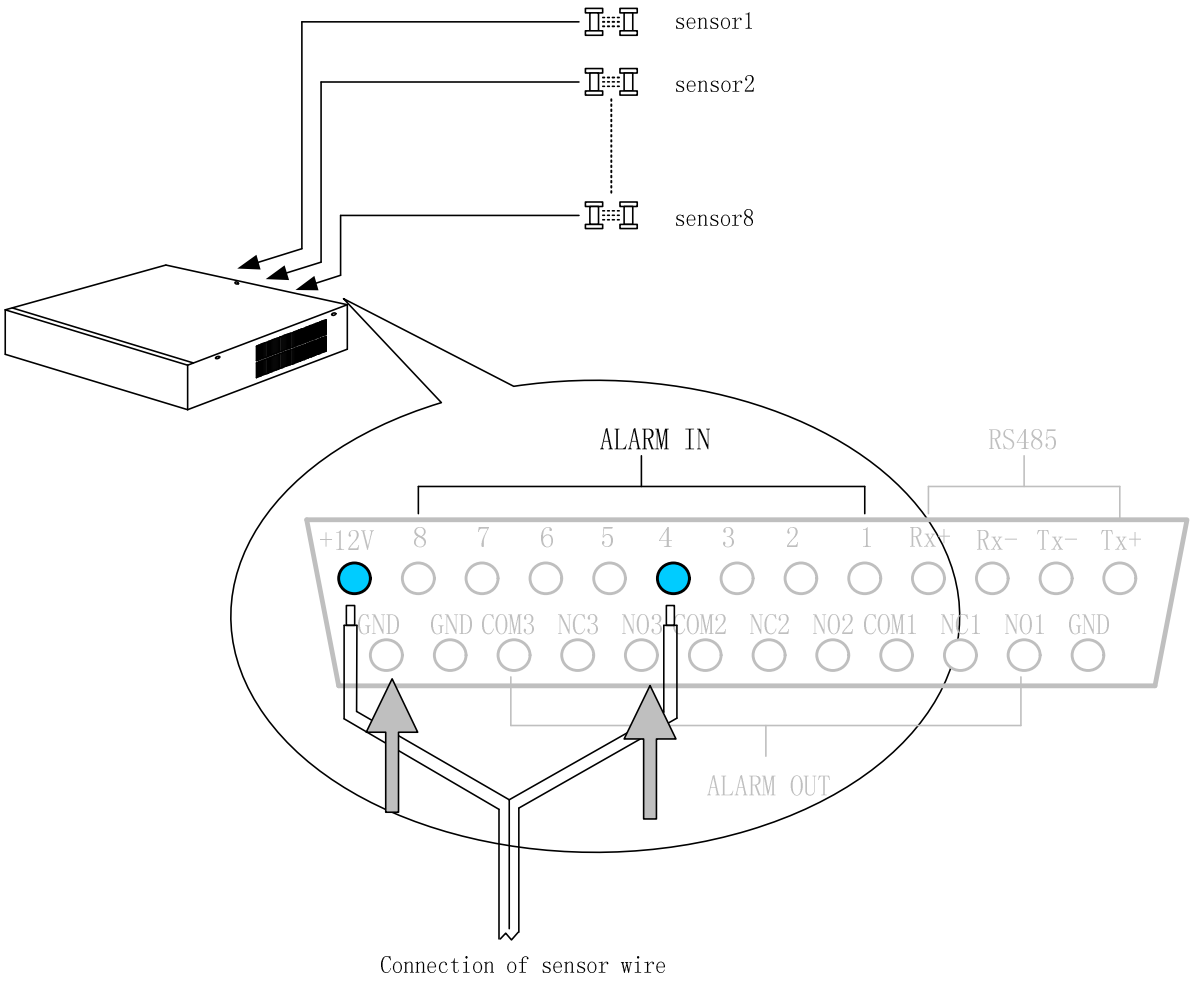


Figure 21 CHANNEL 4 and CHANNEL 8 DVR Sensor Connection

O Note:

Both CHANNEL 4 and CHANNEL 8 DVR provide 1 to 8 alarm input port(s).

12VDC power is provided for most sensors and alarm output equipments for easier system construction

Two pins are used in the connection between sensor and DVR,One connects to the ALARM IN pin ,another connects the GND pin.

Sensor connection of CHANNEL 16 is as following which is connected through two DB25 connector:

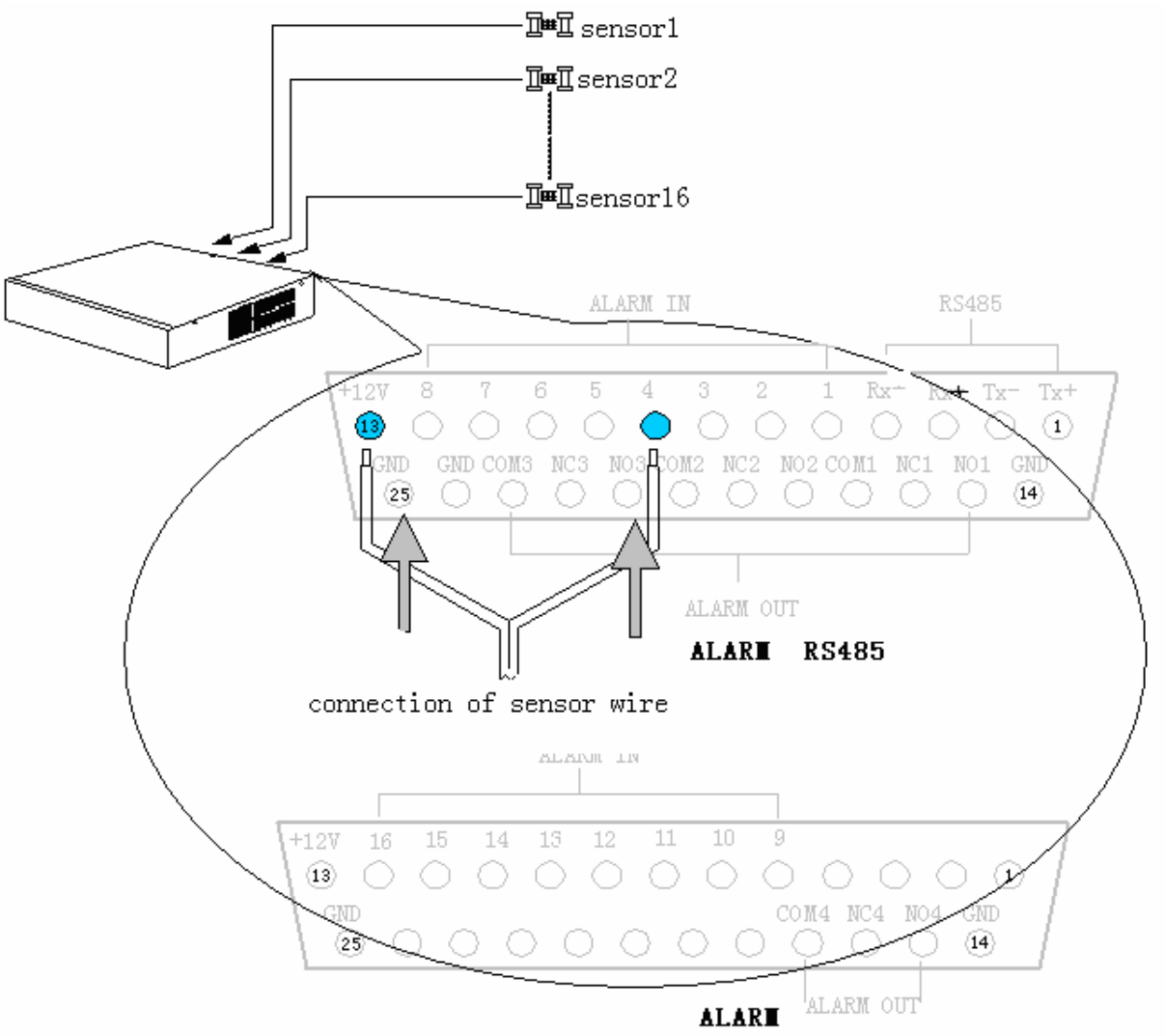


Figure 22 CHANNEL 16 DVR sensor connection

& Alarm output ports connection

CHANNEL 4 and CHANNEL 8 provide 3 groups alarm output ports and CHANNEL 16 provide 4 groups, with ” NO” and “NC” available for each alarm output.

CHANNEL 4 and CHANNEL 8 alarm output connection is as following which is connected through a DB25 connector:

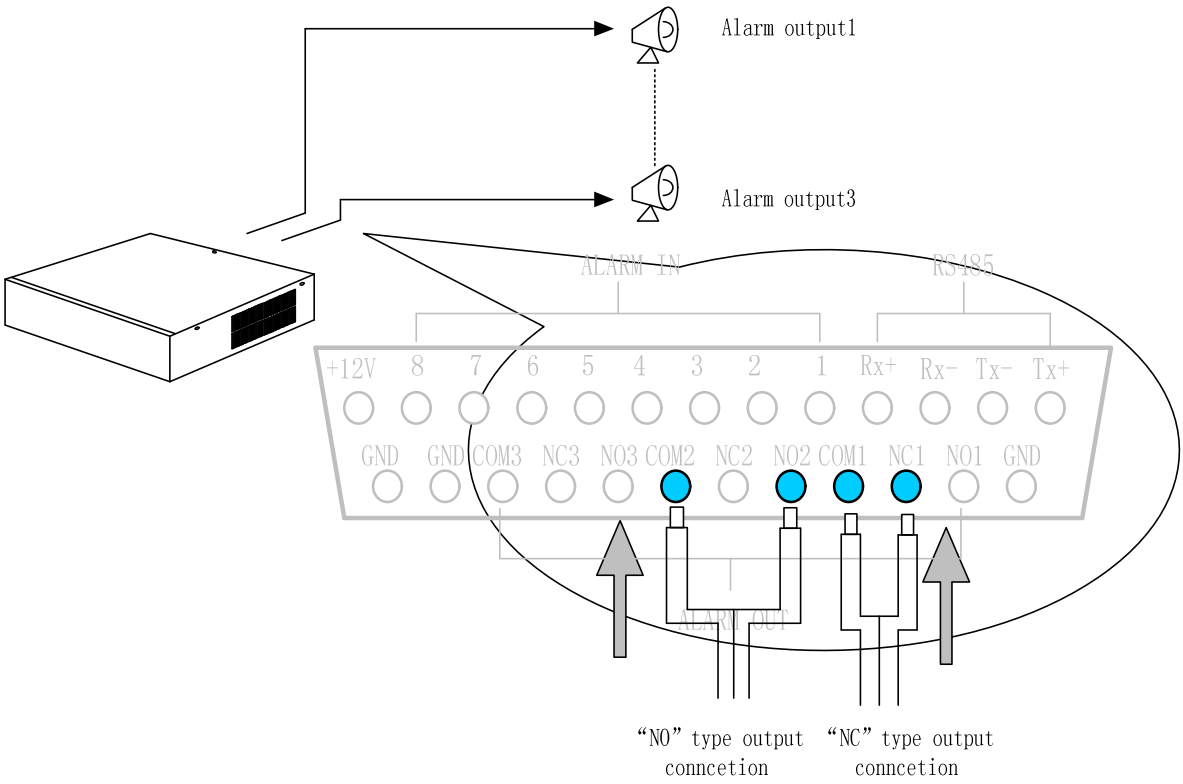


Figure 23 CHANNEL 4 and CHANNEL 8 alarm output connection

CHANNEL 16 provides 4 alarm output ports through two DB25 interfaces which is connected as following:

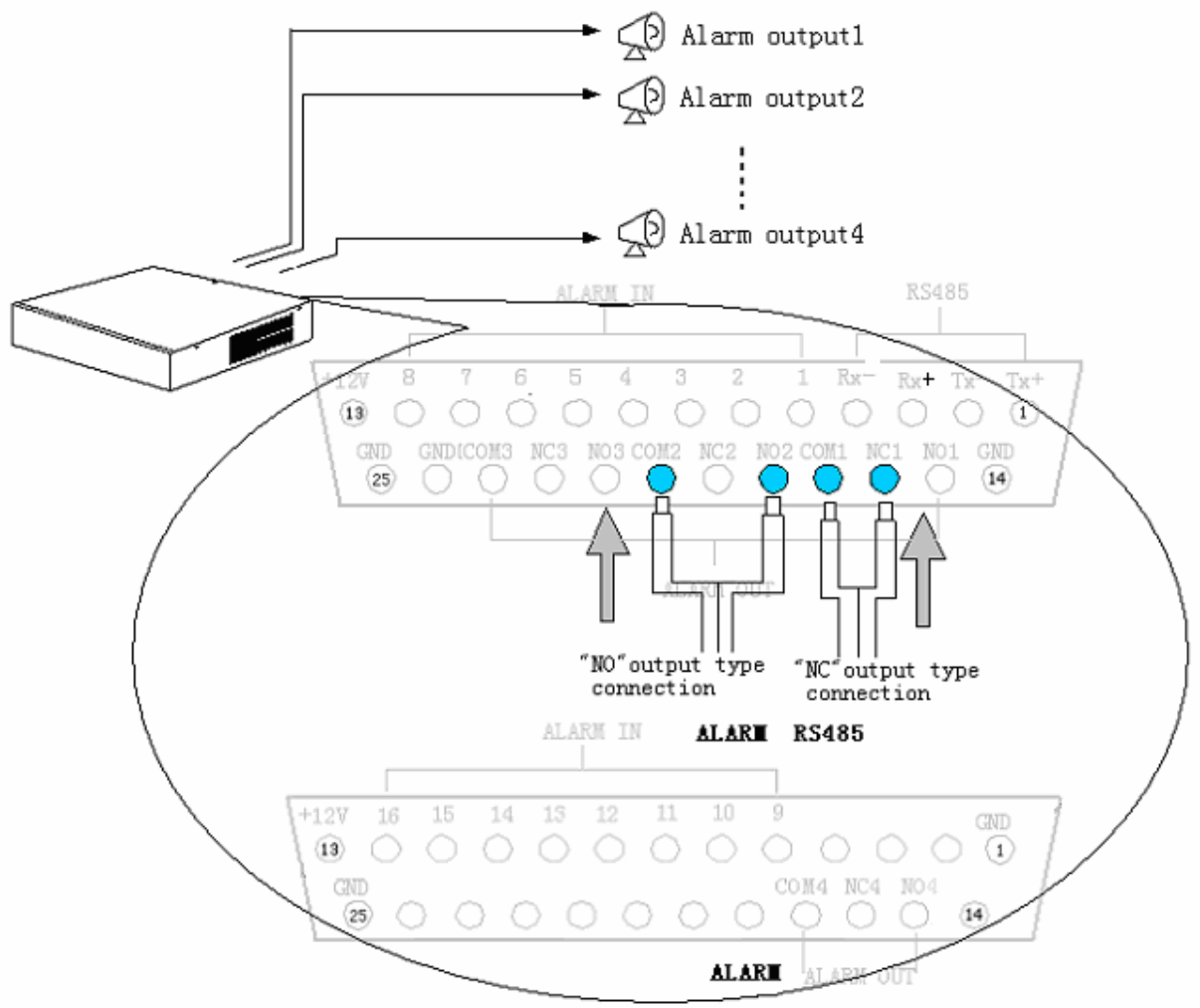


Figure 24 CHANNEL 16 alarm output connection

% Note

When alarm output is inactive, "NC" is connected with "COM", "NO" is disconnected with "COM";

When alarm output is active, "NO" is connected with "COM", "NC" is disconnected with "COM";

& Pan/Tilt/Zoom ports connection

M4 series DVR is able to control several PTZ ports through physical connection of RS-485 bus and identifies PTZ through the address setting of decoder.

CHANNEL 4 DVR define 1 to 4 PTZ addresses, connected as following:

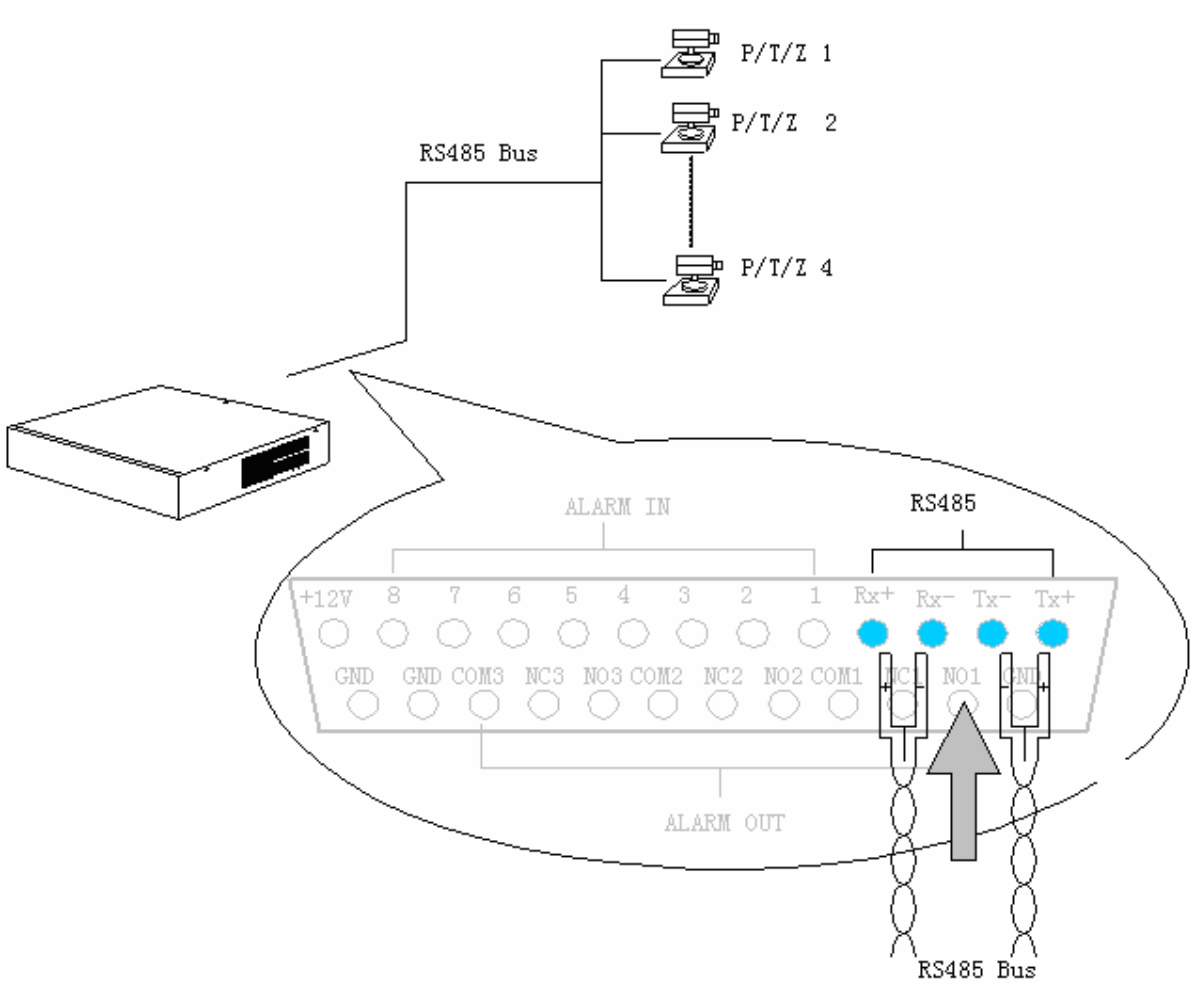


Figure 25 CHANNEL 4 DVR Pan/Tilt/Zoom connection wire

CHANNEL 8 DVR define 1 to 8 PTZ addresses, connected as following:

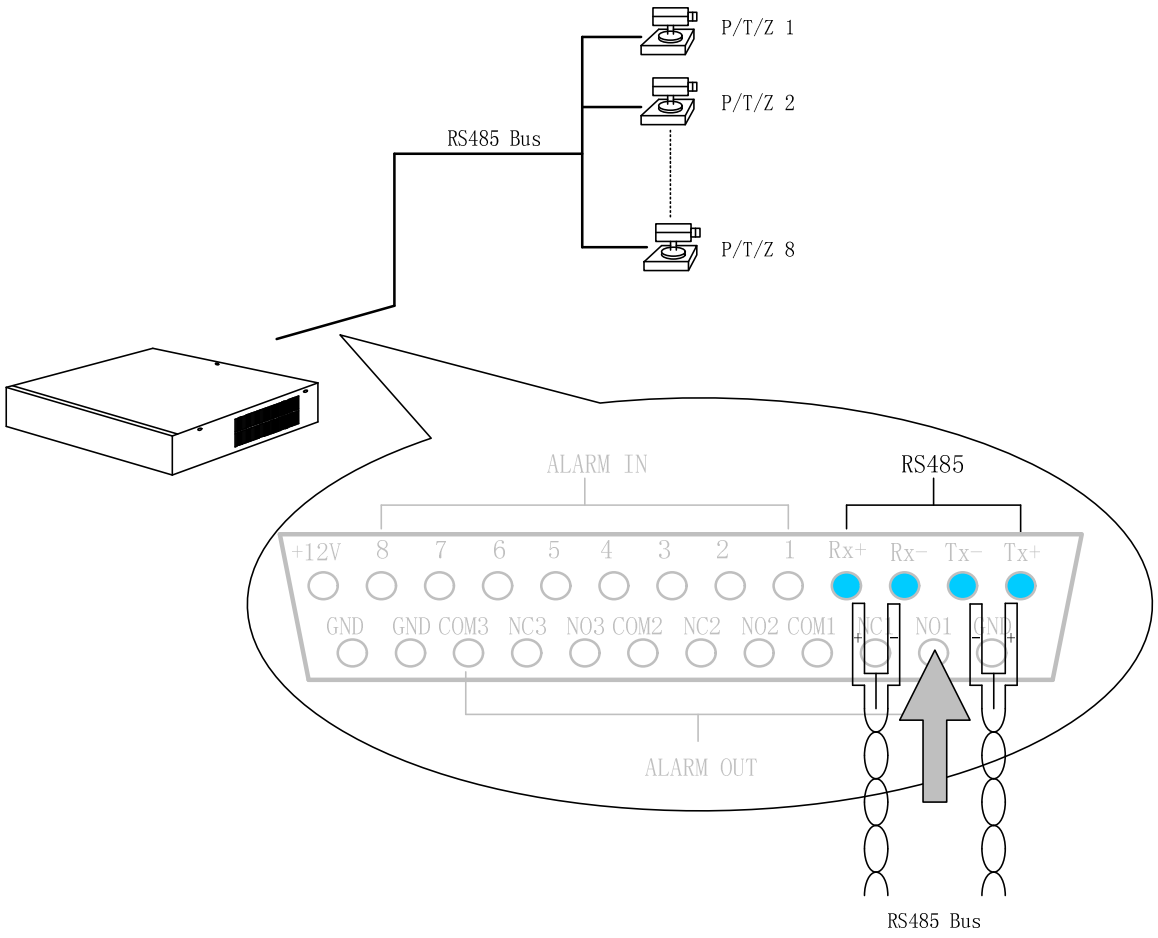


Figure 26 CHANNEL 8 Pan/Tilt/Zoom connection wire

CHANNEL 8 DVR define 1 to 8 PTZ addresses, connected as following:

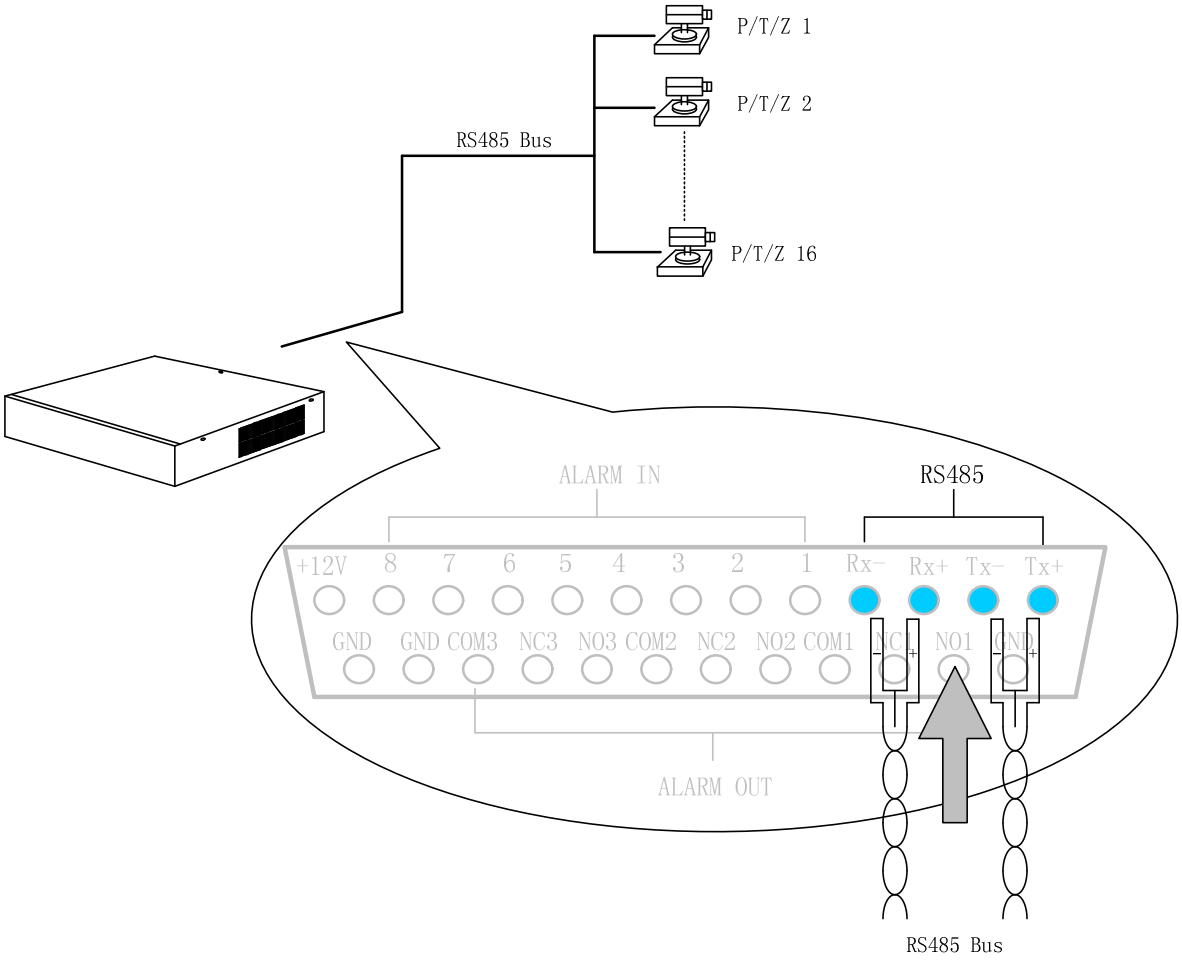


Figure 27 CHANNEL 16 Pan/Tilt/Zoom connection wire

% Note

PTZ address in system is the same as the camera number, namely,

Camera 1 has PTZ address of 1

Camera 2 has PTZ address of 2

...

Camera 16 has PTZ address of 16

PTZ address configurations have to follow the above rule.

& Ethernet port connection

M4 series DVR provides one 10/100M Ethernet port connection to LAN or Internet directly.

CHANNEL 4 or CHANNEL 8 is connected to network as following:

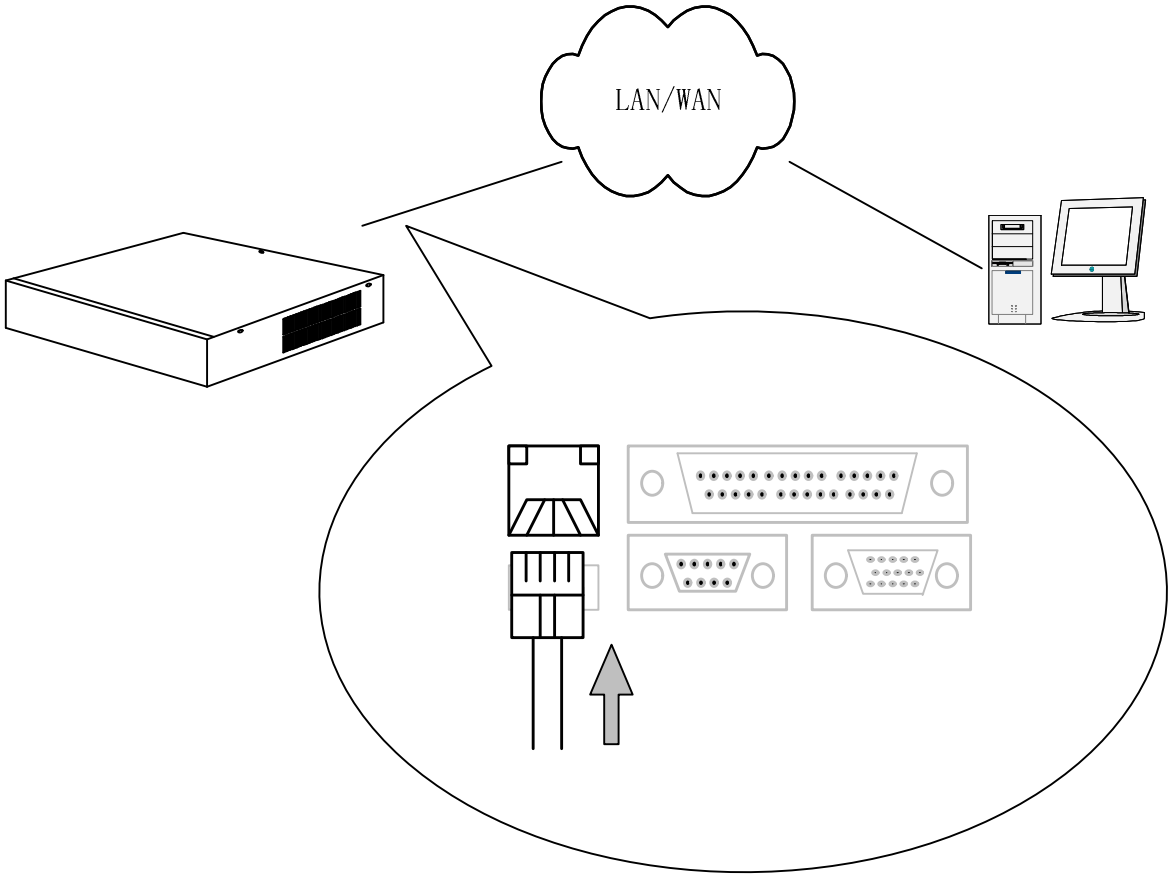


Figure 28 CHANNEL 4 or CHANNEL 8 DVR Network Connection

CHANNEL 16 is connected to network as following:

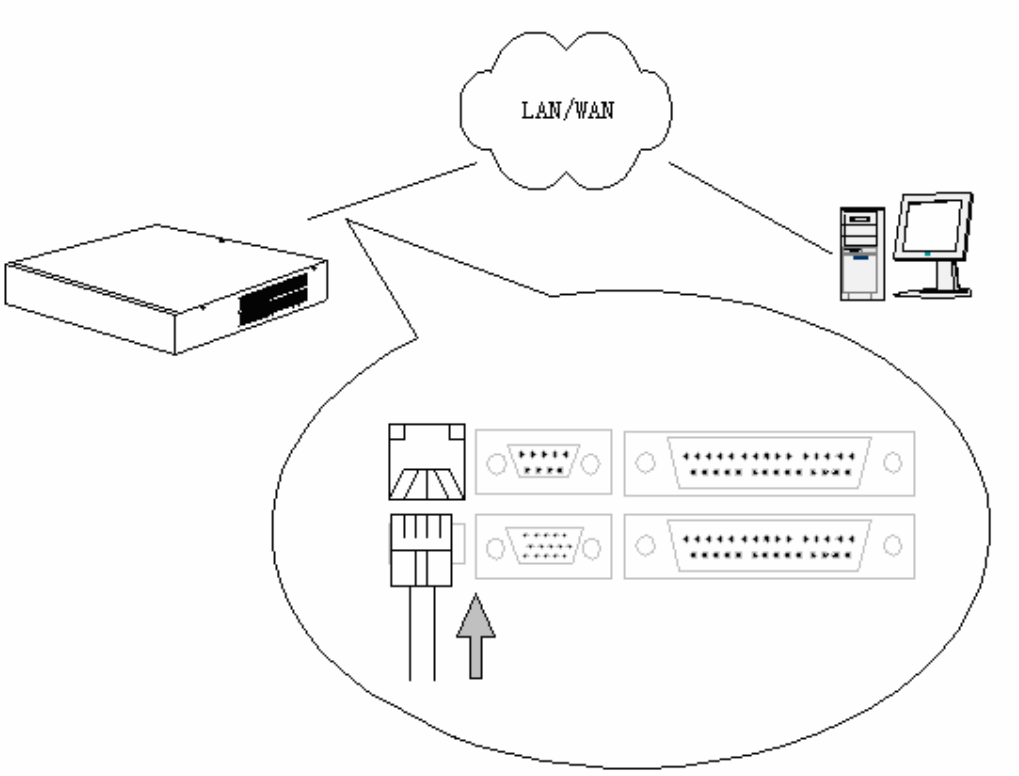


Figure 29 CHANNEL 16 DVR Network Connection

& Start the recorder

Before starting the recorder, please confirm:

1. Plug in power line of recorder;
2. Power on external equipments;
3. Push the power button at the front of the recorder;
4. Power indication lights on, with the following starting picture shown on the monitor.

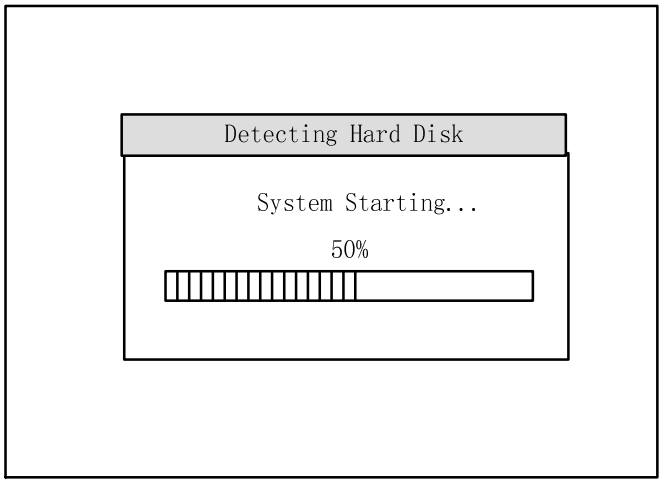


Figure 30 System Starting

After the starting picture ends, video from cameras will be displayed on the monitor. DVR enters into normal working mode for operation.

2.5Network software installation

Network browser installation notification:

Network browser only support windows 2K/ windows XP

Installation Step:

Run the CD driver and follow the installation prompt to setup the program.

Chapter 3 System operation

3.1 Front panel introduction

The front panel of CHANNEL 16 DVR includes all operation buttons and indication lights of CHANNEL 4 and CHANNEL 8, so we take CHANNEL 16 DVR as an example to introduce these functions.

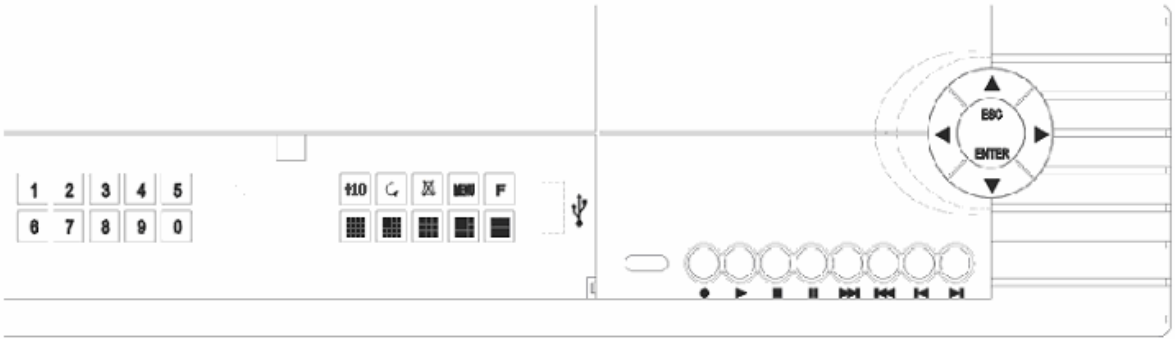


Figure 31 CHANNEL 16 DVR Operation Panel

From left to right, the front panel is divided into four function zones : Numbers zone, window control zone, Record/playback zone, and System control zone.

Function key definition of front panel：

Key Name	Function
REC ●	1. Activate manual recording of current channel 2. Save PTZ preset position of current channel 3. HDD directory repair
Stop ■	1. Stop recording of current channel 2. Stop playback operation 3. Place PTZ position of current channel back to initial position
Play ►	1. Activate playback of current channel 2. Back to normal playback from fast forward & backward 3. Playback by frames under PAUSE mode 4. 3 levels of slow backward play back(X1/2) 5. Pan horizontal move and stop under

	pan control mode
Pause	PAUSE CURRENT PLAYBACK
Forward	3 levels of fast forward playback
Backword	3 levels of fast backward playback
Next	Jump to next recorded segment
Previous	Jump to previous recorded segment
Enter	1. Confirm key when in menu operation or window prompt mode 2. Set/cancel motion detection areas 3. set mask area 4. P/Z、lens, iris and die state switching
ESC	1. Cancel key when in menu operation or window prompt mode 2. Back to menu/window state from motion detection area setup state 3、log out the mask area setup mode 4、set or cancel mute mode 5、cancel bidirectional talking
F	Freeze picture of current channel
	Cancel alarm output
	Single channel auto-switching
Menu	Enter system menu mode
Direction	1. "Up" 2. Pan/tilt up direction control 3. move the lens near 4. Move the mask area up
Direction	1. "Down" 2. Pan/tilt down direction control 3. move the lens far 4. Move the mask area down
Direction	1. "Left" 2. Pan/tilt left direction control 3. Lens focus near 4. Move the mask area left 5. Playback data backward at *2,*4,*8
Direction	1. "Right" 2. Pan/tilt right direction control 3. Lens focus far 4. Move the mask area left 5. Playback data forward at *2,*4,*8
	4 window splitting
	6 window splitting
	9 window splitting
	13 window splitting

	16 window splitting
+10	+10
0	1. “0”
1	1. “1” 2. Switch from 9 window splitting to camera1 single window 3. Set camera1 as the main window under 6 window splitting mode 4. Switch from 4 window splitting to camera1 single window 5. Switch from 16 window splitting to camera1 single window 6. Set camera1 as the main window under 13 window splitting mode 7. display the mask area under video mask area setup mode
2	1. “2” 2. Switch from 9 window splitting to camera2 single window 3. Set camera2 as the main window under 6 window splitting mode 4. Switch from 4 window splitting to camera2 single window 5. Switch from 16 window splitting to camera2 single window 6. Set camera2 as the main window under 13 window splitting mode 7. identify the mask area under video mask area setup mode
3	1. “3” 2. Switch from 9 window splitting to camera3 single window 3. Set camera3 as the main window under 6 window splitting mode 4. Switch from 4 window splitting to camera3 single window 5. Switch from 16 window splitting to camera3 single window 6. Set camera3 as the main window under 13 window splitting mode
4	1. “4” 2. Switch from 9 window splitting to camera4 single window 3. Set camera4 as the main window under 6 window splitting mode 4. Switch from 4 window splitting to camera4 single window 5. Switch from 16 window splitting to camera4 single window 6. Set camera4 as the main window under 13 window splitting mode
5	1. “5” 2. Switch from 9 window splitting to

	camera5 single window 3. Set camera5 as the main window under 6 window splitting mode 4. Switch from 16 window splitting to camera5 single window 5. Set camera5 as the main window under 13 window splitting mode
6	1. “6” 2. Switch from 9 window splitting to camera6 single window 3. Set camera6 as the main window under 6 window splitting mode 4. Switch from 16 window splitting to camera6 single window 5. Set camera6 as the main window under 13 window splitting mode
7	1. “7” 2. Switch from 9 window splitting to camera7 single window 3. Set camera7 as the main window under 6 window splitting mode 4. Switch from 16 window splitting to camera7 single window 5. Set camera7 as the main window under 13 window splitting mode
8	1. “8” 2. Switch from 9 window splitting to camera8 single window 3. Set camera8 as the main window under 6 window splitting mode 4. Switch from 16 window splitting to camera8 single window 5. Set camera8 as the main window under 13 window splitting mode
9	1. “9” 2. Switch from 9 window splitting to camera9 single window 3. Set camera9 as the main window under 6 window splitting mode 4. Switch from 16 window splitting to camera9 single window 5. Set camera9 as the main window under 13 window splitting mode

3.2 Remote controller

The remote controller is an accessory to enhance handy operation of digital video recorder. All the setting and operation can be done through remote controller. Most keypad functions of remote controller are as the same as the front panel. Please

refer to section“front panel” for detailed functional description.Special keys of remote controller are explained below:

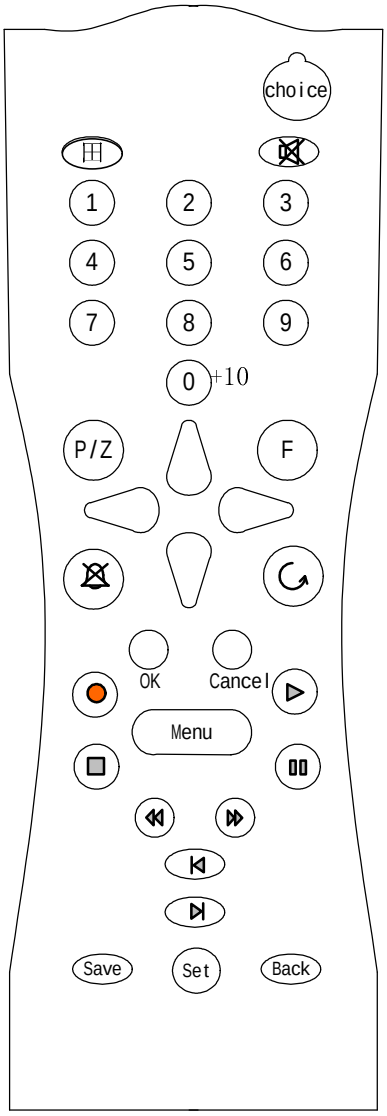


Figure 32 Remote controllers

Key Name	Function
Choice	Select DVR to be controlled
P/Z	Pan,lens,iris idle state switching
Set	Set P/Z original position of current channel
Save	Save P/Z preset position of current channel
Back	Place P/Z back to original postion

3.3 Window Display

& Split-window definition

M4 series DVR supports single window，picture in picture，4/6/9/13/16 window splitting .

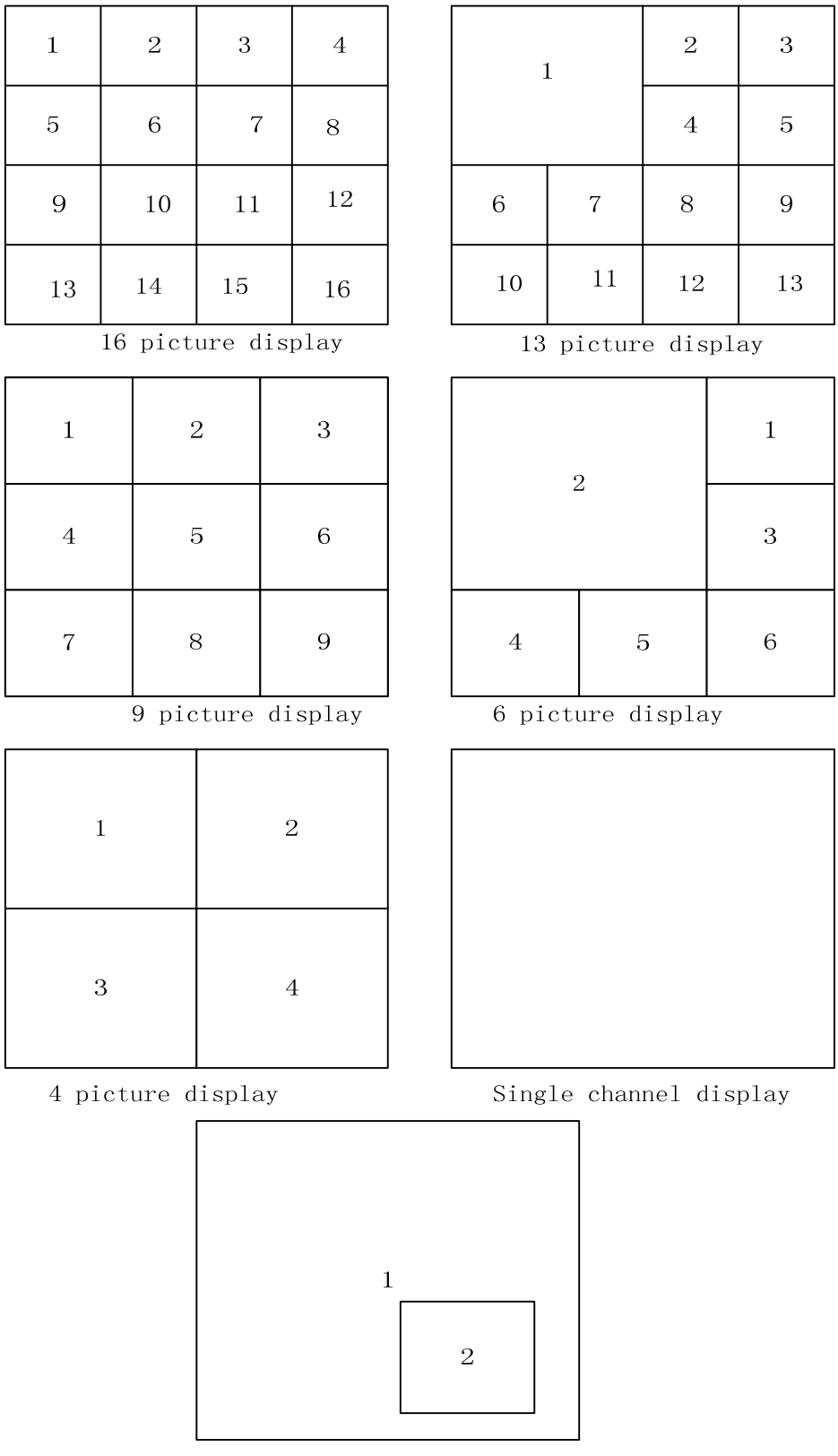


Figure 33 Display modes

% Note

CHANNEL 4 DVR supports only single and 4 picture splitting
CHANNEL 8 DVR supports single and 4/6/9 picture splitting.
CHANNEL 16 DVR supports single and 4/6/9/13/16 picture splitting.

& OSD information

Entire system picture displays as following:

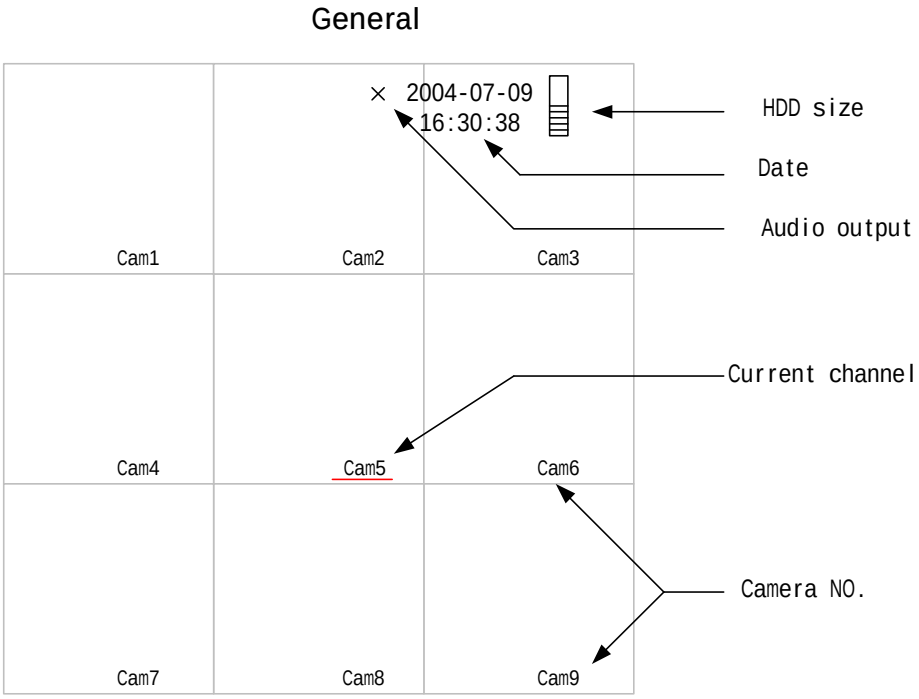


Figure 34 System picture display

The status display of Single channel is as following:

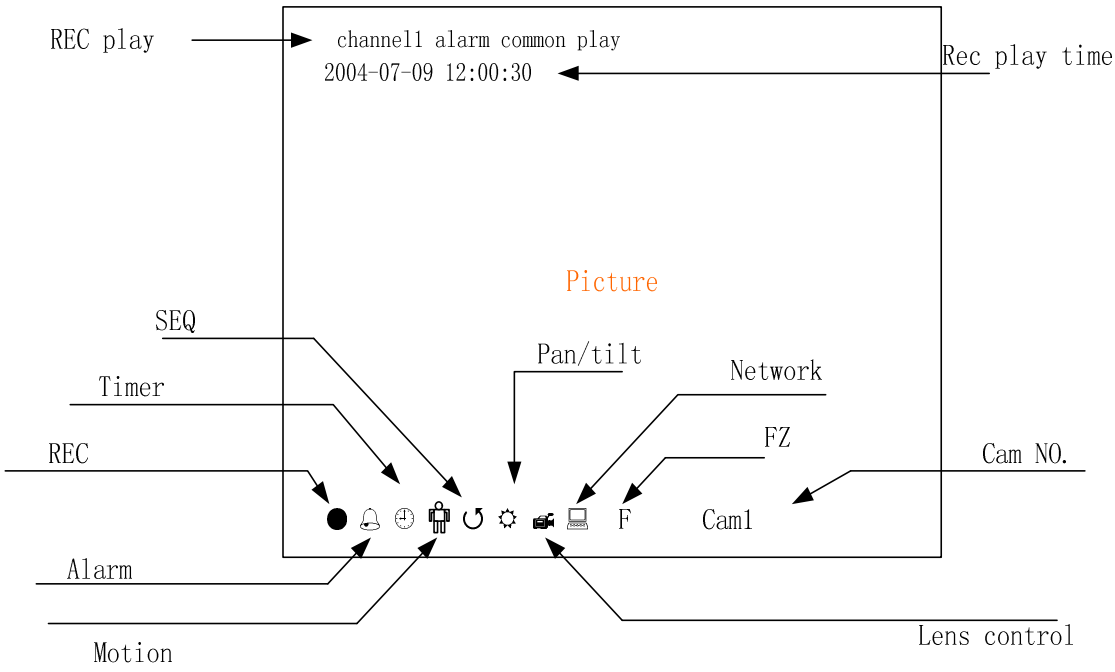


Figure 35 Channel display

& Menu and window interface

User interface of DV series DVR are composed of menu interface and window interface through which user controls the system. Basic operation is described below:

1. Menu

Below shows basic menu format. Press **"up"** and **"down"** to move the cursor. Press**"Enter"**to confirm your choice.

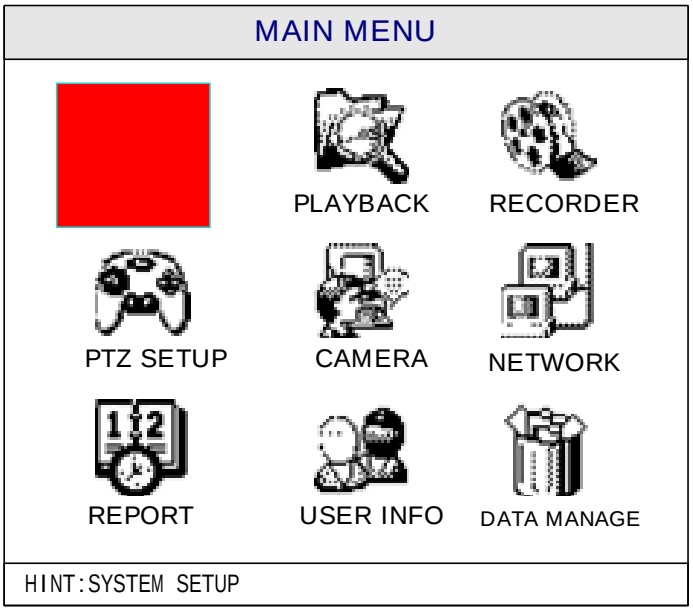


Figure 36 Menus

2. Window

- Below shows system window interface.

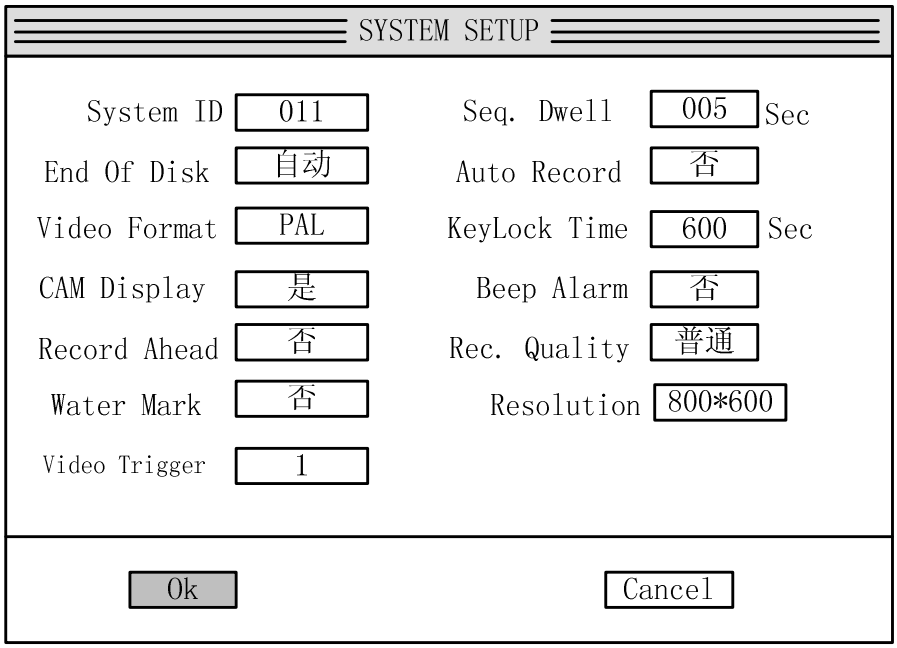


Figure 37 Windows Interface

- Window operation is similar with the menu operation.

1. Press"up" and "down" to move the cursor.

2. Targets controllable in the window interface includes number input box, date input box, time input box, selection box, etc.

3. The uncontrollable targets include characters, boundaries, and titles.

l Descrioption

Fig. 4 Window operation setting

TARGET	OPERATION	REMARKS
Data Input: 123	1. Input numbers 2. Press "Left" or "Right" to move the cursor	
Date Input: 2002-12-06 16:20:32	1. Input numbers 2. Press "Left" or "Right" to move the cursor	Cursor is unmovable when illegal date inputted
Time Input: 12:00	1. Input numbers 2. Press"Left" or "Right" to move the cursor	Cursor is unmovable when illegal time inputted
Selection Table: Common	Press "Left" or "Right" to select terms	
Selection Bar: 0-2 40.0G 20.2G	Press"OK" to confirm your current selection	In list box
OK/Cancel Cancel	Press "OK" to confirm your selection	Mostly shown on the bottom of the window

3.4 Login

l Login by inputting your passwords.

The recorder has three password levels: Manager, Operator and Browser with Master at the top level and Browser at the bottom. The security level will be verified according to the input password. If passwords of different levels are the same, then most highest operation level is granted. Different password level leads to different operation restrictions.

O Note

1,The password consists of Max. 6 numbers, factory default configuration is set as:

Manager---------333333

Operator----222222

Browser---------111111

2.If wrong password is inputed 3 times, DVR will produce a beep..

l Login steps:

1. Press any key, system will pop up a login dialogue box;
2. Input your password;
3. Press "OK" for your selection;
4. After password verification, system will remind you of your level after successful login.

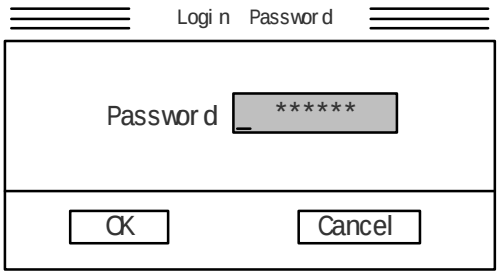


Figure 38 User Login Interface

Successful login:

Figure 39 Login Successful

Unsuccessful login:

Figure 40 Login Failed

3.5 Keypad auto-lock

Keypad auto-locking works after long-time operation vacancy. Re-logon is required for further operation. Keypad auto-locking starts timing when no operation is done on the system, timing stops when user operates the system.

When keypad auto locks, system pops up following message:

Figure 41 Keyboard Auto Lock

3.6 System Management

& System parameter configuration

Basic system parameter configuration are provided:

- **F** System recognition
- **F** Single channel auto-switching interval setting
- **F** Recorder overwrite mode select
- **F** Power-on auto-recording select
- **F** Video format select
- **F** Keypad auto-locking interval setting
- **F** Screen show select
- **F** Buzzer select
- **F** Pre-recording select
- **F** Manual recording quality select
- **F** I frame interval setting
- **F** VGA output resolution setup

- **F** External trigger source for auto-switching(Only available in CHANNEL 2 DVR)
- **F** Stream type select
- **F** Alarm switch select
- **F** Frame rate select

operation steps：

1. Click SYSTEM Management on the menu.

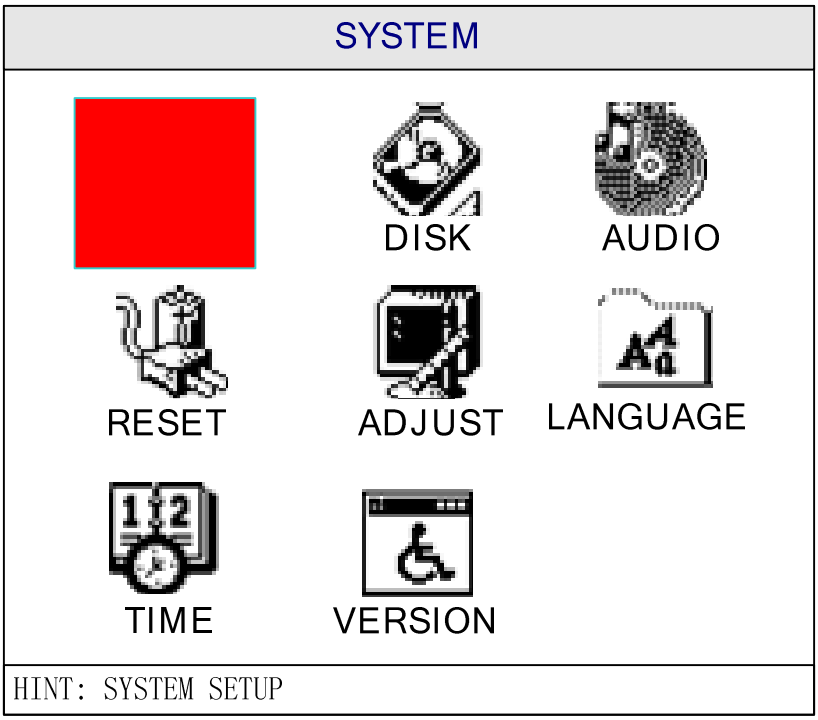


Figure 42 System Parameter Setup Menus

2. Click System paramter.

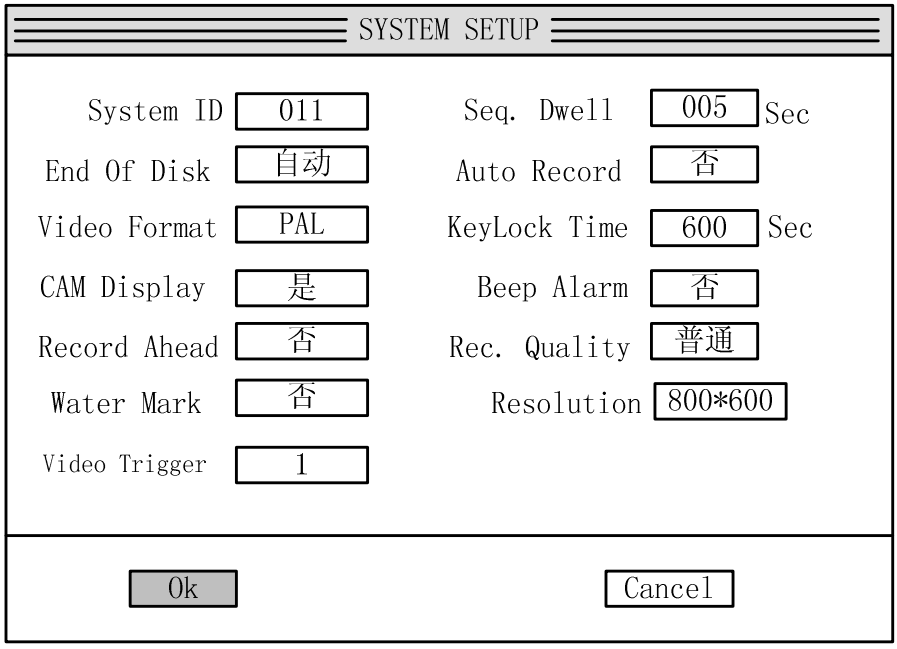


Figure 43 System Parameter Setup

3. Configure parameter as required.

Detailed function description of each parameter shows in the following table.

Table 3 system parameter configuration description

Items	Description	Remarks
System Identification	Define the ID of DVR for control through remote controller	
Single channel auto-switching interval	Define single channel auto-switching interval	> 0 s
Power on auto-recording select	Auto-recording or not when the system is powered on	Yes or No
Recorder overwrite mode select	Auto/manual overwrite mode select when the HD is full	Auto: System overwrites the most earliest records without notice. Manual: System notifies user when HD full.
Video format	Select the current video format	PAL or NTSC
Keypad auto-lock interval	Length of idle time before keypad auto locks	≥ 5 s
Screen show	Whether to display the channel title and other icon or not	All,cancel,title and status can be selected
Buzzer	Buzzer on/off when alarm triggered	Yes or No
Pre-recording	Startup pre-recording or not	Yes or No
Image quality	Select manual recording image quality level	Bad/normal/good/better /best
I-Frame interval	Define record I-frame interval	Suggestion: use default

		value 00
VGA resolution setting	Setup VGA output resolution	800*600 or 1024*768
Trigger source for video switching	Setup external alarm input as trigger source for video switching	Only available in CHANNEL 2 DVR
Stream type	Define the stream of manual record variable or not	Yes or no
Alarm switch	Define single channel display or not when the channel is alarm recording.	Yes or no
Frame Rate	manual record frames(full means 25fps)	FULL、1/2F、1/4F、1/8F or 1/16F

% Warning：

System time is extremely important to a smooth running of the whole system. Exiting from all other functions are suggested when system time.modification is necessary, otherwise it'll result in mistake in recording.

4. Choose "OK" to confirm your setting; Choose "Cancel" to give up.

& Disk Management

Query and management of HD information is provided. Formatting is required before a new HD can be used after installation.

Operation step：

1. Select Disk Information.

2. "Disk Information" window will popup, information of all connected HD is displayed.

3. When formatting is required, move the select bar to the HD wanted and press"OK" key. Formatting status will be displayed on the screen.

4. When repairing the HD catalog is required, move the select bar to the HD wanted and press "Record"key

% Warning：

HD formatting will delete all the stored data

5. Choose”PgUp” or “PgDn” to view all the information.
6. Choose”Return” to close “Disk Information” window.

& System reset

User may use this function to reset the whole system.

Operation step：

1. Click System Reset.
2. A dialogue box will popup to make sure the operaton.
3. Press ”OK” to reset system; Press ”Cancel” to give up.

& Display adjustment

Video parameter of each current channel can be adjusted separately, with values ranging from 0-99. Adjustable figure is displayed below:

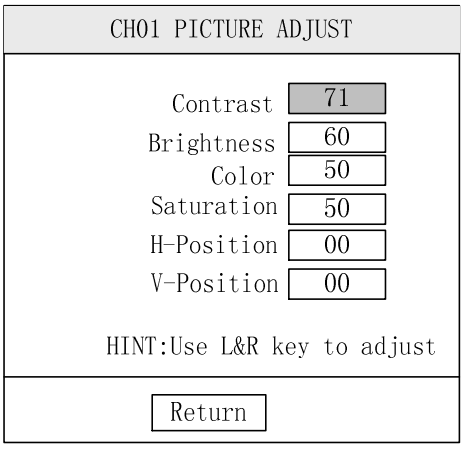


Figure 44 video parameter adjust

$ Note:

Video adjusted is the focused channel. Only in live video monitor mode can channel 1 be adjusted.

If Channel 1 is under playback mode, Its contrast, brightness and color cannot be adjusted.

The saturation parameter is not realized now.

Operation step:

1. Move cursor to the desired channel.
2. Click Picture adjust.
3. Select different item using "Up" and "Down"; Change numbers using "Left" or "Right".
4. Press "Return" to finish the adjustment.

& Language Selection

User can select English or Chinese to operate the system.

Operation step:

1. Select Language Selection.
2. Press "OK", use "UP" and "DOWN" keys to select.
3. Press "BACK" button to end the selection.

& Time setting

Set the system time of recorder.

Operation step:

1. Select "Time setting".
2. Press "OK" to display current system time, set new time using number keys.
3. Press "OK" to activate new time; Press "Cancel" to give up modification.

& Version Query

Software version can be queried from system menu.

Operation step：

1. Select System Version.
2. Press “OK”, version information will be displayed.
3. Press ”OK” again to close the window.

3.7 Recording search

Three methods are provided to search recorded data, based on Time/Channel/Event separately, Combined search is also available.

> % Warning：
> Max..5000 records are available for each search.Other records can be searched by changing search conditions

Operation step:

1. Select playback.
2. Video search dialogue will popup for users to input search conditions.

   Channel No. Set at “0” means searching all the channels.

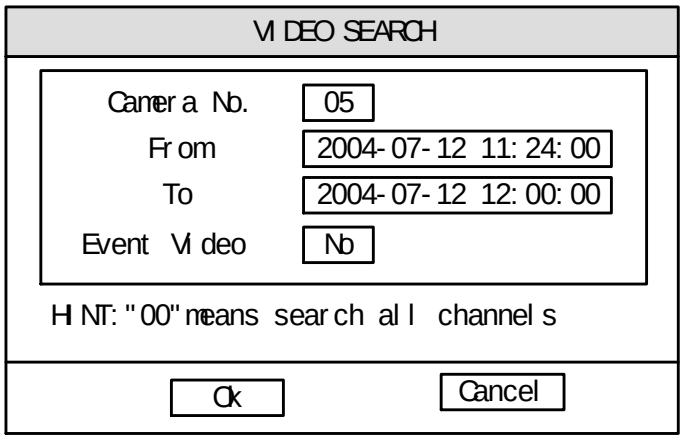


Figure 45 Vidio Search window

$ Note:

When event record search is selected, only event recording data is searched. Else all type of datas are searched.

Event recording include 3 types:

1. External alarm event
2. Motion detection event
3. Timing event

3. Press "OK" to start searching; Press"Cancel" to stop
4. Dialogue box will popup to show the search result.
5. Move curcor to select record data. Use "PgDn" or "PgUp" to view the recording data page by page.
6. Click "OK" to play back the records selected.
7. Please refer to section 16 for control during playback.

$ Note:

During playback, when current segment is over, system will continue playback by jumping to the next segment.

3.8 Record parameter setting

Users select "record parameter setting" through the menu display as following.

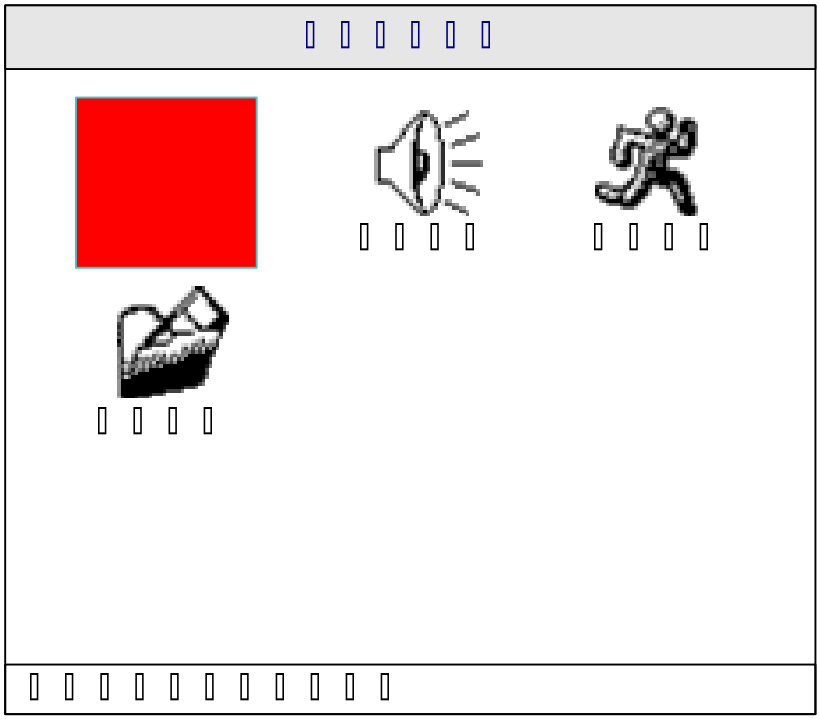


figure 46 Record parameter setting menu

& Timing recording

According to the preset time, system will automatically record. Parameters like record quality,record frame,record stream and record interval of time can be setted individually for each channel.

Operation step:

1. Select “Timing Record Setup”.
2. Press “OK”, enter timing record parameter configuration window. Press”Up” or “Down” to move the curcor and press “Left” or“ Right” to select the Parameters.

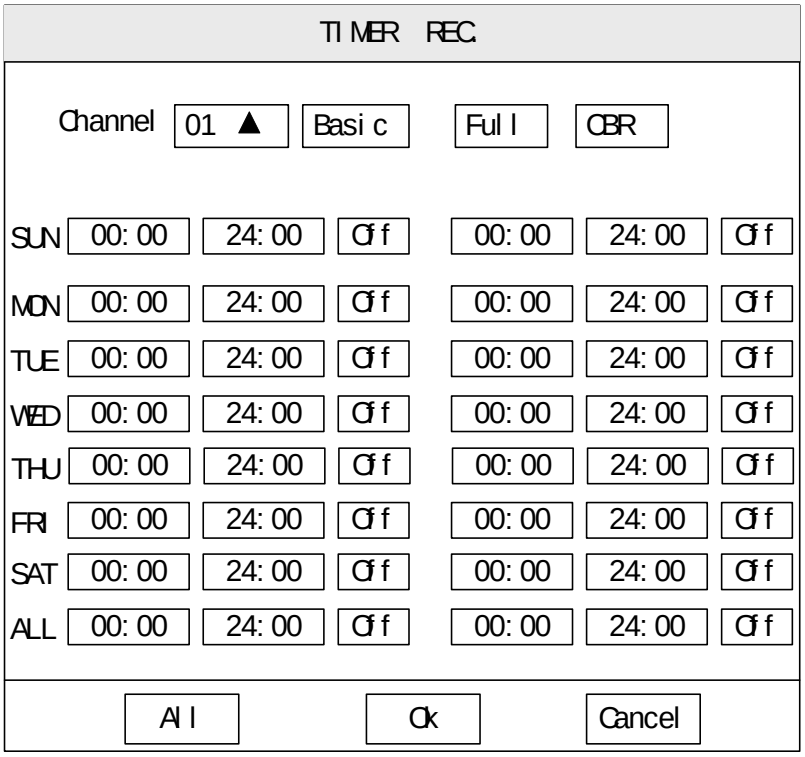


Figure 47 Timer Recorder parameters setup

3. Channel No.: from 1 to 16.
4. Record quality: Bad/normal/good/better/best; default value:normal;
5. Record frame:Full,1/2F,1/4F,1/8Fand 1/16F,default value:Full
6. Stream type:CBR or VBR. defaut value:CBR.
7. The date of record time is Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday or all. Two record intervals can be set for each day. “all” indicates record that is carried out each day according to the setted time.After setting every interval time, option bar must be set “on” to make the setting active. Default value: all timing recordings are turned off.
8. If all of the channels have the same timing recording parameters, after setup of one channel, press “all” below the memu, system will hint as following.

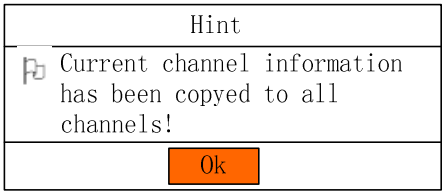


Figure 48 “all” hint

9. After set the timing record parameters according to your requirement, press "Ok".

10. Press "OK" to make current parameter settings effective; Press "Cancel" to give up the modification.

$ Note:

As to CHANNEL 4, channel selection is only available from No.1 to No. 4

As to CHANNEL 8, channel selection is available from No.1 to No. 8.

As to CHANNEL 16, channel selection is available from No.1 to No. 16

& Alarm Recording

According to alarm input signals generated by external sensors, system can start auto-recording and output related alarm signals. Users can setup following parameters: alarm input port、alarm output port、alarm time length、alarm recording time length、P/T/Z action、recording channel、recording quality、recording interval. Operation step:

1. Select Alarm-Rec Setup.
2. "Alarm-Rec Setup " dialogue box pop up. Press"Up" or "Down" to move the cursor for setting, press"Left" or "Right" to select terms and input parameters. The menu looks like following:

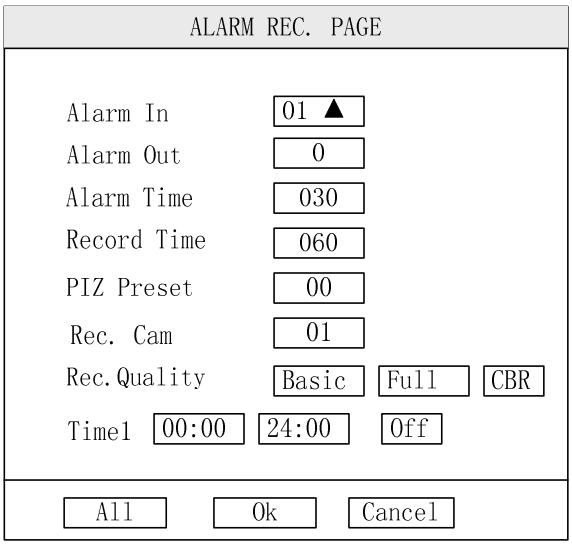


Figure 49 Alarm Recording parameter setup menu

3. Alarm input port: from 1 to 16. default value: 1.
4. Alarm output port: from 1 to 4. default value: 0.
5. Alarm time length: from 000 to 999. default value: 060.
6. Alarm recording time length: From 000 to 999. default value: 060.
7. P/T/Z action: 00. default value: 00.
8. Recording channel no.: from 1 to 16. default value: 1.
9. Recording quality: Bad/normal/good/better/best; default value:normal;
10. Recording frame rate:. Full,1/2F,1/4F,1/8Fand 1/16F. default value:Full
11. Stream type:CBR or VBR. defaut value:CBR.
12. Recording interval 1 and 2: two intervals can be set for each day, only during these intervals external alarm inputs are detected.
13. If all of the channels have the same alarm recording parameters, after setup of one channel, press “all” below the memu, system will hint “current channel parameter is applied to all channels”, press “ENTER” all channels will set these parameters automatically.
14. Press ”OK” to make current parameter settings effective; Press ”Cancel” to give up the modification.

$ Note:
$ For CHANNEL4 and CHANNEL8 alarm input is from 1 to 8, for CHANNEL16 alarm input is from 1 to 16.
$ For CHANNEL4 and CHANNEL8 alarm output is from 1 to 3, for CHANNEL16 alarm output is from 1 to 4.
$ No alarm output if alarm time length is "0";
$ If recording channel is set to 0, it means record all channels.
$ No P/T/Z function if P/T/Z set at "0"

& Motion detection recording

By detecting the motion in the video, recorder can start motion detection recording. Parameters like sensitivity of motion detection, motion detection zone, P/T/Z movement, alarm recording duration, record quality, alarm output port, alarm output duration can be configured individually.

Opeartion Step:

1. Select Motion-Rec. Setup.
2. Press "OK" to popup a dialogue box for parameter setting. Press"Up" or "Down" to move the cursor for setting, press"Left" or "Right" to select terms and input parameters. The menu looks like following:

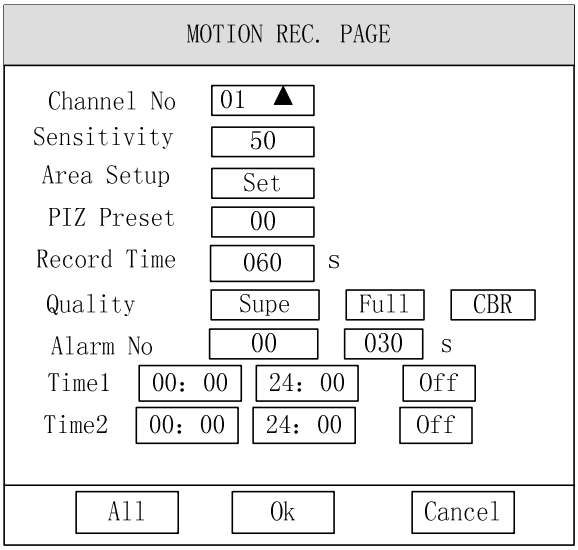


Figure 50 motion detection recording parameter setup menu

Sensitivity adjustment and motion detection zone setup are described below in detail:

3. Sensitivity: motion detection sensitivity is from 0 to 99, 0 is the highest sensitivity. Default value : 50.
4. Click "set"on certain channel, motion detection zone setup interface appears.

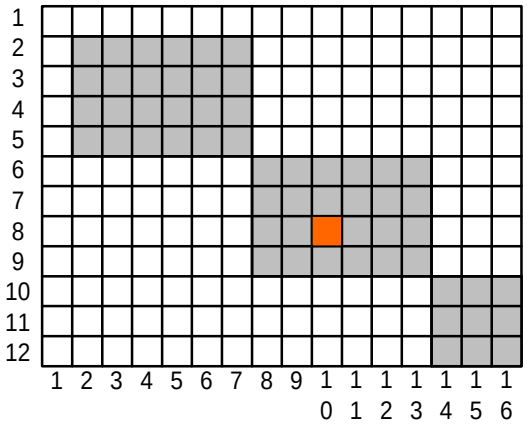


Figure 51 motion detection area setup

Motion detection setting is only available in the green area, in which green area represents the setted area. White area represents the not setted area.

Move the cursor using up/down/right/left keys. Press "OK" for area setup /clearance. Press "Cancel" to return to the dialogue box. Maximum 192 individual areas can be set.

5. Press "OK" to make all settings effective. Press "Cancel" to give up all the modification.

$	Note:
$	For CHANNEL4 and CHANNEL8 alarm input is from 1 to 8, for CHANNEL16 alarm input is from 1 to 16.
$	For CHANNEL4 and CHANNEL8 alarm output is from 1 to 3, for CHANNEL16 alarm output is from 1 to 4.

& Record segment length setup

1. Select Record segment length setup.
2. Press "OK", then pops out a dialogue box for record segment length setting.
3. Input the new length, effective values are between 5~240 seconds/ segment.
4. Press "OK" to activate new settings; Press "Cancel" to give up the modification.

& Audio recording setting

Audio recording companion to video recording can be selected for each channel.

> **$** Note:
> Audio data has to be included in the recording if remote on-site sound surveillance is needed. As.HD capacity is considered, we suggest not select audio recording when audio is not used,

Operation Step:

1. Click "Audio recording setting".
2. Move the cursor using "Up" and "Down"; Select item using "Left" or "Right".
3. Press "OK" to save the setting; Press "Cancel" to give up current modification.

3.9 PTZ setup

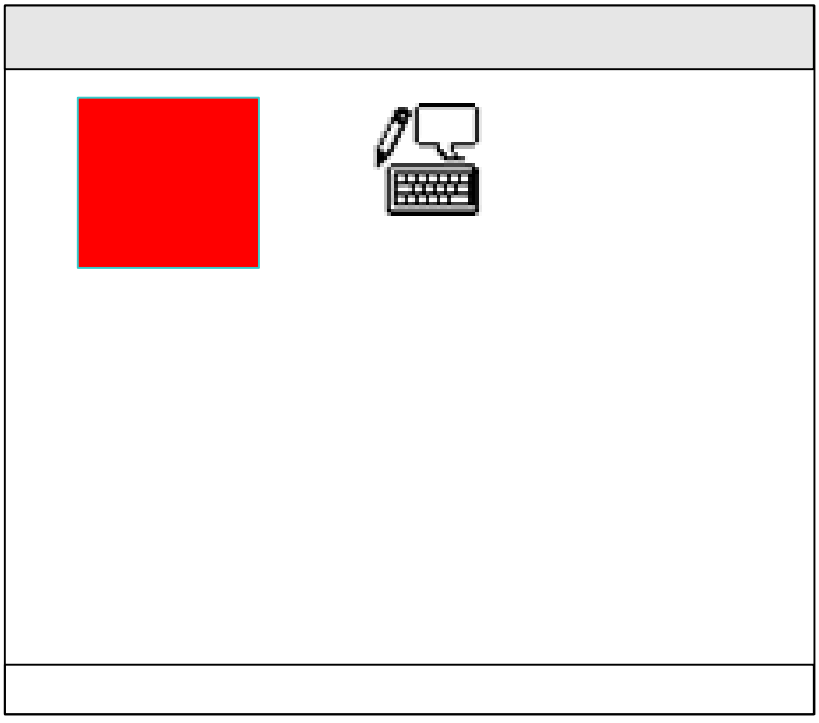


Figure 52 P/T/Z setup menu

& Pan/Tilt/Zoom control parameter setting

According to the P/T/Z type, user can setup P/T/Z parameters such as P/T/Z control protocol, P/T/Z communication rate and P/T/Z connetion.

Operation step:

1. Select P/T/Z Setup.
2. Press "OK" to enter P/T/Z parameter setup window.
3. Move the cursor using "Up" and "Down"; Select item using "Left" or "Right".
4. Press "OK" to activate new configurations; Press "Cancel" to give up modification.

> **$** Note
> Max 4 P/T/Z channels can be set in CHANNEL4.
> Max 8 P/T/Z channels can be set in CHANNEL8.
> Max 16 P/T/Z channels can be set in CHANNEL16.

& Pan/Tilt/Zoom Preset positions management

P/T/Z preset positions are used in alarm recording and motion detection recording, when needed P/T/Zs can be directed to the preset positions. Preset position management function includes query and deletion of preset positions.

Operation step:

1. Select P/T/Z preset.
2. Press "OK" to enter preset position management window
3. Move the cursor using "Up" and "Down"; Select item or input parameters using "Left" or "Right".
4. Channel no.: select the channel to be managed.
5. Preset position: select the preset position to be managed.
6. Call: place the P/T/Z of current channel to current preset position.
7. Original position: place the P/T/Z of current channel to its original position.
8. Delete: delete current preset position.

9. Status: show whether current preset position was set or not.
10. Return: return to its top layer menu.
11. Auto circular monitoring: under Pan control mode press “Play” to start auto circular monitoring, press again to stop.

> **$** Note
> P/T/Z preset position setup and original position setup will be described in section 16 “ P/T/Z control”.

3.10 Video channel setting

Parameters like connection, display position, shelter zone, P/T/Z protocal can be configured for each channel.

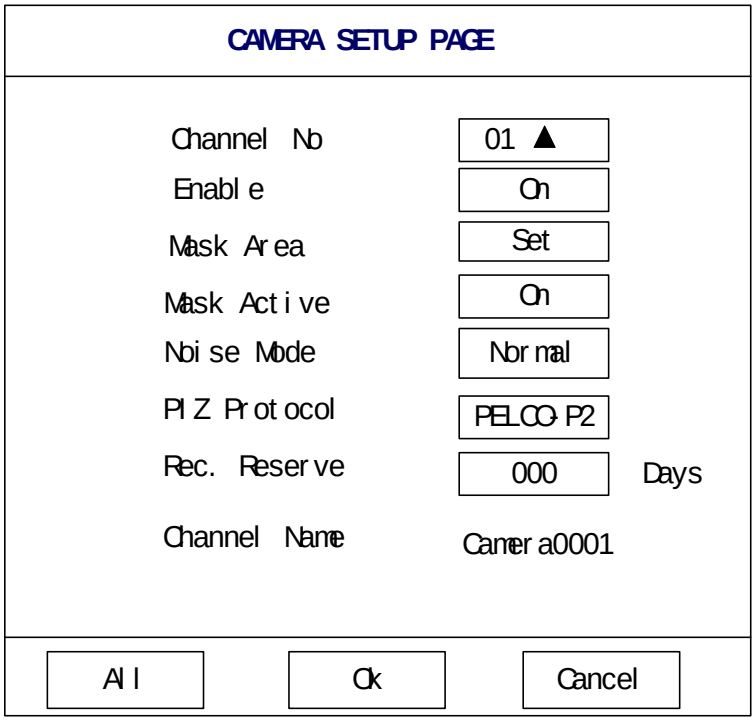


Figure 53 video channel connection setup menu

Operation step:

1. Select Video channel setting
2. Press “OK” to enter video channel setting window.

3. Move the cursor using “UP” and “DOWN”. Modify parameters using number keys or “RIGHT”/”LEFT”.
4. Channel no.: select the channel to be controlled.
5. Connection: whether to display current channel or not.
6. Shelter zone: setup the area to be masked of current channel.
7. Shelter active: whether to activate the mask area of current channel or not. Default value: no.
8. Low noise mode: function not realized now.
9. P/T/Z protocol: communication protocol between DVR and external P/T/Z. default value: PELCO-P1.
10. Recording reserved when overwrite: when the disk is full, records of current channel among days setted here won’t be deleted when overwrite.
11. Channel name: display current channel name
12. If all of the channels have the same video channel parameters, after setup of one channel, press “all” below the memu, system will hint “current channel parameter is applied to all channels”, press “ENTER” all channels will set these parameters automatically.
13. Press ”OK” to activate new configurations; Press ”Cancel” to give up modification.

Shelter zone setup operation step:

When enter video area setup mode, following picture appears:

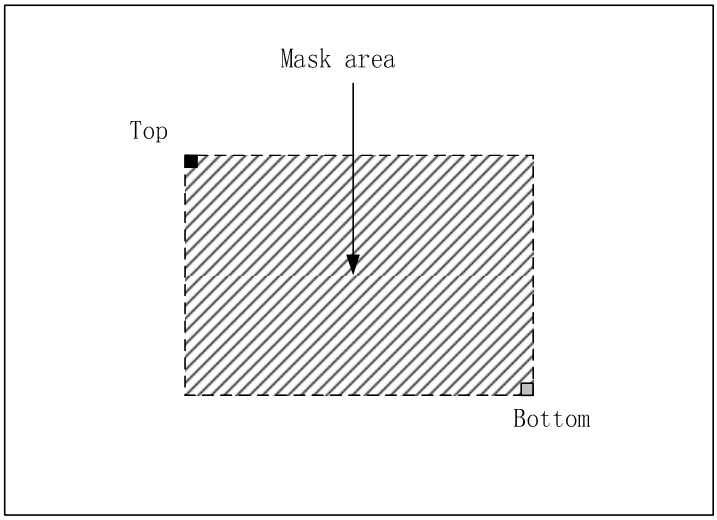


Figure 54 mask area setup

a) Use direction key to move whole area or adjust area size.If user controls the start position then move the area; If user controls the end position then adjust the area size.

b) Press number key "1" and "2" to show its outline or fill the whole area.

c) Press "OK" to change start position or end position; Press "Cancel" to quit area setup mode.

& Note

When applying "all", the shelter zone setup doesn't apply to all channels, it needs to be set individually for each channel.

3.11 Communication setup

Communication setup includes two parts: Network parameter setup and serial port setup.

& Network parameter setup

Operation step:

1. Select Network parameter on the main menu.
2. Press "OK" to enter network parameter setup window.

3. Move the cursor using “UP” and “DOWN”. Modify parameters using number keys or “RIGHT”/”LEFT”.

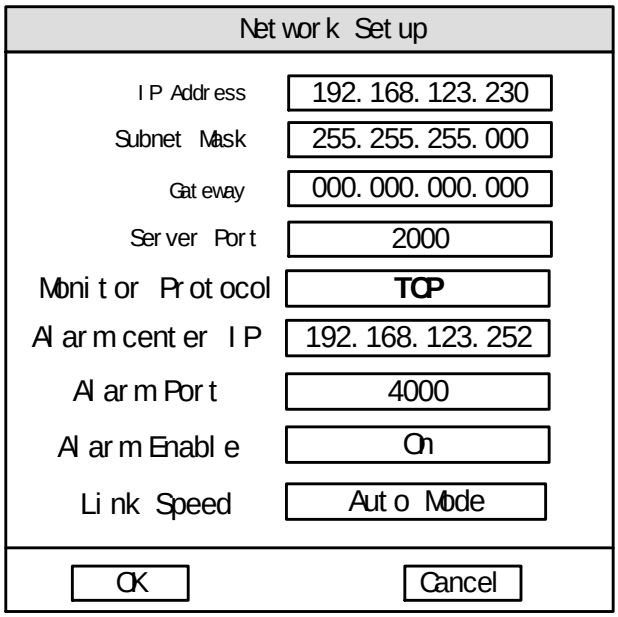


Figure 55 Network Parameter setup

4. Press ”OK” to save, press “Cancel” to give up modifications.

& Serial port setup

Baud rate setup: default value 2400bps

Data width: 8bits

Stop bit: 1bit

Checksum: none

& Note:

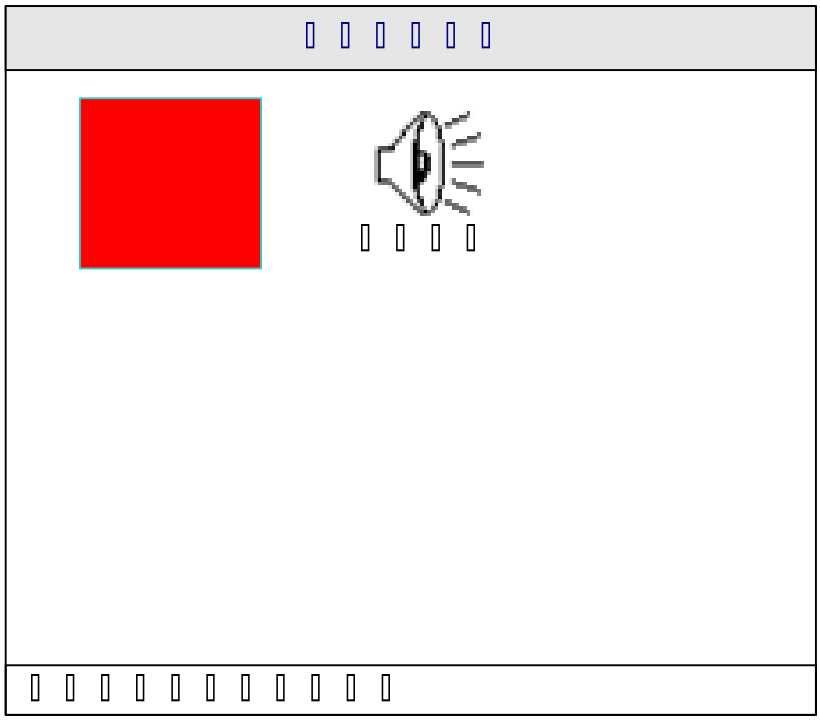
Never set the recorder and gateway IP address as 255 255 255 255;

Never set service port number as “0”

Re-start the recorder to make modification valid.

3.12 System running log

When enter SYSTEM LOG Menu, following picture appears:



picture 56 system log menu

& System log

Main system events are recorded in system log. Records are kept in time sequence. When the occupation has 100 system logs, the most earliest event will be overwrited.

Operation step:

1. Select System log
2. Press “Enter” to view current system log information.
3. Click ”PgDn” / “PgUp” to view next/ previous page.
4. Press ”Return” to end the search.

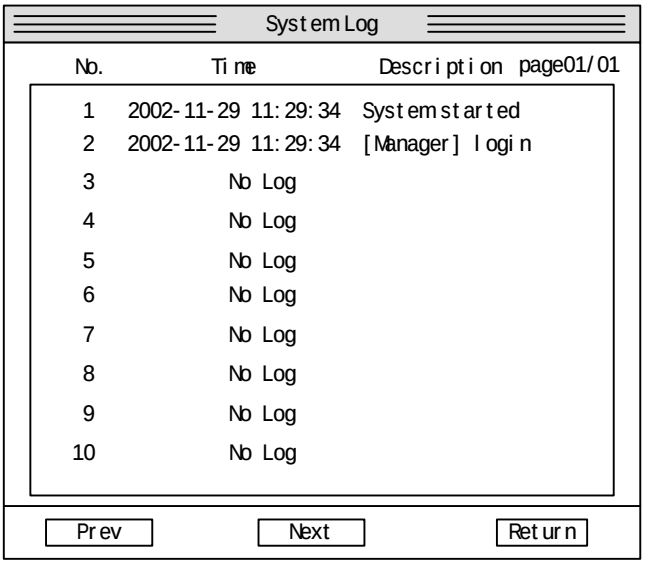


Figure 57 system log display

& Alarm log

Alarm events are recorded in alarm log. Records are kept in time sequence. When the occupation has 100 alarm logs ,the most earliest event will be overwrited.

Operation Step:

1. Select Alarm log.
2. Press "Enter" to view current alarm log information.

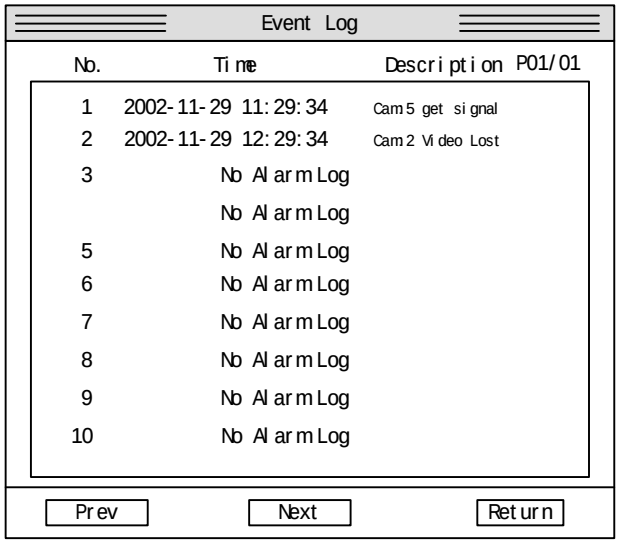


Figure 58 event log display

3. Click ”PgDn” / “PgUp” to view next/ previous page.

4. Press ”Return” to end the search.

3.13 User management

When enter USER INFO Menu, following picture appears:

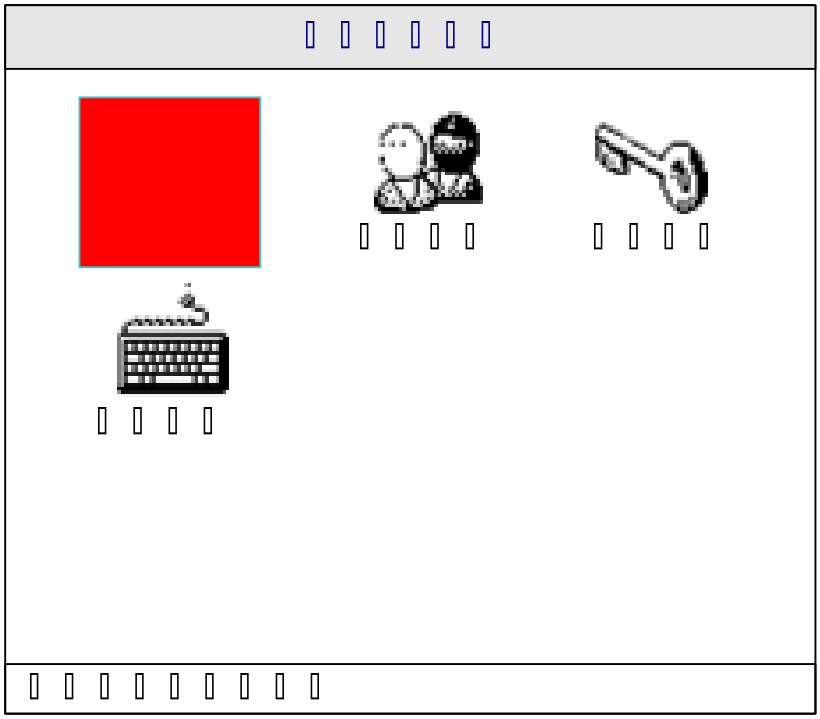


Figure 59 user info menu

& Security level

Live video or playback of some camera can be forbidden for non-administrater users. If set one channel “not allowed”, then operator and browser won’t be allowed to monitor or playback of the channel.

Operation step:

1. Select “Security level”.
2. Press “Enter” to enter security level management window.
3. Set the corresponding security level.

4. Press “Return” to end the setup.

& On-line user inquiry

Remote connected user can be inquiried and forced disconnected.

Operation Step:

1. Select “On line user”.
2. Press “OK” to enter on-line user information window.
3. Move selection bar using ”Up” and “Down” keys. Press ”OK” to disconnect the selected user.

Confirmation dialogue box will pop up as following.

4. Press ”OK” to disconnect, press ”Cancel” to give up.

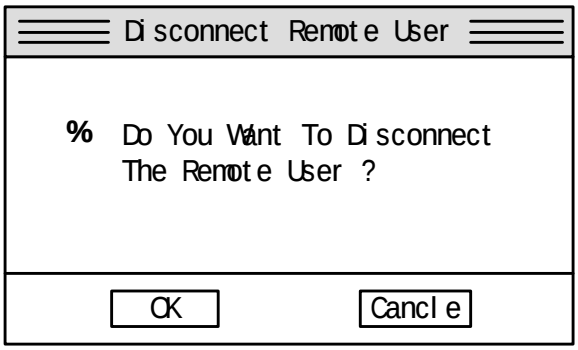


Figure 60 disconnect remote user

5. Select ”Return” to end current inquiry.

& Password modification

Password levels that can be modified are determined by the current user security level. The recorder has three password levels as administrator, operator, and browser. Administrator can modify all passwords, operator can modify passwords of opertator and browser, browser can only modify password of browser.

Operation step:

1. Select “Password modification”.
2. Press “OK” to enter password modification window.

3. Input password with number keys. Press ”OK” to activate new passwords, press ”Cancel” to give up the modification.

& Key lock

Key lock function is provided to prevent illegal user from entering system.

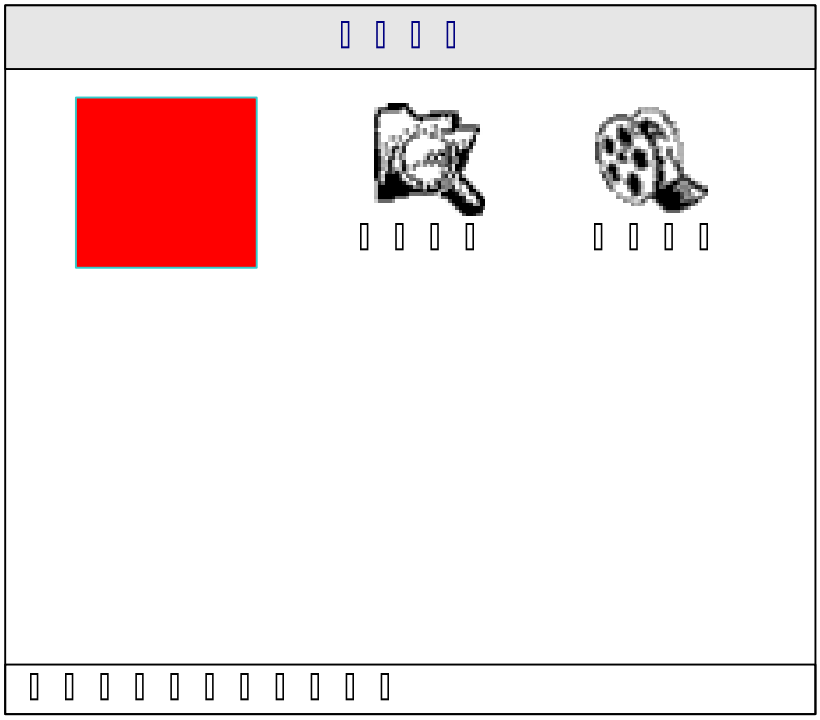
Operation step:

1. Select Key lock.
2. Press “OK” to enter confirmation dialogue box.
3. Press “OK” to lock the keys, press ”Cancel” to give up.

> **$** Note:
> The key lock function will be performed automatically after long-time absence. Please refer to chapter ”auto-key lock”. Manual key lock is also available.

3.14 Parameter data management

When enter DATA MANAGE Menu, following picture appears:



Fiagure 61 DATE MANAGE Menu

& Save current parameter

Only after this operation will current system parameters be saved into system internal flash. Otherwise, the recorder will lose the modified parameters when it powers down.

Operation step:

1. Select “Save current parameter”.
2. Press “OK” and system will notify when successful.

& Restore factory settings

Factory default settings can be restored when needed.

Operation Step:

1. Select “Restore factory settings”.
2. Press “OK” to confirm.

& Vidio Data Backup

Video data stored in harddisk can be backuped to external USB devices through USB interface

Operation step:

1.Select "Video data backup".

2.Press "Enter", backup search condition window will popup.

3.Input the backup conditions, press "OK" to confirm.

4 When the search results popup, press "backup" to start copy.

3.15 Monitoring control

& Window splitting

Single video window or split-window can be displayed.

1. Split-window -> single window

According to the split mode, press the corresponding number key to display the single video window. Please refer to Chaper "Basic Display" for key definitions.

2. Single window - > Split-window

Press split key to enter split-window mode.

& Video auto-switching

Single video can be auto displayed channel by channel. Please refer to "System parameter setup" for auto-switching interval setup.

Operation step:

1. Press" " under non auto-switching mode, system will enter auto-switching mode with an icon" " displayed on the left bottom corner of the screen.

2. Press " " to stop auto-switching when already in auto-switching mode.

& Image freezing

"Image freezing" is used to freeze current video for detail analysis when in live monitoring mode. Other functions such as recording are not affected by freezing.

Opeartion Step:

1. Freeze current video channel by pressing "F", with an icon "F" shown on the left bottom corner of the channel.
2. When in freeze mode press "F" again to return to normal mode, icon "F" disappeared.

> **$** Note:
> The recorder will automatically return to the normal running mode if you use the function of Image auto-switching

& Change focused channel

Current focused channel has a selection bar on the channel, next operations such as start recording, P/T/Z operation, picture freeze, video adjust etc are only effective to this channel. Focused channel can be changed through direction keys.

Operation step:

a) Press "Up" or "Down" to move the selection bar.

b) Channel with the selection bar on the bottom is the current channel.

& Audio monitor

On-site sound can be monitored through the recorder. Only one channel can be monitored at one time. Sound of the focused channel is outputted.

1. Press "🔇"on the Remote controller or "ESC" on the pannel to enter mute mode and disable system sound output.

2. Press "🔇"on the Remote controller or "ESC" on the pannel again to enable system sound output.

3.16 Control of Pan/Tilt/Zoom

& Pan/Tilt/Zoom control

P/T/Z can be moved up/down or left/right under control. P/T/Z preset positions and initial position can be setup.

Operation guide:

1. On channel configured with P/T/Z connected, press"P/T/Z"(on remote controller) or "Enter" (on panel).
2. System enters P/T/Z control mode, with an icon "  " displayed on left bottom corner of the channel.
3. Press"up" and "down" to adjust P/T/Z vertical angle.
4. Press"left" and "right" to adjust P/T/Z horizontal angle.
5. Press "recording" on panel or "Save" on remote controller to save current P/T/Z position as preset position.
6. Press "F" on panel or "setup" on remote controller to save current P/T/Z position as initial position.
7. Press "stop" on panel or "Return" on remote controller to turn P/T/Z back to initial position.
8. Re-press "P/T/Z" or "Enter" to enter lens control mode. Please refer to the next section for details.

& Lens control

Lens control includes zoom in/ zoom out, foculizing/dilating, preset positions setup, initial position setup.

Operation step:

1. Press "P/T/Z"(using remote controller) or "Enter"(using front panel) under P/T/Z control mode.

2. System enters lens control mode with an icon " " displayed on left bottom corner of the channel.
3. Press"up" and "down" to zoom lens near or far.
4. Press"left" and "right" to move lens focus near or far.
5. System enters iris control mode when press "Enter" under lens control mode, with an icon "☼" displayed on left bottom corner of the channel.
6. Press"up" and "down" to set the iris value.
7. Press "recording" on panel or "Save" on remote controller to save current P/T/Z position as preset position.
8. Press "F" on panel or "setup" on remote controller to save current P/T/Z position as initial position.
9. Press "stop" on panel or "Return" on remote controller to turn P/T/Z back to initial position.
10. Re-press "P/T/Z" on remote controller or "Enter" on front panel to quit iris control mode and enter normal mode.

3.18 Recording control

& Manual recording

Manual recording is different from auto-recording, in that, manual recording will not stop unless the user stops it.

Operation step:

1. Press "recording" at current channel.
2. Start to recording with an icon ⏺ displaying on left bottom corner of the screen. Please refer to "System setup" to set image quality.

$ Note:

Manual recording will not be initiated if the current channel is under recording;

Manual recording will be uneffective if the hard risk is fully occupied. .

& Stop recording

To stop the recording manually, no matter whatever recording modes are (manual/timing/alarm/motion detection mode).

Operation step:

1. Press"stop ■"on the recording channel.
2. The recorder will stop recording.

   System will return the P/T/Z position back to the initial position automatically if P/T/Z is auto-adjusted during recording.

$ Note:

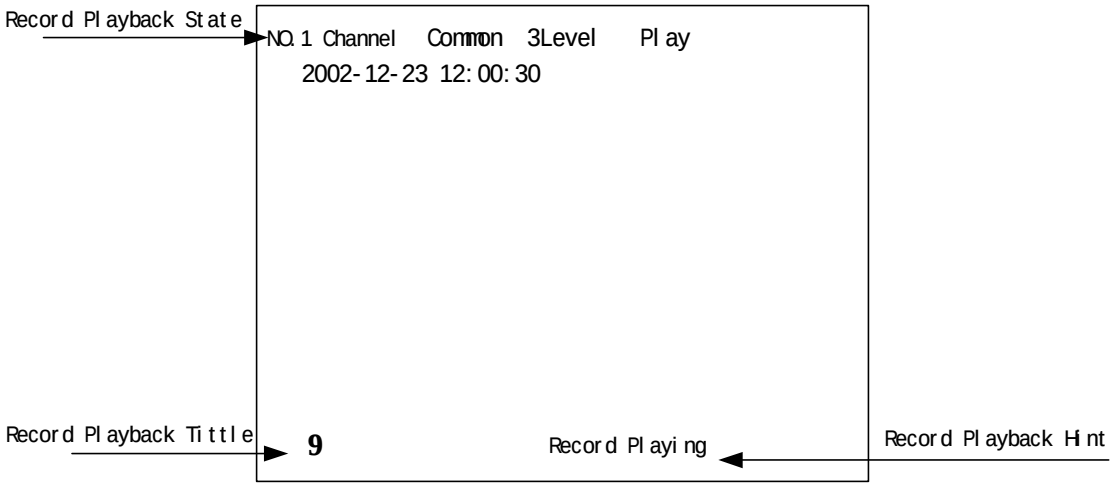
If it's under the event trigger recording, this function can only stop recording. It will not affect alarm output. Please refer to section"alarm cancel" for simultaneous alarm stopping.

3.19 Playback control

& Playback

The recorder has 2 playback modes: records searching playback and current channel immediate playback.

- Records searching playback: please refer to section "records searching"
- Current channel immediate playback: press"playback" on current channel and system will automatically playback all its recording.
- The playback information is as following:



$ Note:

Records playback of all channels will be performed on channel No.1, during which it will switch from monitoring mode to the playing back.

& Slow playback

Press "playback" under record playback mode to enter slow playback mode with 1/2 normal speed. System will return to normal speed when press "playback" again under 1/8 normal speed mode.

& Stop playback

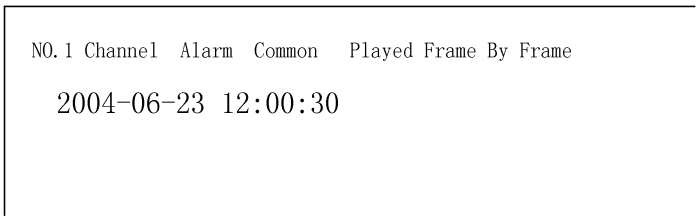
Press "stop ■" to end playback mode. Channel No.1 will be switched from playback mode to monitor mode.

O Note:

1. Record stopping is avaliable under following modes; frame playing/ forward/backward/playing. Press"stop" to end current playing;
2. If it's under recording and playing modes simultaneously, the function of stop playing back takes priority.

& Frame playing

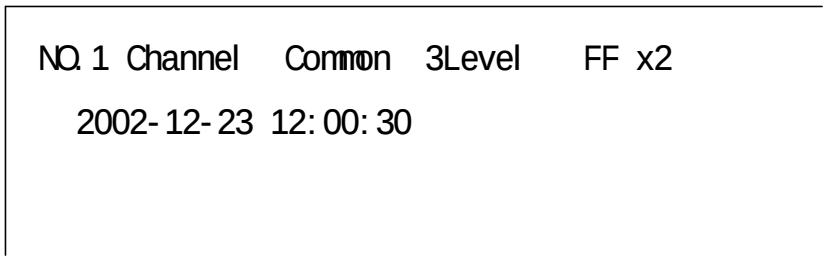
Press "pause" under recording mode to enter frame playing mode, shown as following.



Under this mode, press "playback" or "Direction ▶" to play by frames. Press "pause" to return back to normal playing.

& Forward

Press "forward" or "Direction ▶" under recording mode to enter forward mode.

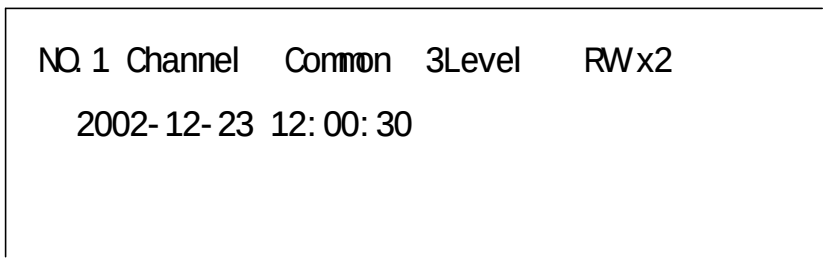


Forward playback rates are X2, X4, X8 available, which is switched using "Forward" key.

Press "playback" to return to normal speed.

& Backward

Press "backwoard" or "Direction ◀" under recording mode to enter backward mode.



Backward playback rates are X2, X4, X8 available, which is switched using **"backward"** key.

Press **"playback"** to return to normal speed.

& Previous

Press **"prev"** to play previous record segment, which will speed up the playback of different segments.

> **O** Note:
> Playing records are decided by searching term. Shifting among different recording only refers to those measuring up the term.

& Next

Press **"next"** to play next record segment, which will speed up the playback of different segments.

3.20 Alarm cancel

Alarm cancel allows user to confirm system alarm output, press **"☒"** to stop all alarm outputs including the internal buzzer.

> **$** Note:
> Alarm cancel is only used to stop current alarm output. Re-triggered alarm output and other functions, such as recording, will not be affected,.

& Remote controller address selection

The remote controller is capable of controlling more than one recorder. Each recorder has its own system id number. Remoter controller address selection command defines the recorder to be controlled. Set address at "0" allows the remote controller to control all the recorders.

Operation step:

i. Press “select” on the remote controller.

ii. All idle recorders(no menu and P/T/Z operations etc) under control of remote controller pops up the address selection window.

iii. Input recorder address to be controlled.

iv. Press “OK” to activate the selection.

Chapter 4. Specifications

Items	Parameters Index
Video Input	4-16ch PAL/NTSC，BNC (1.0Vpp 75 Ohm)
Video Output	1 ch PAL/NTSC，BNC (1.0Vpp 75 Ohm) 1ch VGA output (800*600 / 1024*768)
Audio Input	4-16ch 8db 22K RCA
Audio Output	1ch 8db 22K RCA
Sensor Input	8~16ch N.O
Alarm Output	CHANNEL 16 4ch N.O or N.C ,CHANNEL 4 and CHANNEL 8 3ch N.O or N.C
Monitoring Mode	single window，picture in picture，4/6/9/13/16 window splitting
Compression Mode	MPEG-4 A/V
Recording Speed	(4-16) x 25 f/s PAL (x30 f/s NTSC)，real time
Display Speed	(4-16) x 25 f/s PAL (x30 f/s NTSC)，real time
Compression Quality	5 levels adjustable
Recording Mode	Manual/Timing/Alarm/Motion Dection
Searching Mode	According to time/date/channel/event
Motion Dection	Max. 192 detection areas per channel
PTZ Control	Up/Down/Left/Right/Focus/Zoom/bright In&Out per channel
Network	10/100M Ethenet, TCP/IP
Security	3 levels password
Users Interface	GUI
Operation System	Real-time Operation System
HDD Store	Up To 8 Internal HDD，Standard file system
Remote Control	Remote control software installed on PC
Power	AC 110V 60Hz / AC 220V 50Hz

Appendix1: record parameter

Single channel record parameter (no audio)

Record	Video	HDD capacity	Record time

quality			
Basic	25 FPS	80G	621hours
Common	25 fps	80G	414 hours
Good	25 fps	80G	311 hours
Better	25 fps	80G	248 hours
Best	25 fps	80G	207 hours

Single channel record parameter (audio)

Record quality	Video	Audio	HDD capacity	record time
Basic	25fps	Sync single audio 8K	80G	561 hours
Common	25fps	Sync single audio 8K	80G	387 hours
Good	25fps	Sync single audio 8K	80G	295 hours
Better	25fps	Sync single audio 8K	80G	238 hours
Best	25fps	Sync single audio 8K	80G	200 hours

Note： The parameter listed is the reference data of single channel; parameters for 8 channels and different HD capacities can be calculated accordingly.

Appendix2: Operation attention lists

- Audio input must use active audio sensor. Keep audio sensor away from audio power amplifier.
- When the DVR is in the menu operation mode, remote user cann't modify the parameters through network.
- Set motion detection sensitivity at 10-25 to effectively detect moving objects.
- About save of parameters
  There are many "acceptance" icon in menu, which can save parameters temporaryly, but when system power down these parameters are not saved. "Save configuration" in "Data management" menu will save all parameters permanently into system flash. Following parameters won't be active unless system reboots after save: auto-recording when power on、network parameter setup、VGA resolution.
- It is forbidden to format hard disk when DVR is recording.

- If the buzzer beeps when DVR startup, maybe no harddisk is connected or some video input channel is not connectd, please examine these situations.
- If no hard disk is connected successfully, no operation related to data storage into hard disk is allowed. (Hard disks should be installed by ICRealtime certified technicians)
- If unformatted hard disk is connected, user should enter into main menu to format this disk. (Hard disks should be installed by ICRelatime certified technicians)
- When the hard disk is full, and "recording auto overwrite" function is not active. Message "Hard disk full, recording with overwrite?". Press "OK" to start overwrite, press "Cancel" to stop recording.