

HCS-8130M Series Professional Audio & Video Recorders

Professional Audio & Video Recorders for Conference



Installation and Operating Manual
V 1.4

Remark:

- All rights reserved for translation, reprint or reproduction
- Contents may change without prior announcement
- All technical specifications are guideline data and not guaranteed features
- Taiden Co., Ltd. is not responsible for any damage caused by improper use of this manual
- The equipment must be connected to earth!
- This product conforms to the rules of the European directive 2004/108/EC.
- To protect your hearing, avoid high pressure level on earphones. Adjust to a lower and convenient level.
- If any detailed information is needed, please contact your local agent or TAIDEN service center in your region. Any feedback, advice and suggestion about the products is appreciated
- TAIDEN is the registered trademark of TAIDEN Co., Ltd.

Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.
6. The MAINS plug serving as a disconnection device, should be easy to operate.
7. The apparatus should be connected to the MAINS socket-outlet with protective earth.
8. Clean only with dry cloth.
9. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
10. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
11. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade and the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
12. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
13. Only use attachments/accessories specified by the manufacturer.
14. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
15. Unplug this apparatus during lightning storms or when unused for long periods of time.
16. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
17. Do not place the equipment on any uneven or unstable stand; original product package or appropriate package should be used to avoid damage caused by strong impacts during transportation.
18. Power supply cords:
AC 100 V-120 V 60 Hz or AC 220 V-240 V 50 Hz
19. For service, please contact the nearest TAIDEN Service Center.
20. All TAIDEN products are guaranteed for definite time (see the WARRANTY CARD for details) excluding the following cases:
 - A. All damage or malfunction caused by human negligence;
 - B. Damage or malfunction caused by improper operating by operator;
 - C. Parts damage or loss caused by disassembling the product by non-authorized personnel.
21. Use ONLY specified connection cable to connect the system equipment.
22. Upon receipt of the product, please fill out the Warranty Card enclosed and post it to TAIDEN Service Center.



TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

CAUTION: To reduce the risk of electric shock, DO NOT open covers, no user serviceable parts inside. Refer servicing to qualified service personnel only.

CAUTION: DO NOT use alcohol, ammonia or petroleum solvents or abrasive cleaners to clean the devices.



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



The exclamation mark 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.

Important Safety Instruction

WARNING: To reduce the risk of fire or electric shock, DO NOT expose units to rain or moisture.



Attention: Installation should be performed by qualified service personnel only in accordance with the National Electrical or applicable local codes.



Power Disconnect: Units with or without ON – OFF switch have power supplied to the unit whenever the power cord is inserted into the power source; however, the unit is operational only when the ON – OFF switch is in the ON position. The power cord is the main power disconnect for all units

WARNING: The apparatus should be connected to a mains socket outlet with a protective earthing connection.

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Installation & User Guide

About this manual

This manual is a comprehensive guide to the installation and operation of the TAIDEN HCS-8130M Series Professional Audio & Video Recorders for Conference. It includes the detailed description of the functions and interfaces of the HCS-8130M Series Professional Audio & Video Recorders for Conference, system connection and installation, system set-up and operation.

The manual is divided into the following chapters:

Chapter 1: Professional Audio & Video Recorders for Conference

Detailed descriptions of the functions and indications, installation and connection, configuration and operation of the HCS-8130M Series Professional Audio & Video Recorders for Conference.

Chapter 2: Recorder Control

Detailed descriptions of the recorder control via monitor and mouse.

Chapter 3: TAIDEN Digital Audio & Video Recording System Software

Detailed descriptions of the installation, running and operation of the TAIDEN Digital Audio & Video Recording System Software.

Chapter 4: Specifications

Main technical parameters of HCS-8130M Series Professional Audio & Video Recorders for Conference.

This manual is applicable to:

HCS-8131M

Professional Audio & Video Recorder for Conference (4 CHs composite video input with D1 resolution, 1 CH VGA input, 4 CHs audio input)

HCS-8132M

Professional Audio & Video Recorder for Conference (8 CHs composite video input with D1 resolution, 1 CH VGA input, 8 CHs audio input)

HCS-8133M

Professional Audio & Video Recorder for Conference (1 CH SDI input with 1080p resolution, 1 CH VGA input, 4 CHs audio input)

HCS-8134M

Professional Audio & Video Recorder for Conference (2 CHs SDI input with 1080p resolution, 1 CH VGA input, 8 CHs audio input)

Chapter 1: Professional Audio & Video Recorders for Conference

TAIDEN HCS-8130M Series Professional Audio & Video Recorders for Conference are professional video/audio recorders for conference system. Using embedded processor and embedded operation system, integrated several techniques in IT domain, including video/audio compressing and decompressing, mass disk storage, TCP/IP control etc., realized powerful functions of video/audio compressing, video/audio recording and playback, and network transferring.

Features:

- Cooperating with TAIDEN conference system, synchronously records conference video & audio information
- Automatically records speaking delegate(s) and the panorama of the venue - saves data as digital files
- Index and sort facility of video & audio recorded file (by conference name, speaker, begin time, end time, etc.)
- Recorded file playback, fast play, backward, pause/stop, etc.
- Audio/video files saved on harddisk for download
- During AV recording, all channels can be monitored with earphones
- Network monitoring facility
- Variety of control methods and MMI to facilitate administrator's and users' tasks
- Visual, interactive, cooperative play function
- Supports central control system for the management and operation of the equipment
- Recording file adopts a common standard format
- Single system scalable to support multiple concurrent meetings simultaneously recording live
- With DSP processing chips, embedded operating system, stable and reliable due to immunity to network virus attacks

Product types:

HCS-8131M

Professional Audio & Video Recorder for Conference (4 CHs composite video input with D1 resolution, 1 CH VGA input, 4 CHs audio input)

HCS-8132M

Professional Audio & Video Recorder for Conference (8 CHs composite video input with D1 resolution, 1 CH VGA input, 8 CHs audio input)

HCS-8133M

Professional Audio & Video Recorder for Conference (1 CH SDI input with 1080p resolution, 1 CH VGA input, 4 CHs audio input)

HCS-8134M

Professional Audio & Video Recorder for Conference (2 CHs SDI input with 1080p resolution, 1 CH VGA input, 8 CHs audio input)

1.1 Functions and indications

1.1.1 Front panel

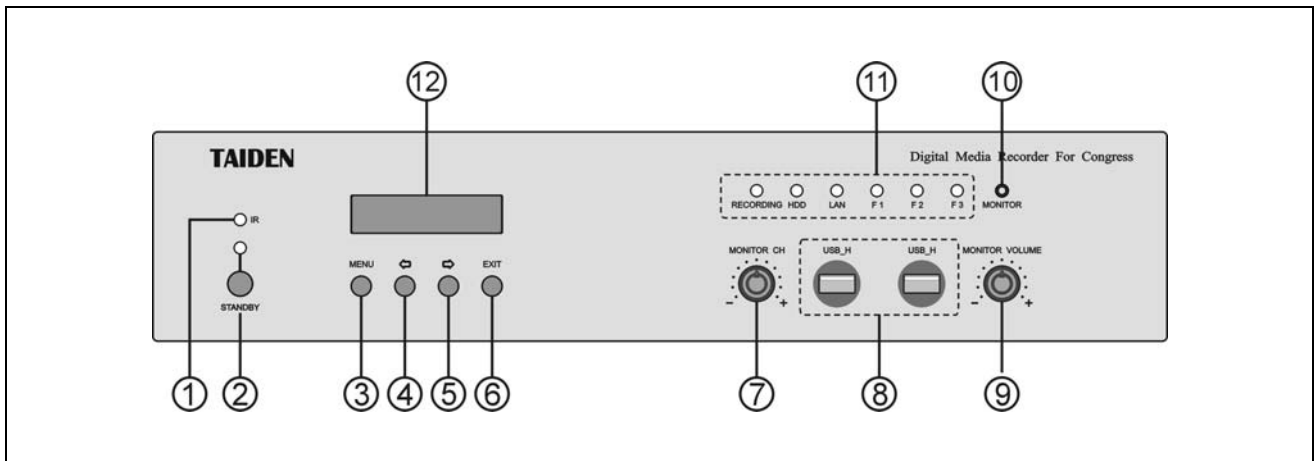


Figure 1.1 Front panel of HCS-8130M Series Professional Audio & Video Recorders for Conference

Figure 1.1:

1. Reserved

2. “STANDBY” button and indicator

- a. Switches to red in standby mode;
- b. Switches to blue when operating.

3. “MENU” button

4. “←” (Left) button

- Press this button to cursor to the left or to decrease the parameter.

5. “⇒” (Right) button

- Press this button to cursor to the right or to increase the parameter.

6. “EXIT” button

7. Monitoring channel select knob

- After monitor and mouse are connected, and the recorder is controlled by the OSD software, the monitoring channel cannot be adjusted via this knob.

8. A type USB interface

- To plug-in a USB stick or mouse.

9. Monitoring volume adjust knob

- Knob to adjust the volume of the monitoring channel.

10. Monitoring earphone interface

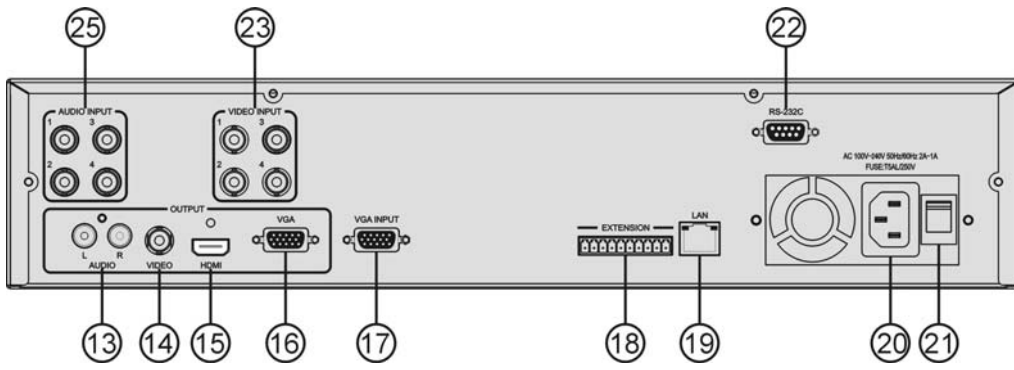
- Earphone jack (Ø 3.5 mm).

11. Indicating light (red)

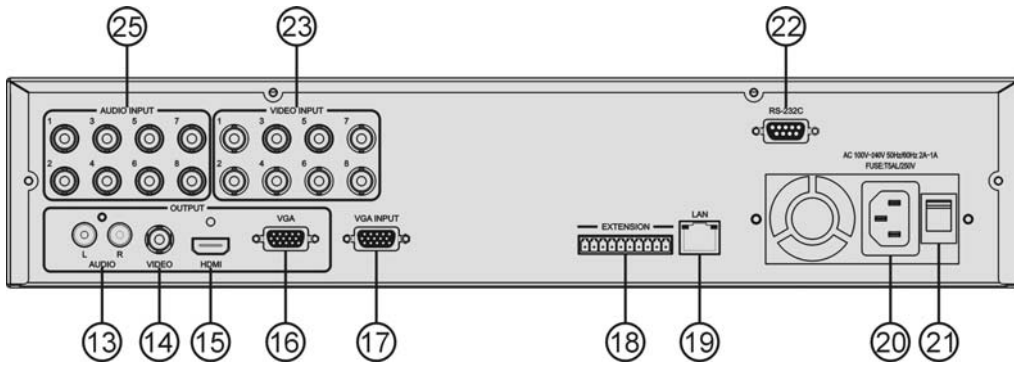
- “RECORDING”: indicator flashes when recording;
- “HDD” indicator light will be keep on, when disk lost, error or full of use;
- “LAN”: indicator will be turned on if data are received or transmitted at Ethernet port;
- “F1”: indicator light will be turn on when the number of video data reach 10 months;
- “F2”, “F3”: reserved.

12. Menu display

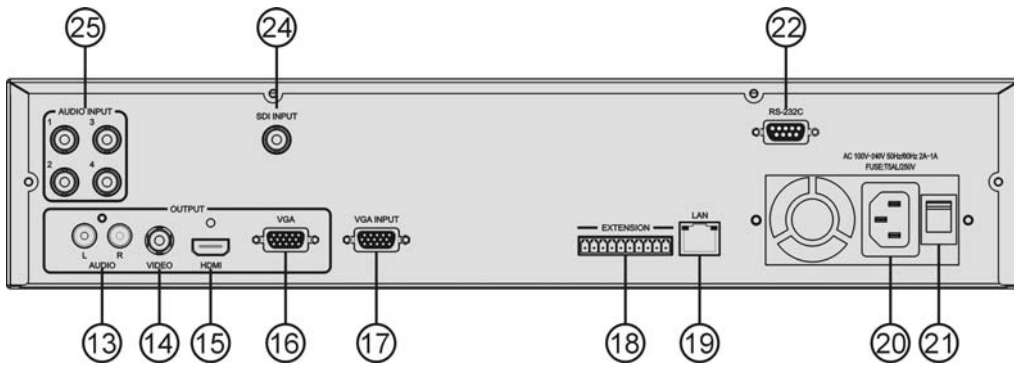
1.1.2 Backside



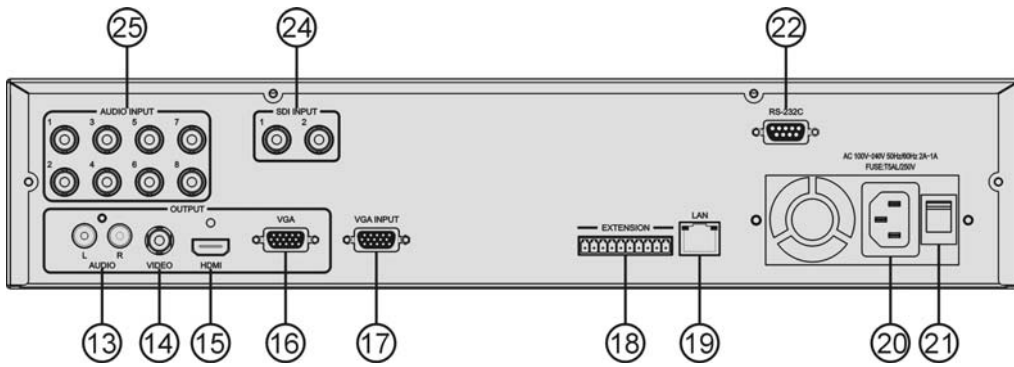
Rear panel of HCS-8131M



Rear panel of HCS-8132M



Rear panel of HCS-8133M



Rear panel of HCS-8134M

Figure 1.2 Rear panel of HCS-8130M Series Professional Audio & Video Recorders for Conference

Figure 1.2:

13. Audio output

14. Reserved

15. HDMI output

16. VGA output

17. VGA input

18. Extension interface - reserved

19. Ethernet interface (LAN)

20. Power supply

21. Mains switch

22. RS-232C port

- “COM” port is used for connecting to a central control system for central controlling, as well as for system diagnosis, updating and monitoring.

23. Video input

24. SDI input

25. Audio input

- Used as mono or stereo audio inputs.

1.2 Installation

1.2.1 HDD Installation

Caution:

- When working with electrostatic sensitive devices such as a hard disk or the recorder, make sure you use a static-free workstation. Any electrostatic energy coming in contact with the hard disk or recorder main board can damage it permanently.

HCS-8130M Series Recorder can installation of at most four HDDs, one of them as main-HDD which includes a conference data area and a recording storage area and others as hypo-HDDs which only have a recording storage area. HCS-8130M Series Recorder is with a 1000G HDD (default as main-HDD) when leaving factory. Based on the record schedule, you can calculate the total capacity you need (refer to Appendix A) and add other HDD. Please ask the specialist to disassembly the recorder and install HDD.

Installing the harddisks must be performed by qualified personnel. Unauthorized installation of harddisks may result in permanent damage of the disk and the recorder, and is performed at your own risk.

Procedure:

1. Before installation of the HDD, switch the recorder off and unplug the power cable;
2. Place the recorder on a flat table, and make sure you take proper ESD precautions. Wear an ESD bracelet at all times. A Philips screwdriver is required to disassemble and reassemble the unit;
3. Remove the metal top cover by removing screws;
4. Fix and fasten four attached posts to the bottom cover;

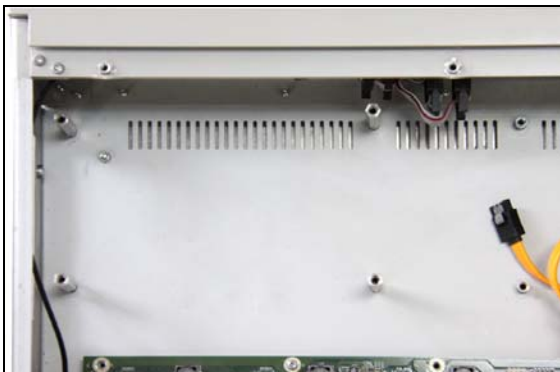


Figure 1.3 Installation of the posts

5. Place the metal harddisk bracket on top of the harddisks, and fasten each harddisk with 4 screws to the bracket;



Figure 1.4 Installation of the bracket onto the harddisk

6. Set the bracket to the fixed posts and fix the bracket with 4 screws or 4 posts (if more HDD is needed);
7. Connect the power and data cables to the HDD and main board;



Figure 1.5 Cable connection

8. Repeat above steps, up to 4 HDD can be installed (two at the left and the other two at the right);
9. Check all connections, and reinstall the metal cover on the recorder.

Note:

- ☞ please select suitable hard disk for mass storage;
- ☞ When a recorder only installation of one HDD, which will be the main-HDD and can connect to any HDD data cable interface.
- ☞ When a recorder installation of more HDDs, the main-HDD must connect to the Interface J31 which is the nearest one of the battery.
- ☞ When the HDD is added from one to more, the quondam HDD must connect to the Interface J31 as the main-HDD.
- ☞ Please format hard disk after installation, see section 2.5 for details.
- ☞ Do not change the connection of the HDDs after working.

1.2.2 Fixed in cabinet

The recorder can be fixed in a standard 19-inch cabinet. The recorder is equipped with a pair of fixing brackets ①. First unscrew the lateral screws ② from the housing. Then fasten the brackets with these screws and put the recorder in the cabinet. Finally fix the four holes ③ up with screws.

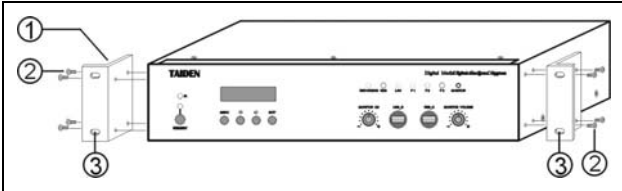


Figure 1.6 Installation of the recorder

In addition, 1U metal stripes are included as decoration to be installed between the CMUs in the cabinet. It is also good for the ventilation and cooling off. Fix up the four holes ③ with screws.

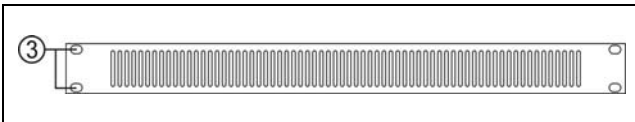


Figure 1.7 Decoration of cabinet

1.3 Connection

HCS-8130M Series Professional Audio & Video Recorder for Conference can be connected to TAIKEN conference system, synchronously records conference video & audio information. By connecting to the automatic video tracking system, the application software is used to make camera presets for every congress unit, automatically records speaking delegate(s) and the panorama of the venue - saves data as digital files.

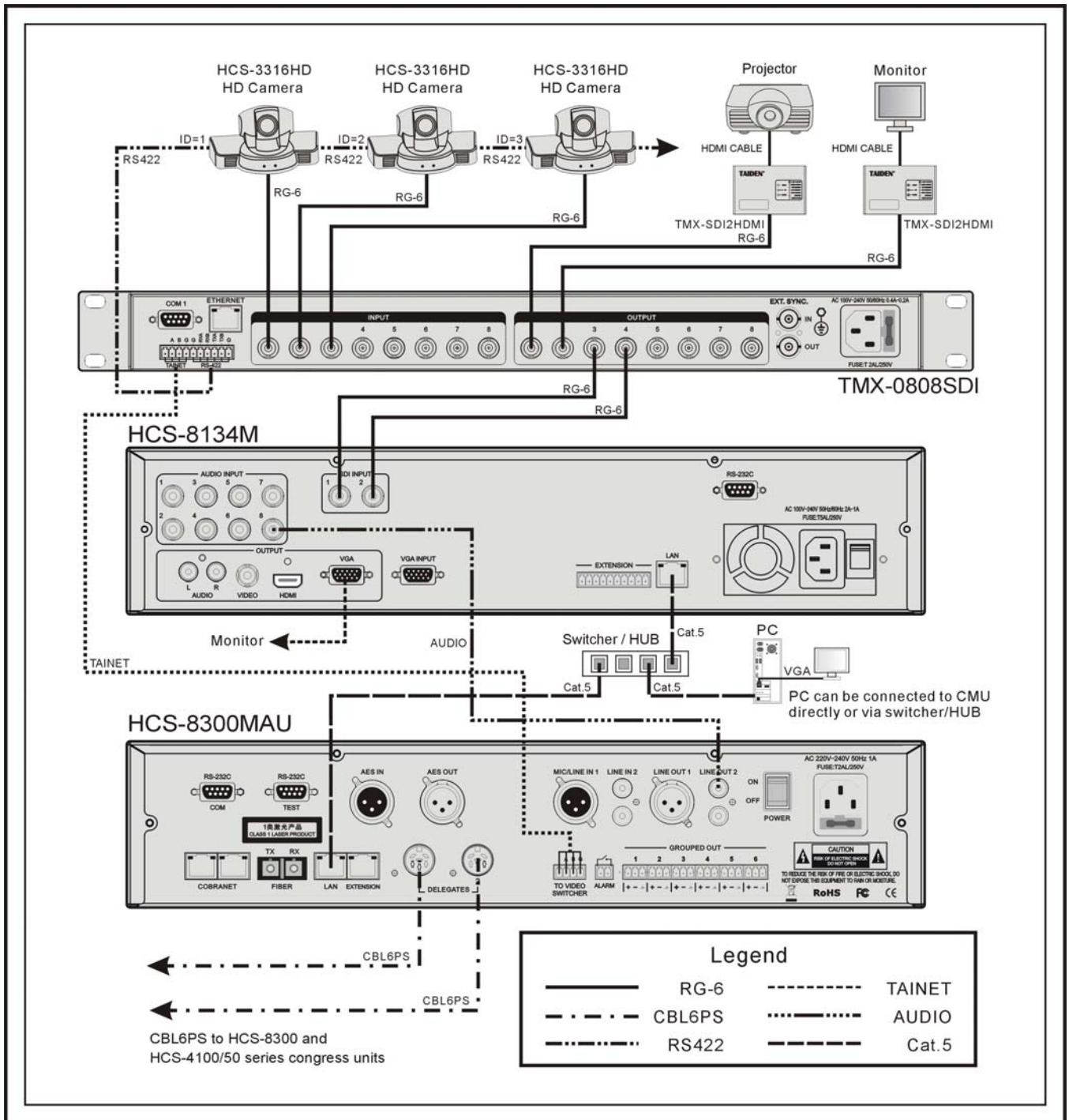


Figure 1.8 System connection

1.4 Configuration and operation

After installation and connection and prior to the meeting, the recorder should be configured through the dialog menu and button. The term “interface” used hereinafter means the information displayed on the LCD as the user interface.

The menu structure is shown in the following figure:

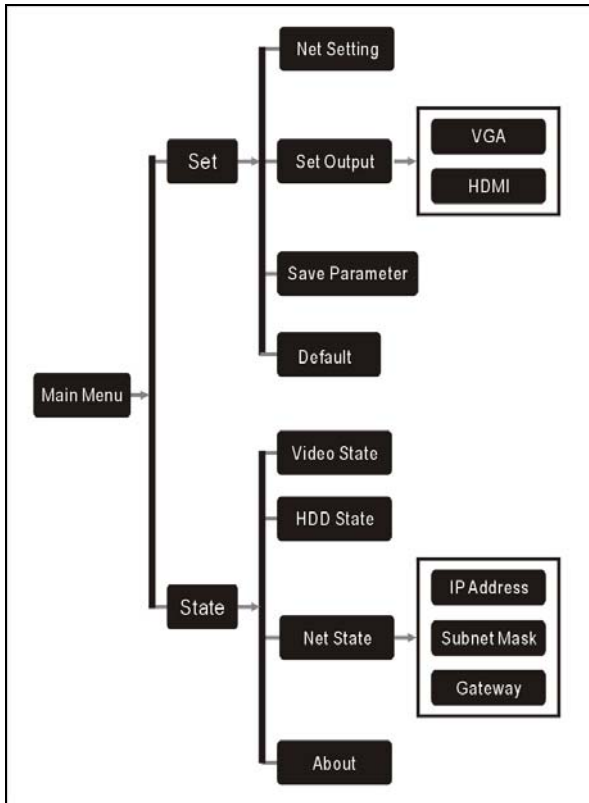


Figure 1.9 LCD menu structure of the recorder

A) Starting initialization

Switch on to STANDBY status, and then press the “STANDBY” button, the recorder will start initialization:

Initializing...
Please wait

Loading harddisk(s) after initialization:

Loading HDD...

B) LCD main menu

When the initialization is finished, the main menu will be displayed on the LCD:

“Set”

“State”

Set State

- Press the “MENU” button to go to the corresponding submenu;
- Use the “←/→” button to switch from term to term.

1.4.1 Set

Select “Set” and Press the “MENU” button under main menu will go to the set menu, which includes four menu items:

- “1. Net Setting”
- “2. Set Output”
- “3. Save Parameter”
- “4. Default”

1. Net Setting

Set Menu:
1. Net Setting DHCP: Y N

Use the “←/→” button to enable DHCP or not;

- If “Y” is selected, it stands for obtain a dynamic IP address automatically, use the “MENU” button to save and return to the upper level menu;
- If “N” is selected, it stands for set a static IP address manually, use the “MENU” button to go to step a).

Note:

- ☞ If current setting is changed, please reboot the recorder.

a). Setup unique “IP Address” for the recorder:

- 1). Select “IP Address” and press the “MENU” button to go to setup IP address interface:

Net Setting:
1. IP Address IP Address
192.168. 1.100

- 2). Use the “←/→” button to switch between the four numbers;
- 3). Use the “MENU” button to edit selected number;
- 4). Use the “←/→” button to decrease/increase the

number;

- 5). Use the "EXIT" button to return to the upper level menu.

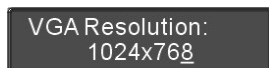
b). Setup "Subnet Mask" and "Gateway"

Same chronological order as for "IP Address" set up.

2. Set Output



- a). Press the "↔" button to select output: "VGA" or "HDMI";
 - If "VGA" is selected, video signal will output via VGA interface;
 - If "HDMI" is selected, video signal will output via HDMI interface.
- b). Press the "MENU" button to enter resolution setting interface;
- c). Press the "MENU" button to enter and Use the "↔" button to select a resolution;



- VGA resolution range: 800x600, 1024x768, 1280x1024, 1440x900;
 - HDMI resolution range: 1920x1080i50.
- d). Press the "MENU" button to confirm and press the "EXIT" button to return to the upper level menu.

Note:

☞ After monitor and mouse are connected, and the recorder is controlled by the OSD software, the resolution cannot be adjusted via LCD menu of the front panel.

3. Save Parameter



- a). Press "↔" to select save parameter or not;
 - If "Y" is selected, system parameters can be saved;
 - If "N" is selected, system parameters cannot be saved;
- b). Press the "MENU" button to confirm and to return to the upper level menu.

4.Default



- a). Press "↔" to select "Y" or "N";
 - If "Y" is selected, default can be set up;
 - If "N" is selected, current settings can be saved;
- b). Press the "MENU" button to confirm and to return to the upper level menu.

1.4.2 State

Select "State" and Press the "MENU" button under main menu will go to the state menu, which includes four menu items:

- "1. Video State"
- "2. HDD State"
- "3. Net State"
- "4. About"

1. Video State



Display the video input status, press the "EXIT" button to return to the upper level menu.

- "X" stands for no signal input;
- "N" stands for normal signal input.

2. HDD State



- a). Press the "↔" button to select the disk number;
- b). Press the "MENU" button to display the total disk space and the available disk space;



- c). Press the "EXIT" button to return to the upper level menu.

3. Net State

Recorder network information includes: IP address, subnet mask and gateway, press the "EXIT" button to return to the upper level menu.



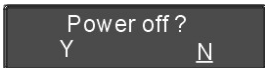
4. About

Recorder information includes: firmware version and series number, shown as in the following figure - press any button to return to the upper level menu.



C) Power off

Press and hold the “STANDBY” button for 3 s, the interface is shown as in the following figure:



Press the “⇐/⇒” button to select power off or not.

- Select “Y” and press the “MENU” button to switch to standby mode;
- Select “N” and press the “MENU” button to return to the upper level menu.

Press and hold the “STANDBY” button for 10 s to switch to standby mode directly.

Chapter 2: Recorder Control

Connect monitor to the output interface of recorder (supports HDMI and VGA), and connect mouse to the USB interface on the front panel, then you can view/setup/manage recorder information and preview/record/monitor recording files. After devices are connected, the video monitor windows were displayed automatically. Double click to display the appointed video on full screen or return to monitor windows. Right click to enter main menu or return to monitor windows.

The main menu includes Video, Recording, Audio, Network, Storage and System. We take HCS-8132M and HCS-8134M as example to explain the operation of the recorder. The operation of HCS-8131M and HCS-8133M is comparable, just the input channel is fewer.

Note:

- ☞ The menu will be locked when TAIDEN Digital Audio & Video Recording System connected to the device.
- ☞ When power on a DVR for the first time, or power on after upgrading a DVR or formatting the HD, video files will be scanned and “Scanning video files, please wait...” will be displayed.



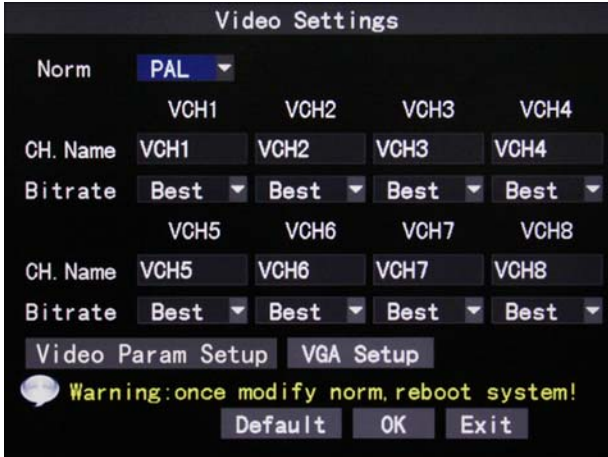
- In the main menu, left click the menu item to go to corresponding submenu, and right click to exit the current menu;
- In submenu interface, the corresponding prompting information (the word in yellow) will be displayed on the lower of the interface when put the mouse pointer on the operation.

Note:

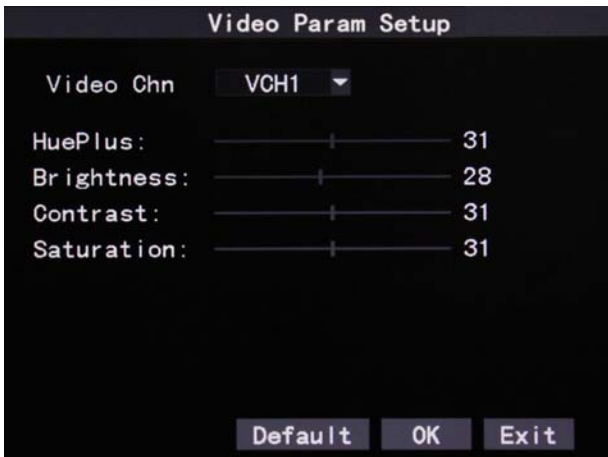
- ☞ “R” on the lower-left of the window when recording;
- ☞ “H” on the lower-left of the window when disk lost or full of use;
- ☞ “W” on the lower-left of the window when disk error.
- ☞ DVR can record video data not more than 12 months, after recording 10 months, a note will pop up when next record, for example, when the eleventh month recording in 2014-7, a note “Because of file system limitation, please backup videos of 2013-6 after this recording to avoid the videos be overwritten!!!” will be displayed and the indicator light F1 in the main unit will be turn on.

2.1 Video Settings

Video input and VGA input are used for HCS-8131M and HCS-8132M, video settings interface is shown as in the following figure:



- Norm: PAL and NTSC for selection;
- CH. Name: input/modify channel name, the maximum length is 8 characters, click to pop-up input box, switch input method by clicking 123, abc or ABC;
- Bitrate: best, fine and normal for selection;
- Video Param Setup: setup hueplus, brightness, contrast and saturation for video channel;



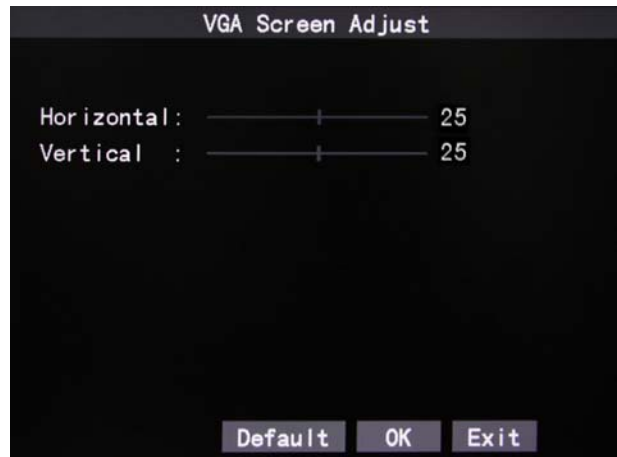
- VGA Setup: setup channel name and bitrate, and adjust the position of the image.



SDI input and VGA input are used for HCS-8133M and HCS-8134M, video settings interface is shown as in the following figure:



- CH. Name: input/modify channel name, the maximum length is 8 characters, click to pop-up input box, switch input method by clicking 123, abc or ABC;
- Bitrate: best, fine and normal for selection;
- VGA Setup: if the gathered image has a bias, try the screen setup to adjust the position of the image.



2.2 Recording Search

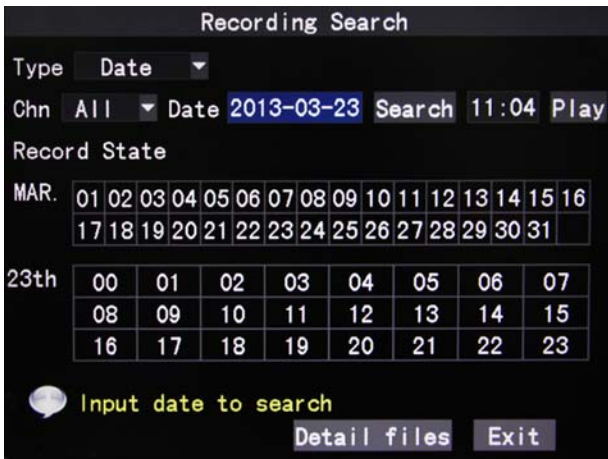
HCS-8130M series recorder supports two searching types: meeting and date.

2.2.1 Meeting



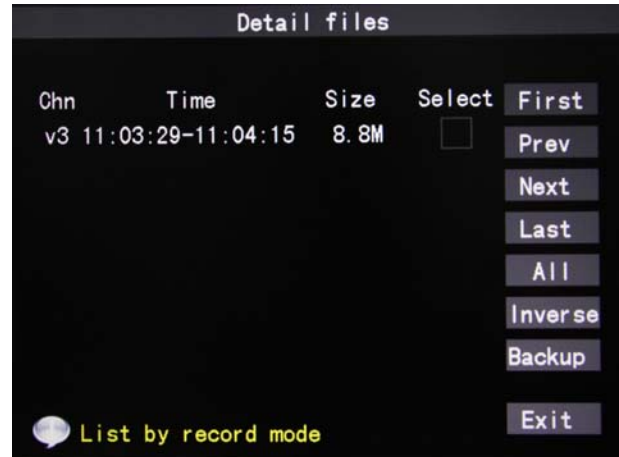
- If type is selected as “Meeting”, input date and click “Search”, the result will be listed below;
- Click meeting name in the list to play back the recording file.

2.2.2 Date

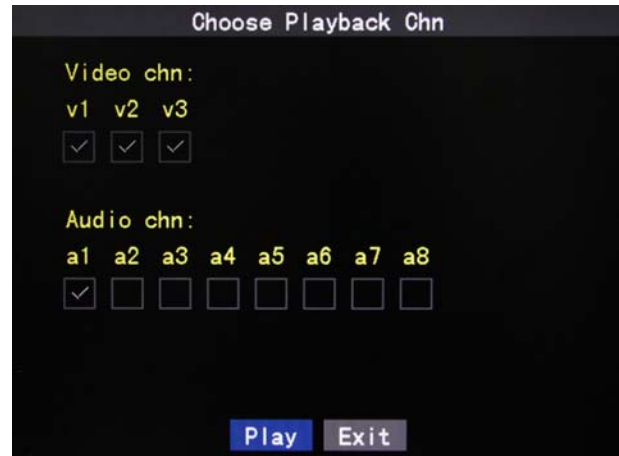


- If type is selected as “Date”, select searching channel and input date, then click “Search”, the date background turns to green if it has recording file;
- Input time (time in the above figure is 09:24) to play back recording file of this time;
- Click the date with green background, the time background turns to green if it has recording file;
- Select a time to play back recording file of this time;
- Select a day then click “Detail files” to view the detail recording information of the day;

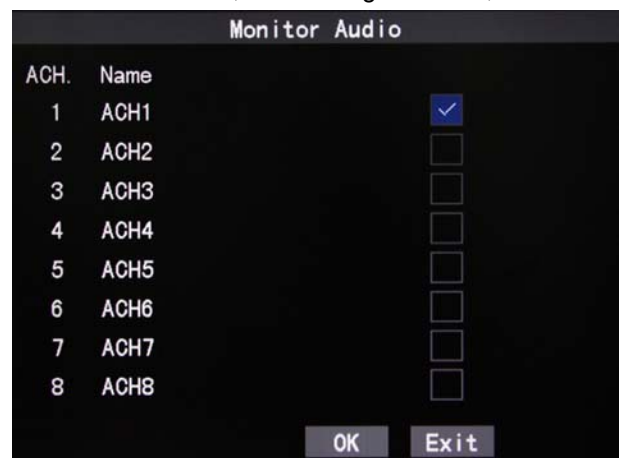
- Click one file in the “Detail files” list to play back recording file;



- Click the time with green background in “Recording Search” to choose playback channel;



- Select video channel and audio channel, then click “Play” to play recording files;
- Right click on playing interface, select “Monitor ACH.” on the pop-up menu to enter “Monitor Audio” interface, as in the figure below;



- Click on the right row to monitor corresponding audio channel.

Note:

☞ Some early version has no palyback function, "This version does not support playback!" will be displayed

2.3 Audio Settings

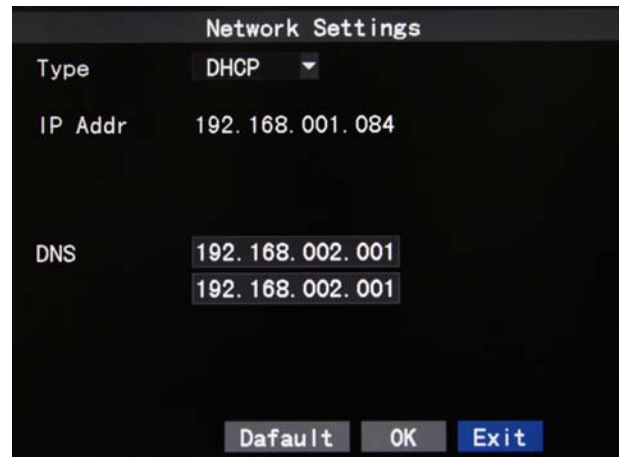
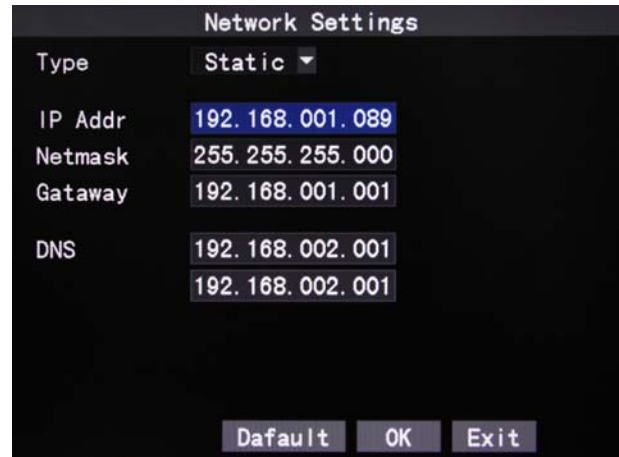


- Select monitor channel;
- Adjust audio gain for each channel, the range is -30 dB -0 dB;
- The channel name of the right row can be modified, the maximum length is 8 characters, click to pop-up input box, switch input method by clicking 123, abc or ABC.

2.4 Network Settings

Network settings supports static and DHCP.

- Static: setup IP address, netmask, gateway and DNS;
- DHCP: setup DNS only.



2.5 Storage Management

Click “Storage” to view detail information of hard disks. Recorder supports up to 4 disks and the maximum capacity of each disk is 2T.



- Format HDD: select HDD to format, please backup data before format, or the data will be lost;

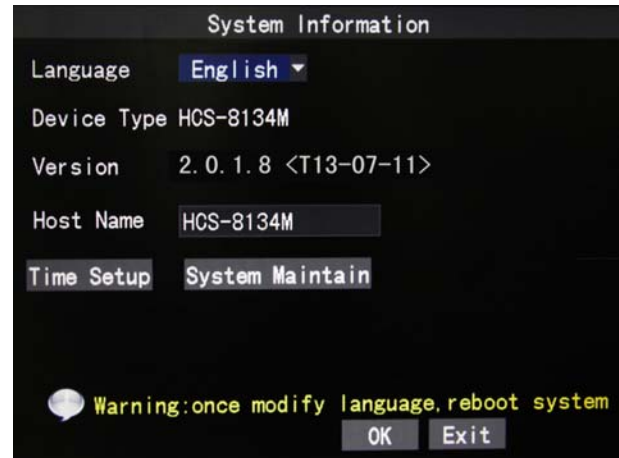
Warning:

- ☞ Please format the HDD according to the storage time (early data first).
- ☞ It will not refresh data automatically after formatting the HDD.

- Format U_Disk: format the U_disk connected to the USB interface.

2.6 System Information

System information includes: view device type and software version, setup system language, host name, system time and system maintenance.



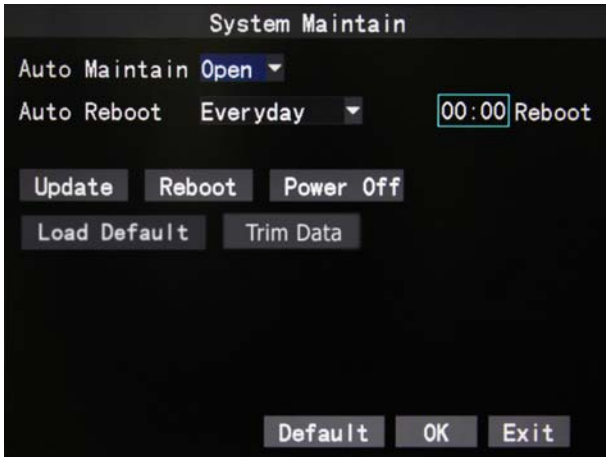
- Language: setup system language, Chinese or English. If current setting is changed, the recorder will reboot;
- Host Name: input/modify host name, the maximum length is 16 characters, click to pop-up input box, switch input method by clicking 123, abc, ABC or +-*;
- Time Setup: click to enter “Time Setup” submenu, select date format, time format and time zone, set date and time;



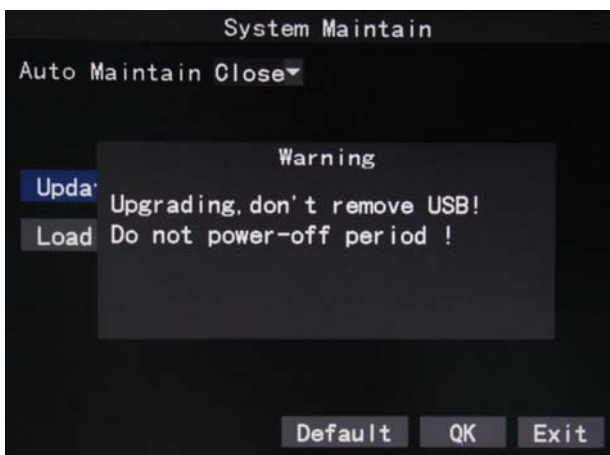
Warning:

- ☞ Modify time earlier than the current system time will lose recording file. For example: in the above figure, the current system time is 03/28/2013 11:07:04, if we modify the system time as 03/17/2013 11:07:04, the recording file between 03/17/2013 11:07:04 and 03/28/2013 11:07:04 will be lost.

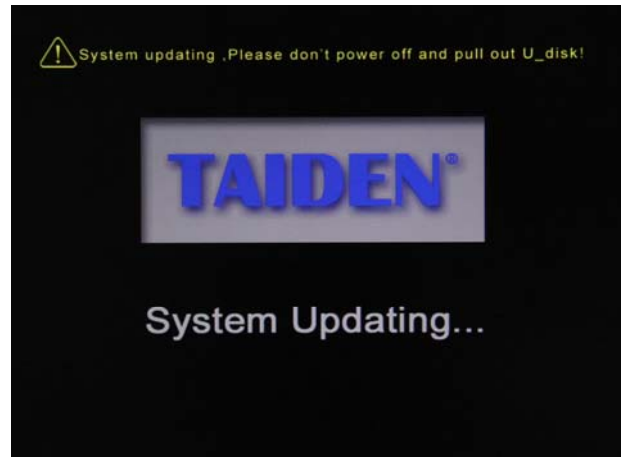
- System Maintain: click to enter “System Maintain” submenu;



- ◆ Auto Maintain
 - ◆ Open: set auto reboot time: everyday, every week or every month;
 - ◆ Close: close auto reboot.
- ◆ Update: upgrade for the HCS-8130M series main unit.
 1. Plug the U_disk with all upgrading firmware (for example: HCS_8131M_Ver_2.1.0.8.sw is the firmware of HCS-8131M , and Ver_2.1.0.8 is the version number of the firmware) to the USB interface on the front panel of the recorder;
 2. Click “Update”, and the system will update automatically after reading the U_disk and the firmware;



Note: If the U_disk was not inserted or read, a note of “No thumb drive!” will be displayed; and if there is no firmware in the U_disk, a note of “No upgrade file!” will be displayed on the screen. Please check the U_disk.



3. Auto reboot the device to finish the update;



4. Please check that the version number of main unit is the same as the firmware.

Note:

- ☞ Please make sure that the U_disk with the capacity not more than 4GB and format it as FAT32;
- ☞ Please insert the U_disk before entering the main menu to give ample time for reading the U_disk;
- ☞ Don't power off the recorder or pull out the U_disk during updating.

- ◆ Reboot: reboot recorder;
- ◆ Power Off: power off recorder;
- ◆ Load Default: reset to the factory default setting.
- ◆ Trim data: trim the conference data, and mark the conference log whose recording is nonexistent.

Note:

- ☞ Conference data trimming can be stopped at any time and the trimmed data will be saved.

Chapter 3: TAIDEN Digital Audio & Video Recording System Software

3.1 Installation and Running

3.1.1 Running Environment

Hardware requirements: dual-core processor/4G or higher/Discrete graphic card/1440 × 900 (better)/DirectX 9.0 or higher.

Software requirements: WindowsXP or higher.

3.1.2 Installation

◆ CD Contents

TAIDEN Digital Audio & Video Recording System for Conference application software.

◆ Installation guide

Double click and run “Install.exe” on this CD.

Note: The language your select is just the software language which could not be changed after this installation;
When the firewall is opened, please add the application to the exception.

3.1.3 Software Running

Once installation completed, a shortcut named “DVR 2.1” will appear on the Windows desktop. Double click it to run the application, and the primary window is shown:

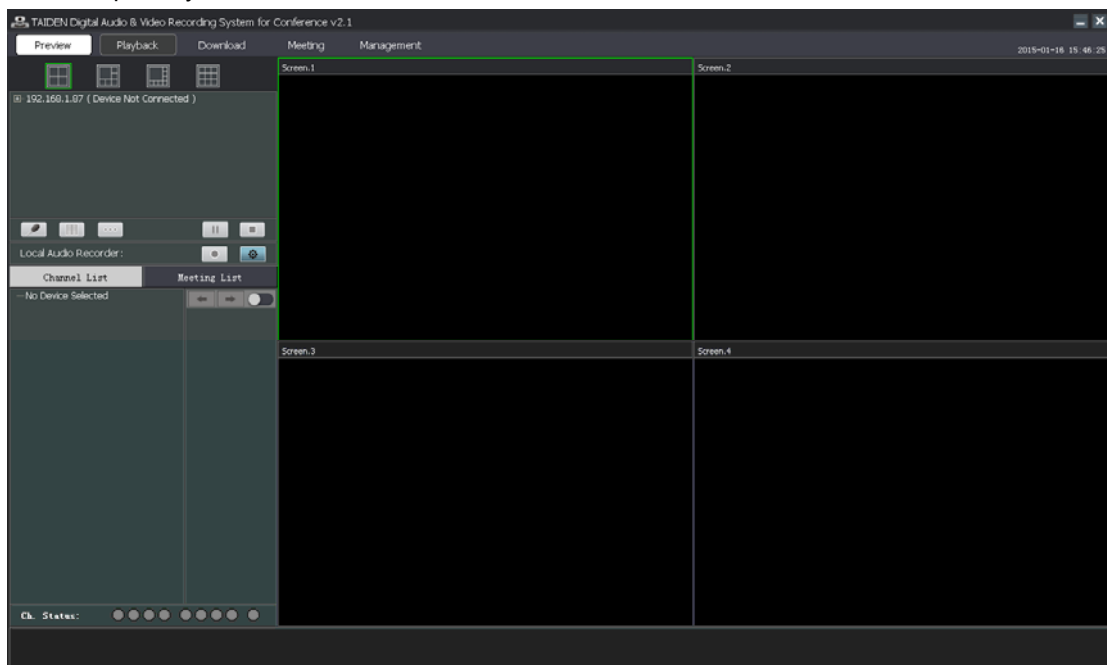


Figure: Primary Window of TAIDEN Digital Audio & Video Recording System – Did not connect DVR

The functions of the digital audio & video recording system include: Preview, PlayBack, Download, Meeting and Management. We take HCS-8132M as an example to introduce the operation of the digital audio & video recording system. Operating of other devices of HCS-8130M series is comparable, only part of interfaces have little difference because of different video and audio input on the rear panel of the device.

3.2 Management

Management function is used to add/edit/delete device, device upgrade, set up video channel and audio channel, view disk information and format the disk of DVR.

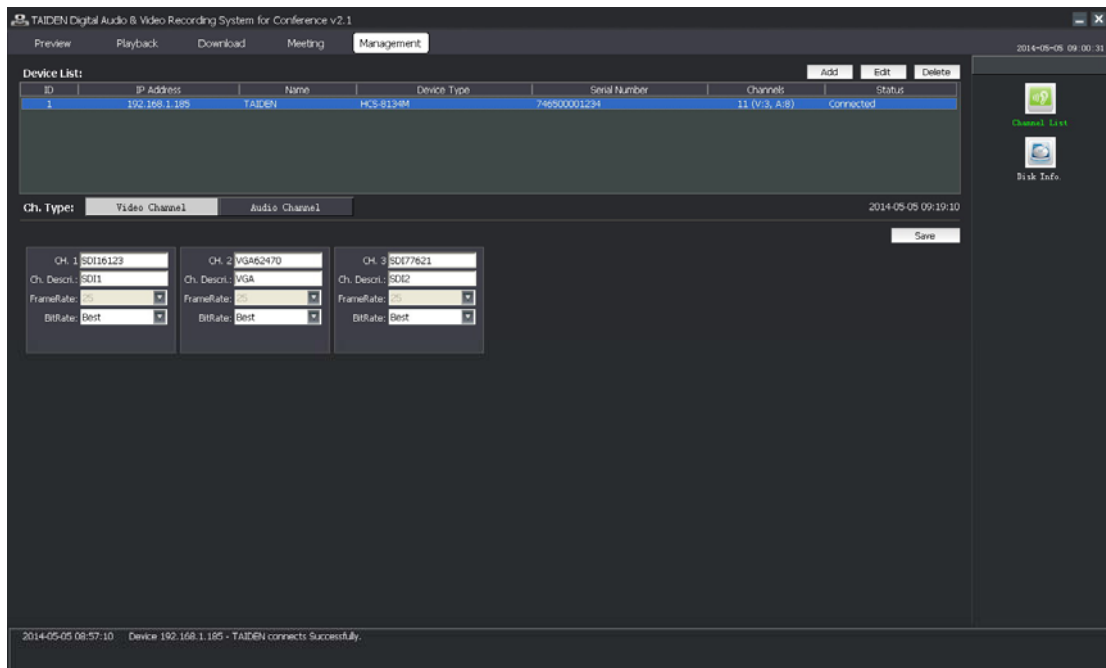
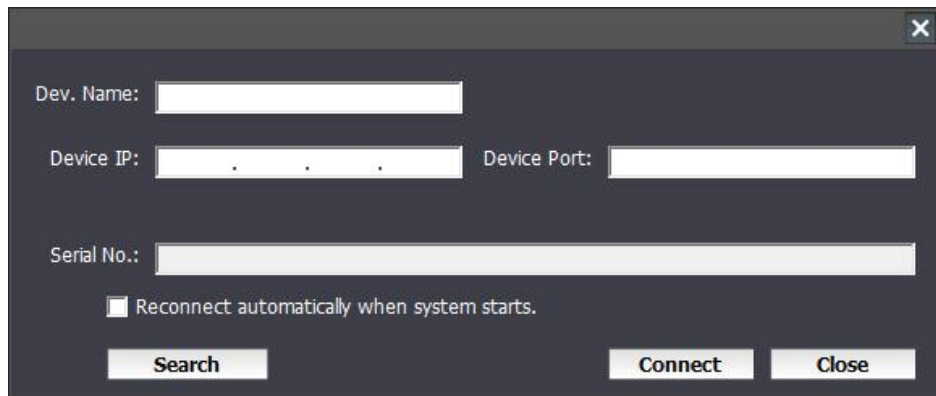


Figure: Management interface

3.2.1 Device Management

- ◆ **Add:** click the “Add” button to pop up add device dialog box, please input device name (supports 16 characters), device IP and device port, serial number was got automatically when connected. If select “Reconnect automatically when system starts”, the added device will be connected automatically next time. When the device information is unknown, we can use the “Search” function to search devices in the same network.



Dev. Name:

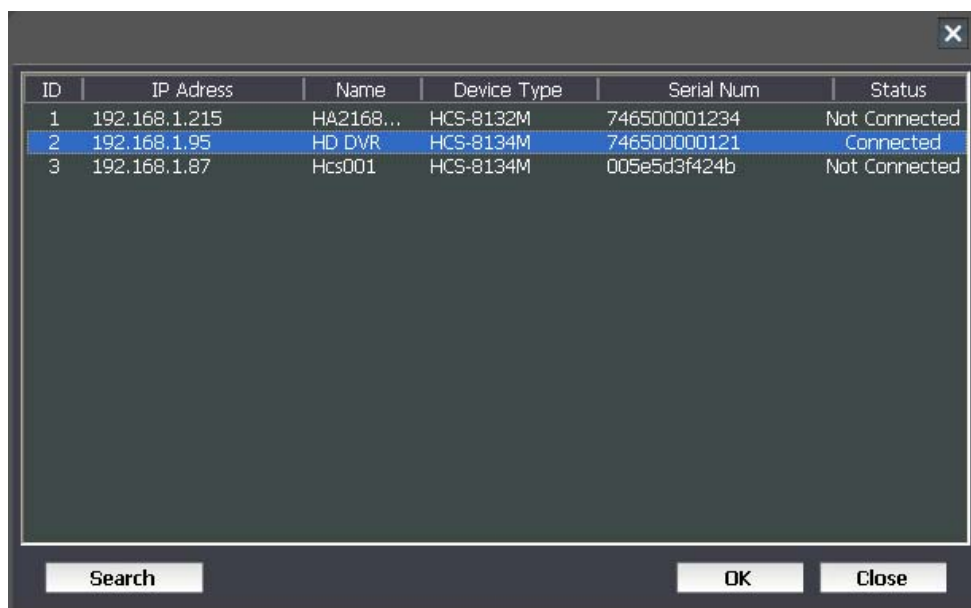
Device IP: . . Device Port:

Serial No.:

Reconnect automatically when system starts.

Figure: Add Device

- ◆ **Search:** click the “Search” button to search devices in the network, select one device and then click “OK”. We cannot connect the device which has been connected by other recording system. One recording system can manage several devices at the same time.



ID	IP Address	Name	Device Type	Serial Num	Status
1	192.168.1.215	HA2168...	HCS-8132M	746500001234	Not Connected
2	192.168.1.95	HD DVR	HCS-8134M	746500000121	Connected
3	192.168.1.87	Hcs001	HCS-8134M	005e5d3f424b	Not Connected

Figure: Search Device

- ◆ **Edit:** click the “Edit” button or double click device information in device list to pop up edit device dialog box, when the device has been connected, only device name can be modified (supports 16 characters).

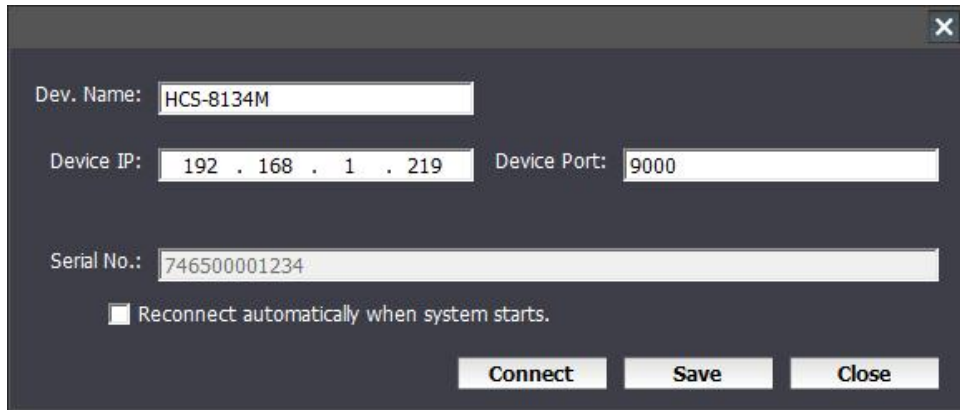


Figure: Edit Device

Note:

- ☞ DVR can record video data not more than 12 months. From the eleventh month, a information about the number of residual months are able to be recorded will be displayed on the under side of the figure after connecting a DVR successfully. Please backup recording when necessary.
- ☞ If the DVR had recorded for 12 months, a note about overwriting recording information will displayed on the under side of the figure.

◆ **Delete:** delete device from the device list, but cannot delete the device which has been connected.

◆ **Device upgrade:** right click any connected DVR and select “Device Upgrade” to pop up device upgrade dialog box. Click the “Open” button to add the upgrade programmes and their particular imformation will be displayed on the device information list. Select the programmes and click the “Start” button to upgrade the DVR. After finish the upgrade, please restart the DVR.

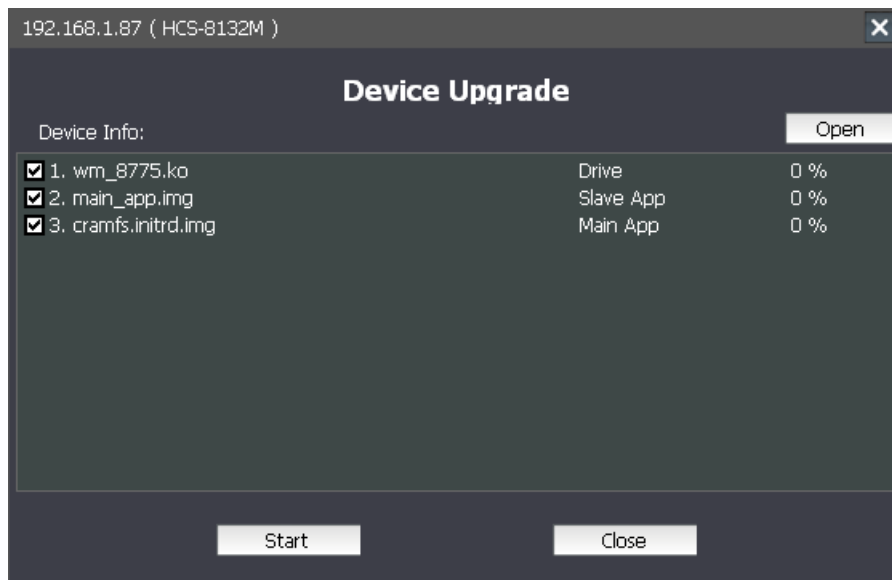


Figure: Device Upgrade

Note:

- ☞ The type of the programme must be the same as the type of the DVR which is going to be upgraded.

3.2.2 Channel List

- ◆ **Video Channel:** set up channel name (supports 8 characters), channel description (supports 31 characters) and channel quality;

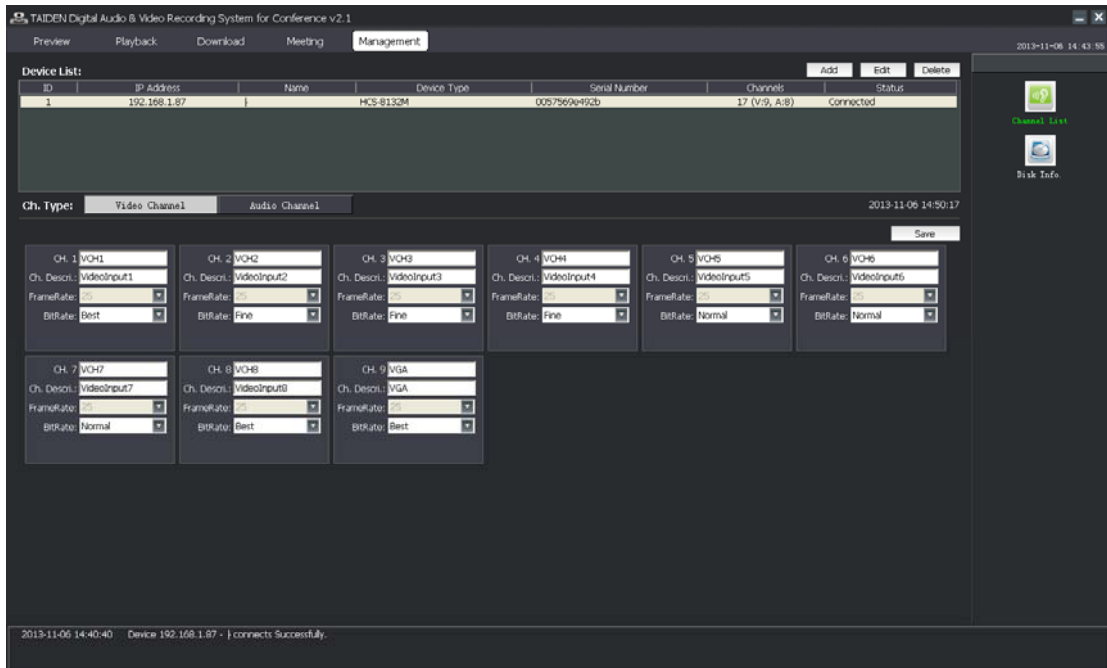


Figure: Video channel

- ◆ **Audio Channel:** set up channel name (supports 8 characters), channel description (supports 31 characters) and channel type. Channel type includes floor, group out and SI audio.

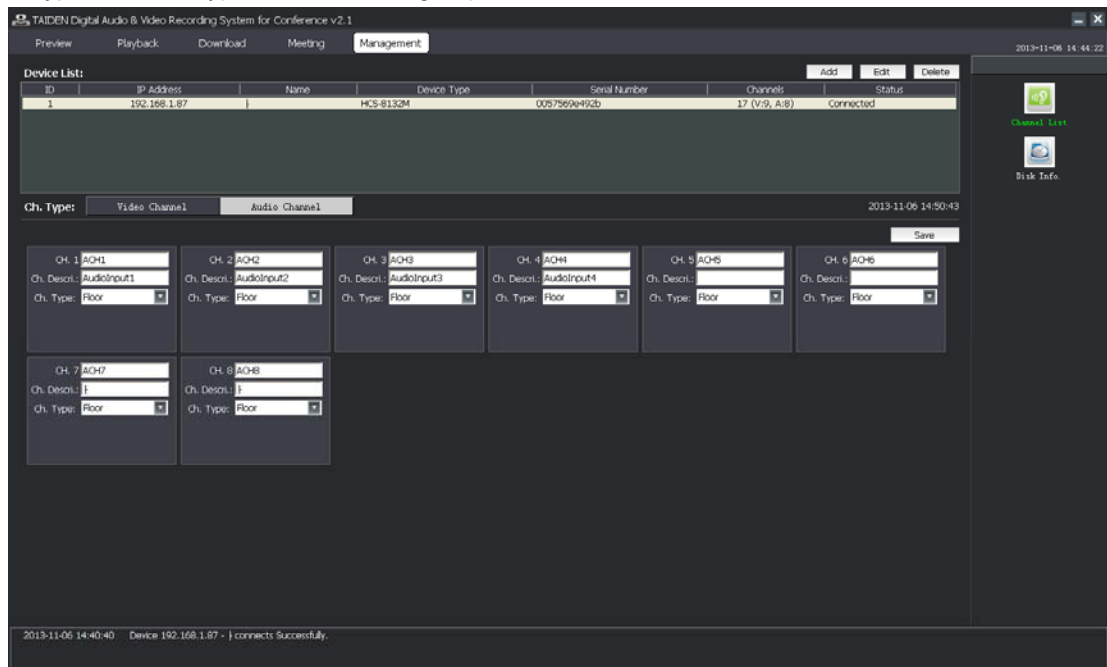


Figure: Audio channel

Note:

- ☞ Video and audio parameter can be saved after power off correctly: hold and press the “STANDBY” key on the front panel of the device and power off according to the prompting information on the LCD.

3.2.3 Disk Information

The HCS-8130M Series Professional Audio & Video Recorders support four disks at most, one disk capacity can reach 2.0T. Disk size, free size and estimated time available can be viewed through disk information interface.

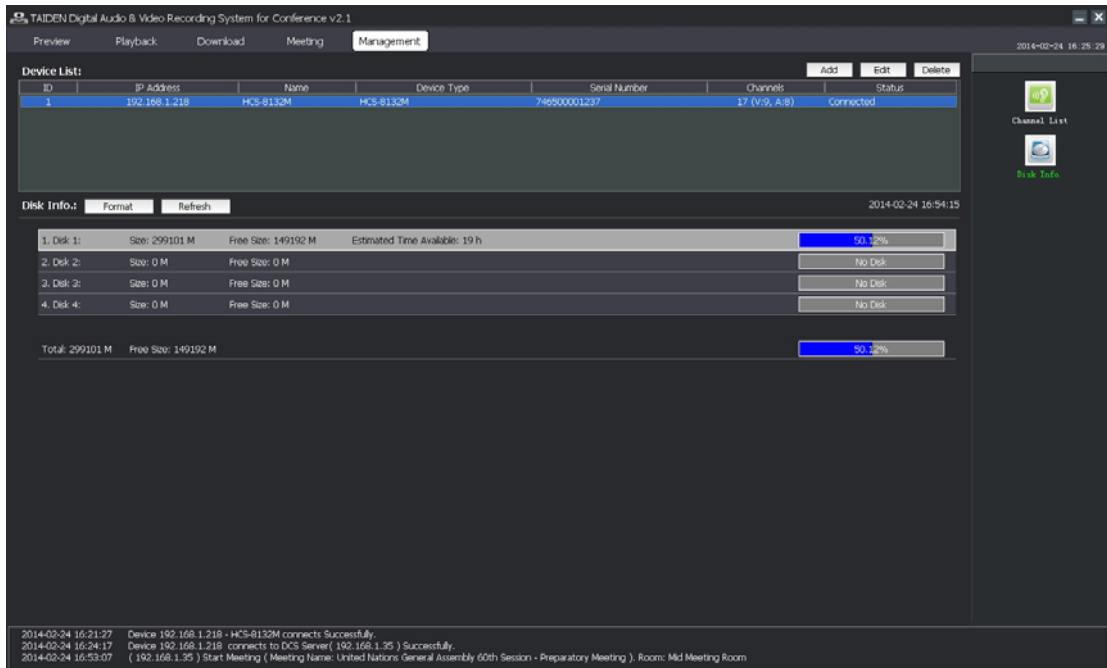



Figure: Disk information

- ◆ Format: format the disk, please check the important file on the disk to backup before formatting;
- ◆ Refresh: refresh disk information.

3.3 Meeting

3.3.1 Connect to server

TAIDEN Digital Audio & Video Recording System can work together with HCS-8130M series Professional Audio & Video Recorders, meeting information will be added by operator manually. If connect with TAIDEN Conference Management System (DCS Server) at the same time, meeting information will come from DCS Server automatically.

When DVR connected, click  to unfold detailed information and then click “No meeting started, double click to select meeting” to open meeting management interface.

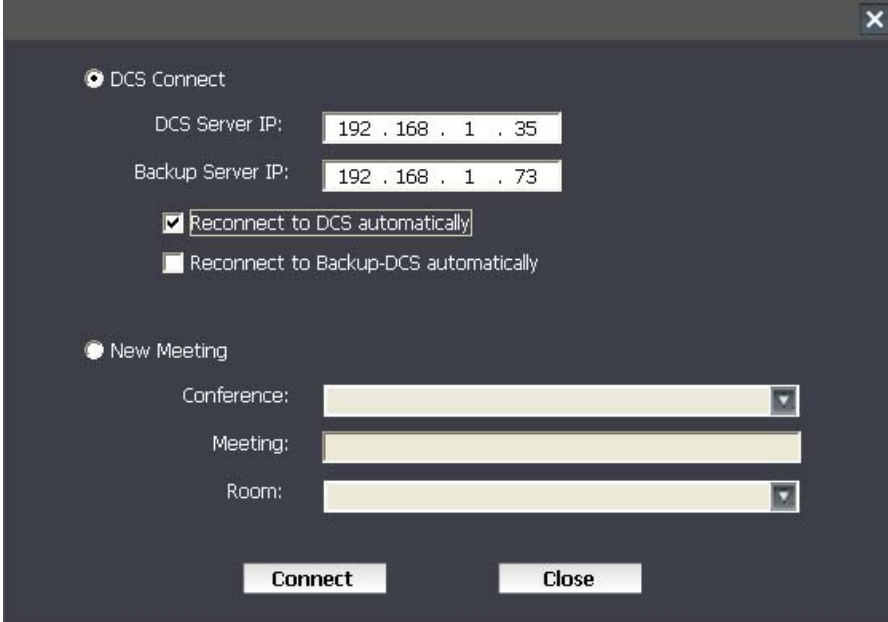


Figure: Connect to server

- ◆ **DCS Connect:** input DCS Server IP and Backup Server IP, then click the “Connect” button to connect the DCS server. If connection succeeds, the button “Connect” will turn to “Disconnect” which can be used to switch to “New Meeting”;
 - Reconnect to DCS automatically: If the DCS server fails, the software will reconnect to DCS automatically and the “Connect” button will turn to “Stop” to be used to stop reconnecting.
 - Reconnect to Backup-DCS automatically: If the DCS server fails, the backup-DCS server will take over the DVR automatically to connect working.

- ◆ **New meeting:** input conference name, meeting name and conference room to start meeting manually.

3.3.2 Meeting management

TAIDEN Digital Audio & Video Recording System can save the information data of a meeting which be held with it, and user can see about the meeting information from “Meeting” module. But if the DVR is connected to another computer, you must synchronize the data to this computer to make search and playback possible. The Meeting interface is shown as below:

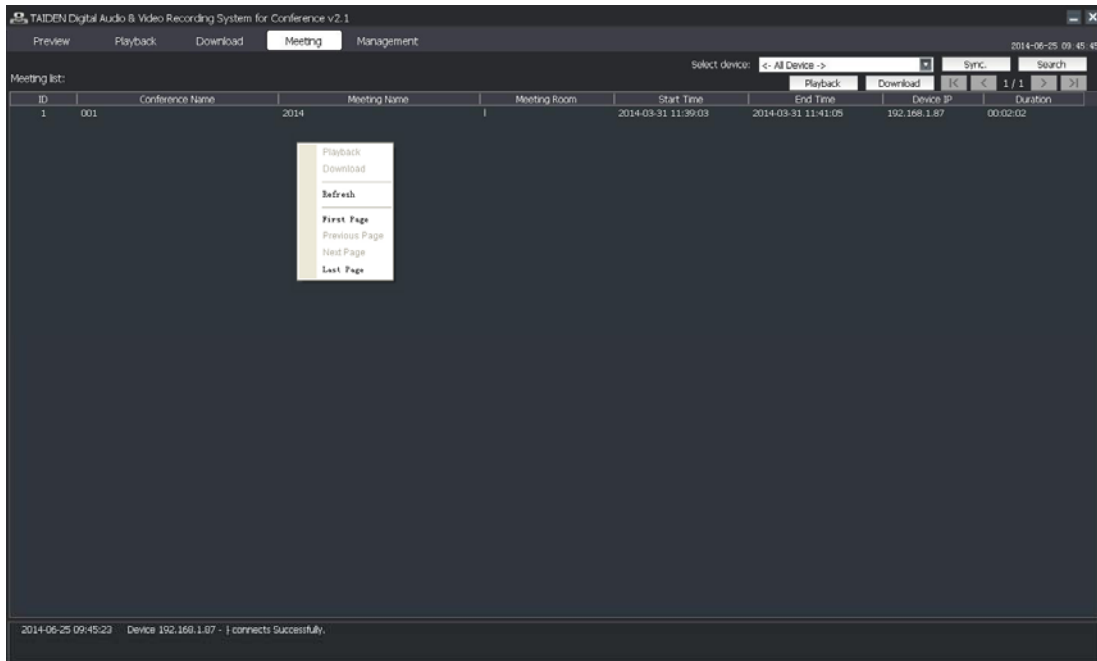


Figure: Meeting interface

- ◆ **Select device:** select any DVR from current devices or select “All Device”.
- ◆ **Sync.:** synchronize the meeting information data from DVR to the current computer. Click “Sync.” to pop up the Sync. Meeting dialog box, then select meetings for synchronizing(can use Ctrl for multiform selection) and click “Sync.” to start transmitting, the sync status will be displayed on the below of the interface. Click “Sync. All” to synchronize all meetings on the list to the computer.

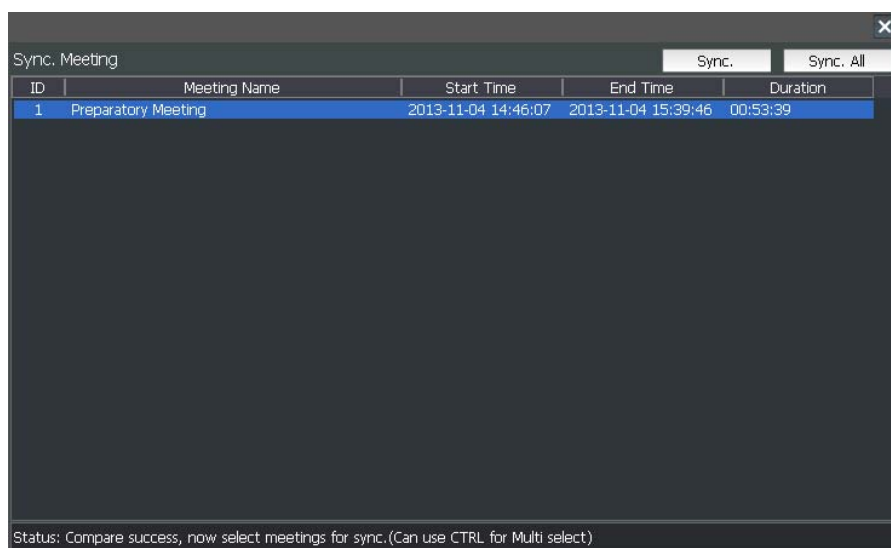
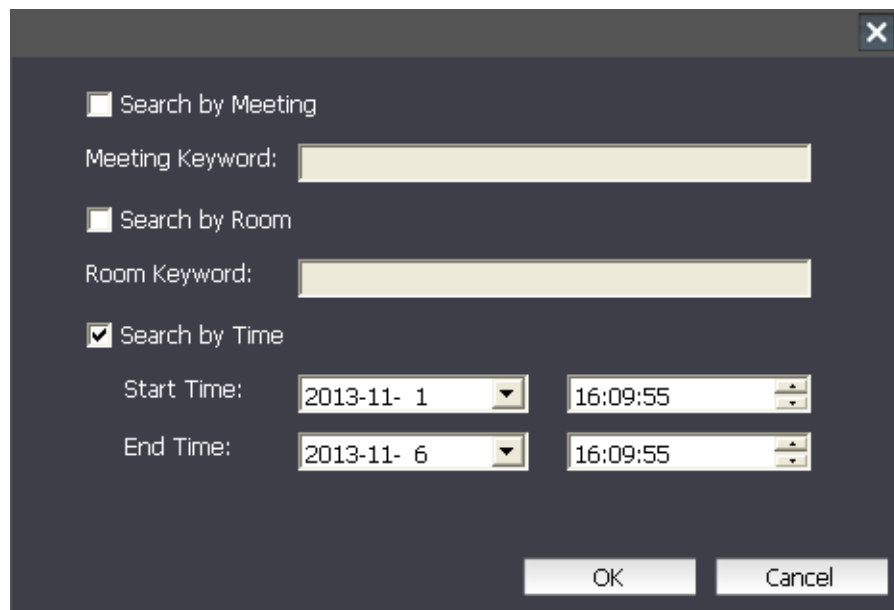






Figure: Sync. Meeting

- ◆ **Search:** search the meeting information from the current computer. Click “Search” to pop up the Search dialog box, user can search by meeting, room or time, click any item and write down the key word, then click “OK” to search. The result will be displayed on the meeting list.



The screenshot shows a search dialog box with a dark background and a close button (X) in the top right corner. It contains three search options: 'Search by Meeting' (unchecked), 'Search by Room' (unchecked), and 'Search by Time' (checked). Below each option is a text input field for a keyword. The 'Search by Time' section has two rows: 'Start Time' and 'End Time'. Each row has a date dropdown menu and a time spinner. The 'Start Time' is set to '2013-11- 1' and '16:09:55'. The 'End Time' is set to '2013-11- 6' and '16:09:55'. At the bottom right, there are 'OK' and 'Cancel' buttons.

Figure: Search

- ◆ **Meeting list:** display the meeting information of the current computer.
- ◆ **Playback:** select a meeting from the meeting list, then click the “Playback” button at the top right corner or right click and select “Playback” to go to playback interface to replay the meeting (see section 3.5).
- ◆ **Download:** select a meeting from the meeting list, then click the “Download” button at the top right corner or right click and select “Download” to go to download interface to download the meeting (see section 3.6).
- ◆ **Refresh:** refresh the meeting list.
- ◆ Meeting list supports multipage-display, user can click , , ,  or right click and select “First Page”, “Previous Page”, “Next Page” and “Last Page” to page through the list.

3.4 Preview

After device connection, recording started when meeting started.

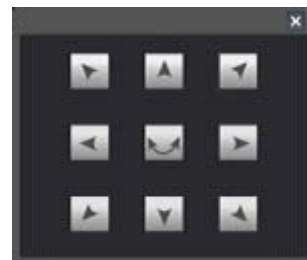
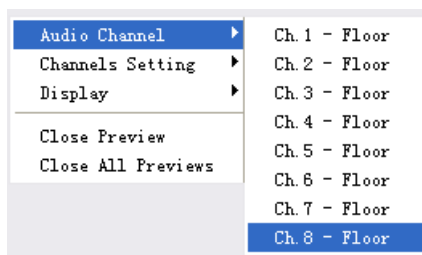
Supports layout of multi sub screen, 4,6,8 or 9 sub screens. Click one icon on the top left corner of the interface to select the layout of the screen.








Figure: Preview interface – connected DVR

Select one screen and then double click one video channel on the left of the Channel List or double click one figure of the video wall on the right side, the video will be displayed on the screen. Double click the video channel or the figure again and the video will disappear; double click one screen on the right to show full screen and double click again to come back.

Right click on the screen, the pop-up menu will be displayed as below in the left, including Audio Channel, Display(4:3 or 16:9), Close Preview, Close All Previews. Channels Setting is for VGA signal only, the interface is shown as below in the right.



- ◆ Device List: display the information of all DVR and DCS servers;
- ◆ Channel List: on the left side display the DVR channel list and all channel working status and on the right side is the video wall which display the real time figure of the channel. Drag  to turn on or turn off and click  or  to switch channels. The figure refresh every 1s and the particular information of the channel will be displayed when the mouse park on a figure. The information will disappear or display automatically with the channel cutting off or linking;
- ◆ Channel Status: unavailable(grey), no signal(white), have signal(pink);

- ◆ Meeting List: display meeting event and happen time;
- ◆ Local Audio Recorder: save the audio of current preview channel to the local file. Click the  button to set the parameters, include save path, file prefix and part time. It also provides some insert characters for file prefix to select, such as conference name, meeting room, meeting name, channel ID and channel name. After setting the parameters, select a audio channel and click the  button to start recording. It will create 2 audio file with “.aac” as postfix which partitioned according to left and right tracks.

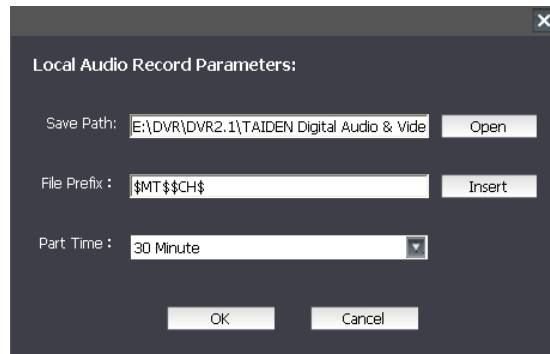


Figure: Local Audio Record Parameters Setting


- ◆ : new speech event;



Figure: New Speech Event

- ◆ : new voting event;

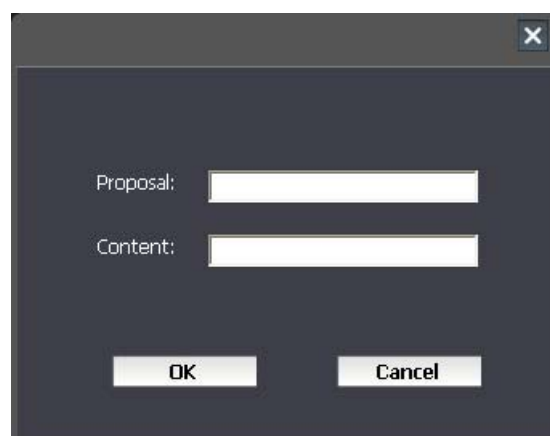

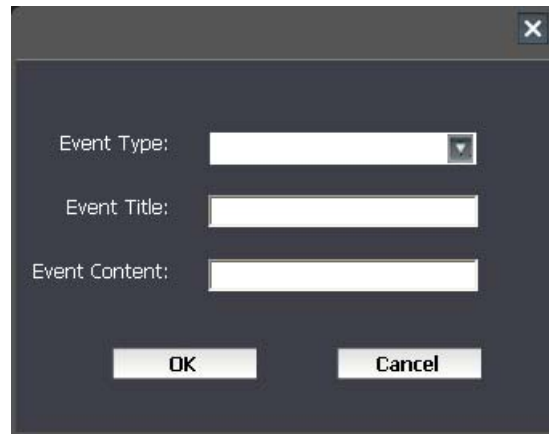




Figure: New Proposal Event

◆ : new custom event;



The image shows a dialog box titled "New Custom Event". It has a dark grey background and a light grey border. At the top right corner, there is a close button (an 'X' icon). The dialog contains three input fields: "Event Type" with a dropdown arrow, "Event Title" with a text input field, and "Event Content" with a text input field. At the bottom, there are two buttons: "OK" and "Cancel".

Figure: New Custom Event

◆  / : pause/ continue the meeting and recording.

Note:

- ☞ It could not continue the meeting and recording in 20 seconds after pausing;
- ☞ For evens such as speaking, interpretation and proposal, pose time point are all marked as end time point, the software can playback or download meeting information before this time point;
- ☞ If paused,a meeting will be splitted into two by the pause point.

3.5 PlayBack

Files playback, must connect corresponding DVR.



Figure: Files Playback

Note:

When a meeting time spans more than one day, the meeting information will be listed in days, generating one record for every day.

Please click “Select Meeting” to open current meeting or meeting file.

- Files playback: all the meeting files in the system will be listed. Use “Only Show Associated Device Meetings” function to list corresponding meeting files only.

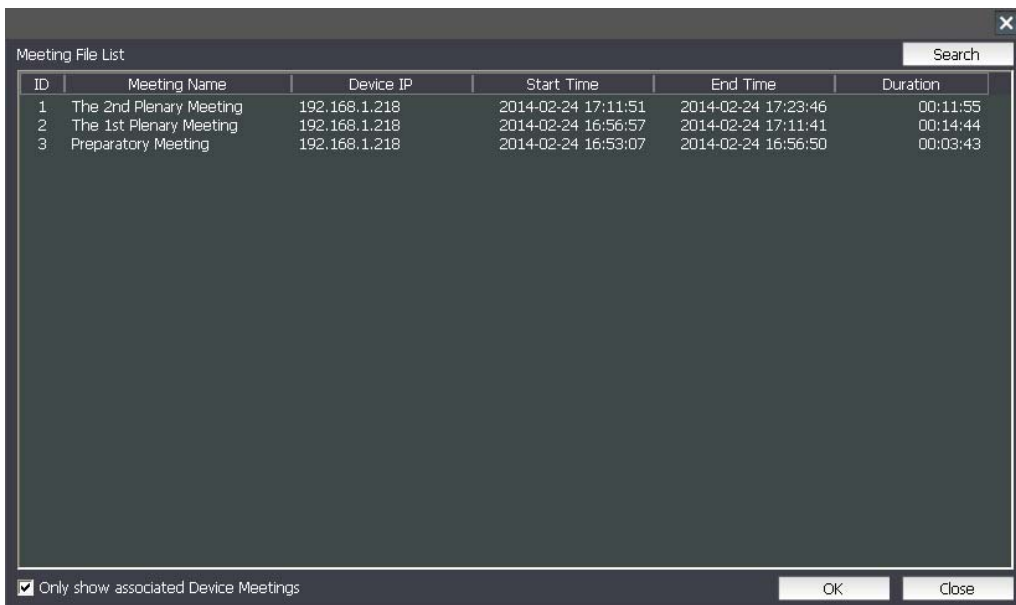


Figure: Meeting File List

We can use “Search” function to find meeting file quickly, supports searching by meeting, room or time.

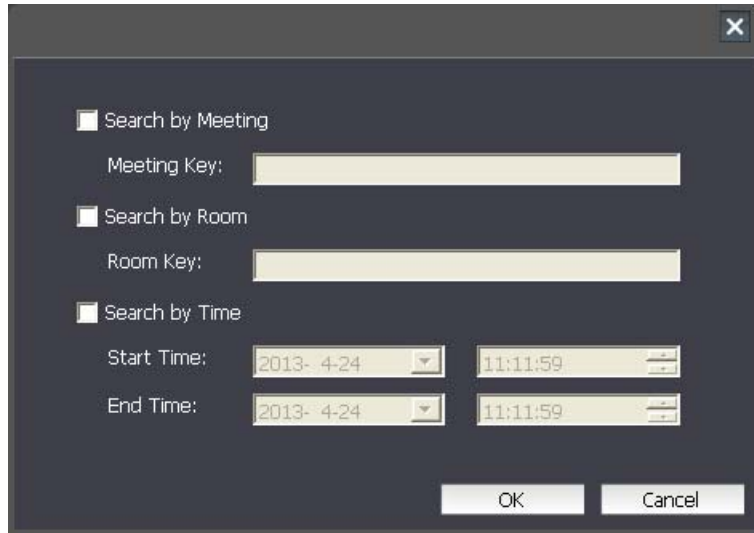








Figure: Search Meeting File

When select a meeting or file, meeting information will be displayed under the playback interface, includes all information, speak information, SI information and so on.

Double click one meeting information, detailed information was displayed on the left.

Supports layout of multi sub screen, 4 or 3 sub screens. Click one icon on the below right corner of the playback to select the layout of the screen. Select a screen and then double click one video channel to playback on the screen; double click one audio channel as monitor channel. Right click the screen to select the display(4:3 or 16:9), double click the screen to show full screen and double click again to come back. Control playback process through , , ,  and  button. Click  button to hide/display left side column and under side column.

Click the “Search” button on “All Info.” status to find meeting information according to speak information, SI information or proposal information.

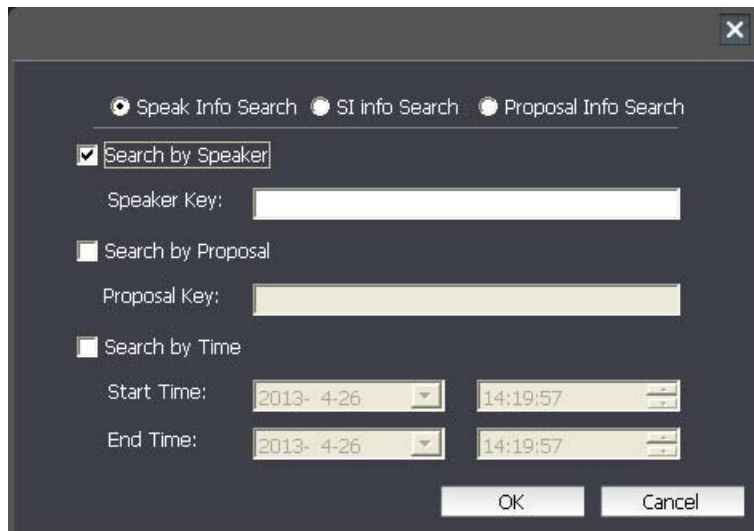


Figure: Search Meeting Information

Note:

☞ When a meeting time spans more than one day, the search results will be listed in days, generating one record for every day.

3.6 Download

Use this function to download video and audio files.

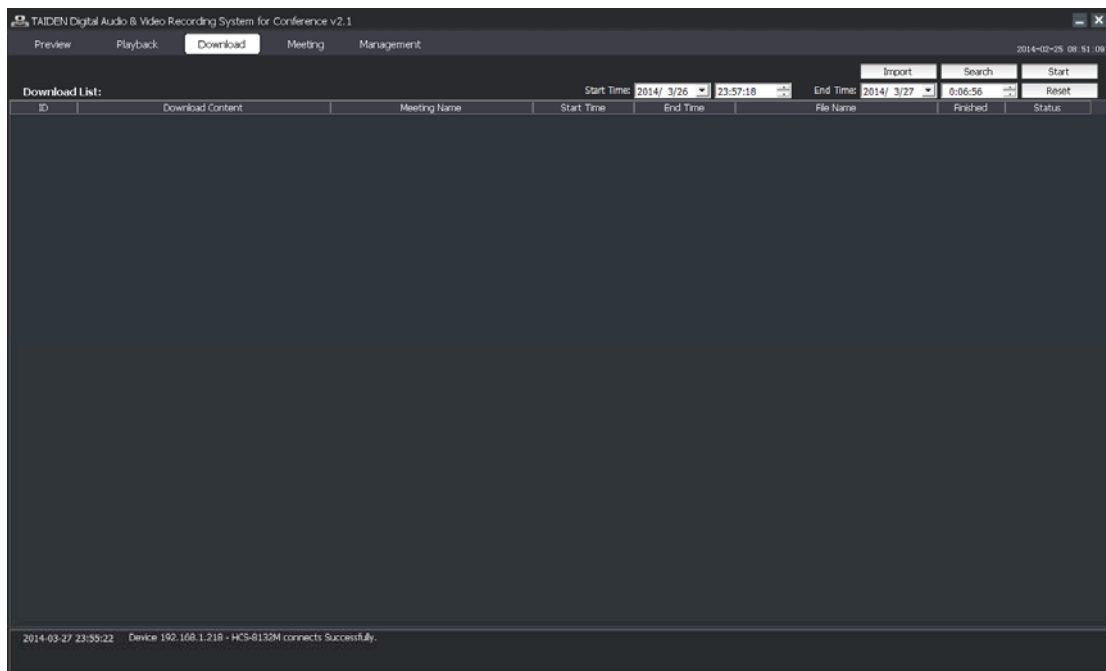


Figure: Download interface

First click “Import” button to open file list. We can use “only show associated device meetings” function to list corresponding meeting files only.

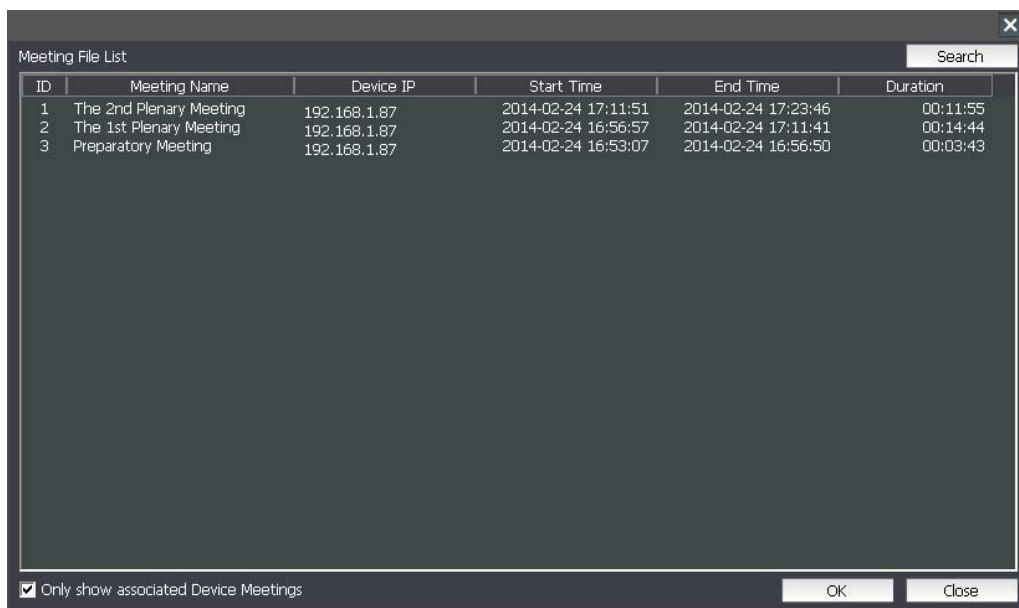


Figure: Select Meeting

Then select a file and click “OK” to open configure interface. Configure the parameters and select the file format(“*.mp4” or “*.aac”), then click “OK” to begin downloading. If you need more video channels, please configure them one by one. You can also select the partition time(10min, 30min, 60min, 90min or 120min) as stated capacity to partition the file into some sections, they will be saved into the save folder (the default name is the meeting name and can be user defined). Otherwise, user can also select the event type(Speak Info., SI Info., Proposal Info.) they want to download.

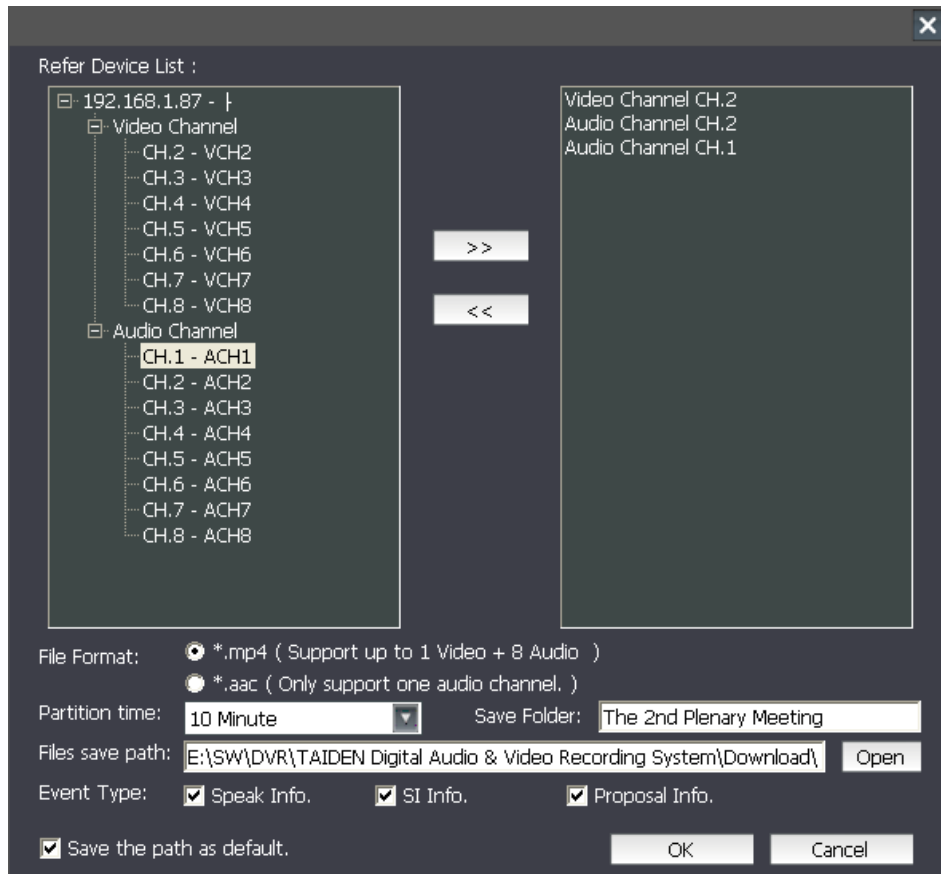


Figure: Configure Download Parameters

After configuration, system ticks off conference automatically, video channel and audio channel can be changed, and file name can be modified too in download interface. At last, click “Start” to start downloading files.

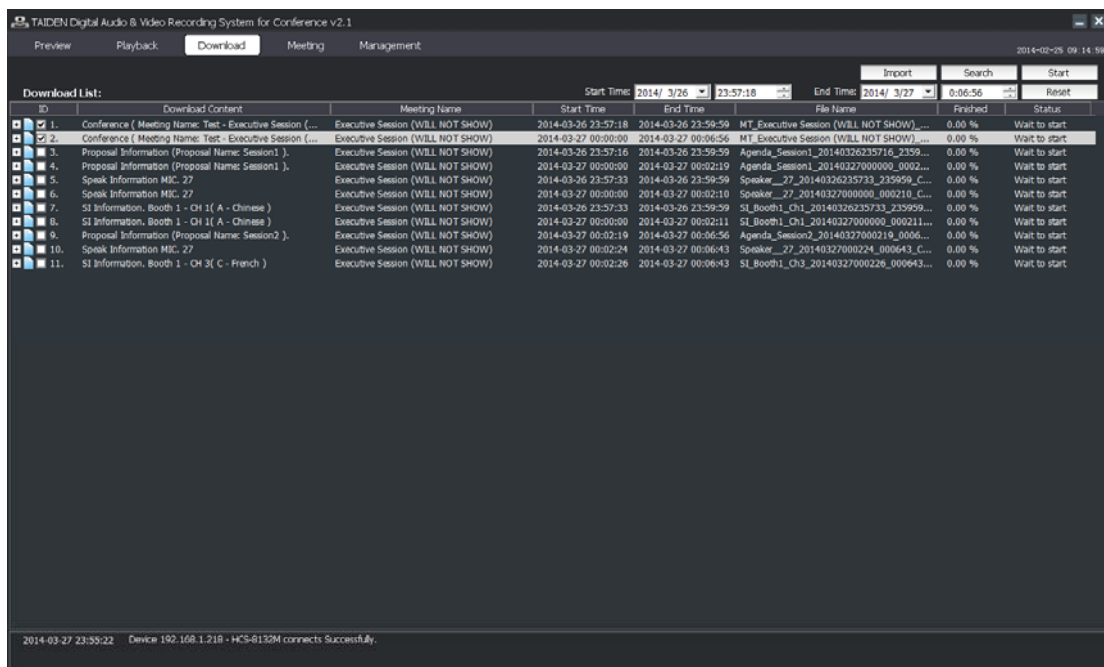


Figure: Download interface - configured

Note:

- ☞ When a meeting time spans more than one day, it will be listed in days, generating one record for every day.
- ☞ The audio channel can not be changed when the file contains more than one audio channel.
- ☞ Do not cancel any file in the download list after importing a conference.
- ☞ The audio of download file is stereo, if you use the third-party player to play, you should select only one track.

We can use “Search” function to find meeting information file of a selected meeting quickly, supports searching by speech information, SI information or proposal information.

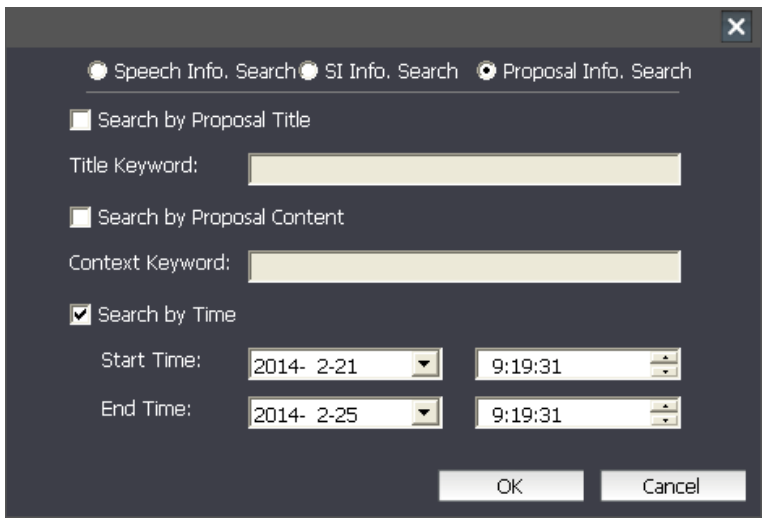


Figure: Search Meeting Information

Select and write down a searching condition, then click “OK” and the meeting information will be displayed on the Download List.

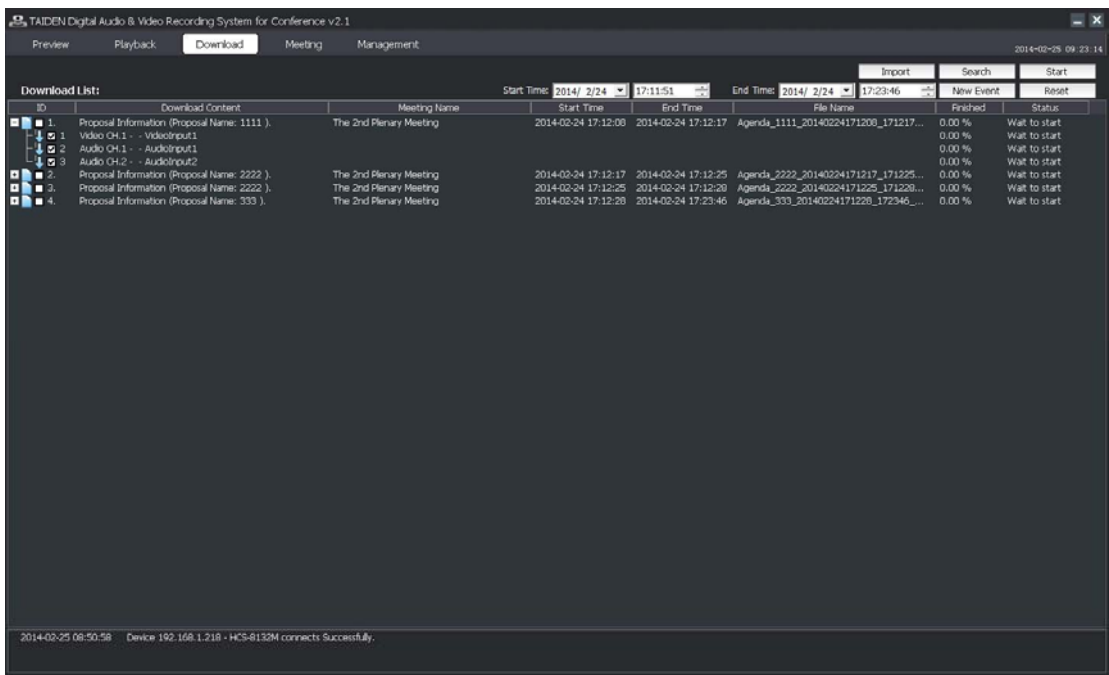


Figure: Meeting Information

Note:

When a meeting time spans more than one day, the search results will be listed in days, generating one record for every day.

We can also define a new event from the selected conference by setting up the start time and end time, then click “New Event” to build a UserDefine information. Click “Reset” to return to the time of conference.

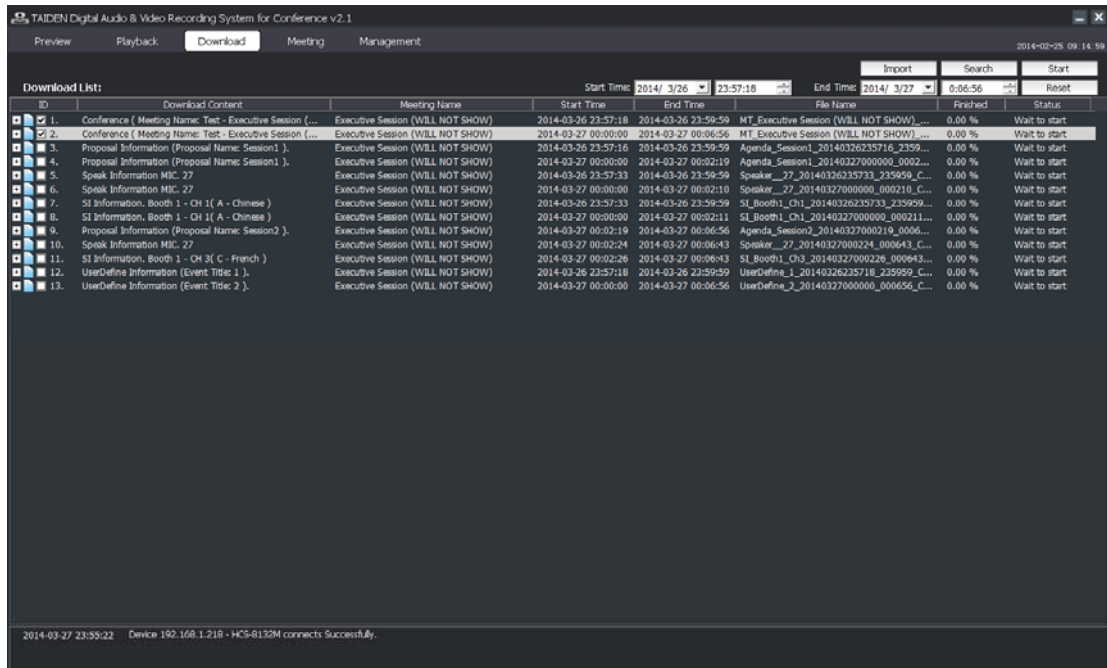


Figure: UserDefine Information

Note:

☞ If the meeting time spans that we set up more than one day, the userdefine information will be listed in days, generating one record for every day.

Chapter 4: Specifications

4.1 Physical characteristics

Types	HCS-8130M series
Installation	Tabletop / standard 19-inch rackmount
Dimensions (mm)	<p>Technical drawing showing dimensions of the HCS-8130M series device. The device is shown from a top-down perspective and a side perspective. The top-down view shows a width of 478 mm and a depth of 430 mm. The side view shows a height of 324 mm and a thickness of 99 mm. The front panel features a display screen, several buttons, and a control panel with multiple indicators.</p>
Color	White
Weight	6.6 kg

4.2 Electrical characteristics

Types	HCS-8130M series
Video compression	H.264
Harddisk capacity	Up to 4 harddisks, each disk ≤ 2 T
Video input (composite video, for HCS-8131M and HCS-8132M)	1 Vpp/75 Ohm, BNC connectors, PAL: 704×576 / NTSC: 704×480
Video input (VGA)	0.7 Vpp/75 Ohm, female 15-pin HDF, up to 1400×1050@60 Hz
Video input (SDI, for HCS-8133M and HCS-8134M)	0.7-1.2 Vpp/75 Ohm, BNC connectors, up to 1080p30
Video output (VGA)	1 channel VGA, resolution: 800×600@60 Hz, 1024×768@60 Hz, 1280×1024@60 Hz, 1440×900@60 Hz
Video output (HDMI)	1 channel HDMI, resolution: 1920*1080i@50 Hz
Audio input	2 Vpp/1 kOhm, BNC connectors
Audio output	Linear electrical level/1 kOhm, RCA connectors
Audio compression	AAC
Communication interfaces	RJ45 10M/100M/1000M self-adaptive Ethernet interface, RS232 port
USB interfaces	USB 2.0, supports USB flash memory, USB HDD, USB CD-R/W, USB DVD or USB mouse
Power supply	AC 100 V-240 V, 50 Hz/60 Hz
Power consumption (excl. harddisk)	20 W - 50 W

Appendix A: Calculational Methods of Total Harddisk Capacity

Base on the record schedule, you can calculate the total capacity of a DVR.

The calculational methods:

Step 1: Use the formula (1) to calculate the storage capacity q_i of a single channel in a hour, units: MByte.

$$q_i = d_i \div 8 \times 3600 \div 1024 \quad (1)$$

thereinto: d_i - bit rate, units: Kbit/s

Step 2: Make sure the record schedule, use the formula (2) to calculate the storage capacity m_i of a single channel, units: MByte.

$$m_i = q_i \times h_i \times D_i \quad (2)$$

thereinto: h_i - recording time per day, units: hour

D_i - days for saving the kinescope

Step 3: use the formula (3) to calculate the total capacity q_T of all channels.

$$q_T = \sum_{i=1}^c m_i \quad (3)$$

thereinto: c — the total number of channels with a DVR

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