TOA

IP-1000 System Management Software   IP-1000S

Thanks for your purchase of TOA products IP-1000 series.
Please read the manual carefully to ensure the machine operating in long time and fault-free.

TOA Corporation

Contents

Chapter 1

Summary

1.1 Feature

IP-1000 series IP network broadcast products are completely different from the traditional, FM addressable and numerical control PA system products. It based on the general network platform, and add the independent intellectual rights of digital audio technology, and it embodies its remarkable advantages in many aspects.

● Transmission aspect: the audio transmission distance is limitless extension, which can running on across the gateway of LAN and Internet, and support widely range of important applications, control the broadcast from the main campus to branch campus, simultaneous broadcast from enterprise headquarters to each branch area, it will realize the rapidly and reliably information communication. Every road program occupy bandwidth 0.1Mbps only.

● Tone quality aspects: terminal output tone quality close to level CD(44.1K, 16bit),which is more suitable for music appreciation and listening practice, such as the college entrance examination, CET 4 and 6 listening broadcasting, every pronunciation is very clear, you won't plagued by unclear voice no longer.
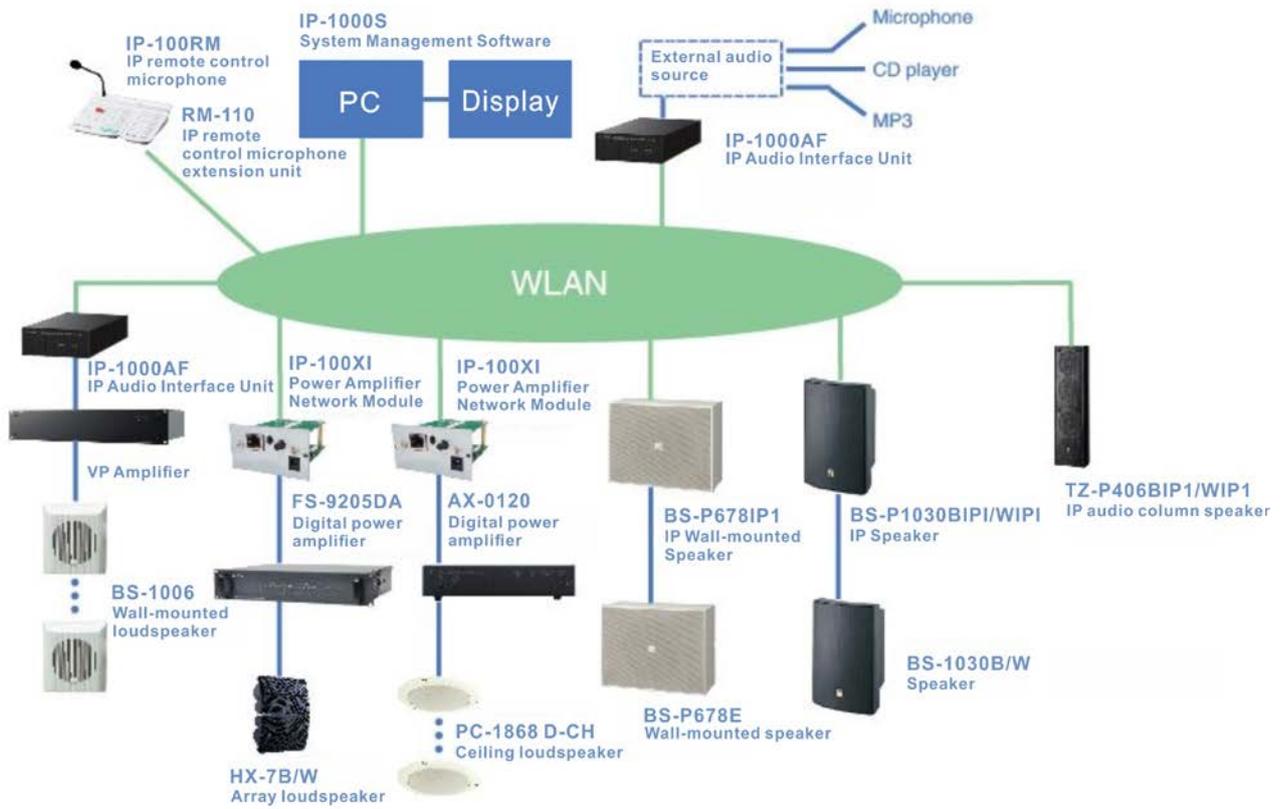
1.2 Function Description

Function	Description
● Covering the traditional PA system all functions.	Including the speech broadcasting, background music and timing ringing,...etc.
● Timing program playing	Uploading the required music to the server and make a play schedule, then the system would work automatically as per the schedule, and the terminal can receive the programs independently.
● Arbitrary choose paging	It can assign all zones, partial or a single terminal broadcast paging through IP paging microphone or workstation. The workstation software also support remote paging across the Internet.
● Audio real-time broadcast	Make the external audio (cassette, radio, microphone...etc) connect to the audio server to compress in high quality data flow, and send broadcast data through the network, the terminal can receive the broadcast it in real-time.
● Free AOD	Operate the terminal through remote control or control panel to realize the music AOD playing from the server, LCD screen display the catalogue, it can fast forward, backward and repeat, the operation is simply and convenient.
● Fire linkage	System access the fire protection alarming signal to realize the fire linkage, and support for the next layer alarming. The terminal with force switching function, it can control three -wire voice control device.
● Audio material making	Realizing the digital material recording, switch, and editing. System server can save music program for thousands hours.
● Other functions	Program monitoring, any terminal can be set as sound monitor to monitor the other terminal`s broadcasting programs; wireless remote control can remote control the program stop and playing.

1.3 System diagram

1-3

IP-100RM
IP remote control microphone

RM-110
IP remote control microphone extension unit

IP-1000S
System Management Software

PC — Display

Microphone

External audio source

CD player

MP3

IP-1000AF
IP Audio Interface Unit

WLAN

IP-1000AF
IP Audio Interface Unit

VP Amplifier

BS-1006
Wall-mounted loudspeaker

IP-100XI
Power Amplifier Network Module

FS-9205DA
Digital power amplifier

HX-7B/W
Array loudspeaker

IP-100XI
Power Amplifier Network Module

AX-0120
Digital power amplifier

PC-1868 D-CH
Ceiling loudspeaker

BS-P678IP1
IP Wall-mounted Speaker

BS-P678E
Wall-mounted speaker

BS-P1030BIPI/WIPI
IP Speaker

BS-1030B/W
Speaker

TZ-P406BIP1/WIP1
IP audio column speaker

Chapter 2

Software Installation

2.1 Server software installation

IP-1000 system management software consists of two parts, the server software and workstation software.

2.1.1 Server software installation

⚠ **Warning: Some firewall software may effect IP network audio system software operation, so please close all the firewall software(including Windows XP built-in firewall) to debugging broadcasting. After debugging, then set the firewall(exception) to allow audio system software access to network.**
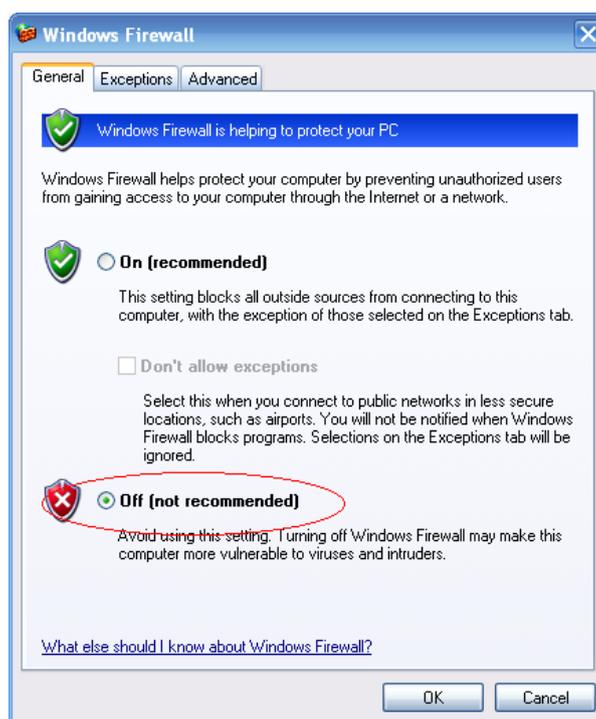
2.1.2 Operating environment

- ◆ CPU: P4 1G or above

- ◆ Hard disk：20G hard disk or above

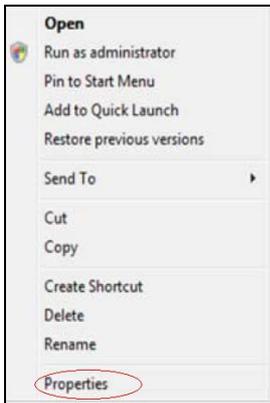- ◆ Memory：512M or above

- ◆ Network card：10M/100Mself-adaption

2.1.3 Running server software

This software supports Windows XP (including) and above operating system:

➢ Windows XP suggest to use professional version.

➢ **If you need to use Windows 7 operating system, please set [compatibility] option follow below steps to ensure the software in running well.**

Step	Operation	Diagram
1	Right-click server icon	
2	Select "running the program as administrator".	
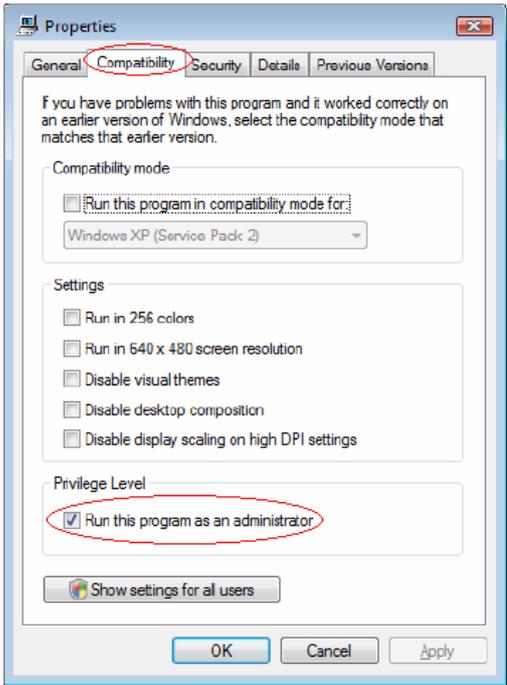
➢ **If you need to use Windows 2008 Server (32/64 bits) operating system, please set as following steps:**

Step	Operation
1	Right- click "computer", select "manage" in popping menu to start server manager.
2	From [server manager] window to select [function], select [add function] from right window, choose [desktop experience] in popping [add function guide], press [install] button for installation.

2.1.4 Installation steps

Step	Operation	Diagram
1	Ensure computer with 100M network card, and the drivers install correct;	
2	In the network card TCP/IP setting, designed IP address (e.g, 192.168.0.6), subnet mask 255.255.255.0, and gateway (e.g., 192.168.0.1). ☼ **Note: The server must use fixed IP address. It can't automatic again, please consult the user network administrator to get the available fixed IP.**	
3	Inserting the system installation CD, double click on the "Setup IPNBS_V1.0.0(160706)_TOA.exe" to running the main program.	
4	After operate the main program, press the next step to right picture, delete [IP digital network PA workstation] option, then press next step until the installation is finished.	
5	Taking out the CD after the server software installation is finished.	
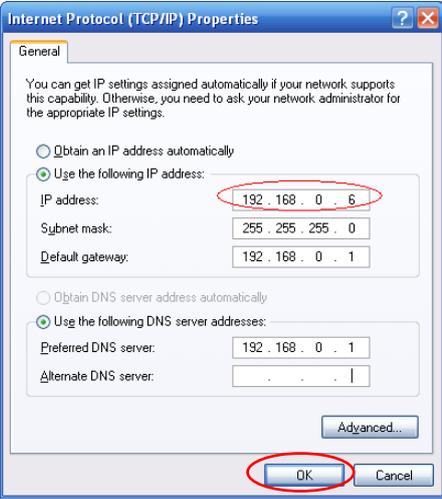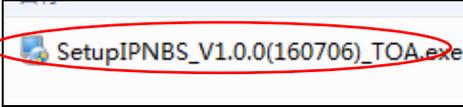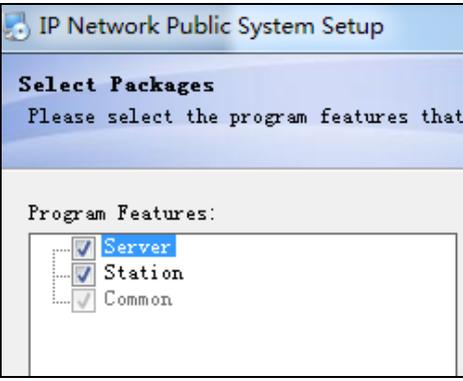
2.2 Workstation software installation

Workstation software usually installed in company available desktop PC or laptop, therefore the running environment is relax, it need equip with sound card if real-time broadcasting function is required.

Workstation and server installation process is almost same.

1   Check computer install Windows 2000/XP operating system or not, workstation software do not support Window98/Me.

2   Ensure computer with full-duplex audio card , and the driver install correct ;

3   Ensure computer with 100M network card, and the drivers install correct;

It can set as auto-obtain IP address from the network card TCP/IP setting. Please consult for available fixed IP If network doesn't configure DHCP service.

4   Inserting the system installation CD, double click on the "Setup IPNBS_V1.0.0(160706)_TOA.exe" to running the main program.

Press the next to delete [IP broadcast/intercom system software package] option from the program function interface and only remain [IP broadcast/intercom system software package], press the next until the installation completed, and generate the shortcut icon on the desktop.
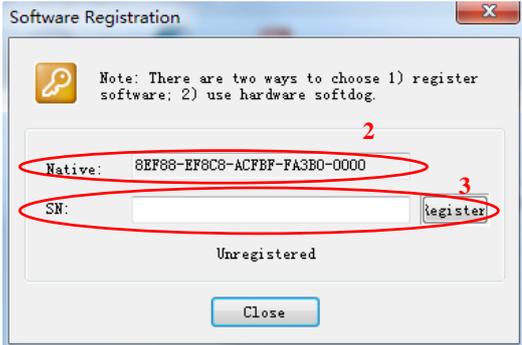
2.3 Software registration

User can authorized to use the official version server software through registration or install USB key.

Registration code

Step	Operation	Diagram
1	Running the server software, click on the "help" to select "software registration".	
2	**Registration code:** Please send Native code to supplier to ask the SN registration code.	
3	Fill in the supplier offered SN registration code and click on register. **Note: Demo software is unregistered, it only can connect up to 3 terminals.**	

Softdog

1	When the softdog cannot be detected by server software, it will automatically running the demo of three terminals;	
2	Directly insert the softdog to the USB port (no drive) of the server software PC, and then running the server software.	

softdog
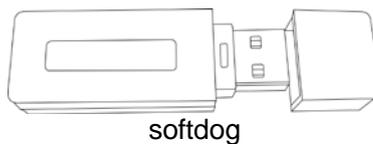
Chapter 3

Server Software Operation Description
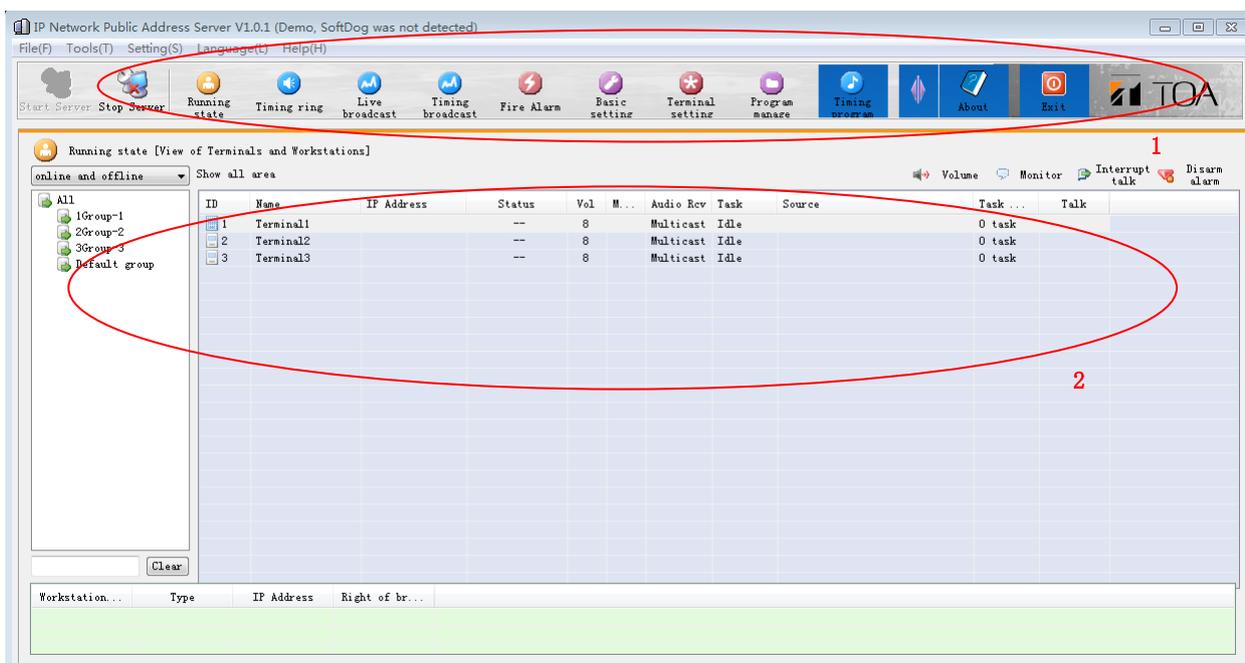
3.1 Main interface

Server software is the core of digital IP broadcast system software package, which is responsible for the audio stream on demand service, planning task processing, terminal management and authority management functions, it will provide the data interface service for the workstation.

The server main interface is divided into two areas: tool bar and page area.

1	**Toolbar**	It mainly controls [open service] and [close service], the service will be open automatically after the software run. If close service manually, the workstation and terminal request will not answer, the server only can complete the configuration work;
2	**Page area**	Display the relevant function interface according to the page selection;

3.2 Terminal setting

Terminal setting only operate during system installation, it do not need modification after finished debugging, here is a list of setting server steps for maintainer reference.

Step	Operation	Diagram
1	Select the【terminal setting】page as below. After assigned the terminal numbers, click on the【update】button and restart the software; 💡**Note: when revising the terminal numbers, the server software must be official version. Demo software can`t revise the terminal numbers, and it only support 3 terminals.**	
2	After restart the software, then back to the【terminal setting】page, left-click any one terminal，click【Edit】to appear 【edit terminal attribute】dialog box. It can modify the terminal name according to the terminal install location, and it also can set terminal functions based on the actual demands.	

3.3 Terminal attribute parameters

Parameters	Instruction

Advance Attribute
Audio Rcv：

Terminal audio receiving mode is multicast or unicast, the default is multicast mode, it need restart the software server if it revised the audio receiving mode.

Enable area:

Used for some terminal that with multiple subzones.

Broadcasting attribute

Mainly for the limits authority terminal setting, operation steps are as follow:

For example: in a campus, the grade terminal only allow to broadcasting to its grade terminals, we can modifying the【allowed broadcasting range】to【part】, and then open the【select terminal】button, selecting the grade terminal in the pop-up dialog box. It will effectively avoid inadvertently for other grade broadcasting and undesirable consequences.

【Broadcast priority】can ensure when multiple network microphones call to the same priority terminal, then the terminal with higher-priority can break the voice of the lower priority terminal.

Monitoring attribute
Mainly for the terminal setting authority, operation steps are same a "broadcasting attribute".
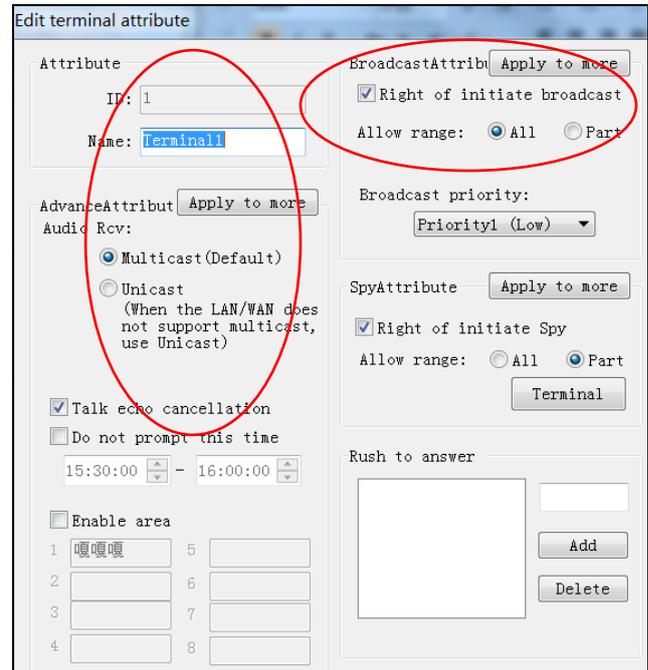
The important notice regarding "audio receiving" setting:

This system software send audio to the terminal by [multicast mode] at default, but the multicast cannot send it with the following two network environment.

◆ LAN environment, server and terminal is not in the same network segment (and the core switch forbid the multicast)
◆ WAN environment
💡Note: If the terminal with this two situations, please select [unicast way], otherwise the terminal cannot play out the voice.

Unicast and multicast comparison

Noun	Explanation	Advantage	Disadvantage
Unicast	One-to-one communication mode between the server and terminal, Network switcher only transfer the data but not copy. If ten terminals request the same data, the server should transfer one by one, and repeat for ten times.	Server can send different data to every customer based on their different request and easily to accomplish the personalized service.	Server sends data flow to every terminal, server flow = terminal number × terminal flow; the server with a big heavy load in the large terminal numbers and every large terminal flow.
Multicast	One-to-one group communication mode between the server and terminal, the host which has joined in the same team could receive all the data from the team, network switcher only need transfer and copy the data to the required user.	Customers who need the same data flow can join the same group and sharing a data flow, to saving the server load.	Most of device all support multicast transmission, but in many cases (especially WAN) limit the multicast use.

3.4 Zone setting

In the【Terminal setting】right page, it can press the right【add group】,【deleted group】、【add Area】, 【add shadow】button according to the basic requirements, setting zone is mainly used for the broadcasting zone selection.
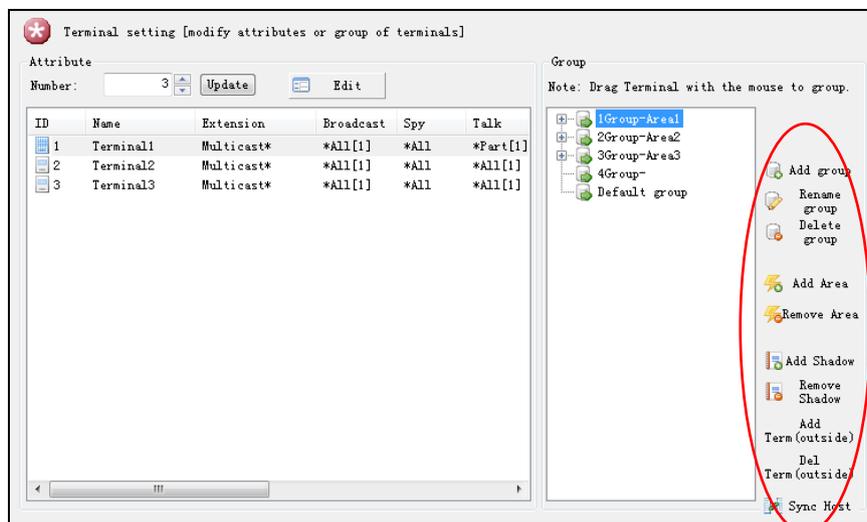
Build zones:

Choose the target terminal, press and hold the mouse left button, drag to the appointed zone (eg: office building).

⚡ **Note: if you need multi select, you can press the keyboard button of Shift or Ctrl.**

Shadow terminal

If the terminal need in multiple zones at the same time (e.g.: classroom 301 terminal is belong to high grade one zone and high school zones), you can add the shadow terminal to realize.

Step	Operation	Diagram
1	On the right side of【terminal setting】page, select the terminal (e.g.: classroom 301), press [add shadow]button.	
2	Press the mouse to choose the shadow terminal from the original zone (e.g.: classroom301 (shadow), press and hold the left mouse button, drag and drop to the specified zone ⚡ **Note: the interface displayed name is for some engineering case, it`s for demo only, the user can freely modify it.**	
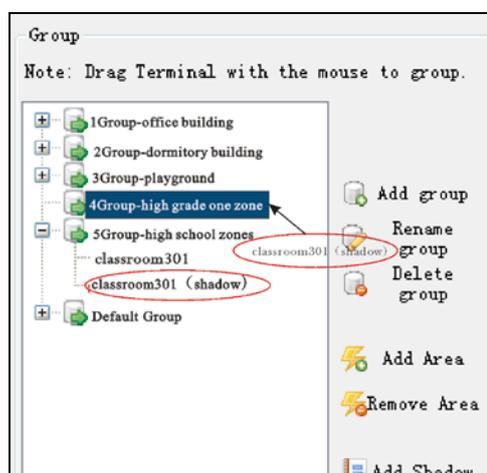
3.5 Basic setting

Select 【basic setting】page interface as following.

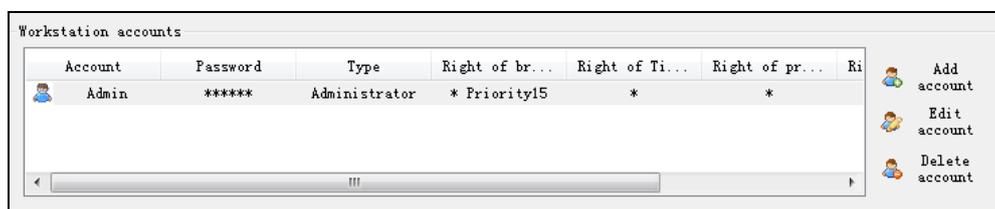| Menu	Description
Bind Network Card	When the server have multi network cards, please assigned one network card for digital broadcasting use.
Task Interrupt	When the terminal perform multiple tasks at the same time, it can judge which task to execute at first by priority.
Audio output	Choose "sound gradually increase", the voice output naturally.
Appoint Sniffers	Assigned a terminal as a monitor, you can monitor any one from the [running state] page.
Timing automatically switches computer:	Timing switch computer: making the server auto-close at night and turn on in the morning. ● Open: click "power-on setting" to open the help document, setting auto power on time according to the prompt. ● Close: setting the computer power off time. ● Enable Tray: after selected, program will be minimized to tray.
Wireless remote controller	If the user select equipped with a wireless remote controller, please make the wireless receiving module connected with the server through serial port, and set up the communication serial port number, press 【Take effect】button after finished setting.
Fire alarm device	If the user select the fire alarm siren, please make the fire alarm siren connected to the server through the serial port, and set the communication serial port number , press 【Take effect】 button after finished setting.

3.6 Workstation management

Login account in workstation is for the use of the software administrator and the common use to assign the account and password, it need enter the user account and password to login server software from the workstation.
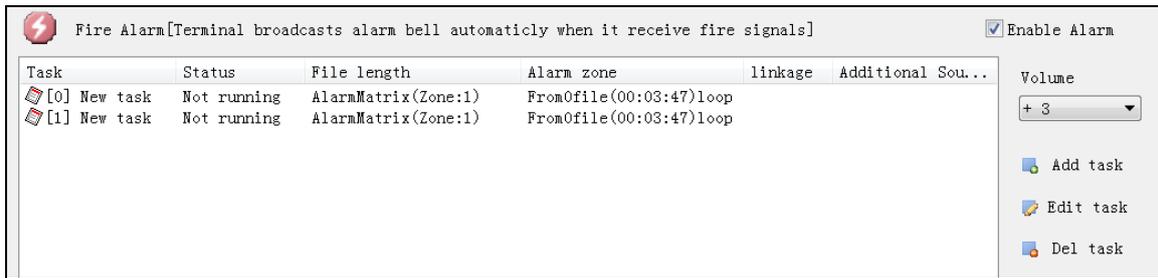
Add users

Step	Operation	Diagram
1	Fill in the user name.	
2	Set a password.	
3	Select users' category: "Administrator" and " common user" this two options, please select one according to the practical situation.	
4	Set user function permission and priority. Priority: when multiple workstation is broadcasting at the same time, if select the same target terminal, the system will decide to receive which workstation`s audio according to the priority of the terminal. The highest priority is level 16 ,it`s used for fire protection, so the fire duty room workstation users set to 16 levels; The administrator is default for level 15 ; The ordinary users for 1-14 level;	
5	Set operating range.	

3.7 Fire alarm

Select【fire Alarm】page, the interface page as following:

```
  Fire Alarm[Terminal broadcasts alarm bell automaticly when it receive fire signals]    ☑Enable Alarm

Task          Status        File length         Alarm zone              linkage   Additional Sou...   Volume
📄[0] New task  Not running   AlarmMatrix(Zone:1)   From0file(00:03:47)loop                              + 3
📄[1] New task  Not running   AlarmMatrix(Zone:1)   From0file(00:03:47)loop

                                                                                                        🔲 Add task
                                                                                                        📝 Edit task
                                                                                                        🔲 Del task
```
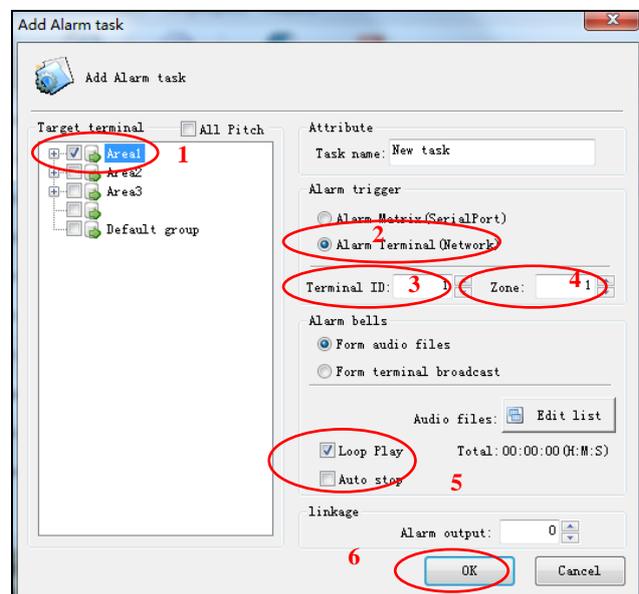
Menu	Description
Enable fire alarm	Fire alarm master switch, fire alarm can be opened if selected, fire alarm will be closed if cancel the selection.
Volume adjustment	Can make the task volume specialization, it`s suitable for different time with different volume.
Add task	Add fire alarm task.
Edit task	Modify the added task.
Delete task	It can manually delete task.
Manually execute	Click "manually execute" button to running the target task.
Manually stop	Click "manually stop" button to stop the running task.

Add fire alarm task

Step	Operation	Diagram
1	Select the target terminal, corresponding alarm area and alarm port, such as【alarm terminal (network)】 port 1 are connected to the alarm line of the "office building", thus the target area should select "office building" (or a terminal of the region).	
2	Select alarm trigger device: Alarm matrix (serialPort): the terminal is not incorporated into the server, it directly connected to the computer. Alarm terminal (network): the terminal connect to the server through the network. Trigger device default is "alarm terminal (network)".	
3	Fill in terminal ID number.	
4	Fill in port number.	
5	Select audio file.	
6	Set audio file broadcast way.	

Right task key operation

After selected the target task, the right of mouse button can perform the terminal binding and the shadow task in the pop-up menu.
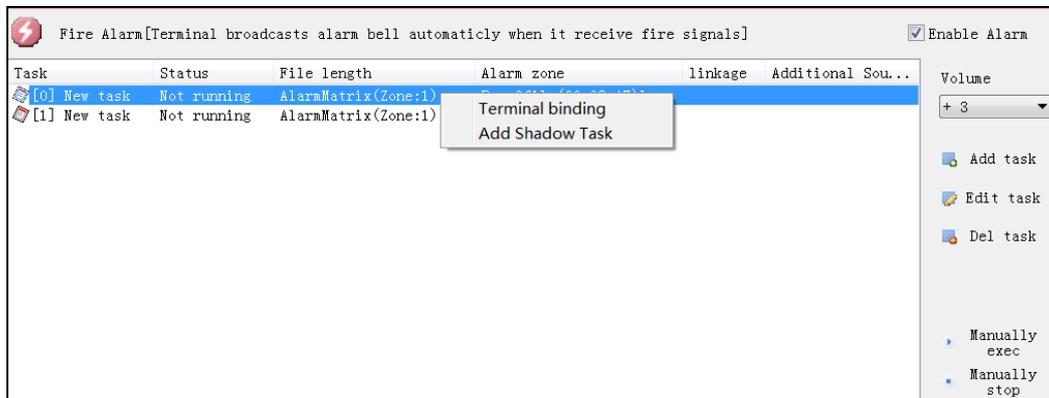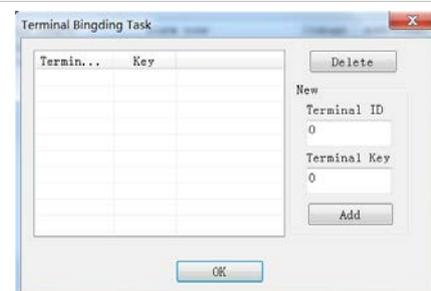

- Terminal binding

  Inputting the terminal number and button in the pop-up dialog box and then clicking OK.

  Terminal binding is effective for single task   only.

  After binding the terminal, press the corresponding button of terminal to manually execute or stop corresponding fire alarm task.

- Add the shadow task

  （1）Selecting the target task
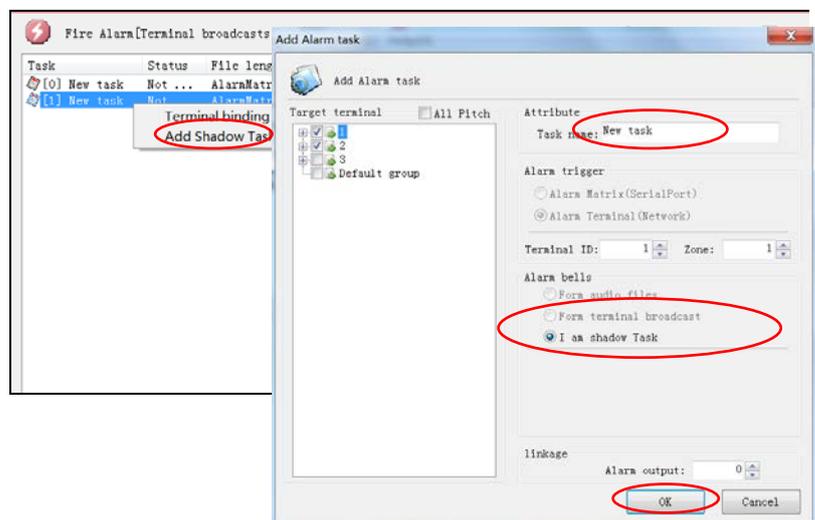
  Note: the fire alarm task NO.[0] cannot add shadow task.

  （2）Right clicking the target task, selecting "add shadow task".

  （3）Selecting the target areas of shadow task in the pop-up dialog box.

  （4）Named for the shadow task.

  （5）Selecting the trigger device of shadow task, and input the ID and port number on it.

  （6）Click OK.

Controlling input trigger fire alarm task

Step 1. Adding the fire alarm task in the server.

Step 2. When the terminal alarm input is short circuit, the server will execute corresponding timing broadcasting task.

When the terminal alarm input is disconnected, the server will stop timing broadcasting task.

3.8 Program management

Program management can newly-built menu, add file, rename and delete file to the program libraries in server.

Press【Folder】button, assign the file position in pup up dialog box, then press【Search】button to set up the program library automatically.

3.9 Timing ringing

Select 【Timing ringing】page, page area as follows.

- Exec scheme   Manually select timing ringing task solution.

- New scheme   New-built timing ringing solution.

- Edit scheme   Modify solution.

- Del scheme   Manually delete solution.

- Automatic Switching   Select "automatic switching", software will automatic select the corresponding solution according to computer time.

- Add task   Add timing ringing task, please refer to following for operation steps.

- Edit task   Modify the added task.

- Delete task   It can manually delete task.

- save Index   Save the talk line sequence.

- Keep sequence   Click "manually execute" button to running the target task.

- Manually stop   Click "manually stop" button to stop the running task.

Note: It can manual add or delete the target terminal when the timing ringing task is running.

New Scheme

Press【Add new scheme】 to set the scheme name, start time, stop time, priority to create timing ringing scheme.
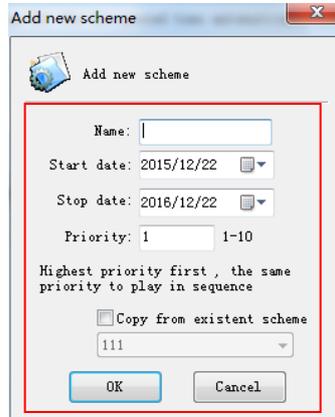
When the priority is the same, so the newly-built two different scheme`s "Start date" and "End date" should not be overlapping, that is the next one scheme should not include the last one scheme time as below picture:

After created like this rules, then the scheme will be execute by time in order.

When the newly-built scheme`s "Start date" and "End date" is overlapping, so it will execute the scheme by their Start date when their date is same and it will execute the scheme with earlier priority when their with same priority.

e.g.: There have "111" and "222" this two scheme on 2nd-Dec-2015, then the system will execute the higher priority"222" scheme as below picture:

Note: To ensure the scheme can execute well and switch on time, so it is suggested to newly-built the scheme as above operation

Add task

Press right side【add task】button and pup up a dialog box, add timing ringing task as following steps.

| Step	Operation	Diagram
1	Select target terminal.	
2	Set task name.	
3	Set time: 3.1 You can choose daily task、weekly tasks、one time task from the task type, the school use the weekly tasks at most. 3.2 Assigned the open/close date、the task execution time. 3.3 The task executing time can be unspecified by default, so the playing time will be the same as the ring time. If the specified time is longer than the ring time, then it will be loop playback; If the specified time is shorter than the actual ring time, then it will be terminated playing in advance. 3.4 The end date can be unspecified by default, the task will be detected whether it`s meet the playing demands or not every day.	
4	Select audio file.	
5	Set expand Attribute: Contain mandatory switch signal: It will create a short circuit signal when the timing task is running, it`s used to control the target zone terminal signal output.  Power Amplifier only control: When the timing task is running, make the target zone terminal used as the power control, but not play the voice.  Volume inching: It can make the task volume specialization, it`s suitable for the different time with different volume.eg: the shopping mall background music volume should be smaller at morning, and the volume should be bigger at afternoon. Remote control: Remote operate the task starting and stopping by wireless remote control, the remote control button set value is corresponding to the 12 numeric buttons.	

Fulfill the ring task parameters, press 【OK】to exit the dialog box, the list will display the new added task, it will auto-execute at the assigned time, it also can use manual operation for special situation.

Right task key operation

After selected the target task, the right of mouse button can perform the batch copy & paste and terminal binding in the pop-up menu.
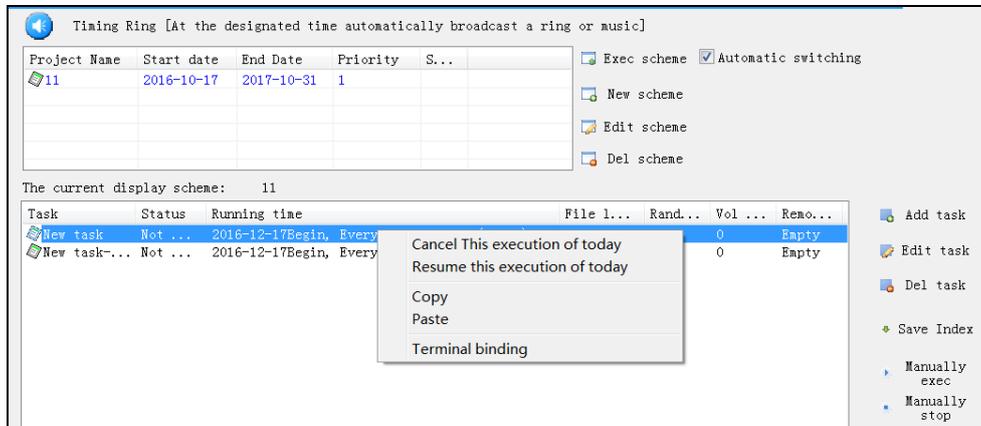
- Cancel today execution

  Setting the target task is not execute today, which is effective for one task only.

- Resume today execution

  Resume the target task to automatically running today, which is effective for one task only.
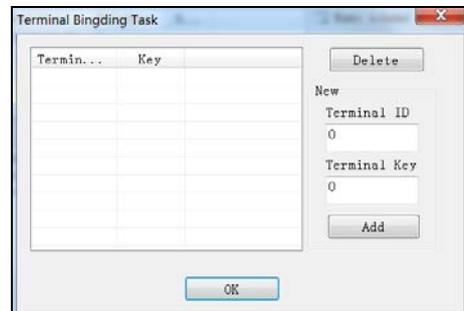
- Copy

  batch copy task

- Paste

  Paste task

Terminal binding

Inputting the terminal number and button in the pop-up dialog box, and then clicking OK.

Terminal binding is only effective for one task.

After binding the terminal, press the corresponding button of terminal to manually execute or stop corresponding timing ringing task.
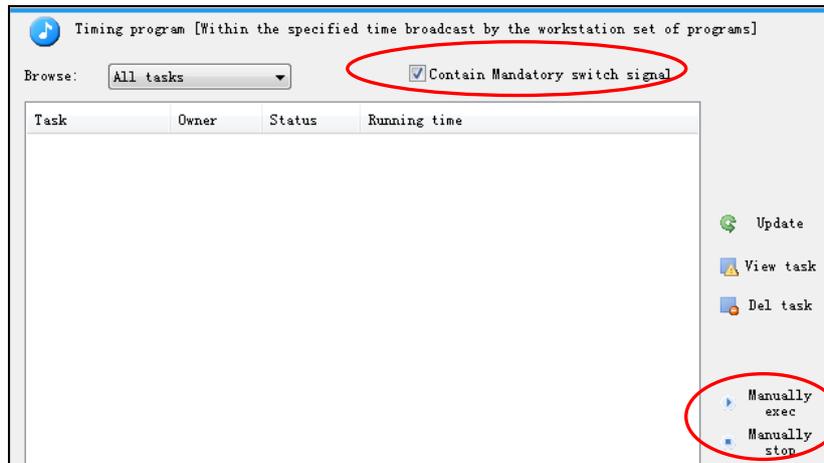

Note: timing ringing task can manually add or delete target terminal during the running.

3.10 Timing program

- Checking the timing program task from the server, but the main adding and editting operation should be execute from the workstation.

- Choose【timing program】page as following picture. Double click any one line can check the detailed information.

- Task program will be automatically execute like the timing ring task at the assigned time, it also can use manual operation for special situation.

- If choose【contain mandatory switch signal】,when the task in operating, it will control the target forced switchover the signal output at the same time.

3.11 Timing Broadcast

It will make the broadcasting automatically at the specified time through the sound card or the terminal collect the audio, it will auto-open the collect audio and broadcasting function when the sound source is from the sound card, it`s mainly used for external analog audio timing broadcasting, such as the morning news from radio.

Select 【timing broadcast】page to click【add task】as below picture:

| Step	operation		Diagram
1	Select zone;		
2	Naming for timing broadcast task;		
3	Set time(specific steps can refer to timing ringing time setting)		
4	Select expand attribute:		
	The parameters for the soundcard and recording (such as the recording source, recording volume, etc) should beset from the "Live broadcast" page at advance.		
	When select the terminal, server will collect corresponding terminal voice for broadcasting within the specified time, such as terminal initiated radio voice, sound console voice and etc.		
5	Click for confirmation.		

Note: extended attribute can be selected according to the actual demand.

Pressing the key 1 to execute the first timing broadcasting task on the server, repressing the key 1 will stop the timing broadcasting task.

Right task key operation

After selected the target task, the right of mouse button can perform the batch copy & paste and terminal binding in the pop-up menu.
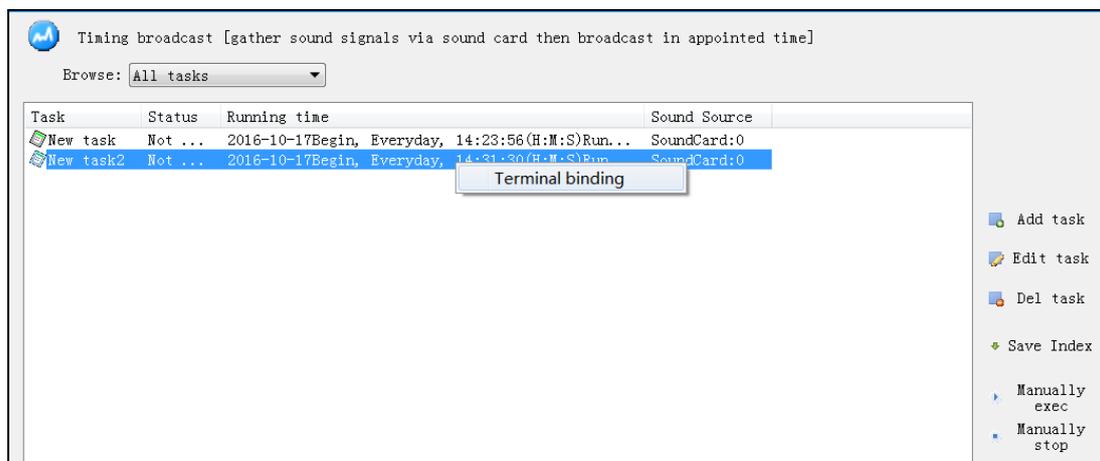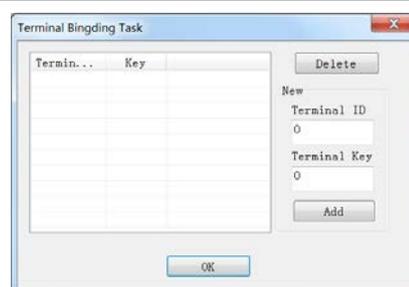

- Terminal binding

    Inputting the terminal number and button in the pop-up dialog box, and then clicking OK.

    Terminal binding is only effective for one task.

    After binding the terminal, press the corresponding button of terminal to manually execute or stop corresponding timing broadcasting task.


Controlling input trigger timing broadcasting task

Step 1. Adding the timing broadcasting task in the server.

① Appointed the trigger terminal, and fill in the ID number.

② Sound source select the appointed audio source of terminal (line or MIC input), the ID number is the trigger terminal one.

Step 2. When the terminal alarm input circuit is shorted, the server will execute corresponding timing broadcasting task.

When the terminal alarm input is disconnected, the server will stop timing broadcasting task.
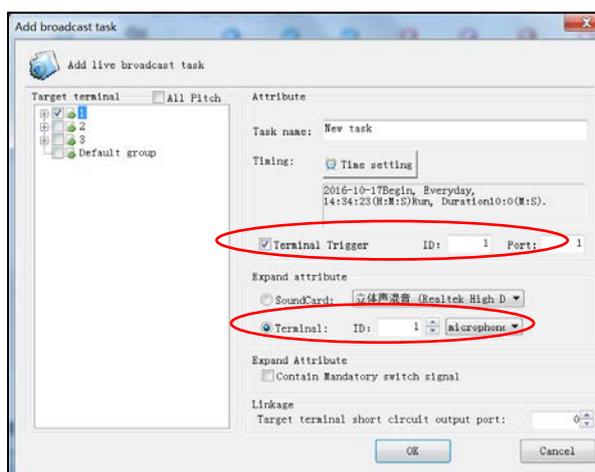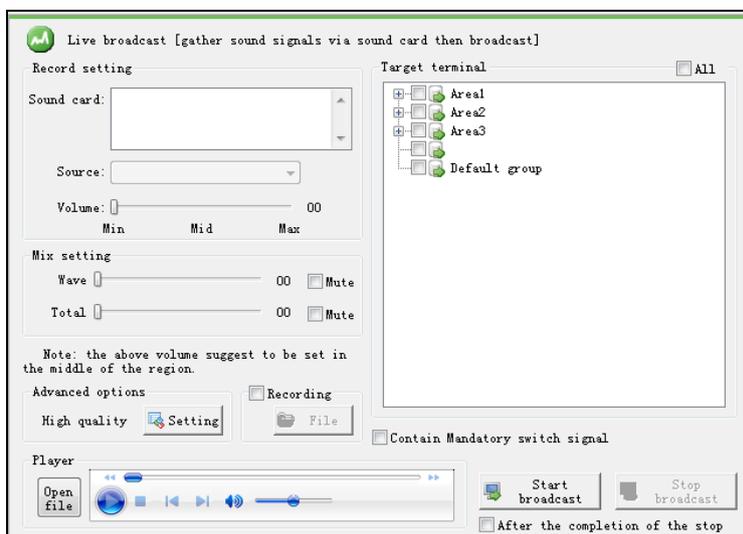
3.12 Live broadcasting

- Through the sound card real-time collect voice to broadcasting, due to the sound card to realize the analog audio switch from analog to digital audio, the sound source is wide, it`s including computer playing voice and external microphone, tape, CD player.

- The system support 5pcs sound card, and this 5 sound card can choose the different target terminal to make the live broadcast at the same time.

Menu	Description	Remark
Sound card	Sound card can make multiple audio (such as a microphone, line input) mixed to one audio input, it also can select one audio input . Note: Realtek HD sound card actually is one sound card only, but the "sound card" window will display two lines (Realtek HD Audio Input and Realtek HD Audio Output), please choose the audio Input this line.	Different models of the sound card for mixing indication is different, such as innovation SB - Live sound card, need to choose "the voice you heard"; Most integrated sound card choose "Stereo mixing" or "Stereo Mixer";
Source	Assigned the sound card audio input mode, If only required microphone sound, choose "microphone", then the other voice won't broadcast to the terminals. It`s usually suggested to set sound mixing mode so that all voice can be played to the terminal.	
Volume	Set recording volume, the volume should not be set too loud, otherwise arise the sound distortion. It is recommended to set it to the middle position.	
Mix setting	The sound mixing volume should not be set too loud, otherwise arise the sound distortion. It is recommended to set it to the middle position.	
High quality	Set voice quality.	
Recording	Sound card can collect the audio data through the external connected device write into the designated file designated file by audio file form. Note: the recording setting will be automatically saved, it is still valid for next time you start the program, it need not to be reset every time.	
Contain mandatory switch signal	When running the real-time broadcast task, it will generate a short circuit signal at the same time, it`s used to control the target area terminal cut signal output.	

Operating step：

1   Appointed sound card.
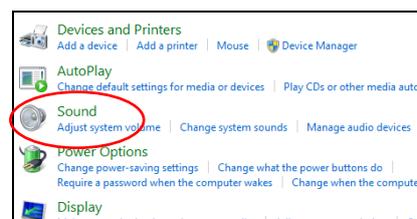
2   Appointed recording source.

3   Set recording volume.

4   Set sound mixing volume.

5   Set sound quality.

6   Appointed broadcast target terminal, it can zone selection from the catalogue, and also can single selection or select all zones.

7   Press 【start broadcast】to make real-time broadcasting of sound card audio data to specified terminal .

8   After finish, press 【stop broadcast】, If you select " auto-stop broadcasting after the playing completed", the software will automatically stop broadcast.

Note: win7 system "stereo mixing" sound card is hidden by default, if you need to enable "stereo mixing", please follow below steps:

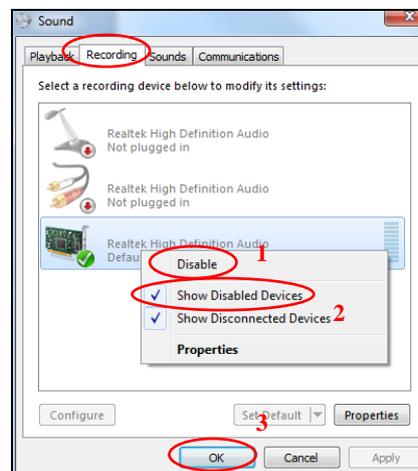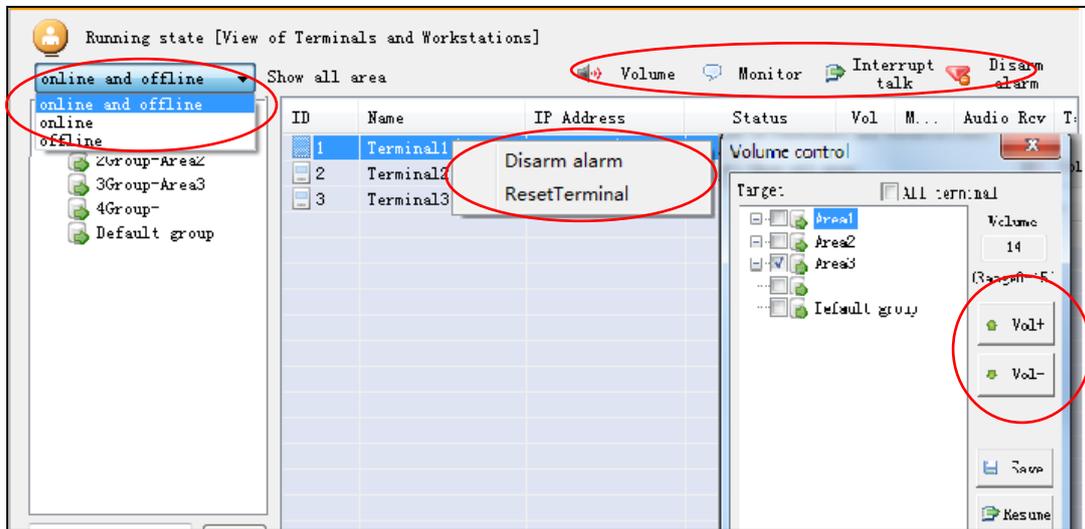|		
1	Open control panel, select hard ware and sound.	
2	Select sound.	
3	Select "recording" parameters to modify the setting: ①The right-click mouse "recording" parameters blank and select "display the disable device". ② The right-click mouse "stereophonic mixing" to start use "stereophonic mixing". ③ Click "OK".	
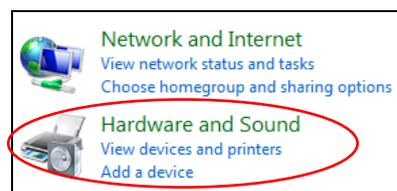
3.13 Running state

In 【running state】page, it can display the current intercom terminal status, such as: login status, the currently executing task...etc;

Double click any one line or press【volume】button, pop up volume control dialog box, we can adjust the corresponding terminal volume as following picture.

Menu	Description
Filter the display terminal	It can filter by the terminal on-line statues
Volume control	Vol+/-:Adjust the terminal volume temporarily Save: Set the present set volume value, the saved volume value is still valid when restart the server. resume: it will not save the current volume value
Monitor	Choose any one line, press the【Monitor】can monitor this terminal`s playing voice (except AOD) (when using this feature , it should be set the specified terminal as monitor from【Basic Settings】 interface at first).
Disarm alarm	When the terminal alarm port terminal with the signal input to trigger the alarm device, choose this terminal, click 【Disarm alarm】button can relieve alarm, if the server connected to the alarm device too, then it also can contact the alarm at the same time. **Note: It can use the mouth right button to realize alarm relieve**

 Note: The【Running state】 interface will display the logged workstation information, e.g.: account、category and so on.
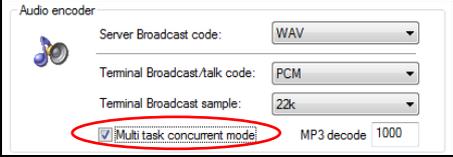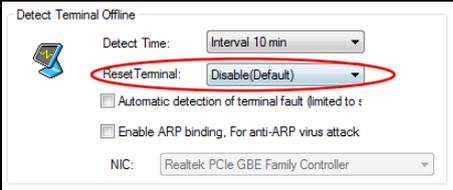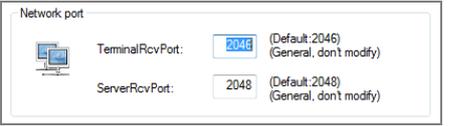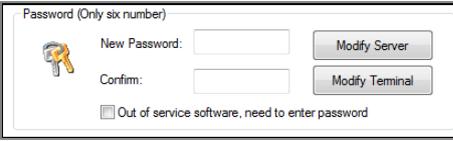
3.14 Setting (It is used for debugging personnel reference only)

Terminal IP address setting
Select "terminal IP setting" from server "setting" menu, enter server password, it can adjust the terminal IP address setting tool.
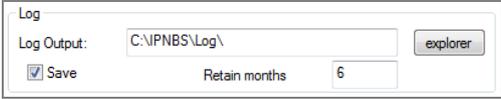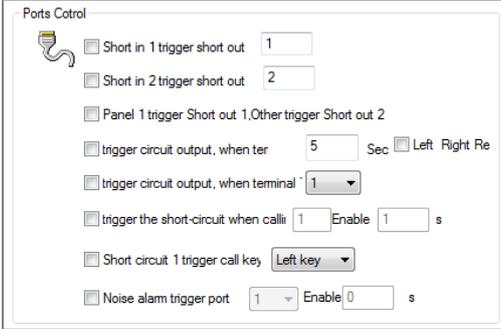
Advanced Setting
Select "advanced setting" from server "setting" menu, enter server password (default is 123456), it can adjust the advanced setting tool.

Parameters	Option	Description	Diagram
Parameters 1	Audio encoder	Server Broadcast code: support MP3 and WAV. Terminal Broadcast/Talk code: intercom or broadcast code, PCM means uncompressed data, ADPCM means compressed data (network data small). Terminal Broadcast sample: select broadcasting sample frequency. Multi broadcast concurrency mode: execute multicast missions at the same time, it`s suggestedto select.	
	Terminal Broadcast	Open terminal broadcast recorder: after selected it, the server will auto-record the broadcasting, recording files stored on the server record catalogue. Play prompt and synchronously control cut signal only valid for some terminals. It`s suggested to select "when IP paging mic to broadcast，play tone".	
Parameters 2	Detect Terminal offline	Detect time: set server detect terminal off-line interval time. Reset terminal: set server reset all terminals interval time, it is recommended to use the default setting (not reset). Automatic detection of terminal fault is only valid for some terminals. When the server computer with multi network cards, it`s required to use ARP binding options and assign the network card.	
	Network port	"Terminal RcvPort" and "Server RcvPort" is suggested to use the default setting.	
	Password	Modify the server software password: only modify the server password. Modify all terminals password: modify all server terminals password, all terminal passwords are the same after the password revised.	

Parameters 4	**Server backup**	Set the standby server: when main server can't work, the system automatically enabled the standby server.	
	Log	Set the log save path and time.	
Parameters 5	**Port control**	Set terminal short circuit input to trigger output and time...etc information.	

Server Backup
- ⦿ Main Server ○ Referral Server

Log
Log Output: `C:\IPNBS\Log\` [explorer]
☑ Save   Retain months `6`

Ports Cotrol
- ☐ Short in 1 trigger short out `1`
- ☐ Short in 2 trigger short out `2`
- ☐ Panel 1 trigger Short out 1,Other trigger Short out 2
- ☐ trigger circuit output, when ter `5` Sec ☐ Left Right Re
- ☐ trigger circuit output, when terminal `1` ▾
- ☐ trigger the short-circuit when calli `1` Enable `1` s
- ☐ Short circuit 1 trigger call key [Left key ▾]
- ☐ Noise alarm trigger port `1` ▾ Enable `0` s

Chapter 4

Workstation Software Operation Description

4.1 Basic introduction

Workstation software using IP network (LAN, WAN) remote login to the server to realize the remote management. It`s mainly check the terminal running status and complete audio broadcast at real-time, program resources management and timing program edit and playing functions, it can be used in the following situations:

● Leader is speaking to the terminal through the LAN or Internet.   Make the Mic analog audio signal access to workstation sound card to real-time collect and compress to make live broadcasting to the digital broadcasting terminal.

● The software receive online radio program, making the real-time broadcasting to the digital broadcasting terminal and making every digital broadcasting terminal could hear the online pure language radio program.

● The teacher play timing program before class. Instructor can pre-establish each class timing playing contents through the network. It can arrange the timing listening textbook contents in the morning and evening, it also can arrange to listen the similar class level or higher scene contents. Each class have their own personalized timing broadcast content.

● Workstation`s【running status】can remote view the server terminal`s relevant information, such as: login status、the currently executing task.
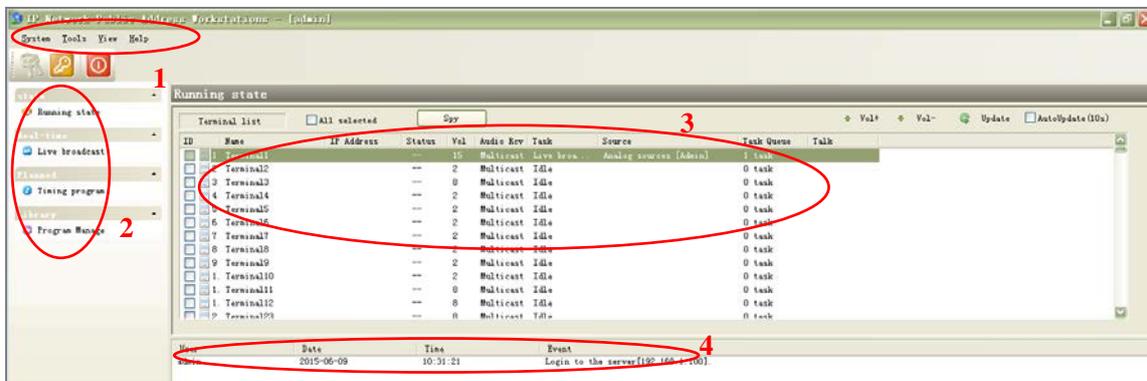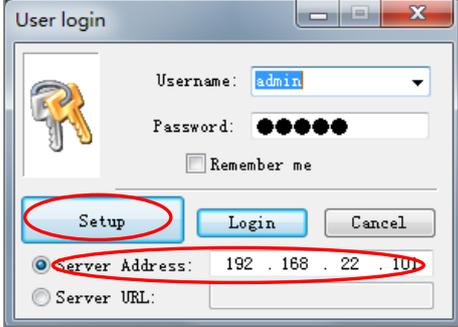

	Name	Description
1	Toolbar	It is main control [login] and [logout],the programs will automatically pop-up a login dialog when it`s running.
2	Page selection area	Select the function page
3	Page area	It will display the corresponding function interface according to the page selection.
4	Event status display area	It will display the execute event date and time.

4.2 Software configuration

Workstation software configuration is simple, it only requires to fill in the server IP address.

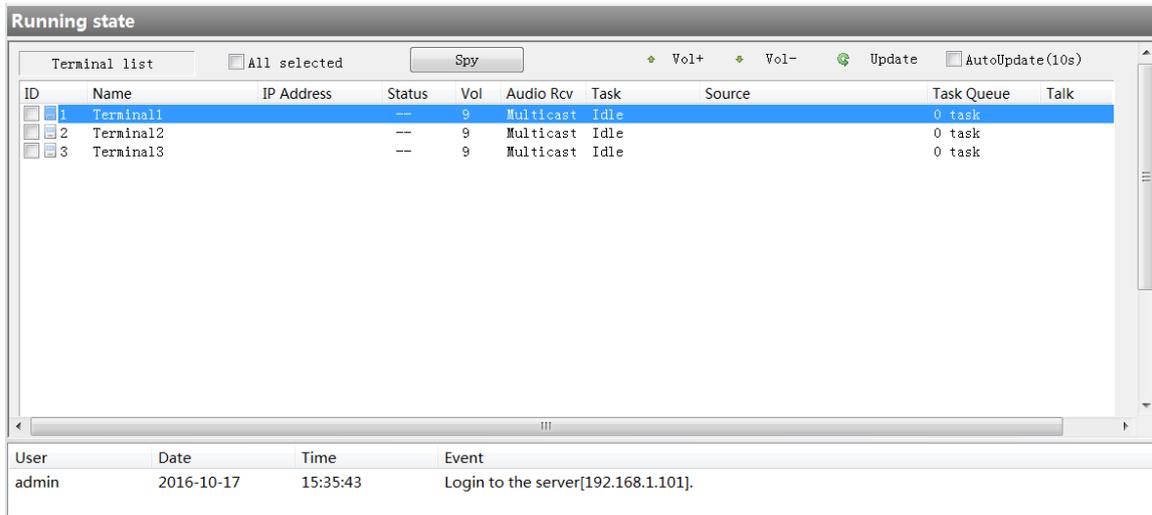| Step	Operation	Diagram
1	After run the workstation software, it will automatic pop-up a dialog box.	
2	Press [Setup] button to set the IP address (eg 192.168.22.101). Fill in the user's name and password then press [login] button, it will enter into the main interface if it`s correct.	

Note: The workstation`s user name, password and the permission all is managed by server.
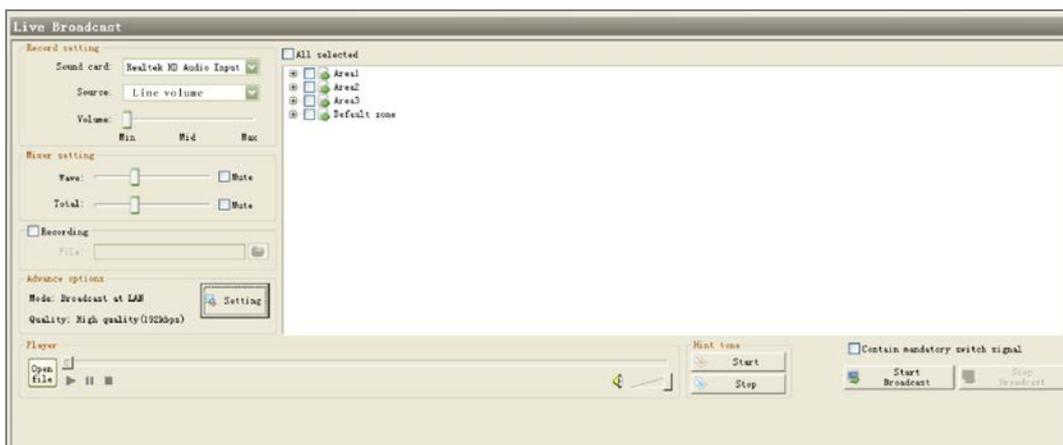
4.3 Running status

Similar to the server software【running state】function, it can display the current all terminal status, such as login status, the currently executing task...etc, it also can modify the terminal volume according to the request, pressing【volume + /- 】can complete the volume modify.

ID	Name	IP Address	Status	Vol	Audio Rcv	Task	Source	Task Queue	Talk
1	Terminal1		--	9	Multicast	Idle		0 task	
2	Terminal2		--	9	Multicast	Idle		0 task	
3	Terminal3		--	9	Multicast	Idle		0 task	

User	Date	Time	Event
admin	2016-10-17	15:35:43	Login to the server[192.168.1.101].

4.4 Live broadcast

The operation steps is same as the server live broadcasting, please refer to relative operation.

Menu	Description	Diagram
Recording	If the live broadcasting contents need save to a file, please choose[recording] and assign the saved file name information.	
Advanced Options	Since the workstation can login to the server from LAN and WAN, and the LAN with sufficient bandwidth, but the WAN with limited bandwidth. In order to make sure the real-time audio is fluent, please click(setting)button to choose the 【mode】 according to the actual situation.	
Line tone	It can choose whether play the prompt tone to the target terminal or not after the broadcasting is beginning.	

4.5 Timing program

Timing program is to play the assigned multiple audio files at assigned time in turn. It`s not require any human intervention after set finished.
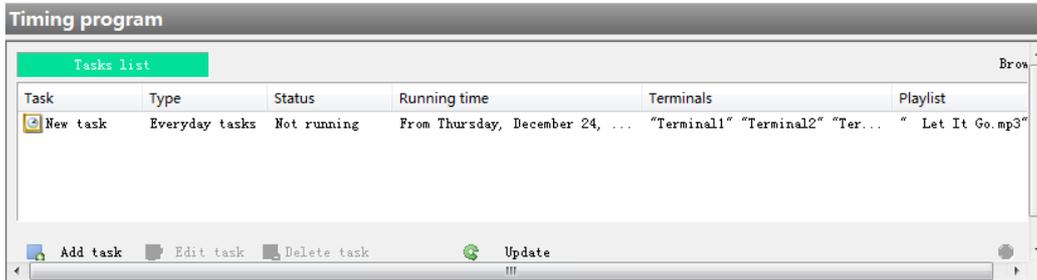
Menu	Description
Add task	Add timing program, operating steps as follows.
Edit task	Modify the added task.
Delete task	It can manually delete task.
Update task	Updating task list.
Manually execute	Click "manually execute" button to run the target task immediately.
Manually stop	Click "manually stop" button to stop the running task immediately.

Operation steps

| Step	Operation	Diagram
1	Press 【add task】 button, it will pop-up the add task window, set the basic information----task name, type,task start and finish time...etc.	
2	Select receive task terminal, it can zone selection,single selection or select all zones.	

3 | Click on the "folder" icon, it will pop-up the follow dialog box, Press shift or Ctrl button can add multi-program files at the same time(Note: It can`t add mp3 and WAV this two format file at the same time).

Note: this program library file is added from the server software 【program management】, please refer to the server "program management" for the detailed methods , it also can upload from workstation 【program management】.

Click [OK] after the file is selected, the selected files will be displayed in the program list, it can change the play sequence according to the direction up and down key.

Finally press 【OK】button, this task will be added to the 【timing program】page immediately.
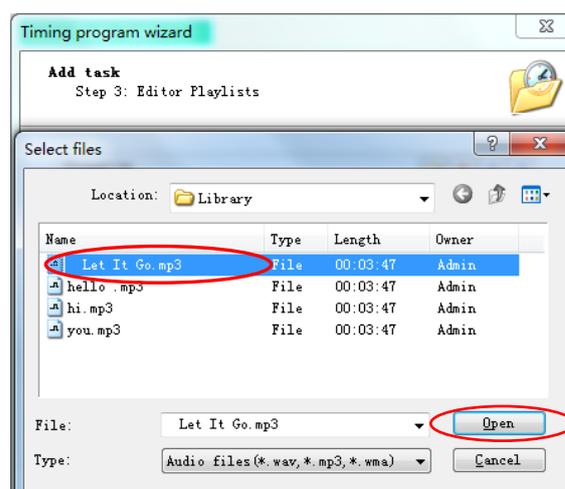
Press 【update task】button will synchronously update to the server software【timing program (workstation) 】page, the task will run automatically at the assigned time.

4.6 Program management

The Program Management of workstation is equal to remotely operate the server program library, it also can create the new folder for program library, add file, rename and delete the audio files. Choose the left side 【program management】interface as the below picture.
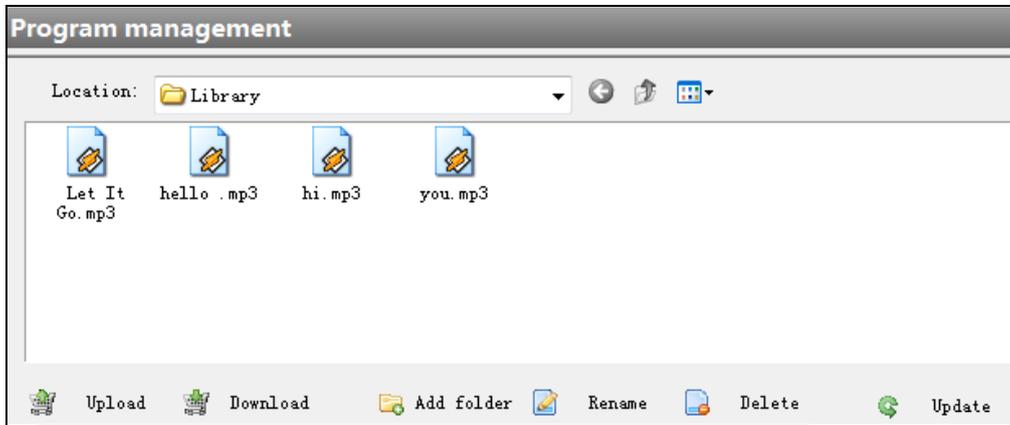
Menu	Description
Upload	Upload the assigned audio files to server program library.
Download	Download the program library audio file to assigned position.
Other functions	Please refer to server software "program management" for creating the new folder, delete, rename.

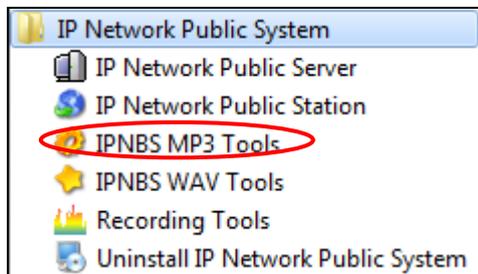# Chapter 5

IPNBS MP3 Tools

5.1 Run MP3 Programming Tools

Run MP3 Programming Tools

Select " IP network PA/broadcast system" program from the start menu, select【IPNBS MP3 Tools】from the submenu, it will pop-up the main interface.

Remark: Other tools such as electronic map tool, intercom recording tool operation method is similar to the above steps

5.2 Format Conversion

To convert WAV format and any MP3 files to standard 128kbps MP3 files.
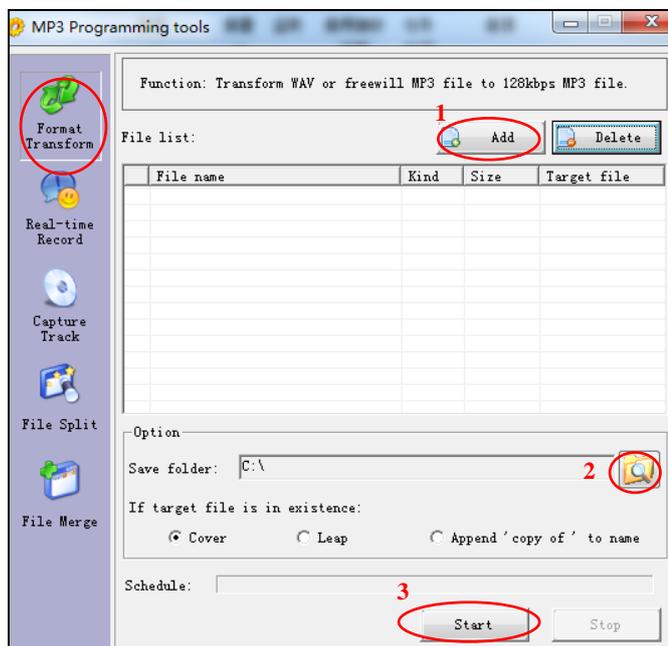
1. Select the target file:

Click 【add】 button to choose the required convert files, click "OK" to confirm, the target file detailed information will be displayed in the file list;

2. Assign the save path:

Click 【save folder】 and "browse" button to assign the save catalogue. The converted file and the original file are saved in the same directory, it can use 【if the target file exit】 this option to make the corresponding choice;

3. Convert the file:

Click 【start】 button, the system will start convert files automatically, it will display the conversion progress from 【schedule】.
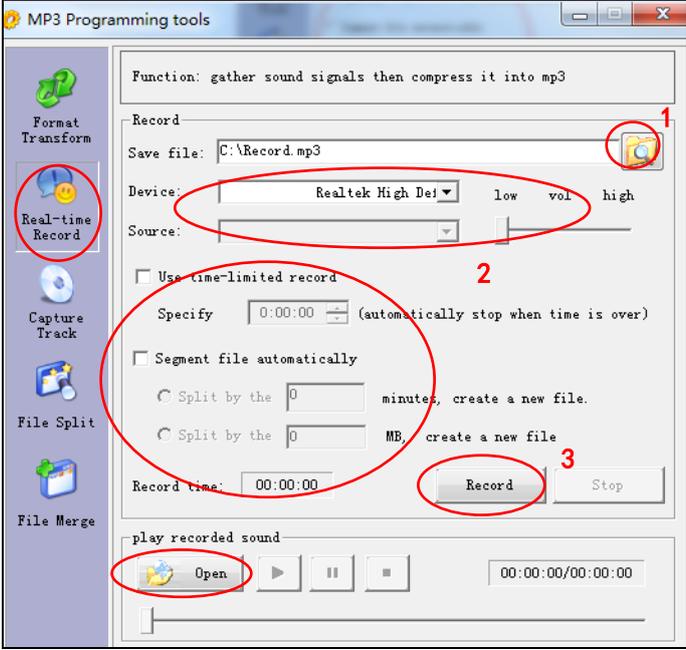
5.3 Real-time Record

To convert analog program source (e g: cassette) to MP3 file.

General recording steps：

Step	Operation	Diagram
1	Select recording file save path: Click【save file】 and browse button, assign the file save path and named for it.	
2	Select【source】as Stereo Mix or stereo mixing, adjust the suitable volume.	
3	Press 【record】button to start recording, the software will ceate a MP3 file in the specified directory. If you enable the file splitting (advanced options), it will auto-produce multiple MP3 files.	

Advanced recording steps：

Time-limited recording

Select【Use time-limited record】 and set time (for example: set 30 minutes, when the recording time up to 30 minutes, the recording will automatically stop)

File splitting

Select 【Segment file automatically】and set the minutes (for example: set 10 minutes, when the recording time up to 10 minutes ,it will create a new MP3 file) or file size (for example: set 5 MB, when the recording file up to 5 MB, it will create a new MP3 files).

play recorder sound:

Press 【open】button to select the recording file, it will play.

5.4 Capture Track

5–4

Convert the CD audio file to WAV format

1 Put music CD in the drive, the software will automatically detect the CD audio files and added to the list;

2 Click 【save to folder】 and "browse" button to select a folder as the save directory;

3 Click 【setting】 to name the capture file;

4 Click 【Crasp】 to start convert. The user also can pause or quit during the capture process;

【Rate of progress】 can display the file capture process status.

5 User can click pop up or close CD-ROM after capture finished.

5.5 File Merge

Function: It can combine the multiple MP3 files which with the same sampling frequency and bit rate into a single file.

1   Click【Add】to add files, select the files to be combined from the pop-up dialog box, the tool will auto-display the file attributes in the list.

Remark: If you want to add the file again, it can`t add the the different sampling frequency and kbps with first file.

2   Combine files must be have two files at least.

Click 【Merge】 will pop-up a dialog to save the combined file name and catalogue.

After finish combination, click the 【Audition】 button to listen the combined file effect.

5.6 File Split

Function: To split the MP3 files according to the time length.

1   Select target file, click 【File name】and "browse" button to open the MP3 files, it will automatically play.

2   Split file

2.1 Adding sub-section: click on "adding starting point" will make the current MP3 files playing time added to the starting point list.

2.2 Click on "adding end point" will make the current MP3 files playing time added to the end point list, the system will pause playing and calculate the playing length automatically.

Note: If the user forget to add some one subsection to the end point, the system default for the finish time.

Click【 Edit subsection 】 can reset the starting point, end point and rename the subsection.

3   Specify the file save path:

Click 【Setting】 button, click from pop up dialog box and select the splited files save catalogue.

4   Split file: click 【Split】 it will auto-split files according to the list. User can have a listening test for some section before splitting.
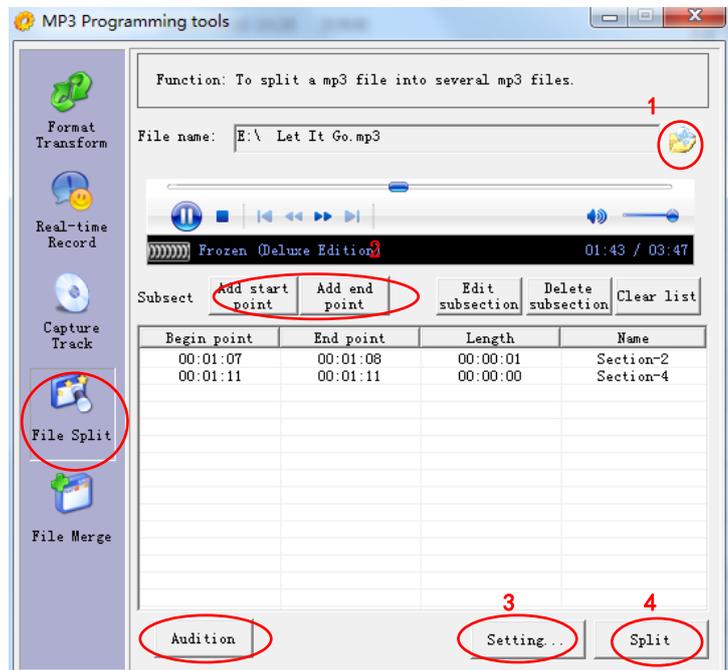
Chapter 6

IPNBS WAV Tools

IPNBS WAV tools

"IPNBS WAV tools" `s【Format Transform】,【Real-time Record】 and【Capture track】's operation method is same as the"MP3 programming tools".

TOA Corporation