Hytera

SmartDispatch
Configuration Guide

Copyright Information

Disclaimer

Contents

Documentation Information

This section describes the conventions and revision history of this document.

Documentation Conventions

Instructional Icons

Icon	Description
Tip	Indicates information that can help you make better use of your product.
Note	Indicates references that can further describe the related topics.
Caution	Indicates situations that could cause data loss or equipment damage.
Warning	Indicates situations that could cause minor personal injury.
Danger	Indicates situations that could cause major personal injury or even death.

Notational Conventions

Convention	Description
“ ”	The quotation marks enclose the name of a software interface element. For example, click “OK”.
Bold	The text in boldface denotes the name of a hardware button. For example, press the **PTT** key.
->	The symbol directs you to access a multi-level menu. For example, to select “New” from the “File” menu, we will describe it as follows: “File -> New”.

Revision History

Version	Release Date	Description
05(V4.0)	11-2013	Added the configuration of Telemetry, Encrypt, Quick GPS, Timed Message and Over Speed Alarm.
04 (V3.6)	01-2013	Added the configuration of database backup & recovery, and batch export & import.
03 (V3.5)	11-2012	Added the configuration of repeater.
02 (V3.0)	09-2012	Removed the Media Server and Remote Configurator components.
01 (R2.5)	04-2012	Initial release

1. Product Overview

1.1 Introduction

SmartDispatch is an integrated and modular dispatch system based on the Client/Server architecture, which facilitates the construction of a complex dispatch system. It consists of the SmartDispatch Client, SmartDispatch Gateway, SmartDispatch Server, repeater, dispatch station and radio. SmartDispatch provides capabilities such as radio dispatch, GPS location, telephone interconnection, text and voice communication, making the dispatching process most efficient.

1.2 System Architecture

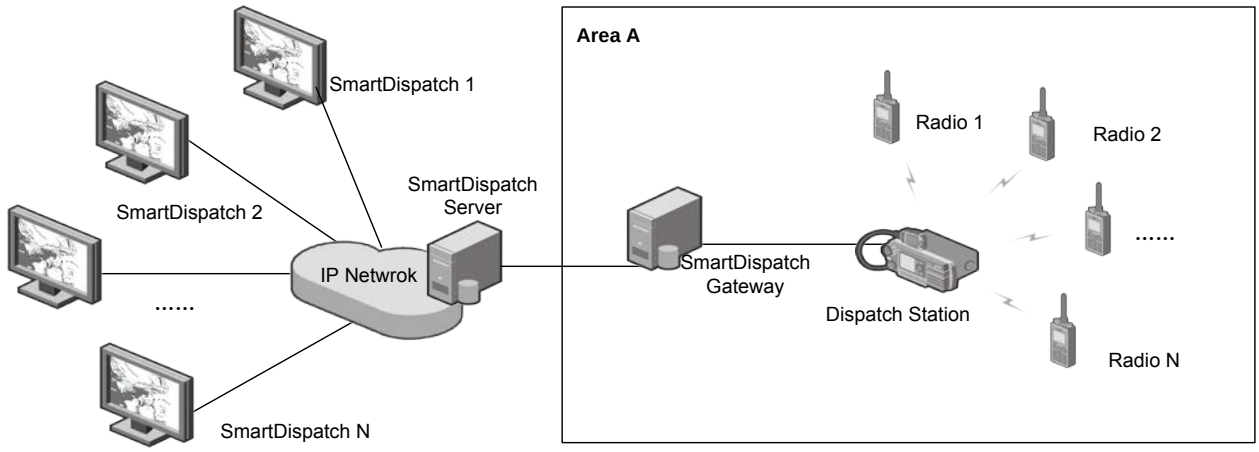
SmartDispatch supports the single-site and multi-site dispatch system. The IP Multi-site Connect feature brings you more benefits. For details, see *Section 6.2 IP Multi-site Connect Mode.*

1.2.1 Single-site Dispatch System

You can dispatch any subscriber within the single site (e.g. Area A) via the SmartDispatch Client. The SmartDispatch Client can connect to the SmartDispatch Server via the LAN or WAN.

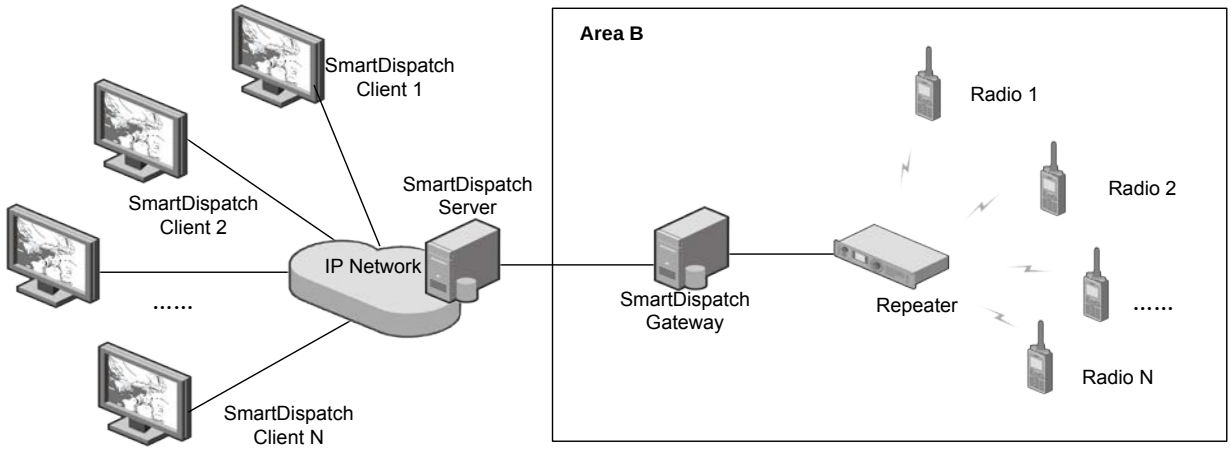
- Network Diagram 1:

  One SmartDispatch Gateway supports four dispatch stations at most. One or two dispatch stations can be deployed in a group. If only one dispatch station is available, it will be responsible for transmitting both the audio signal and GPS data. In case of two dispatch stations, one is used to transmit the audio signal while the other to transmit the GPS data.



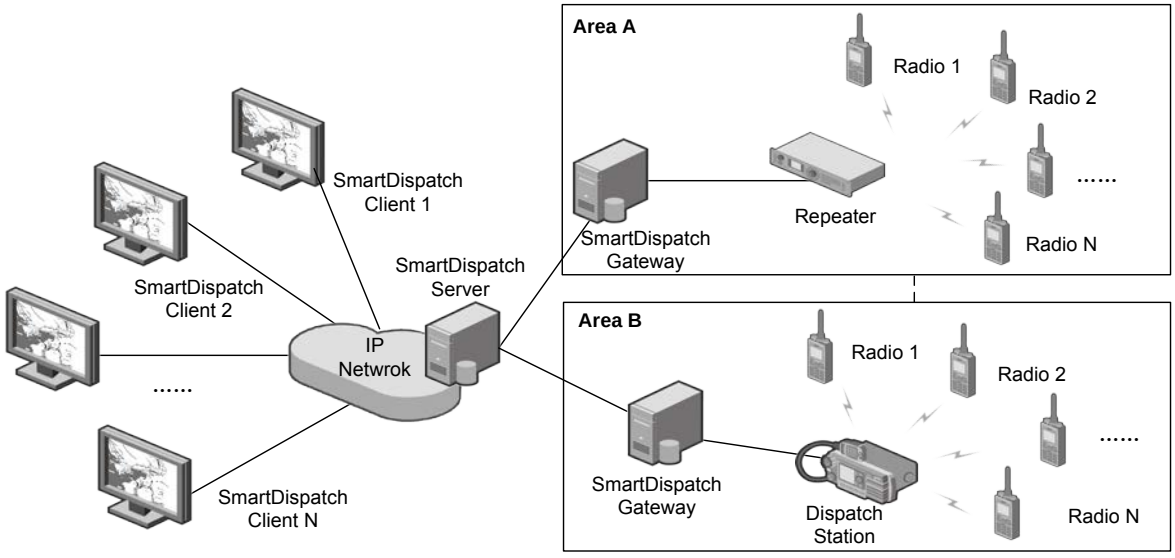
- Network Diagram 2:

In the Single Site mode, the repeater only works in the local mode. It is required to connect the repeater to the SmartDispatch Gateway.



1.2.2 Multi-site Dispatch System

As SmartDispatch can bring different sites together, you can dispatch any subscriber in different regions (e.g. Area A or Area B) via the SmartDispatch Client. The SmartDispatch Client can connect to the SmartDispatch Server via the LAN or WAN.

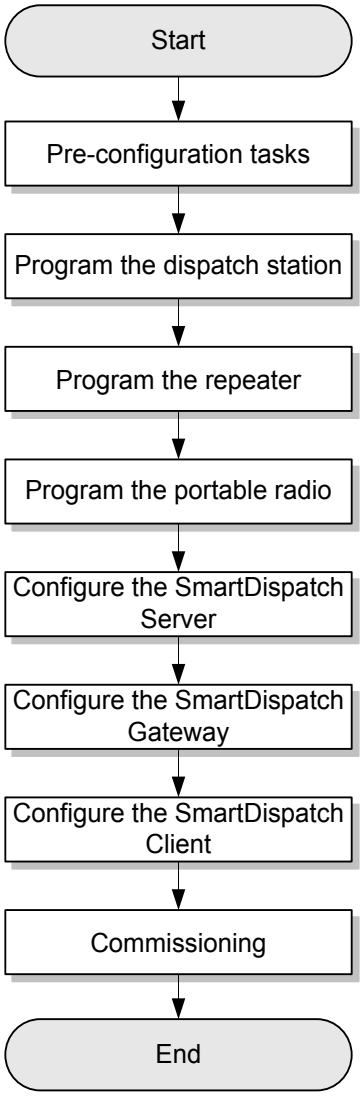


2. Configuration Flow

The following figure describes the overall flow for configuring SmartDispatch.

Caution

Ensure you have administrative privileges before configuration.

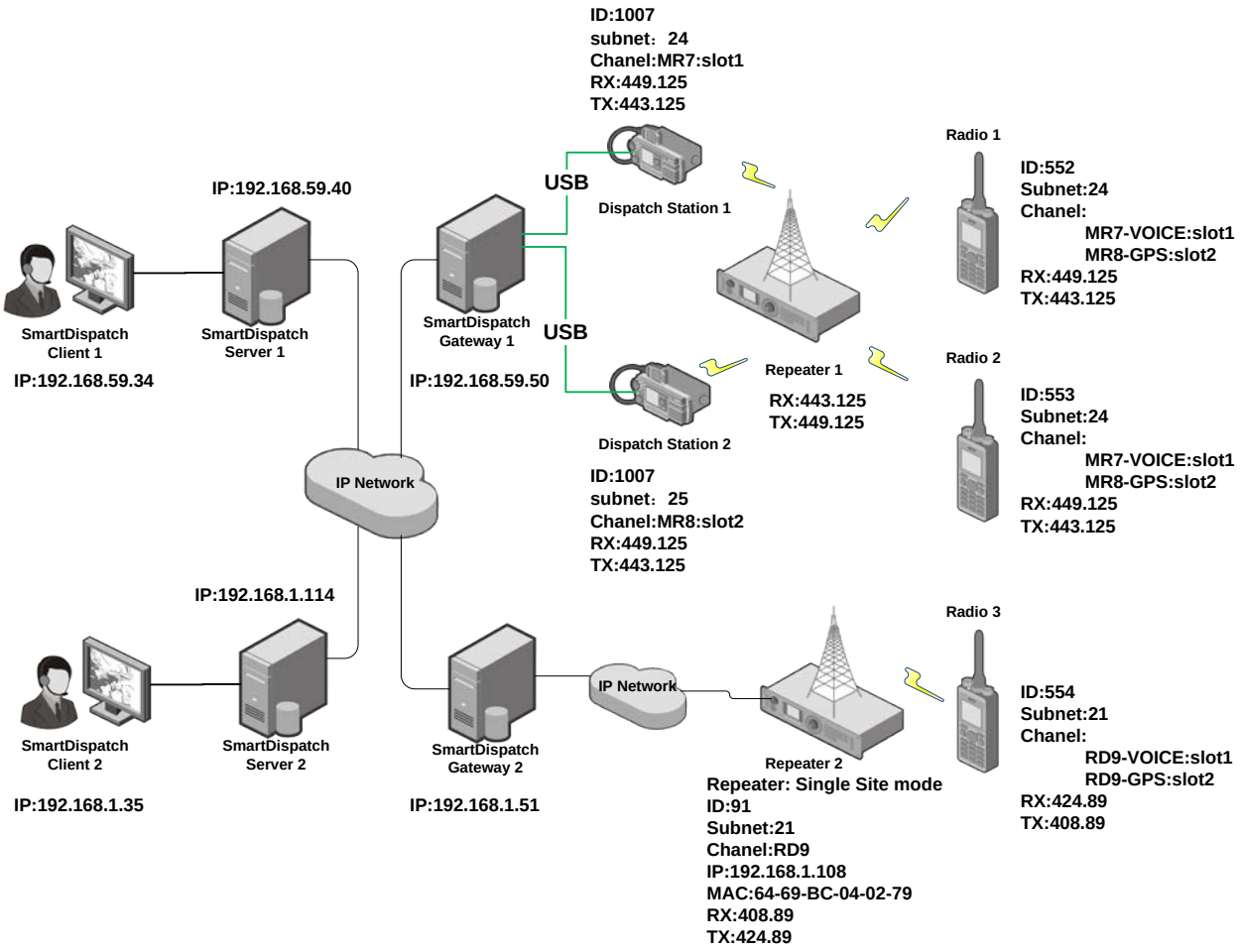


3. Planning

Caution

The data in the following figure is for your reference only.

The data configuration in this guide is based on the multi-site dispatch system.



3.1 IP Planning

Network Element	IP	Subnet Mask
SmartDispatch Client 1	192.168.59.34	255.255.255.0
SmartDispatch Client 2	192.168.1.35	255.255.255.0
SmartDispatch Server 1	192.168.59.40	255.255.255.0

Network Element	IP	Subnet Mask
SmartDispatch Server 2	192.168.1.114	255.255.255.0
SmartDispatch Gateway 1	192.168.59.50	255.255.255.0
SmartDispatch Gateway 2	192.168.1.51	255.255.255.0
Repeater 1	/	/
Repeater 2	192.168.1.108	/

3.2 Radio Planning

Please refer to the following information when programming the dispatch station, repeater and the portable radio.

Dispatch station

Network Element	ID	Alias	RX Freq.	TX Freq.	Subnet No.	Channel	Slot	Function
Dispatch Station 1	1007	MR7	449.125	443.125	24	MR7	Slot 1	For audio transmission.
Dispatch Station 2	1007	MR8	449.125	443.125	25	MR8	Slot 2	For GPS data transmission.

Repeater

Network Element	ID	Alias	RX Freq.	TX Freq.	Channel	Slot	Function
Repeater 1	/	/	443.125	449.125	MR7-VOICE	Slot1	For data repeating.
					MR8-GPS	Slot2	
Repeater 2	91	Repeater3	408.89	424.89	RD9	Slot1	For working in the Single Site mode.
						Slot2	

Portable radio

Caution

In IP Multi-site Connect mode, be sure to enter the ID of the master repeater in the “RRS & GPS radio ID” field when programming the portable radio.

Network Element	ID	RX Freq.	TX Freq.	RRS & GPS Radio ID	Channel	Slot	Function
Portable radio 1	552	449.125	443.125	1007	MR7-VOICE	Slot 1	For audio transmission.
					MR8-GPS	Slot 2	For GPS data transmission.
Portable radio 2	553	449.125	443.125	1008	MR7-VOICE	Slot 1	For audio transmission.
					MR8-GPS	Slot 2	For GPS data transmission.
Portable radio 3	554	424.89	408.89	91	MR9	Slot 1	For audio and GPS data transmission through the repeater.

3.3 Port Planning

Port	Description
SmartDispatch Server and SmartDispatch Gateway	
1433	Indicates the database port.
61400	Both the SmartDispatch Client and SmartDispatch Gateway access the SmartDispatch Server via this port. For details, see *Section 8.1 Basic Settings and 9.1 Basic Settings.*

Port	Description
17000	Indicates the VOIP start port of the SmartDispatch Server for audio communication. Up to 400 ports are reserved for audio communication. For example, if the start port number is 17000, the port range will be 17000–17399. For details, see *Section 8.1 Basic Settings.*
19000	Indicates the VOIP start port of the SmartDispatch Gateway for audio communication. The system will reserve sufficient ports for audio communication. When the SmartDispatch Gateway is connected to dispatch stations, the number of the reserved ports is twice that of the dispatch stations. For example, if the SmartDispatch Gateway connects three dispatch stations and the start port number is 19000, the reserved port numbers will be 19000 – 19005. However. If the SmartDispatch Gateway connects to the repeater, the number of the reserved ports is fourfold that of the repeaters. For details, see *Section 9.1 Basic Settings.*
5060	Indicates the local port of the SmartDispatch Server for telephone access. For details, see *Section 8.4 SIP Settings.*
Dispatch Station	
3002	Indicates the Radio Registration Service (RRS) port number. Do keep this value when programming the dispatch station.
3003	Indicates the number of the Global Position System (GPS) port for GPS data exchanging between radios in the IP Multi-site Connect network. Do keep this value when programming the dispatch station.
3004	Indicates the message port in the IP Multi-site network for the radios to send and receive short messages. Do keep this value when programming the dispatch station.
3005	Indicates the call control port in the IP Multi-site network. If the portable radio and the dispatch station need to realize the same function, their port numbers must be consistent. Otherwise, they must be different. Do keep this value when programming the dispatch station.

Port	Description
Repeater	
30001	Slot 1 RRS Port
30002	Slot 2 RRS Port
30003	Slot 1 LP Port
30004	Slot 2 LP Port
30005	Slot 1 TP Port
30006	Slot 2 TP Port
30007	Slot 1 TM Port
30008	Slot 2 TM Port
30009	Slot 1 RCP Port
30010	Slot 2 RCP Port
30012	Slot 1 RTP Port
30014	Slot 2 RTP Port
30015	Analog Channel RCP Port
30016	Analog Channel RTP Port

4. Pre-configuration Tasks

It is required to check the database and hardware components first before configuration.

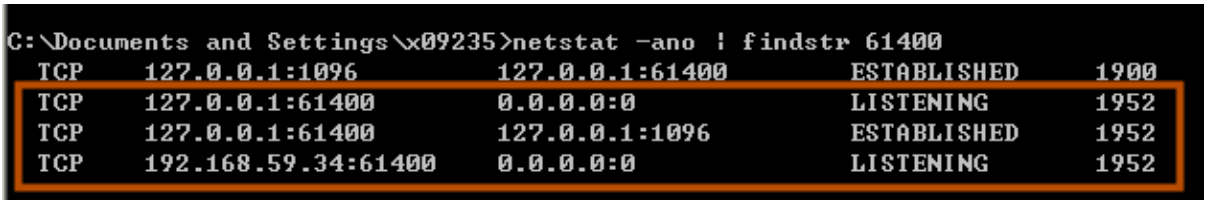
4.1 Checking the IP Address

To check whether the IP address assigned to the dispatch station is available, open the command window and run the “PING” command.

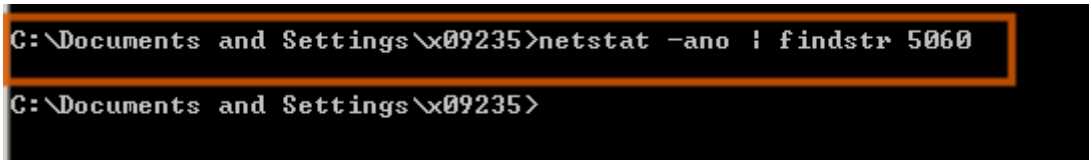
4.2 Checking the Port

To check the port utilization, open the command window and run the *netstat –ano | findstr <port>* command. If the port is occupied, it is required to change the default port via the configuration tool.

- If the port is occupied, relevant records will appear as shown in the following figure.



- If the port is available, there is no record as shown in the following figure.



Note

To open a command window, go to “Start -> Run”, and type “cmd” into the text box, finally press **Enter.**

4.3 Checking the Dispatch Station, Repeater and Portable Radio

Check whether the dispatch station and portable radio have sufficient battery strength, and whether the firmware version of the dispatch station, repeater and portable radio meets the following requirements.

- Dispatch station: V4.05.16.102 or later.
- Repeater: V5.06.01.006 or later.
- Portable radio: V4.05.16.002 or later.

4.4 Testing the Sound Card

Test the sound card in the computer on which you want to install the SmartDispatch Gateway and SmartDispatch Client.

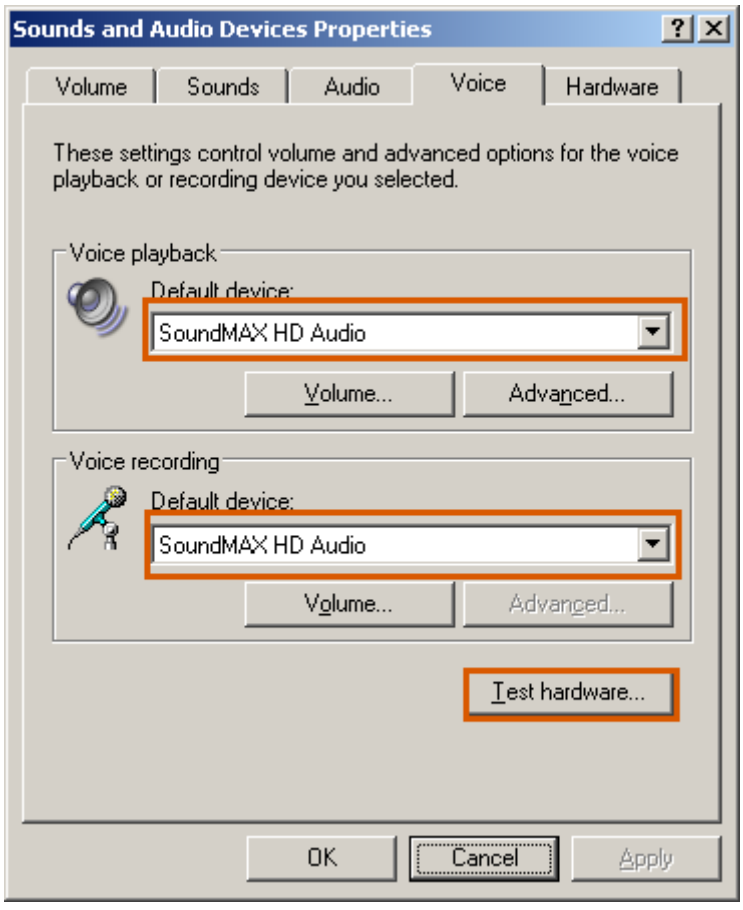
Caution

Be sure to connect the microphone and speaker to the computer properly before test.

4.4.1 Testing the Sound Card in Windows XP

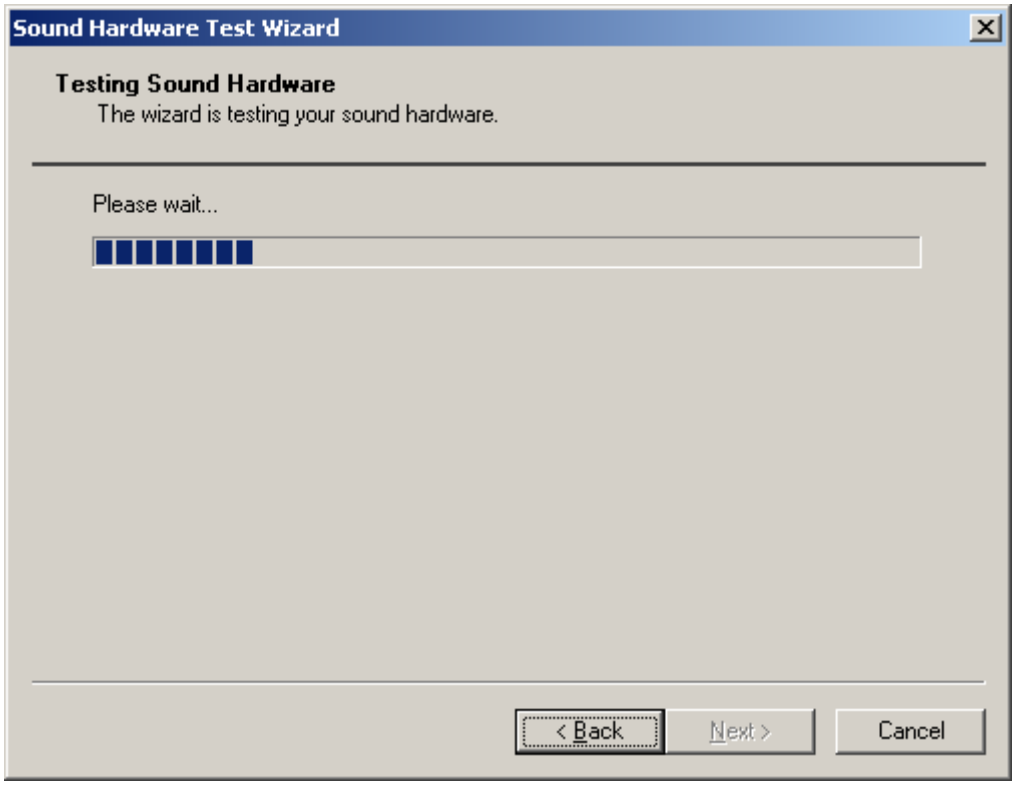
Step 1 Go to “Start -> Control Panel -> Sound and Audio Device -> Voice”.

Step 2 Select the default device from the drop-down list under the “Voice playback” and “Voice recording”, and then click “Test hardware…”

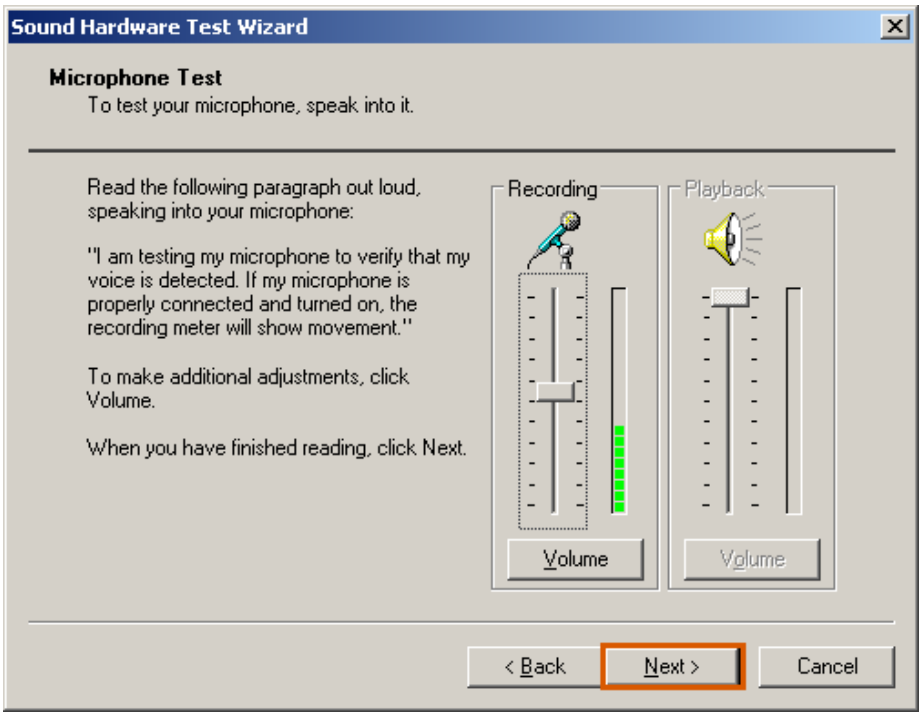


Step 3 Click “Next”.

The system starts testing the sound hardware.

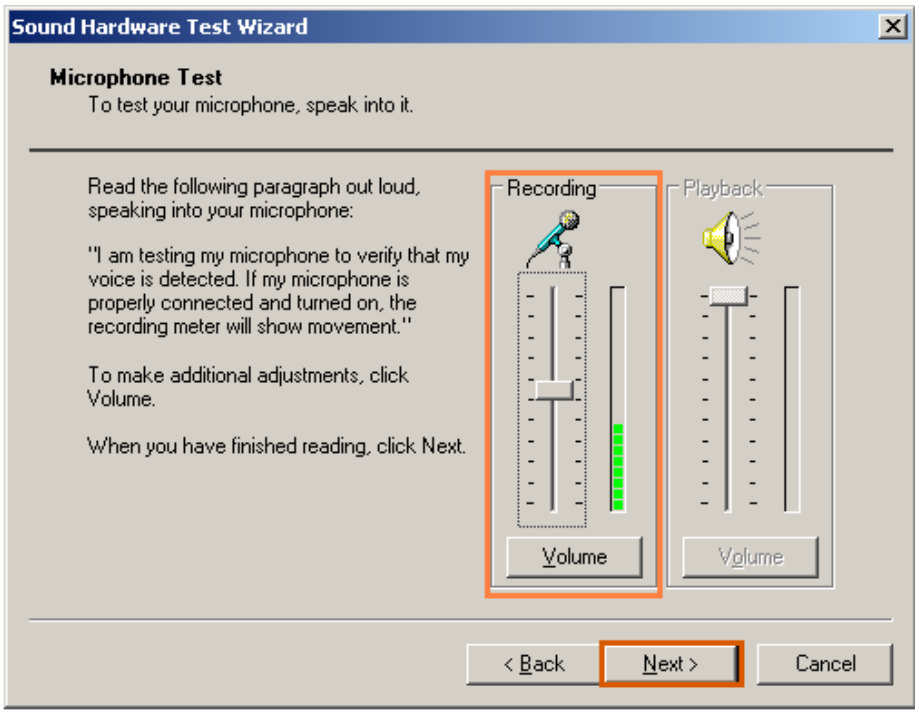


The following interface will appear after the test is finished.



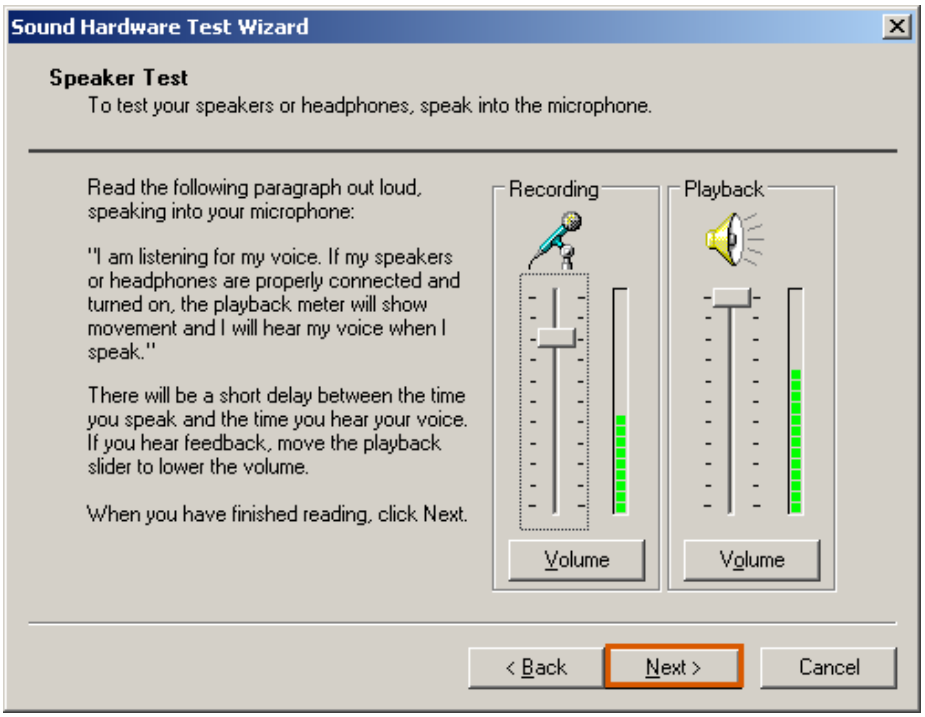
Step 4 Check the microphone. Speak into the microphone and observe whether the “Recording” meter will show movement.

If yes, it indicates that the microphone works properly. Otherwise, you need to replace the microphone.



Step 5 Click “Next”.

Step 6 Check the speaker. Speak into the microphone. If the speaker works properly, the “Playback” meter will show movement.



Step 7 Click “Next” and the test result appears. Then click “Finish” to complete the sound card test.

4.4.2 Testing the Sound Card in Windows 7

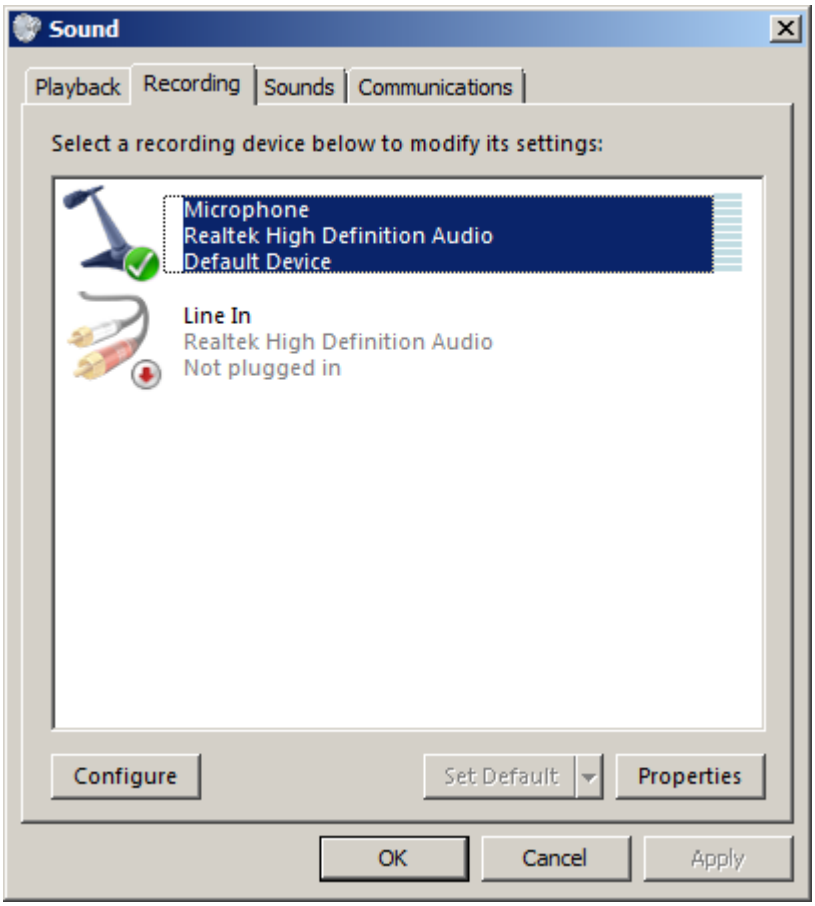
Be sure to connect the microphone and speaker to the computer properly before test. In Windows 7, you should test the microphone and speaker respectively.

Testing the microphone

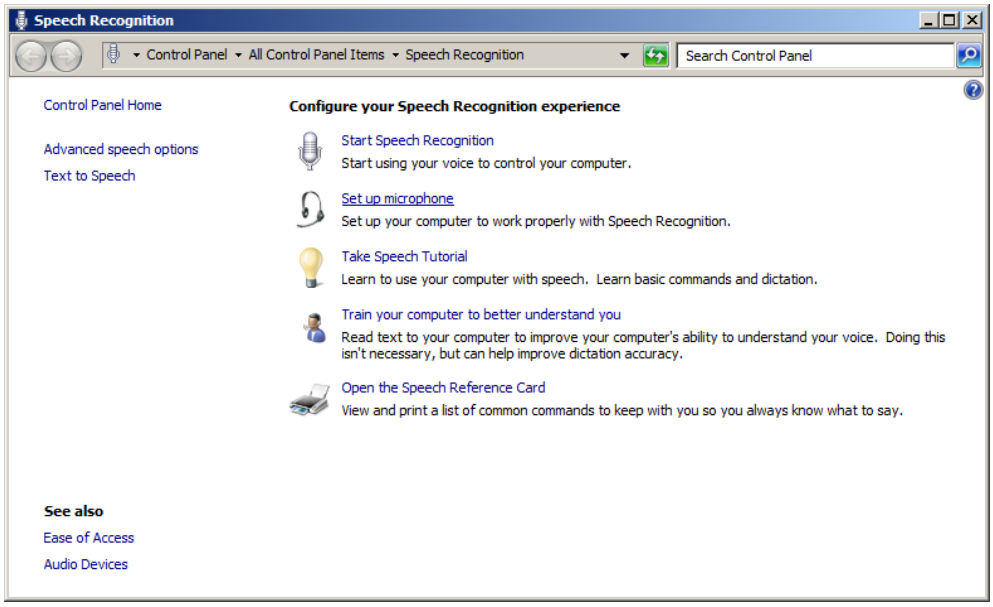
Step 1 Right-click the sound icon on the taskbar and select “Sounds”.

Step 2 Select the “Recording” tab in the “Sound” window.

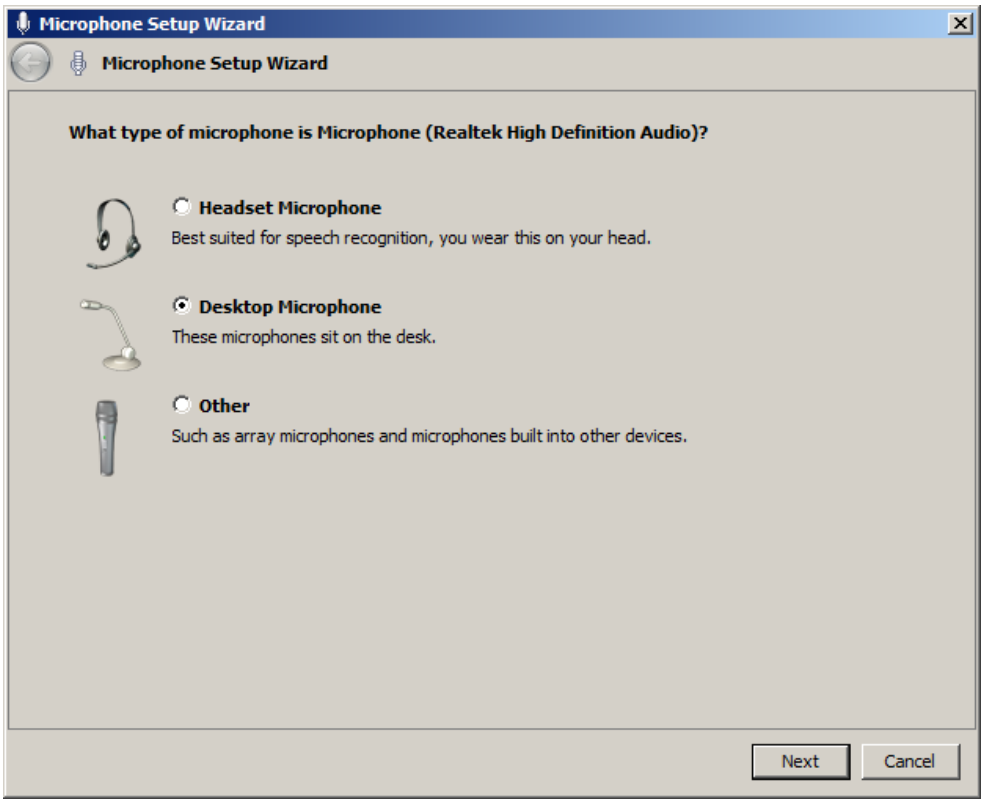
Step 3 Select “Microphone” and click “Configure”.



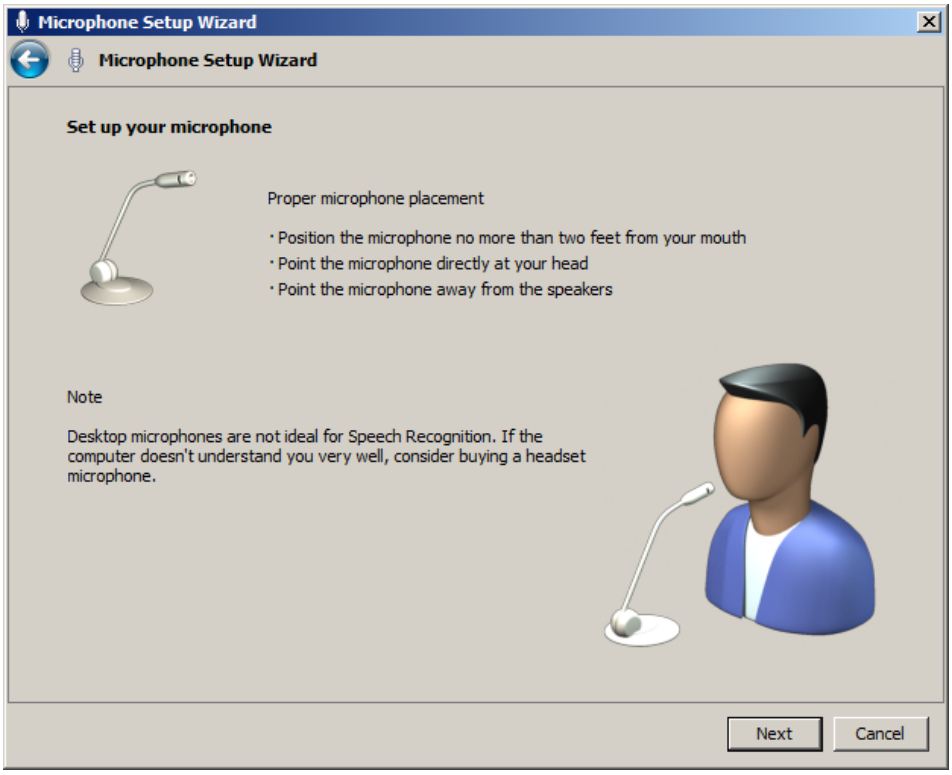
Step 4 Click “Set up Microphone”.



Step 5 Select the microphone type (e.g. Desktop Microphone) and click “Next”.

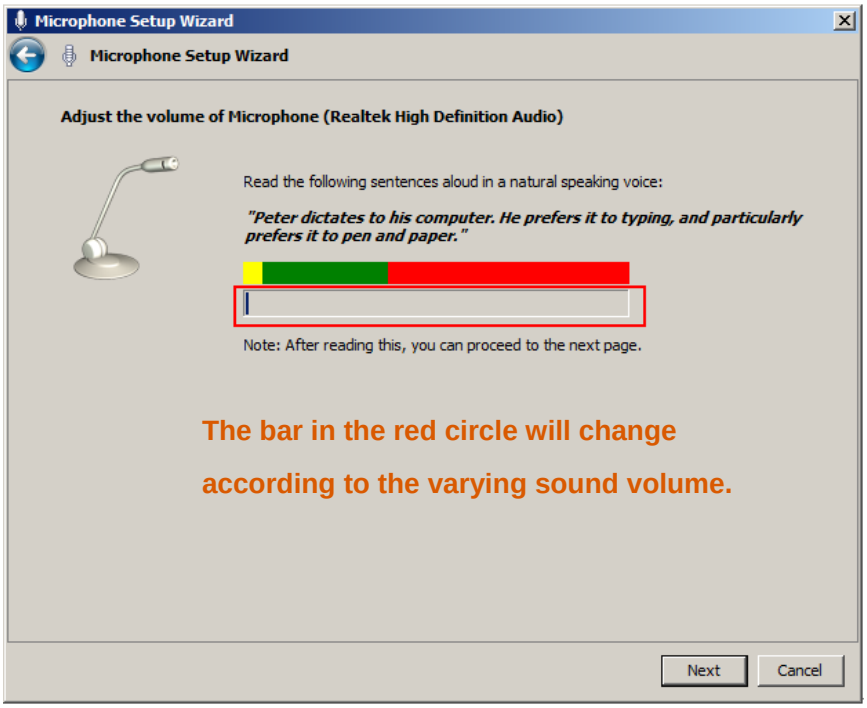


Step 6 Click “Next”.

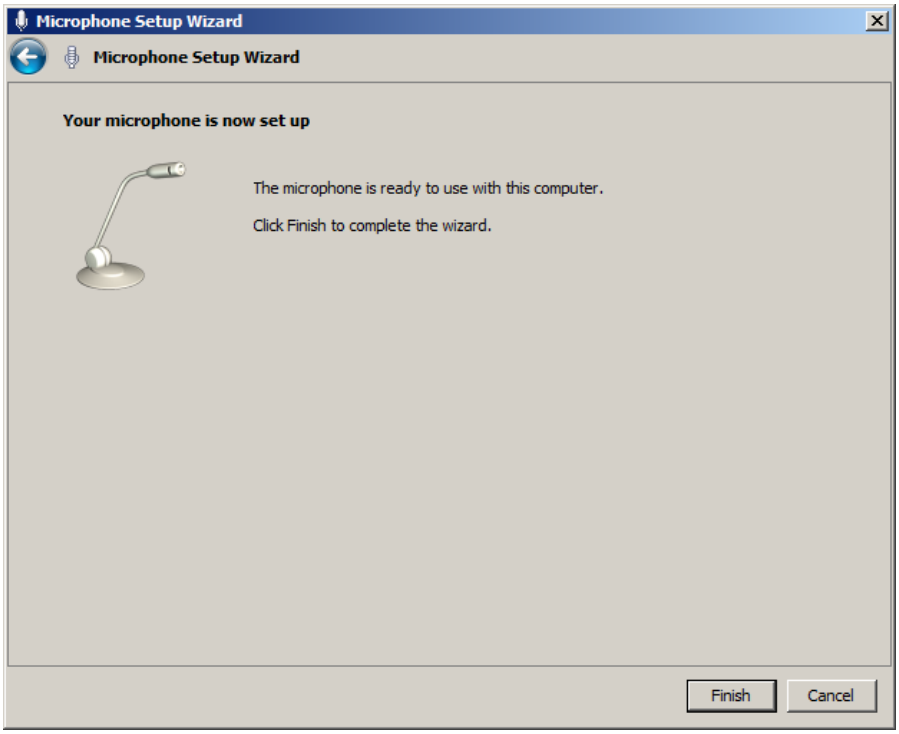


Step 7 Speak into the microphone. If the microphone works properly, the progress bar will change accordingly. Then click “Next”.

If the microphone does not work properly, please update the driver program or replace your microphone, and then test it again.

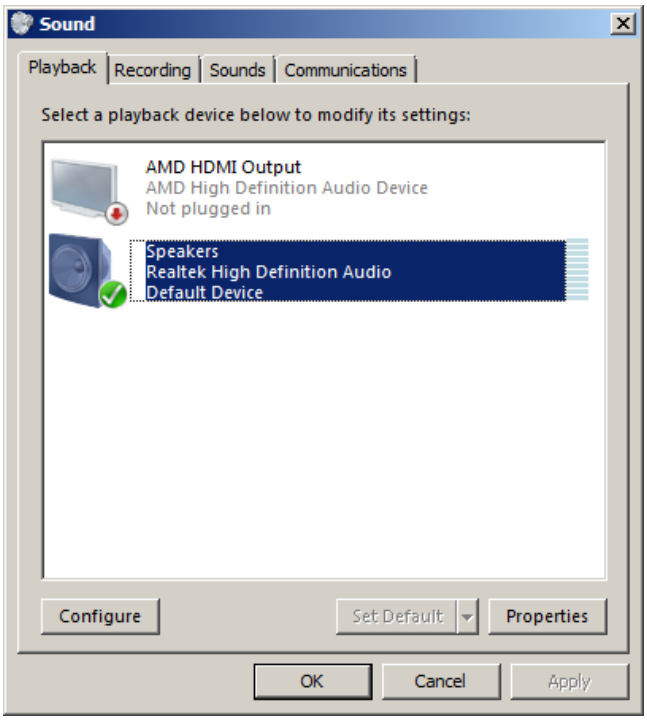


Step 8 Click “Finish”.



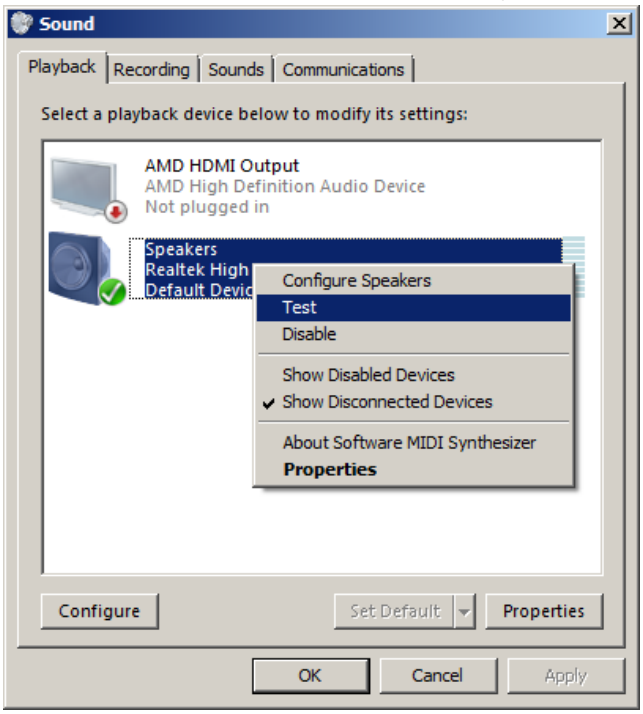
Testing the speaker

Step 1 Select the “Playback” tab in the “Sound” window.



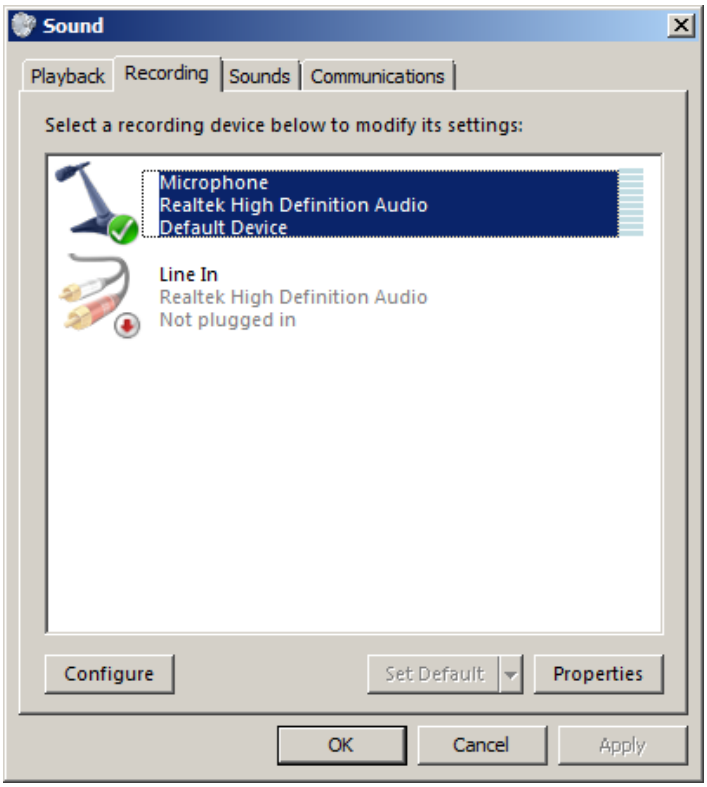
Step 2 Right-click “Speakers” and select “Test”.

If you can hear the sound, it indicates the speaker is ready for use.

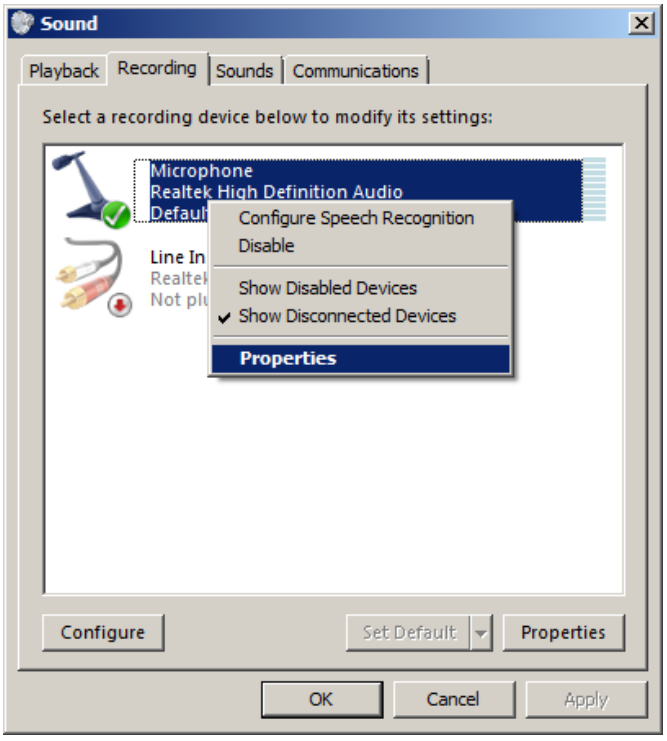


Testing the recording

Step 1 Select the “Recording” tab in the “Sound” window.



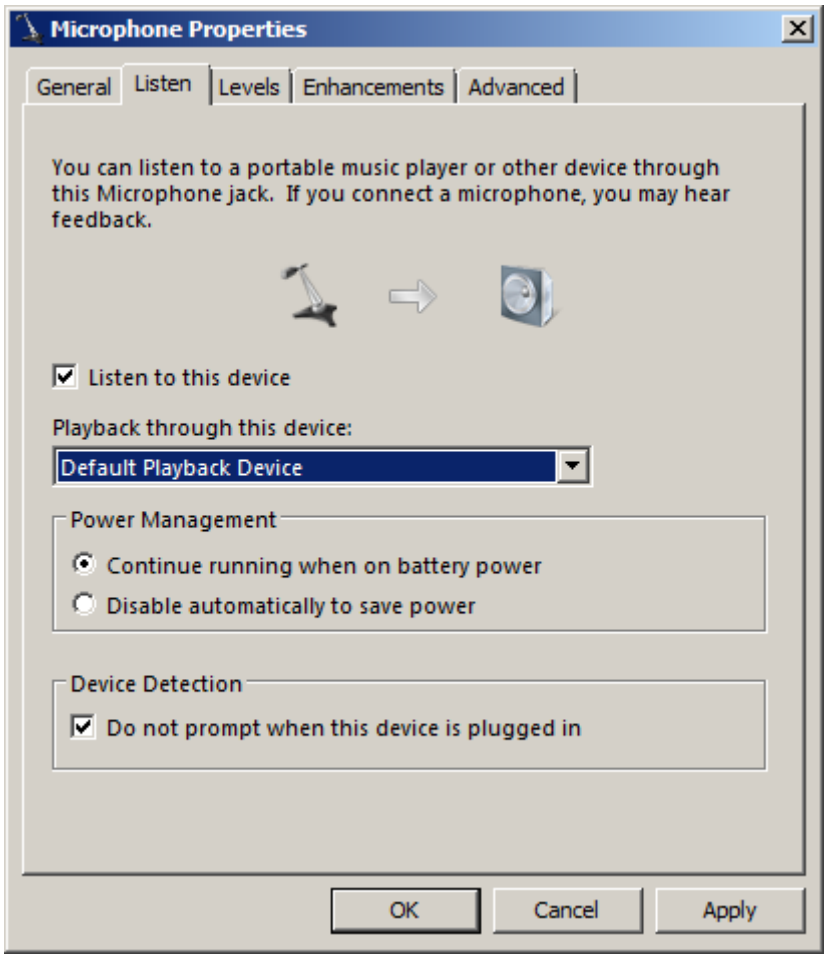
Step 2 Right-click “Microphone” and select “Properties”.



Step 3 Select the “Listen” tab and select “Listen to this device”, and then select the device from the drop-down list under “Playback through this device”.

Caution

This step is intended to test the recording only. In general, do not select the option “Listen to this device”.



Step 4 Speak into the microphone.

If the microphone works properly, you will hear the sound and the volume indicator changes accordingly.

Step 5 Click “OK” to finish.

4.5 Configuring the Multi-channel Sound Card

4.5.1 Installing the Multi-channel Sound Card

Step 1 Insert the multi-channel sound card into the PCI slot of the computer.

Step 2 Install the driver program.

4.5.2 Connecting the Cable

You can see the “In” or “Out” label on the connectors of the cable. Make sure that the connectors labeled “In” are connected to the microphone and those labeled “Out” are connected to the earpiece or speaker.

Step 1 Insert the connectors labeled “IN7↓”and “IN8↓”into the matching jacks on the breakout cable.

Step 2 Plug the other end of the breakout cable into the microphone jack of the dispatch station.

Step 3 Insert the connectors labeled “OUT7↑”and “OUT8↑”into the matching jacks on the breakout cable.

Step 4 Plug the other end of the breakout cable into the speaker jack of the dispatch station. See the connection as follows.

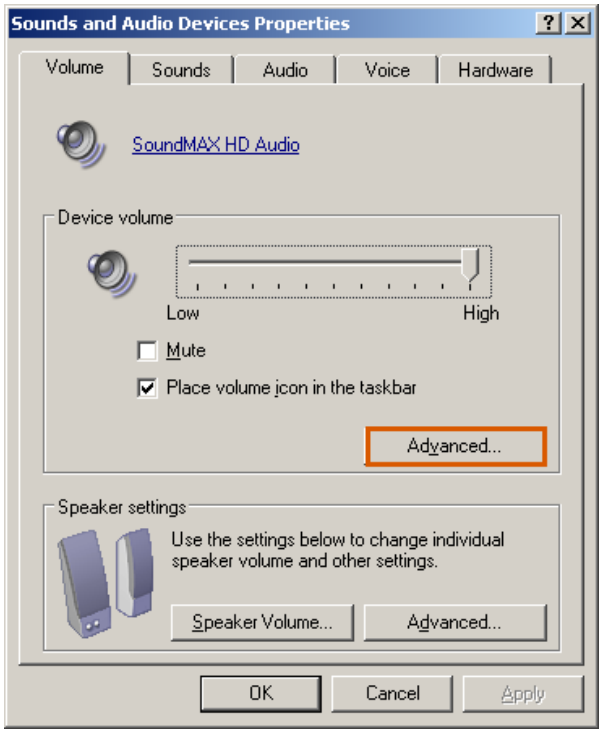
4.6 Instructions

Deactivating the microphone boost feature

You need to deactivate the microphone boost feature in Windows XP. To do this, follow the steps below:

Step 1 Go to “Start -> Control Panel -> Sound and Audio Device -> Voice”.

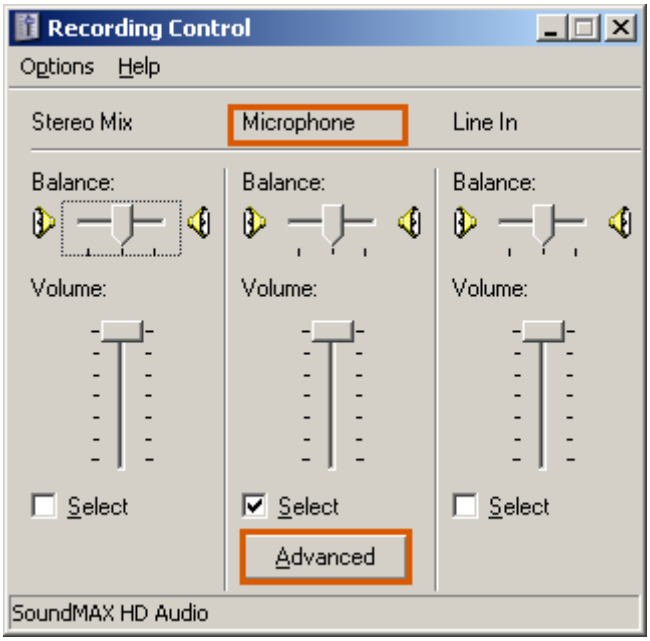
Step 2 Click the “Volume” tab and click “Advanced” in the “Device volume” box.



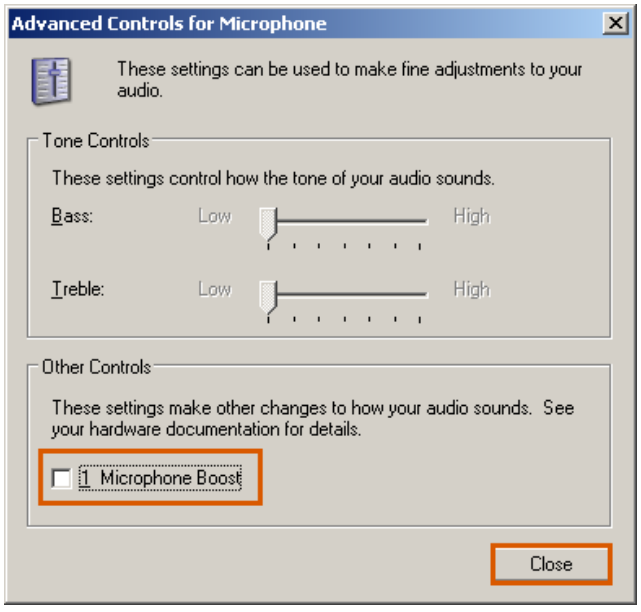
Step 3 Open the “Recording Control” panel and click “Advanced”.

Note

It is required to open the “Recording Control” panel first.



Step 4 Clear the check box labeled “1 Microphone Boost” and click “Close”.



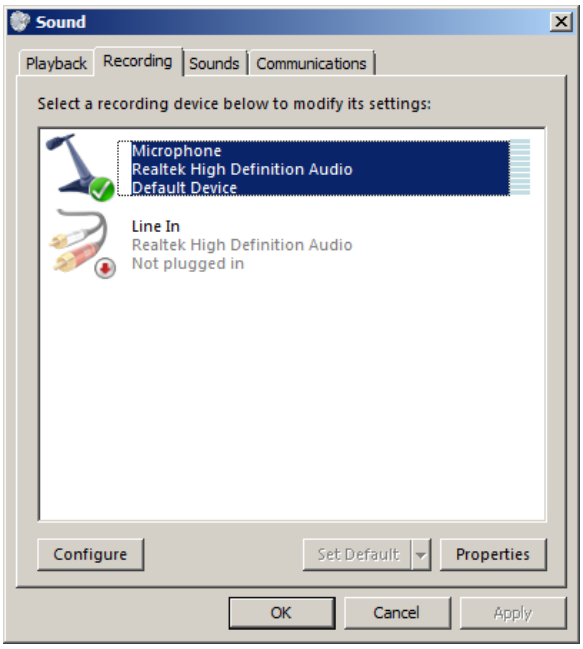
Deactivating the listening feature

You need to deactivate the listening feature in Windows 7. To do this, follow the steps below:

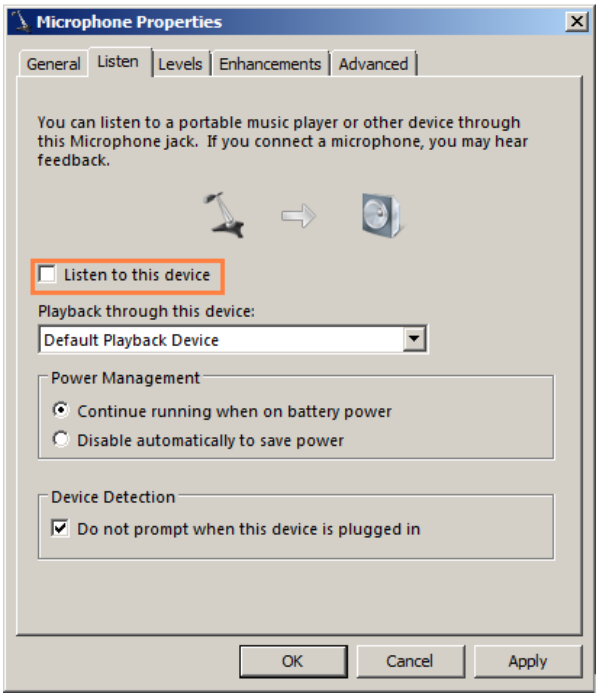
Step 1 Right-click the sound icon on the taskbar and select “Sounds”.

Step 2 Select the “Recording” tab in the “Sound” window.

Step 3 Select “Microphone” and click “Prosperities”.



Step 4 Clear the check box labeled “Listen to this device” and click “OK”.



5. Programming the Dispatch Station

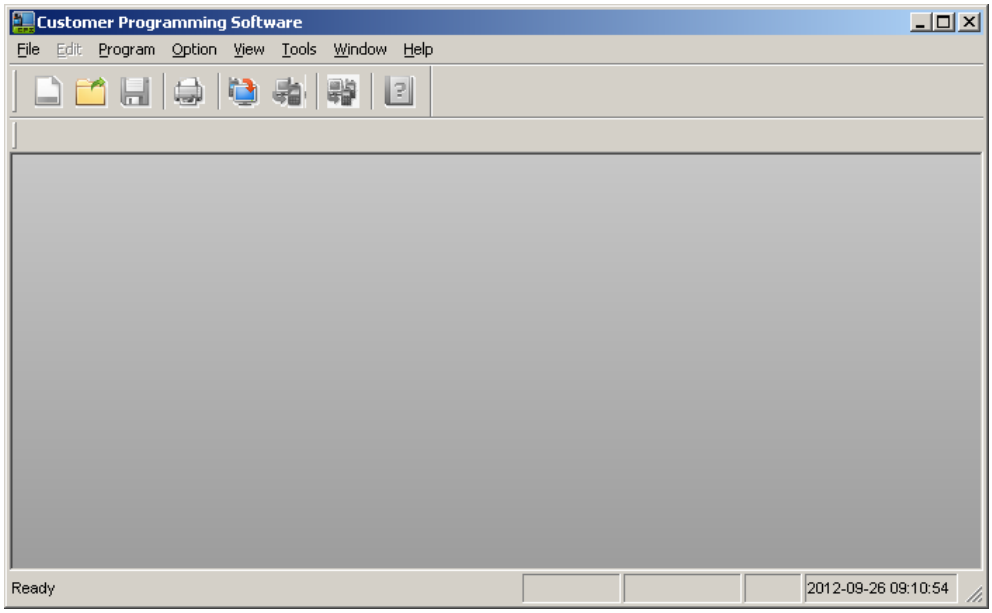
Caution

- Read the data from the dispatch station and the portable radio before programming.
- It is recommended to deploy two dispatch stations in a group to transmit the audio signals and GPS data separately, so that the GPS data reception will not be affected. In this case, these dispatch stations must share the same ID.
- The firmware version of the dispatch stations must be V4.05.16.102 or later.

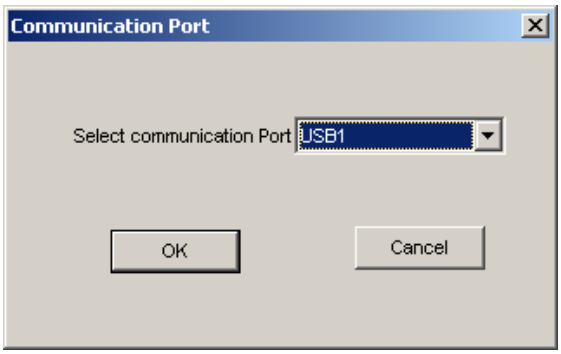
5.1 Basic Settings

Step 1 Open the Customer Programming Software.

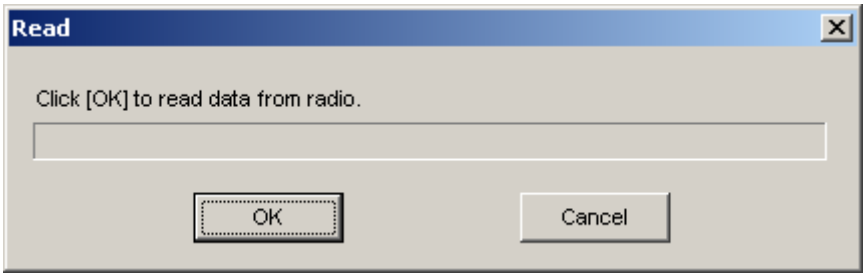
Step 2 Click the icon  in the toolbar to read the data from the dispatch station.



Step 3 Click  to enter the following window.



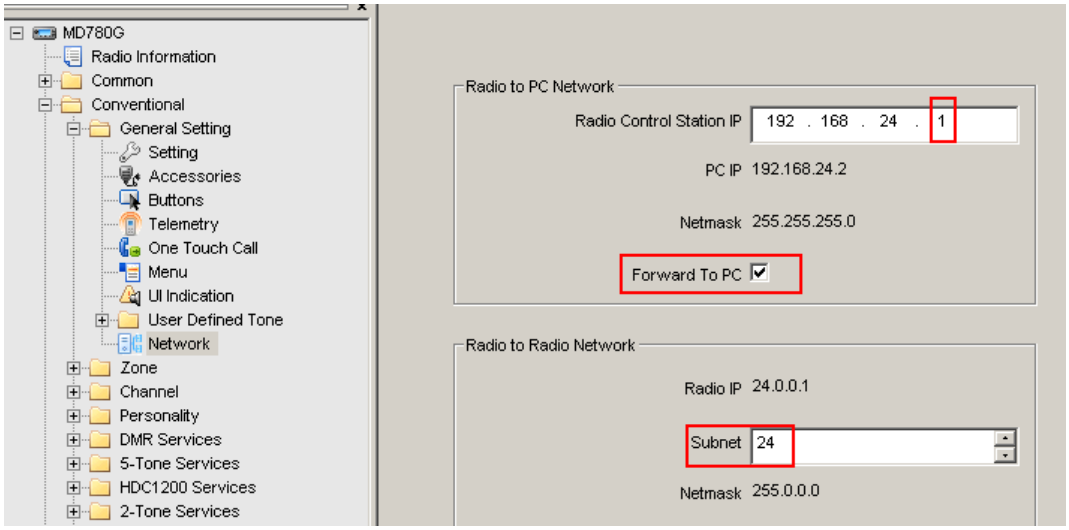
Step 4 Click OK to start reading the data from the dispatch station. After the data is read successfully, click OK in the following window.



Step 5 Go to “Conventional -> General Setting -> Network” in the left navigation tree.

Step 6 Set the following parameters.

Do follow the settings specified in the table below.



Parameter	Settings
Radio Control Station IP	The fourth section must be s et to 1. It is highly recommended to set this IP to “192.168.**Subnet**.1”.
Forward To PC	Be sure to select this option.

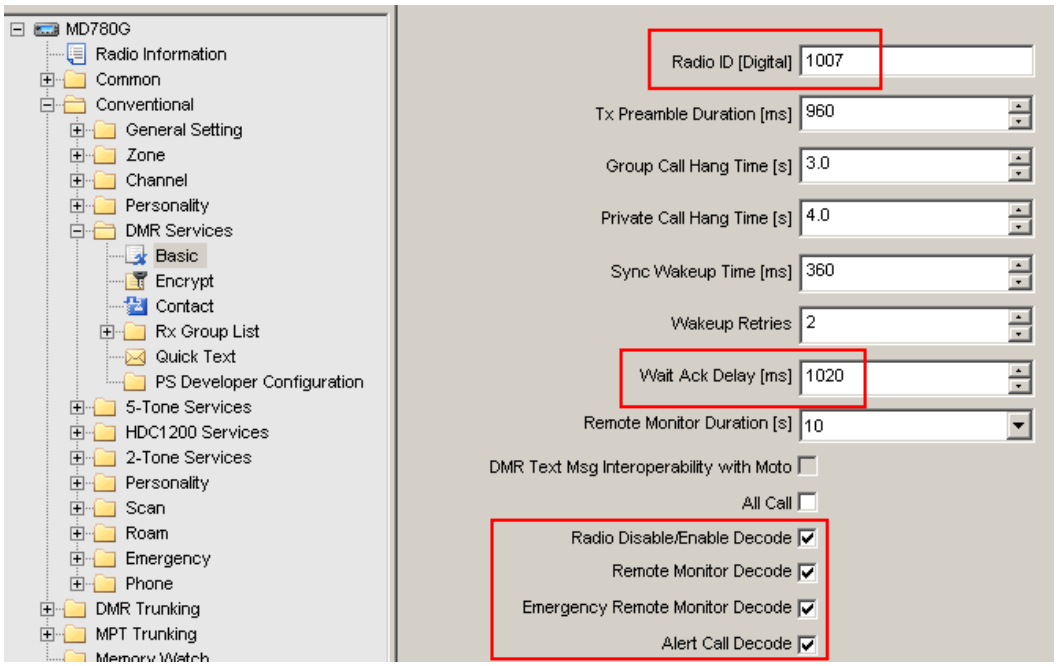
Parameter	Settings
Subnet	This parameter defines the first field of IP address in the virtual subnet. The range is 1 – 126. **Caution** ➢ The subnet must be different from the first section of the IP address for accessing the SmartDispatch Gateway. For example, if the IP address of the SmartDispatch Gateway is 10.168.24.43, the subnet must not be set to 10. Otherwise, it may cause communication failure. ➢ In the same group, it is better to set the subnet of the dispatch station (for audio transmission) and the dispatch station (for GPS data transmission) to be different.

5.2 DMR Service Settings

Step 1 Go to “Conventional -> DMR Services -> Basic”.

Step 2 Set the following parameters.

Do follow the settings specified in the table below.

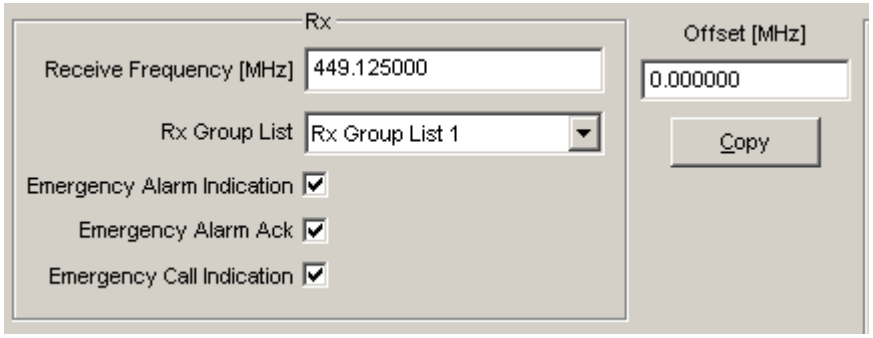


Parameter	Settings
Radio ID [Digital]	Sets the identity of the dispatch station. It must be unique. The range is 1 – 16776415.
Wait Ack Delay [ms]	Sets the time period of waiting for an ACK after sending data or command. The value must be greater than 990.
Radio Disable/Enable Decode	Sets whether the dispatch station can decode the Radio Disable/Enable command. The disabled dispatch station will be incapable of any operation, but can be monitored remotely. In this case, it can only be enabled through re-programming or decoding the Radio Enable command. Be sure to select this option.
Remote Monitor Decode	Sets whether the dispatch station can decode the Remote Monitor command. Be sure to select this option.

Parameter	Settings
Alert Call Decode	Sets whether the dispatch station can decode the Alert Call command. Be sure to select this option.

5.3 Channel Settings

In any case, you must select the following options: “Emergency Alarm Indication”, “Emergency Alarm Ack” and “Emergency Call Indication”.



Caution

It is recommended to use different channels for GPS data and audio transmission.

One dispatch station in a group

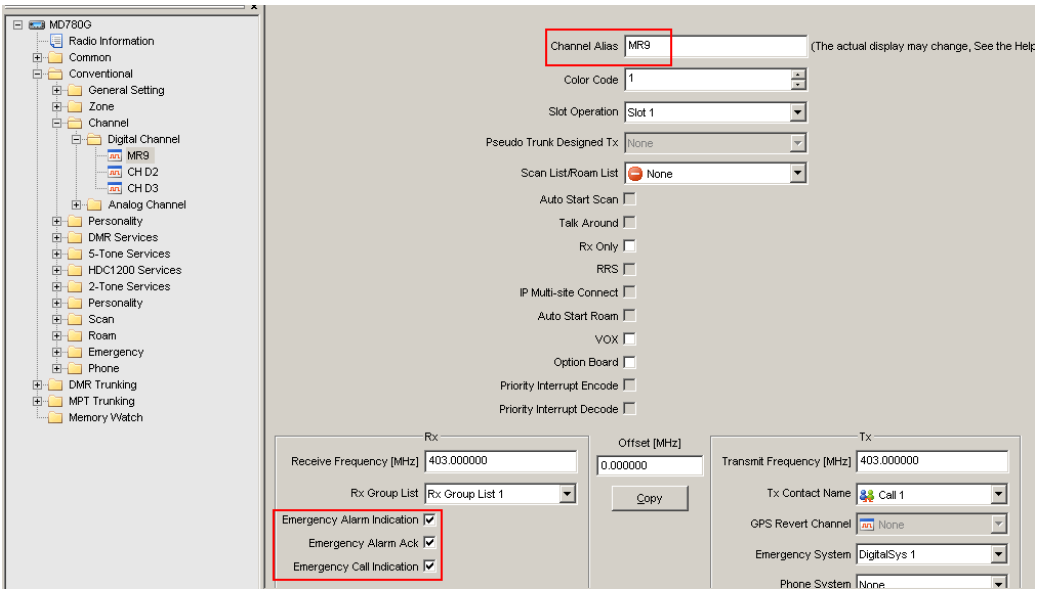
In this case, only one dispatch station is employed to transmit both the audio signals and GPS data in a group.

Step 1 Go to “Conventional -> Channel -> Digital Channel”.

Step 2 Set the following parameters.

Caution

You must select the following options: “Emergency Alarm Indication”, “Emergency Alarm Ack” and “Emergency Call Indication”.



Two dispatch stations in a group

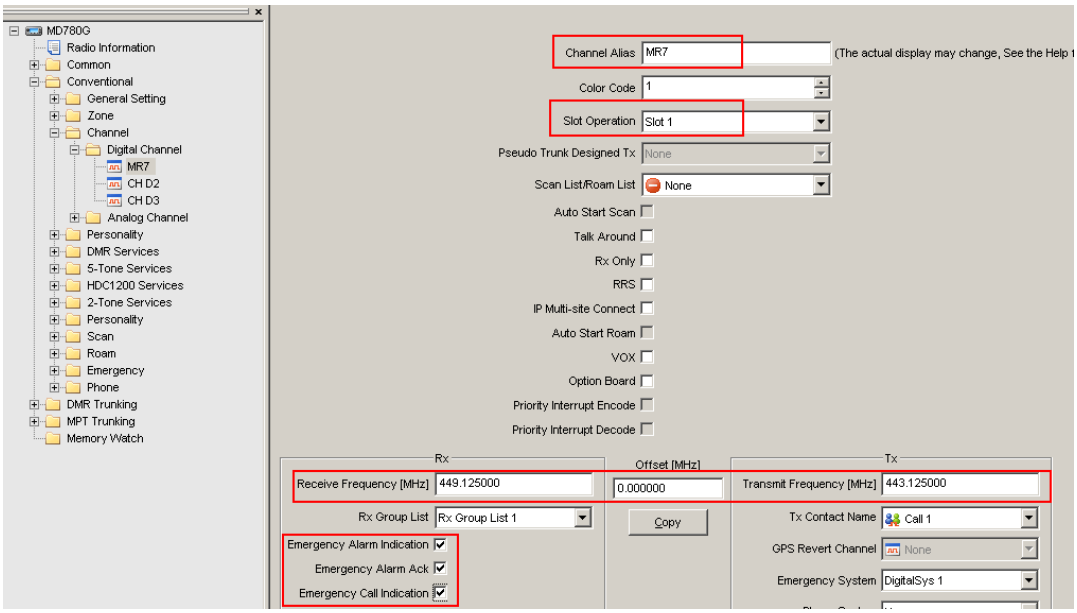
In this case, two dispatch stations are employed in a group to transmit the audio signals and GPS data separately. If these dispatch stations work at the same frequency, they must use different slots.

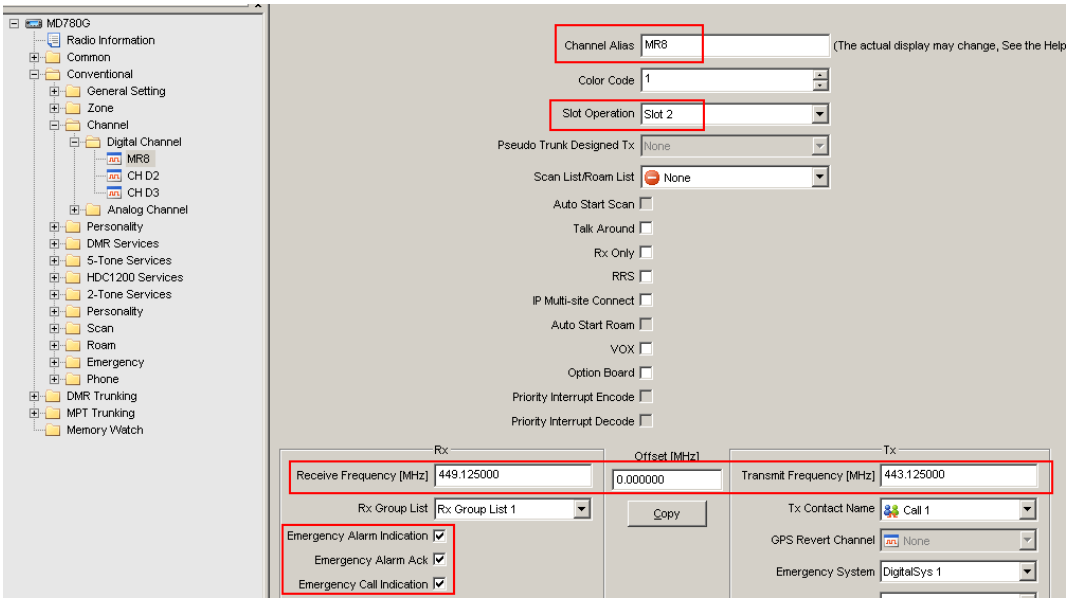
Step 1 Go to “Conventional -> Channel -> Digital Channel”.

Step 2 Set the following parameters. Please note that the settings of the two dispatch stations will be different.

Caution

You must select the following options: “Emergency Alarm Indication”, “Emergency Alarm Ack” and “Emergency Call Indication”.





Pseudo Trunking

If you need to use the Pseudo Trunking feature, the portable radio should enable the Pseudo Trunking feature and the dispatch station should meet the following requirements simultaneously:

- Two dispatch stations are required in the same group.
- The Pseudo Trunking feature is disabled in the dispatch station.
- Two dispatch stations must operate on different slot.

6. Programming the Repeater

Caution

The version of the repeater must be V5.06.01.006 or later.

6.1 Single Site Mode

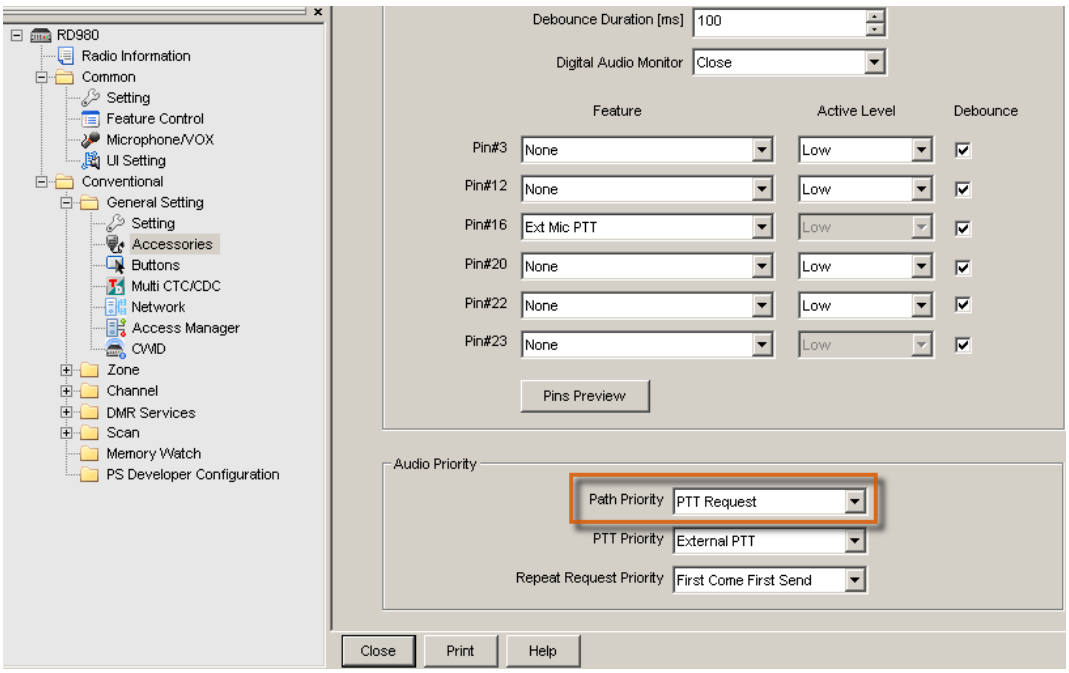
- General Setting

In the Single Site mode, the repeater only works in the local mode. It is required to connect the repeater to the SmartDispatch Gateway.

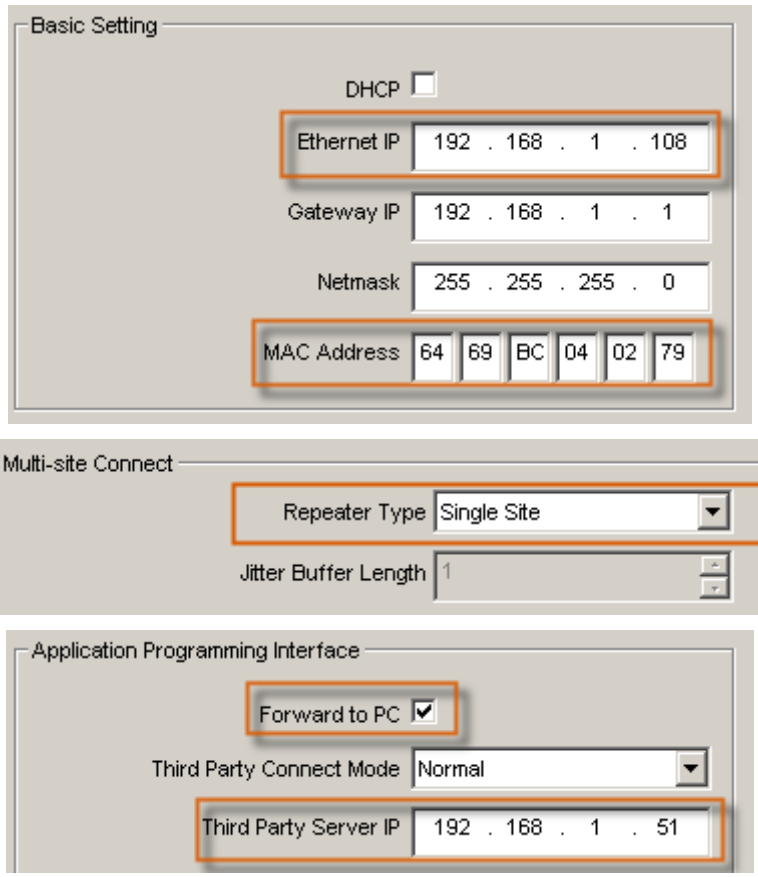
Step 1 Open the Customer Programming Software and read the configuration from the repeater.

Step 2 Go to “Conventional -> General Setting -> Accessories” in the left navigation tree.

Step 3 Set the “Path Priority” to “PTT Request”. When both the repeat request and PTT request come simultaneously, the repeater will first respond to the PTT request.



Step 4 Go to “Conventional -> General Setting -> Network” in the left navigation tree, and set the following parameters.



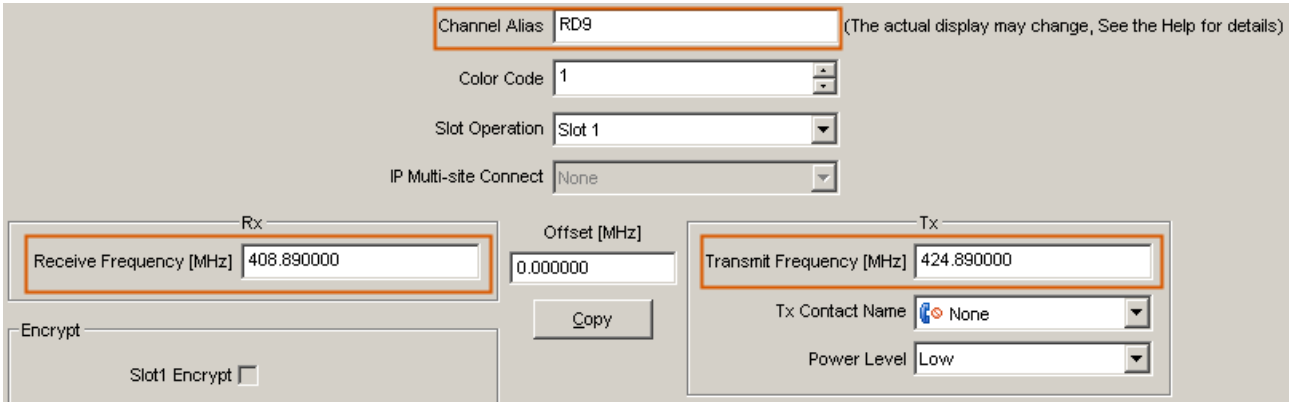
Parameter	Description
Basic Setting	
Ethernet IP	Sets the IP address of the repeater.
MAC Address	Sets the address of the repeater in the network. It must be unique. Make sure that each value in the each part is different.
IP Multi-site Connect	
Repeater Type	If you select “Single Site” from the drop-down list, the repeater will work in the local mode rather than the IP Multi-site Connect mode.
Application Programming Interface	
Forward To PC	In the network, the repeater can forward the received data via the Ethernet to the computer, and receive and respond to the repeat request from the computer, to realize communication

Parameter	Description
	between SmartDispatch and the radios.
Third Party Server IP	Sets the IP address of the SmartDispatch Gateway.

- Channel

Step 1 Go to “Conventional -> Channel -> Digital Channel” in the left navigation tree.

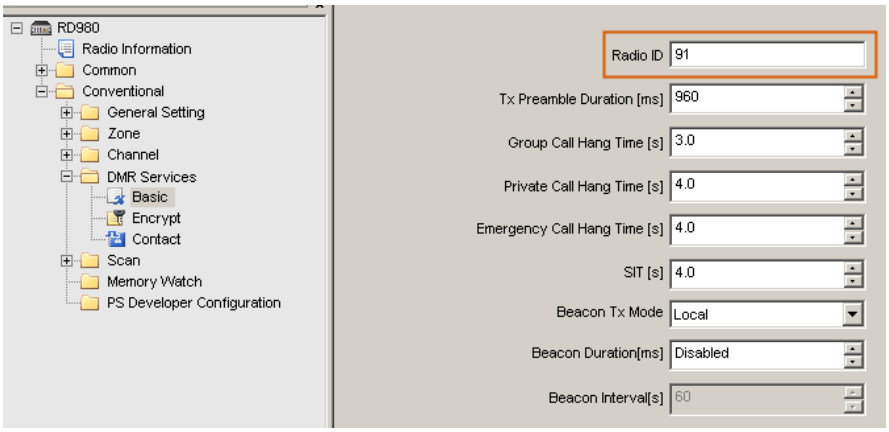
Step 2 Set the channel alias, RX frequency and TX frequency.



- DMR Services

Step 1 Go to “Conventional -> DMR Services -> Basic”.

Step 2 Set the radio ID.



6.2 IP Multi-site Connect Mode

6.2.1 Introduction

In the IP Multi-site Connect mode, multiple repeaters in dispersed locations can be connected to

exchange the audio signals and data over a TCP/IP-based network. In this way, the data will be transmitted over IP Multi-site Connect network, extending the repeater's coverage. The repeater can work in the IP Multi-site Connect mode only when you purchase the IP Multi-site Connect feature and enable it in advance.

Each IP Multi-site Connect network supports up to fifteen IP sites, including one master site and fourteen slave sites. The slave sites are managed and controlled by the master site. You must configure the Master repeater and Slave repeater respectively. The Master repeater with the static IP address is used to record the location of the Slave repeater in the network for forwarding the data.

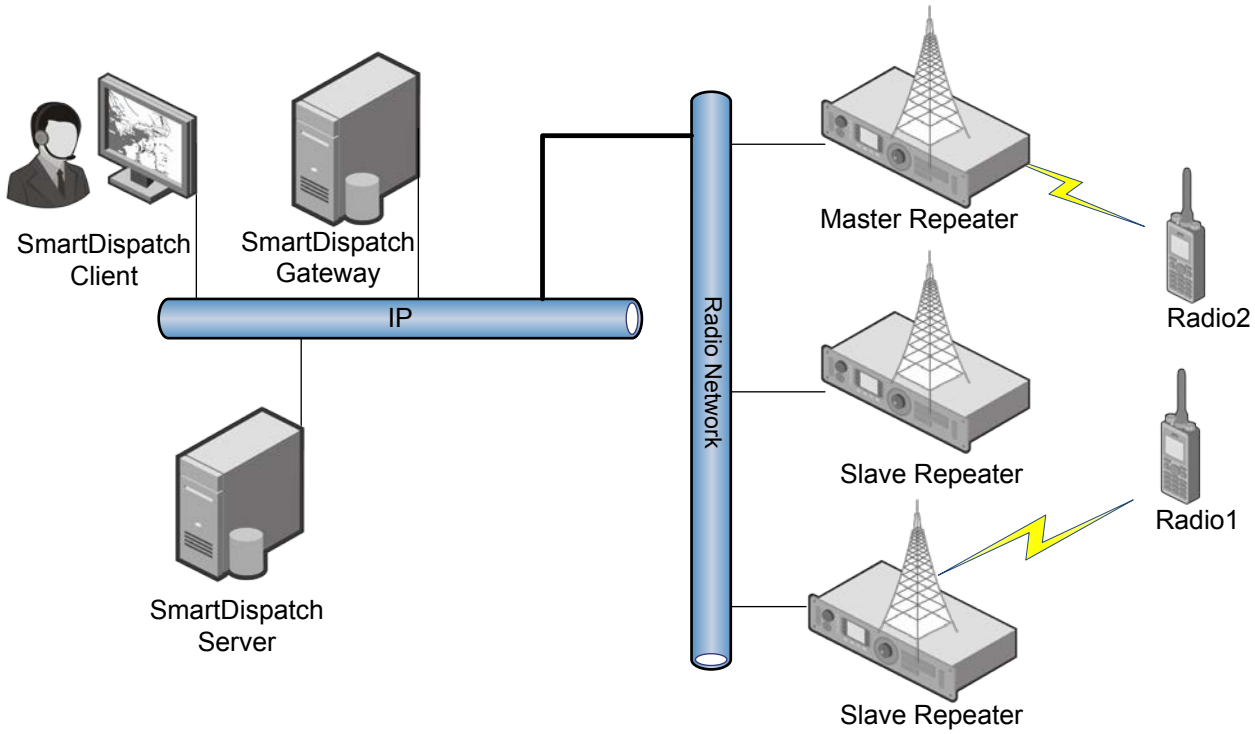
The IP Multi-site Connect feature can bring you these typical benefits:

Benefit	Example
Connecting two or more repeaters in dispersed locations	The local repeater can connect to other repeaters in dispersed locations over the IP Multi-site Connect network.
Extending the communication coverage	Multiple repeaters can be deployed in a large building to overcome obstacles like unfavorable terrain, to achieve seamless communications.
Broadcasting messages to all connected repeaters	In case of an emergency, the dispatch station can send an instruction to all repeaters in IP Multi-site Connection mode.
Connecting repeaters working in varied frequency bands	The UHF repeaters and VHF repeaters can be connected so that data and voice can be exchanged among them.
Connecting IP-based applications	In the IP Multi-site Connect mode, you can use IP-based software developed by any third party to realize more functions.

6.2.2 Normal Mode

In the Normal mode, once any repeater receives the data or command, it will transfer such data or command to other repeaters over the IP Multi-site Connect network. It is only required to connect the master repeater to the SmartDispatch Gateway.

The system architecture is illustrated as below.



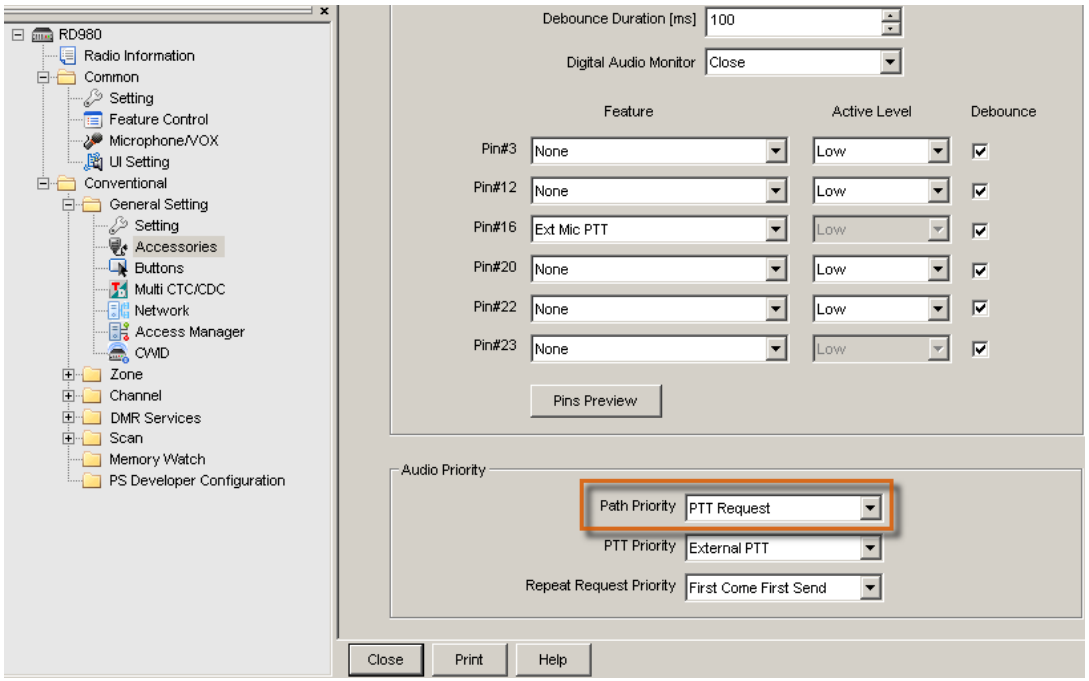
Master Repeater

- General Setting

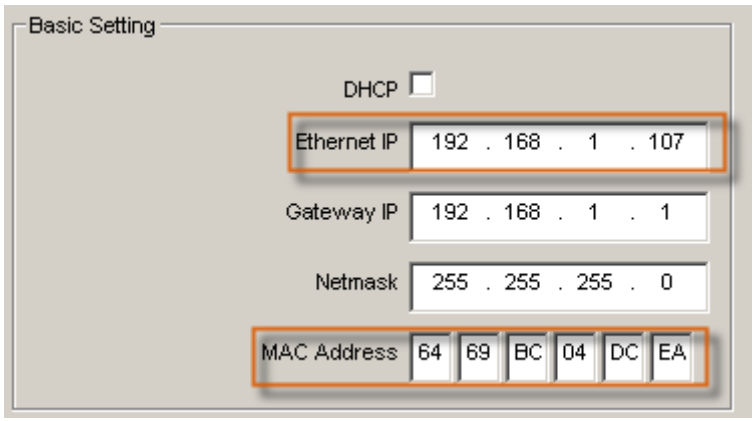
Step 1 Open the Customer Programming Software and read the configuration from the repeater.

Step 2 Go to “Conventional -> General Setting -> Accessories” in the left navigation tree.

Step 3 Set the “Path Priority” to “PTT Request”. When both the repeat request and PTT request come simultaneously, the repeater will first respond to the PTT request.



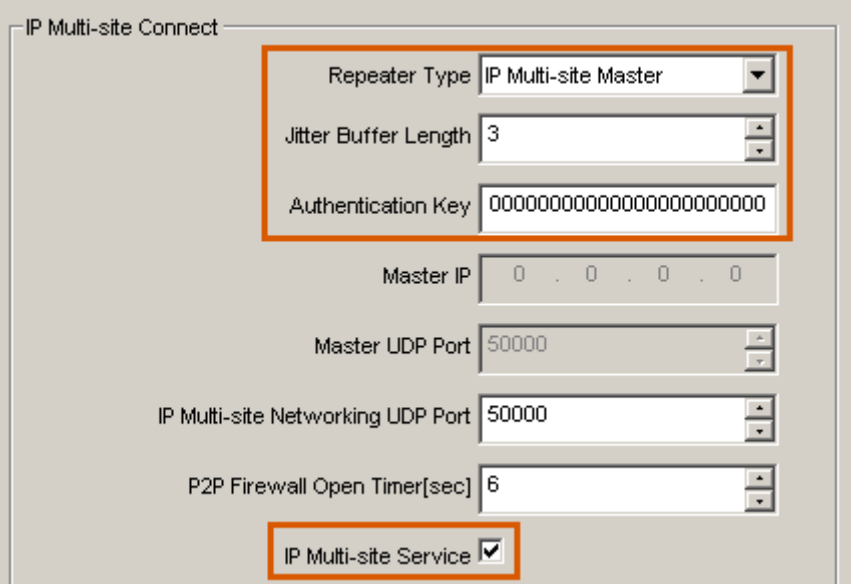
Step 4 Go to “Conventional -> General Setting -> Network” in the left navigation tree, and set the parameters in the “Basic Setting” box.



Parameter	Description
DHCP	Do not select this option.
Ethernet IP	It must be unique. Otherwise, communication may be failure in the system.
Gateway IP	It must be unique. Please note that the last digit should not be set to “0”.
Netmask	255.255.255.0

Parameter	Description
MAC Address	Sets the address of the repeater in the network. It must be unique. Make sure that each value in the each part is different.

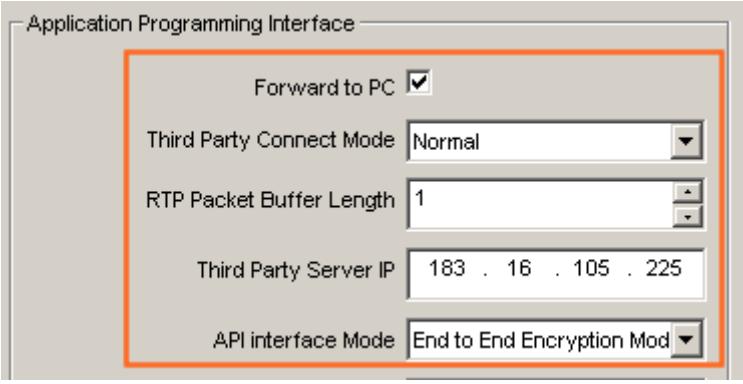
Step 5 Set the parameters in the “IP Multi-site Connect” box.



Parameter	Description
Repeater Type	When this option is set to “IP Multi-site Master”, the repeater will act as the master one in the IP Multi-site Connect network.
Jitter Buffer Length	This parameter defines the length of buffer area for the repeater to process the received voice and data in the IP network. You should set this parameter based on the actual network conditions. For example, if there is a poor network connection, the value should be greater to improve the communication continuity. In the IP Multi-site Connect network, it is recommended to set this parameter to 3. The range is 1 - 8.
Authentication Key	Sets the password for accessing the IP Multi-site Connect network. Please note that the authentication key of the slave

Parameter	Description
	repeater must be identical with that of the master repeater in the same IP Multi-site Connect network. If you leave this parameter blank, it indicates that no authentication is required. This key can contain up to 40 characters (0 – 9 and A – F).
IP Multi-site Service	Be sure to select this option.

Step 6 Set the parameters in the “Application Programming Interface” box.

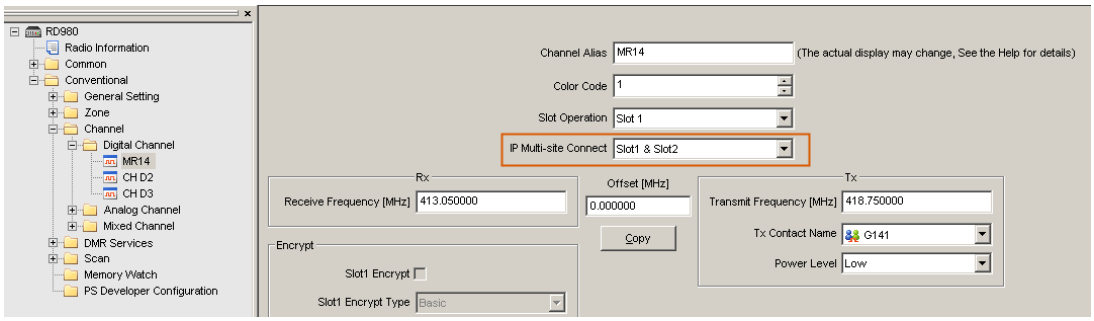


Parameter	Description
Forward To PC	Be sure to select this option.
Third Party Connect Mode	Be sure to select “Normal” from the drop-down list.
Third Party Server IP	Sets the IP address of the SmartDispatch Gateway.
API interface Mode	Be sure to select “End to End Encryption Mode” if you need to use the Voice Encryption feature; otherwise, keep the default settings.

- Channel

Step 1 Go to “Conventional -> Channel -> Digital Channel” in the left navigation tree.

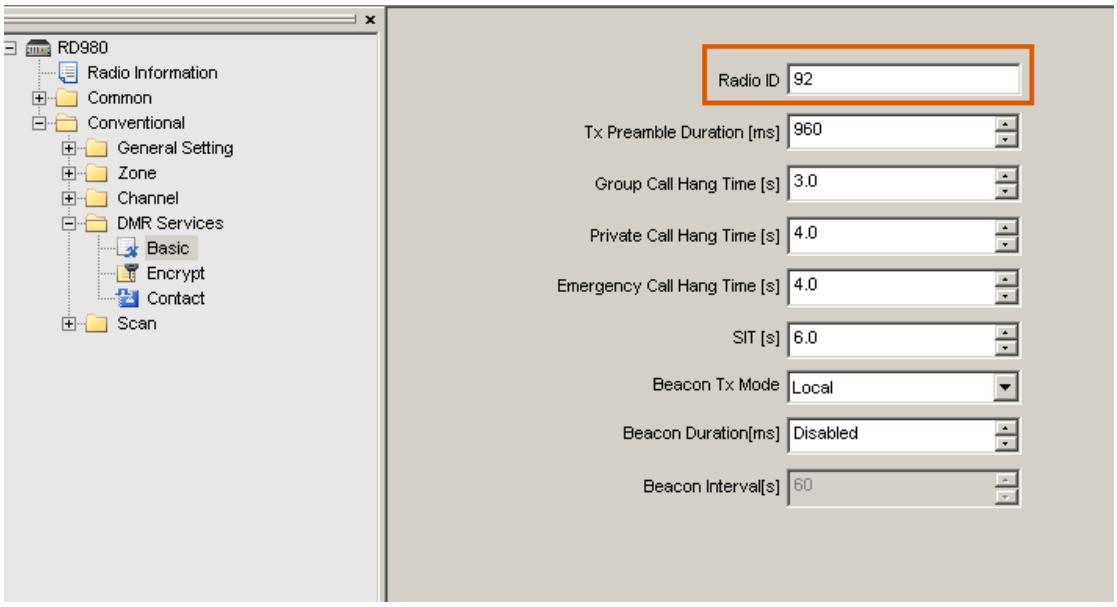
Step 2 Set the “IP Multi-site Connect” to “Slot 1& Slot 2”. Thus the repeater uses Slot 1 and Slot 2 to forward the data in the IP Multi-site Connect network.



- DMR Services

Step 1 Go to “Conventional -> DMR Services -> Basic”.

Step 2 Set the radio ID.



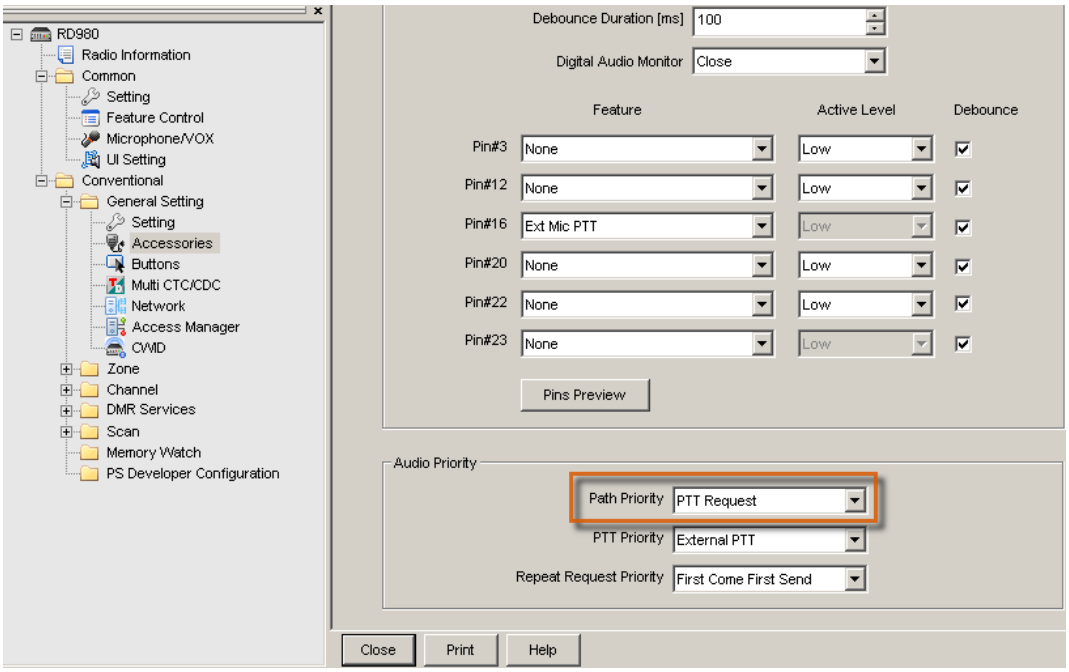
Slave Repeater

- General Setting

Step 1 Open the Customer Programming Software and read the configuration from the repeater.

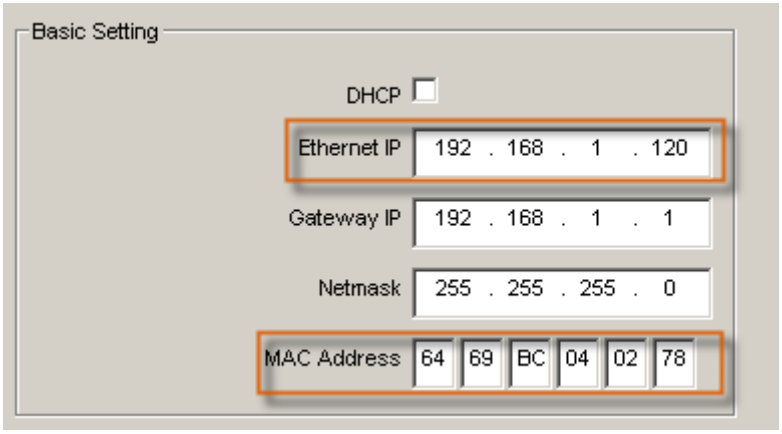
Step 2 Go to “Conventional -> General Setting -> Accessories” in the left navigation tree.

Step 3 Set the “Path Priority” to “PTT Request”. When both the repeat request and PTT request come simultaneously, the repeater will first respond to the PTT request.



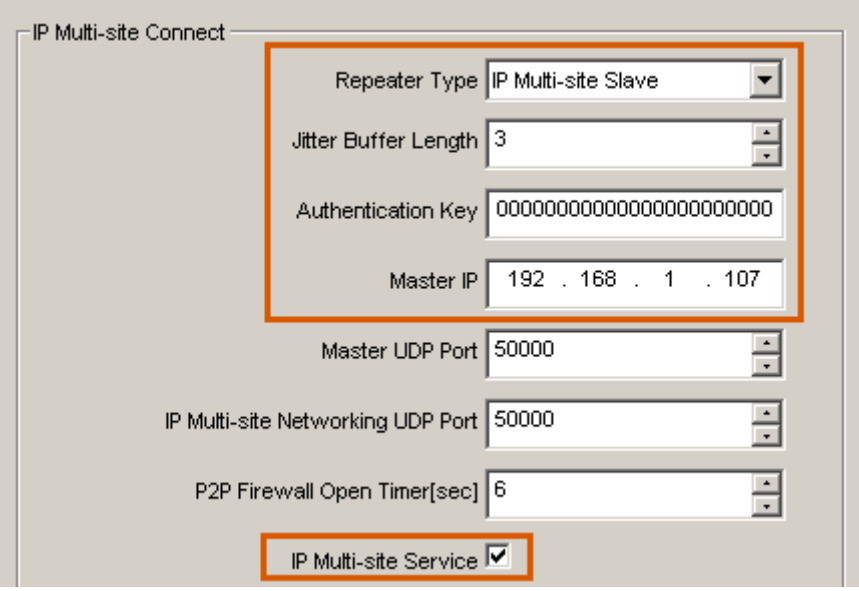
Step 4 Go to “Conventional -> General Setting -> Network” in the left navigation tree,

Step 5 Set the parameters in the “Basic Setting” box.



Parameter	Description
DHCP	Be sure to select this option.
MAC Address	Sets the address of the repeater in the network. It must be unique. Make sure that each value in the each part is different.

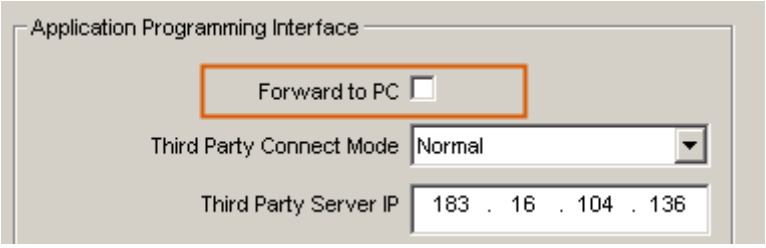
Step 6 Set the parameters in the “IP Multi-site Connect” box.



Parameter	Description
Repeater Type	When this option to “IP Multi-site Slave”, the repeater will act as the slave one in the IP Multi-site Connect network.
Jitter Buffer Length	This parameter defines the length of buffer area for the repeater to process the received voice and data in the IP network. You should set this parameter based on the actual network conditions. For example, if there is a poor network connection, the value should be greater to improve the communication continuity. In the IP Multi-site Connect, it is recommended to set this parameter to 3. The range is 1 - 8.
Authentication Key	Sets the password for accessing the IP Multi-site Connect network. Please note that the authentication key of the slave repeater must be identical with that of the master repeater in the same IP Multi-site Connect network. If you leave this parameter blank, it indicates that no authentication is required. This key can contain up to 40 characters (0–9 and A–F).
Master IP	Sets the IP address of the master repeater in the IP Multi-site Connect network.

Parameter	Description
IP Multi-site Service	Be sure to select this option.

Step 7 Set parameters in the “Application Programming Interface” box.

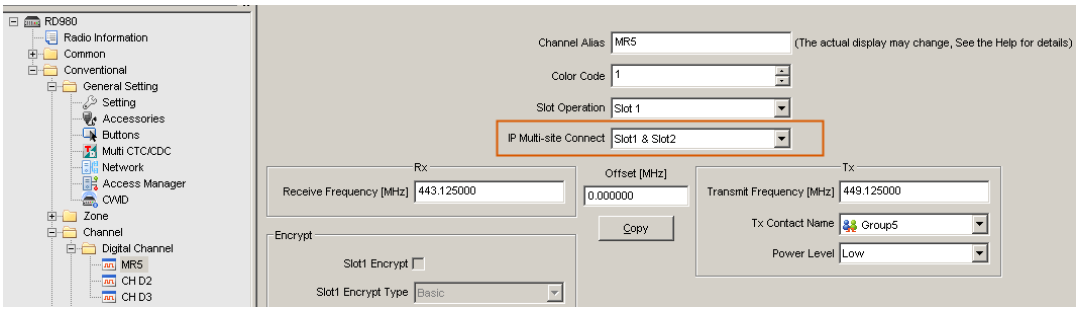


Parameter	Description
Forward To PC	Do not select this option.

- Channel

Step 1 Go to “Conventional -> Channel -> Digital Channel” in the left navigation tree.

Step 2 Set the “IP Multi-site Connect” to “Slot 1& Slot 2”. Thus the repeater uses Slot 1 and Slot 2 to forward the data in the IP Multi-site Connect network.



- DMR Services

Step 1 Go to “Conventional -> DMR Services -> Basic”.

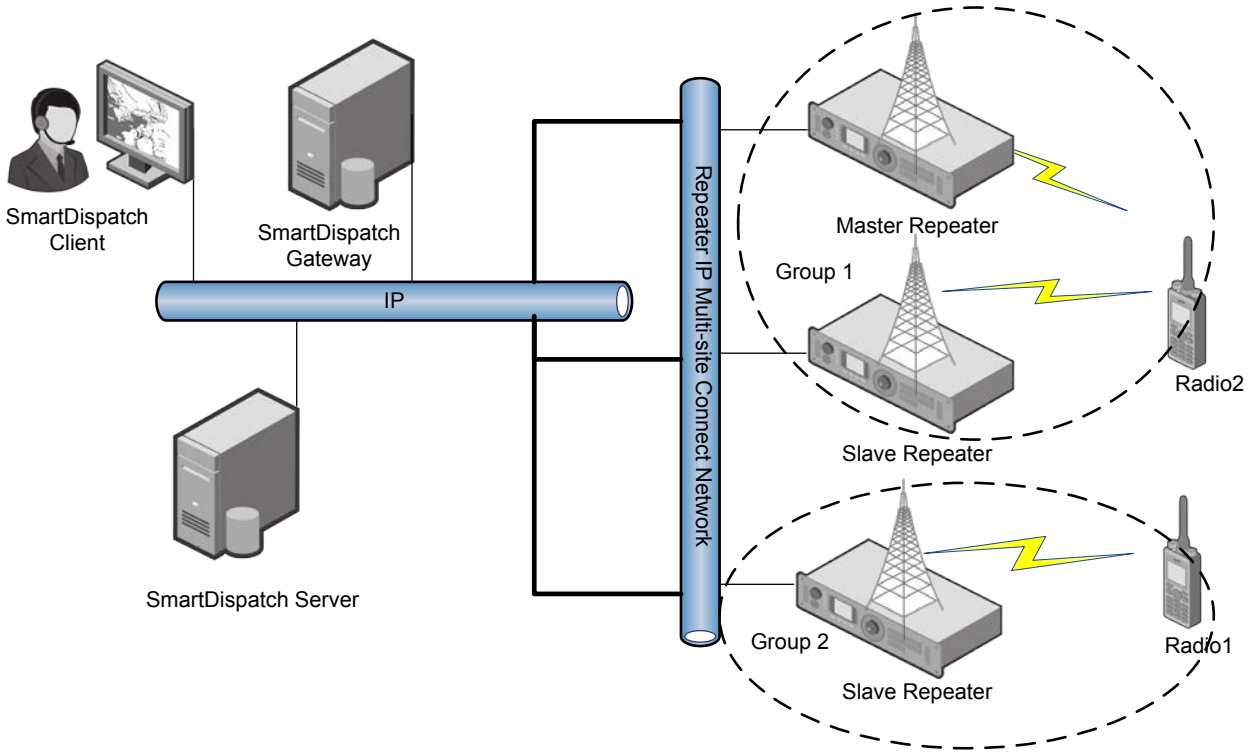
Step 2 Set the radio ID.

6.2.3 Selective Mode

In the selective mode, the repeater activates the Access Manager feature, to repeat the right data to the right radio over the IP network. Thus point-to-point communications can be achieved between repeaters with the same Access Manager feature.

Each repeater connects to the SmartDispatch Gateway and transmits the received data from the air interface to it, while the SmartDispatch sends the data and command to each repeater respectively.

The system architecture is illustrated as below.



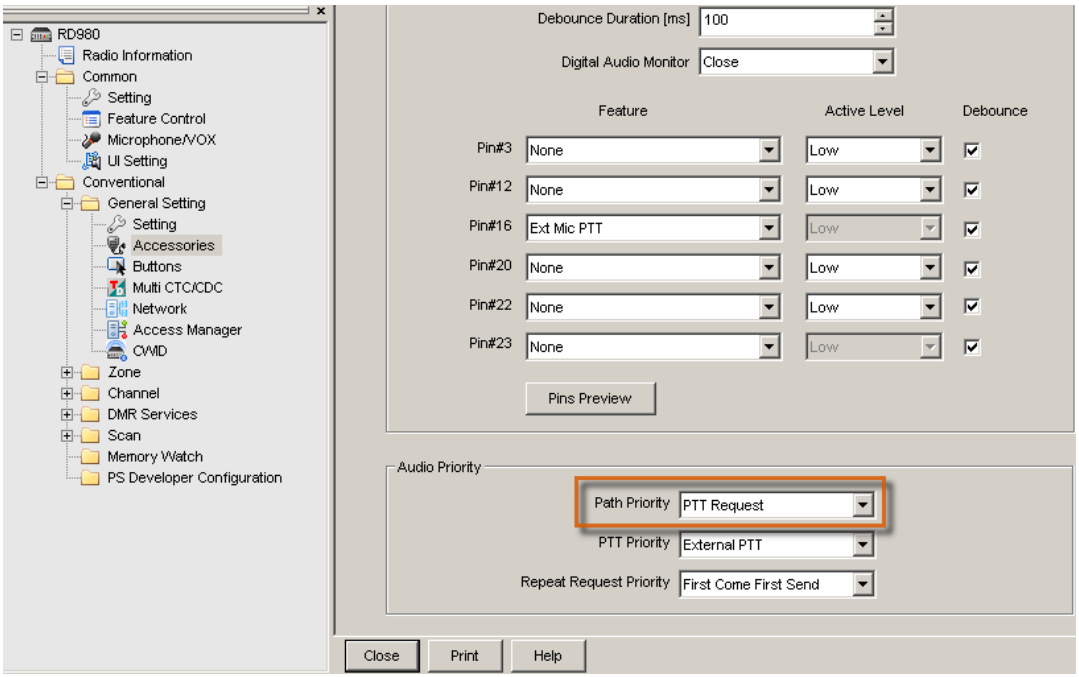
Master Repeater

- General Setting

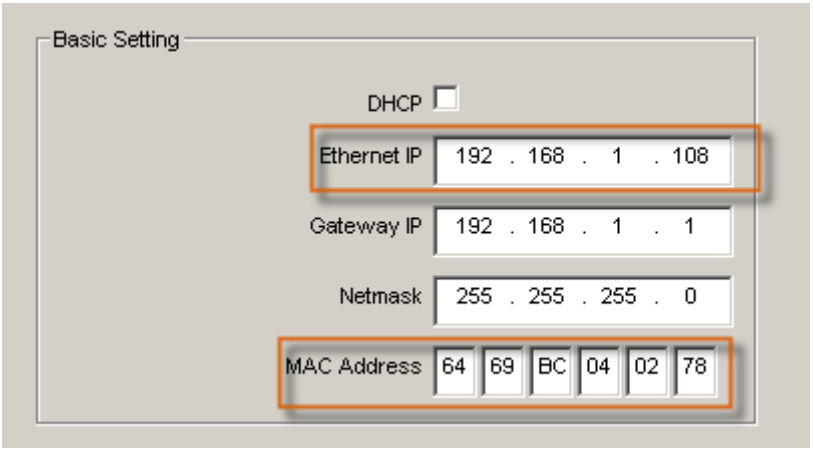
Step 1 Open the Customer Programming Software and read the configuration from the repeater.

Step 2 Go to “Conventional -> General Setting -> Accessories” in the left navigation tree.

Step 3 Set the “Path Priority” to “PTT Request”. When both the repeat request and PTT request come simultaneously, the repeater will first respond to the PTT request.



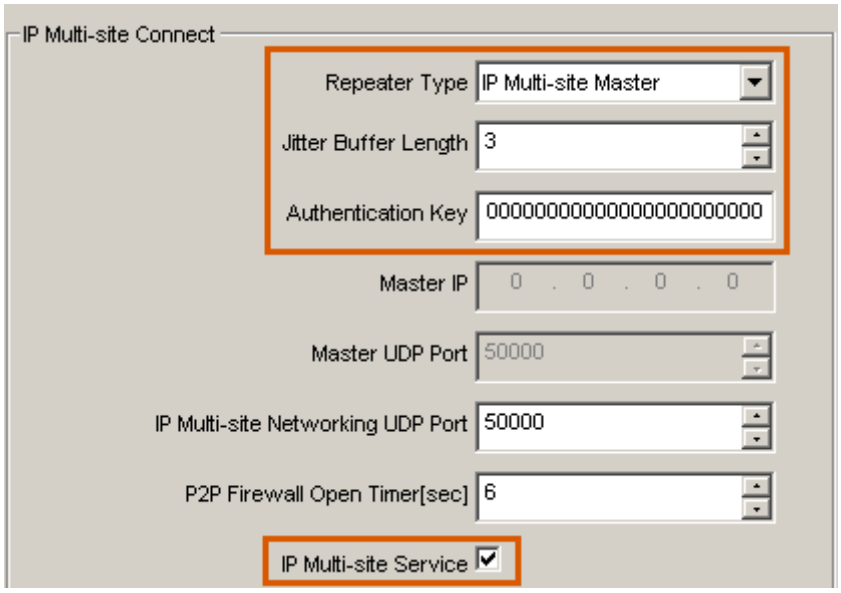
Step 4 Go to “Conventional -> General Setting -> Network” in the left navigation tree, and set the parameters in the “Basic Setting” box.



Parameter	Description
DHCP	Do not select this option.
Ethernet IP	It must be unique. Otherwise, communications may be failure in the system.
Gateway IP	It must be unique. Please note that the last digit should not be set to “0”.

Parameter	Description
Netmask	255.255.255.0
MAC Address	Sets the address of the repeater in the network. It must be unique. Make sure that each value in the each part is different.

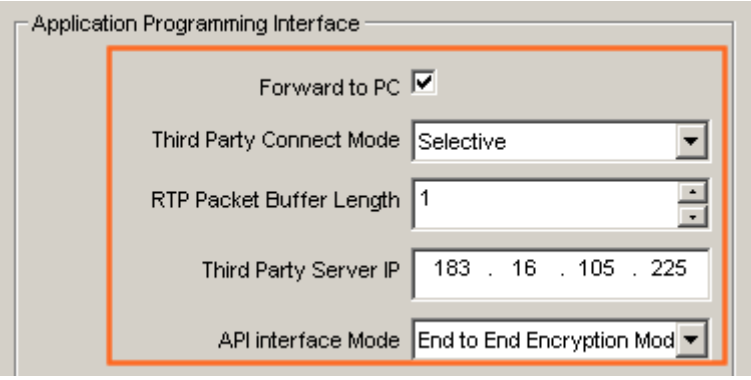
Step 5 Set the parameters in the “IP Multi-site Connect” box.



Parameter	Description
Repeater Type	Sets this option to “IP Multi-site Master”. Then the repeater will act as the master one in the IP Multi-site Connect network.
Jitter Buffer Length	This parameter defines the length of buffer area for the repeater to process the received voice and data in the IP network. You should set this parameter based on the actual network conditions. For example, if there is a poor network connection, the value should be greater to improve the communication continuity. In the IP Multi-site Connect, it is recommended to set this parameter to 3. The range is 1 - 8.
Authentication Key	Sets the password for accessing the IP Multi-site Connect network. Please note that the authentication key of the slave

Parameter	Description
	repeater must be identical with that of the master repeater in the same IP Multi-site Connect network. If you leave this parameter blank, it indicates that no authentication is required. This key can contain up to 40 characters (0–9 and A–F).
IP Multi-site Service	Be sure to select this option.

Step 6 Set parameters in the “Application Programming Interface” box.

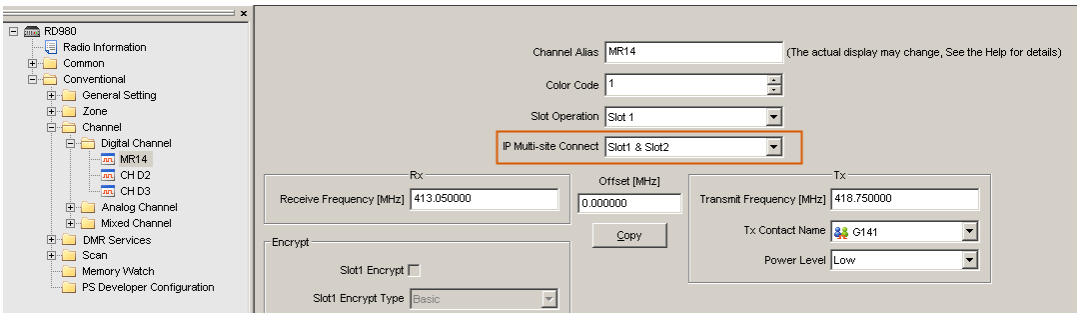


Parameter	Description
Forward To PC	Be sure to select this option.
Third Party Connect Mode	Be sure to select “Selective” from the drop-down list.
Third Party Server IP	Sets the IP address of the SmartDispatch Gateway.
API interface Mode	Be sure to select “End to End Encryption Mode” if you need to use the Voice Encryption feature; otherwise, keep the default settings.

- Channel

Step 1 Go to “Conventional -> Channel -> Digital Channel” in the left navigation tree.

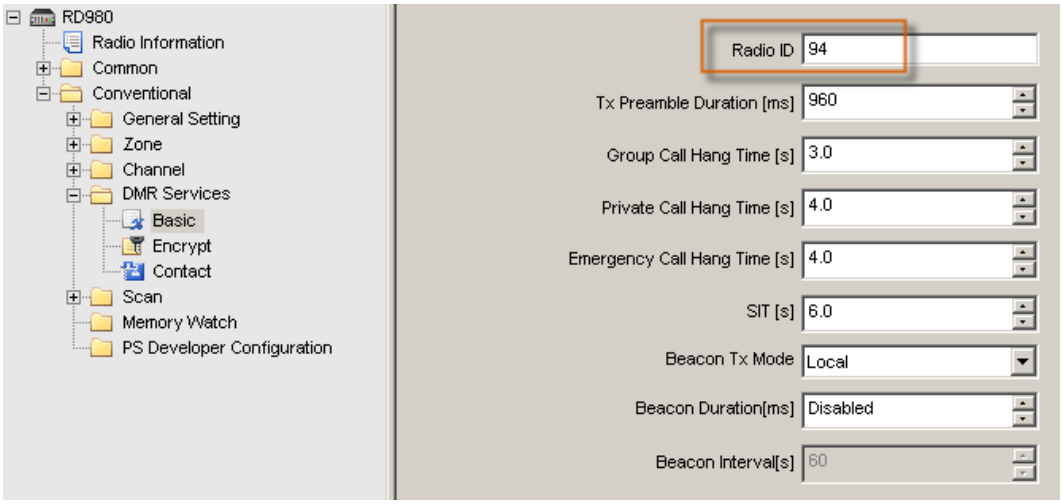
Step 2 Set the “IP Multi-site Connect” to “Slot 1& Slot 2”. Thus the repeater uses Slot 1 and Slot 2 to forward the data in the IP Multi-site Connect network.



- DMR Services

Step 1 Go to “Conventional -> DMR Services -> Basic”.

Step 2 Set the radio ID.



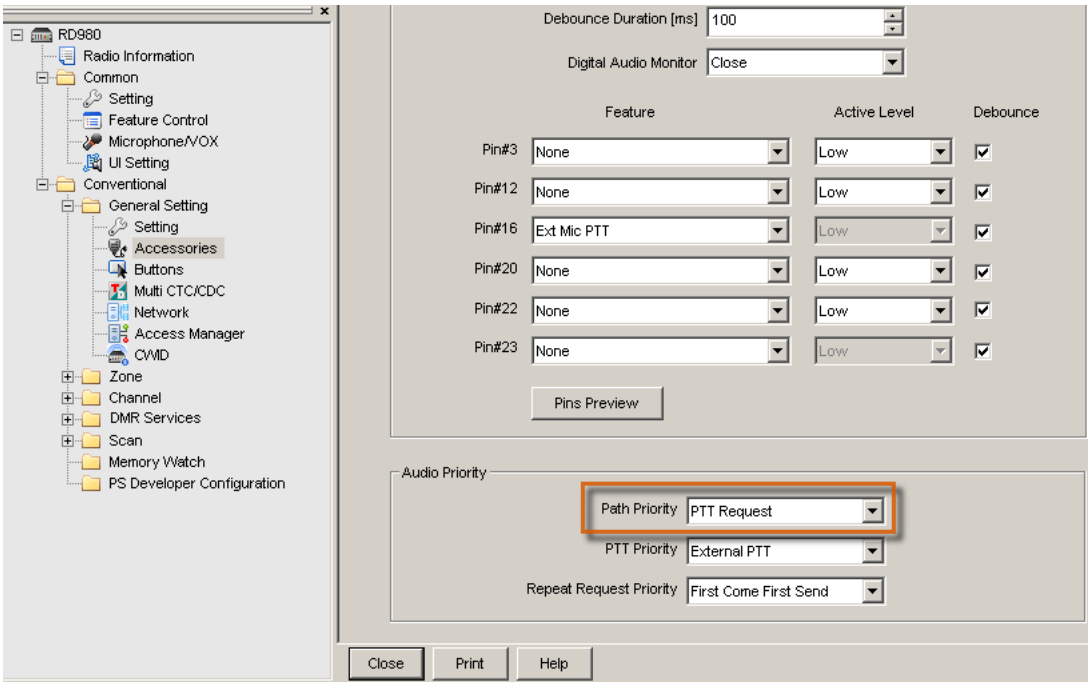
Slave Repeater

- Basic Setting

Step 1 Open the Customer Programming Software and read the configuration from the repeater.

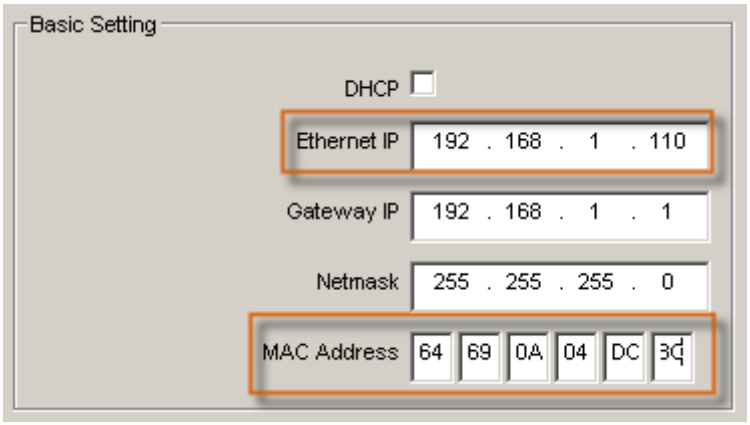
Step 2 Go to “Conventional -> General Setting -> Accessories” in the left navigation tree.

Step 3 Set the “Path Priority” to “PTT Request”. When both the repeat request and PTT request come simultaneously, the repeater will first respond to the PTT request.



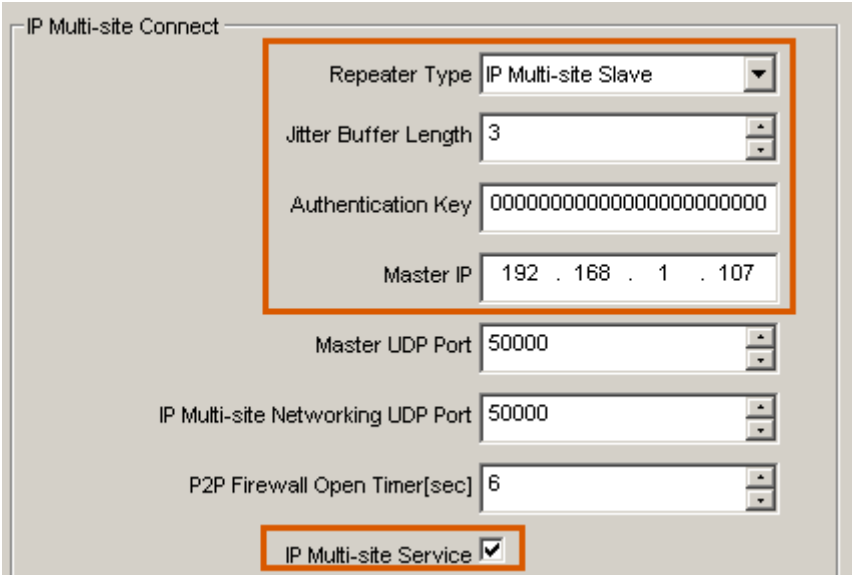
Step 4 Go to “Conventional -> General Setting -> Network” in the left navigation tree.

Step 5 Set the parameters in the “Basic Setting” box.



Parameter	Description
DHCP	Be sure to select this option.
MAC Address	Sets the address of the repeater in the network. It must be unique. Make sure that each value in the each part is different.

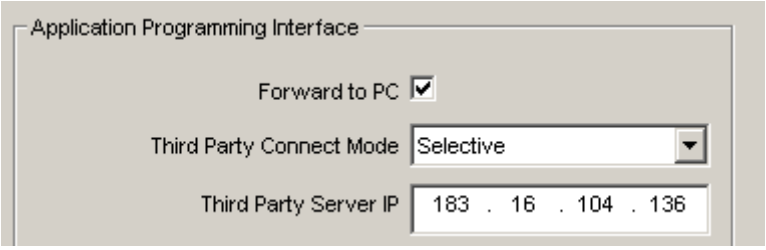
Step 6 Set the parameters in the “IP Multi-site Connect” box.



Parameter	Description
Repeater Type	Sets this option to “IP Multi-site Slave”. Then the repeater will act as the slave one in the IP Multi-site Connect network.
Jitter Buffer Length	This parameter defines the length of buffer area for the repeater to process the received voice and data in the IP network. You should set this parameter based on the actual network conditions. For example, if there is a poor network connection, the value should be greater to improve the communication continuity. In the IP Multi-site Connect, it is recommended to set this parameter to 3. The range is 1 - 8.
Authentication Key	Sets the password for accessing the IP Multi-site Connect network. Please note that the authentication key of the slave repeater must be identical with that of the master repeater in the same IP Multi-site Connect network. If you leave this parameter blank, it indicates that no authentication is required. This key can contain up to 40 characters (0–9 and A–F).
Master IP	Sets the IP address of the master repeater in the IP Multi-site Connect network.

Parameter	Description
IP Multi-site Service	Be sure to select this option.

Step 7 Set parameters in the “Application Programming Interface” box.

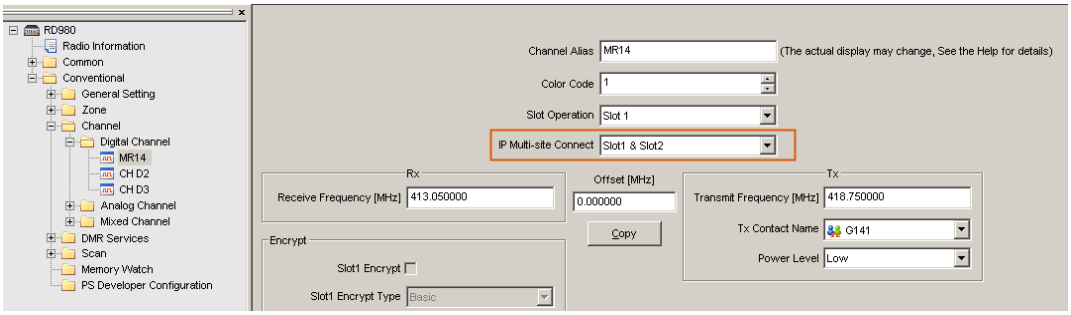


Parameter	Description
Forward To PC	Be sure to select this option.
Third Party Connect Mode	Be sure to select “Selective” from the drop-down list.
Third Party Server IP	Sets the IP address of the SmartDispatch Gateway.

- Channel

Step 1 Go to “Conventional -> Channel -> Digital Channel” in the left navigation tree.

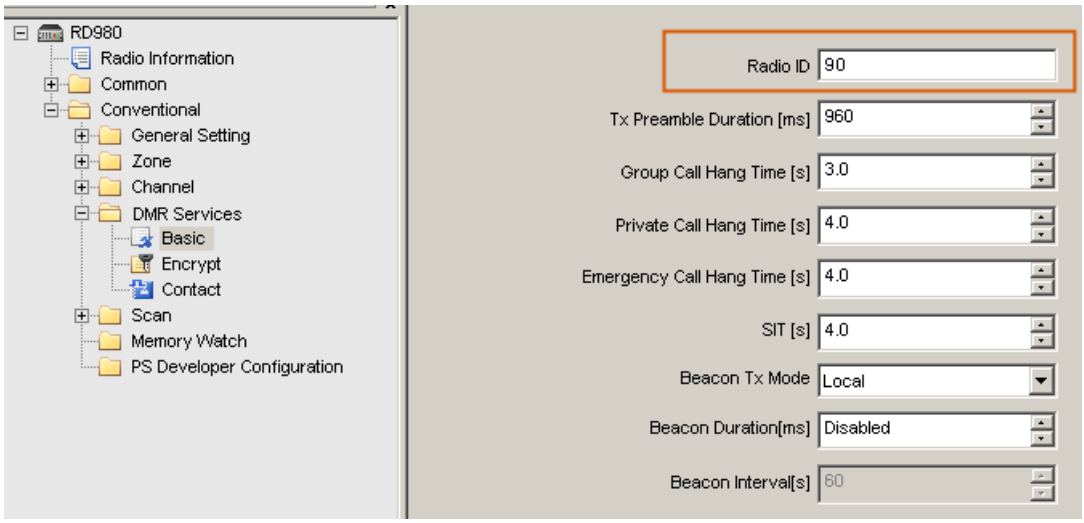
Step 2 Set the “IP Multi-site Connect” to “Slot 1& Slot 2”. Thus the repeater uses Slot 1 and Slot 2 to forward the data in the IP Multi-site Connect network.



- DMR Services

Step 3 Go to “Conventional -> DMR Services -> Basic”.

Step 4 Set the radio ID. The radio ID of the slave repeater can not be identical with that of the master repeater.



6.3 Encryption

You should set the encrypt key for the repeater before using the Voice Encryption feature. Make sure that this key is identical with that of the radio and SmartDispatch Client. In addition, you should configure the appropriate parameters in the SmartDispatch Gateway (See the description of “Encrypt Slot” in “9.3 Repeater Settings”).

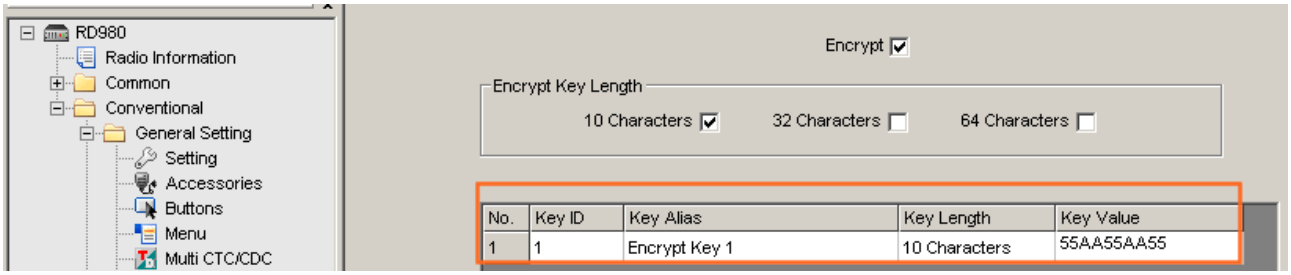
Caution

- The “API interface Mode” parameter should be set to “End to End Encryption Mode” for the repeater via the CPS. For more information, see the previous section “6.2 IP Multi-site Connect Mode”.
- If both the master repeater and slave repeater are available in the system, you should configure the same encrypt key for them.

Follow the steps below to set the encrypt key:

Step 1 Go to “Conventional -> DMR Services -> Encrypt”.

Step 2 Select “Encrypt” and enter an encrypt key.

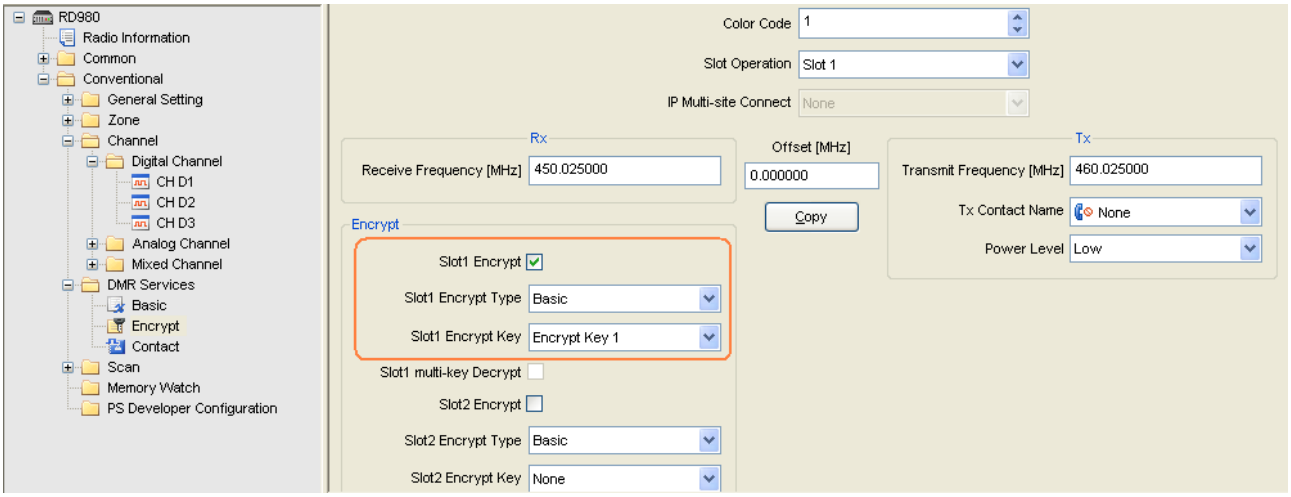


Parameter	Description

Parameter	Description
Encrypt Key Length	Defines the length of the key you enter. Currently there are three options: 10, 32 and 64 characters. As long as you set this parameter, you can enter the encrypt key in the “Key Length”.
Key ID	The ID must be unique.
Key Alias	The alias must be unique.
Key Value	Be sure to enter the hexadecimal numbers. The length of key value is subject to the settings in the “Key Length”.

Step 3 Go to “Conventional -> Channel -> Digital Channel”.

Step 4 Set the encrypt key. For example, you use slot 1 for voice transmission. Thus, select “Slot1 Encrypt”, and choose the corresponding encrypt key for slot 1.



Caution

After setting the encrypt key for slot 1 in the CPS, you should select slot 1 for outputting the audio via the menu in the repeater: “Main Menu -> Digital Speaker -> Slot 1”.

7. Programming the Portable Radio

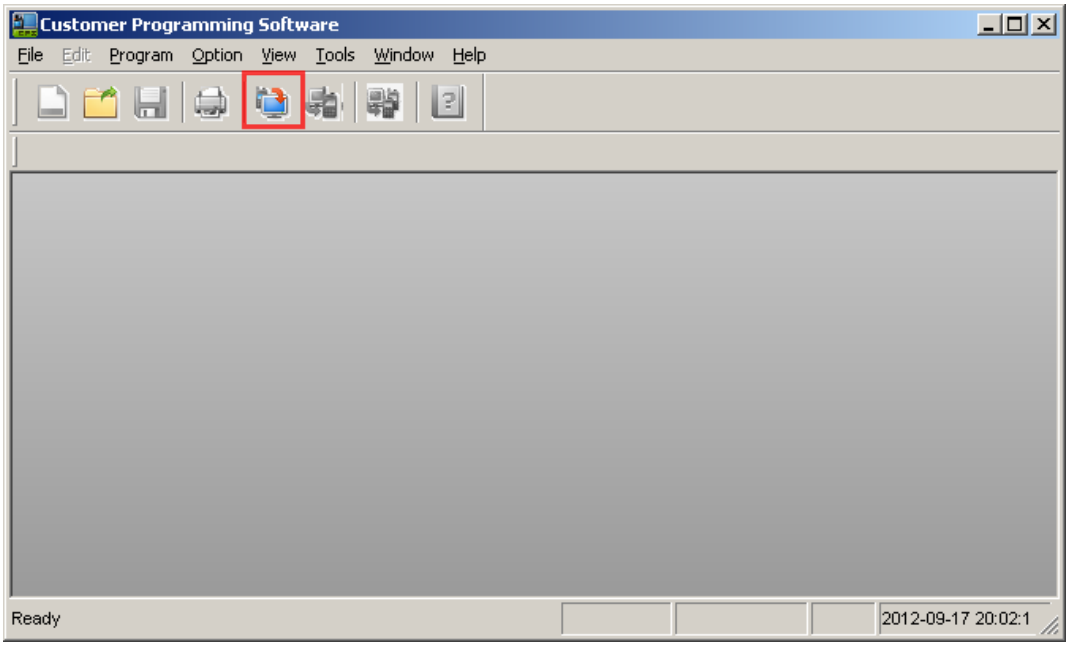
Caution

- The Customer Programming Software (V4.05.16.002 or later) is required.
- To activate the Pseudo Trunking feature, there must be two dispatch stations in the same group but on different slots.

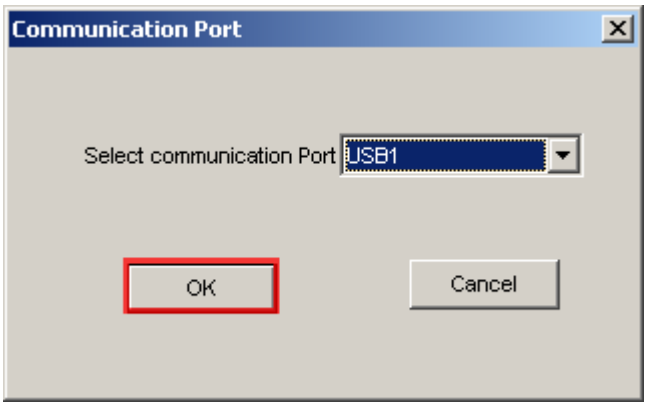
7.1 Basic Setting

Step 1 Open the Customer Programming Software.

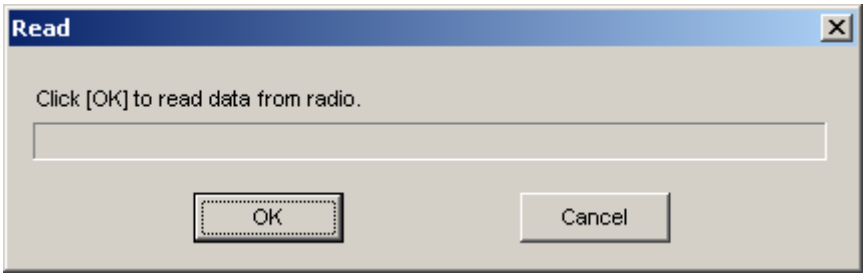
Step 2 Click the icon in the toolbar to read the data from the portable radio.



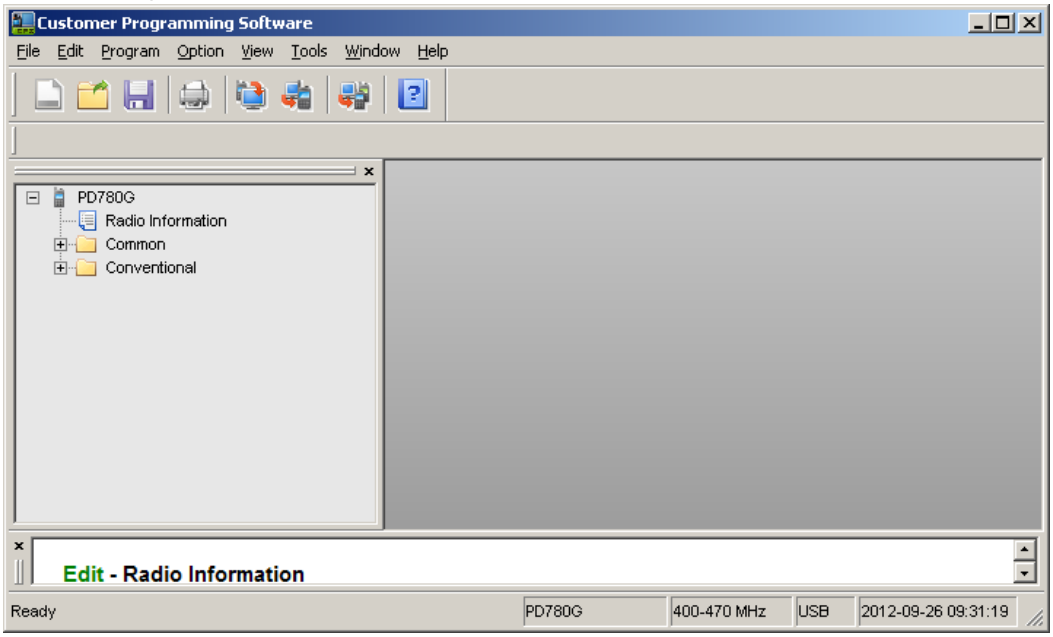
Step 3 Click OK to enter the following window.



Step 4 Click OK to start reading the data from the portable radio. After the data is read successfully, click OK.



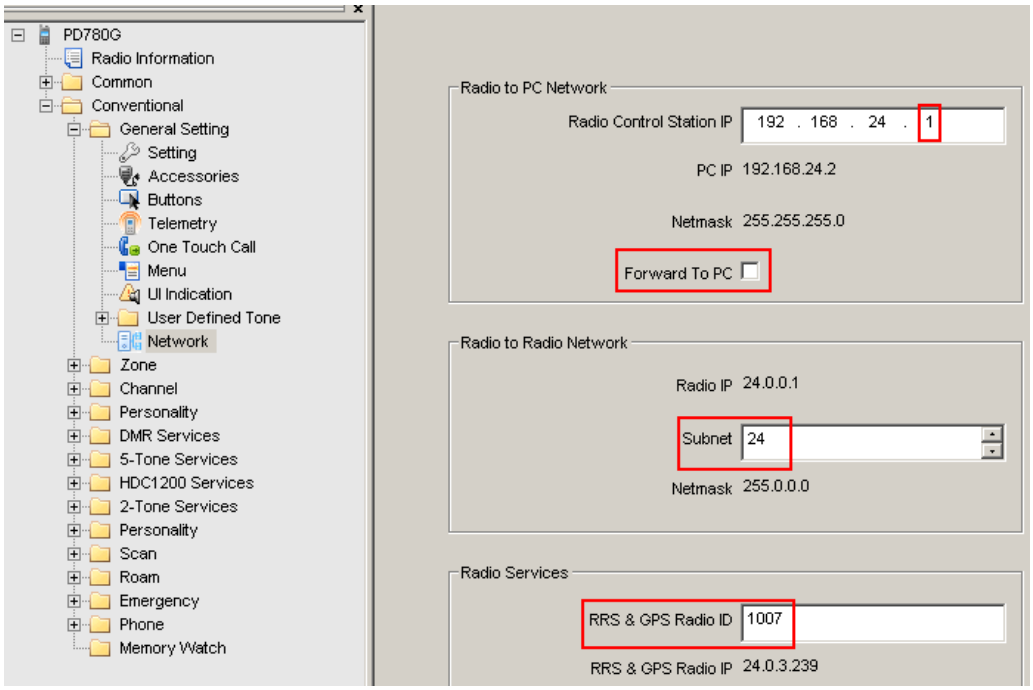
The following window appears.

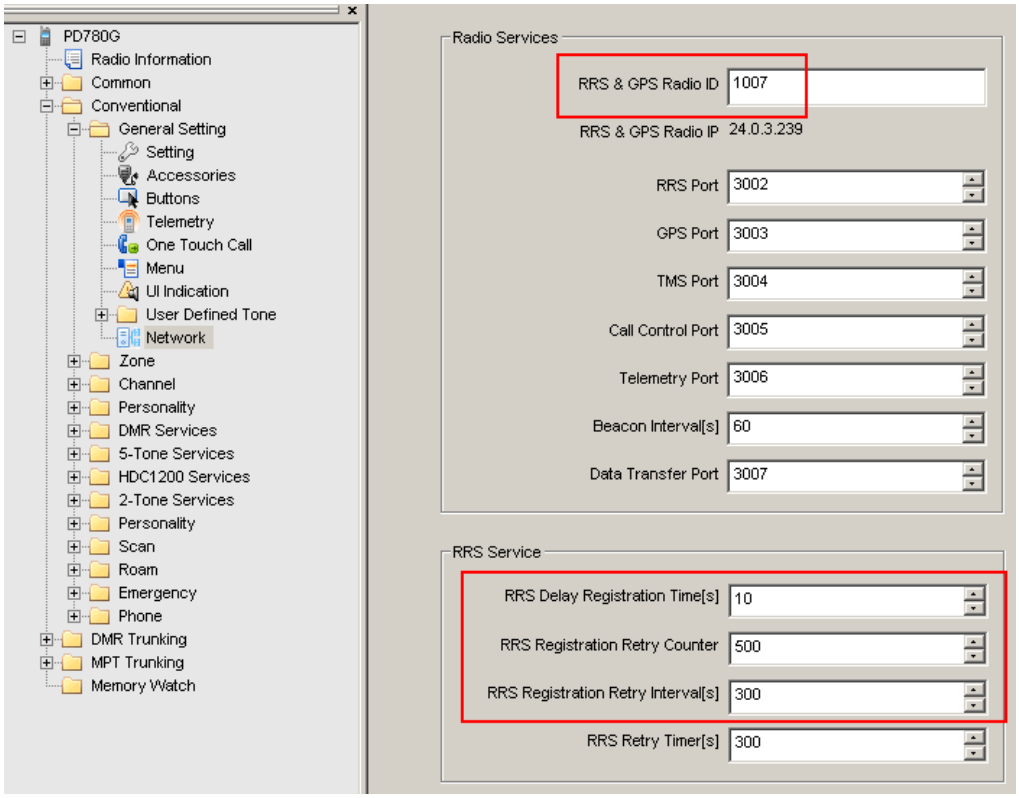


Step 5 Go to “Conventional -> General Setting -> Network” in the left navigation tree.

Step 6 Set the following parameters.

Do follow the settings specified in the table below.





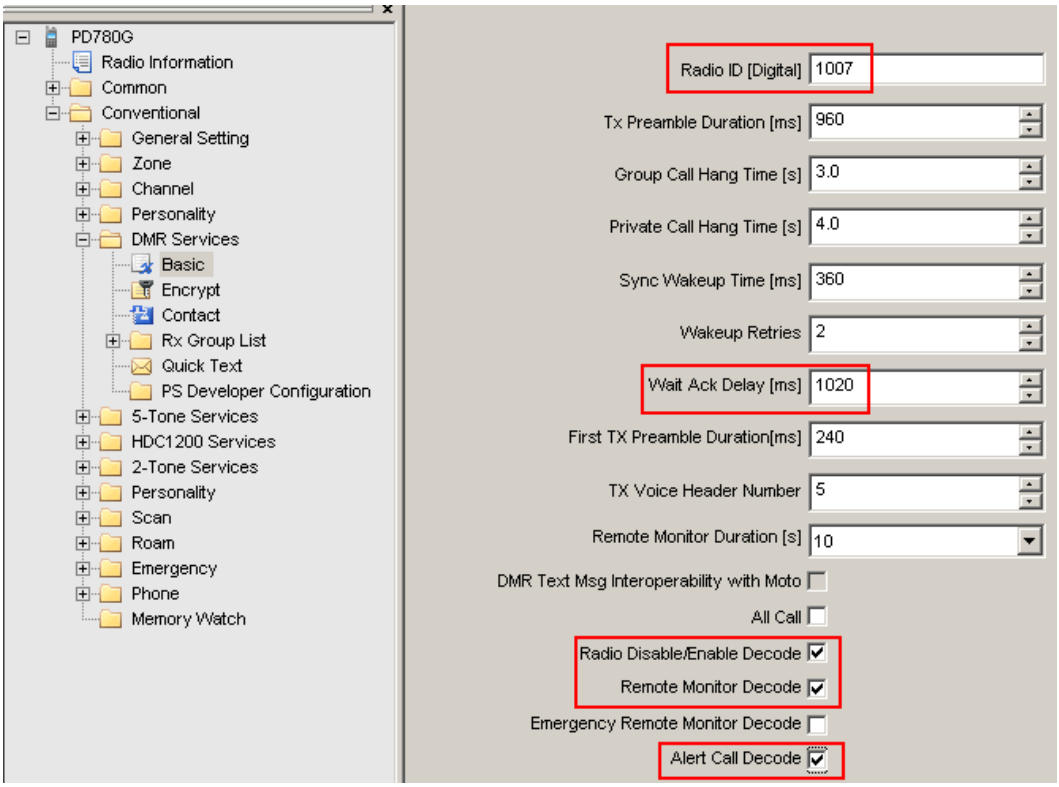
Parameter	Settings
RRS & GPS Radio ID	Be sure to enter the corresponding radio ID specified in the dispatch station or repeater. Otherwise, the registration will fail and the radio can not work properly.

Parameter	Settings
	● Enters the dispatch station ID in this field if the dispatch station is employed in the SmartDispatch system. ● If the repeater is employed in the SmartDispatch system, do as follows: ➢ Enters the ID of the master repeater in the Normal mode. ➢ Enters the ID of the repeater which the radio belongs to in the Selective mode
Forward To PC	Do not select this option. Otherwise, the message may not be sent successfully.
Subnet	It must be c onsistent with that in the dispatch station or repeater.
RRS Delay Registration Time	Defines the time between the power-on and registration. It is recommended to set to 10 seconds.
RRS Registration Retry Counter	Defines the maximum retry times for the portable radio to send the registration message. It must be set to 500 (maximum).
RRS Registration Retry Interval	Defines the interval of retrying the registration. It must be set to 300 (maximum).

Step 7 Click “Close” to finish.

7.2 DMR Service Settings

Step 1 Go to “Conventional -> DMR Services -> Basic”.



Step 2 Set the parameters as per the table below.

Parameter	Settings
Radio ID [Digital]	Sets the identity of the portable radio. It must be unique. The range is 1~16776415.
Wait Ack Delay [ms]	Sets the time period of waiting for an ACK after sending data or command. The value must be greater than 990.
Radio Disable/Enable Decode	Sets whether the portable radio can decode the Radio Disable/Enable command. Be sure to select this option.
Remote Monitor Decode	Sets whether the portable radio can decode the Remote Monitor command. Be sure to select this option.

Parameter	Settings
Alert Call Decode	Sets whether the portable radio can decode the Alert Call command. Be sure to select this option.

7.3 Channel Settings

You can choose to deploy one dispatch station in a group to transmit both the audio signals and GPS data, or two dispatch stations in a group to transmit the audio signals and GPS data separately. Thus, you must configure the portable radio according to the deployment of the dispatch station.

One dispatch station in a group

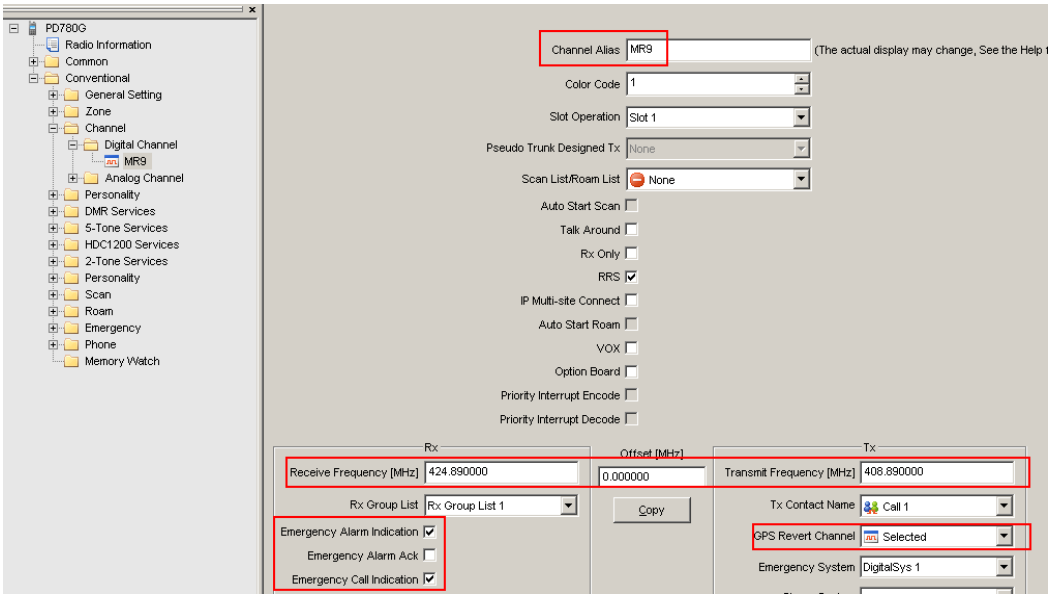
If only one dispatch station is employed in a group to transmit both the audio signals and GPS data, you just need to set one channel for the portable radio. Ensure that the “GPS Revert Channel” parameter is set to “Selected”.

Step 1 Go to “Conventional -> Channel -> Digital Channel”.

Step 2 Set the following parameters.

Caution

You must select the following options: “Emergency Alarm Indication” and “Emergency Call Indication”.



Two dispatch stations in a group

If two dispatch stations are employed in a group to transmit the audio signals and GPS data separately, you need to set two channels for the portable radio. One is used to transmit the audio signals while the other to transmit the GPS data. More importantly, their slots must be different.

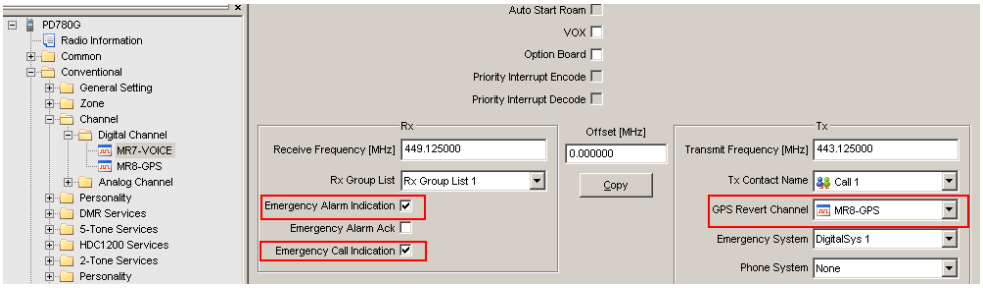
Step 1 Go to “Conventional -> Channel -> Digital Channel”.

Step 2 Set the following parameters.

Note

Click the icon to add a channel.

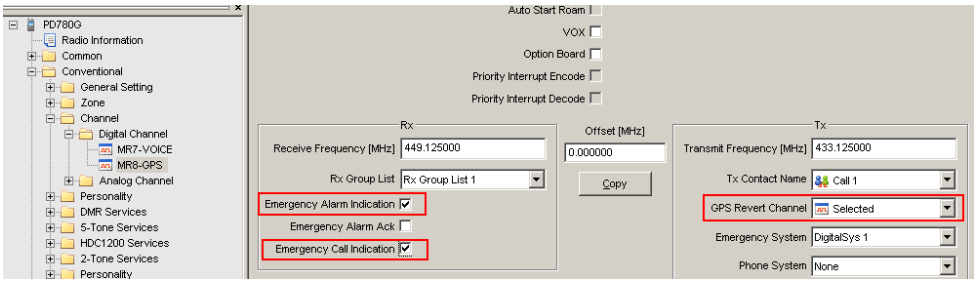
- Setting the voice channel for audio transmission



Note

Do set the “GPS Revert Channel” to “MR8-GPS”.

- Setting the channel for GPS data transmission



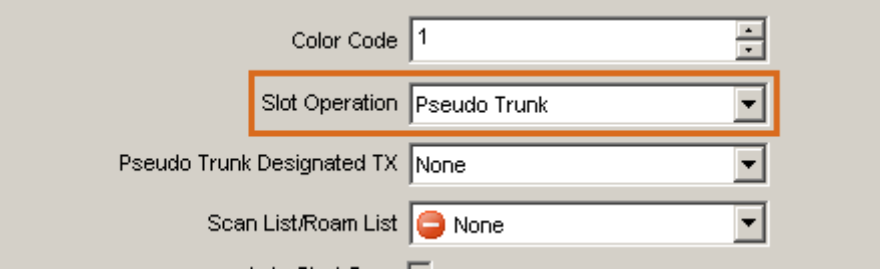
Note

Do set the “GPS Revert Channel” to “Selected”.

Activating the Pseudo Trunking feature

Step 1 Go to “Conventional -> Channel -> Digital Channel”.

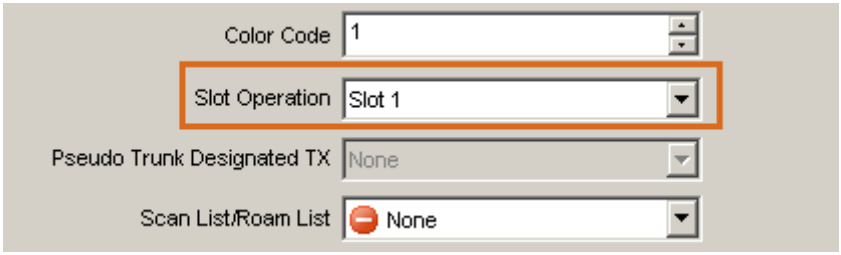
Step 2 Set the “Slot Operation” to “Pseudo Trunk”.



Deactivating the Pseudo Trunking feature

Step 1 Go to “Conventional -> Channel -> Digital Channel”.

Step 2 Select the same slot specified for the dispatch station from the “Slot Operation” drop-down list.



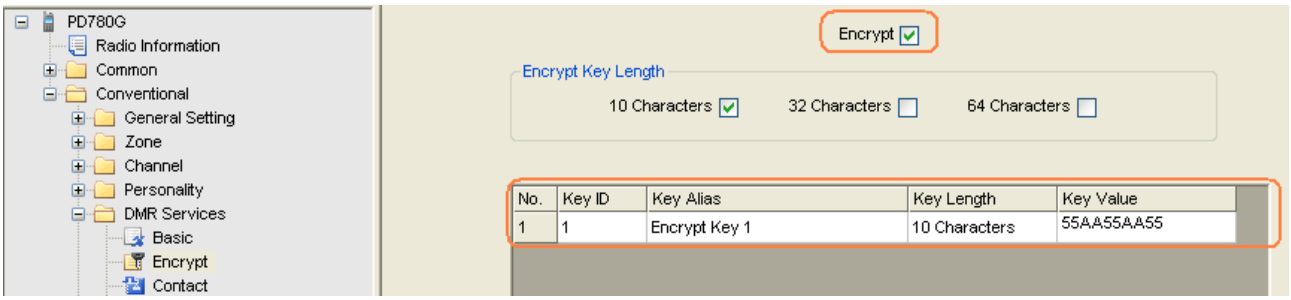
7.4 Encryption

You should set the encrypt key for the portable radio before using the Voice Encryption feature. Make sure that this key is identical with that of the repeater and SmartDispatch Client.In addition, you should configure the appropriate parameter in the SmartDispatch Gateway (See the description of “Encrypt Slot” in “9.3 Repeater Settings”).

Follow the steps below to set the encrypt key:

Step 1 Go to “Conventional -> DMR Services -> Encrypt” in the left navigation tree.

Step 2 Select “Encrypt” and create an encrypt key. Ensure that this key is the same with that of the repeater and SmartDispatch.

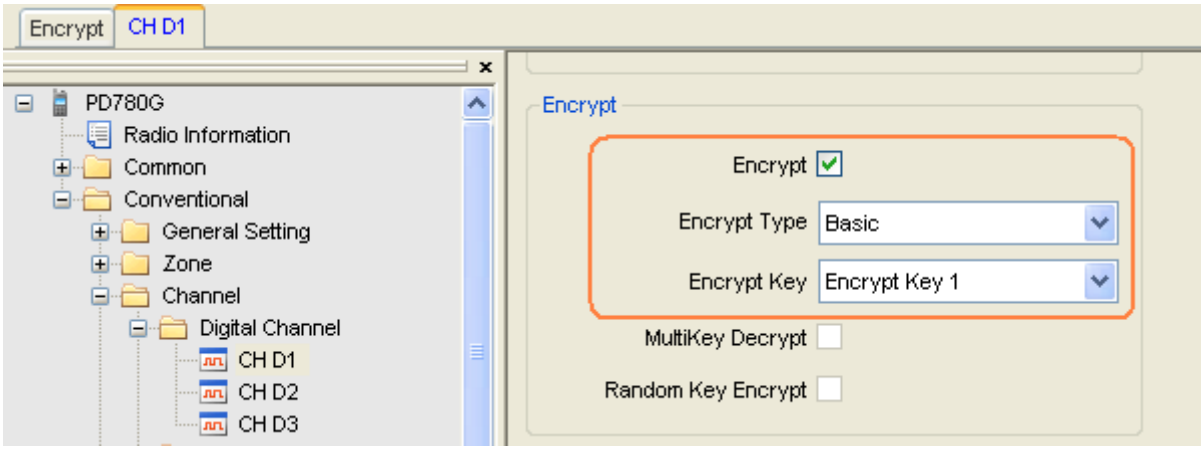


Parameter	Description

Parameter	Description
Encrypt Key Length	Defines the length of the key you enter. Currently there are three options: 10, 32 and 64 characters. As long as you set this parameter, you can enter the encrypt key in the “Key Length”.
Key ID	The ID must be unique.
Key Alias	The alias must be unique.
Key Value	Be sure to enter the hexadecimal numbers. The length of key value is subject to the settings in the “Key Length”.

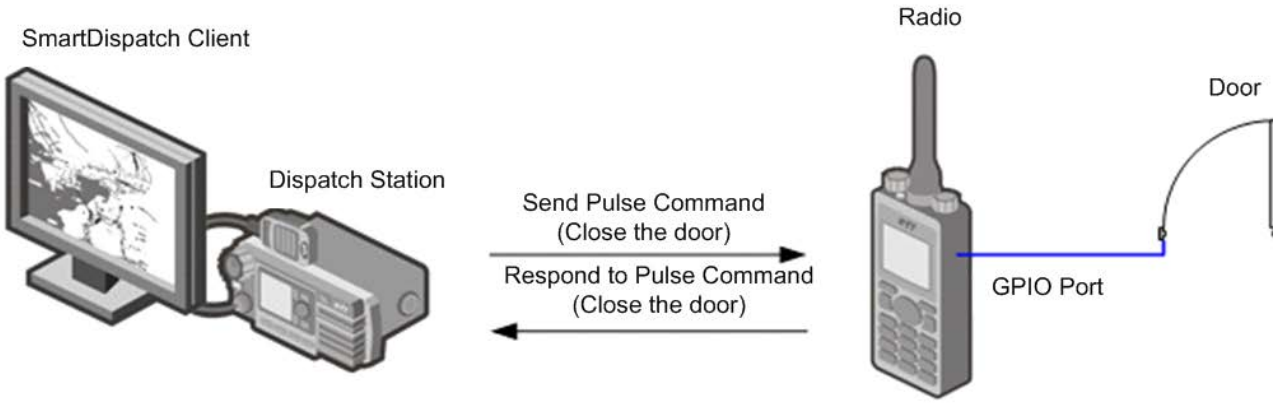
Step 3 Go to “Conventional -> Channel -> Digital Channel”.

Step 4 Set the encrypt key for the channel on which the encrypted voice is transmitted.



7.5 Telemetry

Through the SmartDispatch Client, you can remotely monitor the status of the external device connected to the radio, as well as controlling it.

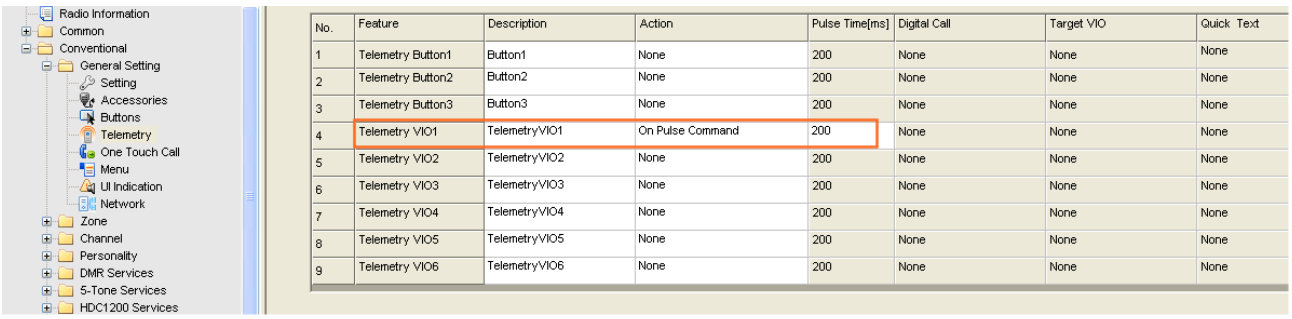


To apply the Telemetry feature, you should connect the monitored device to the GPIO port of the radio, define the telemetry commands (see “10.9 Telemetry”) and enable the radio in the following steps to respond to the commands.

Step 1 Go to “Conventional -> General Setting -> Telemetry” in the left navigation tree.

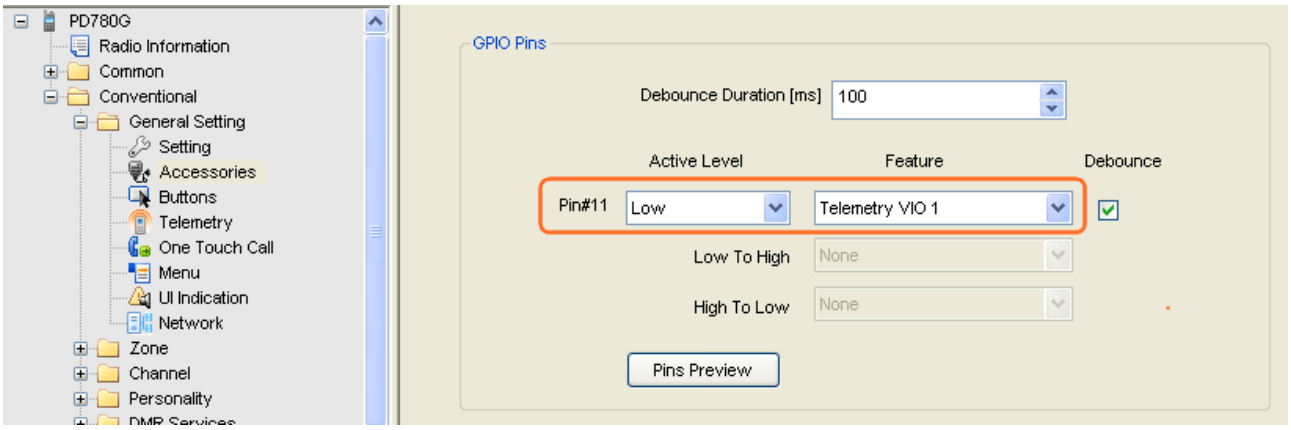
Step 2 Configure how the radio responds to the received telemetry commands.

In SmartDispatch Client, Feature 1 – Feature 6 of Telemetry are corresponding to “Telemetry VIO 1” – “Telemetry VIO 6” of the radio respectively. Pay attention to this when setting the Telemetry features. For example, if you select Feature 1 in SmartDispatch, you must configure the Telemetry VIO 1 for the radio. Accordingly, select the corresponding “Action” of the radio according to the preset command. For example, if you set the command “Send Pulse Command” in SmartDispatch, you need to select “On Pulse Command” for the right VIO port of the radio.



No.	Feature	Description	Action	Pulse Time[ms]	Digital Call	Target VIO	Quick Text
1	Telemetry Button1	Button1	None	200	None	None	None
2	Telemetry Button2	Button2	None	200	None	None	None
3	Telemetry Button3	Button3	None	200	None	None	None
4	Telemetry VIO1	TelemetryVIO1	On Pulse Command	200	None	None	None
5	Telemetry VIO2	TelemetryVIO2	None	200	None	None	None
6	Telemetry VIO3	TelemetryVIO3	None	200	None	None	None
7	Telemetry VIO4	TelemetryVIO4	None	200	None	None	None
8	Telemetry VIO5	TelemetryVIO5	None	200	None	None	None
9	Telemetry VIO6	TelemetryVIO6	None	200	None	None	None

Step 3 Set the GPIO port corresponding to the preset VIO port of the radio. The radio will respond to the telemetry command through this port.



Different telemetry responses need different GPIO voltages. Here we take low level of the GPIO port as the active level.

Action	GPIO Port Response
Send Status Command	Upon the receipt of “Send Query Status Command”, the radio will send the level status of its GPIO port (corresponding to the VIO port) to the SmartDispatch.
On Pulse Command	Upon the receipt of “Send Pulse Command”, the radio’s GPIO port (corresponding to the VIO port) will output an active level with specific pulse width (e.g. : 200ms).
On Toggle Voltage Command	Upon the receipt of “Send Toggle Voltage Command”, the radio will toggle the level of the GPIO port (corresponding to the VIO port). For example, currently the GPIO port is using high level, and it will toggle to low level as soon as the radio receives this command.
On Active/Inactive Voltage Command	● Upon the receipt of “Send Active Voltage Command”, the radio’s GPIO port (corresponding to the VIO port) will output an active level (here we take low level as the active level). ● Upon the receipt of “Send Inactive Voltage Command”, the radio’s GPIO port (corresponding to the VIO port) will output an inactive level (here we take high level as the inactive level).

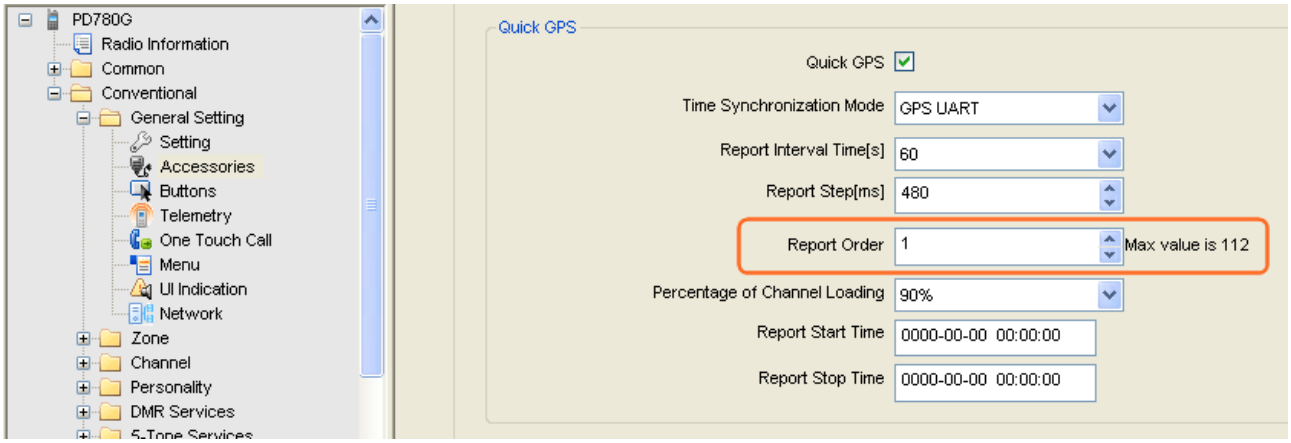
7.6 Quick GPS

When the Quick GPS feature is enabled for the radio, the GPS polling will be transmitted more securely and efficiently.

To set this feature, go to “Conventional -> General Setting -> Accessories” in the left navigation tree.

Caution

- Different report orders are required on radios with the Quick GPS feature enabled. You need to set this parameter for the radio based on its actual report order.
- The other parameters in the “Quick GPS” settings shall be set to the same values respectively with those set for other radios whose Quick GPS feature is also enabled.

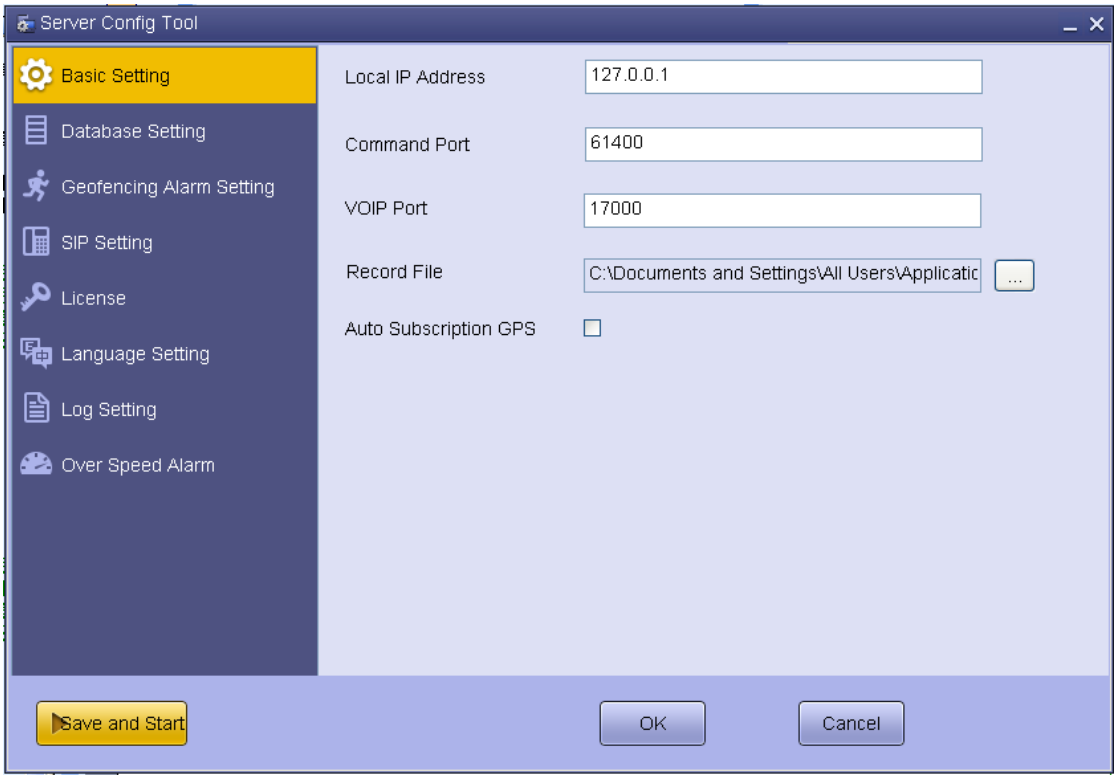


8. Configuring the SmartDispatch Server

Caution

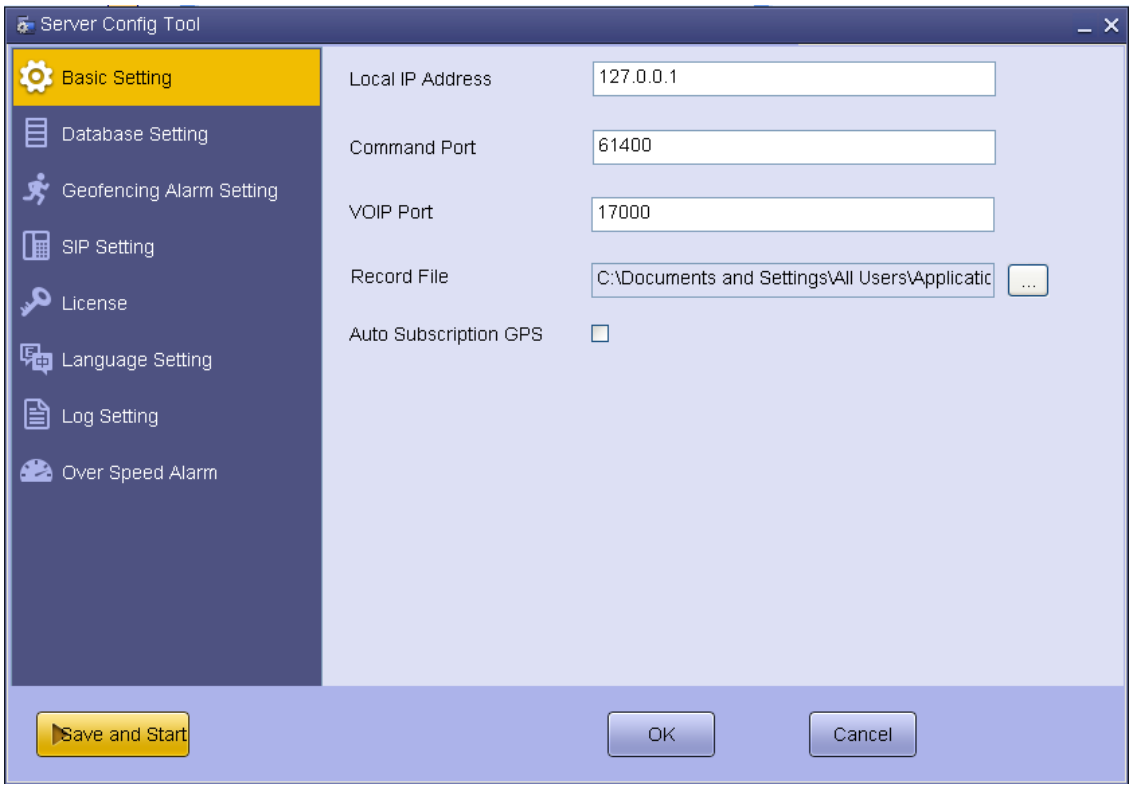
Make sure that your computer is not in the power saving mode; otherwise, the SmartDispatch service will be stopped, resulting in system malfunctions.

Double-click the shortcut icon “SmartDispatch Server Config Tool” on the desktop to enter the following main window.



8.1 Basic Settings

Step 1 Specify the path for saving the recordings and leave the other parameters to their default settings.



Parameter	Description	Example
Local IP Address	Sets the IP address of SmartDispatch Server.	127.0.0.1
Command Port	Both the SmartDispatch Client and SmartDispatch Gateway access the SmartDispatch Server via this port.	61400
VOIP Port	Sets the VOIP start port of the SmartDispatch Server for audio communication. Up to 400 ports are reserved for audio communication. For example, if the start port number is 17000, the port range will be 17000–17399.	17000
Audio Codecs	SmartDispatch supports two audio formats including G.711 and G.729. The audio codec in the SmartDispatch system must be identical. **Caution** Be sure to select “G.711u” if you use the repeater.	G.711u
Record File	Defines the path for storing the recordings.	D:\Record

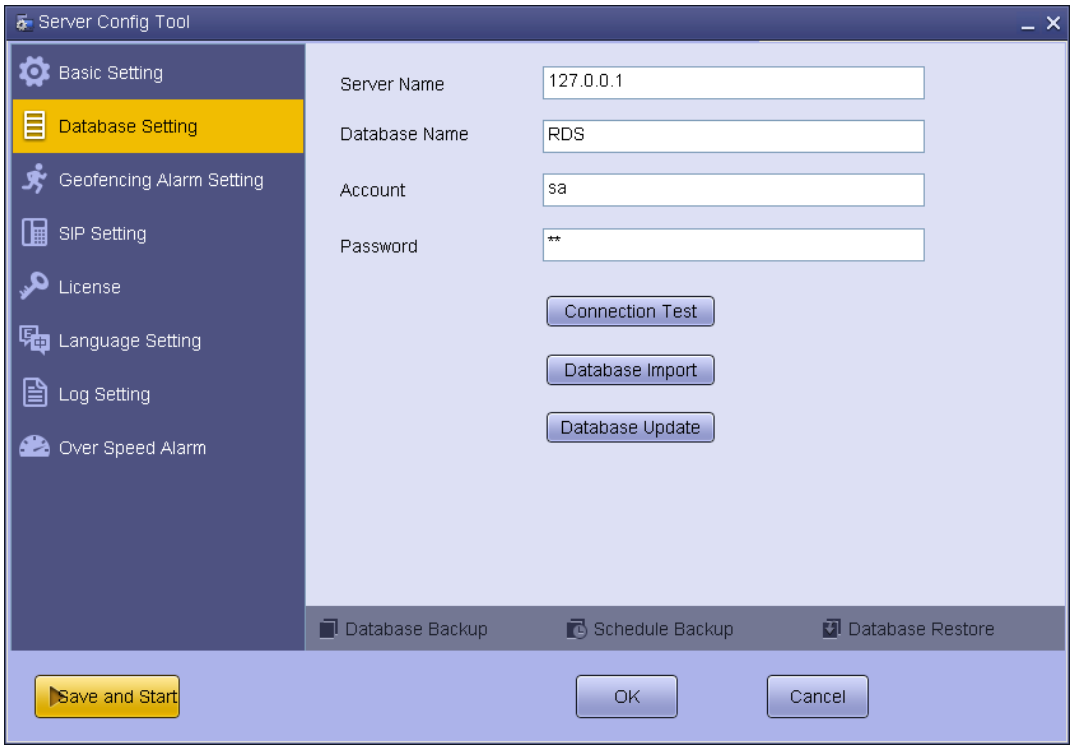
Parameter	Description	Example
		Files
Auto Subscription GPS	● When this option is selected, the radio will automatically go on polling the GPS information after all the dispatchers who are positioning this radio exit their SmartDispatch. It is easier for the dispatchers to position the radio continuously. ● If you don't select this option, the radio will stop polling its GPS information after all the dispatchers who are po sitioning this radio exit their SmartDispatch.	0:05:00

Step 2 Click "OK" to finish.

8.2 Database Settings

Step 1 Click "Database Setting".

Step 2 Set the following parameters.



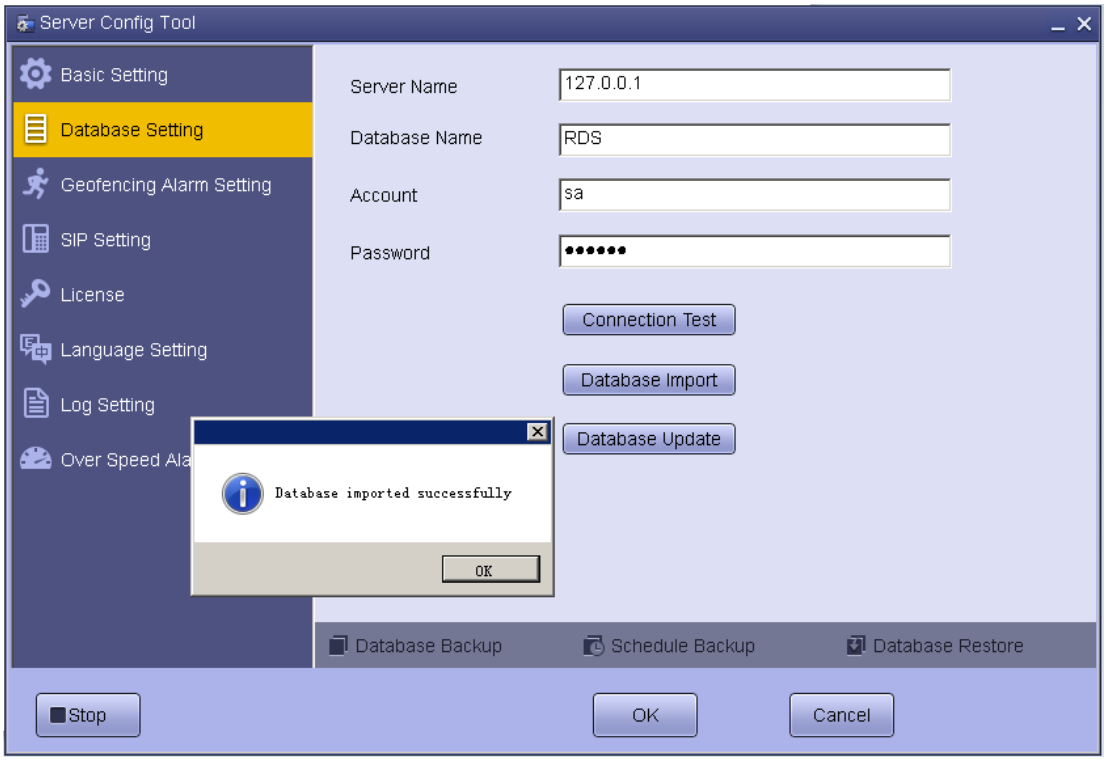
Parameter	Description	Example
Server Name	Sets the name of the server where the database is installed. It consists of the computer name and database instance name. If there is only one database in the computer, you can enter the IP address (127.0.0.1) in this field.	X09235D\SQLEXPRESS
Database Name	Sets the alias of the database.	RDS
Account	Sets the database account. Be sure to enter “sa” in this field.	sa
Password	Sets the database password.	123456

Step 3 Import the data to the database or upgrade the database.

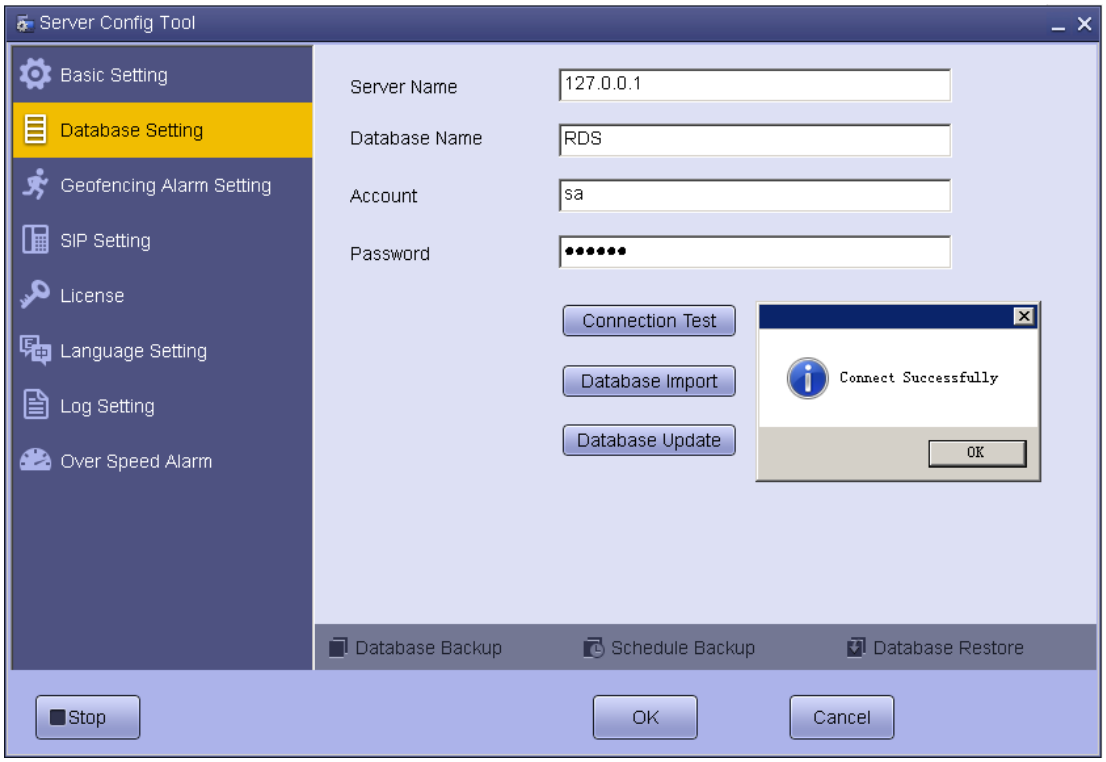
Caution

The database can be connected successfully only when you import the data to it or upgrade it in advance.

If you have already installed a lower version, you can click “Database Update” to upgrade the database.



Step 4 Click “Connection Test” to check the availability, and then click “OK” on the pop-up window.



Step 5 Click “OK” in the window to finish.

8.2.2 Backing up the Database

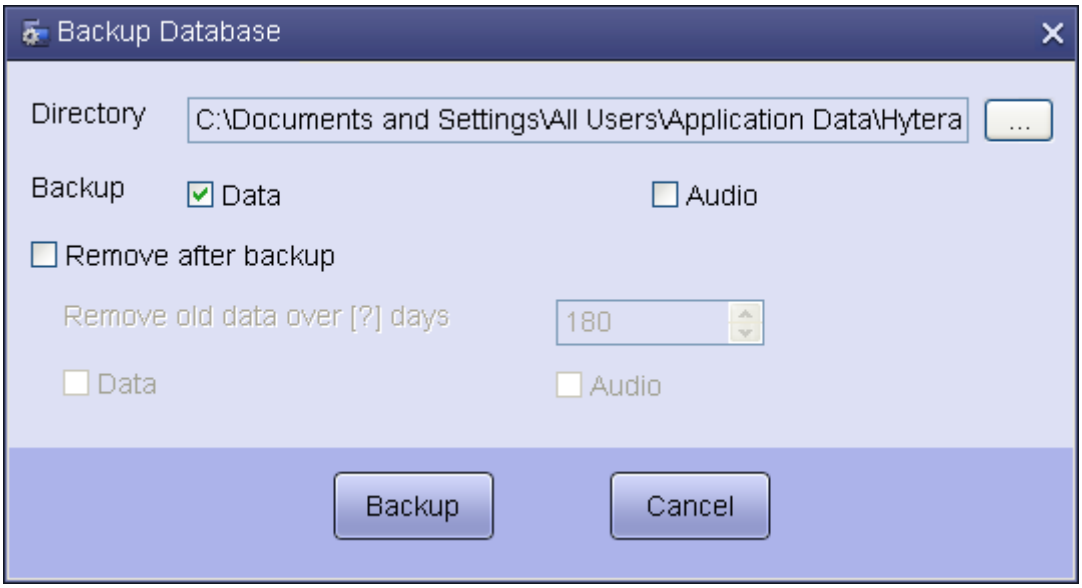
As the database and recording file are vital in the SmartDispatch system, you should back up them regularly to guard against data loss.

You can schedule the backup to occur automatically or back up the data manually. The backup file is saved as a .zip file in the designated directory using this format: Hytera_RDS_BAKyyymmdd_X.zip" (for example: Hytera_RDS_BAK20121224_0.zip).

- To backup the data manually, do as follows:

  You can initiate a manual backup after setting the following parameters.

  Click "Database Backup" and set the parameters, finally click "OK" to save your settings.



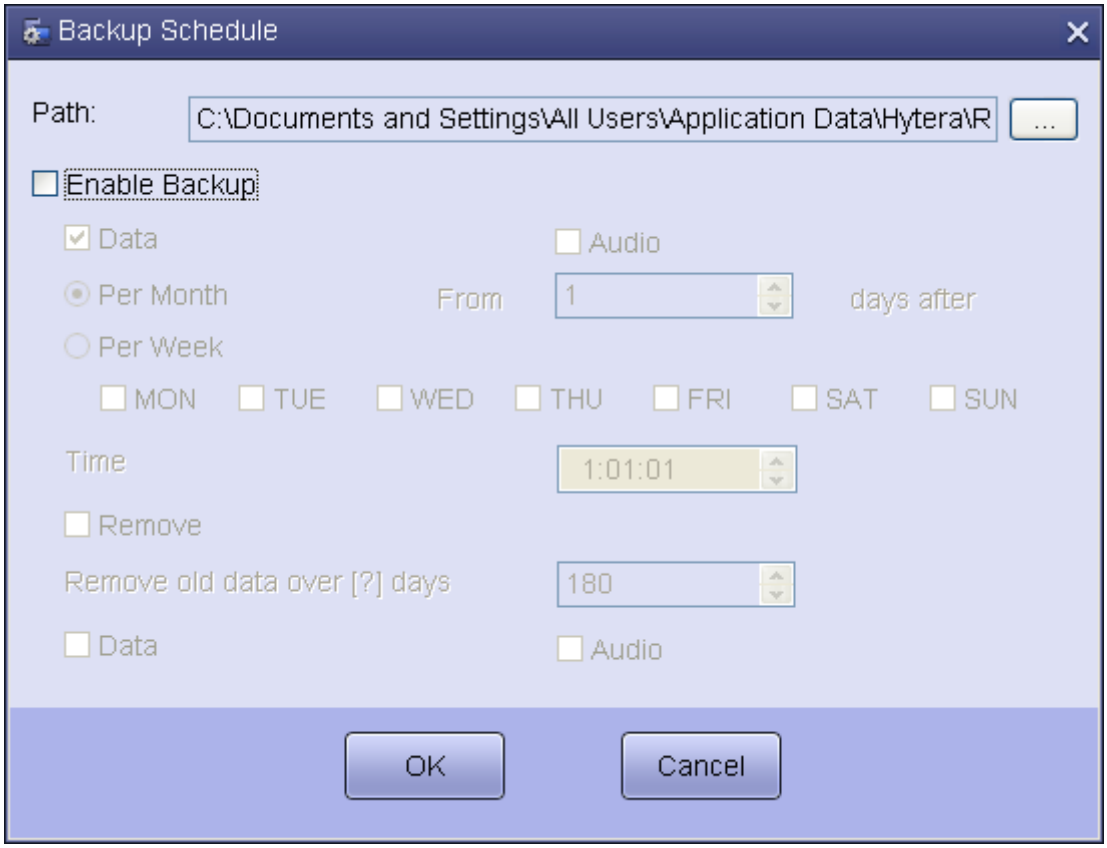
Parameter	Description
Directory	Specifies the location of the backup file.
Backup	Sets which kind of data you want to back up. You can choose to back up the data or recording file.
Remove after backup	Sets whether to delete the data regularly. After you select this option, you are allowed to set the related parameter. Make sure that the data is backed up and archived properly before you remove it.
Remove old data over [?] days	Enters a value. All data older than the specified days will be removed.

Parameter	Description
Data	Sets whether to delete the data.
Audio	Sets whether to delete the recording file.

- To back up the data automatically, do as follows:

  The database and recordings can be automatically backed up by month or week.

  Click “Schedule Backup” and set the parameters, finally click “OK” to save your settings.



Parameter	Description
Path	Specifies the location of the backup file.
Enable Backup	Sets whether the automatic backup is activated. When you select this option, you are allowed to set the related parameter.
Data	Sets whether to automatically back up the data.
Audio	Sets whether to automatically back up the recording file.
Per Month	Specified which days of the month that an automatic backup should

Parameter	Description
	occur. This parameter must be work with the “Time” parameter.
Per Week	Specified which day of the week that an automatic backup should occur. This parameter must be work with the “Time” parameter.
Time	Sets the exact time on the specified day that an automatic backup should run. This parameter must be work with the “Per Month” and “Per Week” parameters.
Remove	Sets whether to delete the data regularly. After you select this option, you are allowed to set the related parameter. Make sure that the data is backed up and archived properly before you remove it.
Remove old data over [?] days	Enters a value. All data older than the specified days will be removed.
Data	Sets whether to delete the data.
Audio	Sets whether to delete the recording file.

8.2.3 Restoring the Database

Caution

You must restart the server and log in to the SmartDispatch Client again after the database is restored.

If the data is lost or the oldest database needs to be restored, you can restore the data from a .zip archive.

Step 1 Click “Restore Database” and  to select the backup file, then click “Restore” to restore the database.

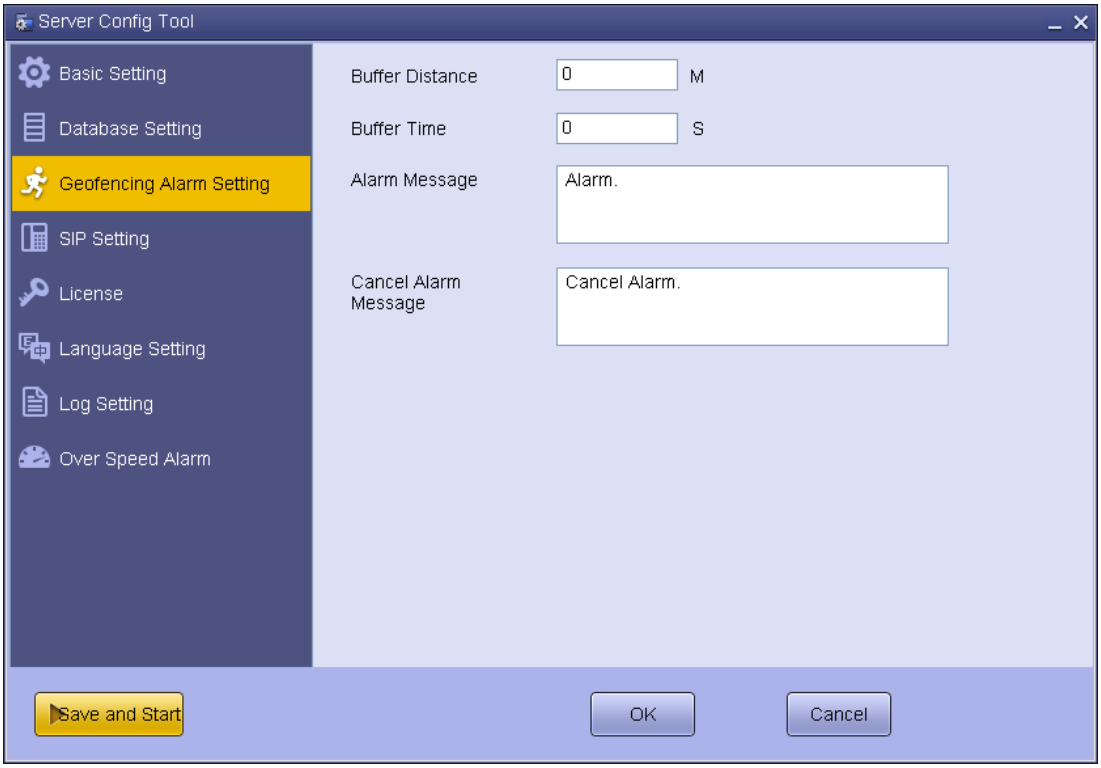
Step 2 Click “Save and Start” to restart the server.

Step 3 Shut down the SmartDispatch client and log in to it again, to view the recovery data.

8.3 Geofencing Alarm Settings

Step 1 Click “Geofencing Alarm Setting”.

Step 2 Set the following parameters according to your actual requirements.



Parameter	Description	Example
Buffer Distance	Sets the buffer distance for triggering a geofencing alarm.	0

Parameter	Description	Example
Buffer Time	Sets the buffer time period for triggering a geofencing alarm.	0
Alarm Message	Edits the message indicating the geofencing alarm. The SmartDispatch Client will send this message to the subscriber once he/she is out of the designated region.	Alarm.

Parameter	Description	Example
Cancel Alarm Message	Edits the message indicating canceling of the geofencing alarm. The SmartDispatch Client will send this message to the subscriber after he/she goes back to the designated region.	Cancel Alarm.

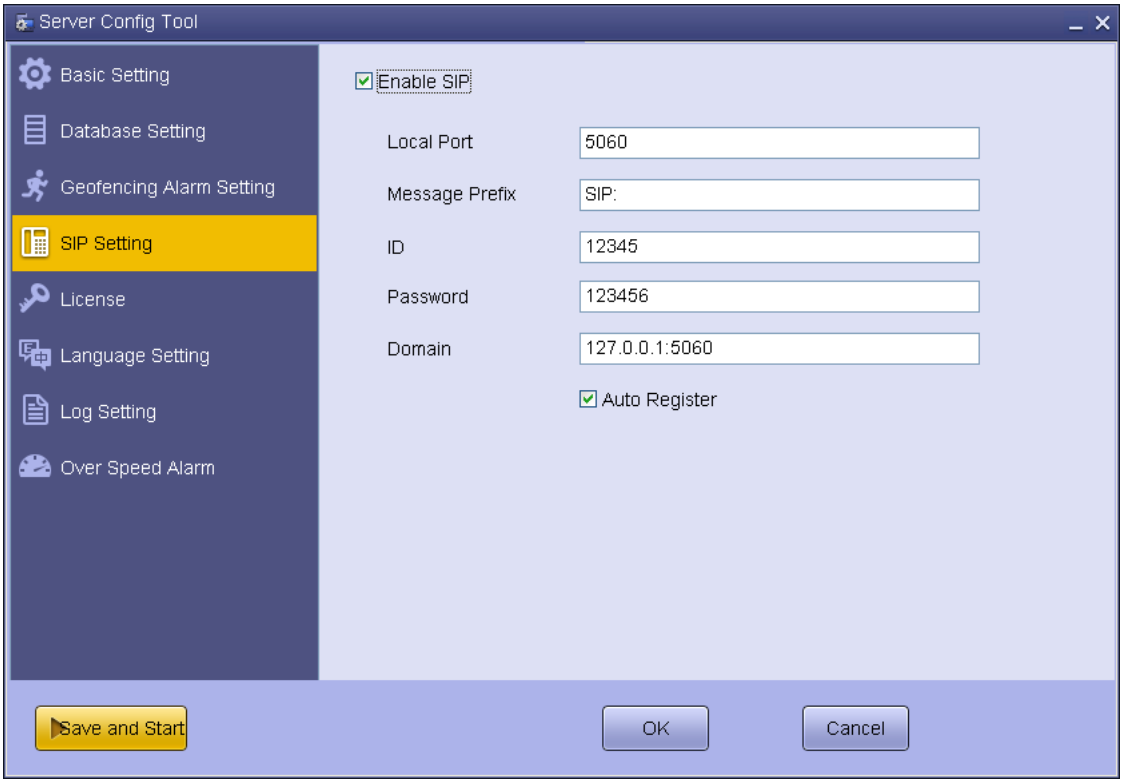
Step 3 Click “OK” to finish.

8.4 SIP Settings

SmartDispatch can access the telephone switch to communicate with the telephone subscribers. To be specific, the SmartDispatch Server establishes the SIP connection with the telephone switch, which communicates with the telephone. In this way, SmartDispatch can communicate with the telephone subscriber. During the SIP connection, it is required to authenticate the account first.

Step 1 Click “SIP Setting” and select the “Enable SIP” option.

Step 2 Set the following parameters.



Parameter	Description	Example
Enable SIP	Sets whether the SIP telephone can access	√

Parameter	Description	Example
	the SmartDispatch system. If you select this option, it indicates that this feature is enabled.	
Local Port	This port is used by the SmartDispatch Server to establish connection via the SIP protocol. The remote end is IP-PBX.	5060
Message Prefix	Sets the prefix of the SIP call. If the portable radio initiates a call to the telephone, it will send the text message to the SmartDispatch Client first for call request. This message consists of that prefix and t he telephone number.	SIP:
ID	Sets the user name specified in the IP-PBX. For details, please consult your network management administrator.	12345
Password	Sets the password specified in the IP-PBX. For details, please consult your network management administrator.	123456
Domain	Sets the IP address of the switch and the port defined in the SIP protocol. For details, please consult your network management administrator.	127.0.0.1:5060

Step 3 Click “OK” to finish.

8.5 License

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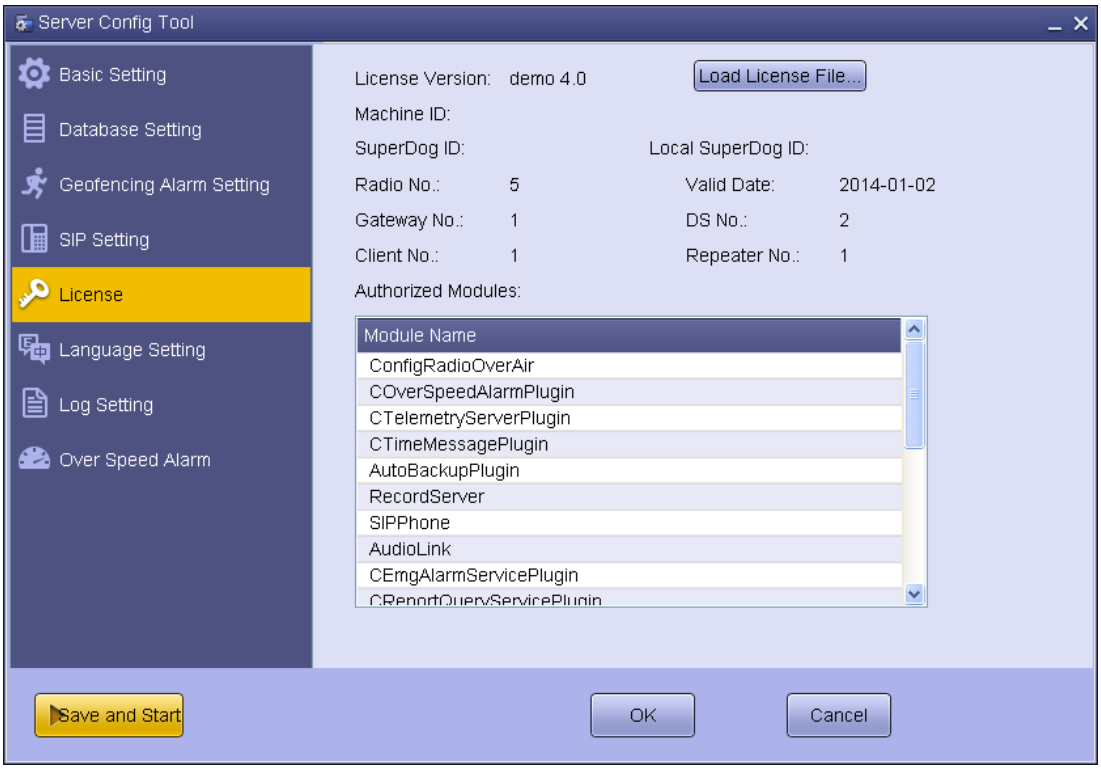
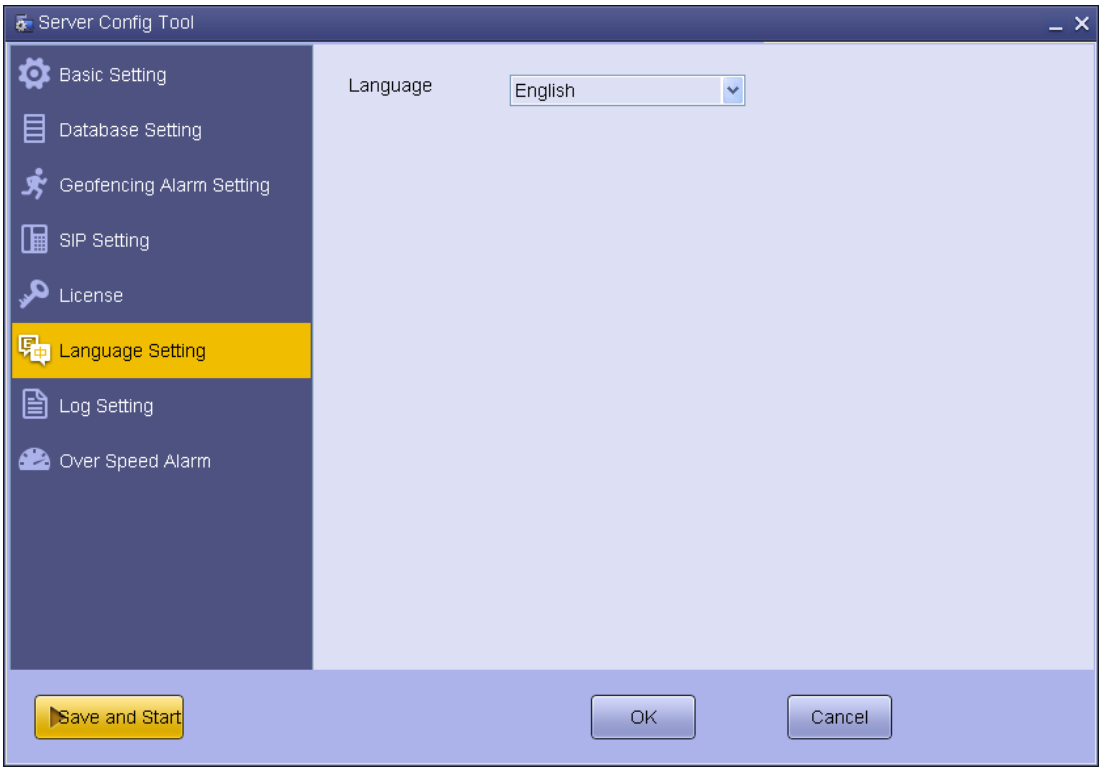


8.6 Language Settings

Step 1 Click “Language Setting”.

Step 2 Select the language.

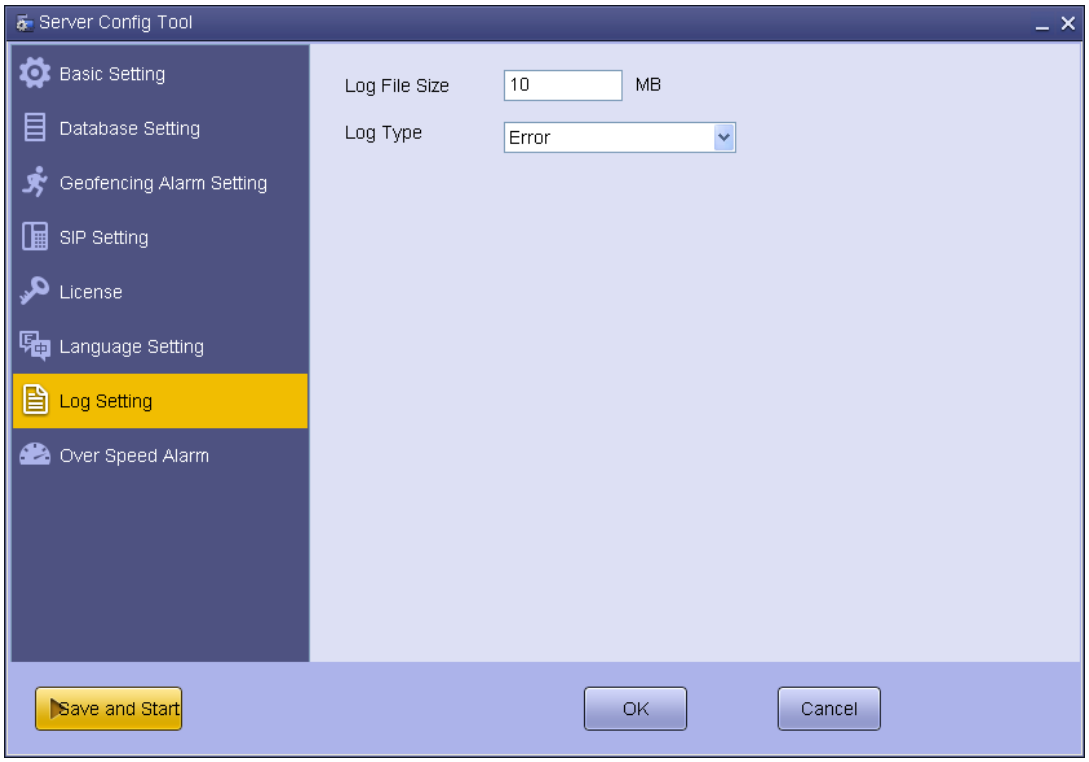


Step 3 Click “OK” to finish.

8.7 Log Settings

Step 1 Click “Log Setting”.

Step 2 Set the following parameters as per your actual needs.



Parameter	Description	Example
Log File Size	Sets the maximum size of an individual log file.	10
Log Type	Sets what kind of information will be recorded in the log file. There are four types including System, Error, Warning and Info.	Error

Step 3 Click “OK” to save your settings.

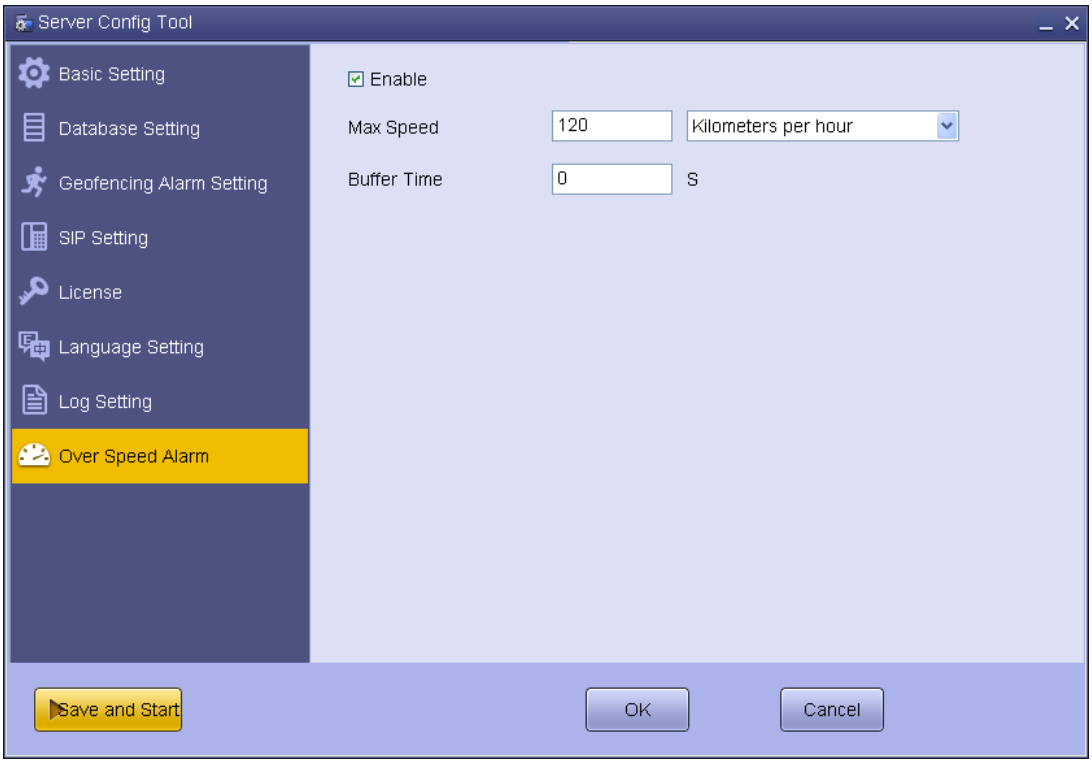
Step 4 Click “Save and Start” to start the server service.

8.8 Over Speed Alarm Settings

Step 1 Click “Over Speed Alarm” and select “Enable”.

Step 2 Set the maximum speed and the buffer time.

Step 3 Click “OK” and then “Save and Start” to start the server service.



Parameter	Description	Example
Max Speed	Sets the speed threshold of the radio movement. Once the radio movement reaches this speed for a certain time period (i.e. the “Buffer Time”), the over speed alarm will be triggered. There are three units for this parameter: Kilometers per hour, Knots per hour and Miles per hour.	120 Kilometers per hour
Buffer Time	Sets the time period before the over-speed radio triggers the over speed alarm. As soon as this period expires, the alarm will be triggered and the SmartDispatch will send the alarm message to the radio automatically. Accordingly, when the radio slows down and moves at a speed under the threshold for the same time period, the SmartDispatch will send a message to the	0

Parameter	Description	Example
	radio to inform that the alarm is dismissed.	

9. Configuring the SmartDispatch Gateway

Caution

Make sure that your computer is not in the power saving mode; otherwise, the SmartDispatch service will be stopped, resulting in system malfunctions.

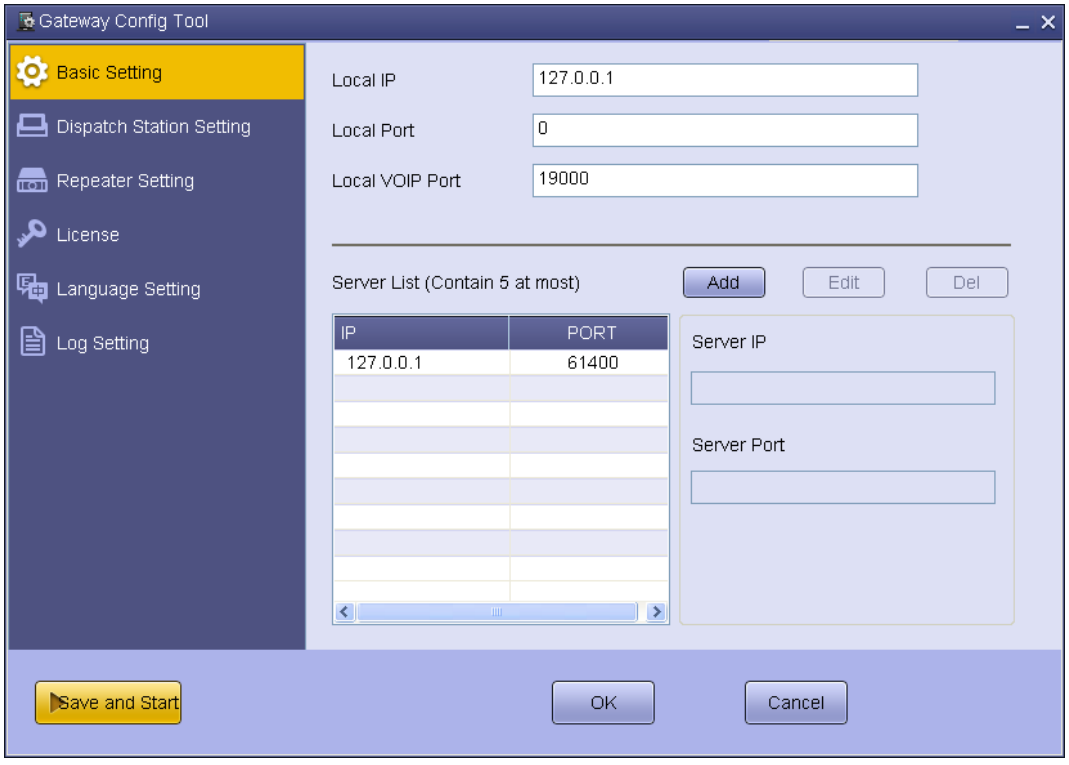
To ensure normal operation of the gateway server, connect the USB dog (for license verification) to the SmartDispatch Server.

Double-click the shortcut icon “SmartDispatch Gateway Config Tool” on the desktop to enter the relevant window.

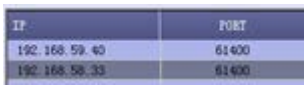
9.1 Basic Settings

Step 1 Click “Basic Setting”.

Step 2 Set the following parameters.

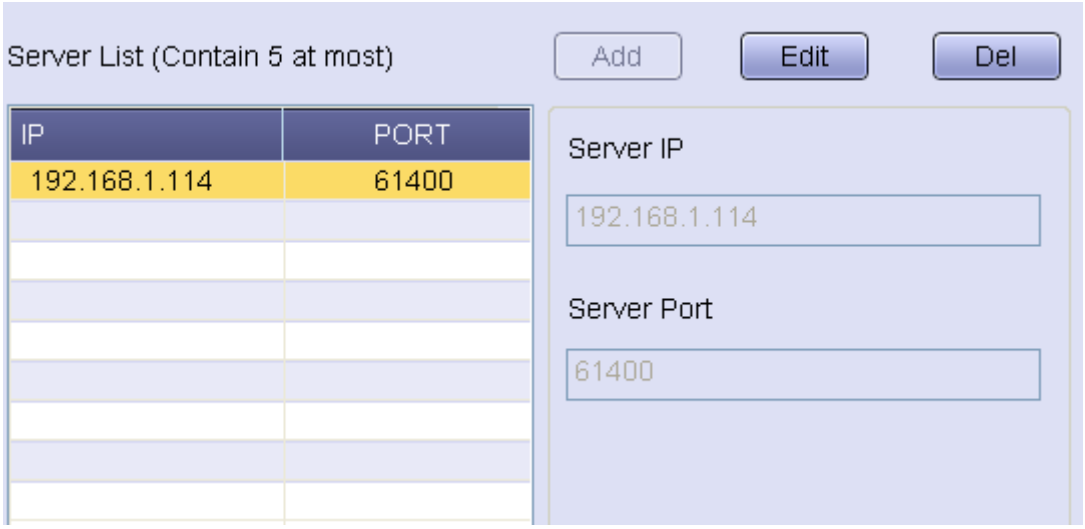


Parameter	Description	Example
Local IP	Sets the IP address of the SmartDispatch	127.0.0.1

Parameter	Description	Example
	Gateway.	
Local Port	Sets the port for accessing the SmartDispatch Server.	0
Local VOIP Port	Sets the VOIP start port of the SmartDispatch Gateway for audio communication. The system will reserve sufficient ports for audio communication. When the SmartDispatch Gateway is connected to dispatch stations, the number of the reserved ports is twice that of the dispatch stations. For example, if the SmartDispatch Gateway connects three dispatch stations and the start port number is 19000, the reserved port numbers will be 19000 – 19005. However, when the SmartDispatch Gateway connects to the repeater, the number of the reserved ports is fourfold that of the repeaters.	19000
Server List	Displays all servers connected to the SmartDispatch Gateway. One SmartDispatch Gateway can contain 5 servers at most.	
Server IP	Sets the IP address for accessing the SmartDispatch Server.	192.168.59.40
Server Port	Sets the port for accessing the SmartDispatch Server.	61400

Step 3 Click in blank area of the “Server List” pane, and click “Add” to add a server.

If the SmartDispatch Gateway and SmartDispatch Server are installed on the same computer, you can skip this step.

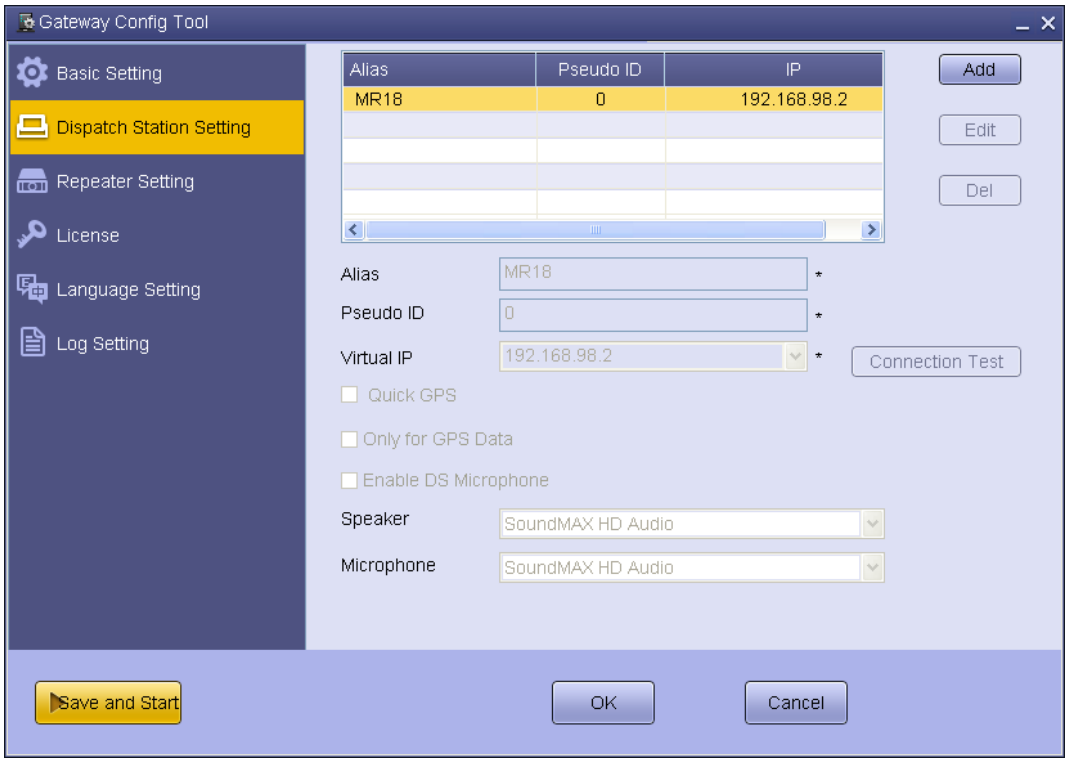


Step 4 Click “Save and Start”.

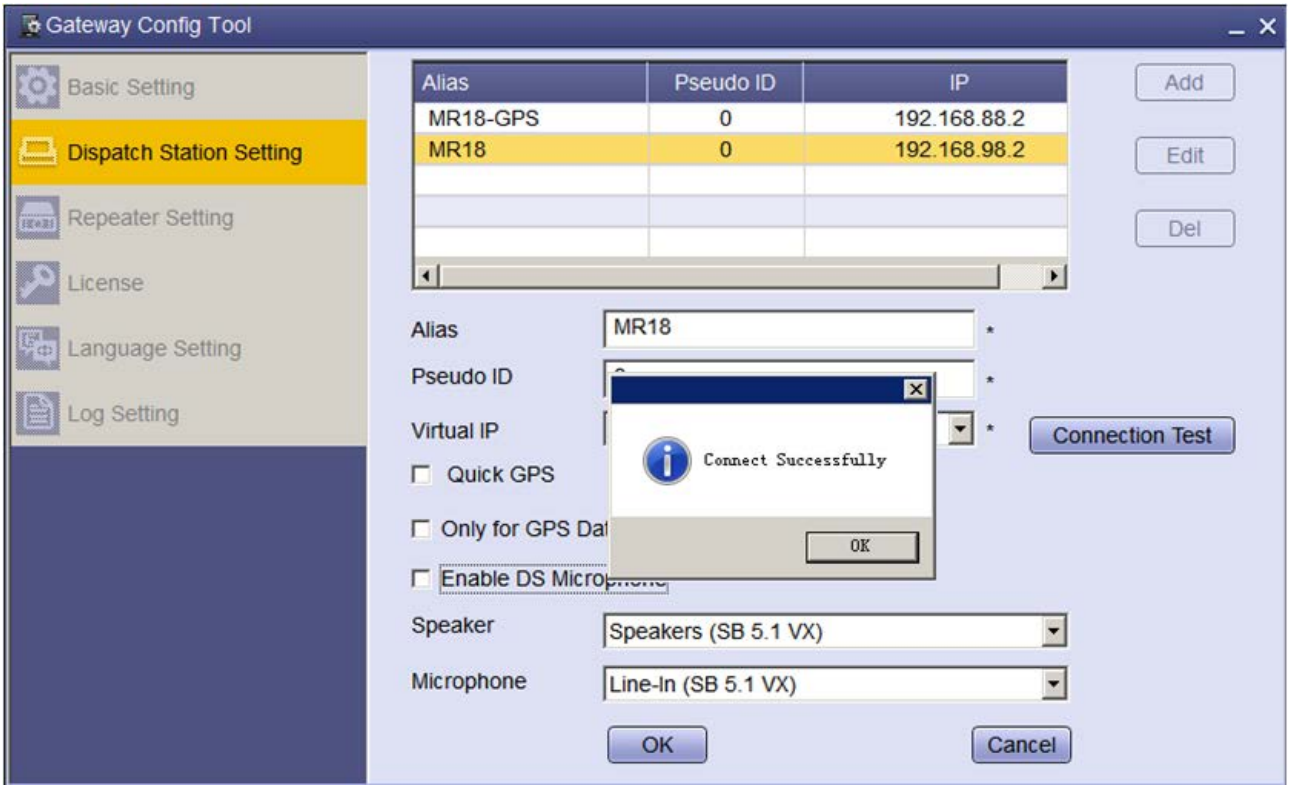
If you make any change in this tab, the button will change from “Start” to “Save and Start”

9.2 Dispatch Station Settings

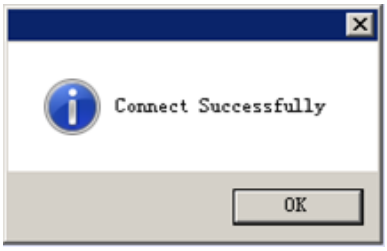
Step 1 Click “Dispatch Station Setting”.



Step 2 Click “Add” and set the following parameter. Click “Connection Test” to test whether the dispatch station is connected properly. The prompt “Connect successfully” will appear after successful connection.



Parameter	Description	Example
Alias	Sets the alias of the dispatch station. Please refer to *Section 3.2 Radio Planning*	MR7
Pseudo ID	Sets whether to enable or disable the Pseudo feature. If you set this parameter to 0, it means this feature is disabled. As a result, the voice or data is transmitted on the designated slot. However, if the value is not 0, the pseudo feature will be activated. In this case, either slot 1 or slot 2 is used to transmit the data or voice as long as it is available. Accordingly, the channel utilization is improved. Please note that the Pseudo ID of each repeater must be different.	0
Virtual IP	Sets the virtual IP address of the dispatch station. It consists of four sections. The first three sections are consistent with those of the IP address defined in the Customer Programming Software, while the last section is one greater than that of the IP address. For example, if the dispatch station IP is 192.168.87.1, the virtual IP should be 192.168.87.2.	192.168.87.2

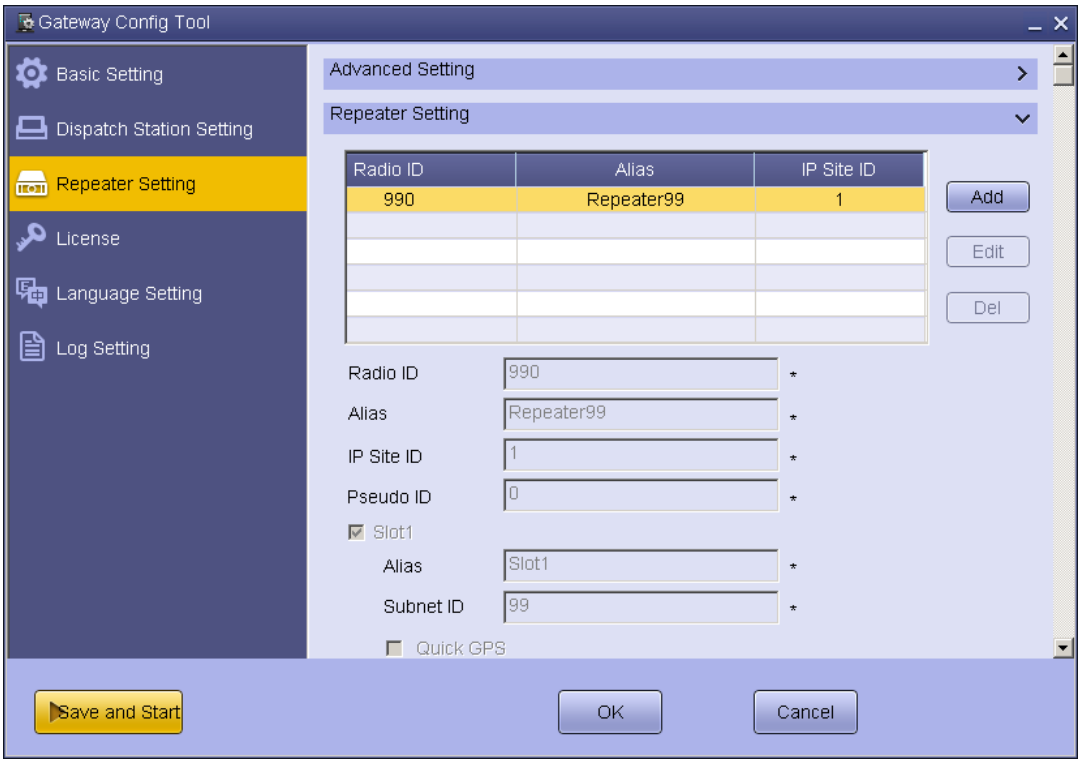
Parameter	Description	Example
Connection Test	Tests whether the dispatch station is connected properly. **Caution** Prior to perform the connection test, make sure that the dispatch station has already connected to the PC and been turned on. If this test is failure, the dispatch station can not operate properly. If the port is occupied, the alert message will be given. Thus you must stop the SmartDispatch service first and then make the connection test again.	
Enable DS Microphone	Sets whether to enable the microphone. If you use the microphone to talk, only the voice from the microphone will not be recorded. However, the relevant call records involving the microphone still exist.	☑
GPS Dispatch Station	● Checked: the dispatch station will only be us ed for GPS data transferring, unable to transmit the audio signal. Then you need to set another dispatch station for audio transmission. ● Unchecked: the dispatch station will transmit both the audio signal and GPS data.	☐

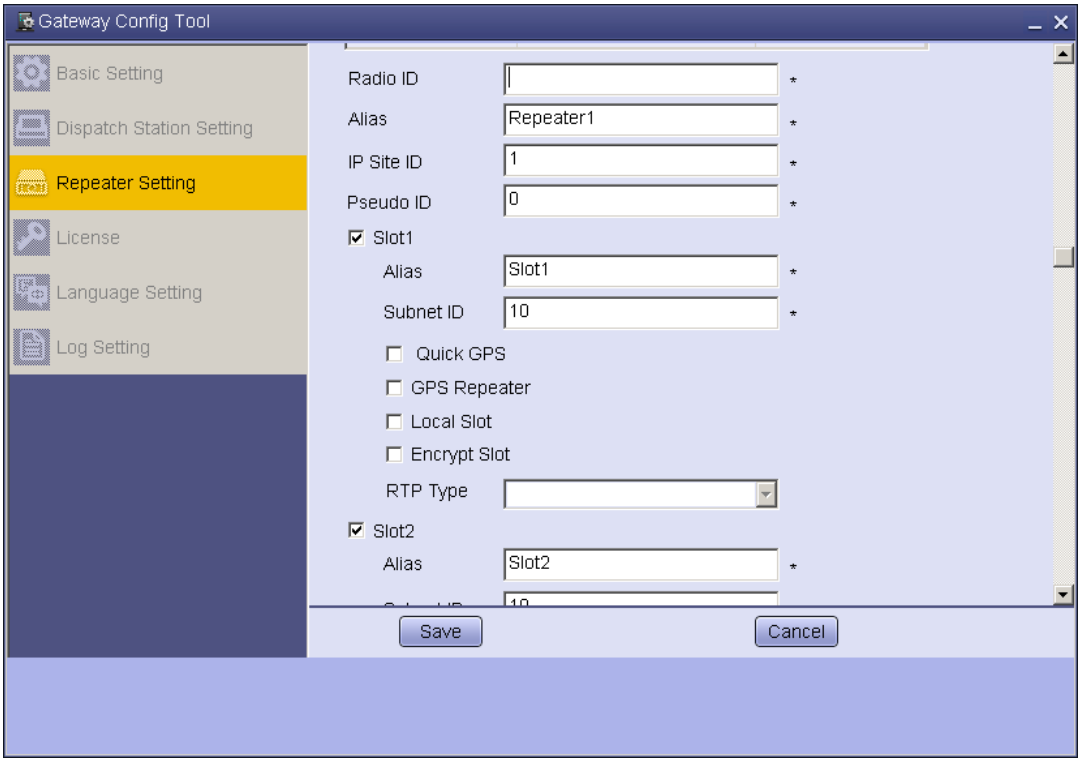
Parameter	Description	Example
Quick GPS	● Checked: the dispatch station will only be used as the quick GPS data station, unable to transmit the audio signal. Then you need to set another dispatch station for audio transmission. Only when the dispatch station is used to transmit quick GPS data can the SmartDispatch distinguish the quick and normal GPS data. ● Unchecked: the dispatch station will transmit both the audio signal and GPS data.	☐
Speaker	Sets the name of the speaker. If the “GPS Dispatch Station” option is checked, this option is not available.	Speakers (SB 5.1 VX)
Microphone	Sets the name of the microphone. If the “GPS Dispatch Station” option is checked, this option is not available.	Line-In (SB 5.1 VX)

Step 3 Click “OK” to finish.

9.3 Repeater Settings

Step 1 Click “Repeater Setting” and then click “Add” to add a repeater. Finally click “Save” to save the settings.





Parameter	Description	Example
Radio ID	Sets the SSI of the repeater.	92
Alias	Sets the alias of the repeater.	Repeater3

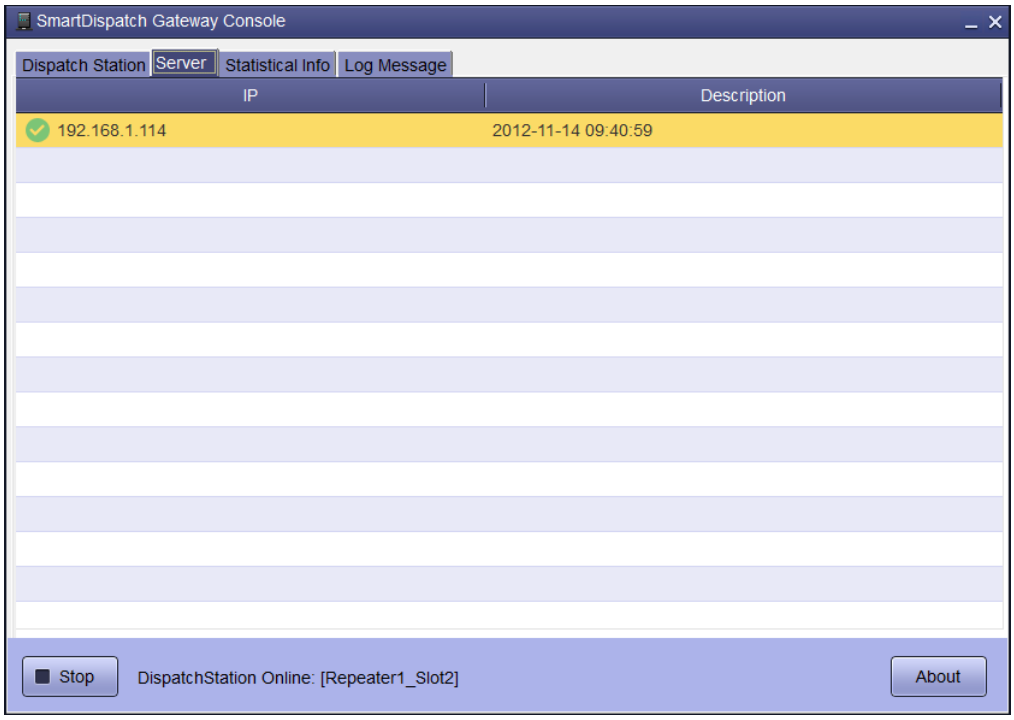
Parameter	Description	Example
IP Site ID	Sets the ID of the IP multi-site network. Each IP Multi-site network has a unique ID. Within the same IP Multi-site network, repeaters in geographically dispersed location can be linked together to exchange the data and voice. In other words, when you send any command to one repeater via SmartDispatch Client, other repeaters in the same network will also receive it.	1
Pseudo ID	Sets whether to enable or disable the Pseudo feature. If you set this parameter to 0, it means this feature is disabled. As a result, the voice or data is transmitted on the designated slot. However, if the value is not 0, the pseudo feature will be activated. In this case, either slot 1 or slot 2 is used to transmit the data or voice as long as it is available. Accordingly, the channel utilization is improved. Please note that the Pseudo ID of each repeater must be different.	0
Slot1	Slot 1	☑
Alias	Sets the alias of the slot.	Slot1
Subnet ID	Sets the ID of the repeater. Within the same IP Multi-site network, if the radio wants to communicate with the repeater, their subnet IDs must be identical. However, in the CPS, you are allowed to program the subnet ID for the radio rather than for the repeater. That is why you must set this ID for the repeater here.	21

Parameter	Description	Example
Quick GPS	● Checked: the slot can only transfer quick GPS data, and another slot is needed to transfer audio signal. Only when the slot is used to transmit quick GPS data can the SmartDispatch distinguish the quick and normal GPS data. ● Unchecked: the slot will transfer both audio signal and GPS data.	☐
GPS Repeater	If you select this option, the slot is in charge of transmitting the GPS data. Otherwise, this slot is used to transmit the audio signal.	☐
Local Slot	The slot is only used for local data transmission.	☐
Encrypt Slot	This option must be selected if you need to encrypt the voices. Be sure to set “RTP Type” to “RTP_SELP”.	☐
RTP Type	Sets the audio format for transmission. Be sure to set it to “RTP_SELP”.	RTP_SELP
Slot2	Slot 2	☑
Alias	Sets the alias of the slot.	Slot2
Subnet ID	Sets the ID of the repeater. Within the same IP Multi-site network, if the radio wants to communicate with the repeater, their subnet IDs must be identical. However, in the CPS, you are allowed to program the subnet ID for the radio rather than for the repeater. That is why you must set this ID for the repeater here.	21
Quick GPS	● Checked: the slot can only transfer quick	☐

Parameter	Description	Example
	GPS data, and another slot is needed to transfer audio signal. Only when the slot is used to transmit quick GPS data can the SmartDispatch distinguish the quick and normal GPS data. ● Unchecked: the slot will transfer both audio signal and GPS data.	
GPS Repeater	● Checked: the slot can only transfer normal GPS data, and another slot is needed to transfer audio signal. ● Unchecked: the slot will transfer both audio signal and GPS data.	☑
Local Slot	The slot is only used for local data transmission.	☐
Encrypt Slot	This option must be selected if you need to encrypt the voices. Be sure to set “RTP Type” to “RTP_SELP”.	☐
RTP Type	Sets the audio format for transmission. Be sure to set it to “RTP_SELP”.	RTP_SELP

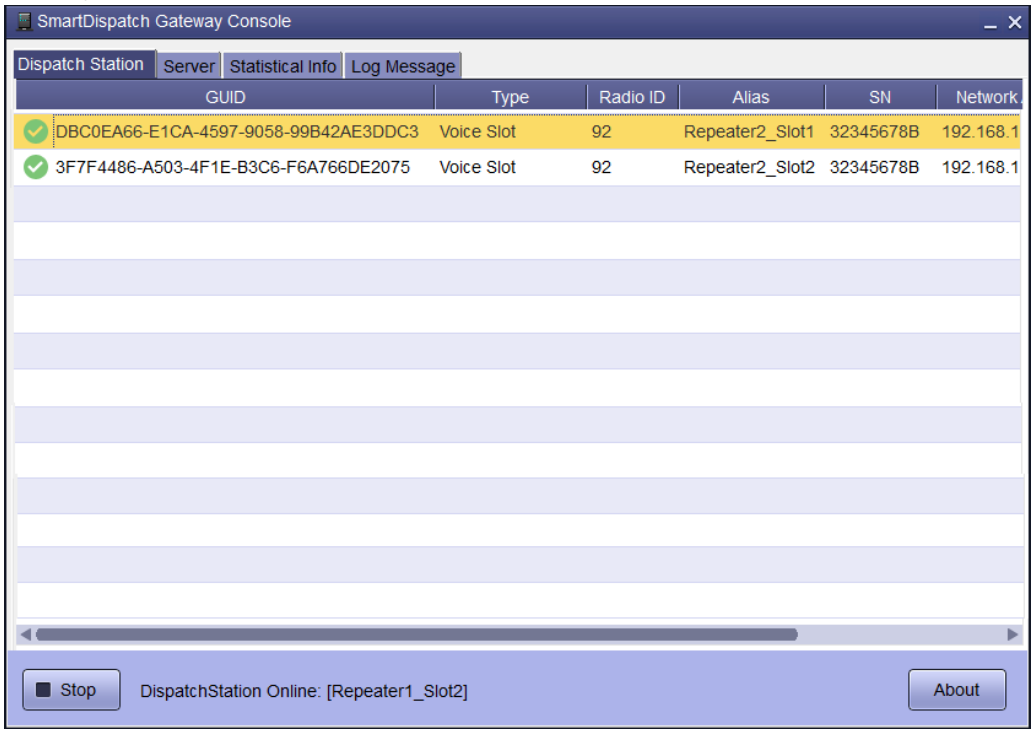
Step 2 Open the “SmartDispatch Gateway Console” and click the “Server” tab to check the connection between the SmartDispatch Gateway and SmartDispatch Server.

If the icon appears, it indicates successful connection between SmartDispatch Gateway and SmartDispatch Server.



Step 3 Click “Dispatch Station” tab to check the connection between the SmartDispatch Gateway and repeater.

If the icon appears, it indicates successful connection between the SmartDispatch Gateway and the repeater.



9.4 License

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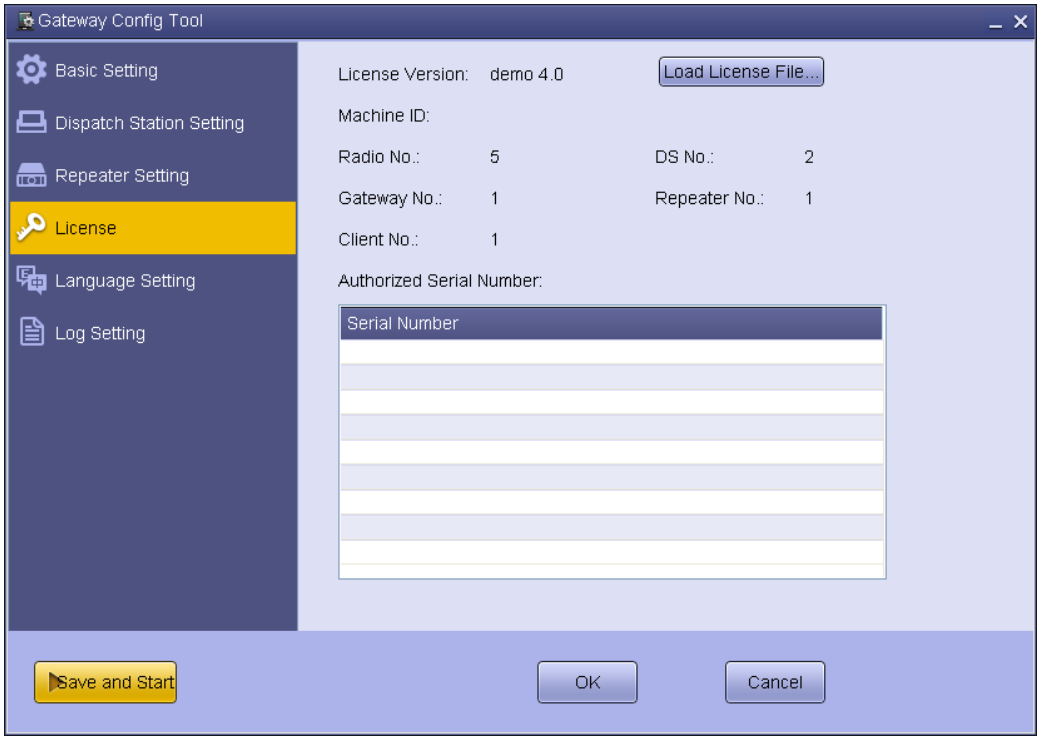
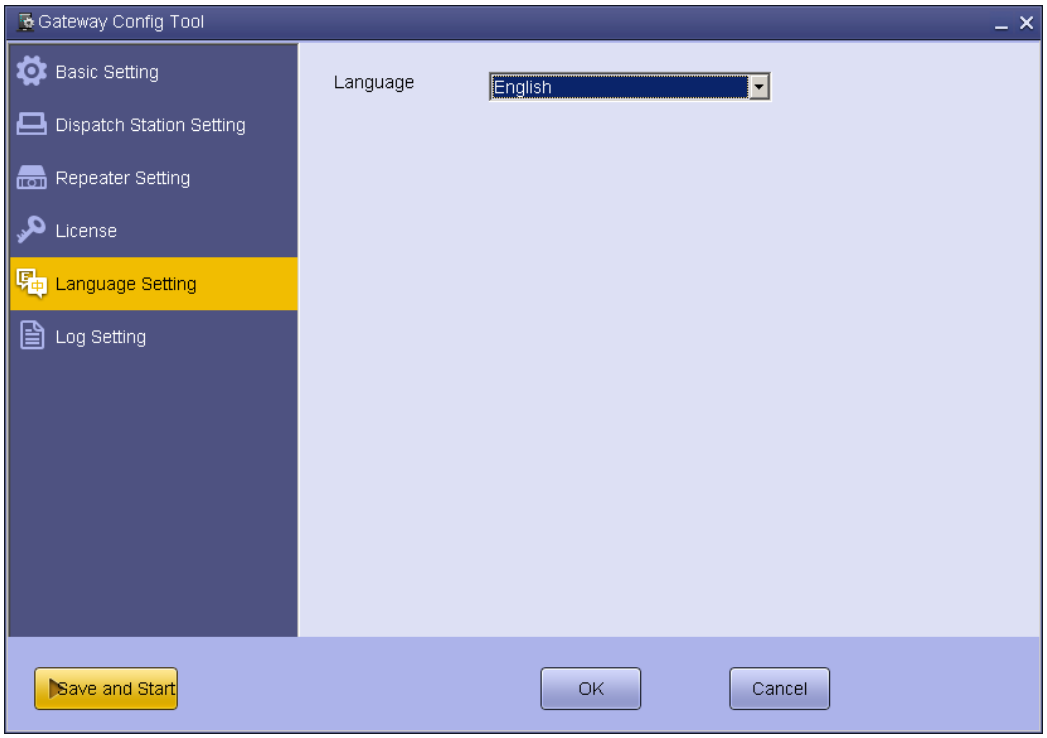


9.5 Language Settings

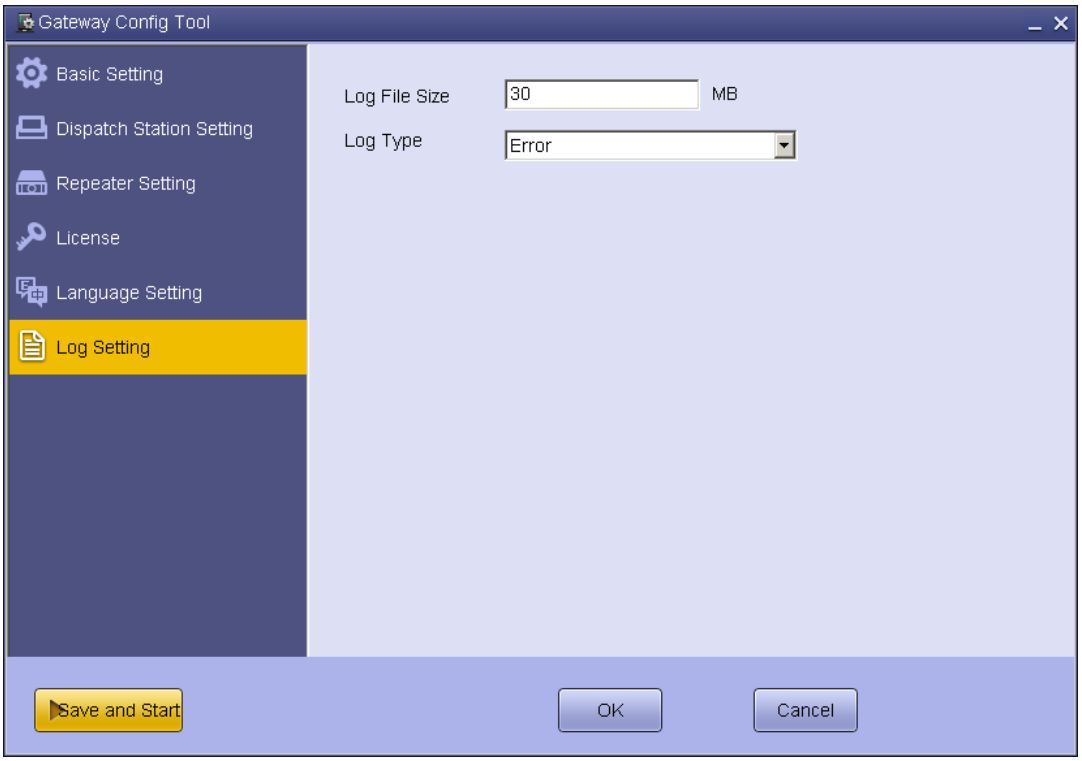
Step 1 Click “Language Setting”.



Step 2 Select the language and click “OK” to finish.

9.6 Log Settings

Step 1 Click “Log Setting”.



Step 2 Set the maximum size of an individual log file and the log type.

Step 3 Click “OK” to finish.

10. Configuring the SmartDispatch Client

Caution

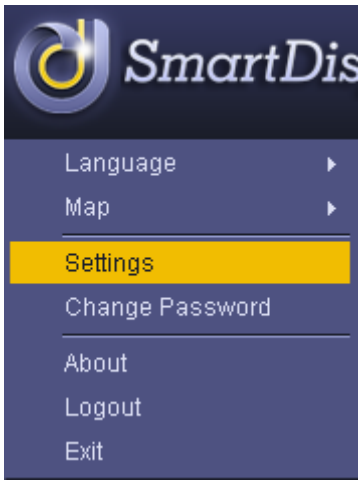
To ensure normal operation of the gateway server, connect the USB dog (for license verification) to the SmartDispatch Server.

Only the administrator is allowed to configure the SmartDispatch Client.

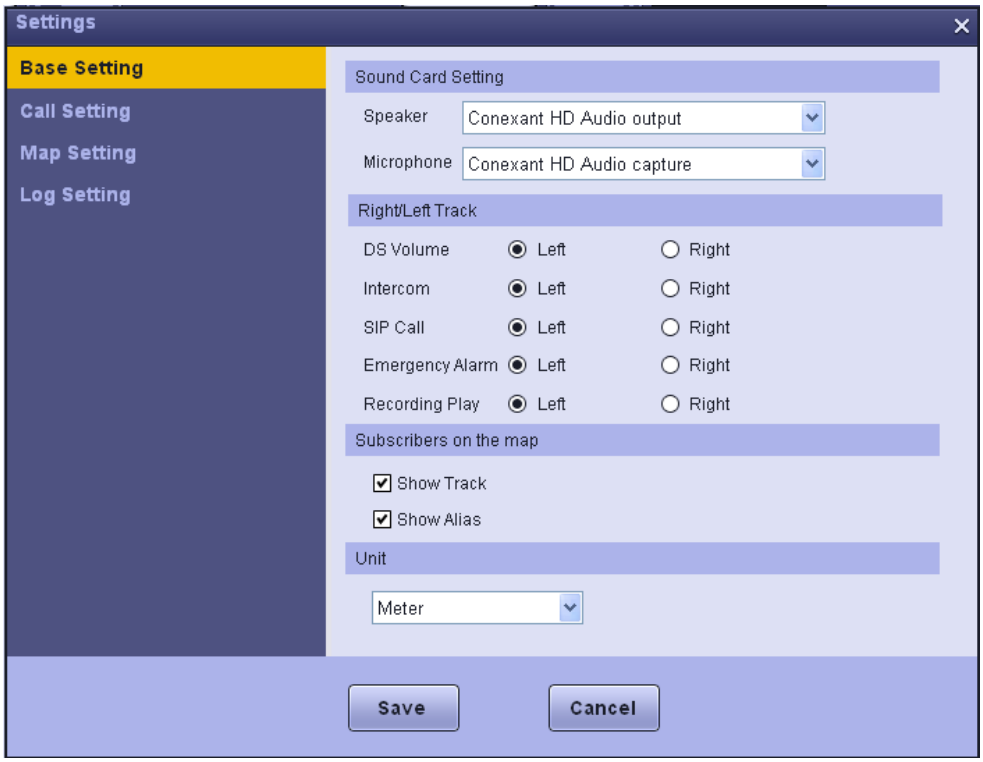
10.1 Setting the Sound Card

It is required to configure the sound card before performing any dispatch task.

Step 1 Click  on the upper left corner of the main window and select “Settings”.



Step 2 Click “Base Setting” to enter the following interface.



Parameter	Description
Sound Card Setting	
Speaker	Outputs the voice. If the computer that the SmartDispatch Client is installed on is equipped with the multi-channel sound card, the parameter should be set according to the microphone.
Microphone	Inputs the voice. If the computer that the SmartDispatch Client is installed on is equipped with the multi-channel sound card, the parameter should be set according to the speaker. **Note** In the Windows 7, the appropriate option will appear after the microphone is connected properly.
Right/Left Track	
DS Volume	Sets which track to output the voice from the dispatch station.

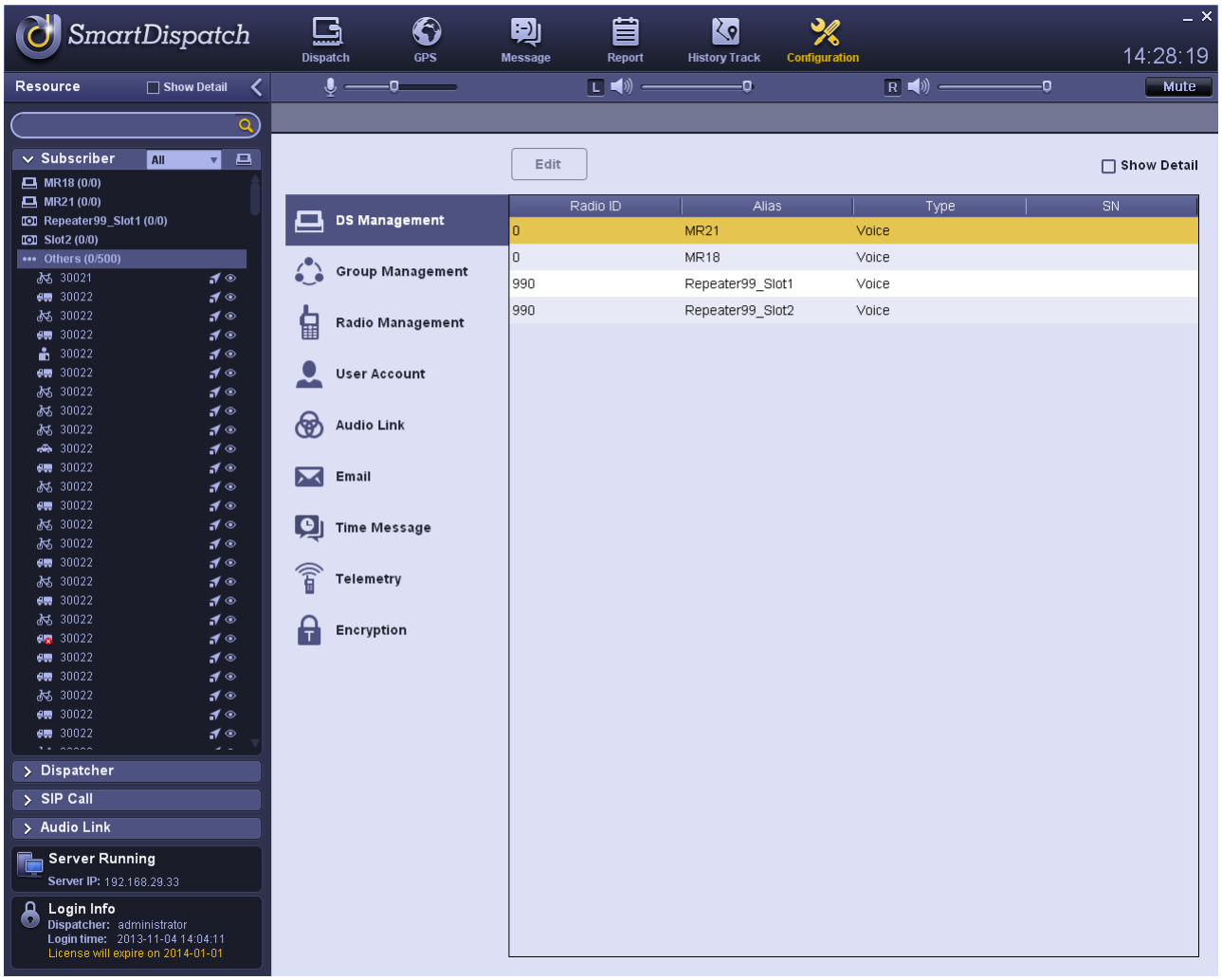
Parameter	Description
Intercom	Sets which track to output the voice during dispatcher intercommunication.
SIP Call	Sets which track to output the voice during telephone intercommunication.
Emergency Alarm	Sets which track to output the voice for triggering the emergency alarm.
Recording Play	Sets which track to output the voice when playing a recording.
Subscriber on the map	
Show Track	Sets whether the movement track of the radio is displayed on the map in the process of real-time tracking.
Show Alias	Sets whether the alias of the radio is displayed on the map in the process of GPS positioning and real-time tracking.
Unit	Sets the length unit to be used when measuring the distance on the map. Select the unit on your actual needs.

Step 3 Click “Save” to finish.

10.2 Setting the Dispatch Station

You can change the volume or position information of the dispatch station, modify the channel alias, and specify the available workgroup.

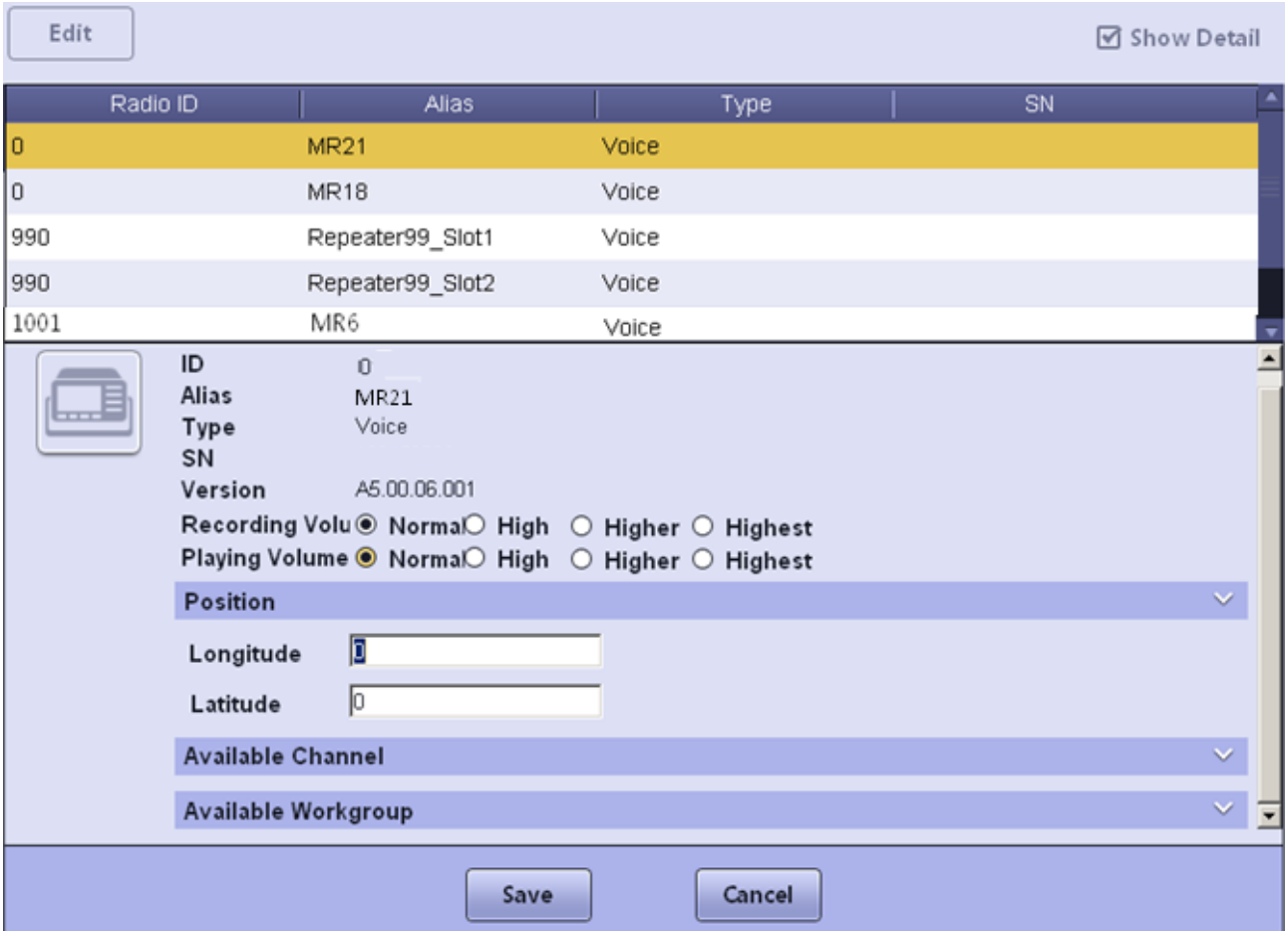
Step 1 Click “Configuration” on the top of the main window.



Tip

To view all information quickly, select “Show Detail” in the upper right corner of the interface.

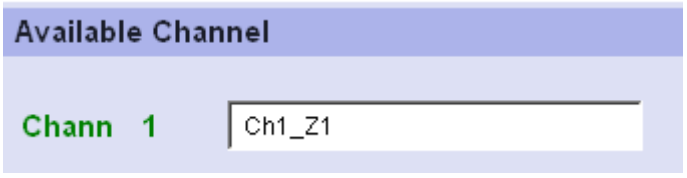
Step 2 Select the dispatch station and click “Edit”. Please note that you can not modify the information of the offline dispatch station.



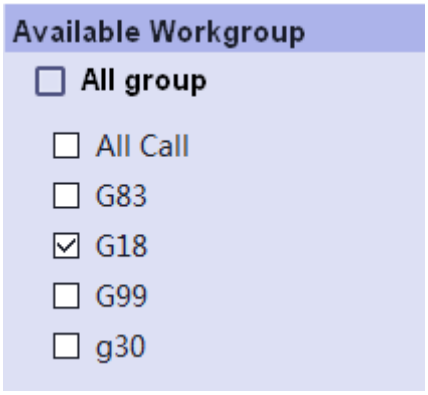
Step 3 Set the following parameters: “Recording Volume”, “Playing Volume” and “Position”.

After you set the longitude and latitude of the dispatch station, you can view this dispatch station on the map and directly call it.

Step 4 Change the alias of the available channel.



Step 5 Assign the available workgroup to the dispatch station.



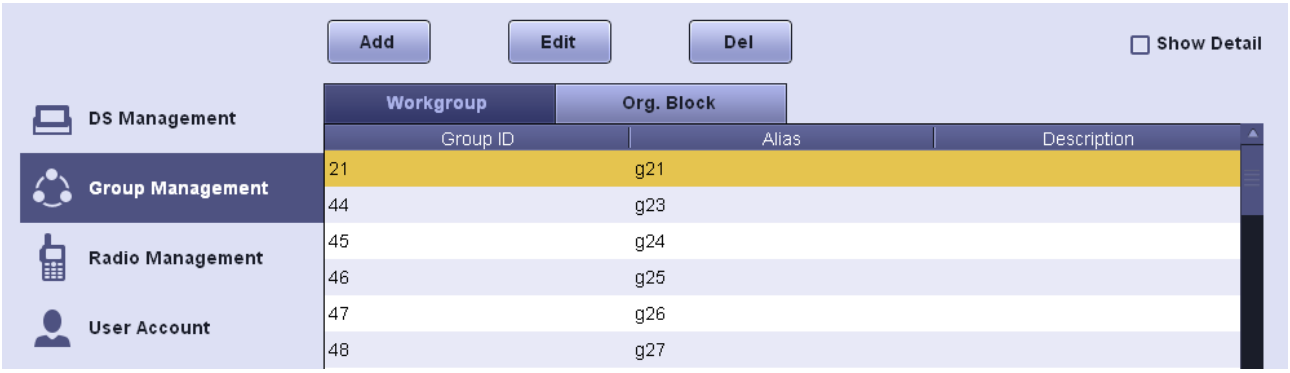
Step 6 Click “Save” to finish.

10.3 Setting the Group

You can define the workgroup and organization block. The former aims at grouping all radios for group call, while the latter can sort all radios by membership for quick search.

Step 1 Click “Configuration” on the top of main window.

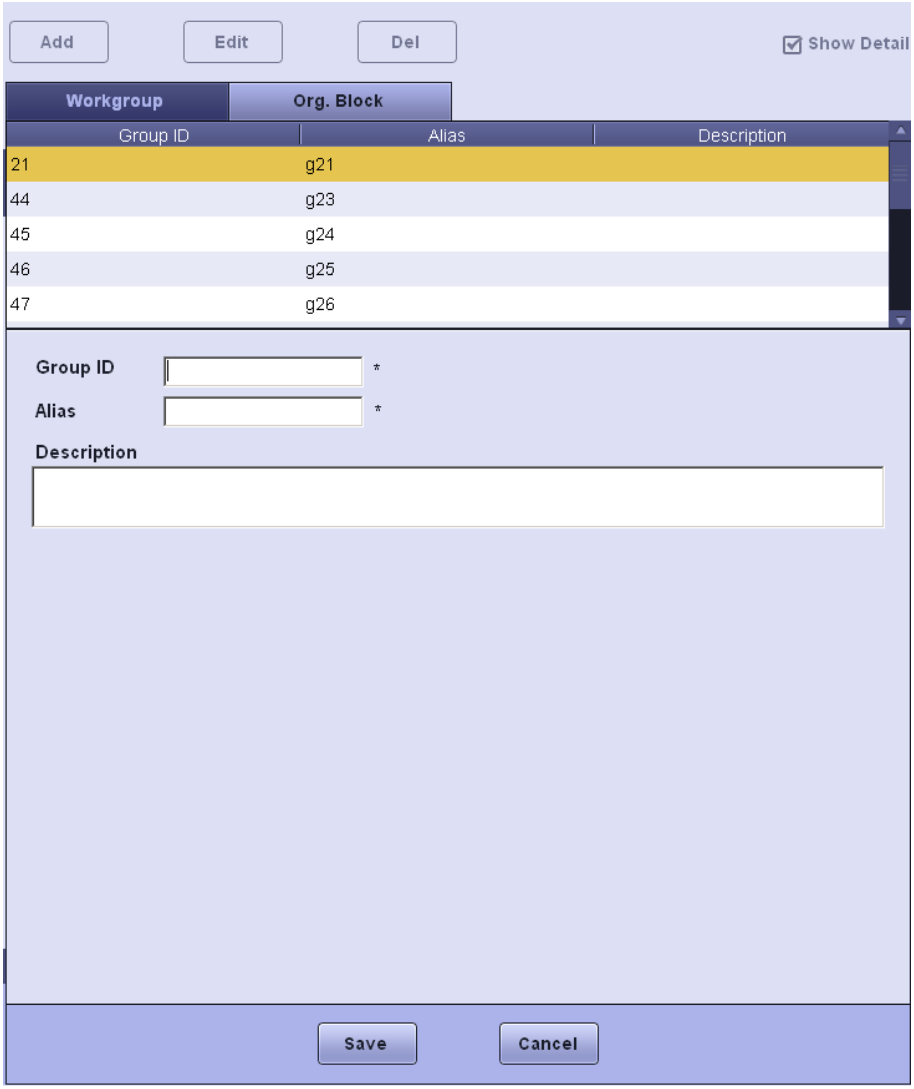
Step 2 Click “Group Management”.



Adding a group

Step 1 Click the “Workgroup” tab.

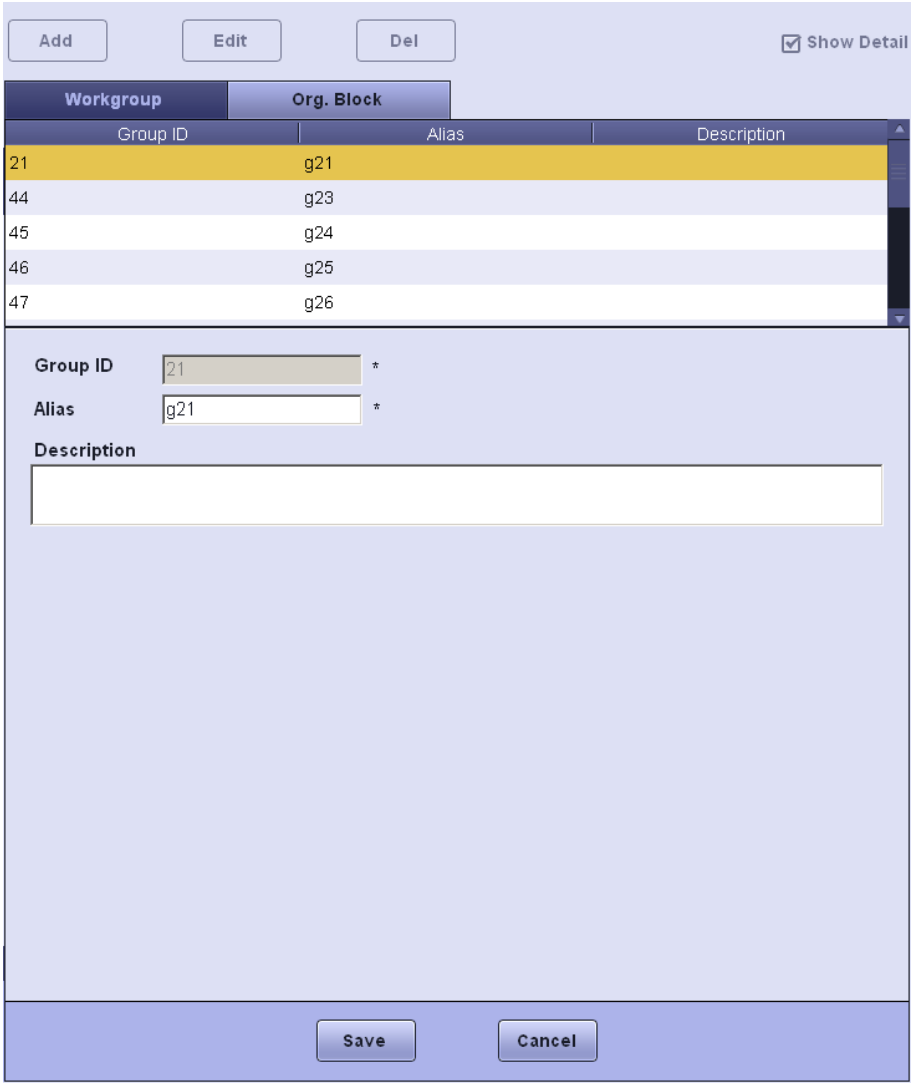
Step 2 Click “Add”.



Step 3 Enter the group information and click “Save” to finish.

Modifying a group

Step 1 Select the group and click “Edit”.



Step 2 Modify the group information and click “Save” to finish.

Deleting a group

Step 1 Select the group and click “Del”.

Step 2 Click “Yes” in the pop-up dialog to finish.

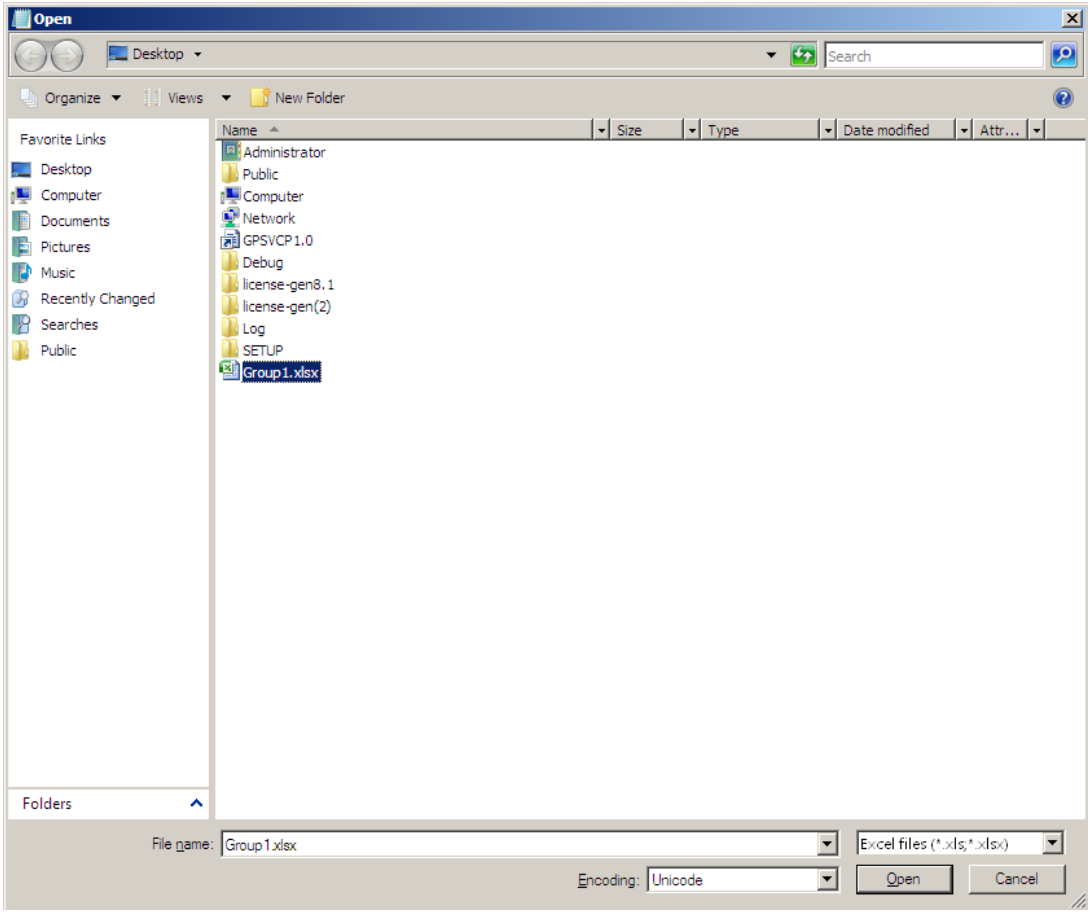
You are only allowed to delete the group which does not contain the radio.

Adding Multiple Groups Simultaneously

Step 1 Click “Template” and open the template shown as below. Then edit the group information in the Excel and save it.

	A	B	C
1	Group ID(1-16776415)	Alias	Description
2			
3			
4			

Step 2 Click “Import”. Select the Excel file to be imported.



Step 3 Click “Open” to import the group information.

Exporting the Group Information

For example, the existing workgroup information is shown as below.

Workgroup	Org. Block	
Group ID	Alias	Description
11	11	11111
100	100	100

You can click “Export” and export the workgroup information to the Excel file.

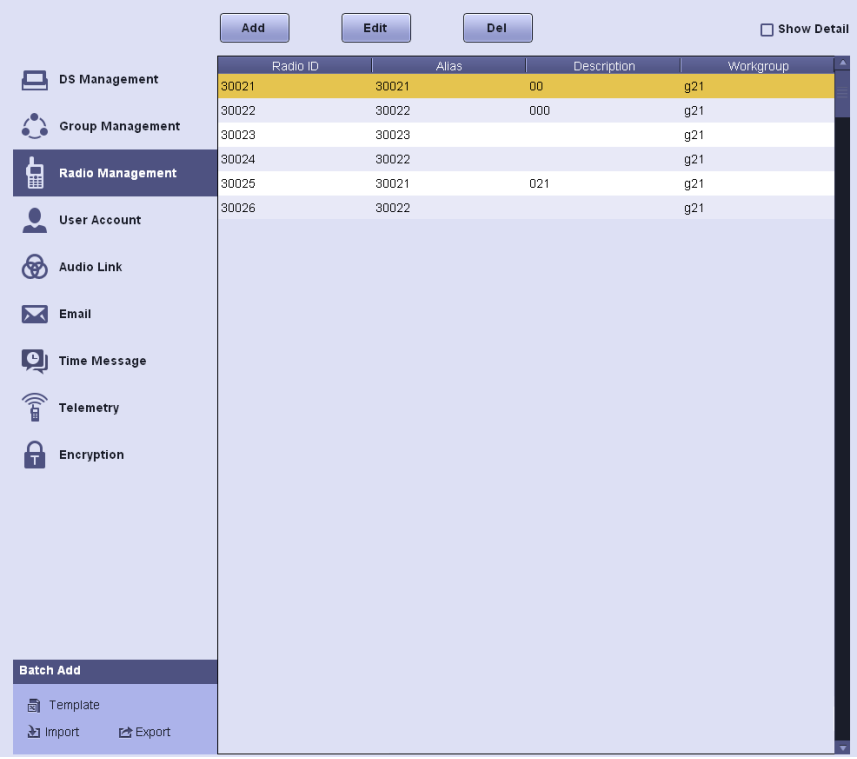
	A	B	C
1	Group ID	Alias	Description
2	11	11	11111
3	100	100	100
4			

10.4 Setting the Radio

You can add a radio to the SmartDispatch system for dispatch purpose.

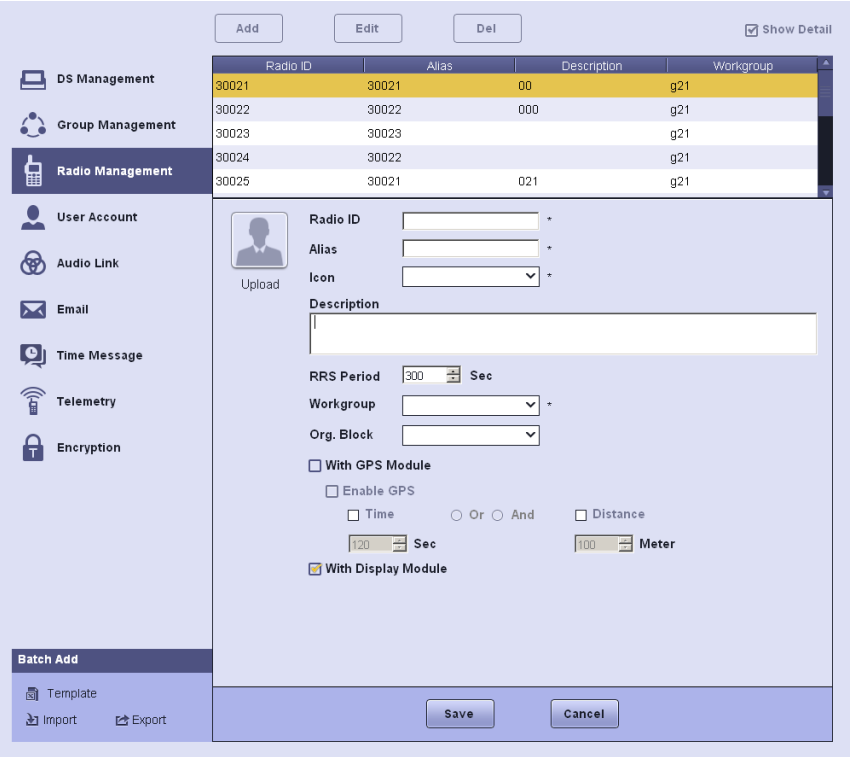
Step 1 Click “Configuration” on the top of main window.

Step 2 Click “Radio Management”.



Adding a radio

Step 1 Click “Add”.



Step 2 Set the following parameters.

Parameter	Description
Radio ID	Enters the radio ID specified in the Customer Programming Software.
Alias	Sets the alias of the radio.
Icon	Sets how the radio subscriber carries the radio.
Description	Enters the information related with the radio.
RRS Period	Sets the registration interval.
Workgroup	Classifies all radio subscribers according to their task type and working area.
Org. Block	Classifies all radio subscribers according to their job position.
With GPS Module	Sets whether the radio is equipped with GPS module. If the radio has the GPS module and this option is selected, you can position or track it.

Parameter	Description
Enable GPS	After you select the “With GPS Module” option, this option is available. Select this option for positioning or t racking the radio. You can also set the GPS polling interval.
Time	Sets the time interval of GPS polling.
Sec	
Or	When you select the “Time” and “Distance” simultaneously, the “Or” and “And” will be available. ● Or: indicates that any of the condition is met. In other words, the GPS data is transmitted to the SmartDispatch system by either time interval or distance interval. ● And: indicates that all conditions are met. In other words, the GPS data is transmitted to the SmartDispatch system by both time interval and distance interval.
And	
Distance	Sets the distance interval of GPS polling.
Meter	
With Display Module	Sets whether the message is sent to the radio. Please note that you can view the message via the radio with the LCD only. If you do not select it, the message will not be sent to the radio.

Step 3 Click “Save” to finish.

Modifying a radio

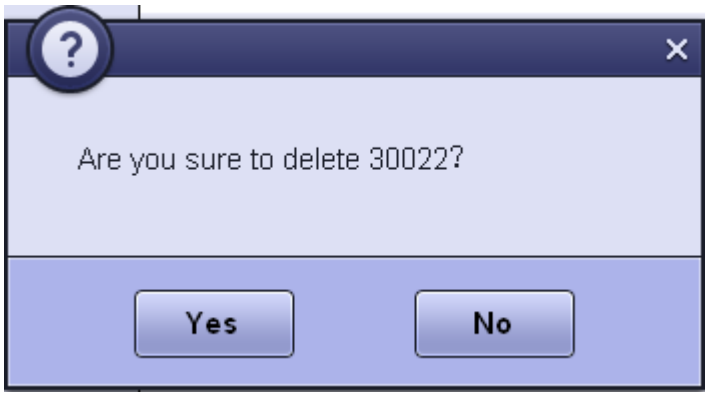
Step 1 Select the radio and click “Edit”.

Step 2 Modify the information and click “Save” to finish.

Deleting a radio

Step 1 Select the radio and click “Del”.

Step 2 Click “Yes” in the pop-up dialog to finish.



Adding Multiple Radios Simultaneously

Step 1 Click “Template” and open the template shown as below. Then edit the radio information in the Excel and save it.

	A	B	C	D	E	F	G
1	Radio ID	Alias	Icon Value	Description	RRS Interval(300-86400sec)	Group ID	With GPS module
2							
3							
4							

H	I	J	K	L
Enable GPS	GPS Upload Type	GPS Interval(1-86400sec)	Distance (100-30000Meter)	With display module

Step 2 Click “Import”. The following pop-up dialogue appears. Select the Excel file to be imported.

Step 3 Click “Open” to import the group information.

Exporting the Radio Information

For example, the existing radio information is shown as below.

Radio ID	Alias	Description	Workgroup
111	radio		11
512	512		11

You can click “Export” and export the radio information to the Excel file.

	A	B	C	D	E	F	G
1	Radio ID	Alias	Icon Value	Description	RRS Interval(300-86400sec)	Group ID	With GPS module
2	111	radio	Bike		300	111	Yes
3	512	512	Portable		300	512	Yes
4							

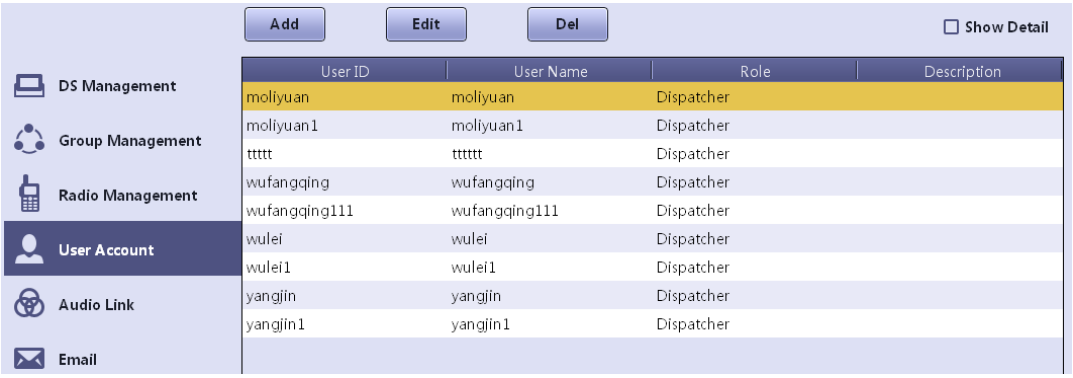
H	I	J	K	L
Enable GPS	GPS Upload Type	GPS Interval(1-86400sec)	Distance (100-30000Meter)	With display module
Yes	Distance	60	100	Yes
Yes	Distance	60	100	Yes

10.5 Setting the User Account

You can add or delete a user account, and change the password.

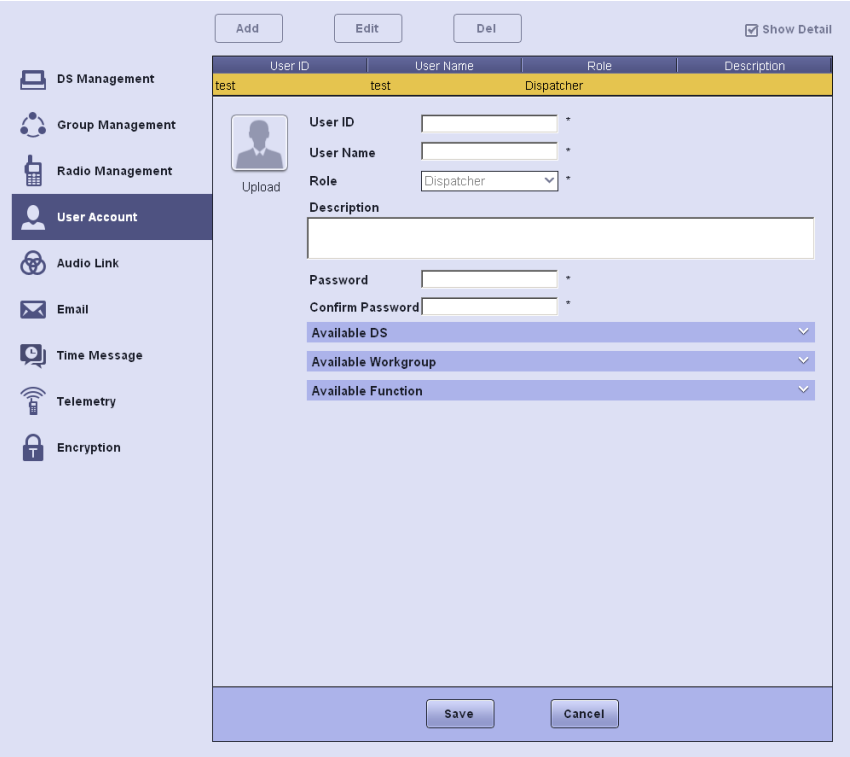
Step 1 Click “Configuration” on the top of main window.

Step 2 Click “User Account”.



Adding a user account

Step 1 Click “Add”.



Step 2 Set the following parameters.

Parameter	Description
User ID	Sets the login ID. It must be unique.
User Name	Sets the user name.
Role	This option is not available.
Description	Enters the information related with the account.
Password	Sets the login password.
Confirm Password	Enters the password again for further confirmation.
Available DS	Assigns the available dispatch station to the dispatcher.
Available Workgroup	Assigns the available workgroup to the dispatcher.
Available Function	Assigns the available feature to the dispatcher.

Step 3 Click “Save” to finish.

Modifying a user account

Step 1 Select the account and click “Edit”.

Step 2 Modify the information and click “Save” to finish.

Deleting a user account

Step 1 Select the account and click “Del”.

Step 2 Click “Yes” in the pop-up dialog to finish.

10.6 Setting the Audio Link

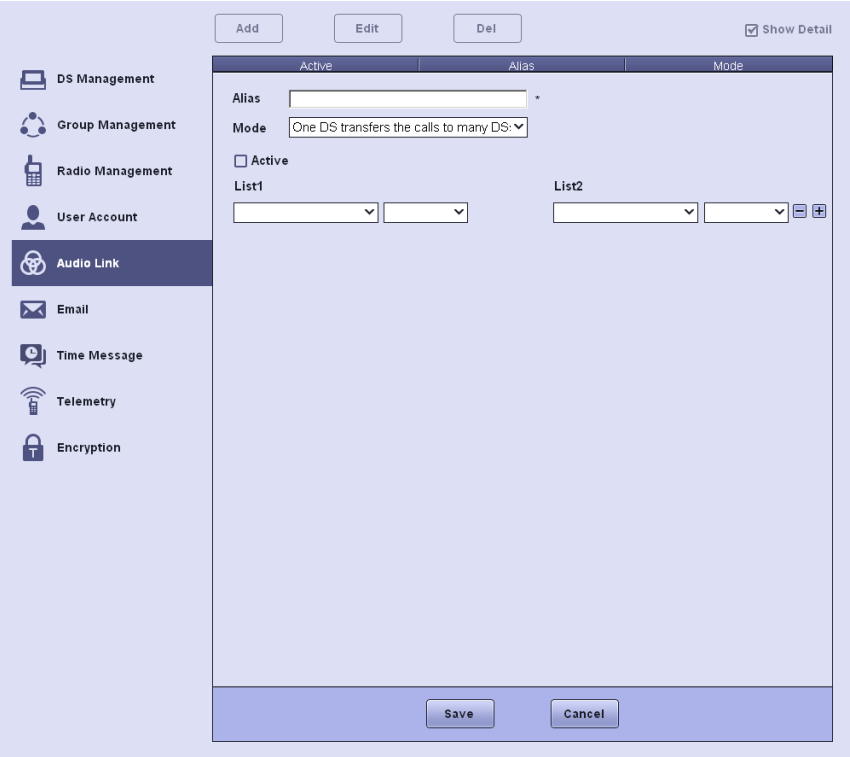
You can set the audio link to realize intercommunication among portable radios under different dispatch stations.

Step 1 Click “Configuration” on the top of main window.

Step 2 Click “Audio Link”.

Adding an audio link

Step 1 Click “Add”.



Step 2 Set the following parameters.

Parameter	Description
Alias	Sets the alias of the audio link.
Mode	SmartDispatch supports three modes: ● DSs transfer the calls to each other: The radio or group between areas can communicate with each other. ● Many DSs transfer the calls to one DS: The call from different dispatch stations in multiple areas can be r edirected to one dispatch station in one designated area. ● One DS transfers the calls to many DSs: The call from one dispatch station in one designated area can be redirected to multiple dispatch stations in multiple areas.
Active	Sets whether to activate the audio link feature.
List	Sets the dispatch station and group for the audio link.

Step 3 Click “Save” to finish.

Modifying an audio link

Step 1 Select the desired audio link and click “Edit”.

Step 2 Modify the information and click “Save” to finish.

Deleting an audio link

Step 1 Select the desired audio link and click “Del”.

Step 2 Click “Yes” in the pop-up dialog to finish.

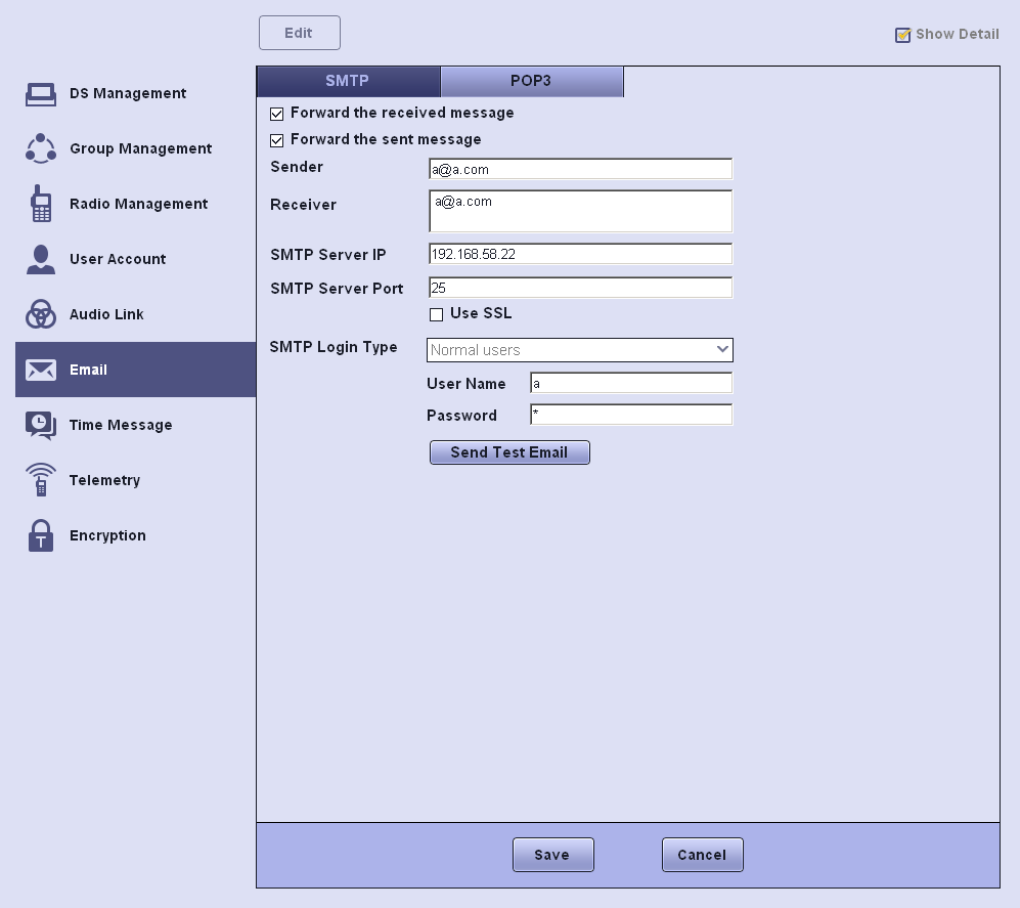
10.7 Setting the Email Access

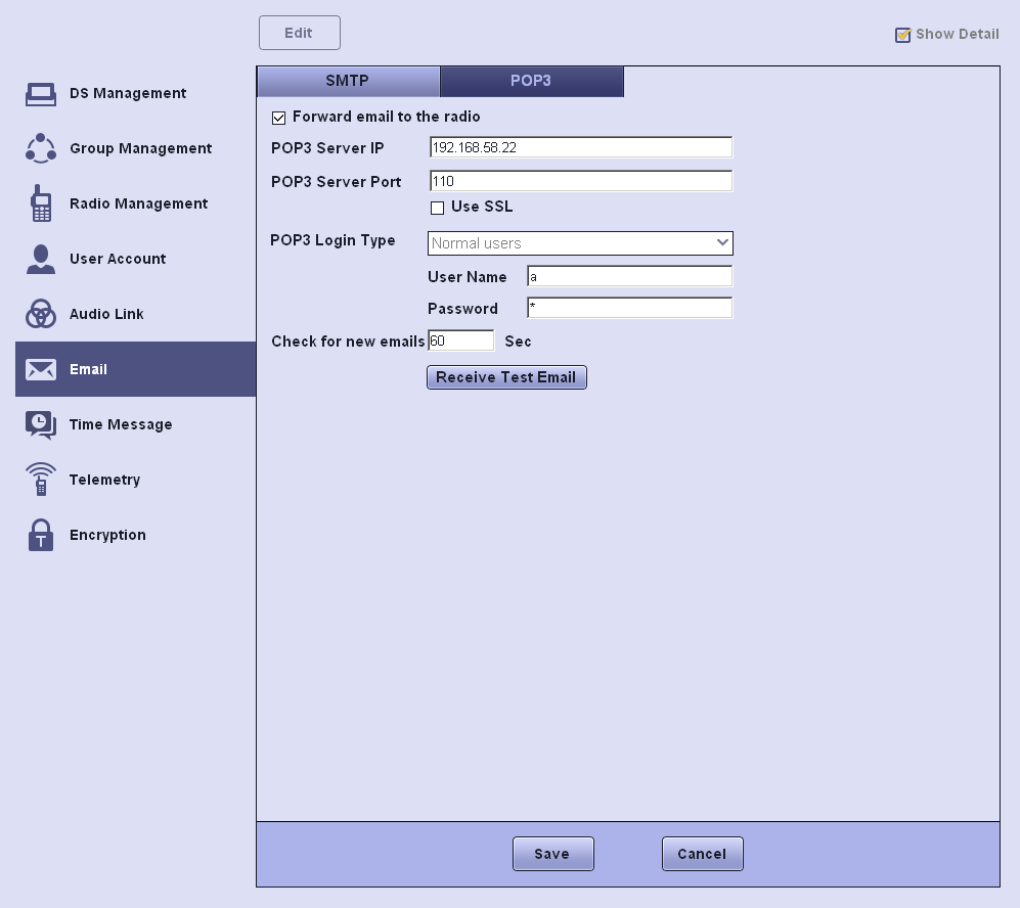
After the email access feature is enabled, you can:

- Open the designated mailbox to view the received and sent messages with the SMTP email service.
- Send the message in the mailbox to the radio or group with the POP3 email service.

Step 1 Click “Configuration” on the top of main window.

Step 2 Go to “Email -> Edit” to set the parameters.





Parameter	Description	Example
SMTP		
Forward the received message	Sets whether to send the received message from the SmartDispatch system to the designated mailbox.	Select
Forward the sent message	Sets whether to send the sent message to the designated mailbox.	Select
Sender	Sets the mailbox used for sending the e-mail.	a@a.com
Receiver	Sets the mailbox used for receiving the e-mail.	a@a.com

Parameter	Description	Example
SMTP Server IP	Sets the IP address of the SMTP server.	192.168.58.22
SMTP Server Port	Sets the port of the SMTP server.	25
Use SSL	Selects whether the SSL is enabled for a secure connection. It is recommended to check this option for higher security. When you set this parameter, you should consider whether the selected mailbox supports the SSL.	Deselect
SMTP Login Type	Sets the account type for logging in to SMTP.	Normal users
User Name	Sets the user name for logging in to the SMTP.	a
Password	Sets the password for logging in to the SMTP.	a
Send Test Email	Verifies the configuration.	Clicks this button to send a test e-mail.
POP3		
Forward email to the radio	Set whether to send the received mail to the radio.	Select
POP3 Server IP	Sets the IP address of the POP3 server.	192.168.58.22
POP3 Server Port	Sets the port of the POP3 server.	110
Use SSL	Selects whether the SSL is enabled for a secure connection. It is recommended to check this option for higher security. When you set this	Deselect

Parameter	Description	Example
	parameter, you should consider whether the selected mailbox supports the SSL.	
POP3 Login Type	Sets the account type for logging in to POP3 server.	Normal users
User Name	Sets the user name for logging in to POP3 server.	a
Password	Sets the password for logging in to POP3 server.	a
Check for new emails () sec	Sets the interval for receiving the new email.	60
Receive Test Email	Verifies the configuration.	Clicks this button to send a test e-mail.

Step 3 Click “Save” to finish.

10.8 Encryption

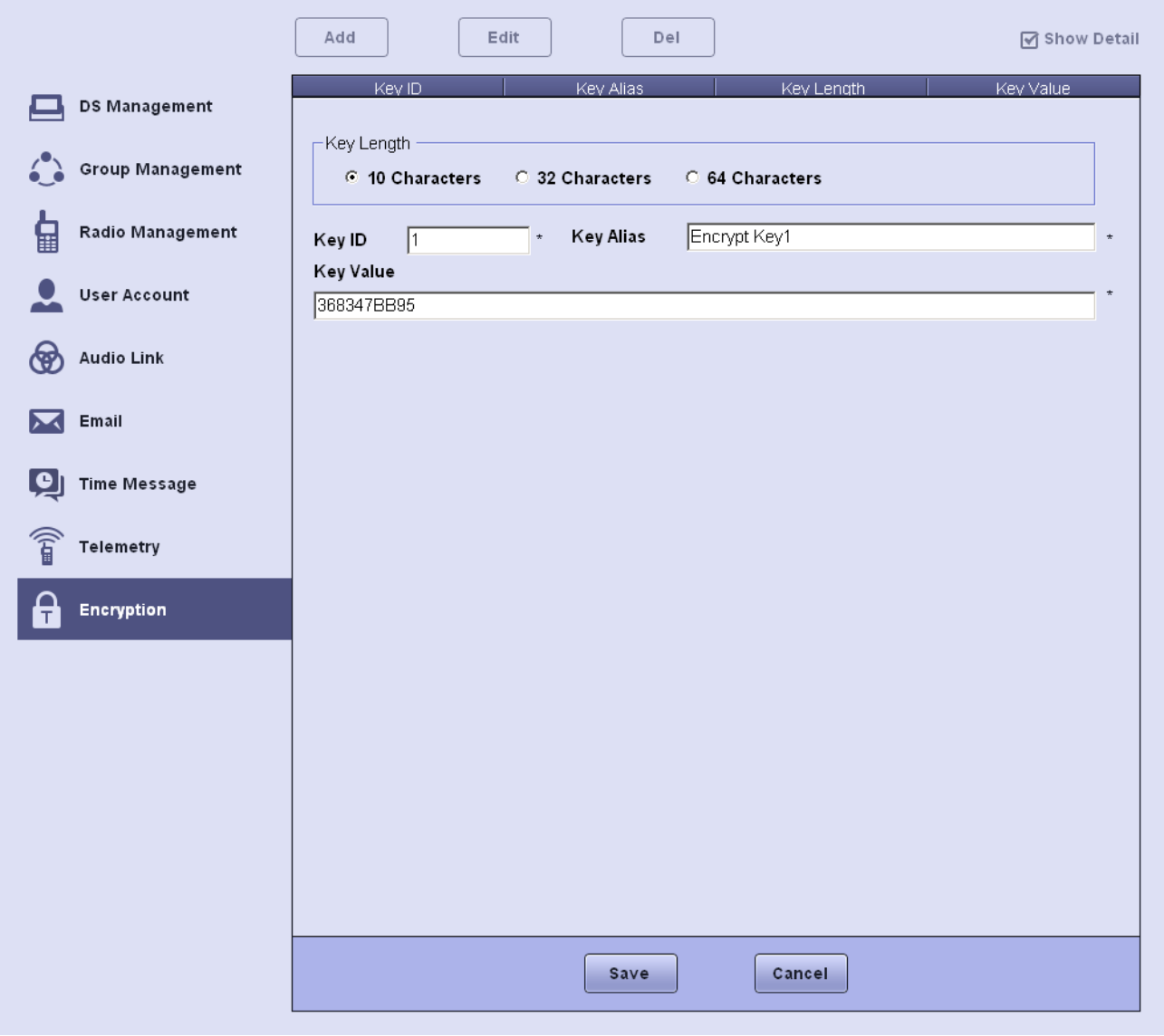
To encrypt the voices, you need to set the same encrypt key for the repeater, radio and SmartDispatch Client, and configure the algorithm in the gateway (See the description of “Encrypt Slot” in “9.3 Repeater Settings”).

Caution

To encrypt the voices, you need to connect the USB dog (for voice encryption) to the SmartDispatch Client.

Step 1 Click “Configuration” on the top of main window.

Step 2 Click “Encryption”. Then click “Add” and configure the encryption key for the SmartDispatch Client. This key must be identical with that of the repeater and the radio.

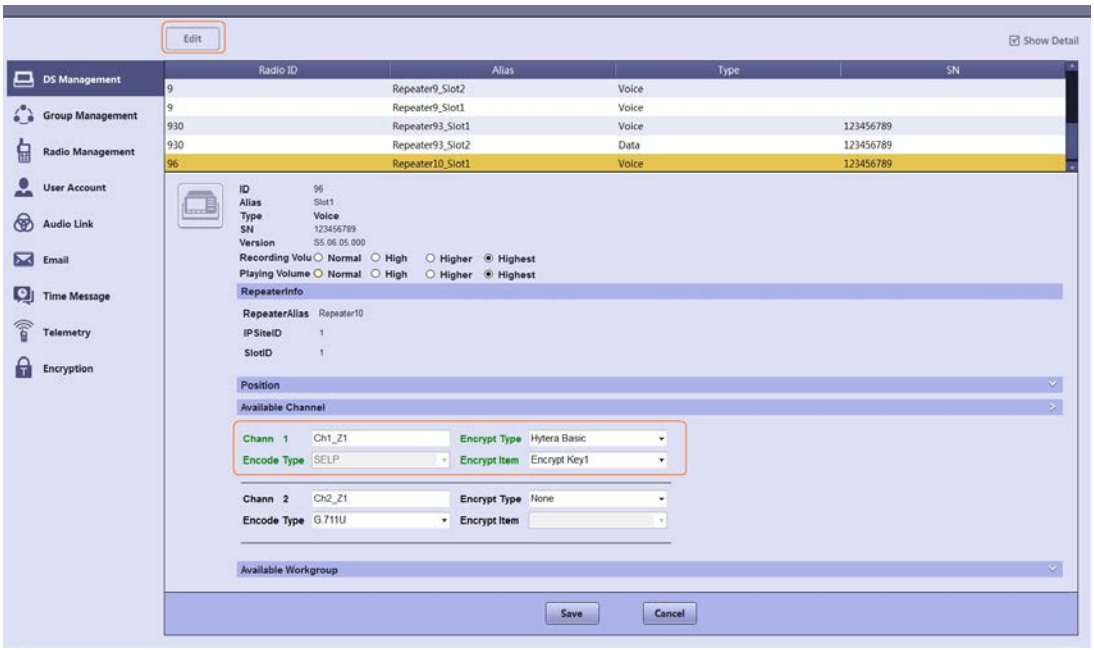


Parameter	Description
Key Length	Defines the length of the key you enter. Currently there are three options: 10, 32 and 64 characters.
Key ID	The ID must be unique.
Key Alias	The alias must be unique.
Key Value	Be sure to enter the hexadecimal numbers. The length of key value is subject to the settings in the “Key Length”.

Step 3 Click “Save” to finish.

Step 4 Click “DS Management”, select the dispatching repeater and click “Edit”. The configuration interface will appear.

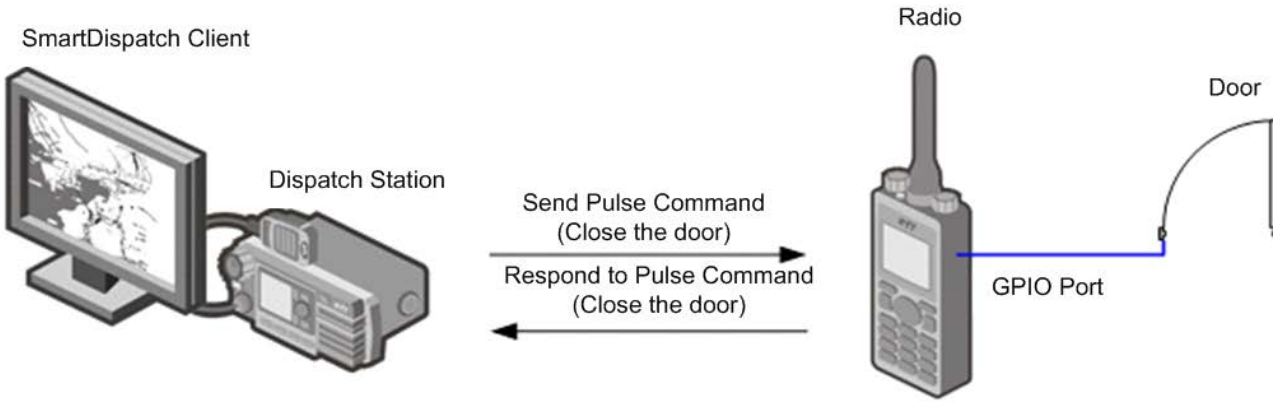
Step 5 Spread the “Available Channel” field to configure the channel encryption. This configuration must be consistent with that of the repeater via the Customer Programming Software.



Step 6 Click “Save” to finish.

10.9 Telemetry

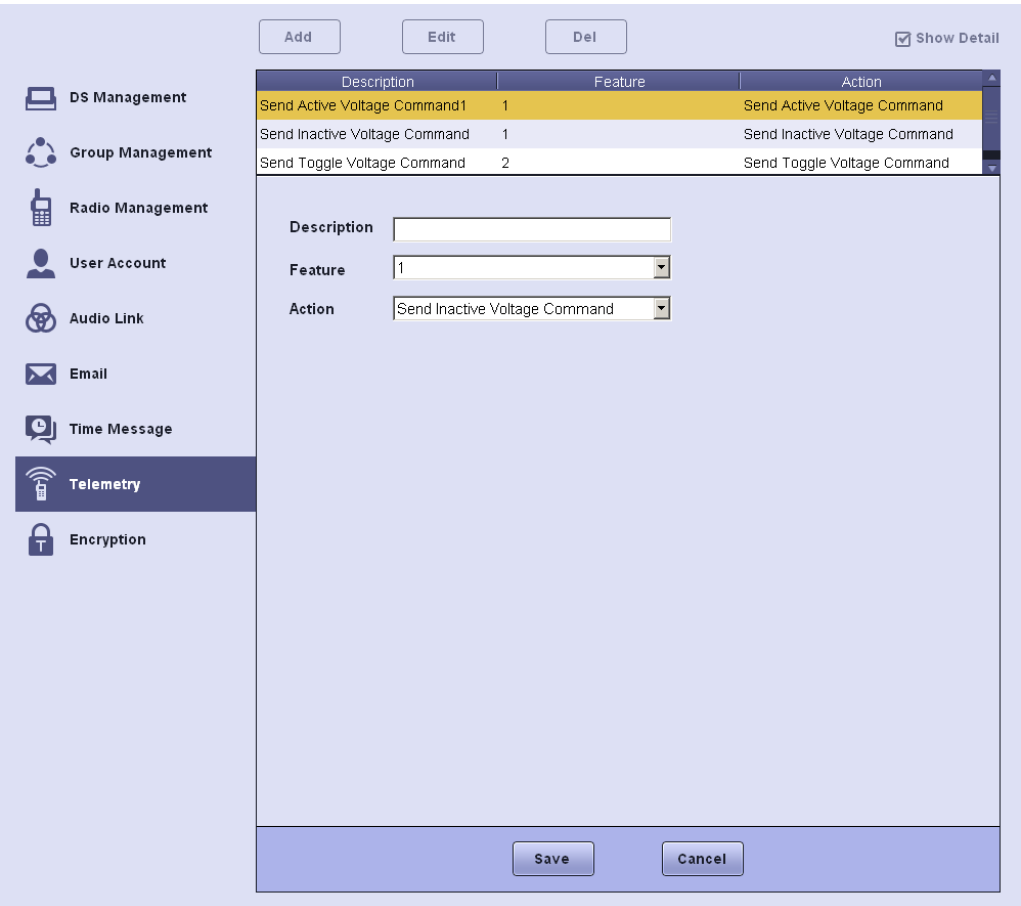
Through the SmartDispatch Client, you can remotely monitor the status of the external device connected to the radio, as well as controlling it.



To apply the Telemetry feature, you should connect the monitored device to the GPIO port of the radio, define the telemetry commands (as below) and enable the radio in the following steps to respond the commands (see “7.5 Telemetry”).

Step 1 Click “Configuration” on the top of main window.

Step 2 Click “Telemetry” and then click “Add” to set a telemetry command.



Parameter	Description
Description	Describes the command.
Feature	Sets the feature (1–6) which the radio's Telemetry VIO (1–6) must be corresponding to. For example, Feature 1 i s selected, so you need to select Telemetry VIO 1 of the radio to respond to the command.
Action	Sets the method of the command. As each command must have the corresponding response, the corresponding responding action shall be set for the radio. See the configuration for the radio in "7.5 Telemetry".

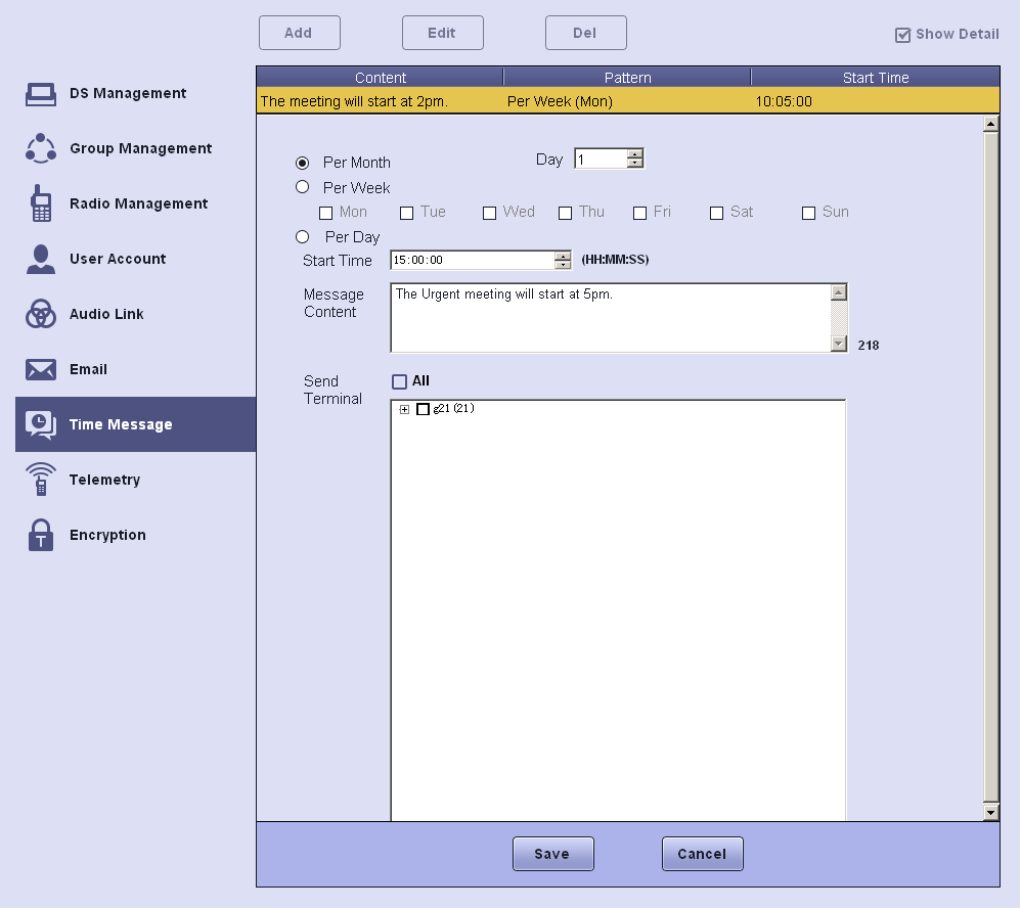
Step 3 Click "Save" to finish.

10.10 Time Message

You can configure the message (e.g.: meeting invitation) to be sent to the target radio(s) at the predefined time.

Step 1 Click "Configuration" on the top of main window.

Step 2 Click "Time Message". Then click "Add" to set the message.


Add
Edit
Del
Show Detail
DS Management
Group Management
Radio Management
User Account
Audio Link
Email
Time Message
Telemetry
Encryption
Content
Pattern
Start Time
The meeting will start at 2pm.
Per Week (Mon)
10:05:00
Per Month
Day 1
Per Week
Mon Tue Wed Thu Fri Sat Sun
Per Day
Start Time 15:00:00 (HH:MM:SS)
Message Content
The Urgent meeting will start at 5pm.
218
Send Terminal
All
g21 (21)
Save
Cancel

11. Commissioning Services

11.1 Commissioning the Online and Offline Service

11.1.1 Online status

Prerequisite

All components in the SmartDispatch system work properly.

Procedure

Step 1 Turn on the portable radio.

Expected Result

After the portable radio is online, the color of its icon on the SmartDispatch Client will turn orange.

11.1.2 Offline status

Prerequisite

- All components in the SmartDispatch system work properly.
- The portable radio is online already.

Procedure

Turn off the portable radio.

Expected Result

After the radio is offline, its icon on the SmartDispatch Client will turn from orange to grey.

11.2 Commissioning the Message Service

Prerequisite

- All components in the SmartDispatch system work properly.

Procedure

Step 1 Send the message from the SmartDispatch Client to the portable radio.

Step 2 Send the message from the portable radio to the SmartDispatch Client.

Expected Result

- The SmartDispatch Client can receive the message.
- The portable radio can receive the message.

11.3 Commissioning the Call Service

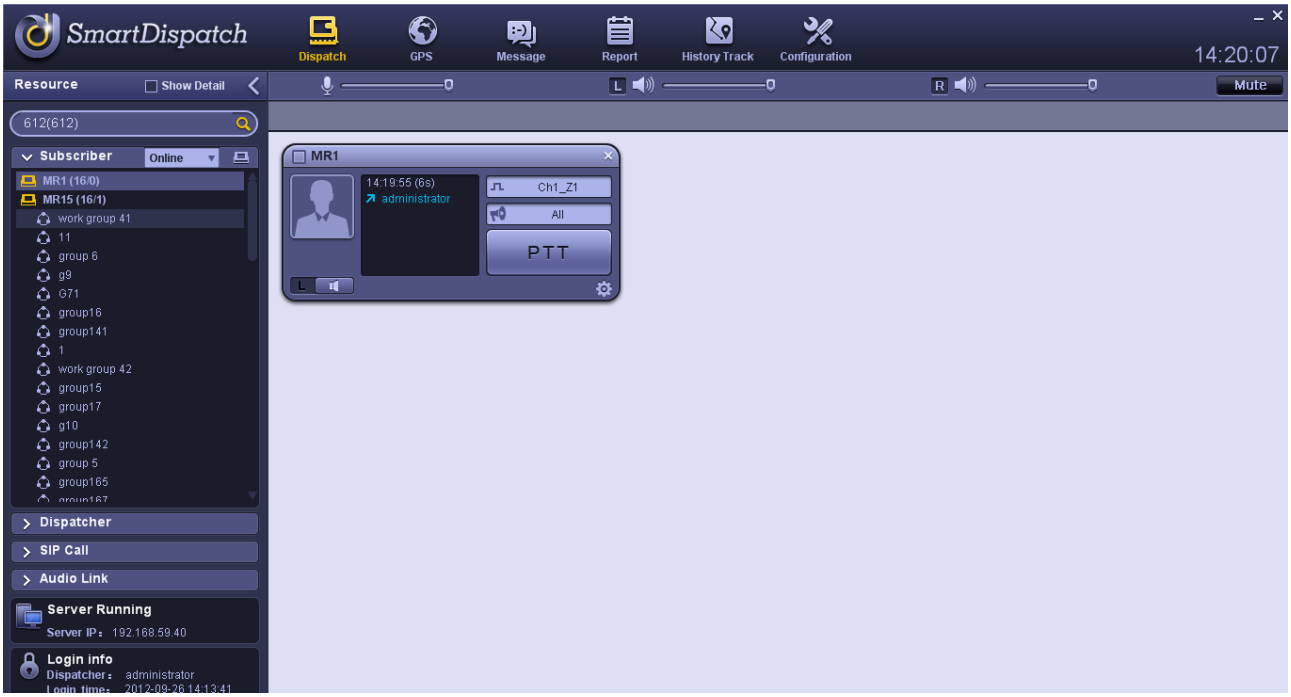
Prerequisite

All components in the SmartDispatch system work properly.

Procedure

Use the portable radio to make a call and the following window appears

If the call can be established successfully, it indicates that the call service is normal.



Expected Result

- The SmartDispatch Client can receive the voice from the portable radio.
- The portable radio can receive the voice from the SmartDispatch Client.

11.4 Commissioning the GPS Positioning Service

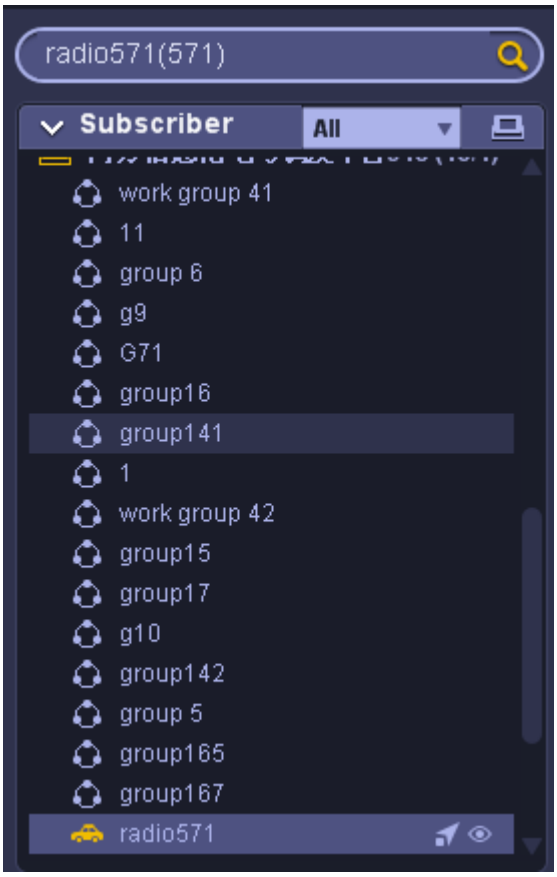
Prerequisite

- All components in the SmartDispatch system work properly.
- The portable radio with GPS module is online and has searched out the GPS signal.

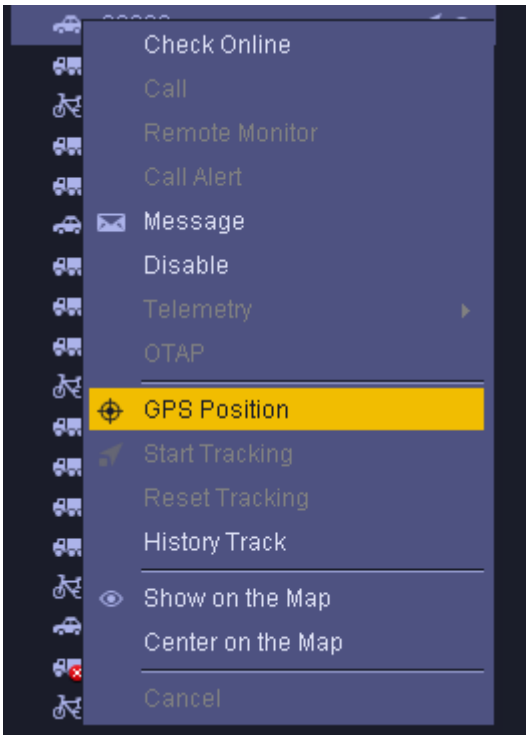
Procedure

Step 1 Log in to the SmartDispatch Client.

Step 2 Select the desired portable radio (e.g. 571) from the list.

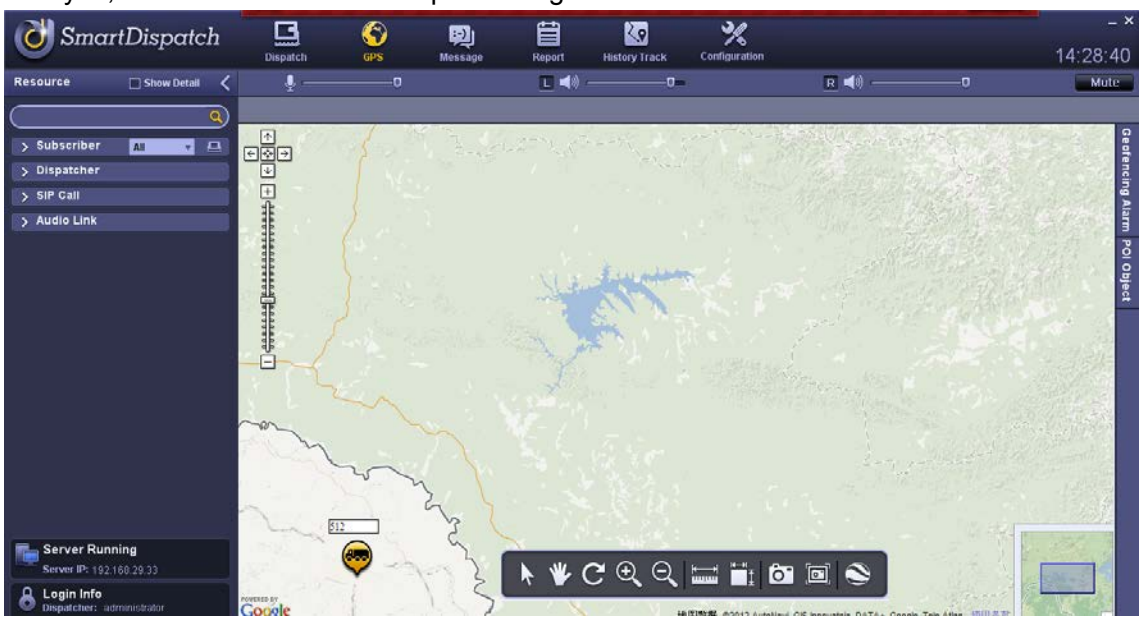


Step 3 Double-click this radio and select “GPS Position”.



Step 4 Zoom in the map and check whether this radio appears on the map.

If yes, it indicates that the GPS positioning service is normal.



Expected Result

The real-time position of the portable radio can be displayed on the map.

11.5 Commissioning the Report Service

Prerequisite

All components in the SmartDispatch system work properly.

Procedure

Step 1 Click “Report”.

Step 2 Define the type of the report.

Step 3 Set the search criterion.

Step 4 Click “Search”.

Expected Result

The search results are displayed.

11.6 Commissioning the Recording Playback Service

Prerequisite

All components in the SmartDispatch system work properly.

Procedure

Step 1 Click “Report”.

Step 2 Set the search criterion.

Step 3 Click “Search”.

Step 4 Select one recording from the search results.

Step 5 Click the play button to play this recording.

Expected Result

The recording can be played properly.

Address: HYT Tower, Hi-Tech Industrial Park North, Beihuan RD., Nanshan District, Shenzhen, China
Postcode: 518057
http://www.hytera.com