

CS (Conventional System)

Dispatching System User Manual

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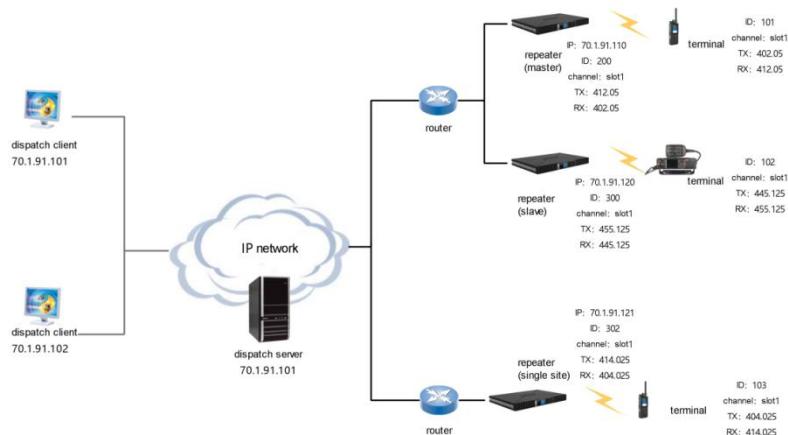
1. Overview

The PD200 dispatching system is a DMR T2 dispatching system self-developed by Caltta. The PD200 can realize command & dispatch services through access of the repeater PR900 and corresponding DMR radios, build communication network for users, and realize digital conventional dispatching services.

The PD200 dispatching system adopts C/S architecture and modular design, and is composed of functional modules such as voice dispatch, positioning, short message, and report generation, It is realized based on the standard SIP protocol.

It consists of dispatching client, dispatching server, gateway, repeater, mobile and portable radios.

Figure 1-1 Sample diagram of DMR conventional networking



2. System

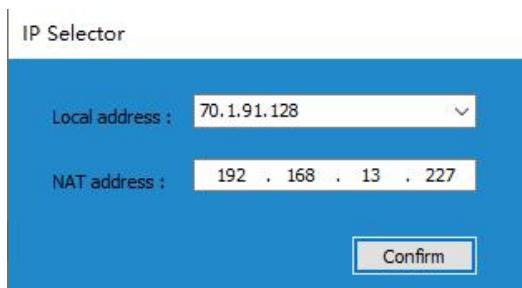
2.1. Log in System

The way of log in to the system is as follows:

First, you need to start the server on the server computer, click to run the server software PD200Server on the desktop. The IP selection window pops up as follows.

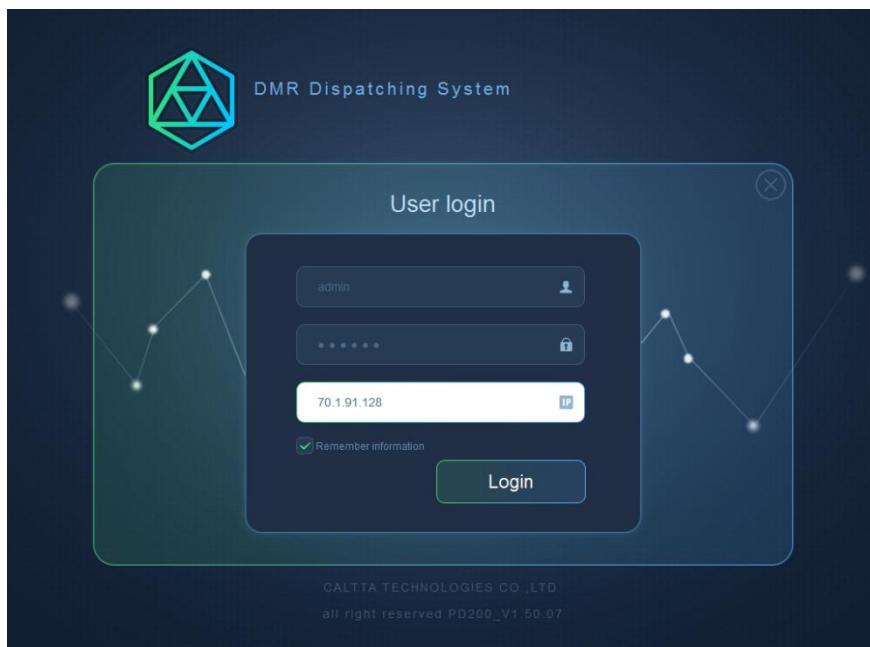
Select the correct IP address from "Local IP Address" drop-down box, which is used as the server IP address. Fill in "NAT Address" with the mapping IP address during private network traversal (if there is no private network traversal, keep default setting), click "OK" and the server enters background running state.

Figure 2-1 IP selection before login



Step 1 Double-click  on desktop or in the installation directory, and login dialog will be shown as follows.

Figure 2-2 Login interface



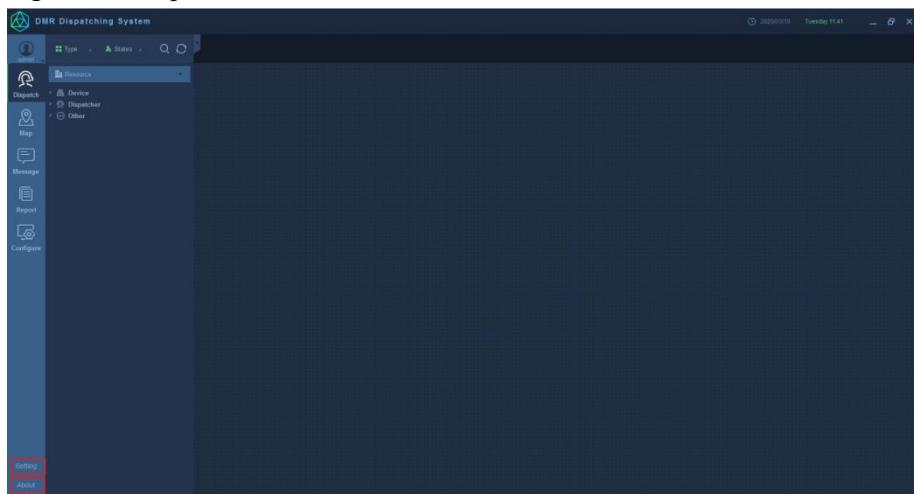
Step 2 Enter username, password (default password 111111) and server IP address, click "Login".

2.2. System Parameters Configuration

2.2.1. Storage Path Configuration

After logging in to the dispatcher client, click "Setting" on the bottom-left corner.

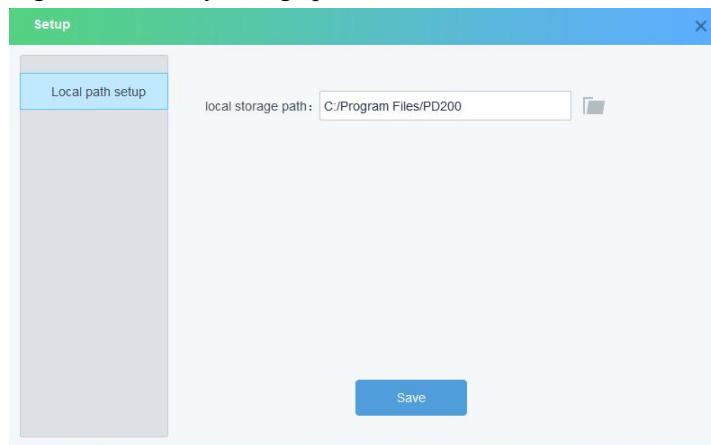
Figure 2-3 Dispatcher main interface



You can change the storage path for files saved by clients. This path is used to save client

logs, alarm information, recording files, repeater tracing logs, and so on.

Figure 2-4 Modify storage path

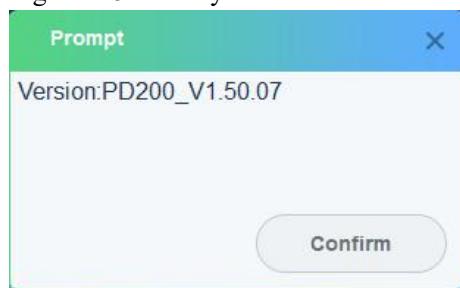


2.3. About the System

After logging in to the dispatcher client, click "About" on the bottom-left corner.

You can view system brief introduction, system version and copyright information, click "OK" to exit.

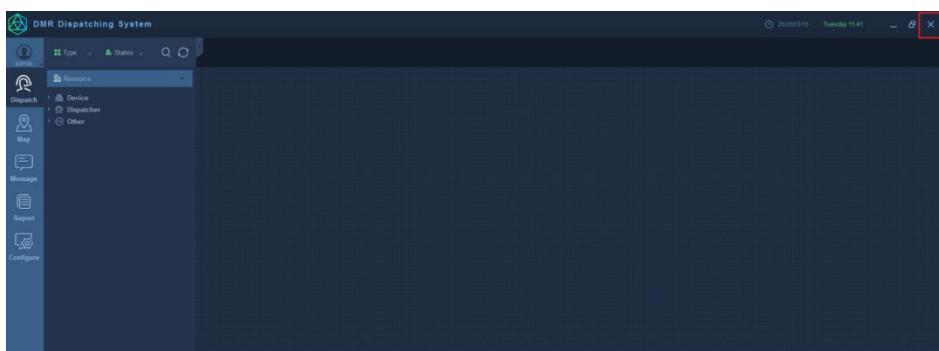
Figure 2-5 View system information



2.4. Log out System

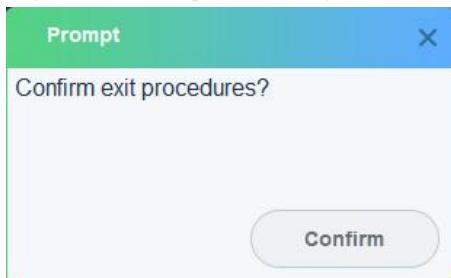
When you do not need to use the system, you can log out the system by clicking the "Close" button in the upper right corner of the interface.

Figure 2-6 Click "Close" to logout



Click "Confirm" on the pop-up page to exit the system.

Figure 2-7 Prompt before logout



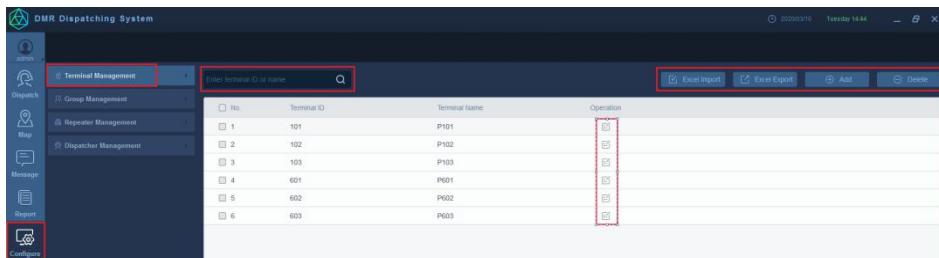
3. Configure

3.1. Terminal Management

"Terminal Management" is mainly used to manage terminal numbers in the dispatching system, which is convenient for the dispatcher to dispatch terminals.

"Terminal Management" contains 6 functions: add terminal, edit terminal, delete terminal, batch import / export terminals, search terminal ID / name.

Figure 3-1 Terminal management interface



3.1.1. Add Terminal

The terminal ID range is [1,16775903]. The newly added terminal ID is not allowed to be duplicated with existed terminal ID, and it must be consistent with parameters configured by CPS. The terminal name cannot exceed 16 characters, which can be numbers, letters, symbols, and Chinese characters, and the name is not allowed to be empty.

Figure 3-2 Add terminal

Terminal ID: Input number(1-16775903) *

Terminal Name: Limit 16 characters *

Save

3.1.2. Edit Terminal

The terminal name can be edited and submitted, which cannot exceed 16 characters (can be numbers, letters, symbols, and Chinese characters), and is not allowed to be empty.

Figure 3-3 Edit terminal - 1

No.	Terminal ID	Terminal Name	Operation
1	101	P101	
2	102	P102	Edit
3	103	P103	

Figure 3-4 Edit terminal - 2

Terminal ID: 101

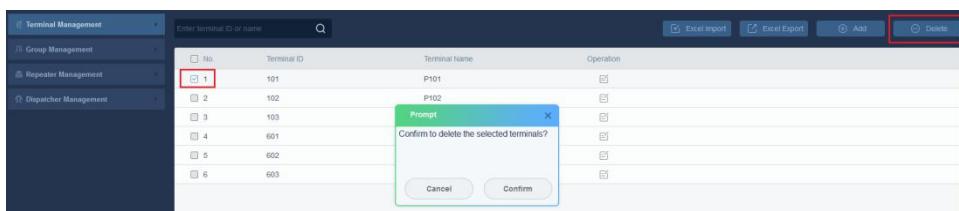
Terminal Name: P101 *

Save

3.1.3. Delete Terminal

Select the terminal you want to delete, select the checkbox in front, and click "Delete" button at the top-right corner. Click "Confirm" on the pop-up page to delete the terminal, otherwise click "Cancel".

Figure 3-5 Delete terminal



3.1.4. Batch Export Terminals

The "Excel Export" function can export all allocated terminal numbers to an Excel file for easy backup and subsequent use.

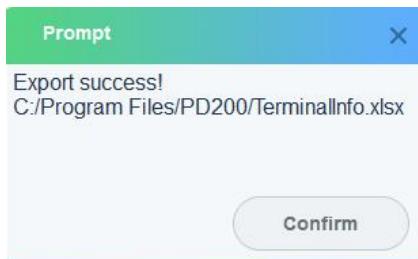
On "Terminal Management" page, click "Excel Export", and a dialog box will pop up. Set the path and file name, and click "Save" to save successfully.

Figure 3-6 Batch export terminals



The following dialog box will pop up after successful export.

Figure 3-7 Prompt after export success



3.1.5. Batch Import Terminals

The "Excel Import" function can help you import user number data saved on your local computer, such as a user number file that has been exported as a backup previously.

The user number Excel sheet contains two lines of information: "Terminal ID" and

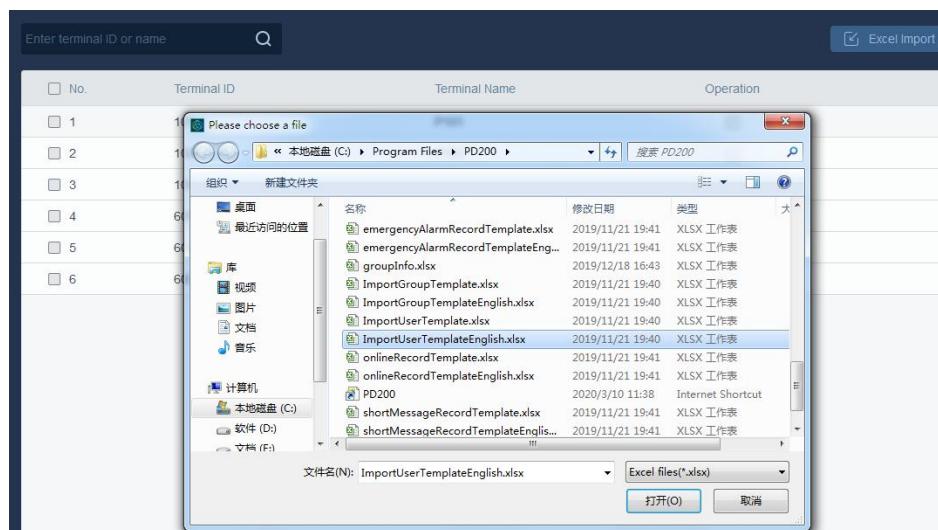
"Terminal Name". You can add / modify "Terminal ID" and "Terminal Name" as you need.

Figure 3-8 Excel file for batch import terminals

	A	B
1	Terminal ID	Terminal Name
2	201	P201
3	202	P202
4	203	P203
5	204	P204
6	205	P205
7	206	P206
8	207	P207
9	208	P208
10	209	P209
11	210	P210
12	211	P211
13	212	P212
14	213	P213
15	214	P214

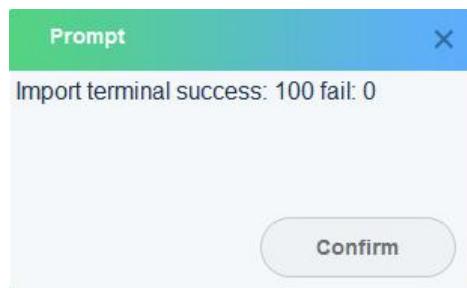
Select "Excel Import", the following page will pop up, you can choose the file to import.

Figure 3-9 Batch import terminals



After the import is complete, the number of succeeded and failed imported terminals will be displayed.

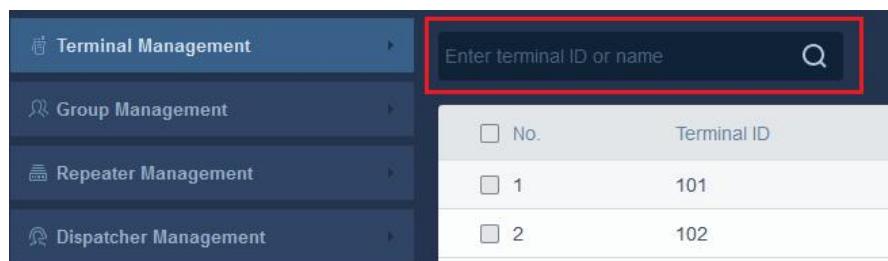
Figure 3-10 Prompt after import success



3.1.6. Search Terminal

Enter the ID or name of the terminal to search. Fuzzy search is supported.

Figure 3-11 Search terminal



The search results are displayed based on search criteria:

Figure 3-12 Search results containing "60"

No.	Terminal ID	Terminal Name	Operation
1	260	P260	edit
2	601	P601	edit
3	602	P602	edit
4	603	P603	edit

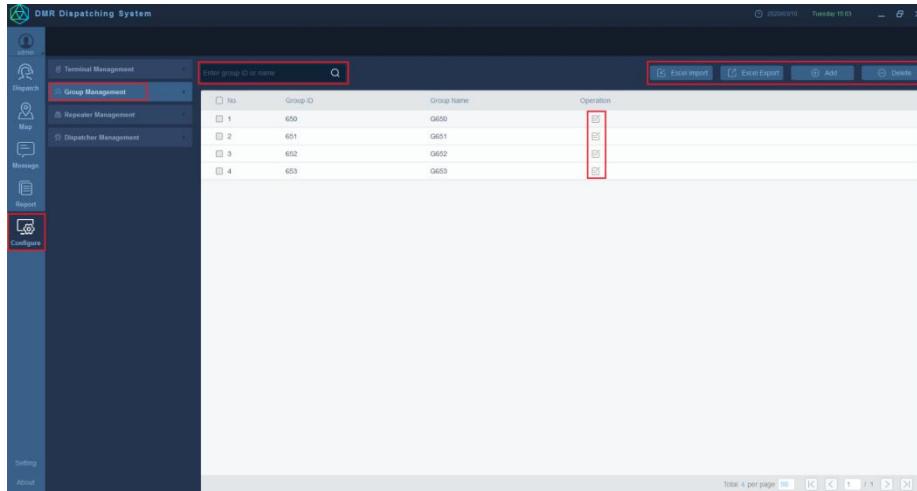
Figure 3-13 Search results containing "Security"

No.	Terminal ID	Terminal Name	Operation
1	201	Security_201	edit
2	202	Security_202	edit
3	203	Security_203	edit
4	204	Security_204	edit
5	205	Security_205	edit

3.2. Group Management

"Group Management" contains 6 functions: add group, edit group, delete group, batch import / export groups, search group ID / name.

Figure 3-14 Group management interface



3.2.1. Add Group

The group ID range is [1,16776415]. The newly added group ID is not allowed to be duplicated with existed group ID. The terminal name cannot exceed 16 characters, which can be numbers, letters, symbols, and Chinese characters, and the name is not allowed to be empty.

Figure 3-15 Add group

Group ID:	Input number(1-16776415)
Group Name:	Limit 16 characters

Save

3.2.2. Edit Group

The group name can be edited and submitted, which cannot exceed 16 characters (can be numbers, letters, symbols, and Chinese characters), and is not allowed to be empty.

Figure 3-16 Edit group - 1

No.	Group ID	Group Name	Operation
1	650	G650	
2	651	G651	
3	652	G652	
4	653	G653	Edit

Figure 3-17 Edit group - 2

Edit Group

Group ID: 652

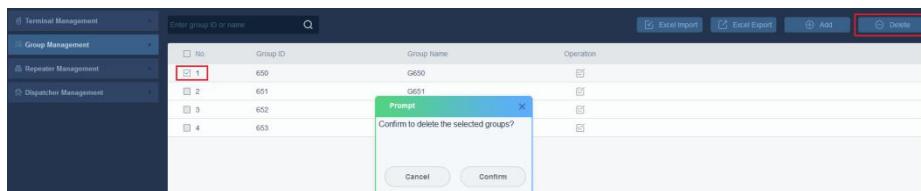
Group Name: G652 *

Save

3.2.3. Delete Group

Select the group you want to delete, select the checkbox in front, and click "Delete" button at the top-right corner. Click "Confirm" on the pop-up page to delete the group, otherwise click "Cancel".

Figure 3-18 Delete group



3.2.4. Batch Export Groups

The "Excel Export" function can export all allocated group numbers to an Excel file for easy backup and subsequent use.

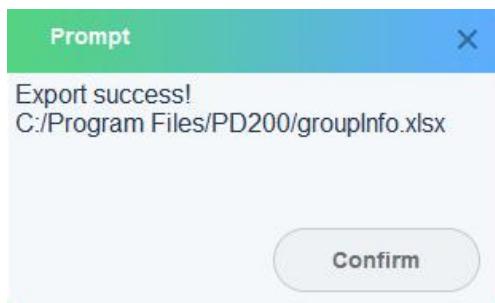
On "Group Management" page, click "Excel Export", and a dialog box will pop up. Set the path and file name, and click "Save" to save successfully.

Figure 3-19 Batch export groups



The following dialog box will pop up after successful export.

Figure 3-20 Prompt after export success



3.2.5. Batch Import Groups

The "Excel Import" function can help you import group number data saved on your local computer, such as a group number file that has been exported as a backup previously.

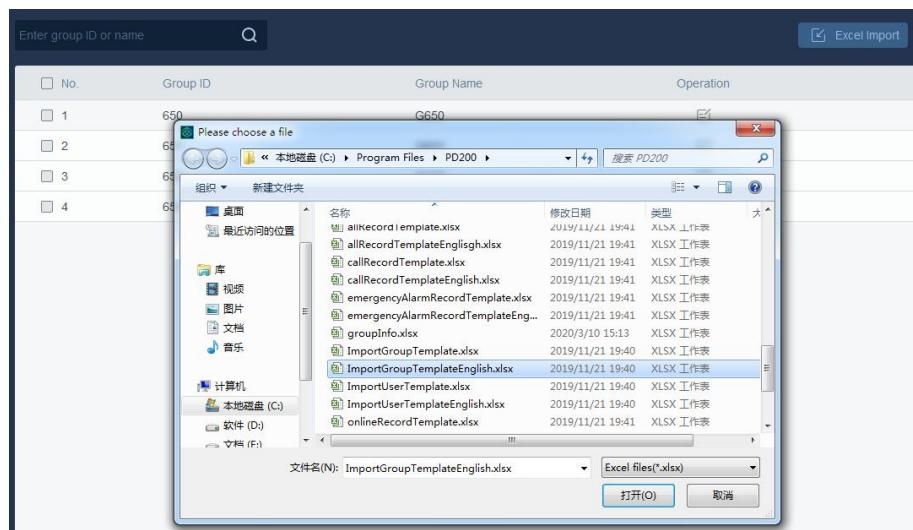
The group number Excel sheet contains two lines of information: "Group ID" and "Group Name". You can add / modify "Group ID" and "Group Name" as you need.

Figure 3-21 Excel file for batch import groups

	A	B
1	Group ID	Group Name
2	900	Security_900
3	901	Security_901
4	902	Security_902
5	903	Security_903
6	904	Security_904
7	905	Security_905
8	906	Security_906
9	907	Security_907
10	908	Security_908
11	909	Security_909
12	910	Security_910

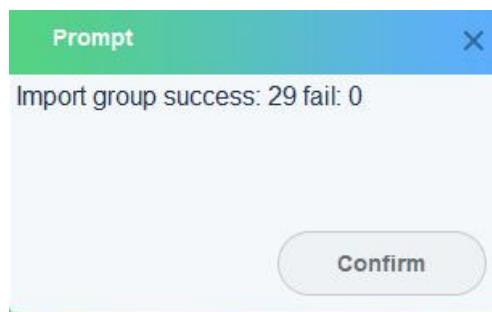
Select "Excel Import", the following page will pop up, you can choose the file to import.

Figure 3-22 Batch import groups



After the import is complete, the number of succeeded and failed imported groups will be displayed.

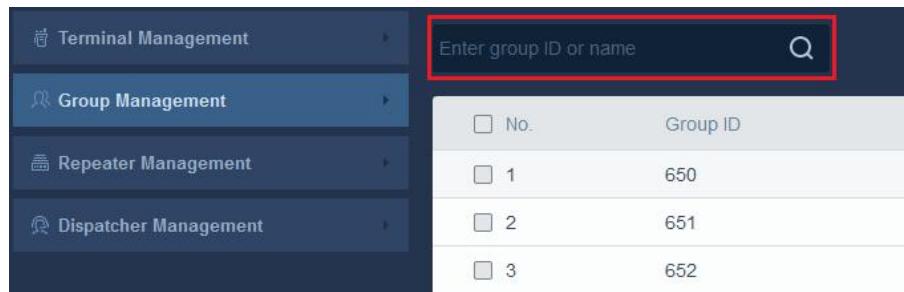
Figure 3-23 Prompt after import success



3.2.6. Search Group

Enter the ID or name of the group to search. Fuzzy search is supported.

Figure 3-24 Search group



The search results are displayed based on search criteria:

Figure 3-25 Search results containg "65"

No.	Group ID	Group Name	Operation
1	650	G650	
2	651	G651	
3	652	G652	
4	653	G653	

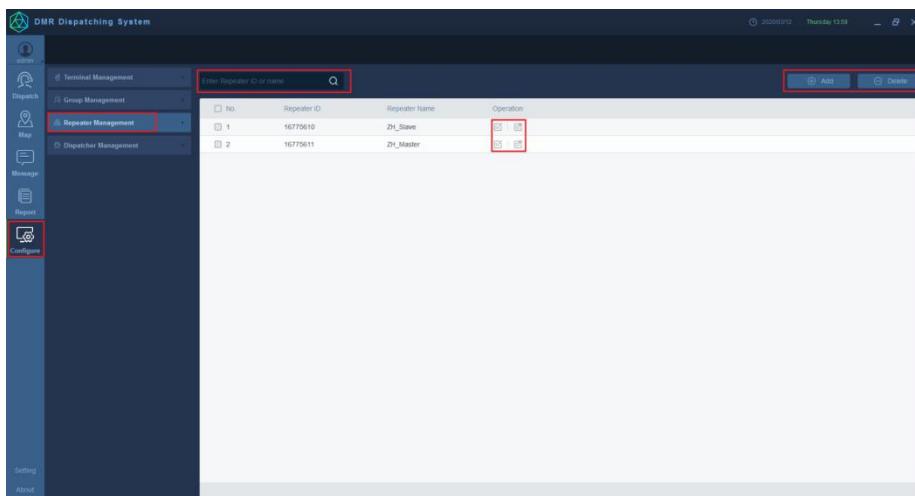
Figure 3-26 Search results containg "Security"

No.	Group ID	Group Name	Operation
1	900	Security_900	
2	901	Security_901	
3	902	Security_902	
4	903	Security_903	
5	904	Security_904	
6	905	Security_905	
7	906	Security_906	

3.3. Repeater Management

"Repeater Management" contains 5 functions: add repeater, view repeater, edit repeater, delete repeater, search repeater ID / name.

Figure 3-27 Repeater management interface

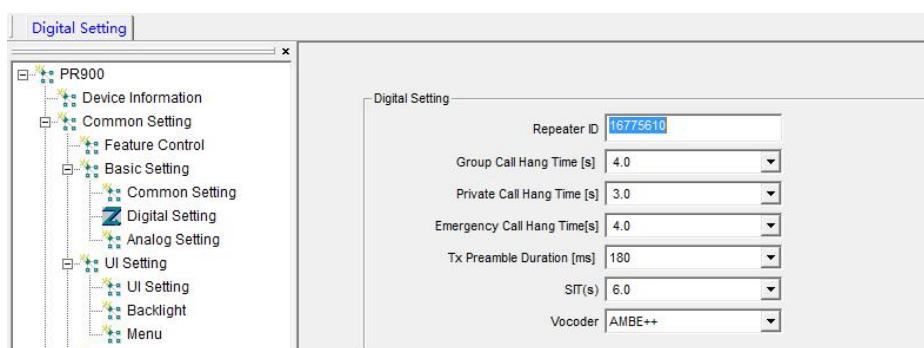


3.3.1. Add Repeater

The repeater ID range is [1,16775903]. The newly added repeater ID is not allowed to be duplicated with existed repeater ID. The repeater name cannot exceed 16 characters, which can be numbers, letters, symbols, and Chinese characters, and the name is not allowed to be empty. The repeater password can contain the following characters: (0-9, a-z, A-Z, ~!@#\$%^*).

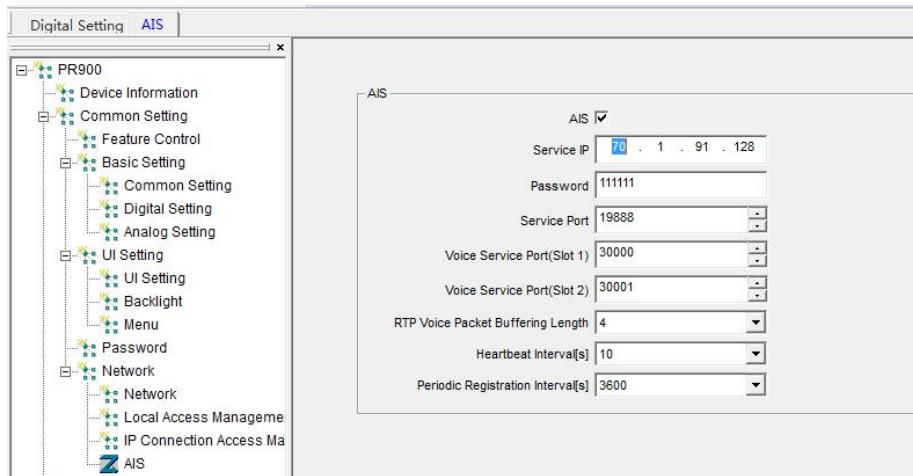
The repeater ID is allocated during CPS configuration.

Figure 3-28 Repeater ID configuration via CPS



The repeater password is configured during CPS configuration, which is used to connect to the dispatching server.

Figure 3-29 Repeater password configuration via CPS



When adding a new repeater, the repeater ID and password must be consistent with CPS configuration, so that the repeater can establish link with dispatcher server successfully. The "IP Link ID" defaults to "1" and cannot be changed. Select "Configure IP Link" according to actual needs.

Figure 3-30 Configure repeater basic information

The screenshot shows the 'Add Repeater' dialog with the 'Basic Information' tab selected. It contains the following fields:

- Repeater ID: Input number(1-16775903) *
- Repeater Name: Limit 16 characters *
- PassWord: Input characters(0-9、a-z、A-Z、~!@#\$%^*) *
- Confirm PassWord: Input characters(0-9、a-z、A-Z、~!@#\$%^*) *
- IP Link ID: 1
- Configure IP Link:

At the bottom right is a 'Save' button.

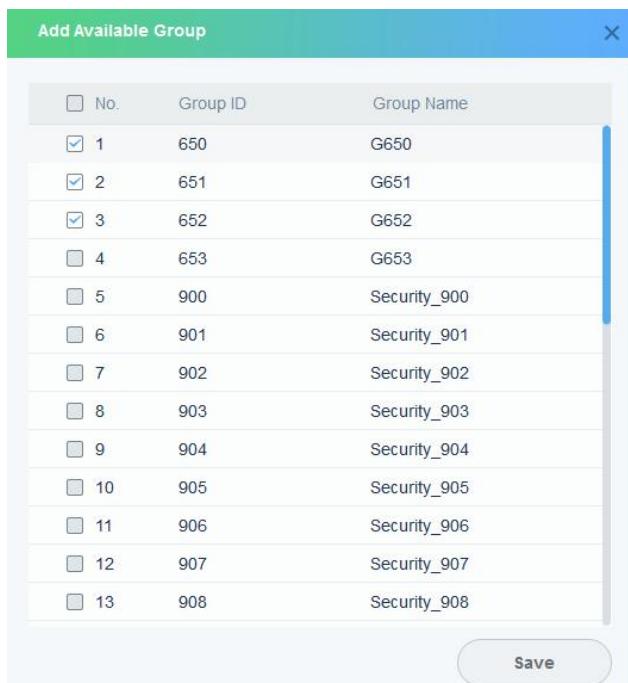
After entering parameters of the new repeater, click "Save",

Select "Add Available Group", to add groups that belong to the repeater, and click "Save".

Figure 3-31 Add repeater with available group - 1

The screenshot shows the 'Add Repeater' dialog with the 'Available Group' tab selected. At the top, there is a dropdown menu labeled 'Time Slot 1'. Below it are three buttons: '+ Add Available Group' (highlighted with a red box), 'Delete' (with a minus sign icon), and 'No.' (with a checkbox icon). A table below has columns for 'Group ID' and 'Group Name'.

Figure 3-32 Add repeater with available group - 2



3.3.2. View Repeater

After adding the repeater successfully, you can click to view the information of the repeater.

Figure 3-33 View repeater basic information

No.	Repeater ID	Repeater Name	Operation
1	16775610	ZH_Slave	
2	16775611	ZH_Master	

View Repeater

Basic Information Available Group

Repeater ID: 16775610

Repeater Name: ZH_Slave

IP Link ID: 1

Figure 3-34 View repeater available group

The screenshot shows a list of repeaters with columns for No., Repeater ID, Repeater Name, and Operation. Two repeaters are listed: No. 1 (16775610, ZH_Slave) and No. 2 (16775611, ZH_Master). An 'Edit' icon is next to each. A modal window titled 'View Repeater' is open over the list, containing tabs for 'Basic Information' and 'Available Group'. The 'Available Group' tab is selected, showing a dropdown for 'Time Slot 1' set to 'Time Slot 1' and a table of groups:

No.	Group ID	Group Name
1	650	G650
2	651	G651
3	652	G652

3.3.3. Edit Repeater

You can click to edit the name and password of the repeater.

Figure 3-35 Edit repeater basic information

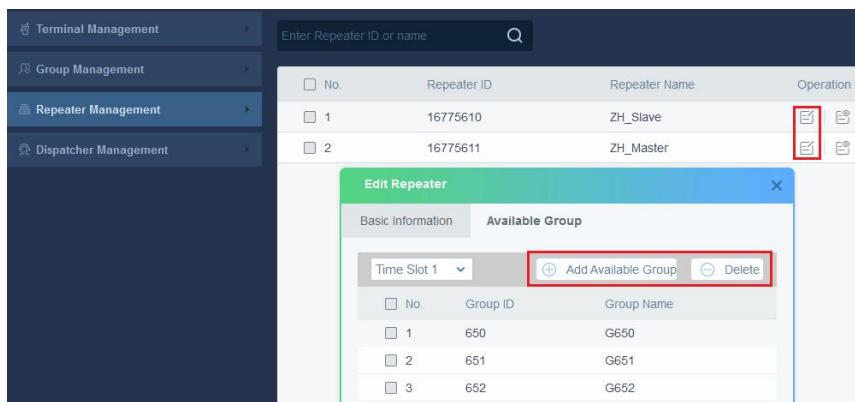
The screenshot shows the 'Repeater Management' section of the software. On the left is a sidebar with 'Terminal Management', 'Group Management', 'Repeater Management' (selected), and 'Dispatcher Management'. The main area has a search bar 'Enter Repeater ID or name' and a table of repeaters:

No.	Repeater ID	Repeater Name	Operation
1	16775610	ZH_Slave	
2	16775611	ZH_Master	

A modal window titled 'Edit Repeater' is open, containing tabs for 'Basic Information' and 'Available Group'. The 'Basic Information' tab is selected, showing fields for Repeater ID (16775611), Repeater Name (ZH_Master with a red asterisk), PassWord (Input characters(0-9, a-z, A-Z, ~!@#\$%^)), Confirm PassWord (Input characters(0-9, a-z, A-Z, ~!@#\$%^)), and IP Link ID (1). A 'Configure IP Link' checkbox is checked. A 'Save' button is at the bottom right. The 'Available Group' tab is also visible.

You can also edit the "Available Group" of the repeater.

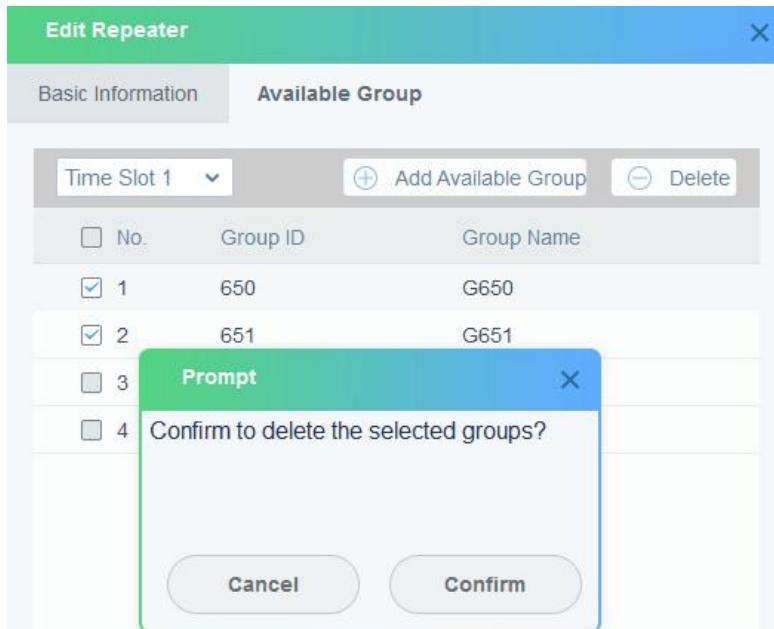
Figure 3-36 Edit repeater's available group



You can perform deletion operation on the "Available Group" of the repeater:

Select the group you want to delete under time slot 1 or time slot 2, and click "Delete" button at the top-right corner. Click "Confirm" on the pop-up page to delete the group, otherwise click "Cancel".

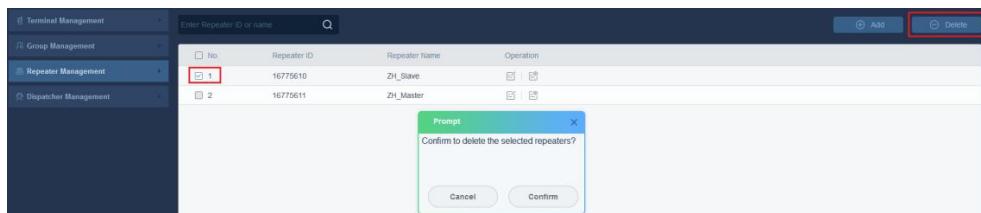
Figure 3-37 Delete available group from repeater



3.3.4. Delete Repeater

Select the repeater you want to delete, select the checkbox in front, and click "Delete" button at the top-right corner. Click "Confirm" on the pop-up page to delete the repeater, otherwise click "Cancel".

Figure 3-38 Delete repeater



3.3.5. Search Repeater

Enter the ID or name of the repeater to search. Fuzzy search is supported.

Figure 3-39 Search repeater



The search results are displayed based on search criteria:

Figure 3-40 Search results containg "701"

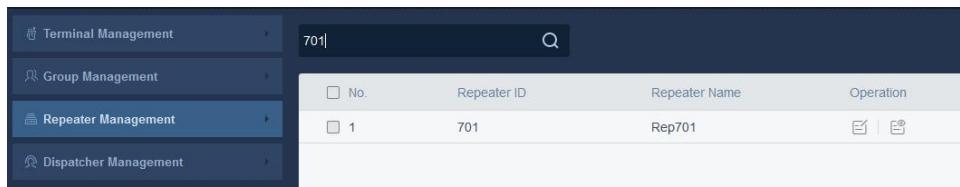
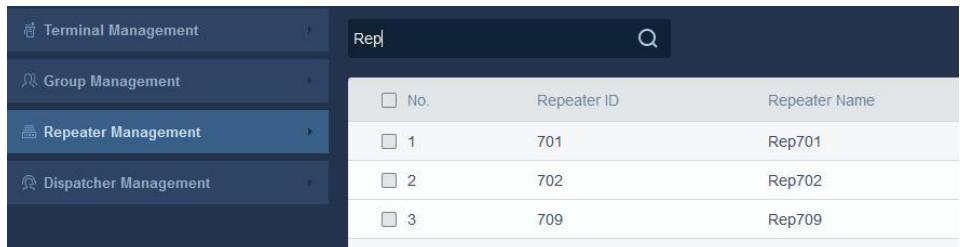


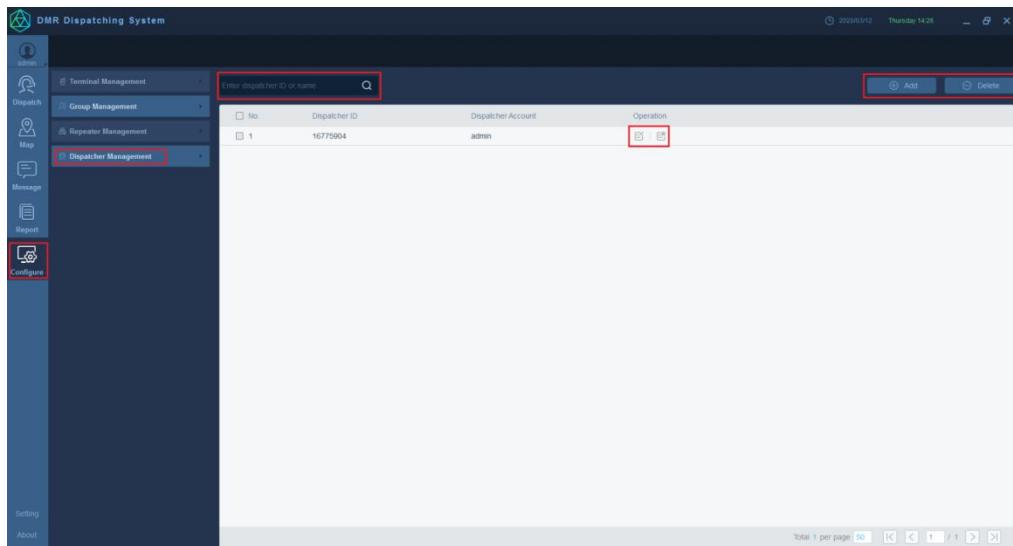
Figure 3-41 Search results containg "Rep"



3.4. Dispatcher Management

"Dispatcher Management" contains 5 functions: add dispatcher, view dispatcher, edit dispatcher, delete dispatcher, search dispatcher ID / name.

Figure 3-42 Dispatcher management interface



3.4.1. Add Dispatcher

The dispatcher ID range is [16775904,16776159]. The newly added dispatcher ID is not allowed to be duplicated with existed dispatcher ID. The dispatcher account cannot exceed 16 characters, which can contain the following characters: (0-9, a-z, A-Z, _, Chinese characters), and the name is not allowed to be empty. The dispatcher password can contain the following characters: (0-9, a-z, A-Z, ~!@#\$%^*).

Figure 3-43 Add dispatcher basic information

Add Dispatcher

Basic Information Available Repeater

Dispatcher ID:	Input number(16775904-16776159)	*
Dispatcher Account:	Input characters(0-9、a-z、A-Z、_)	*
PassWord:	Input characters(0-9、a-z、A-Z、~!@#\$%^*)	*
Confirm PassWord:	Input characters(0-9、a-z、A-Z、~!@#\$%^*)	*

Save

After entering parameters of the new dispatcher, click "Save".

Select "Add Available Repeater" on "Available Repeater" page, to add available repeater, and click "Save". Now the dispatcher can perform PTT, positioning, and other dispatching services on the groups and users under the repeater.

Figure 3-44 Add dispatcher with available repeater

Add Dispatcher

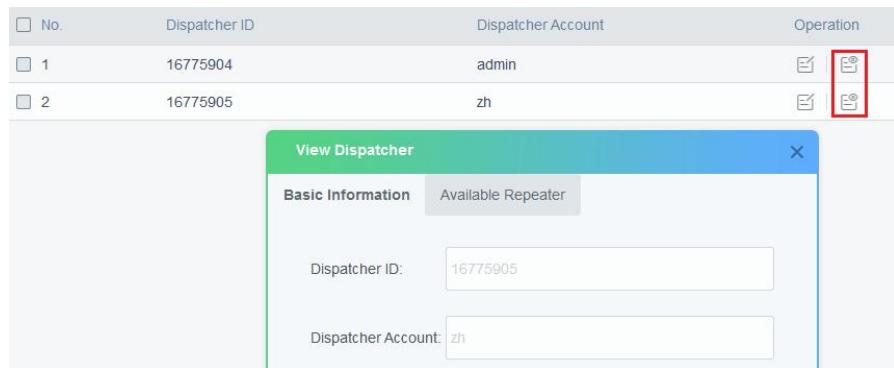
Basic Information Available Repeater

No.	Repeater ID	Repeater Name
1	16775610	ZH_Slave
2	16775611	ZH_Master

3.4.2. View Dispatcher

After adding the dispatcher successfully, you can click  to view the information of the dispatcher.

Figure 3-45 View Dispatcher

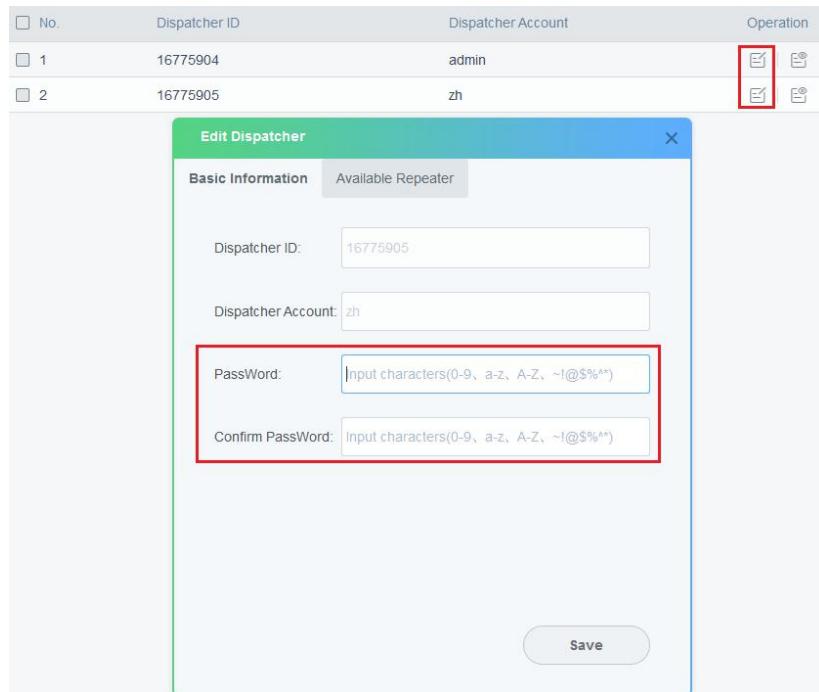


The screenshot shows a table titled 'Dispatcher' with columns: No., Dispatcher ID, Dispatcher Account, and Operation. There are two entries: Row 1 (No. 1) has Dispatcher ID 16775904 and Account admin; Row 2 (No. 2) has Dispatcher ID 16775905 and Account zh. The 'Operation' column contains icons for edit, view, and delete. A modal window titled 'View Dispatcher' is open over the table, showing tabs for 'Basic Information' and 'Available Repeater'. The 'Basic Information' tab is selected, displaying the Dispatcher ID (16775905) and Dispatcher Account (zh).

3.4.3. Edit Dispatcher

You can click  to edit the password of the dispatcher.

Figure 3-46 Edit dispatcher basic information



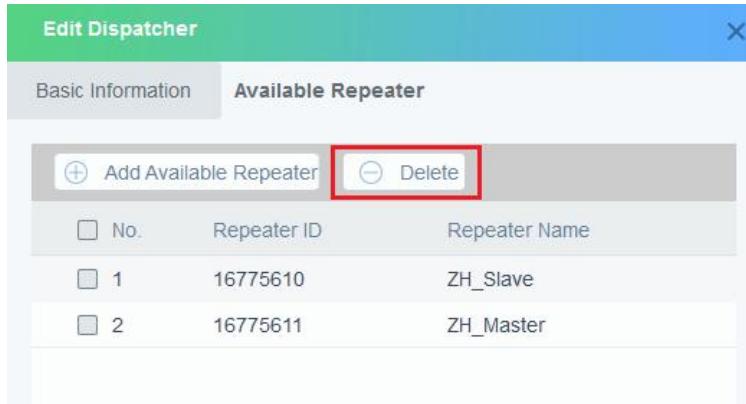
The screenshot shows a table titled 'Dispatcher' with columns: No., Dispatcher ID, Dispatcher Account, and Operation. There are two entries: Row 1 (No. 1) has Dispatcher ID 16775904 and Account admin; Row 2 (No. 2) has Dispatcher ID 16775905 and Account zh. The 'Operation' column contains icons for edit, view, and delete. A modal window titled 'Edit Dispatcher' is open over the table, showing tabs for 'Basic Information' and 'Available Repeater'. The 'Basic Information' tab is selected, displaying the Dispatcher ID (16775905) and Dispatcher Account (zh). Below these fields are two input fields: 'PassWord:' and 'Confirm PassWord:', both with placeholder text 'Input characters(0-9, a-z, A-Z, ~!@#\$%^*)'. A red box highlights these two input fields. At the bottom right of the modal is a 'Save' button.

You can also edit the "Available Repeater" of the dispatcher.

You can perform deletion operation on the "Available Repeater" of the dispatcher:

Select the repeater you want to delete, and click "Delete" button. Click "Confirm" on the pop-up page to delete the repeater, otherwise click "Cancel".

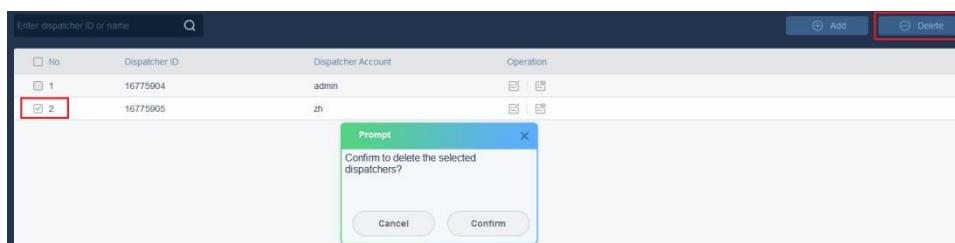
Figure 3-47 Delete dispatcher's available repeater



3.4.4. Delete Dispatcher

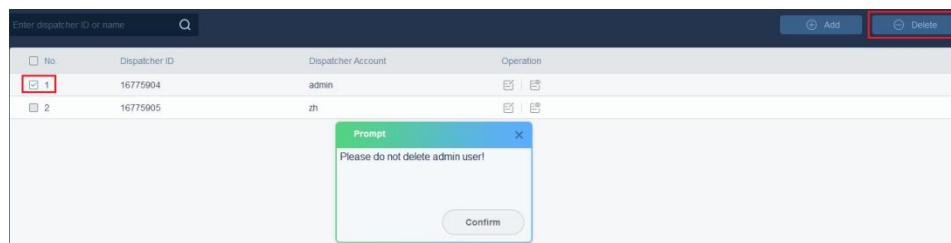
Select the dispatcher you want to delete, select the checkbox in front, and click "Delete" button at the top-right corner. Click "Confirm" on the pop-up page to delete the dispatcher, otherwise click "Cancel".

Figure 3-48 Delete dispatcher



Note: Dispatcher account "admin" cannot be deleted.

Figure 3-49 Delete "admin" failure prompt



3.4.5. Search Dispatcher

Enter the ID or name of the dispatcher to search. Fuzzy search is supported.

Figure 3-50 Search dispatcher



The search results are displayed based on search criteria:

Figure 3-51 Search results containg "admin"

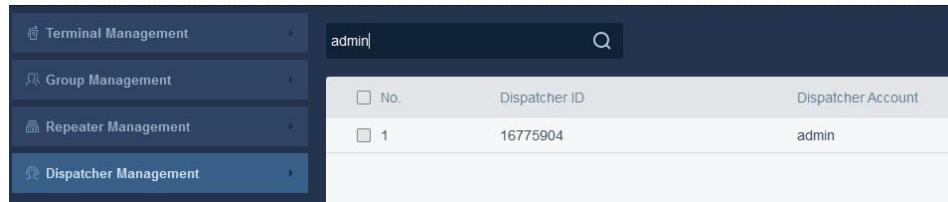
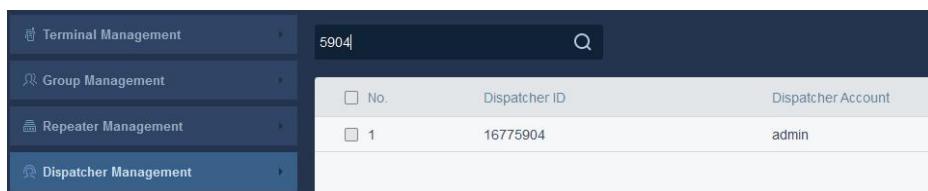


Figure 3-52 Search results containing "5904"



4. Dispatch

The "Dispatch" module provides you with various voice dispatching services such as private call, group call, all call, and dispatcher interworking. The system automatically records the call content during a call, you can check the call log in the "Report" module and replay it.

4.1. Interface Introduction

The main function of dispatch is displayed on the interface, which is convenient for you to use. The main dispatching interface and interface elements are shown as follows.

Figure 4-1 Dispatch management interface

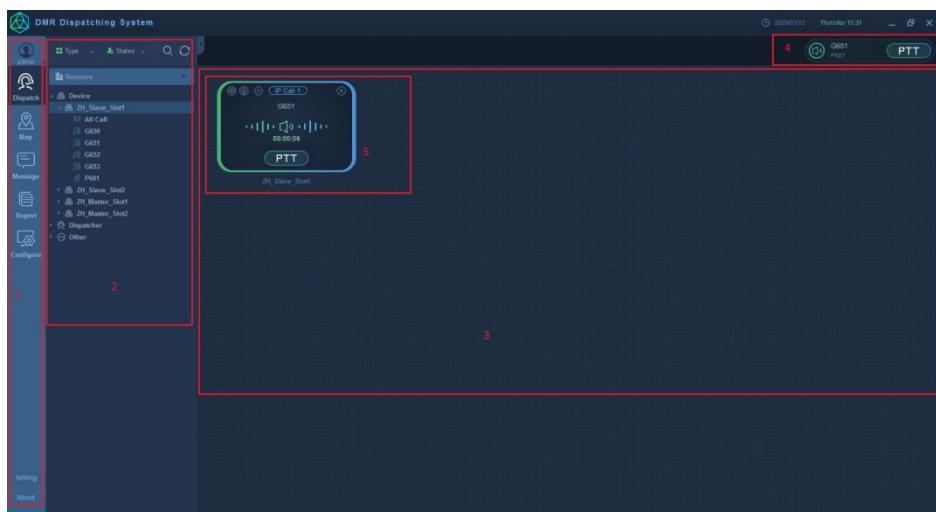


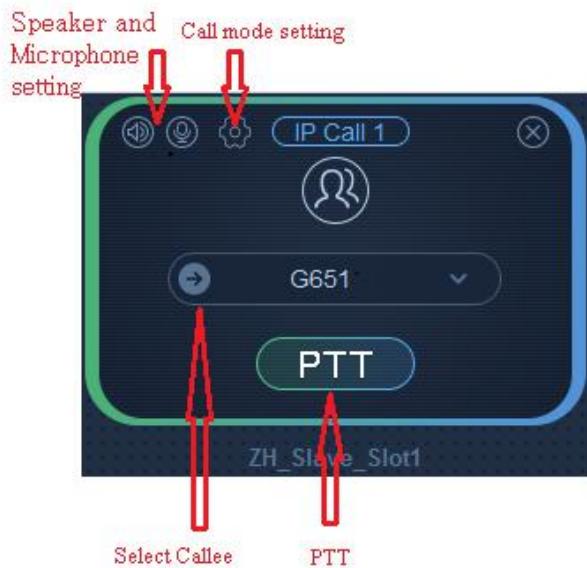
Table 4-1 "Dispatch" interface explanation

No.	Name	No.	Name
1	Main Menu	4	Call Bar
2	Resource List	5	Call Panel
3	Dispatch Area		

4.1.1. Call Panel

The call panel helps you make call and apply for speaking rights.

Figure 4-2 Call panel interface



4.1.2. Resource List

The "Resource" list covers all the resources you can access currently. The list contains the following elements:

Figure 4-3 "Resource" list interface



Table 4-2 "Resource" list interface explanation

No.	Name	No.	Name
1	Search	5	States Filter
2	Refresh	6	Device List
3	Show details	7	Dispatcher List
4	Type Filter	8	Other List

4.1.3. Voice Control

The sound control is located in the upper left corner of the call panel, and you can set the call to mute state.

 Speaker normal mode

 Microphone normal mode

 Speaker mute mode

 Microphone mute mode

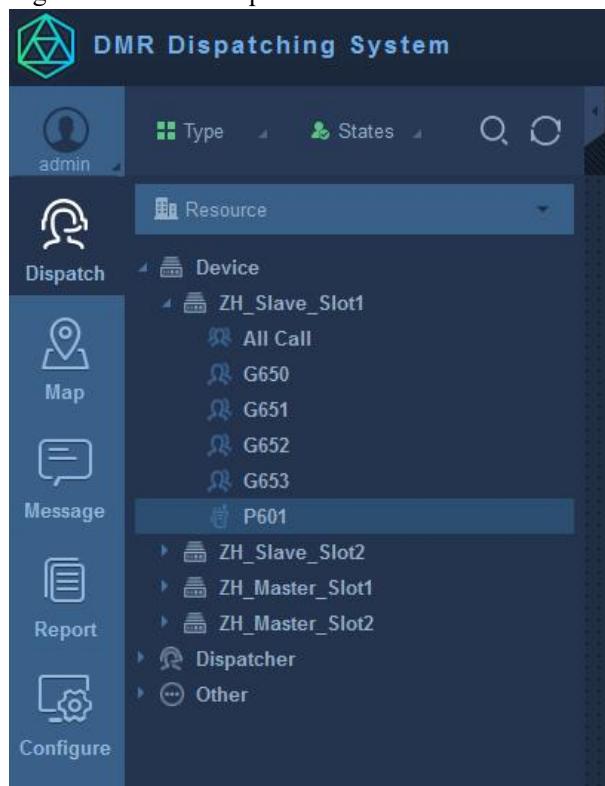
4.2. Add to Dispatch Area

You can add task groups such as dispatching terminals to your dispatch area, which will lead to quick management and dispatch.

Take dispatching terminal as an example, the operation is as follows:

Step 1 Click "Dispatch", and select "Devices" under "Resources" on the left, as shown in the following figure.

Figure 4-4 Add to dispatch area - 1



Step 2 Right-click the dispatching terminal, select "Add to Dispatch Area" to add the corresponding terminal to the dispatch area.

Figure 4-5 Add to dispatch area - 2

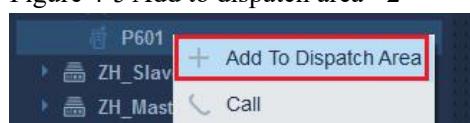
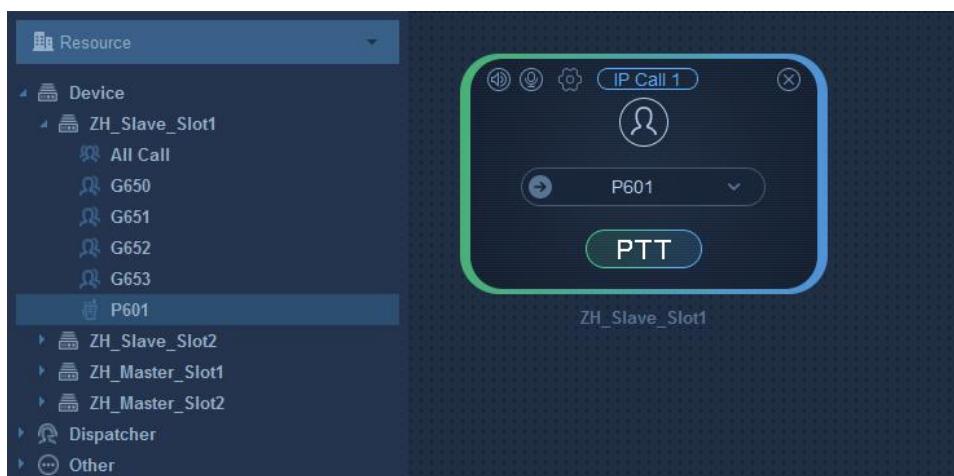


Figure 4-6 Add to dispatch area - 3



If the device icon is in gray (not highlighted), such as , it indicates that the current device should be offline.

Figure 4-7 Device offline



4.3. Online Check

You can check if a radio is online and prepare for dispatching.

The method of Online Check is as follows:

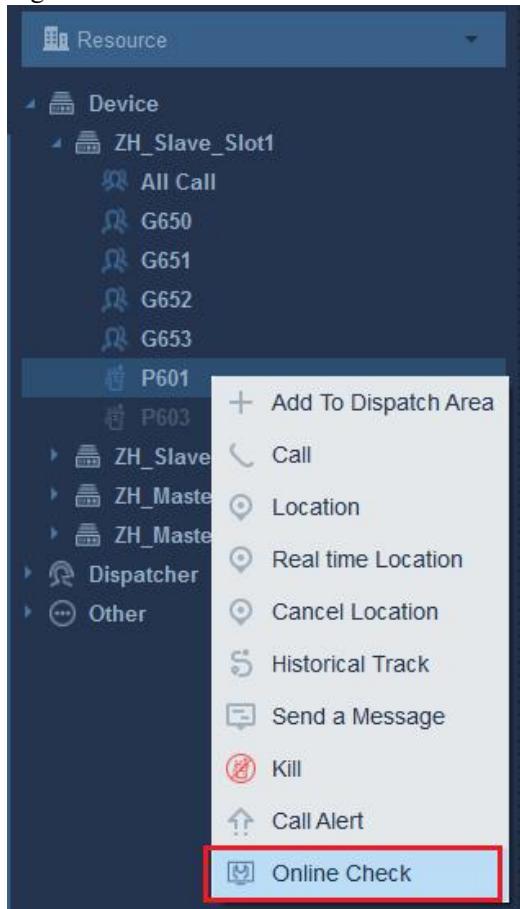
Step 1 Click "Dispatch", select "Devices" under "Resources" on the left, as shown in the following figure.

Figure 4-8 Device online check - 1



Step 2 Right-click the dispatching terminal, select "Online Check", and the detection result will be shown in a pop-up page.

Figure 4-9 Device online check - 2



4.4. Digital Call

A digital call is a call made over digital channel.

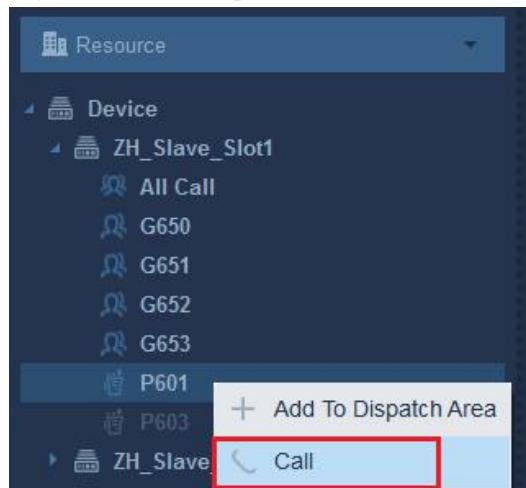
4.4.1. Initiate Private Call

You can initiate a private call to an individual radio. The method for initiating a private call is as follows:

- **Method one**

Search or directly select the radio in the "Device" list. Right-click the radio and select "Call" to initiate a private call.

Figure 4-10 Initiate private call via resource list



- **Method two**

In the call panel, click the list to select the radio, and click "PTT" button to initiate a private call.

Figure 4-11 Initiate private call via call panel



4.4.2. Answer Private Call

The system automatically answers the private call, and the call bar prompts that there is a private call in process.

If you need to speak during a private call, there are two scenarios:

1. If you are in non-dispatching interface currently, when the other party releases PTT button and finishes speaking, you can click "PTT" button on the call bar to speak;
2. If you are in dispatching interface currently, when the other party releases PTT button and finishes speaking, you can click "PTT" button in the call panel to speak.

Figure 4-12 Call bar status when receiving private call

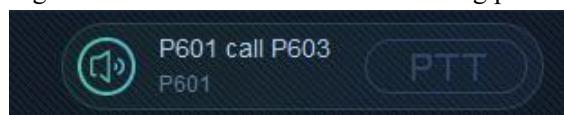
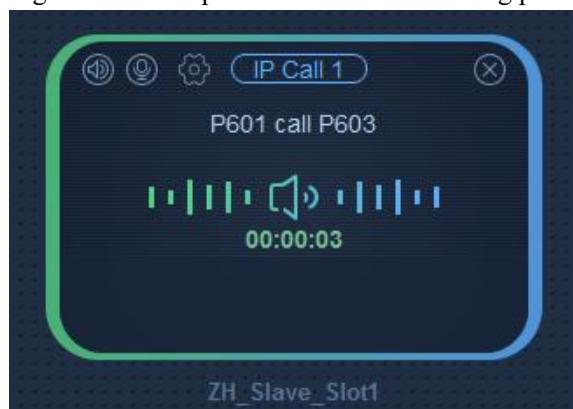


Figure 4-13 Call panel status when receiving private call



During the call, when both parties are not pressing "PTT" button, the call panel displays "Call on Hold" status..

Figure 4-14 Call panel status when call is on hold



If both parties have not pressed "PTT" button to speak during the call hold time, the call ends automatically.

Figure 4-15 Call panel status when there is no call



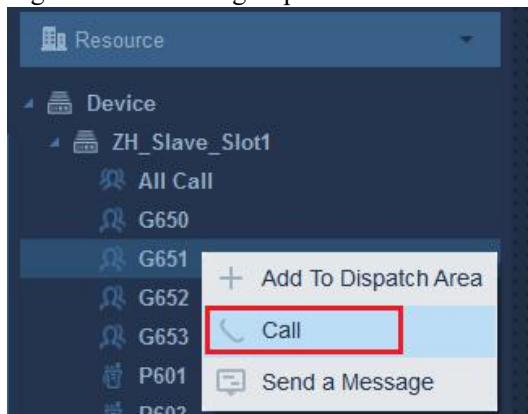
4.4.3. Initiate Group Call

You can initiate a group call to a selected group. The method for initiating a group call is as follows:

- **Method one**

Search or directly select the group in the "Device" list. Right-click the group and select "Call" to initiate a group call.

Figure 4-16 Initiate group call via resource list



- **Method two**

In the call panel, click the list to select the group, and click "PTT" button to initiate a group call.

Figure 4-17 Initiate group call via call panel



Note: The groups with the same "IP Link ID" will be called at the same time, as shown in the following figure:

Figure 4-18 Group with the same "IP Link ID"



4.4.4. Answer Group Call

The system automatically answers the group call, and the call bar prompts that there is a group call in process.

If you need to speak during a group call, there are two scenarios:

1. If you are in non-dispatching interface currently, when the other party releases PTT button and finishes speaking, you can click "PTT" button on the call bar to speak;
2. If you are in dispatching interface currently, when the other party releases PTT button and finishes speaking, you can click "PTT" button in the call panel to speak.

Call bar status when answering call:

Figure 4-19 Call bar status when receiving group call



Call panel status when answering call:

Figure 4-20 Call panel status when receiving group call



During the call, when both parties are not pressing "PTT" button, the call panel displays "Call on Hold" status.

Figure 4-21 Call panel status when call is on hold



If both parties have not pressed "PTT" button to speak during the call hold time, the call ends automatically.

Figure 4-22 Call panel status when there is no call



4.4.5. Initiate All Call

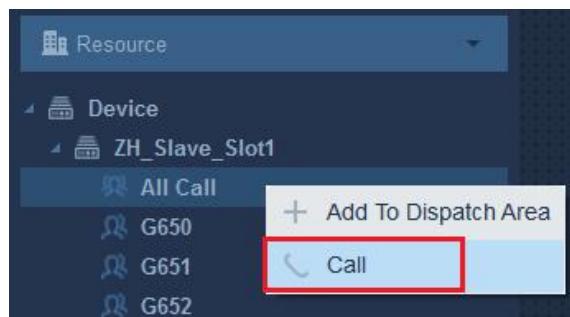
You can initiate all call to all radios under the current repeater. The system automatically records the call content. You can query the call history or replay the recording. For details, refer to "Query Call Record".

The method for initiating all call is as follows:

- **Method one**

In the device list, right-click "All Call" under the first-level device and select "Call" to initiate all call

Figure 4-23 Initiate all call via resource list



- **Method two**

In the call panel, click the list to select "All Call", and click "PTT" button to initiate a group call.

Figure 4-24 Initiate all call via call panel



Note: The groups under the same "IP Link ID" will be called at the same time, as shown in the following figure.

Figure 4-25 Group with the same "IP Link ID"



4.4.6. Answer All Call

The system automatically answers the all call, and the call bar prompts that there is all call in process.

If you need to speak during all call, there are two scenarios:

1. If you are in non-dispatching interface currently, when the other party releases PTT button and finishes speaking, you can click "PTT" button on the call bar to speak;
2. If you are in dispatching interface currently, when the other party releases PTT button and finishes speaking, you can click "PTT" button in the call panel to speak.

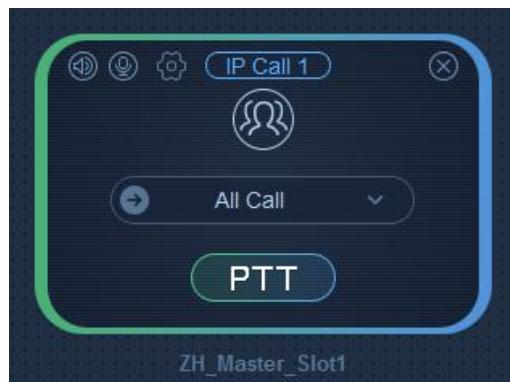
Figure 4-26 Call bar status when receiving all call



Figure 4-27 Call panel status when receiving all call



Figure 4-28 Call panel status when there is no call



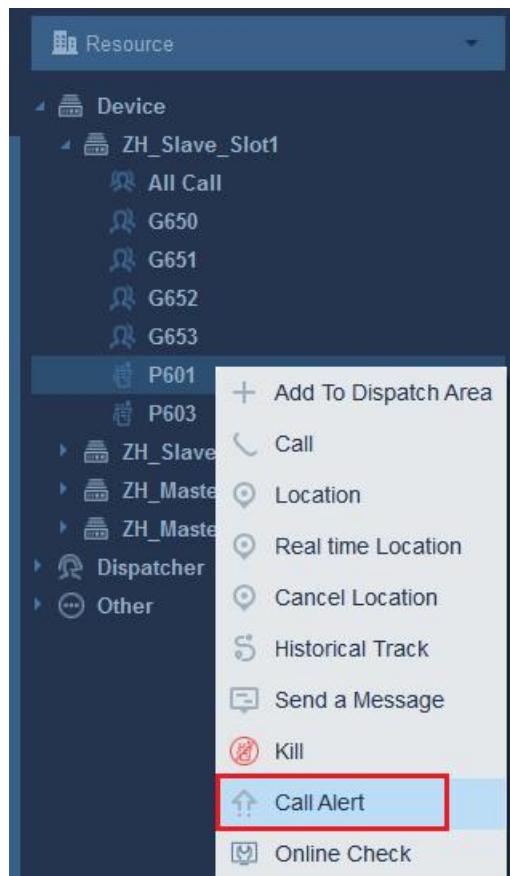
4.5. Initiate Call Alert

If you are currently unable to call or contact the radio, you can initiate Call Alert. The radio user will call back to the dispatcher after sees the alert message.

The method for initiating Call Alert is shown as follows:

Search or directly select the radio user. Right-click the radio user and select "Call Alert" to initiate Call Alert. After receiving the Call Alert, the radio pops up a message, and simultaneously makes four "beep" sounds.

Figure 4-29 Initiate call alert



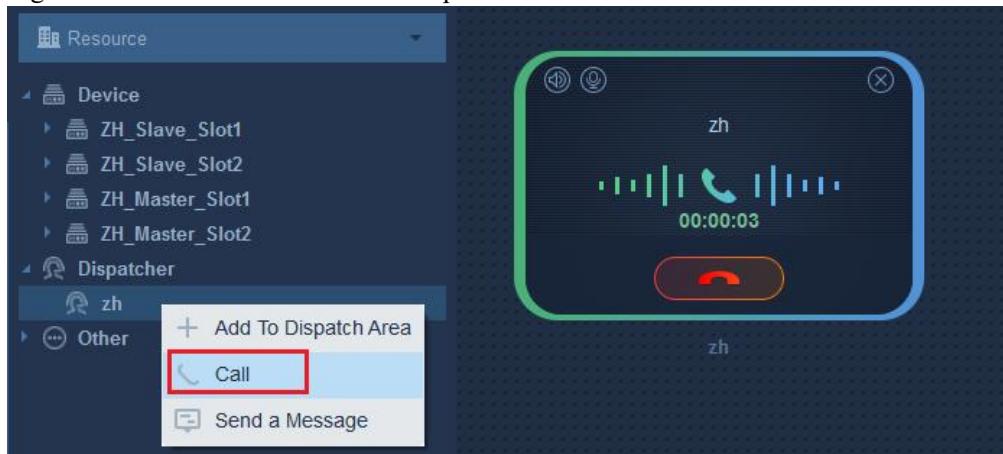
4.6. Intercommunication of Dispatchers

One dispatcher can talk to other dispatchers.

The dispatchers' intercommunication method is shown as follows:

In the "Resource" -> "Dispatcher" list, right-click the dispatcher and select "Call" to initiate a call.

Figure 4-30 Intercommunication of dispatchers



4.7. Kill / Revive Terminal

Legal terminals are terminals added to the dispatching list through "Terminal Management".

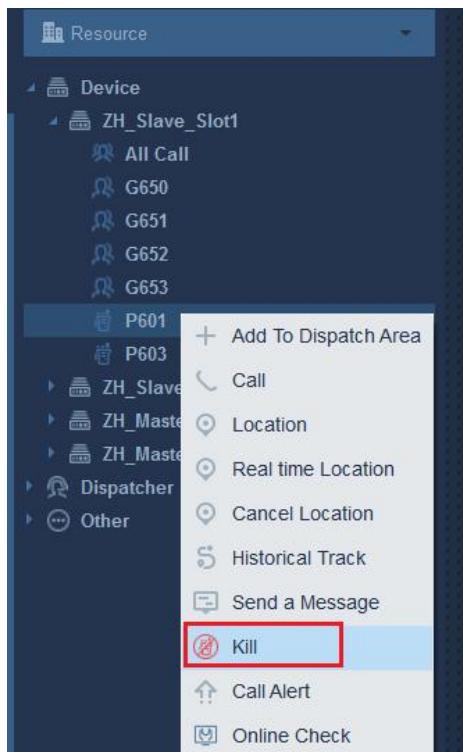
To ensure communication security, you can use the "Kill" function after the radio is lost or lost contact. The "killed" terminal cannot make call or send / receive short message temporarily. However, you can locate the "killed" terminal to learn more about the radio's movement.

The method of "Kill" / "Revive" is shown as follows:

Step 1 Find the terminal in the device list.

Step 2 Right-click the terminal and choose "Kill".

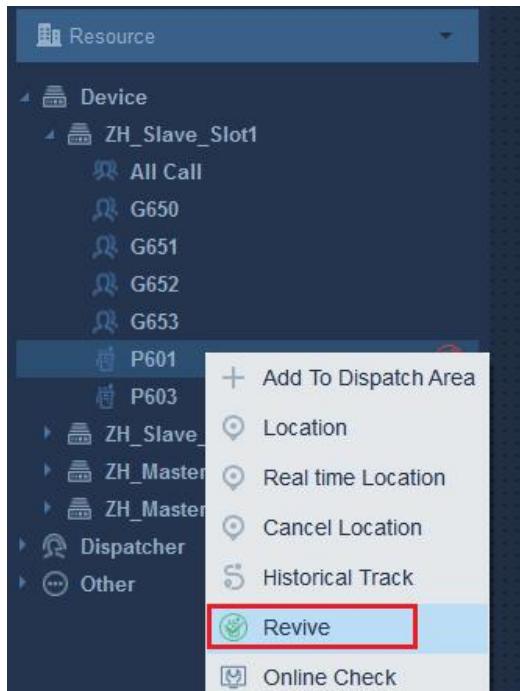
Figure 4-31 Kill terminal



Step 3 After the terminal is "killed", the terminal screen prompts "Radio Killed", and the corresponding function menu of the terminal in "Resource" list changes to "Revive".

If you confirm the communication security is restored, you can use the "Revive" function to restore the communication function of the "killed" terminal.

Figure 4-32 Revive terminal



4.8. Receive Emergency Alarm

The system automatically receives emergency alarm from radios to help dispatcher understand and deal with the alarm situation quickly.

The radio initiates an emergency alarm, and the dispatcher displays the emergency alarm and raises an alarm sound.

Figure 4-33 Receive emergency alarm



After receiving alarm, the dispatcher jumps to the map interface and the terminal is displayed in red color, as shown in the following figure.

Figure 4-34 Map display emergency alarm

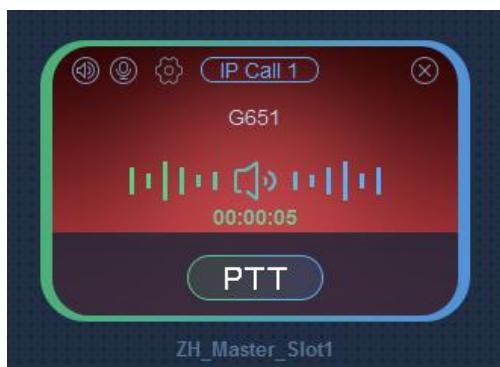


4.9. Receive Emergency Call

In case of emergency, the radio user can use the radio to initiate an emergency call. After receiving the emergency call, the call panel will turn red to give warning.

The following figure shows an emergency call is received:

Figure 4-35 Receive emergency call



5. Map

The "Map" module provides you with end-user positioning, real-time location, and other services. You can also drag, zoom in, and zoom out the map to assist visual dispatch.

5.1. Interface Introduction

The main interface of "Map" is composed of map and map toolbar. You can view radio's positioning data and other information on the map.

The "Map" interface and interface elements are shown as follows.

Figure 5-1 Map management interface

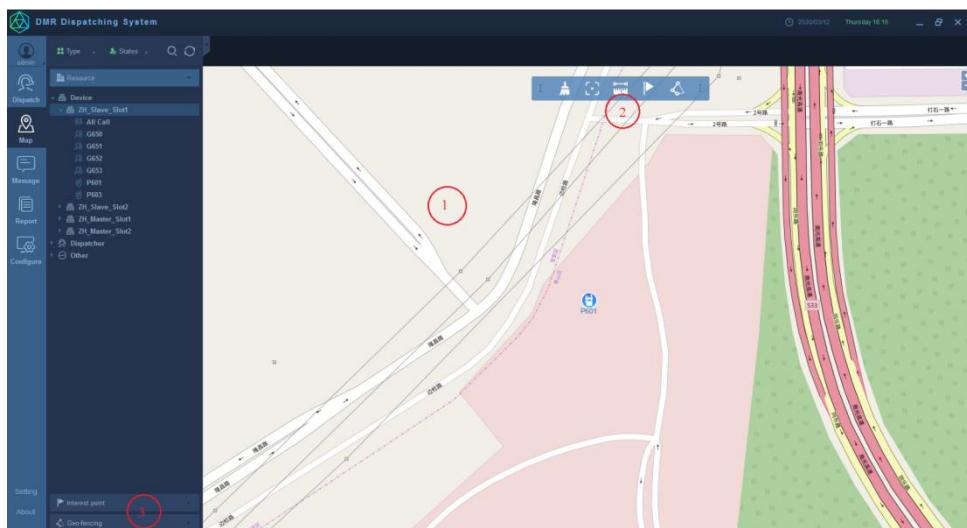


Table 5-1 Map interface explanation

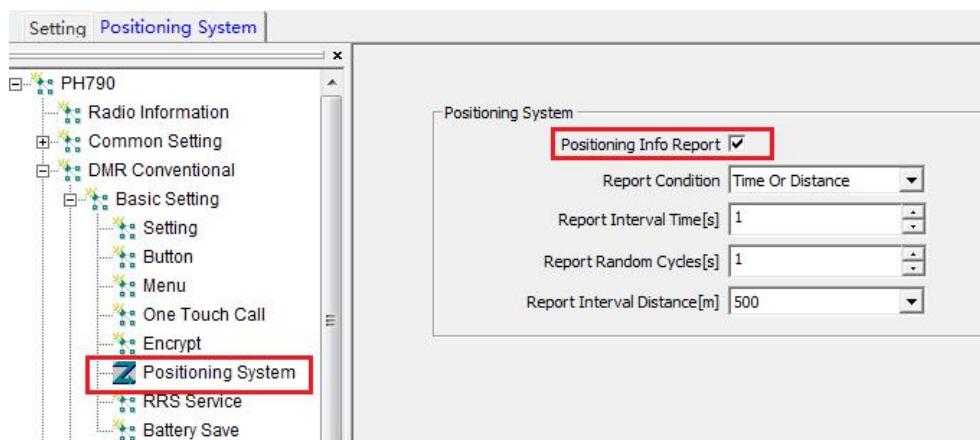
No.	Name	No.	Name
1	Map	3	Interest point & Geo-fencing
2	Map toolbar		

5.2. Positioning Radio

You can locate the radio, and the location information of the radio is displayed on the map after successful positioning. You can right-click on the radio icon and perform corresponding operations to achieve visual dispatch.

The radio must have a positioning module and the positioning function is turned on before it can be positioned.

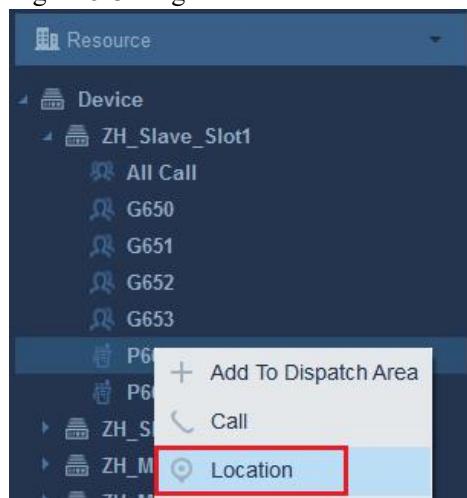
Figure 5-2 Radio positioning system setting



5.2.1. Single time Location

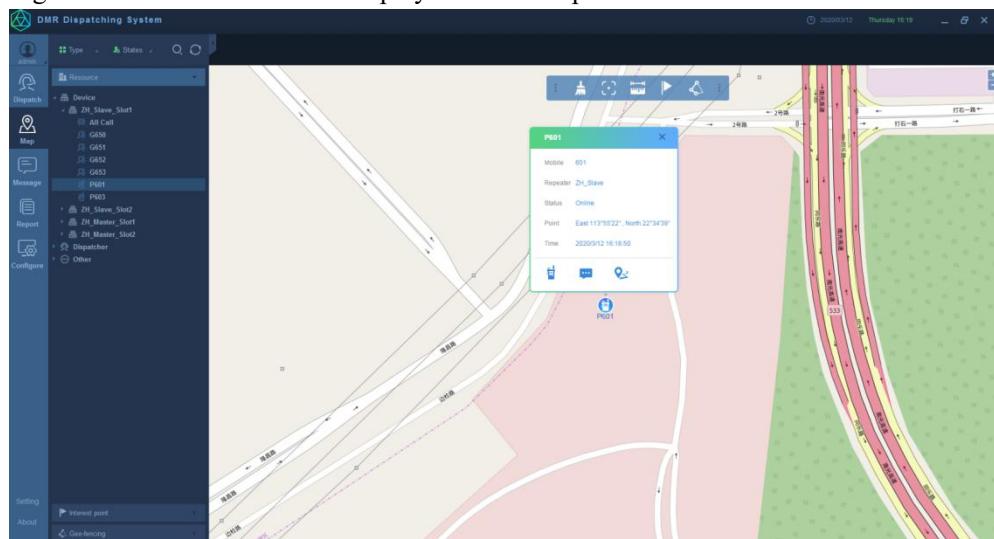
Open "Device List", right-click the radio, and select "Location".

Figure 5-3 Single time location



The current location of the radio will be displayed on the map. Zoom in the map, the radio information is displayed.

Figure 5-4 Radio information displayed on the map

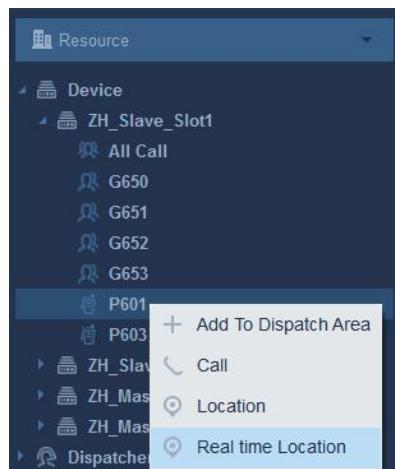


5.2.2. Real-time Location

5.2.2.1. Turn on Real-time Location

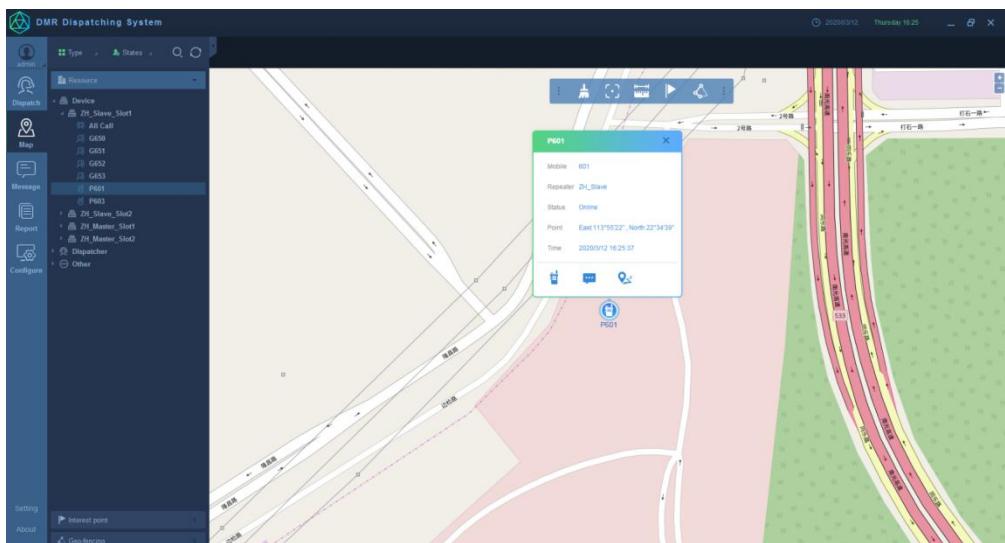
Open "Device List", right-click the radio, and select "Real time Location". Open the device list, right-click the terminal, and select "Cancel Location" to cancel the "Real time Location" of the terminal.

Figure 5-5 Turn on real-time location



The location information of the terminal is periodically refreshed and highlighted on the map.

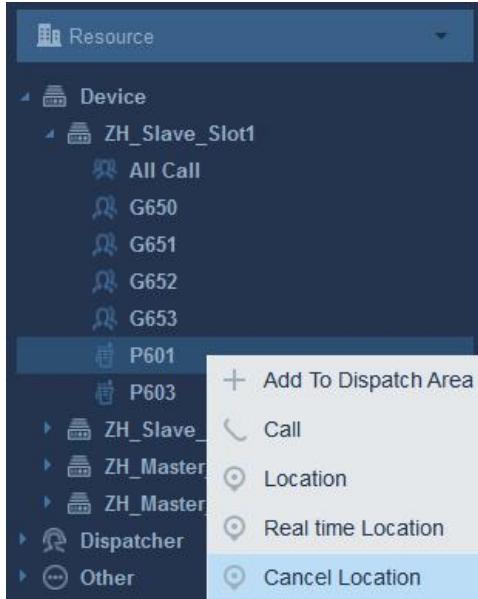
Figure 5-6 Radio information displayed on the map



5.2.2.2. Turn off Real-time Location

Open "Device List", right-click the radio, and select "Cancel Location" to cancel the Real-time Location of the radio.

Figure 5-7 Turn off real-time location



5.3. Use Map Toolbar

You can use the map toolbar to assist you to perform visual dispatch operation.

Figure 5-8 Map toolbar



Click to move the map toolbar.

Table 5-2 Map toolbar explanation

Button	Explanation	Remarks
	Map ranging	Measure distance on the map
	Removal tool	Clear all markers on the map
	Focus on target	Center display the location point on the map
	Geo-fencing	Add Geo-fencing
	Interest point	Add Interest point

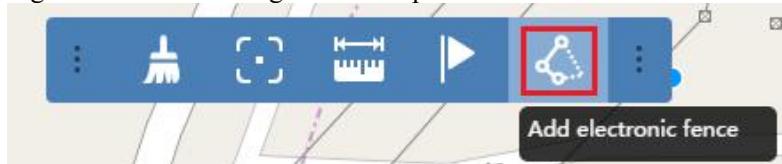
5.4. Geo-fencing

The Geo-fencing means that when the radio leaves the designated fence region, a fencing alarm will be triggered.

5.4.1. Add Geo-fencing Task

Step 1 Click "Geo-fencing" on the map toolbar to open the e-fence setting interface.

Figure 5-9 "Geo-fencing" on the map toolbar



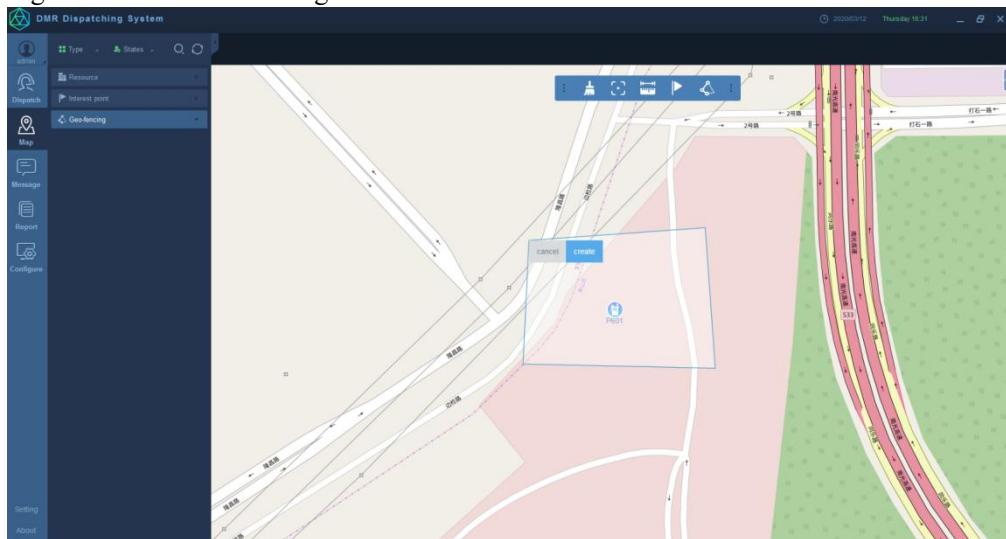
Step 2 Draw the designated region on the map.

Figure 5-10 Draw the designated region for Geo-fencing



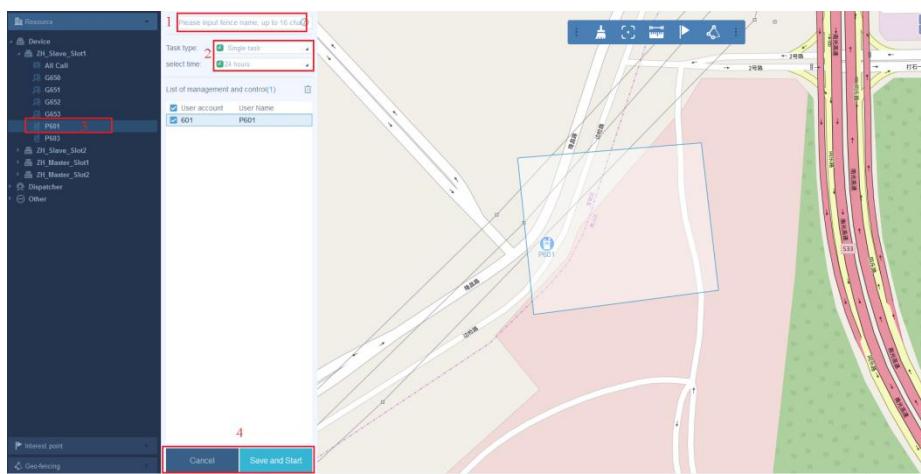
Step 3 After drawing the fence region, double-click the mouse to finish, and click "Create".

Figure 5-11 Create fence region



Step 4 Enter the "Fence name", "Task type", "Select Time", and "List of management and control", and click "Save and Start".

Figure 5-12 Create fence task

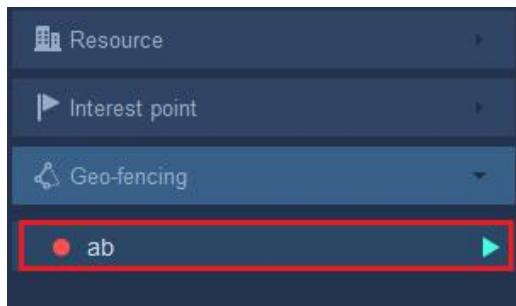


1: Enter the name of the Geo-fencing; 2: Select the "Task Type" and "Select Time"; 3: Double-click the radio number to be controlled ; 4: Click "Save and Start".

5.4.2. Geo-fencing Alarm

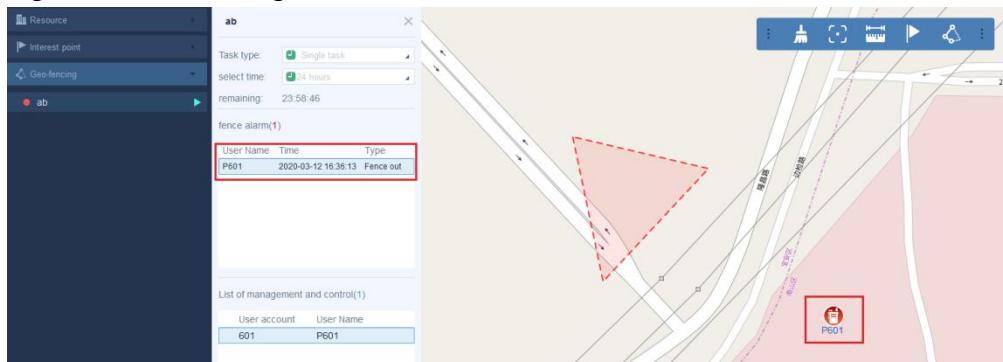
After the task starts, when the controlled radio exceeds the fenced region, a corresponding Geo-fencing alarm will be raised, and the radio outside the fence region will be displayed in red.

Figure 5-13 Geo-fencing alarm



Double-click on the corresponding Geo-fencing to view details.

Figure 5-14 Geo-fencing alarm detail



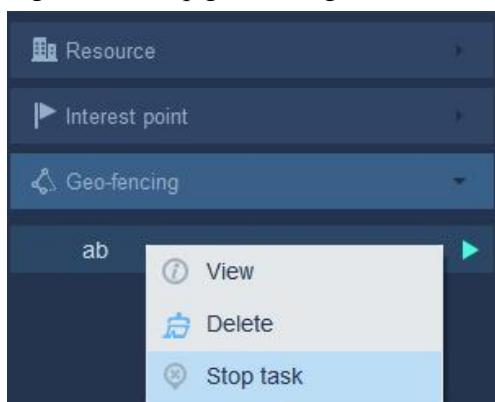
5.4.3. Stop Geo-fencing Task

After stopping the task, you can suspend the control of the current user.

- **Method one**

Right-click on the existing Geo-fencing and select "Stop Task".

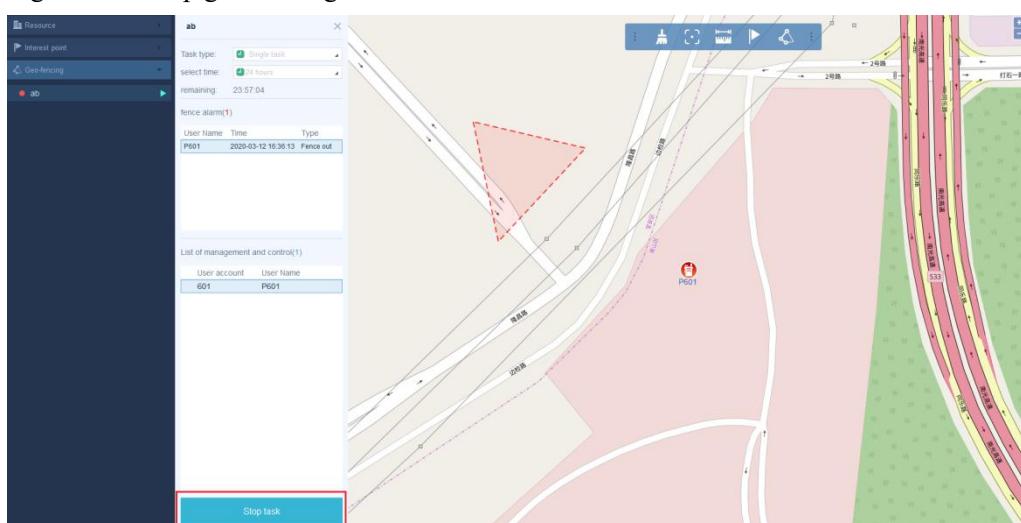
Figure 5-15 Stop geo-fencing task - 1



- **Method two**

Double-click on the existing Geo-fencing to view specific information of the fence, and select "Stop Task".

Figure 5-16 Stop geo-fencing task - 2



After the task stops, the menu changes to "Start Task", you can click on "Start Task" button again to restart the task:

Figure 5-17 Resource list menu changes after geo-fencing stops

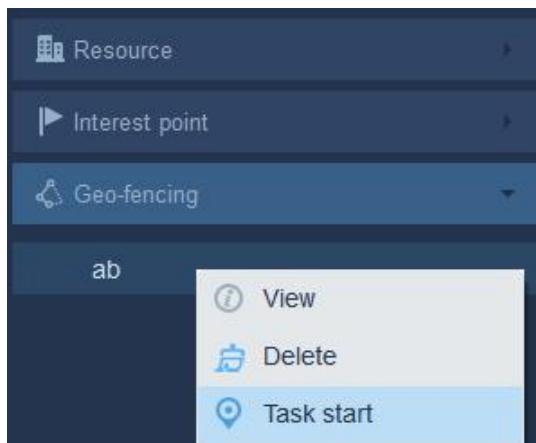
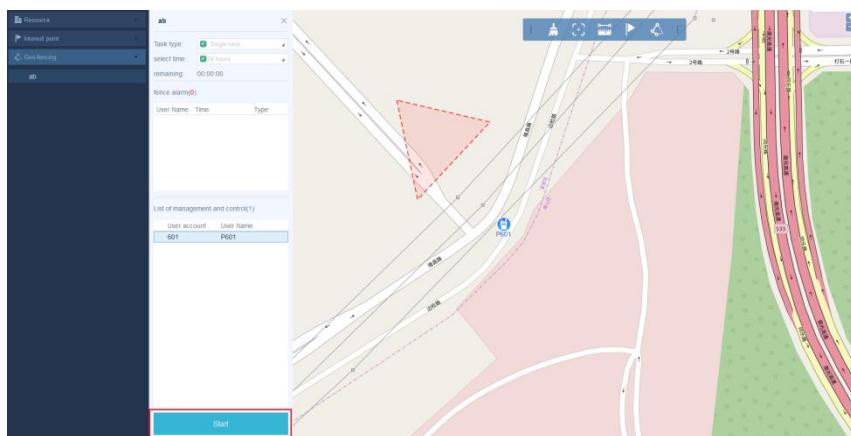


Figure 5-18 Start geo-fencing task

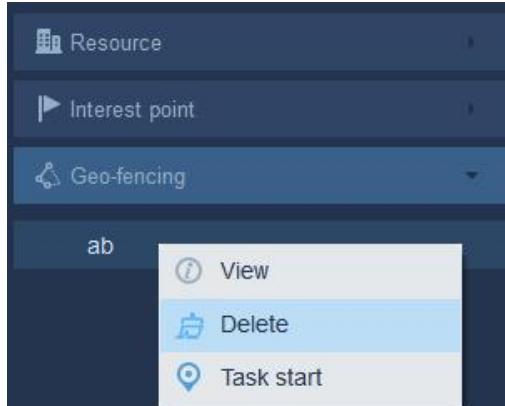


5.4.4. Delete Geo-fencing Task

Find the Geo-fencing you want to delete in the resource list, right-click and select "Delete".

The Geo-fencing is deleted.

Figure 5-19 Delete geo-fencing task



5.5. Interest Point

The main purpose of "Interest Point" is to mark the place of interest. Click on the Interest point to quickly locate the marked place.

5.5.1. Add Interest Point

Step 1 Click on the map toolbar .

Figure 5-20 "Interest Point" on the map toolbar



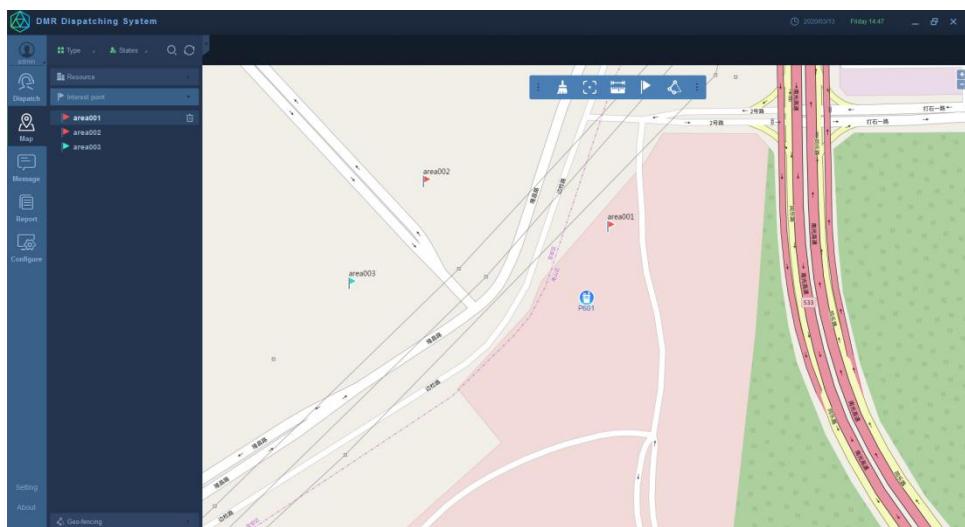
Step 2 Find the location needed to be marked on the map, click it, and a dialog box will pop up, enter the "Name", select the "Icon", fill in "Info", and click "Determine".

Figure 5-21 Add interest point



Double-click an interest point under "Interest Point" on the left resource list to center it.

Figure 5-22 Interest point display on the map



5.5.2. Edit Interest Point

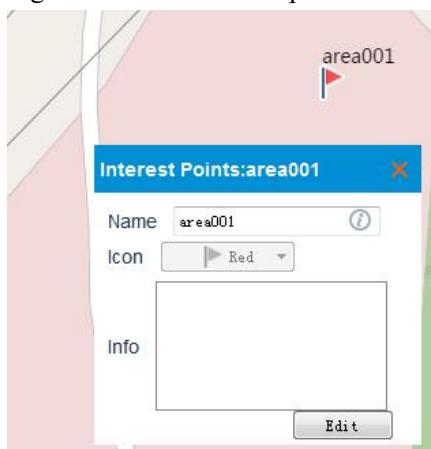
Find "Interest point" on the left resource list, double-click the point you want to modify, and click "Edit" to modify the "Name" and "Description" of the Interest point.

Figure 5-23 Edit interest point - 1



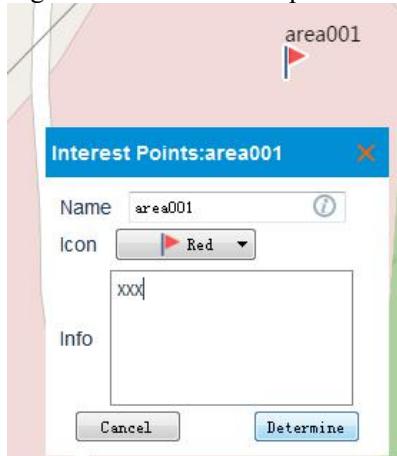
After double-clicking, the following page pops up:

Figure 5-24 Edit interest point - 2



Click "Edit" to enter the editable state, you can edit the "Name", "Icon", "Info".

Figure 5-25 Edit interest point - 3



5.5.3. Delete Interest Point

Find the entry you want to delete under "Interest point" on the left resource list, click to delete.

Figure 5-26 Delete interest point

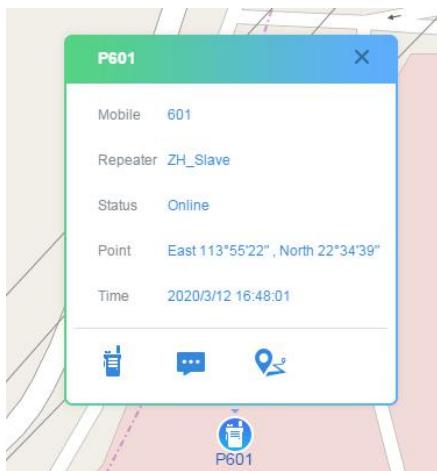


5.6. Radio Visual Dispatch

You can make call to the radio, send text message, and view historical track on the map to realize visual dispatch of the radio, to improve your work efficiency.

Left-click the radio on the map and select relevant operation in the toolbar.

Figure 5-27 Radio visual dispatch



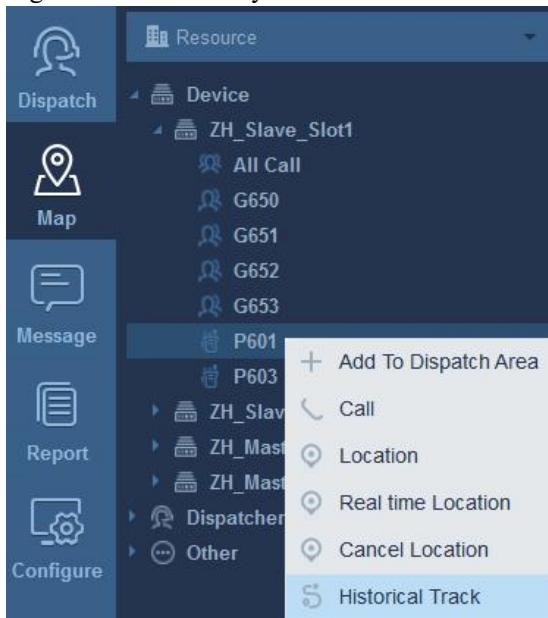
5.7. Track Playback

For users who have positioning service, the system will automatically save the user's historical location information. The dispatcher can choose to view the historical track of the user within a certain period of time.

- **Method one**

Search or directly select the radio. Right-click the radio and select "Historical Track".

Figure 5-28 Track Playback - method 1

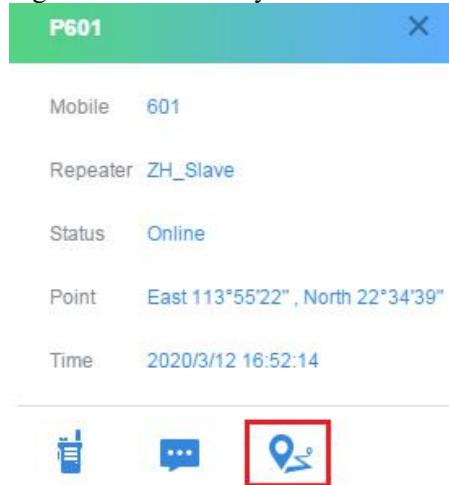


- **Method two**

On the map interface, click the terminal that needs to play the track, click on the

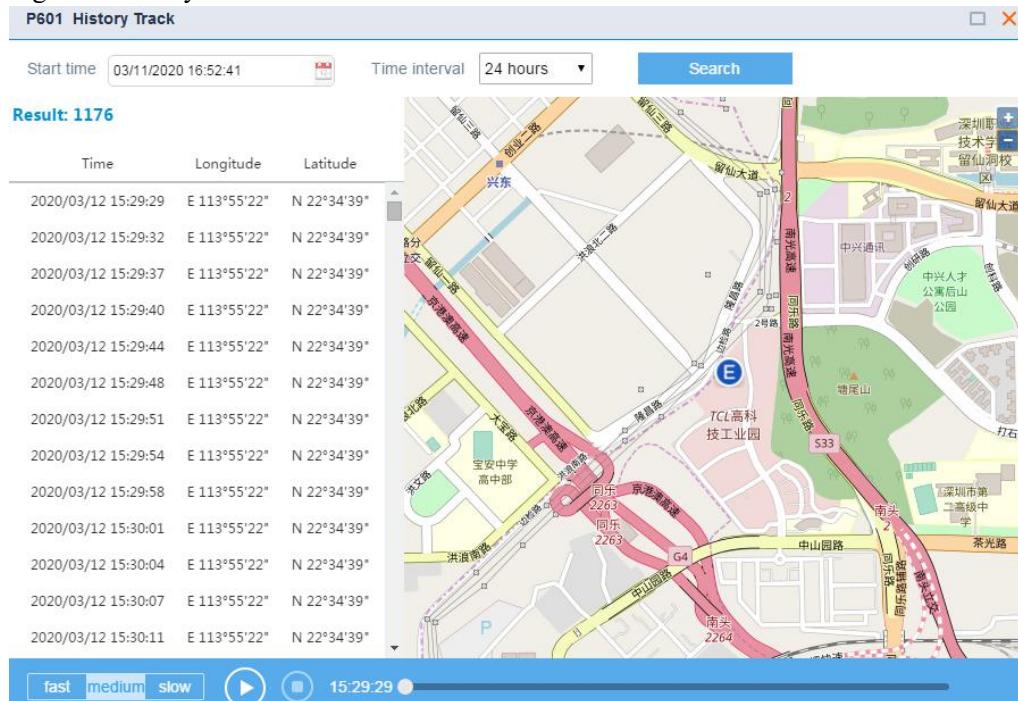
pop-up page.

Figure 5-29 Track Playback - method 2



Select the "Start time" and "Time interval" (up to 24 hours), and click "Search". The historical track points is displayed on the left. Click below to play the historical track.

Figure 5-30 Play historical track



6. Message

The "Message" module provides you with services such as sending short message to group,

sending short message to radio, receiving short message, etc. The contents of short message are displayed in a list which makes it easy to browse.

6.1. Interface Introduction

Figure 6-1 Message management interface

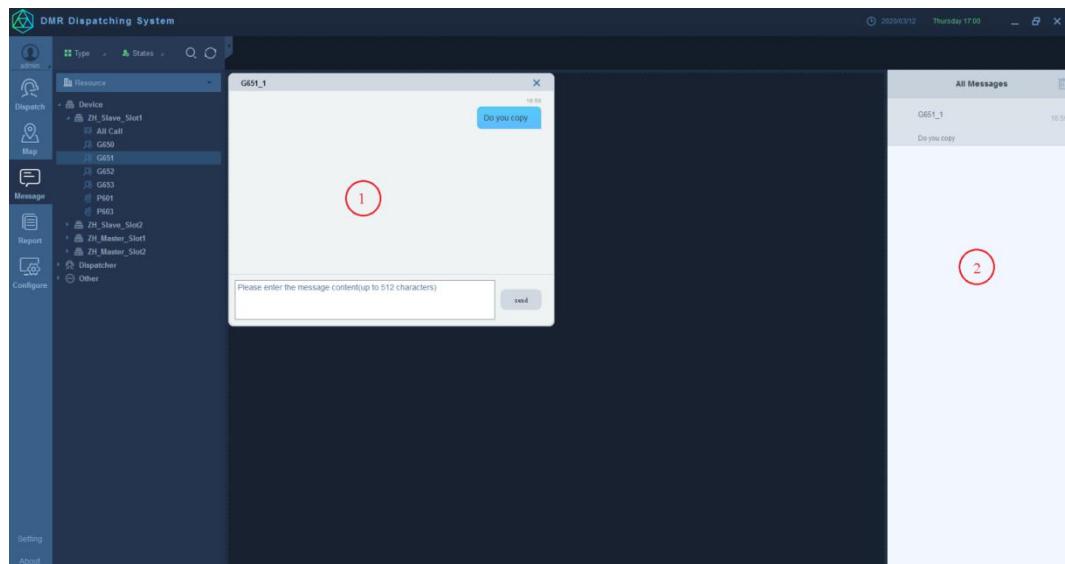


Table 6-1 Message management interface explanation

No.	Name	No.	Name
1	Message dialog box	2	Recent contact list

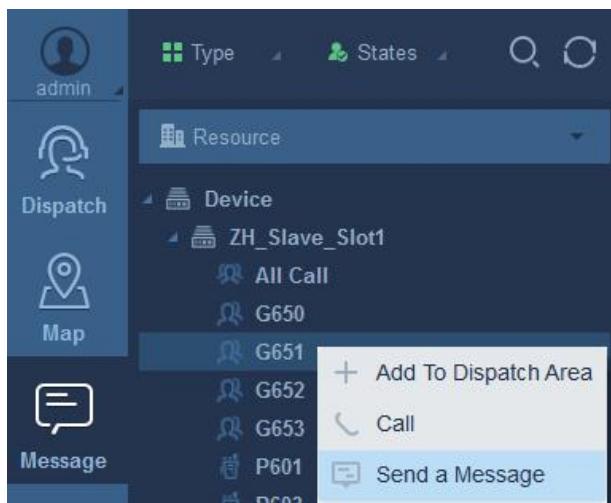
6.2. Send Message

You can send a short message to a predefined group or user.

- **Method one**

Search or directly select the group or user, right-click, and select "Send a Message".

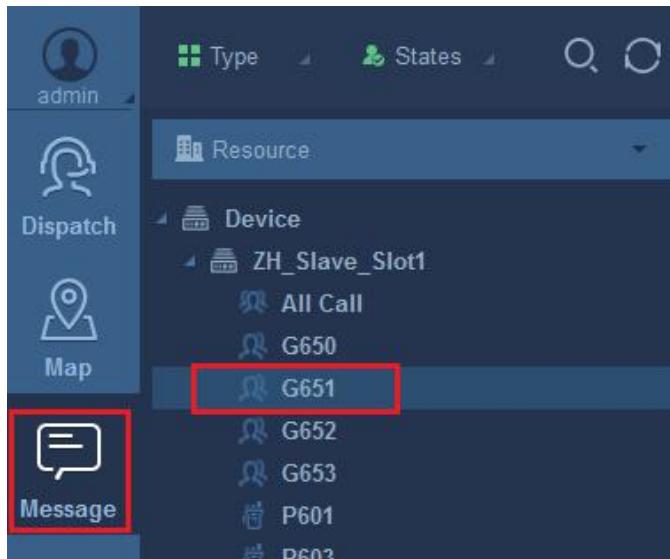
Figure 6-2 Send Message - method 1



- **Method two**

Click "Message" main menu, search or directly select a group or user, and double-click the group or user to send a short message.

Figure 6-3 Send Message - method 2



6.3. Receive Message

When dispatcher receives a short message, the "Message" main menu will be displayed with a small orange dot to indicate that there is a new short message.

Figure 6-4 Receive new message



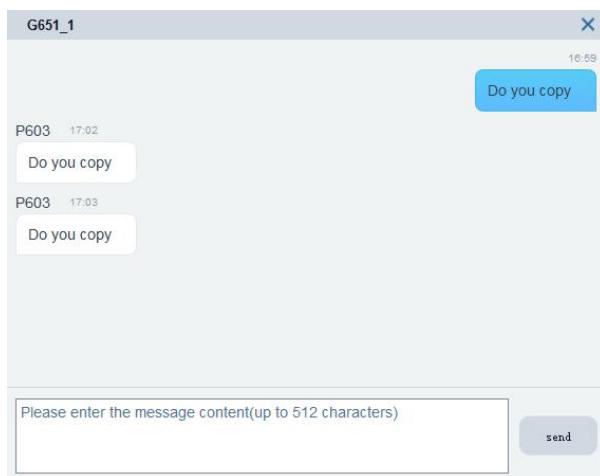
After clicking "Message" main menu, the contact with new short message will be highlighted in the contact list.

Figure 6-5 New message in contact list



Click on a contact, it will display the details of the short message.

Figure 6-6 Message dialog box detail



7. Report

The dispatching system provides you with 5 kind of reports, each one supports export function, which can export data to an Excel file:

- Call history report
- Online record report
- Short message report
- Geo-fencing report
- Emergency alarm report

7.1. Interface Introduction

You can query different records at the main interface of "Report".

The "Report" interface and interface elements are shown as follows.

Figure 7-1 Report management interface

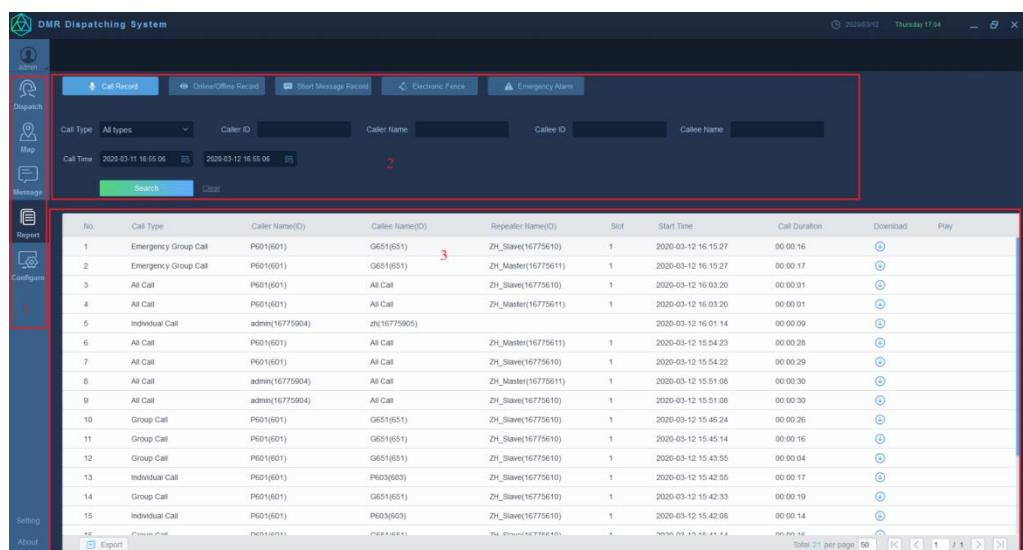


Table 7-1 Report management interface explanation

No.	Name	No.	Name
1	Main menu	3	Query result list
2	Query condition input		

7.2. Query Call Record

The system supports querying call history record and downloading voice recording playback.

After a call finishes, you can first query the call record, then download and replay the voice recording.

Step 1 Click "Report" in the main menu, select "Call Record", enter query parameters (support fuzzy query), "Call Time" is mandatory, and other parameters are optional as required.

Figure 7-2 Query call record



Step 2 Click "Search". The query is successful, and the corresponding records are displayed in the list below.

Figure 7-3 Call record display

No.	Call Type	Caller Name(ID)	Callee Name(ID)	Repeater Name(ID)	Slot	Start Time	Call Duration	Download	Play
1	Emergency Group Call	P601(601)	G651(651)	ZH_Slave(16775610)	1	2020-03-12 16:15:27	00:00:16		
2	Emergency Group Call	P601(601)	G651(651)	ZH_Master(16775611)	1	2020-03-12 16:15:27	00:00:17		
3	All Call	P601(601)	All Call	ZH_Slave(16775610)	1	2020-03-12 16:03:20	00:00:01		
4	All Call	P601(601)	All Call	ZH_Master(16775611)	1	2020-03-12 16:03:20	00:00:01		
5	Individual Call	admin(16775904)	ZH(16775905)			2020-03-12 16:01:14	00:00:09		
6	All Call	P601(601)	All Call	ZH_Master(16775611)	1	2020-03-12 15:54:23	00:00:28		
7	All Call	P601(601)	All Call	ZH_Slave(16775610)	1	2020-03-12 15:54:22	00:00:29		
8	All Call	admin(16775904)	All Call	ZH_Master(16775611)	1	2020-03-12 15:51:08	00:00:30		
9	All Call	admin(16775904)	All Call	ZH_Slave(16775610)	1	2020-03-12 15:51:08	00:00:30		
10	Group Call	P601(601)	G651(651)	ZH_Slave(16775610)	1	2020-03-12 15:46:24	00:00:26		
11	Group Call	P601(601)	G651(651)	ZH_Slave(16775610)	1	2020-03-12 15:45:14	00:00:16		
12	Group Call	P601(601)	G651(651)	ZH_Slave(16775610)	1	2020-03-12 15:45:35	00:00:04		
13	Individual Call	P601(601)	G603(603)	ZH_Slave(16775610)	1	2020-03-12 15:42:55	00:00:17		
14	Group Call	P601(601)	G651(651)	ZH_Slave(16775610)	1	2020-03-12 15:42:33	00:00:19		
15	Individual Call	P601(601)	G603(603)	ZH_Slave(16775610)	1	2020-03-12 15:42:08	00:00:14		
16	Group Call	P601(601)	P601(601)	ZH_Slave(16775610)	1	2020-03-12 15:41:45	00:00:45		

7.2.1. Voice Recording Download / Replay

After the call history query is successful, click to download voice recording, and click

to replay voice recording.

Figure 7-4 Voice recording download / replay

No.	Call Type	Caller Name(ID)	Callee Name(ID)	Repeater Name(ID)	Slot	Start Time	Call Duration	Download	Play
1	Emergency Group Call	P601(601)	G651(651)	ZH_Slave(16775610)	1	2020-03-12 16:15:27	00:00:16		
2	Emergency Group Call	P601(601)	G651(651)	ZH_Master(16775611)	1	2020-03-12 16:15:27	00:00:17		

Every call recording file can be downloaded to the client locally, and the recording file can be

replayed.

The recording file path is the "audioHistory" folder in the client's root directory, such as "C:\ Program Files \ PD200 \ audioHistory".

7.3. Query Online / Offline Record

You can query the online and offline records of devices such as radios, dispatchers, and repeaters based on keywords such as "Device Type", "Device ID", "Online/Offline State", and "Search Time".

Step 1 Click "Report" in the main menu.

Step 2 Select "Online/Offline Record", enter query parameters.

Figure 7-5 Query online / offline record

Step 3 Click "Search". The query is successful, and the corresponding records are displayed in the list below.

Figure 7-6 Online / offline record display

No.	Device Type	Device ID	Repeater Name(ID)	Slot	Online/Offline State	Time
1	Dispatcher	admin(16775904)			Offline	2020-03-12 16:55:04
2	Dispatcher	admin(16775904)			Online	2020-03-12 16:55:04
3	Dispatcher	admin(16775904)			Online	2020-03-12 16:51:08
4	Dispatcher	admin(16775904)			Offline	2020-03-12 16:51:02
5	Dispatcher	admin(16775904)			Online	2020-03-12 16:49:42
6	Dispatcher	admin(16775904)			Offline	2020-03-12 16:49:27
7	Dispatcher	admin(16775904)			Offline	2020-03-12 16:47:07
8	Dispatcher	admin(16775904)			Online	2020-03-12 16:47:07
9	Dispatcher	admin(16775904)			Offline	2020-03-12 16:45:01
10	Dispatcher	admin(16775904)			Online	2020-03-12 16:45:01
11	Dispatcher	admin(16775904)			Online	2020-03-12 16:44:16
12	Dispatcher	admin(16775904)			Offline	2020-03-12 16:43:53
13	Dispatcher	admin(16775904)			Offline	2020-03-12 16:42:02
14	Dispatcher	admin(16775904)			Online	2020-03-12 16:42:02
15	Dispatcher	admin(16775904)			Offline	2020-03-12 16:42:42
<small>Total: 45 per page 50 < < 1 / 1 > > </small>						

7.4. Query Short Message

You can query short message record based on keywords such as "Content", "Caller ID", "Callee ID", and "Search Time".

Step 1 Click "Report" in the main menu.

Step 2 Select "Short Message Record", enter query parameters (support fuzzy query), "Search Time" is mandatory, and other parameters are optional as required.

Figure 7-7 Query Short Message

Content	<input type="text"/>	Caller ID	<input type="text"/>	Callee ID	<input type="text"/>
Search Time	<input type="text" value="2020-03-11 16:55:06"/> 	<input type="text" value="2020-03-12 16:55:06"/> 			
<div style="background-color: #00AEEF; color: white; padding: 5px; text-align: center;"> Search Clear </div>					

Step 3 Click "Search". The query is successful, and the corresponding records are displayed in the list below.

Figure 7-8 Short Message record display

7.5. Query Geo-fencing

You can query alarm record of Geo-fencing based on keywords such as "Fence name" and "Search Time".

Step 1 Click "Report" in the main menu.

Step 2 Select "Electronic fence", enter query parameters (support fuzzy query), "Search Time" is mandatory, and other parameters are optional as required.

Figure 7-9 Query geo-fencing

Fence name	All	Search time	2020-03-11 17:15:26		2020-03-12 17:15:26	
		<input type="button" value="Search"/>	<input type="button" value="Clear"/>			

Step 3 Click "Search". The query is successful, and the corresponding records are displayed in the list below.

Figure 7-10 Geo-fencing record display

No.	Fence name	Terminal name	Time of going out the fence	Time of entering the fence
1	area001	P601	2020-03-12 17:11:14	

7.6. Query Emergency Alarm

You can query emergency alarm record based on keywords such as "Caller Name", "Caller ID", "Callee Name", "Callee ID" and so on.

Step 1 Click "Report" in the main menu.

Step 2 Select "Emergency Alarm", enter query parameters (support fuzzy query), "Search Time" is mandatory, and other parameters are optional as required.

Figure 7-11 Query emergency alarm



Step 3 Click "Search". The query is successful, and the corresponding records are displayed in the list below.

Figure 7-12 Emergency alarm record display

No.	Caller ID	Callee ID	Repeater	Slot ID	Alarm Time
1	P601(601)	601(651)	ZH_Slave(16775610)	1	2020-03-12 16:13:45
2	P601(601)	601(651)	ZH_Slave(16775610)	1	2020-03-12 16:13:41