TX7812

Graphic Monitoring Software of Fire Protection Control Room Installation and Operation Manual



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1 Overview

With TX7004 panel design a new set of software engineering monitoring system, through good architecture designed to meet various requirements of stand-alone monitoring system, network and other aspects of the system, the system is easy to operate, the interface is beautiful and generous.

The graphic display device is connected with the fire alarm panel through the RS232 interface, and is connected with the remote monitoring center through the RJ45 network port, so as to realize the real-time monitoring of the fire alarm panel and the field equipment information.

1.1 System components

Graphical display device software is composed of two parts, server and client.

Server as a bridge between the panel and the client is mainly used to manage communications between the client and the panel, set user permissions, verify the legitimacy of the user, and record user login information, and a panel connection status.

The client is mainly used to receive the status information of the field equipment which is uploaded by the panel. It is displayed in real time and classification, and records the fire alarm information and the system operation log.

1.2 Main features

- 1. Support receive alarm linkage signal, and display the corresponding information
- 2. Support display and query the status and physical location of the monitoring devices.
- 3. Support display the communication status with the panel.
- 4. Support show total building floor plan, floor plan for each protection unit, the system of FIG.
- 5. Support display fire alarm and control system.
- 6. Support describe for the use of fire-fighting equipment icon in the system.
- 7. Support show alarm information and record alarm time and location.
- 8. Support individually show the part of the first fire, and automatically switch to the first alarm interface.
- 9. Support continuous display for follow-up alarm parts, and can manually query the fire alarm location and related information.
- 10. Support loop display for alarm plan, and the total number of plan view and serial number.
- 11. Supports manual reset.
- 12. Supports alarm for the communication failure.
- 13. Support record fire alarm and linkage control history.
- 14. Support log query.
- 15. The local client supports automatic download of the project from the server. The remote client is not supported to download the project from the server automatically.

Note:

The default installation path: C:\Program Files\GMC

Client's default save location: C:\Program Files\GMC\project\Client

Server's default save location: C:\Program Files\GMC\project\Server



1.3 Main specification parameters

Host Configuration:

• System Requirement: Windows 7, Windows 10 or later.

• CPU: P4 1G and above

RAM: 2G and above

HDD: 8G and above

2 Installation and uninstallation

2.1 Operation Environment

• System Requirement: Windows 7, Windows 10 or later.

CPU: P4 1G and above

• RAM: 2G and above

• HDD: 8G and above

2.2 Software installation

Run Setup.exe to install the files into the installation preparation stage, as shown in the Fig.2-1.



Fig.2-1 Prepare to install

Then a Welcome Window is shown in the Fig.2-2.



Fig.2-2 Welcome Window



Click the 'Next' again, you'll see a window of Customer Information as shown in the Fig.2-3.



Fig.2-3 Customer Information

You can enter your information here and click the 'Next' again, you will see a Setup Type window as shown in the Fig.2-4.



Fig.2-4 Setup Type Window

Select the type you need to install and click the 'Next' again, you will see a Ready to Install Window as shown in the Fig.2-5.



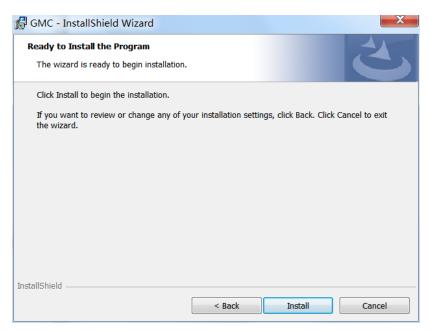


Fig.2-5 Ready to Install Window

By far, the installation guidance is ready and you can start the installation by click 'Install' to enter the installation state (as shown in the Fig.2-6)



Fig.2-6 Installation State

After completion of the installation, click 'Finish' as shown in the Fig.2-7 to exit from the installation.



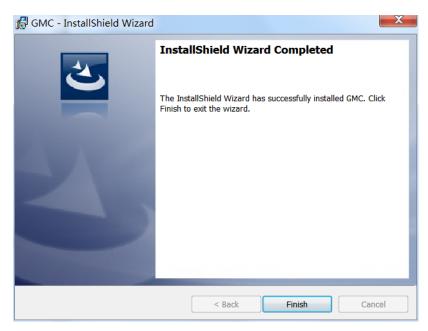


Fig.2-7 Installation Completed

2.3 Software Operation

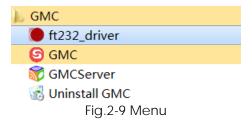
After installation is completed, there are two methods to run the software:

• Method 1: Double click the shortcut icon, as shown in Fig.2-8, on desktop.



Fig.2-8 Shortcut Icon

• Method 2: Choose from the start menu 'GMC---GMC', as shown in Fig.2-9.



Run before the fire control room graphics display device system, you need to run the GMC Server. If you don't have dongle, as shown in Fig.2-10.

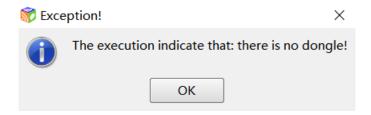


Fig.2-10 no dongle

If you don't have matched shown in Fig.2-11.



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Fig.2-11 invalid dongle

Please Keep inserting the matched dongle when GMC Server is running.

Before the user has not obtained valid dongle, you can't start the GMC Server. You need to purchase the matched dongle from the software provider.

When the communication connects between the panels, the server and the client are normal, they can enter the normal monitoring state.

2.4 Software Uninstallation

To uninstall the configure software, just choose from the start menu 'GMC---Uninstall GMC.' as shown in Fig.2-12.



Fig.2-12 uninstall product

Click 'Yes(Y)', you can completely uninstall the software from your computer, as shown in Fig.2-13.

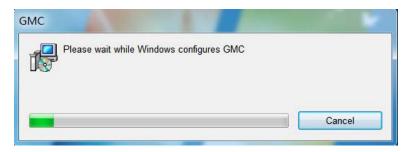


Fig.2-13 uninstalling

Another way to uninstall the software is to re-run the Setup.exe as shown in the Fig.2-14, there are 3 options for you to select: Modify, Repair and Remove. After select 'Remove', same as shown in the Fig.2-12, you can click 'Y' to complete the uninstallation.





Fig.2-14 Modify/Repair/Remove Software

See the interface shown in Fig.2-15, it means the instructions to uninstall is successful, click "Finish" button.

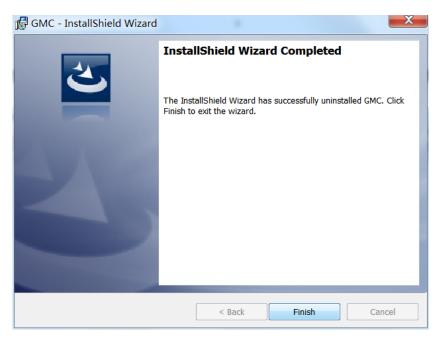


Fig.2-15 uninstall complete

3 Graphics display system monitoring software

Graphical display device client interface as shown in Fig.3-1, including the menu bar, commonly used toolbar, toolbar, the last fire information bar, the total indicator light bar, abnormal equipment information bar, the system status information bar, the monitoring area of 8 parts.



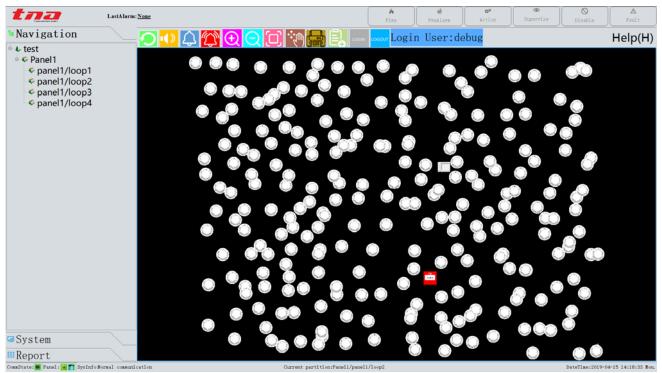


Fig.3-1 client main interface

In the absence of abnormal information occurs, the abnormal equipment information bar automatically hides. If the user does not make any operation within a certain time, the system will automatically switch to full screen display monitoring area, so that the maximum control interface appears. When there is a fire, fault or other abnormal information, the system will automatically exit the full screen mode, and display abnormal equipment information.

3.1 Window introduction

3.1.1 Menu toolbar

The help menu is on the left of toolbar, shown as Fig.3-2. The Help menu provides operating instructions documentation and software version information to the user.

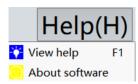


Fig.3-2 menu toolbar

3.1.2 Common toolbar



Fig.3-3 common toolbar

- Reset: After processing the fire, fault and other information, reset the graphic display device;
- Mute: When prompt alarm music, click it to turn off alarm music;
- Silence: When click it to stop panel sounder output and the entire sounder devices in the



loop;

- Evacuate: When click it to start panel sounder output and the entire sounder devices in the loop
- Zoom in: Each click will zoom in the monitoring interface once;
- Zoom out: Each click will zoom out the monitoring interface once;
- Fit to the windows: Click it allows the monitoring interface adjusted to fit the current window size;
- Drag the map: Click it can drag the map through the mouse, for easy viewing;
- Print Zone information: Click it to print the selected device current status information of the partition;
- Add maintenance recode: click it to add a maintenance records of system for easy viewing;
- Login: click it to log in GMC Server. So that user can operate the Panel;
- Logout: click it to log out from GMC Server. In order to Prevent accidental operation;

Common toolbar shown as Fig. 3-3. Zoom in and out function, you can also hold down the Ctrl key on your keyboard and scroll mouse wheel to achieve.

3.1.3 Toolbar

The toolbar is located on the left side of the monitor screen, as shown in Fig.3-4, it is divided into three parts, the navigation toolbar, system tray and other toolbars. It can easily do corresponding operation and management to graphics display device. Via the toolbar.

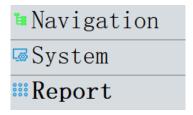


Fig.3-4 toolbar

1) Navigation toolbar





Fig.3-5 Navigation toolbar

As shown in Fig.3-5, Navigation toolbar for navigating and displaying the current monitoring project information. By default, all partitions plan will show by cycle. You can also click on the left mouse button to display the specified partition plan.

2) System toolbar

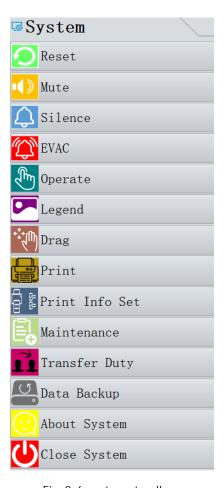


Fig.3-6 system toolbar

As shown in Fig.3-6, system tray to achieve most functions of the graphic display device. Wherein the reset, silencers, operate, drag and drop, print, print Info Set, maintenance records, the transfer duty and so on are same as the standard toolbar, the user can also choose the specific mode of operation according to their habits. The difference from common toolbar is increased legend and data backup.

- Reset: Click it to reset control panel and GMC
- Mute: Click it to mute control panel and GMC



- Silence: Click it to silence control panel
- EVAC: Click it to evacuation control panel
- Operate: Click it to send command (disable, enable, activation, deactivate) to control
 panel, pop-up window shown in Fig.3-7
- Legend: Click the "Legend" button, pop-up window shown in Fig.3-8.
- Print Info Set: Click it to choose the information need to print, pop-up window shown in Fig.3 9.

In the Operate window, you can choose Operate Model or Operate Type



Fig.3-7 Operate

In the legend window, you can view all the icons into the system and the corresponding device name.

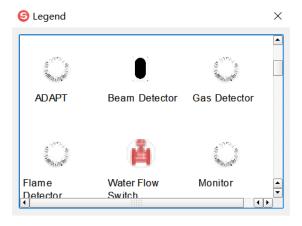


Fig.3-8 legend

In the Print Info Set window, you can choose the information need to print

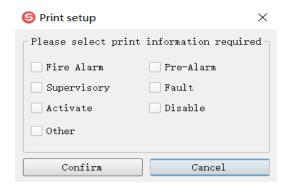


Fig.3-9 PrintInfoSet



Operating provided by other toolbars in Fig.3-10. For details, please refer to Section 3.2 content.

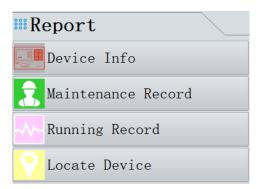


Fig.3-10 other toolbar

- Device Info: Click it to query current all device information of system;
- Maintenance Record: Click it to view the system maintenance records;
- Running Record: Click it query both System Log and Event Info;
- Locate Device: You can locate for devices based on criteria.

3.1.4 Last alarm information bar

The last fire information bar at the top of the monitor interface displays fire information first. When fire information does not occur, the last fire information displays "none"; When the fire break out, as shown in Fig.3-11, with red and blue flashing alternately display the first occurrence of the fire. By the last fire information, you can quickly understand the specific location of the first occurrence of fire.



Fig.3-11 last alarm information bar

The last fire information column shows the last fire, at the same time, the monitor screen will automatically switch to the partition where the last fire equipment, and highlight the last fire apparatus, as shown in Fig.3-12. It can help duty person quickly confirm the type of equipment and the last fire location, in order to make timely treatment.



Fig.3-12 Last alarm

3.1.5 Total indicator bar

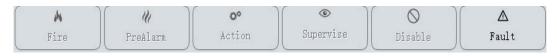


Fig.3-13 total indicator bar



System total indicator bar is located at the right side of the standard toolbar to indicate the current system and device status information. Fig.3-13 shows an abnormal state of system equipment including a fire, pre-Alarm, action, supervise, disable and fault. The corresponding color of each indicator light in the specific condition see table 1.

Status	Color
Fire	Red
Pre-Alarm	Red
Action	Yellow
Supervise	Red
Disable	Pink
Fault	Yellow

Table1 indicator status

The corresponding indicator lights up and a corresponding color flashes frequently and automatically counts the number of occurrence of certain abnormal state of equipment, and in brackets LED display.

3.1.6 Exception device information bar

Exception device information bar is located below the monitoring area, without any exception condition occurs, the abnormal device information bar is automatically hidden. When there is an abnormal situation, the abnormal device information bar displays abnormal device information.

As shown in Fig.3-14, abnormal device information column displays details of the occurrence of an abnormal state, including occur time, panel, loop, group/zone, device address, device type, position, state;

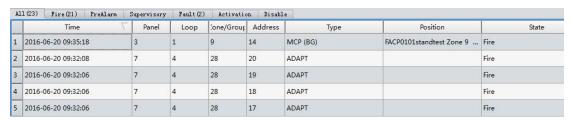


Fig.3-14 abnormal device information column

By default, the abnormal device information column shows all the exception device information. Double click an exception message in the exception device information bar, the system will automatically locate the equipment state of the abnormal occurrence.

In addition, the system can do classification management about the abnormal device information, users can select a category to view through the top menu button above the abnormal device information bar.

To make it easier to view the abnormal device information, in addition to its classification management, you can also select a specific condition. As shown in Fig.3-15, in the right of the selected conditions, there will be a little triangle button, in order to display abnormal device information by clicking this button according to the selected criteria.



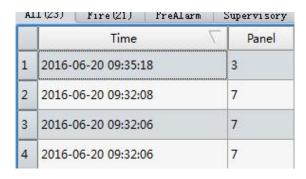


Fig.3-15 sequential display

3.1.7 System status information bar

The system status information bar is located in the lower left corner of the monitoring software interface, as shown in Fig.3-16, which is used to display the real-time communication and working status of the system client, server and panel.

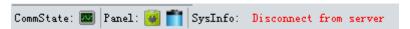


Fig. 3-16 system status

Common Status: Display the current status of the communication, show green and blink when the communication is normal, show yellow and blink when the communication is abnormal;

Main power Status: Display the main power working state of the panel, show green and blink when the main power is normal, show yellow and blink when the main power is abnormal;

Backup power Status: Display the backup power working state of the panel, show green and blink when the backup power is normal, show yellow and blink when the backup power is abnormal;

When the communication link between the panel and the server, the client is normal, the system message is displayed as "normal communication"; When abnormal communication between the server and the panel, system messages are displayed as "server panel disconnected"; When the client and server have connection error, system messages appear as "disconnected from the server."

When panels, servers, client communication have error, the main monitor interface will prompt "Network communications interrupted, check!!!." In this situation, according to the system message in the system status bar, check the communication connections between the corresponding devices.

3.1.8 Monitoring area

Monitor area is the main work area of client for real-time display area floor plan, equipment location and status of the current work within the scope of monitoring. Under normal monitoring status, monitoring area displays in full-screen, and sequentially cycle through each partition. When an abnormal state occurs, the monitoring area will return to normal size, and it's easy to display abnormal information. If there is a fire, the monitoring area will jump to the occurrence of the last fire zone and highlight the last fire.

When a fire occurs, the client interface is shown in Fig.3-17. The column of the last fire information, monitoring area and total indicator bar are able to highlight the fire information.



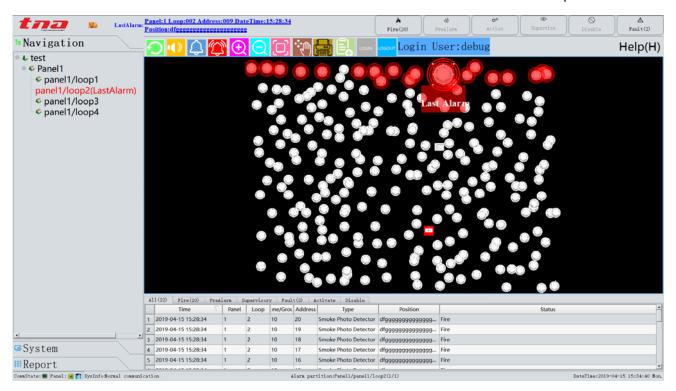


Fig.3-17 fire alarm

3.2 Instructions

3.2.1 Add maintenance record

Graphic display device must carry out maintenance on time, and promptly add maintenance records. Click on the standard toolbar "Add Maintenance Record" button, or "maintenance" button on the system toolbar will pop-up the window as shown in Fig.3-18. Fill in the information, click "Add" button can see an added successfully prompt window, indicating the maintenance record has been added successfully.

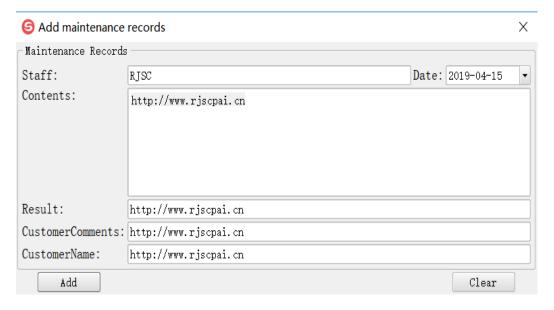


Fig.3-18 add maintenance record



3.2.2 Transfer duty

Monitoring staff when the on duty handover, click the common toolbar or the system toolbar "Transfer Duty" button, after the user authentication ,as shown in Fig.3-19, succession personnel needs to take over their own user name and password to log in again.

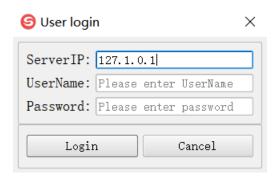


Fig.3-19 transfer duty

3.2.3 Data backup

Data backup function is to back up data for viewing the current project panel and device status information and other data when required. Click on "Data Backup" button in the path selection popup window, select the backup data storage path, and finally click "OK" button.

See a successful backup prompt window, it will generate the corresponding database file in the backup path.

3.2.4 Device information

In other toolbar, click the "Device Info", shown in Fig.3-20. By the device information window you can start device browsing.

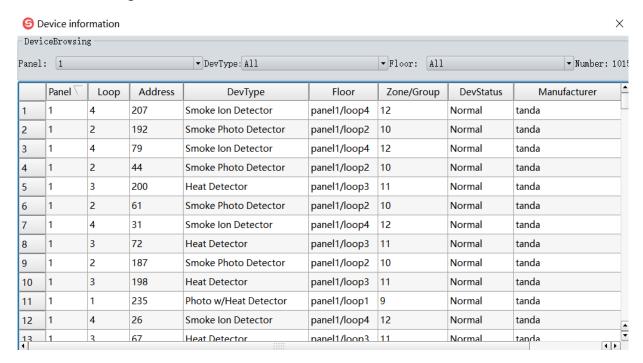


Fig.3-20 device information

Select the device type, or floor, you can browse the corresponding device information in accordance with the conditions of choice. At the same time, the number of devices that meet the selected condition is displayed after the Number.



3.2.5 Maintenance records

In other toolbar, click on the "Maintenance record", as shown in Fig.3-21. Select the start time and end time, click "Search", you can query the maintenance records within the time period. You can also enter a keyword in the maintenance content to query specified records maintenance.

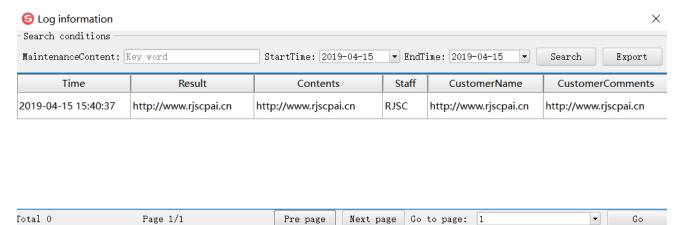


Fig.3-21 maintenance record search

3.2.6 Running records

Running log query and maintenance record query method are basically same. In other toolbar, click on the "system log", you can open the running log query window as shown in Fig.3-22. Select the log type, start time and end time, click the "query" button, you can query the specified type of log within the time period. Among them, the type of log can refer to the need to select "All", "Fire", "PreAlarm", "Supervisory", "Fault", "Activate", "Deactivate", "Disable", "PreAlarmResume", "SupervisoryResume", "FaultResume", "ActivationResume", "Enable", "connect", "Operation", or "backup", "Undefined".

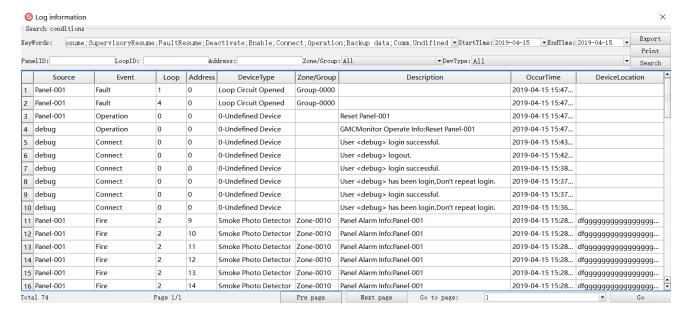


Fig.3-22 running records

Running log records all the operations of the system and the detailed information of all the events that occur in the system, including the source of the operation, type, time and specific content. records, Choose event type, device type, panellD, loopID, address, zone/group, start time and end time, click the "query" button, you can query all the corresponding event information.

Event types that can be selected include:



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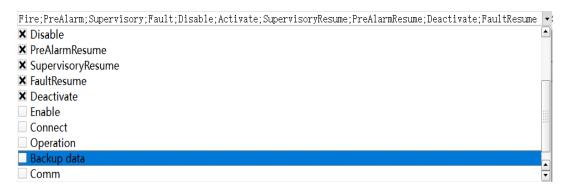


Fig.3-23 event type

3.2.7 Device Properties

In the control area, click the right mouse button, as shown in Fig.3-24. When the icon in front of cycle display, show device properties, monitoring mode display. it means the function is activated.



Fig.3-24 right menu

When you start the cycle display, monitor screen will cycle through each partition. Cancel the cycle, monitoring interface stays in the current partition. System open cycle displays function default, in order to facilitate real-time monitoring of all partitions.

When the display device attributing function is activated, once the mouse stays on device identification, the device properties will display.

Right click on the device icon, as shown in Fig.3-25, you can view the device properties, send command (disable, enable, activation, deactivate) to control panel.

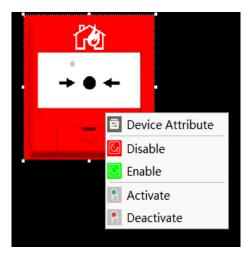


Fig.3-25 device context menu

Click "DeviceAttribute", it is possible to see the Device Properties window similar to Fig.3-26.



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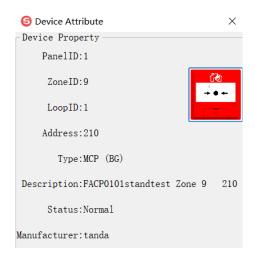


Fig.3-26 device properties

3.2.8 Search device

Click on the "search device" button in the toolbar, or in the control area, click the right mouse button to select "search equipment", you can also through the shortcut key "Ctrl + F", open the search device window, as shown in Fig.3-27.

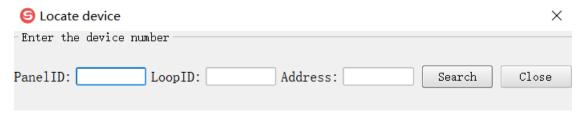


Fig.3-27 search device

Enter Panel ID, Loop ID, Address, click "Search", the Fig.3-28.In this case, search the number of the panel, loop, address to meet the conditions of all devices. Double click a device information, it is possible to locate the device in the partition plan view.

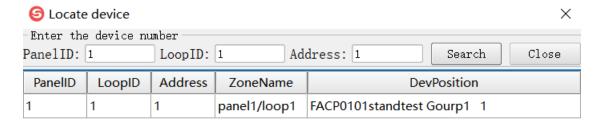


Fig.3-28 search device

3.2.9 Close System

When the user needs to close the graphics display device, click the "off system" button or press the

"Esc" button, pop-up "user authentication" window. Enter an authorized user name and password to close the graphics display device.

4 Graphics display system server software

The server main interface of graphical display device is as shown in Fig.4-1. The server can set up and manage the communication between the panel and the client, manage the user information, set up the user's rights, record the system operation log and so on.





Fig.4-1 server main interface

In order to ensure the normal operation of the graphic display device, the related operation of the server can only be carried out by the system administrator. For example, to modify or delete the panel information and user information, to stop monitoring the panel, to reject the user login, to modify the password, exit the system, etc., must first pass the user authentication as shown in Fig.4-2. After verification, the corresponding operation can be carried out.



Fig.4-2 user verify

The default administrator password is empty, in order to ensure the normal operation of the system, please change the management password in time.

4.1 Panel information

In the left menu bar, select "panel information", you can view all the panel information in the current system, and modify the panel information.

4.1.1 Add panel

Click "add" button, will pop up add panel window as shown in Fig.4-3.

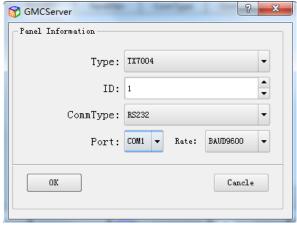


Fig.4-3 Add panel



- Type: Select panel model.
- ID: Enter the panel address (Note: after the panel address is set, it will not be modified).
- Common Type: Select the communication type of the panel (RS232 can be chosen).
- Port: Select the panel's communication port.
- Rate: Baud rates can be selected from BAUD2400、BAUD4800、BAUD9600、BAUD19200、BAUD38400、BAUD57600、BAUD115200.

4.1.2 Modify panel

Direct double click the panel to modify, or click the "modify" after selecting the panel button, popup Fig.4-4 window. You can modify the ID, communication port, baud rate. After the modification, click OK to save the changes.

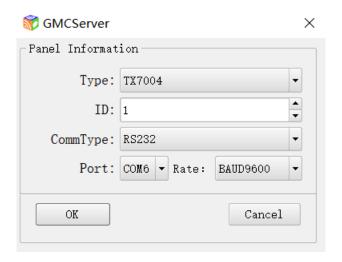


Fig.4-4 modify panel

4.1.3 Delete panel

When you remove the panel, select the panel you want to delete, and then click the "delete" button. It should be noted that the panel will not be able to recover after being deleted, please consider carefully before deleting.

4.1.4 Start/Stop monitoring

When the panel is in a state of "stop", click "start monitoring" button, to start monitoring panel; when the panel is in a state of "start", click "stop monitoring" button, can stop the panel monitoring.

If the serial port can't be found, please install the FT232 driven, which is under the GMC directory under the Start menu.

For ease of viewing panel connection status, the difference of current status corresponding to different panel information colors. When the panel starts, shown in green; When selected, it is shown in blue.

4.1.5 Communication test

When the panel status is "start", click the "communication test" button. If you have Log folder in the run directory of the program, there will be communication data log file in the folder. The details are shown in communications test results.



4.2 User information

User information as shown in Fig.4-5, including name, UserType, Function, LoginRights, connection status and connection address.

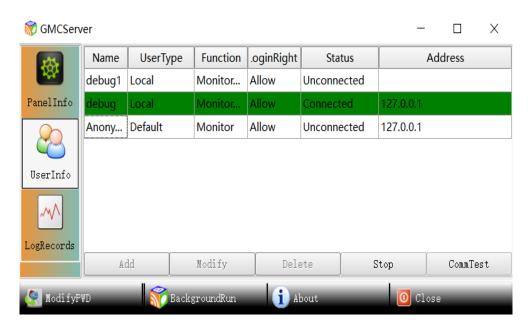


Fig.4-5 user information

4.2.1 Add user

Before you add, modify, delete user information, you must first deny user login. After you refuse the user login, click the add user button, as shown in Fig.4-6.

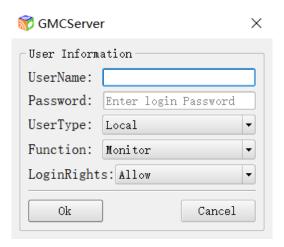


Fig.4-6 Add user

- User Type: Local, Remote, TnaAPI.
- Function: Monitor, Monitor&Control.
- Login Rights: Allow, Refuse.

Enter user name, set the user password, choose user type ,select function, login rights and finally click OK button, then will add the user to the system.



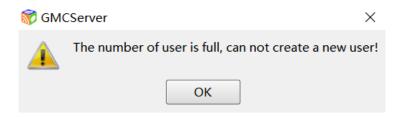


Fig.4-7 user number full

When you see the prompt window, as shown in Fig.4-7, the number of users in the system has reached the maximum limit, can't be added to the system for the new user.

4.2.2 Modify user

Select the user to modify, click "modify the user" button, or double-click the user information directly, you can modify it. Modify the user function to allow the user password, user type, function, login rights changes, can't modify the user name.

4.2.3 Delete user

Select the user to delete, click the delete user button, you can delete the user. User will not be able to log on to the graphics display device.

4.2.4 Allow/Refuse login

Click "Allow Login", when the client and server connection is successful, the connection status is displayed as "connection", and display the connection address.

After the user is denied access, the connection status is "not connected", the user will not be able to log on graphical display device.

4.2.5 Communication test

Through the "communication test" function, check the user connection. Click "Communications Test" button, shown in Fig.4-8. Click on "Send", the server will send a test message to the client communication.



Fig.4-8 user communication test

When the client has successfully received the test message shown in Fig.4-9, indicating that the user is connected properly.

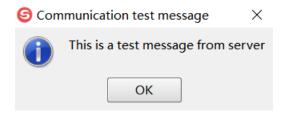


Fig.4-9 test message



4.3 Log records

As shown in Fig.4-10, the log record function can record the panel connection status information, user login information and device exception information. By logging, you can view the system operation log at any time to understand the operation of the system.

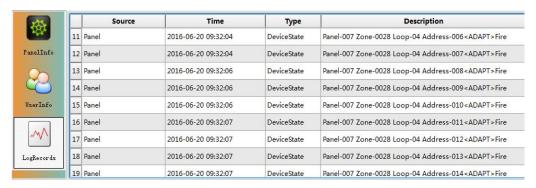


Fig.4-10 log records

4.4 Modify password

To modify the administrator password, click the "Modify PWD" button on the toolbar button to modify the password, after the user authentication, as shown in Fig.4-11.

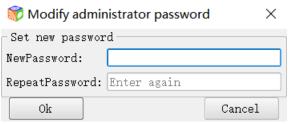


Fig.4-11 modify password

In the "New Password", enter the new password needed to set, in the "Repeat Password" again enter the new password, click "OK" button. When you see the prompt window of the success of the password to modify, the administrator password has been modified successfully.

4.5 Background run

Click the toolbar "Background Run" button, enter the server running in the background mode. When you need to display the main screen again, simply click on the server icon in the lower right corner of the taskbar.

4.6 About system

In the tool bar, click on "About" button, you can view the software name and version number.

4.7 Close system

When you want to exit the system, click the "Close" button on the toolbar, or in the taskbar right corner, right-click the server icon, select "exit", after verification you can exit the server software. Click on the upper right corner of the close button, can only close the main interface, the system will enter into the background operation mode, and can't turn off the server.

Note: after the server is closed, the graphics display device will stop monitoring. Please do not turn off the server at will.

