

Preface

JB-KR-TC5600 Electrical Fire Monitoring Equipment is a new generational controller after full investigation of fire protection market demand and years of experience in fire protection engineering.

JB-KR-TC5600 Electrical Fire Monitoring Equipment is a wall-mounted and modular-design controller with powerful, reliable and flexible function. It is equipped a color LCD and a printer available for all information when alarms, errors or other operations occur. JB-KR-TC5600 is the best option for fire protection engineering.

This manual should be charged by a special person for safekeeping and subsequent reference.

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Part One: Overview

Chapter One: Brief Introduction

JB-DH-TC 5600 Electrical Fire Monitoring Equipment (EFME) and DH12A, DH01B, DH230 electrical fire detectors compose an electrical fire monitoring system of loop control communication. An electrical fire monitoring device uses a two-line loop to connect each detector with its own address, which is called communication. This monitoring device supplies power to each sub devices. Alarms information will be sent to control panel through break mode, effective and efficient. Open circuits, short circuits and communication faults of any loop control device will all report to the control panel, which provides an important basis for normal operation of devices and maintenance of follow-up system.

1.1 JB-DH-TC 5600 Electrical Fire Monitoring Equipment has following features:

1.1.1 It is complied with a large-screen character LCD display, through which all information such as alarms, faults or status can be displayed clearly and directly.

1.1.2 The alarming ranges of residual current detectors and heat detectors all can be adjusted widely. They adapt to various situations.

1.1.3 Detectors are addressable, flexible and convenient for commission and installation.

1.1.4 All devices have the interconnection function of fire alarm system with our company

1.1.5 Maximum 2 loops, with up to 255 electrical fire detectors of a loop.

1.1.6 The enclosure of EFME conforms to the rules of IP30 strictly, with all cracks and louvers smaller than 2.5mm.

Part Two: Construction Installation Commission

Chapter Two: Construction and Components

2.1 Typical Components and Internal Construction

JB-DH-TC 5600 Electrical Fire Monitoring Equipment is wall-mounted, which is complied with a main control panel, a combined residual current detector and a combined heat detector.

Refer to Fig.2-1 for its appearance:

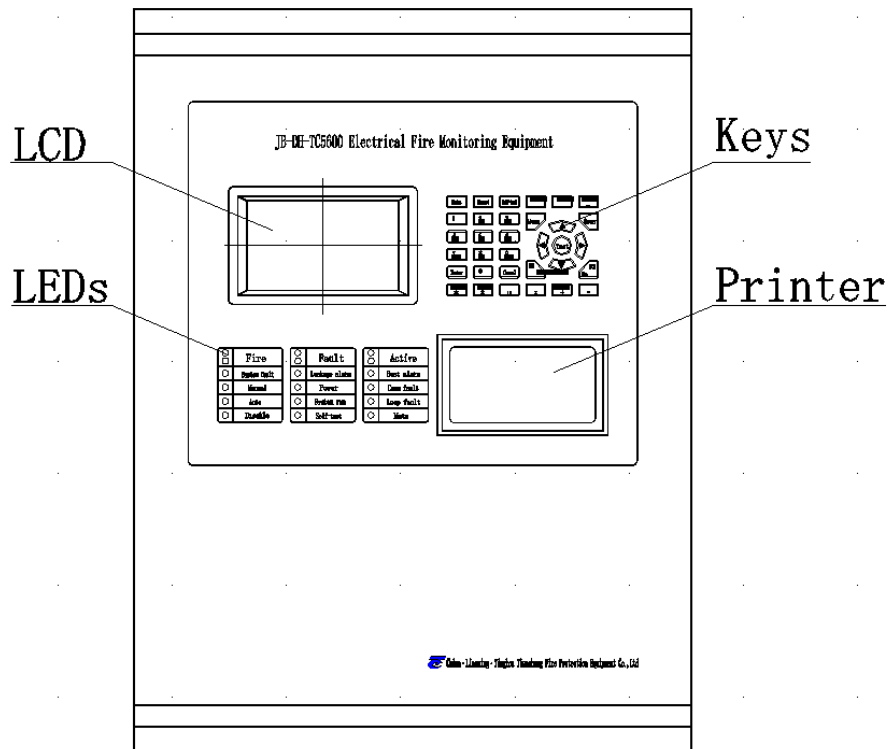


Fig. 2-1

2.2 Display Area

The operation panel of display area consists of a LCD, LEDs, a keypad and a printer. Descriptions of LEDs are as follows:

- Alarm: Red. It illuminates when EFME detects an alarm condition of outside connected detectors. Refer to the details for LCD. After fire condition is removed, press “Reset” and this LED goes out.

- Fault: Yellow. It illuminates when EFME detects a fault condition of outside devices (detectors). Refer to details for LCD. After fault condition is removed, this LED goes out automatically.

- Start: Red. It illuminates when the output relay of control panel starts. When the output all stops, the light goes out.

- System fault: Yellow. When the system can't work normally, the light illuminates.

- Leakage alarm: Red. It illuminates when EFME detects leakage status of outside detectors. Refer to details for LCD. After fire condition is removed, press “Reset” and this LED goes out.

- Heat alarm: Red. It illuminates when EFME detects heat alarm of outside detectors. Refer to details for LCD. After fire condition is removed, press “Reset” and this LED goes out.

- Manual: Green. It illuminates, when manual operation starts.
- Auto: Green. It illuminates, when auto operation starts.
- Loop fault: Yellow. It illuminates, when the loop of control panel is shorted or overloaded. It automatically goes out after troubleshooting.
- Communication fault: Yellow. It illuminates, when the control panel and CRT have troubles in communication. When the communication is back to normal, the light goes out automatically.
- System running: Green. It flashes, when the control panel runs normally.
- Disable: Yellow. When outside devices (detectors) are in trouble, they will be disabled. After fixing or exchanging, enable the devices back to normal. This LED illuminates when there is disablement.
- Self-test: Yellow. It illuminates, when loop devices is testing. Once it finished, the LED goes out.
- Silence: Green. When the control panel alarms, press “Mute” to silence loudspeakers and the LED illuminates. The control panel will alarm again, if there is another fire and the LED goes out.

2.3 The Internal Construction

2.3.1 Introduction of the Internal Construction

The control box is the heart of control panel, consisting of three parts: main board, loop board and power supply.

Show as Fig. 2-2:

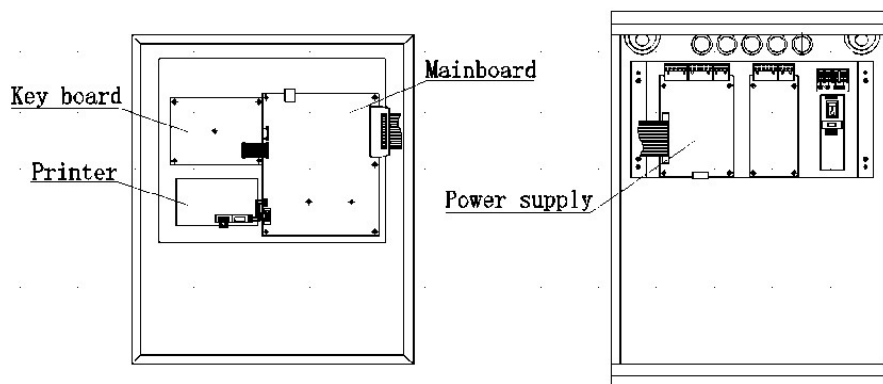


Fig. 2-2

2.3.2 External Terminals Description of Control Panel

L, N, PE: AC 220V terminals and the ground terminal.

L+, L-: Control terminal of non-polarized loop signal.

NC1, CM1, NO1: They respectively are normally closed contact, common mode, and normally open contact of output relay No.1.

NC2, CM2, NO1: They respectively are normally closed contact, common mode, and normally open contact of output relay No.2.

A1, B1: RS485 terminals. A1 is the A-end of 485, B1 the B-end of 485 (reserved).

A2, B2: The RS485 terminals to connect a graphic display device in a fire control room.

CH, CL: Polarized control line of CAN networking of control panel.

JP2: It locates on the outsider networking terminal pins. When this device is the terminal of outside networking, the short-loop block skips to “On” position.

24V, GND: DC 24V power supply output terminals (reserved).

Chapter Three: Installation and Commission

3.1 Open-case Inspection

The field devices need to inspect before installation.

3.2 Components Inspection

Check whether the packing list of control devices matches the engineering components of the project or not. Open packing boxes and check the contents based on the packing list, which includes Installation Manual and keys of the control panel. Then make the necessary checks of the appearance of the control panel. If anything not meeting requirements is found, please connect with aftersales department of our company.

3.3 Internal Components and Cabling Inspection

Check whether the connections of internal components are correct or not. If anything like connecting cables off, something not matching with manuals or unclear signals is found, please connect with aftersales department of our company.

3.4 Installation Condition and Method of Enclosure

3.4.1 Dimension: (L×W×H): 360mm×480mm×130mm.

3.4.2 Ambient Temperature: 0℃ ~+40℃

3.4.3 Environment Humidity: Relative Humidity≤95%, non-condensing.

3.4.4 Structure: No holes for lines on the top of the enclosure, but there is some holes to fix the expansion bolt on the back of the enclosure. Show as Fig. 3-1. Use wall-mounted installation and details as follow:

3.4.4.1 Tools: churn drill, M8 expansion bolts drill, hammer and monkey wrench.

3.4.4.2 Bolt: M8 expansion bolts from outsourcing.

3.4.4.3 Installation: use churn drill to drill the fixed wall, then hammer a M8 expansion bolts drill to the wall. Hang the equipment on it and lock nuts with a monkey wrench preferably.

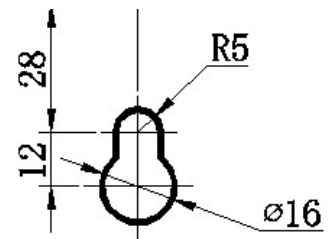


Fig. 3-1

3.5 Start Checking

After control panel installed in the field, it should be powered on for start checking, including checking points as below:

3.5.1 Check whether LCD screen works normally or not.

3.5.2 Check self-test, LCD screen, LED display. Check whether LEDs can all be illuminated and loudspeakers can alarm three times loudly and continuously.

3.5.3 After into monitoring status, check whether keypad can be well used or not, whether printer can operate normally or not.

Anything abnormal is found in those checks, please connect aftersales department of our company.

3.6 Installation and Commission of Outside Devices

3.6.1 Address detectors and install.

3.6.2 Shutdown to measure whether the resistance is greater than $50K\Omega$ (the loop operating at full) more or less. Measure whether the resistance between the loop and earth is greater than 20M or not (Two lines need to parallel before measurement, otherwise devices connected on the loop will be damaged).

3.6.3 Operate the control panel to register loop components and recheck to ensure all registrations are input correctly. If mass information has been lost, first is to check the linkage power and the loop isolate of each floor. Then, check individual device and register again. Make sure all devices have been registered this time.

3.6.4 Program on field, note input.

3.6.5 Test detector alarm. Check whether notes match with the situation of field or not.

3.6.6 Training operators. After the acceptance, the device is ready to use normally.

Part Three: System Operation

Chapter Four: User Guide

4.1 Start, Shutdown and Self-test

When finish the commission, users can open the machine according to the process as follow:

- 4.1.1 Power on the control panel.
- 4.1.2 After power on, the system start to initialize (refer to Fig.4-1 for the display) and enter to monitoring status. Press “Self-test” on the keypad of control panel, then system start to self-test of sound and strobe.



Fig. 4-1

4.2 Description of System Menu

4.2.1 Main menu

The main menu shows as Fig. 4-2:

The main menu displays all the function of the system, each module of which will be described in detail as below.

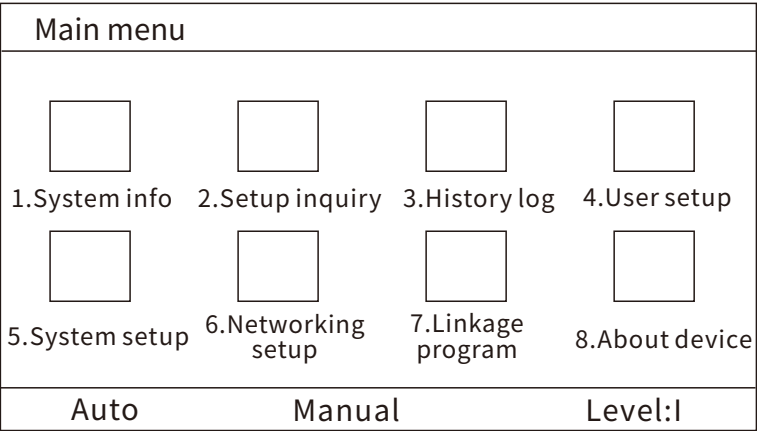


Fig. 4-2

4.2.2 System information

Please refer to Fig. 4-3 for system information inquiry:

This display shows the sum of devices registered in the control panel. Press numerical keys 1-4 to query the relative information.

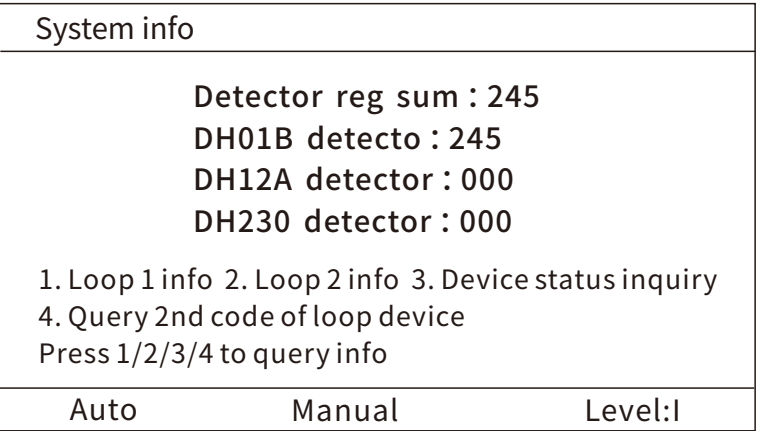


Fig. 4-3

4.2.2.1 Loop Information

Press “1” and display Fig. 4-4 as follow:

Query the sum of registration of 2-loop and each kind of devices, the information of loop current and reference voltage.

Loop 2 info		
Detector reg sum : 245 DH01B detecto : 245 DH12A detector : 000 DH230 detector : 000 Loop status Loop current: 108mA Reference voltage:12.3V F1 to query device F2 for loop status browsing		
Auto	Manual	Level:I

Fig. 4-4

Press “F1” on this display to query the information of 2nd code and note, referring to Fig. 4-5.

2-loop device info			
Add.	Type	2nd code	Note
0001	DH01B	12345678	Tiancheng Fire Protection Equipment Co., Ltd
0002	DH01B		
0003	DH01B		
0004	DH01B		
0005	DH01B		
0006	DH01B		
0007	DH01B		
0008	DH01B		
Auto	Manual	Level:I	

Fig. 4-5

Press “F2” to query the device status of the loop, like online, offline or duplicated code, referring to Fig. 4-6:

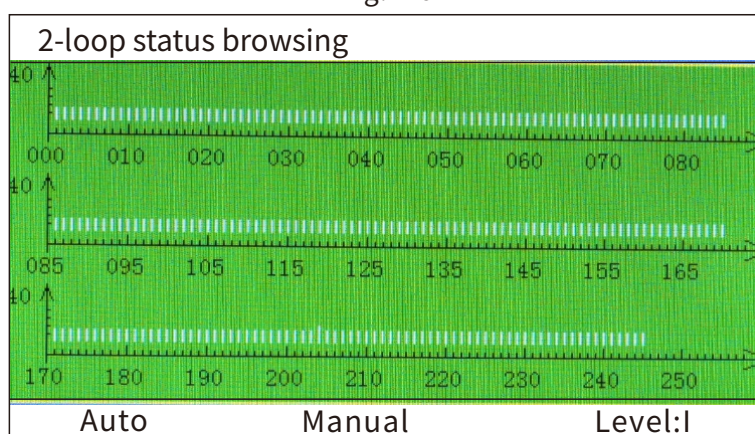


Fig. 4-6

4.2.2.2 Device status inquiry

Press “3”, referring to Fig. 4-7:

Input the information of loop, address and tube to query the status of devices, like the information of online/offline, tube type, device type, alarm pre-value and alarm signal value.

Device status inquiry		
Loop:02 Add.:001 Tube:01 Query status:Refreshing Device status:Online Tube type::Leakage Device type Alarm pre-value Alarm signal value (real-time, auto refresh/3s) CANCEL to revise F1 to exit		
Auto	Manual	Level:I

Fig. 4-7

4.2.2.3 2nd code inquiry

Press “4”, referring to Fig. 4-8:

2nd code inquiry		
1. Total inquiry of 2nd code 2. Single inquiry of 2n code		
Auto	Manual	Level:I

Fig. 4-8

Press “1” to query the sum of the 2nd codes of tubes, referring to Fig. 4-9 as below.

Total inquiry of 2nd code.				
No.	Loop	Add.	Tube	2nd code
0001	02	0001	01	12345678
Auto	Manual	Level:I		

Fig. 4-9

Press “2” to query the single 2nd code of each tube, referring to Fig. 4-10 as below.

Single setup of 2nd code		
Loop:02 Add.:001 Tube:01 2nd code:12345678 Result:Inquiry finished ENTER to query F2 to exit ESC to revise		
Auto	Manual	Level:I

Fig. 4-10

4.2.3 Setup Inquiry

Refer to Fig. 4-11 for information of setup inquiry.

This page is to query all setup information of devices on this control panel, referring to details on the control panel.

Total inquiry of 2nd code.		
1. Local add. 2. Linkage program 3. Device disable 4. Printer setup 5. CAN-networking mode		
Auto	Manual	Level:I

Fig. 4-11

4.2.4 History Log

Refer to Fig. 4-12 for inquiry of history log:

History Log		
1. Alarm log 2. Fault log 3. Other log		
Auto	Manual	Level:I

Fig. 4-12

4.2.4.1 Alarm log of history

Press “1” to query alarm log of history, referring to Fig. 4-13:

Alarm log		Sum:0049					
No.	Dev. No.	Loop	Add.	Tube	Type	°C/mA	Time
0001	00	02	001	02	Temp.	0043	18:53
Date: 15/10/27 Location: Tiancheng Fire Protection Equipment Co., Ltd							
0002	00	02	001	02	Temp.	0046	18:59
Date: 15/10/27 Location: Tiancheng Fire Protection Equipment Co., Ltd							
0003	00	02	001	02	Temp.	0042	19:08
Date: 15/10/27 Location: Tiancheng Fire Protection Equipment Co., Ltd							
0004	00	01	001	01	Leakage	0206	19:19
Date: 15/11/05 Location:							
Auto		Manual				Level:I	

Fig. 4-13

4.2.4.2 Alarm log of history

Press “2” to query alarm log of history, referring to Fig. 4-14:

Fault log							Sum:0333
No.	Dev. No.	Loop	Add.	Tube	Fault type	Time	
0001	00	02	001	02	Break circuit fault	14:31	
Date: 15/10/26 Location: Tiancheng Fire Protection Equipment Co., Ltd							
0002	00	02	001	02	Break circuit fault	14:32	
Date: 15/10/26 Location: Tiancheng Fire Protection Equipment Co., Ltd							
0003	00	02	001	02	Clear break circuit fault	14:32	
Date: 15/10/26 Location: Tiancheng Fire Protection Equipment Co., Ltd							
0004	00	02	001	00	Comm. fault	14:40	
Date: 15/10/26 Location: Tiancheng Fire Protection Equipment Co., Ltd							
Auto			Manual		Level:I		

Fig. 4-14

4.2.4.3 Other log of history

Press “3” to query alarm log of history, referring to Fig. 4-15:

Others log Sum:0629				
No.	Date	Time	Dev. No.	Event Type
0001	32/13/00	25:05	00	Power on
0002	32/13/00	25:05	00	Power fault
0003	48/13/00	25:05	00	Power off
0004	48/13/00	25:11	00	Power on
0005	48/13/00	14:02	00	System reset
0006	48/13/00	14:04	00	Battery fault
0007	48/13/00	14:05	00	Battery recovery
0008	48/13/00	14:11	00	Output 1-1 start
Auto		Manual		Level:I

Fig. 4-15

4.2.5 User Setup

4.2.5.1 Date Setup

“Date Setup” is to set the date of control panel including year, month and date.

4.2.5.2 Sound Setup

“Sound Setup” is to set the key sound of control panel.

4.2.5.3 Printer Setup

“Printer Setup” is to set the switch of the printer, referring to the description of control panel for details.

4.2.6 System Setup

Fig. 4-17 shows the display of system setup.

4.2.6.1 Registration Setup

Press “1” to register all devices on the loop.

4.2.6.2 Illuminate Operation Light

Press “2” to illuminate the operational light, referring to Fig. 4-18:

Locating the device on field and troubleshooting the problem of duplicated code are mainly rely on the operation of output loop, address and F1 to illuminate the operational light.

4.2.6.3 Password Setup

Press “3” to set the password, referring to Fig. 4-19:

User setup		
1. Date 2. Sound 3. Printer		
Auto	Manual	Level:I

Fig. 4-16

System setup		
1. Device reg 2. Illuminate operation light 3. Password setup 4. CRT transmit setup 5. Loop sum setup 6. Loop component setup 7. Factory default		
Auto	Manual	Level:I

Fig. 4-17

Illuminate operation light		
Input loop(**), add.(***) Loop:01 Add.:001 Order has been sent. F1-on F2-off Function: Check duplicated code of devices		
Auto	Manual	Level:I

Fig. 4-18

Password setup		
1. Setup Level II password 2. Setup Level III password		
Auto	Manual	Level:I

Fig. 4-19

There are password setup of Level I and Level II. Press “2” to set password of Level II. As Fig. 4-20 shows:

Input the new password twice and press ENTER to save. The same process applies for the password of Level I. Please remember the changed password for later use.

Level II setup		
Input new password(***): *** Input new password again and remember: *** ENTER to save and exit		
Auto	Manual	Level:II

Fig. 4-20

4.2.6.4 CRT Transmit Setup

Press “4” to display the CRT Transmit Setup as Fig. 4-21 showing:

When the control panel does not connect with CRT, please choose F2-Don't connect with CRT. Otherwise the system will report CRT communication fault.

CRT transmit setup		
CRT configuration: current - not configured with CRT Set- configured with CRT F1-configured with CRT F2-not configure with CRT Press ENTER to save		
Auto	Manual	Level:II

Fig. 4-21

4.2.6.5 Loop Sum Setup

Press “5” to display Fig. 4-22 of Loop Sum Setup:

Choose to set the sum of loop based on the hardware configuration of loops. If loop setup is wrong, there will be communication fault of loops.

Loop sum setup		
Loop sum: Current- 2 loops Set- 1 loops F1-A loop F2-2 loops ENTER to save		
Auto	Manual	Level:II

Fig. 4-22

4.2.6.6 Loop Component Setup

Press “6” to set loop component, referring to Fig. 4-23:

●Press “1” on the display of component setup and enter the display of parameter setup as Fig. 4-24 displaying.

After input the loop, address and tube correctly, the system can query automatically and display the

Component setup		
1.Parameter 2.Tube 2nd code 3.Delete tube 2nd code 4.2nd code and note 5.DH01B batch parameter 6.DH12A batch parameter 7.DH230 batch parameter		
Auto	Manual	Level:II

Fig. 4-23

inquiry result. We decide whether to modify some parameter or not, based on the displayed result. If modify, press the key of up or down to scroll the option. Press Cancel to modify and Enter to save into the control panel.

Parameter setup		
Loop:02	add.:001	→channel:01
status: online type: electric leakage preset value:0900mA		
device type:DH01B status: query complete		
alarm signal value:0000Ma(query)		
0-offline 1-online leakage range (0200-0900) mA		
press cancel key to alter option temp. range (0045-0140) °C		
press enter key to send setup F1-clear F2-exit		
Auto	Manual	Level:I

Fig. 4-24

●On the display of component setup, press “2” to enter the display of 2nd code setup of component tube. Refer to Fig. 4-25:

2nd code setup		
1.Single setup of 2nd code 2.Set 2nd code by loop batch		
Auto	Manual	Level:I

Fig. 4-25

●On the display of 2nd code setup, press “1” to enter the display of single setup of 2nd code of component tube. Refer to Fig. 4-26:

Input loop, address, tube and 2nd code that need to set, and press Enter to save. Tube 2nd code is designed for linkage program. An appropriate 2nd code setup is convenient for the program of linkage formula.

Single inquiry of 2nd code		
Loop:01 Add.:001 Tube:01 →2nd code:12345678 Result:Save successfully		
F1 to cancel F2 to exit CANCEL to revise ENTER to save		
Auto	Manual	Level:I

Fig. 4-26

●On the display of 2nd code setup, press “2” to enter the display of mass setup of 2nd code of component tube. Refer to Fig. 4-27:

On this display, the 2nd codes are allotted according to the registration automatically. Based on the order of loop, the beginning address should not be greater than the ending address. It means that the 2nd code should be programmed incrementally from the first 2nd code.

Mass setup of 2nd code		
Note: first to register, then to auto assign 2nd code		
Loop:01 (01-02)		
Beginning add.:001 (001-255)		
Ending add.:255 (001-255)		
→The first 2nd code: 12345678 (0-9)		
Result :-----		
F1 to clear F2 to exit		
CANCEL to revise ENTER to generate		
Auto	Manual	Level:I

Fig. 4-27

●On the display of component setup, press “3” to enter the display of deleting 2nd code of component tube. Refer to Fig. 4-28:

Press “Enter” to clear all 2nd codes, please be cautious before operation.

Tube 2nd code delete		
Clear all tube 2nd code, please be cautious before operation!!! ENTER to delete 2nd code		
Auto	Manual	Level:I

Fig. 4-28

●On the display of component setup, press “4” to enter the display of note setup of component. Refer to Fig. 4-29:

Input the information of loop, address, 2nd code and note that need to set and press “Enter” to save. But the 2nd code setup is useless for this moment and can be set as any data. The input information of Chinese and English (both capital and small letters), numbers, punctuation marks is accepted by the system.

Component setup		
Loop:01 add.:001 2nd code:12345678		
CHECK to confirm. F1,F2 to select/roll ENTER to save and into the next		
Auto	Manual	Level:I

Fig. 4-29

●On the display of component setup, press “5” to enter the display of pareameter setup of DH01B. Refer to Fig. 4-30:

When more than one DH01B needs to set parameter and the leakage tubes need to set the same parameter, this function can realize setup fast. If the parameter of each tube is different from each other, use the function of parameter setup to realize.

DH01B setup		
Loop:02 (01-02) Beginning add.:001 (001-255) Ending add.:005 (001-255) Tube status: Online (0-1) →Leakage pre-value:0900mA (0200-0900) mA Result:Set successfully Success-005 F1 to clear F2 to exit CANTEL to revise ENTER to set		
Auto	Manual	Level:I

Fig. 4-30

●On the display of component setup, press “6” to enter the display of parameter setup of DH12A. Refer to Fig. 4-31:

When more than one DH12A needs to set parameter and the leakage tubes and temperature tube need to set the same parameter, this function can realize setup fast. If the parameter of each tube is different from each other, use the function of parameter setup to realize.

DH12A setup		
Loop:01 (01-02) Beginning add.:001 (001-255) Ending add.:255 (001-255) Tube status: Online (0-1) Leakage pre-value:0900mA (0200-0900) mA →Temp. pre-value:0140°C (0045-0140)°C Result: ----- F1 to clear F2 to exit CANTEL to revise ENTER to set		
Auto	Manual	Level:I

Fig. 4-31

● On the display of component setup, press “7” to enter the display of parameter setup of DH230. Refer to Fig. 4-32:

When more than one DH230 needs to set parameter and the leakage tubes and temperature tube need to set the same parameter, this function can realize setup fast. If the parameter of each tube is different from each other, use the function of parameter setup to realize.

DH230 setup		
Loop:02	(01-02)	
Add.:001	(001-255)	
Tube status: Online	(0-1)	
Leakage pre-value:0200mA	(0200-0900) mA	
→Temp. pre-value:0045°C	(0045-0140)°C	
Result: -----		
F1 to clear	F2 to cancel	
CANTEL to revise	ENTER to set	
Auto	Manual	Level:I

Fig. 4-32

4.2.6.7 Factory default

Press “7” into the display of factory default, referring to Fig. 4-33:

Press “Enter” to reset all the setups of the control panel. Please be cautious before operating factory default.

Factory default		
<p>Factory default will clear all settings Be cautious to operate!!! ENTER for factory default</p>		
Auto	Manual	Level:I

Fig. 4-33

4.2.7 Networking setup

Press “6” on the main menu and enter the display of networking setup, referring to Fig. 4-34:

Networking setup		
<p>1. Local add. 2. CAN networking mode(CH CL)</p>		
Auto	Manual	Level:I

Fig. 4-34

4.2.7.1 Local address setup

Press “1” to set the local address, referring to Fig. 4-35:

Local add.		
<p>Input add. Zone-Range:(001-255) Current add.:001 Set: 005 ENTER to save</p>		
Auto	Manual	Level:I

Fig. 4-35

4.2.7.2 Networking mode setup

Press “2” to set CAN networking mode, referring to 4-36:

When the networking connects with the fire alarm system of our company, through the interconnection of CAN, the local device will be regarded as a unit mode, uploading all the required information. Users don't need to set any information but interconnection.

Mode setup		
CAN-networking-sub control panel		
Upload alarm-Yes		
Upload fault-Yes		
Upload linkage-Yes		
Upload disablement-Yes		
Upload others-Yes		
CAN networking mode is default setting, not available		
Auto	Manual	Level:I

Fig. 4-36

4.2.8 Linkage Program

Press “7” on the main menu and enter the display of linkage program, referring to Fig. 4-37:

Linkage program		
1. Common program		
2. Off-line program		
Operate by numerical keys		
Auto	Manual	Level:I

Fig. 4-37

4.2.8.1 Common program

Press “1” into the display of common program, referring to Fig. 4-38.

Y1 and Y2 respectively represent the output relay No.1 and No. 2 on the 1-loop, Y3 and Y4 for the output relay No.1 and No. 2 on the 2-loop.

Example 1: $Y1 = (12345678) - 1 + (123****) - 9$

To start output relay No.1, one of the conditions below must be satisfied. One is the detector must alarm, the tube 2nd code of which is 12345678. The other condition is that all the 9 detectors alarm, the tube 2nd code of which need to satisfy the first three figures should be 123, the other five figures can be any number.

Example 2: $Y1 = (12345678) - 1 \times (123****) - 9$

The only difference with Example 1 is “x”, which means “and”, representing the relay only being started when the two conditions satisfied at the same time.

Common program Sum 01/05		
Y□()-__ ()-__		
Eg: $Y1 = (12345678) - 1 \times + (123****) - 9$ Enable		
$Y1 = (12345678) - 1 \times (12345678) - 9$ Enable		
$Y1 = (12345678) - 8 \times (12345678) - 8$ Enable		
$Y1 = (12*****) - 3 + (12345678) - 7$ Enable		
$Y1 = (123*****) - 8 \times (12345678) - 6$ Enable		
$Y1 = (1234****) - 9 \times (12345678) - 1$ Enable		
ENTER-save CANCEL-revise		
F1-disable/enable F2-delete linkage		
Auto	Manual	Level:I

Fig. 4-38

4.2.8.2 Offline program

Press “2” into the display of offline program, referring to Fig. 4-39:

Offline program		
Download-to >control pannel Upload-to >USB		
1. Download linkage(TCDQLD.TXT)		
2. Download note(TCDQZS.TXT)		
3. Upload linkage(TCDQLD.TXT)		
4. Upload note(TCDQZS.TXT)		
Operate by numerical keys		
Note: Transmit completed and reset taken effects		
Power cutting or pulling USB is forbidden in transmission		
Auto	Manual	Level:I

Fig. 4-39

4.2.9 About device

On the main menu, press “8” into the display of “About device”, referring to Fig. 4-40:

This display shows the version of the software, batch No. or other factory default information of the control panel.

4.2.10 Other fast setups

The shortcut keys like self-test, start, stop, linkage, disable, enable or operation level can help us enter the menu. Operate through the keypad and follow the instructions.

About device		
Program ver::Ver 1.0 Batch No.: 2016032601		
Auto	Manual	Level:I

Fig. 4-40

Part Four: Users' Guide

Chapter Five: Faults, Troubleshooting and Regular Inspection

5.1 Common troubleshooting

No.	Problems	Reason	Troubleshooting
1	No display or abnormal display after power up	Abnormal power supply Loose connection with LCD cable.	Check 24V power supply. Check the connection of cables.
2	Can't print	The printer setup is not set as open Loose connecting of printer cables The printer is damaged	Reset the printer Recheck and connect the cables Replace the printer
3	Device fault	The device cables break The device is damaged	Check the connection of cables Replace the device
4	Loop faults	Shortcut circuit of the loop	Check the connection of loop
5	Clock fault, saving fault or loop fault	Environmental interference The relevant parts are aging. The button battery on the mainboard has no power.	Check the connection with earth is good or not. Inform the technical department of our company. Replace the button battery on the mainboard.

5.2 Inspect and Replace Regularly

Inspect devices regularly. Printing paper belongs to consumable. Please keep the paper supply enough.

5.3 Points for attention

This control panel is a precise electronic product, which needs special management and no random touch.

Users should do a good job duty records. If an alarm occurs, press “Mute” on the control panel to confirm quickly and exercise discretion. Once processed, keep preform records, then press “Mute” to cancel. If confirmed as a false alarm, after the record is completed, you can turn off the alarm detector or modules and inform our aftersales department for repair.

Our company is responsible for warranty. Please feel free to connect with our aftersales department if there is any problem. The user shall not disassemble or repair or face the consequence.

Appendix 1 Technical Index

Control panel capacity: Up to 2 bus loops, at the sum of 255 addressable codes.

Wiring:

Wiring	Cable	Distance	Sum and application
Nonpolar two-wire loop	$\geq 2 \times 1.0 \text{ mm}^2$ RVS twist pair	$< 1 \text{ km}$	255 detectors
Power loop line of DC 24V	$\geq 2 \times 1.0 \text{ mm}^2$ RV wire	$< 1 \text{ km}$	Power supply for devices
RS485 loop	Two-core shield cable	$< 500 \text{ m}$	1 x CRT

Environmental requirement

3.1 Environment temperature: $0^\circ\text{C} \sim +40^\circ\text{C}$

3.2 Relative humidity: $\leq 95\%$, non-condensing

4. The power of control panel:

Main power: 220V AC (3A), changing range of voltage: 187V~242V