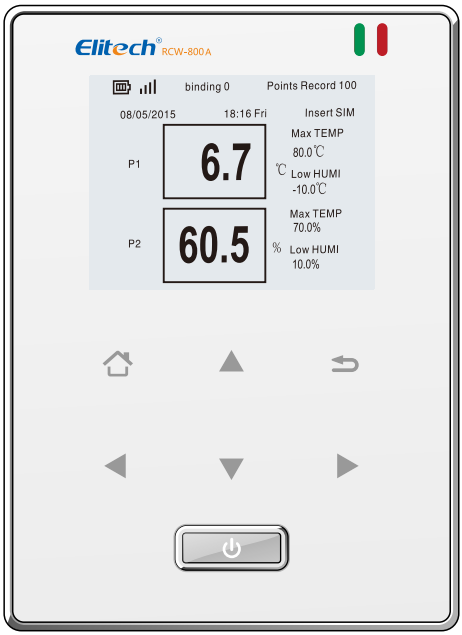
Elitech®



RCW-800A
USER GUIDE

Keep Running After Power–off User–friendly Interface

User Guide

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Chapter I Product Introduction

1.1 Overview

RCW–800A cold chain safety monitor is a high–tech product based on networking tech nology. It completely updates the traditional management style of manual record to a new one that uses a monitor to track, monitor and record data in a real–time and dynamic way. It effectively solves the problems of cold storage temperature and humidity abnormity caus ed by human monitoring error, thus avoiding economic loss and hidden danger.

The monitor completely complies with the latest GSP standard and can be widely used in industries of pharmaceuticals, foodstuffs, catering, logistics, HACCP system certification, etc.

The monitor transmits data to cold chain network platform via 3G network in WCDMA sys tem so that users can achieve real–time monitoring, remote view and management of data online through browser or smart phone terminal. In case of temperature/humidity abnormity, the monitor will immediately alarm by sending short messages or beeping the buzzer. Vario us probes are available. For example, users can select one temperature probe and one hu midity probe based on their actual needs. The monitor has built–in rechargeable lithium ba ttery, so it can provide real–time data uploading and SMS alarm service even in case of cold storage power outage.

1.2 Features and functions

- Comply with the latest GSP standard.
- Real–time monitoring and recording of temperature, humidity and running status of the cold storage.
- SMS, cellphone APP and on–site alarm in case of over temperature/humidity.
- Keep working for at least 2 hours after power supply is disconnected.
- Record cycle could be flexibly adjusted according to the real situation.
- The record capacity of the monitor is 20000 points, which can be synchronized to the cloud.
- The cloud has no space limitation so users can conduct statistics and analysis on the record data.

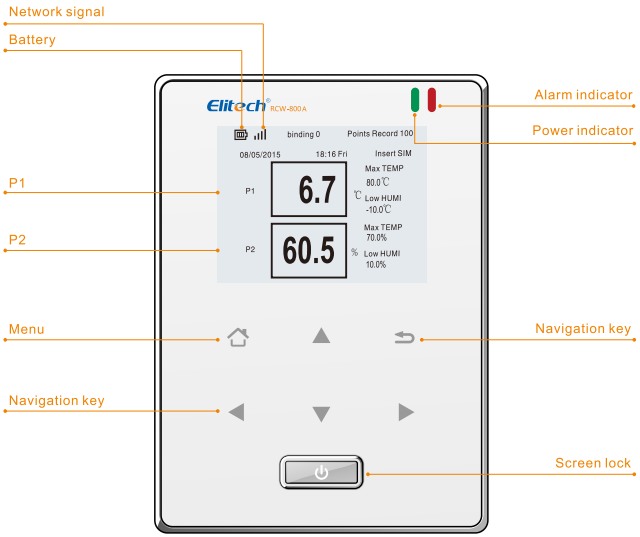
1.3 Technical parameters

- Power supply: 5V/2.5A(DC); It can connect with power supply of 220V, 50/60HZ by exter nal power adapter.
- Temperature measuring range: –40℃ ~ 70℃ ;
- Temperature accuracy: ± 1 ℃ (–25 ℃ ~ 0℃); ± 0.5 ℃ (0℃ ~ 40℃); ± 2 ℃ (others); (Sensor wire length: 5m. If it is longer than 50m, the accuracy deviates 1%.)
- Temperature resolution: 0.1;
- Humidity measuring range: 10~90%RH;
- Humidity accuracy: ± 5%RH;
- Temperature sensor type: NTC;
- Humidity sensor type: Honeywell;
- Record cycle: 1 min to 24 hours continuously set;
- Record capacity: 20,000 points for each way (Max);
- Applicable environment: temperature –10 ℃ ~ 45 ℃ ;Indoor use only, prohibited from exposure to rain and sun.
- Alarm output: indicator, short message, phone call and buzzer;
- Communication interface: 3G, SMS;
- Standby battery: 3.7V 1100mAH lithium battery.

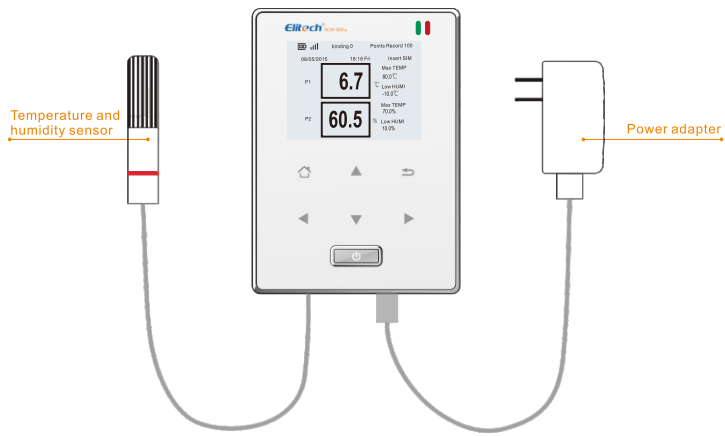
Chapter II Instructions for Use

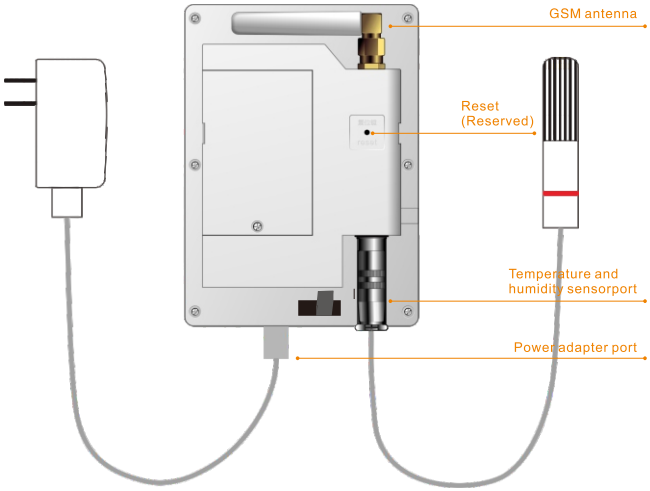
2.1 Device operation procedure

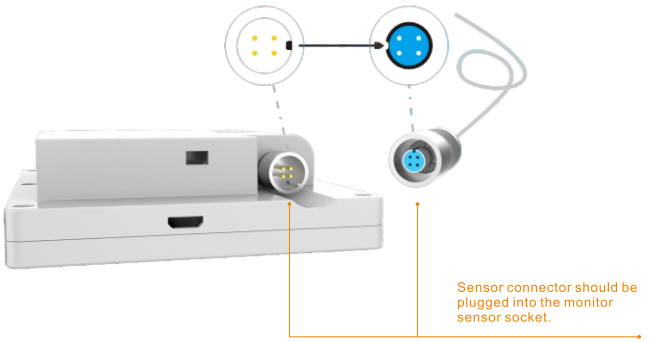
2.1.1 Product introduction



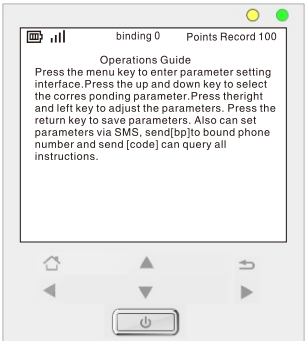
2.1.2 Installation instruction




GSM antenna
Reset
(Reserved)
Temperature and
humidity sensorport
Power adapter port


Sensor connector should be
plugged into the monitor
sensor socket.

2.1.3 Operating instructions

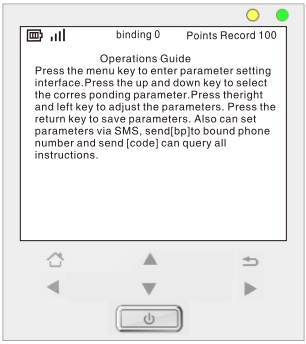


On/Off

1. Slide the On/Off key on the back of the monitor to the right, and the monitor is on and displays start–up picture.

2. When the monitor is switched on for the first time or reset to factory defaults, it will display “Operation guide”. Press the Menu button ⌂ to enter the main interface (Other buttons are disabled at the moment).

3. Slide the On/Off key to the left to switch off the monitor.



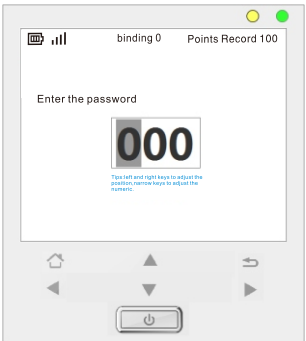
Main interface

1. GSM signal strength: the signal strength the monitor has searched currently.

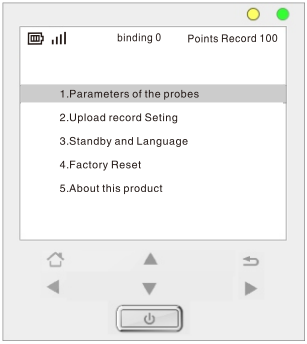
2. Bound cellphones: it displays bound cellphone amount.

3. Alarm indicator: it does not light in normal status; it flashes once a second during over–temperature alarm.

Parameter settings



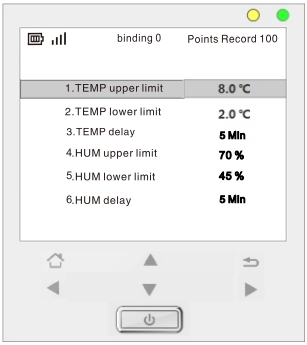
1. In the “Main interface”, press to ⌂ enter the interface of “Enter password”.
2. Press ◀ and ▶ to adjust the digit position; press ▲ and ▼ to adjust the value.
3. You can set the password on the network platform. The initial password is 123.
4. After inputting the password, press to ⌂ enter “Parameter settings” interface.



"Parameter settings" interface

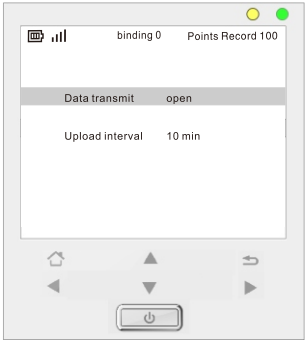
1. You can set alarm parameter, data transmission parameter, screen standby, language and factory reset on this interface.

2. Select "Alarm parameter settings" to set alarm parameters.



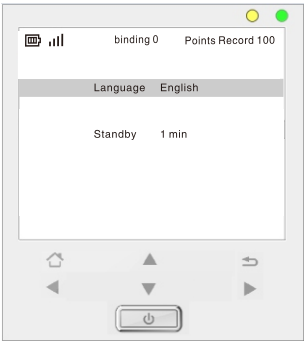
Set alarm parameter

1. Temperature range: –40℃~70℃; humidity range: 0~100%RH; press ◃ and ▹ to adjust the value.
2. Press ◀ and ▶ to select alarm delay value within 0~90 minutes.
3. Press the Return button ⮌ to save the parameters.



Upload report

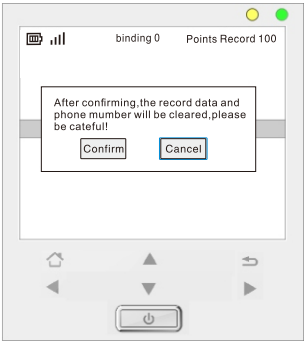
1. Press ◀ and ▶ to open or close data transmission function.
2. Press ◀ and ▶ to select data uploading interval within 1 minute ~ 24 hours.
3. Press ⮌ to save the parameters and enter "Parameter settings" interface.



Screen standby and language selection

1. Select language: Press ◀ and ▶ to switch Chinese/English.
2. Screen standby: three modes are available: 1 min, 5 min and off. The default setting is 1 min. Please press ◀ and ▶ to select your desired mode.
3. Press ⮌ to save the parameters and enter "Parameter settings" interface.

Reset to factory defaults



Factory defaults reset

1. Press ◀ and ▶ to switch Yes/No.
2. If you select Yes, press ⌂ and a dialog box will pop up to ask you to confirm or cancel factory defaults reset. When you press ⌂, the monitor resets to factory defaults, i.e. all the record points and bound cellphone numbers will be cleared.
3. Press ⮌ to save the parameter and enter "Parameter settings" interface.

About the monitor

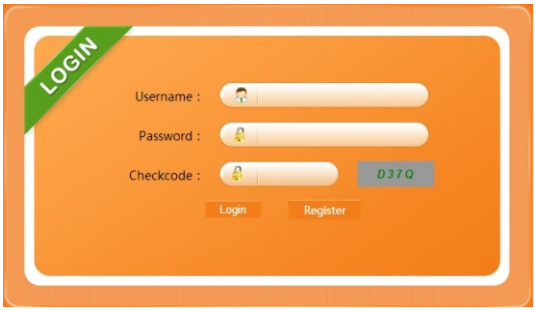
1. Interface: software version, ID and help.
2. Software version: the current software version.
3. ID: the only ID code (a figure with 20 digits) for each monitor.
4. Help: press ▲ and ▼ to select "Help", press ⌂ and the "Operation guide" interface will pop up.

2.2 Platform operation procedure

2.2.1 Platform registration

Please visit website: http://www.i-elitech.com

Step 1: Register account

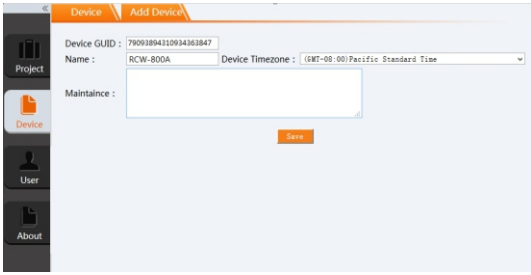


Step 2: Submit information

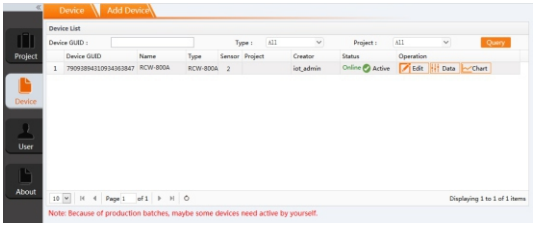
Step 3: Log in the platform

2.2.2 Add devices in the platform

Step 4; Select “device management”, add device ID in the platform (Device ID,refer to "About the product" interface for more information.)

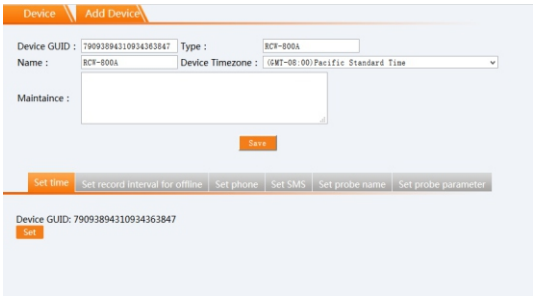


Step 5: After the adding of devices is finished, in the status column, it displays the status of “online activated”, then click “Edit” to set the device parameters.

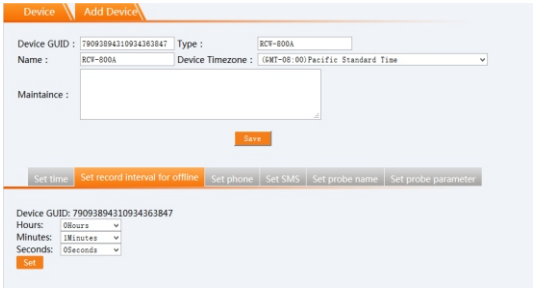


2.2.3 Device parameter setting in platform

Step 6: Click “Set” to set the time of the device

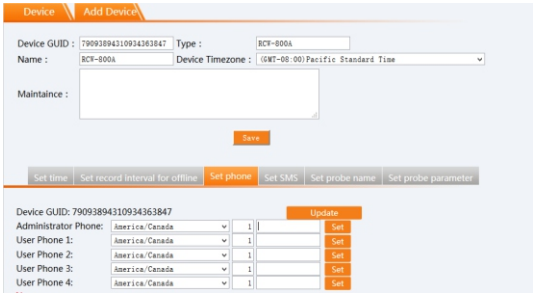


Step 7: Set offline record interval. If the device keeps offline for a long time (for example, no credit in SIM card), it is suggested setting a long record interval in order to record data in a long term.

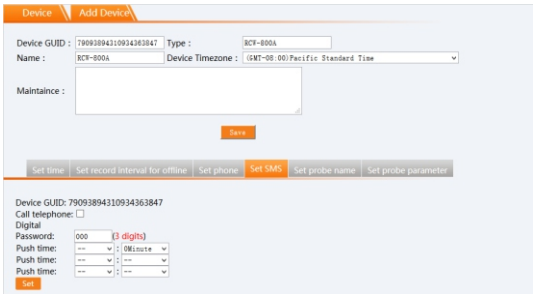


Step 8: Synchronize cell phone number and the bound number will be displayed on this interface.

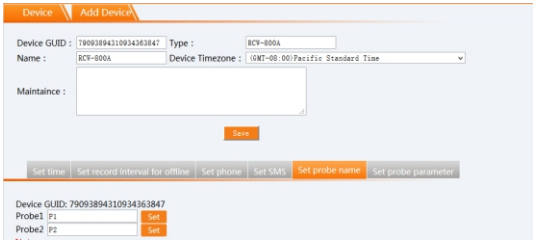
Step 9: Set the bound cell phone number. You can also bind your cellphone by sending short message to the device.



Step 10: Set short message push time

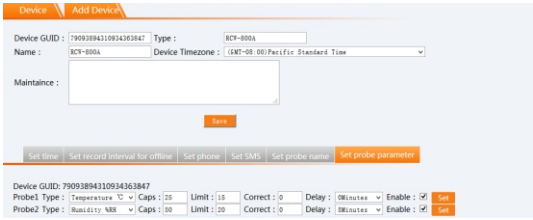


Step 11: Set sensor name, three letters at most.



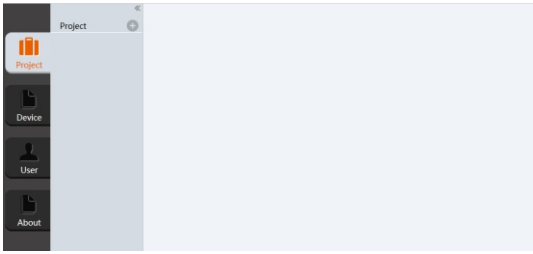
Step 12: Set sensor parameters

1. Set upper/lower limit value of sensors
2. Modify the deviation of temperature and humidity. This function is only available for administer. For common users, it is invisible.
3. Alarm delay time; unit: minute.
4. After finishing setting, check “Enable” and then click “Set” to finish sensor setting.



2.2.4 Create project in platform

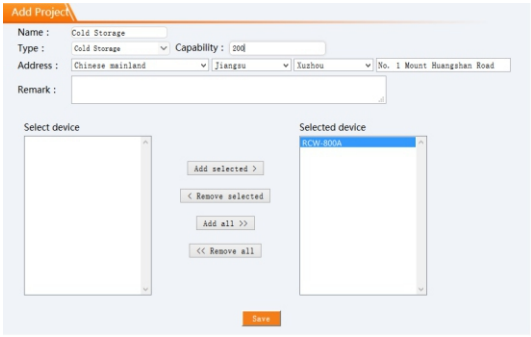
Step 13: Create new project and you can monitor the status of the device and view the coordinate in the map.



Step 14: Edit project information

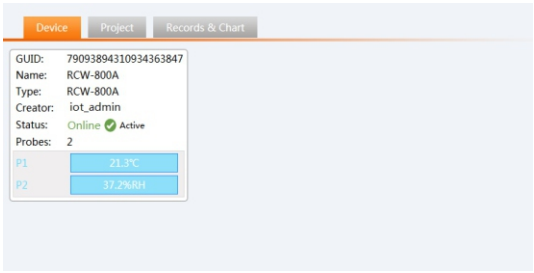
(1) Edit the name of project, the type of project, and cold storage volume

(2) It displays all added devices in the column of “Select devices”. Select certain device (such as medicine storage shown in the following diagram), and click “Add” button, then it will appear in the column of “selected devices”. Click “Save” button to finish project creating.
In the figure below, it has created a medicine project, which uses medicine cold storage device.

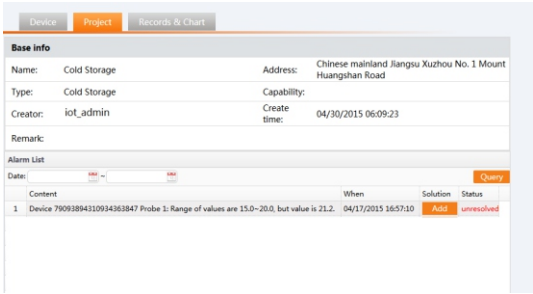


2.2.5 Browse project function ;

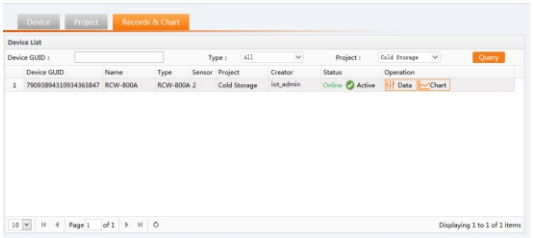
Step 15: Device overview—display device list in the format of squares;



Step 16: Project information—display the basic project information and alarm list information;



Step 17: Data record—display the recorded data and diagram of the device;



2.3 Cell phone operation guide

2.3.1 Cellphone binding

(1) Connect the power supply of the monitor, and after three minutes the network signal appears in LCD display. Then you can start to bind cell phone one minute later.

(2) If you use the monitor for the first time, please send text message “set” by your cellphone to the monitor’s phone number. Once receiving a confirmation message that it has been successfully bound, you can operate according to SMS prompts.

(3) Other common users can send text message “set” by cellphone to the monitor’s phone number. It will be OK once a confirmation message is received that it has been successfully bound.

(4) The one who first binds his/her cellphone is the administrator and has the authority to modify the command parameters. For details, you can send “code” for reference. You can also refer to the part “2.3.2 SMS alarm command list.”

2.3.2 SMS alarm command list

In the following table,「xxxxx」represents SMS content cellphone users send to the monitor. SMS content does not include the symbol「 」.

SMS alarm administrator command

Aim	Message user sent	Message device recevied	Operating instruction
APN settings	「#apn#user name #password#」	Wait for the display to show GSM network signal, send SMS setting and APN in accordance with SIM operator (If APN is set, there is no need to repeat setting.)	
Bind cellphone	「bp」	Thanks for using, and you are administrator! Send「qs」to query status; send「code」to query all command codes; send「cp」to cancel binding; send other cellphone number to bind that cellphone.	
		You are administrator now, please do not bind repeatedly.	When the cell phone number is repeatedly bound
		The binding number reaches its upper limit, binding fails.	
Set tempera ture	「th××l××」	Set success，temperature upper limit：××℃，temperature lower limit：××℃.	If the alarm value is lower than 0℃, then add the symbol "–" before the tempera ture; For duel channel tempera ture, this set will be valid for both chann els; if the second channel is for humi dity, this set will be only valid for first channel tempera ture.
		Set invalid, temperature range –50~100℃, and temperature upper limit should be higher than temperature lower limit.	When set tempera ture is over100℃, or lower than –50, or upper limit is lower than lower limit, it will prompt this message.
Set humidity	「hh××l××」	Set success，humidity upper limit：××% ，humidity lower limit：××% .	Set humidity alarm value.
		Set invalid, humidity range 1~100%, and humidity upper limit should be higher than humidity lower limit.	When set humidity is over100% , or lower than 1% , or upper limit is lower than lower limit, it will prompt this message.

Aim	Message user sent	Message device recevied	Operating instruction
Set alarm delay	「da××」	Set success, alarm delay ×× min.	“××” is alarm time delay, default value is 5min, range 0~90，and it could only be set by administrator.
		Set invalid, alarm delay range 0~90 min.	If it is set beyond the range 0~90min, then it will prompt this message.
Change push time	「ptXXYY ZZ」	Set success, timing push XX、YY、ZZ.	
		Set invalid,，hour in 24–hour system, range 0~23.	If want to close pushing, send 「close push」
Push closed	「pt00」	Setting success, timing push is closed.	
Change sensor name	「p1×× ×」	Senor 1 is renamed to××× .	Sensor name has max. 3characters.
		Set invalid, only could change name of sensor 1 and sensor 2 with max. 3 characters.	If over 3 characters, it will automatically intercept first three characters.
Change sensor name	「p2×× ×」	Senor 2 is renamed to××× .	Sensor name has max. 3characters.
		Set invalid, only could change name of sensor 1 and sensor 2 with max. 3 characters.	If over 3 characters, it will automatically intercept first three characters.
Query cold storage status	「qs」	(push) sensor 1 : 12.1℃, temperature normal; sensor 2: 40%, humidity normal; power supply normal.	It could query current temperature and power supply status of the cold storage.
		(push) sensor 1 : –12.1℃, temperature normal; sensor 2: 24℃, temperature normal; power supply normal.	

Aim	Message user sent	Message device recevied	Operating instruction
Delete phone	「cp」	Administrator identification is deleted and cellphone is unbound!	At the time deleting the cellphone, the count of bound cell phones in LCD will also decrease 1 automatically. If it has bound several cellphones, when administrator's cellphone is unbound, the position will be kept, and the next new user who binds his cellphone will become administrator.
Bind other cellphone	「××××××××××」	××××××××××successfully bound!	"××××××××××" is the cell phone number, and administrator could bind other user's cellphone number. Please input the cellphone number correctly to avoid unnecessary trouble.The one who is bound cellphone will receive a binding message.
Query all bound numbers	「qp」	①××××××××××××; ②××××××××××××;	It could query all bound cellphones.
Cancel other user's cellphone number	「dp XXXXXXXXXXXX」	xxxxxxxxxxx unbound!	Administrator could unbind other bound cellphones.
Change password	「pw×××」	Password change success, new password is ×××.	After finish password change, next time need to input new password to bind cellphone.

Aim	Message user sent	Message device recevied	Operating instruction
Query all command code	「code」	Send「qp」toquery all bound numbers; send「dp×××××××××」to cancel other user's cellphone number; send「pw×××」to change password; Send「pt XXYYZZ」to send push time; send「h××I××」to set alarm temperature; send「da××」to set alarm delay; send「cp」 to unbound cellphone; send「p1×××」to rename sensor 1 to be ×××.	It could query all SMS command by sending「code」.
Wrong command		Wrong command, send「code」to query all command code	It will reply this message only for bound users when they send wrong code.
When common users send other commands		Permission denied, please contact with administrator.	

SMS alarm command for common users

Items	Message 3 user sent	Message device recevied	Notice
Query all command code	「qs」	（push）sensor 1 : 12.1℃, temperature normal; sensor 2: 40%, humidity normal; power supply normal.	
		（push）sensor 1 : –12.1℃, temperature normal; sensor 2: 24℃,temperature normal; power supply normal.	
When bound by administrator		Thanks for using! Your cellphone has been bound! Send「code」to query all command codes.	
When unbound by administrator		Your cellphone has been unbound by administrator.	
When common users send other commands		Permission denied, please contact with administrator.	

Push message cellphone received

Items	Message received	Notice
Timing push	(push) P1: 12.1℃,temperature normal; P2: 40%, humidity normal; power supply normal. （push） P1 : –12.1℃, temperature normal; P2: 24℃, temperature normal; power supply normal.	
Temperature/ humidity alarm	（alarm） P1:30.4℃,over temperatureupper limit, the device is alarming now! To cancel alarm, please dial the phone of the device.	
	（alarm） P2:50%, over humidity upper limit, the device is alarming now! To cancel alarm, please dial the phone of the device.	
	（alarm) P1:30.4℃,over temperature lower limit, the device is alarming now! To cancel alarm, please dial the phone of the device.	
	（alarm） P2:50%,over humidity lower limit, the device is alarming now! To cancel alarm, please dial the phone of the device.	
Sensor abnormity	(alarm) Sensor is disconnected.	
	(back to normal) Sensor is connected.	
Cold storage power outage	(alarm) Power supply abnormal! Please repair it soon!	
Cold storage power connection	(back to normal) Power is connected!	
Device power off reminding	(alarm) The power of cold storage is disconnected, and device will be powered off soon! Please check it asap!	

Chapter III Frequently asked question

3.1 Cellphone could not be bound.
(1) Check if there is signal in LCD display.
(2) Check if there is enough credit in the monitor’s SIM card. Remove SIM card from the monitor and insert it into a cellphone to check.
(3) Check if there has a stable signal around the monitor.
3.2 Cancel phone call alarm
After receiving an alarm message or alarm call, dial the monitor’s phone, alert can be canceled when you hear the hanging up of the monitor.
3.3 Big temperature and humidity data error
(1) Do not put probe lines and high–voltage power lines together.
(2) If extending probe line, please solder the connection points by tin solder to ensure a good connection.

Chapter IV Accessory

4.1 Standard Accessories
One RCW–800A monitor
One temperature/humidity sensor (with 5m wire)
One user manual
One power adapter
4.2 Dual temperature sensor
【User guide of Elitech cold chain network platform】
Download address: http://www.i–elitech.com