

A/C

HB-2020 Series

Horizontal Alarm Host

User Manual

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I. Introduction

HB-2020 Series alarm receiving systems are a complete set of long-distance regional alarm systems, which are composed of HB-2020 computer-controlled wireless receiving hosts and HB-T001 Series solar-powered opposite-type wireless infrared detectors. They can be widely used in industrial and mining establishments, computer rooms, schools, warehouses and other locations.

HB-2020 Series Wireless Receiving Hosts

HB-2020A wireless receiving host adopts secondary frequency conversion processing technology and adopts 8-bit single chip as control core. It has advantages of high receiving sensitivity, easy operation, powerful functions and stable performance.

HB-2020C wireless receiving host adopts secondary frequency conversion processing technology and adopts 8-bit single chip as control core. It has advantages of high receiving sensitivity, easy operation, powerful functions and stable performance. Besides, it can automatically dial pre-set telephone numbers, and also has the function to send an alarm message when the telephone line is dead, and learn the code with a remote controller.

II. Operating Precautions

- Please carefully read this User Manual and pay more attention to labels and directions on the wireless receiving host before operation. Check whether all wire connections are correct and then turn the host on for test so as to prevent occurrence of any

accident.

- The clock module of the host has built-in lithium batteries which can keep the clock module working continuously during power failure. The battery life is about 1 year. If the host can not display the right time, please contact our after-sales service for battery replacement.
- This wireless receiving host can be equipped with 12V 1.2Ah sealed lead acid batteries. If power failure often occurs in some defense areas, batteries with larger capacity are recommended as backup power.
- Please don't disassemble the wireless receiving host in order not to cause accidents or damage the apparatus.
- If failure occurs during operation, please hold the warranty card to approach our client service centre or agents timely. Remember not to disassemble or repair it by yourself.
- Please periodically perform test so as to identify and debug failures in time.

III. Main Functions and Characteristics

1. Function Introduction of HB-2020-A Wireless Receiving Host

- The solar-powered wireless infrared detector can automatically learn code with the wireless receiving host. And it is easy and fast to expand system capacity.
- 1-100 independent wireless defense locations can be defined and each defense location can be armed or disarmed independently. The attributes of each defense location can be defined at will.
- The wireless receiving host can pre-set two groups of on/off times, and can indicate present on/off state.
- Three kinds of alarm sound and four levels of alarm sound volume are optional.

- Ten pieces of up-to date alarm messages will be displayed simultaneously.
- 60 pieces of latest alarm messages can be inquired.
- Build-in backup battery is optional. And it is equipped with floating charge device.
- A set of normally open relay output, a set of normally closed relay output and +12V DC output are provided to control other devices (e.g. alarm siren startup, alarm lamp and alarm linkage etc.)
- It has enclosure damage alarm function.

2. Function Introduction of HB-2020C Wireless Receiving Host

Based on HB-2020A host, HB-2020A host increases functions as follows:

- It can automatically dial six groups of pre-set telephone numbers and two groups of pre-set telephone numbers provided by ADEMCO CID Centre when alarming.
- The pre-set telephone numbers can be dialed 3-9 times.
- It rushes to inform you alarm message by cutting off your present call-in.
- It has dial pause function, and is compatible with built-in exchange system.
- It can receive long distance alarm calls.
- Telephone line short circuit or cut-off report function can be opened/closed.
- It can learn the code with a remote controller.

IV. Name and Usage of Main Parts



Schematic Diagram of Front Panel

① “<” key: It is used to complete setup function together with “Function” key.

② “Function” key: Press “Function” key to switch between setup functions. Please refer to “Operating Instructions” Section for specific operations.

③ “>” key: It is used to complete setup function together with “Function” key.

④ “Reset” key: When alarm occurs, press this key to stop alarming, and alarm message will be automatically kept in record. For HB-2020-C wireless receiving host, when alarm occurs, press this key to stop alarming, and at the same time to stop dialing pre-set telephone numbers. When entering into setup mode, press this key to exit. When telephone line short circuit or cut-off alarm function occurs, press this key to stop this function, or press this key again or reset/power off the host to reactivate this function.

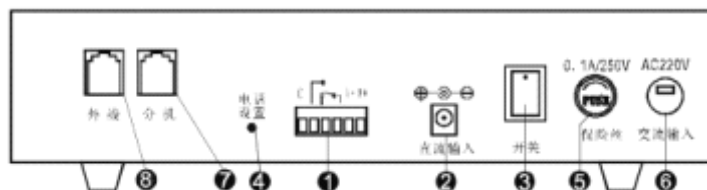
⑤ Time Display: It is usually used to show time through a flashing second lamp. When alarm occurs, it is used to display alarm reception time through a completely lit second lamp. When entering setup mode, it is used to display setup contents through a completely lit second lamp.

⑥ Orientation Display: It is usually used to display clock seconds. When an alarm occurs, it is used to indicate alarm location in defense area. “E1” means the host enclosure has been dismantled. When entering into setup mode, it is used to display function setup

items.


⑦ Failure Indicator: There are two types of failure indicators, namely Low Voltage Indicator and Invalid Operation Indicator. When the failure occurs, the failure time and defense zone No. will be displayed on the panel.

Note: This host has enclosure protection function. Once the host enclosure is dismantled, the host will give out an alarm sound immediately. It is normal when the screen slightly flashes.




Schematic Diagram of Rear Panel

① Output Interface: It is provided with a group of normally opened relay output, a group of normally closed relay output and a group of uncontrolled DC +12V 300mA output.

Normally Opened/Closed Relay Output Interfaces: There is a “” mark on the rear panel of the wireless receiving host. The relay output of the wireless receiving host supports contact rating of 1A 120VAC or 3A 30VDC, which is applied to control other equipments when an alarm occurs. When the power of the controlled equipment is larger than contact rating, it is not allowed to directly connect the controlled equipment with this interface, but to adopt middle relay to avoid damaging the host.

DC Output Interface: V+ and C terminals provide other devices with +12V-13.8V300mA DC output voltage. V+ terminal is DC output anode, while C terminal is DC output cathode, namely power supply source of the entire host. Warning: External power-supply

device must less than 300mA, or it results the damage of host.

② DC Battery Input: The polarity of 12V external backup battery input terminal is . When the host needs larger capacity battery, this interface is used to connect backup battery. This interface is equipped with a self-charge device and can automatically switch between AC and DC. Avoid short circuit occurs in this interface. If build-in backup battery is adopted, this interface should not be connected with power supply.

③ Power Switch: When the backup battery switch is turned off, it will stop working, but backup battery will self charge with AC power.

④ Phone Set-up: Hold down the “Phone Set-up” key for 2.5s to switch to the programmable device of dialling module. Please refer to relevant parts in “Operating Instructions” Section for specific operations.

⑤ Fuse socket: AC power fuse is equipped with AC250V 0.1A fuse tube.

⑥ AC Power Line: This host adopts 220V 50HZ AC power supply.

⑦ Internal phone Jack: It is connected with a user telephone.

⑥ External wire Jack: It is connected with local phone wire

V. Interface Performance and System Connection

V+ Terminal: Anode of 12V~13.8V DC voltage output

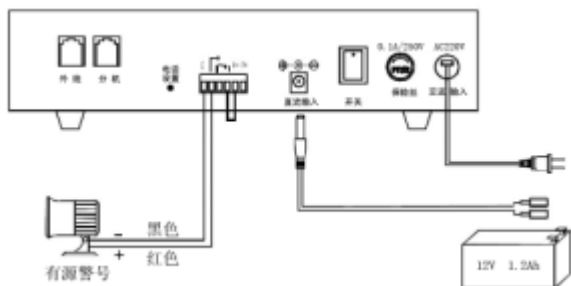
C Terminal: Cathode of 12V~13.8V DC voltage output, namely circuit ground.

DC Input: If build-in backup battery has been selected, the host is not required to connect with external backup battery.

Siren: An active siren is adopted, which will not affect the

operation of built-in speaker in the wireless receiving host. The siren is optional according to specific requirements.

Wiring connection is shown as the Figure below.



VI. System Installation

1. Basic Requirements of System Installation

① During installation, suitable types and models of defense products should be adopted according to user 's requirements for defense areas.

② The installation location, angle and height of defense products shall be determined according to the effective defense zone of defense products and site conditions. The defense products shall be installed in hidden locations as much as possible which must be in compliance with defense requirements.

③ The type of defense zones in each location should be labeled on the orientation drawing.

④ The orientation drawing should be archived for system maintenance.

2. System Installation and Debugging

— The wireless receiving host should be placed on a table which is near to window as far as possible.

— The wireless receiving host has no explosion-proof function, which cannot be directly installed in Class I, II or III hazardous locations (i.e. locations where ignitable concentration of flammable,

explosive vapor/gas, dust or fiber exists), otherwise, it may cause any hazard.

— — In order to ensure excellent operating performance of the wireless receive host, neither should the host share the same power supply with TV, microwave oven and other major high-radiation devices, nor should it be close to these devices. At the same time, the antenna of the wireless receive host should be pulled out.

VII. Operating Instructions

1. Prompt Sound

(1) HB-2020-A Wireless Receiving Host

A long “beep” sound is given out when it is powered on, which means system self-test is normal.

(2) **HB-2020C Wireless Receiving Host**

A long “beep” sound is given out when it is powered on, which means system self-test is normal.

A “beep” sound is given out every second, which means an alarm occurs when telephone line is cut-off.

2. How to Program HB-2020 Wireless Receiving Host

After the host is powered on, the screen of the wireless receiving host will show “12:00 00” through a lit second lamp, and the last two digits on the screen represent the number of seconds. Press the “Function” key to enter into the setup mode, and at the same time, the second lamp is continuously on and the last two digits on the screen flash through which function menu can be set. At this time, the wireless receiving host can not receive any wireless signal from wireless detector. In setup mode, press the “Function” key to switch among different functions. And press the “Reset” key to exit the setup mode. In setup mode, if there is no operation within 30 seconds, the system will automatically exit the setup mode and return back to time display mode.

(1) How to Set Time

In time display mode, press the “Function” key to show the following information:

12 : 00 01

Hour: Press < Minute: Press > Function 1
key to set hour key to set minute Set time

At this time, press “<” or “>” key to adjust time. Press the “Reset” key to exit setup mode, or press the “Function” key to set the first group of automatic power on time.

(2) How to Set the First Group of Automatic Power On Time

Press the “Function” key to enter into “The first group of automatic power on time” setup mode and display the following information:

12 : 00 02

Hour: Press < Minute: Press > Function 2
key to set hour key to set minute Set the first
group of power
on time

In this mode, press “<” or “>” key to adjust the first group of automatic power on time. After setup is completed, press the “Reset” key to exit setup mode or press the “Function” key to set “The first group of automatic power off time”. The above figure shows that the first group of automatic power on time is set at 12:00.

Note: Automatic power on time means a pre-set time from which the wireless receiving host will automatically enter into alert mode and begin to receive wireless signal.

(3) How to Set the First Group of Automatic Power Off Time

Press the “Function” key to enter into “The first group of automatic power off time” setup mode and display the following information:

14 : 00 03

Hour: Press <	Minute: Press >	Function 3
key to set hour	key to set minute	Set the first group of power off time

In this mode, press “<” or “>” key to adjust the first group of automatic power off time. After setup is completed, press the “Reset” key to exit setup mode or press the “Function” key to set “The first group of automatic power on time”. The above figure shows that the first group of automatic power off time is set at 14:00.

Note: Automatic power off time means a pre-set time from which the wireless receiving host will automatically stop receiving wireless signal emitted by the emitter (disarm alter mode), but it still can respond to emergency button of the remote control and alarm signal in emergency zones.

In power off mode, the host displays the following information:

The image shows a digital display with two parts. The left part shows '14' in a box, followed by a colon, then '00' in a box. The right part shows '--' in a box.

(4) How to Set the Second Group of Automatic Power On Time

Press the “Function” key to enter into “The second group of automatic power on time” setup mode and display the following information:

The image shows a digital display with two parts. The left part shows '18' in a box, followed by a colon, then '00' in a box. The right part shows '04' in a box.

Hour: Press <	Minute: Press >	Function 4
key to set hour	key to set minute	Set the second group of power on time

In this mode, press “<” or “>” key to adjust the second group of automatic power on time. After setup is completed, press the “Reset” key to exit setup mode or press the “Function” key to set “The second group of automatic power off time”. The above figure shows that the second group of automatic power on time is set at 18:00.

(5) How to Set the Second Group of Automatic Power Off Time

Press the “Function” key to enter into “The second group of automatic power off time” setup mode and display the following information:

8	:	00	05
Hour: Press <		Minute: Press >	
key to set hour		key to set minute	
		Function 5	
		Set the second	
		group of power	
		off time	

This mode, press “<” or “>” key to adjust the second group of automatic power off time. After setup is completed, press the “Reset” key to exit setup mode or press the “Function” key to set “bypass zone”. The above figure shows that the second group of automatic power off time is set at 8:00. For example, if a company begins operating at 8:00 a.m., the check-out time is 12:00 noon, the check-in time is 14:00 p.m. and the check out time is 18:00 p.m., the power-on /power-off time of the wireless receiving host should be set as follows:

The first group of power-on time is 12:00 noon, while the first group of power-off time is 14:00 p.m.

The second group of power-on time is 18:00 p.m., the second group of power-off time is 8:00 a.m.

It is recommended to reserve some time for employees to check in ahead of schedule and stop off after check out so as not to cause unnecessary alarms.

If you want the wireless receiving host to guard continuously for 24 hours per day, set the same time for any groups of “auto power on time” and two groups of “automatic power off time”, e.g., set automatic power on time and automatic power off time at “12:00”. The factory-set mode is 24-hour continuous alert.

(6) How to Set Bypass Zone

Press the “Function” key to enter into “bypass zone” setup mode and display the following information:

06 : 00 06

Hour: Press < Minute: Press > Function 6
key to set hour key to set minute Set bypass
zone

In this mode, press “<” key to select the zone and press “>” key to select bypass/unbypass mode. “00” means this zone is bypassed, while “01” means this zone is unbypassed.

It should be noted that, whether the defense zone is a common zone or an emergency zone, all alarm information won’t be received if the zone is bypassed by the wireless receiving host.

The factory-set mode is that all defense zones are bypassed. When the host learns code with detectors in certain defense zone, all defense zones will be automatically unbypassed.

It is recommended to apply this function when any failure occurs in defense zones. Once the failure is recovered, the host shall be set in bypass mode in time so as not to avoid loss of any alarm information in defense zones.

To prevent user from forgetting to restore the bypass-zone, the host will automatically reset all zone to original value after power break, so the alarm will be available again.

When sensors alarms frequency or not in good condition, in this status, press function key enable bypass operation, so as to testing whether the sensor is right or wrong.

(7) How to Inquire Records

Press the “Function” key to enter into “Log Inquiry” setup mode and display the following information:

30 . 06 07

Alarm Record No. Alarm Location Function 7

Alarm Record Inquiry

In “alarm record inquiry” mode, press “<” key to display alarm record number and alarm location. Press “>” key to display alarm time (see the Figure below)

21 : 09 07

Alarm Record Time Alarm Record Time Function 7

Hour

Minute

Alarm Record Inquiry

Press “>” key again to display the record number and alarm location of the previous alarm record, and then press “>” to display the alarm time of the previous alarm record.

(8) How to Set Alarm Sound and Alarm Sound Volume

Press the “Function” key to enter into “Alarm Sound and Alarm Sound Volume” setup mode and display the following information:

01 : 00 08

Press < to set

Press > to set

Function 8

Alarm Sound

Alarm Sound Volume

Set Alarm Sound

Function 8 serves to set alarm sound and alarm sound volume. Press “<” to set alarm sound and press “>” to set alarm sound volume.

This host provides three types of alarm sounds. “01” is 120 ambulance warning sound, “02” is 110 police car warning sound and “03” is 119 fire warning sound. And there are four levels of alarm sound volume, which gradually increases from “00” to “03”. During setup, the wireless receiving host can provide pre-set alarm sound and alarm sound volume for reference.

(9) How to Set Power On/Power Off Function by Hand

Manual Power Off: In power-on mode, if it is required to turn off the host at the moment, but users don't want to turn power off to avoid resetting time after reset, the host shall be operated as follows:

In standby mode (as shown in Figure A), hold down “>” key (used to set second) for 5 seconds, and the host will give out two short “beep” sounds, and at the same time, second display zone becomes empty (as shown in Figure B), then the receiving host enters into power-off mode, but at this time, if the host clock works normally, the host don't receive any alarm information (except for emergency zone) until the host is normally powered on by hand.

Manual Power On: Hold down “<” key for 5 seconds to display the following information:



Manual Power Off: Hold down “>” key for 5 seconds to display the following information:



Manual Power On: In manual power off mode (as shown in Figure B), hold down “>” key (used to set hour) for 5 seconds, and the host gives out a short “Beep” sound, and at the same time, second display zone of the host displays second or “— —”, which means the host has returned to normal power-on mode (as shown in Figure A).

Note: Users and distributors shall make clear the difference shown as follows. In automatic power-off mode, the second display zone of the receiving host displays “— —”, while in manual power-off mode, the second display zone becomes empty. The host will display second or “— —” until normally powered on by hand.

3. Programming Set-up for HB-2020C Wireless Receiving Host

Precautions

① The telephone used for programming set-up should be double audio frequency telephone with accessible Internet. Please turn P/T switch to “T” position.

② The wireless receiving host should be set in disarm mode as much as possible to prevent wireless signal from triggering an interrupt.

③ During every step of set-up, telephone will give out sound prompt.

A “beep” sound — — means the operation is valid.

Three “beep” sounds — — mean the operation is invalid.

④ When the host enters into setup mode, telephone is powered by the receiving host, but it is limited by power supply current, so that users fail to conduct programming set-up or can't hear any sound prompt through using “hand-free” function. Therefore, users shall conduct programming set-up through telephone handset.

Programming Operation

How to Enter into Set-up Mode

Make sure to well connect the receiving host and to connect the telephone to the receiving host according to “Interface Performance and System Connection” Section.

In Standby Mode:

Users shall hold down the set-up switch on the rear panel of the receiving host for 2.5 seconds until the host gives out a “beep” sound, and then input a six-number user password and press “#” key to confirm it. Once the password is confirmed, the host will enter into set-up mode.

The factory-set user password is “000000”. If the password is confirmed, there will be a “beep” sound, and then users can go on the next operations. Otherwise, the host will give out three “beep” sounds, and in this case, users shall input password again after sound prompt.

User password can be modified. To modify user password, please refer to the “How to Modify User Password” Section.

Note:

① After pressing down the set-up switch, the outside line will be automatically cut off. At this time, the telephone connected with the host via telephone extension interface is powered by the wireless receiving host, and there should be no dialing tone, bust tone, prompt sound or other voice signal for the telephone. If there is dialing tone, bust tone, prompt sound or other voice signals, it means the outside line is not be cut off. Users can hold down the set-up switch again to enter into the set-up mode, or check if the outside line and telephone extension line connection are normal.

② If users continuously enter the wrong password 3 times, the host will alert immediately, and at the same time, the original second display zone will display “E4”, , and the dialling module will enter into the set-up mode immediately and refuse to respond to the set-up switch within 20 seconds.

③ When telephone line connection is completed, the wireless receiving host gives out urgent “beep·beep·” sound prompt. If the telephone extension socket and telephone socket are wrongly connected, because telephone line is cut-off, this sound prompt often occurs. To avoid this problem, please make sure telephone line is well connected, and then set the host again.

④ In set-up mode, if users do not carry out any operation within successively 20 seconds, the dialling module will automatically exit the set-up mode. In this case, users must enter into the set-up mode again to set the host.

All the following operations shall be done in set-up mode. And press “0#” to exit set-up mode once set-up is completed.

Note 1: Users can exit programming set-up mode at any time after the host gives out prompt sound.

(1) How to Enable/Disable Alarm under Telephone Line Short Circuit or Open Circuit

Enter “6#” to enable alarm under telephone line short circuit or open circuit

Enter “7#” to disable alarm under telephone line short circuit or open circuit

It is recommended to enable alarm under telephone line short circuit or open circuit. Under telephone line short circuit or open circuit, the receiving host will give out urgent “Beep··Beep··” sound prompt.

(2) How to Modify User Password

Enter “9#AAAAAA#AAAAAA#” to change the old user password into a new one.

“AAAAAA” is a new user password. Once user password is modified, the old password will be automatically invalid. To enter into set-up mode again, users should enter the new password.

It is recommended that users should change password timely and take good care of password. If users have forgotten password, users shall contact the distributor to ask for help.

(3) How to Set Informed Telephone Numbers

Enter “11#BBBBBB#” to set the first group of informed telephone numbers

Enter “12#BBBBBB#” to set the second group of informed telephone numbers

Enter “13#BBBBBB#” to set the third group of informed telephone numbers

Enter “14#BBBBBB#” to set the fourth group of informed telephone numbers

Enter “15#BBBBBB#” to set the fifth group of informed telephone numbers

Enter “16#BBBBBB#” to set the sixth group of informed

telephone numbers

“BBBBBB ” represents telephone/mobile phone/beep pager numbers

Note:

During the course of entering telephone/mobile phone numbers, users can enter “*” to add a 2-second pause. The number of * is subject to the type of telephone exchanger. This function applies when users need to dial telephone extension number or semi-automatic pager station.

For example: If the telephone host number of a unit is 6666666, and the telephone extension number is 888, the informed telephone number can be set to 6666666*****888, which means the system dials the telephone extension number 888 after dialing the telephone host number 6666666.

① Each group of telephone numbers (including *) should not more than 27 digits.

② To change any group of telephone numbers, users can directly enter new password, or delete old password and then enter new password.

(4) How to Pre-set Telephone Numbers of ADENCO CID Centre

Enter “17#[Telephone Numbers of ADENCO CID Centre]#” to set the first group of telephone numbers of ADENCO CID Centre.

Enter “18#[Telephone Numbers of ADENCO CID Centre] #” to set the first group of telephone numbers of ADENCO CID Centre.

Note 1: The telephone numbers of ADENCO CID Centre shall be pre-set according to set-up precautions of informed telephone numbers, but when telephone numbers of ADENCO CID Centre are pre-set, user ID shall be set according to instructions of Command 24#.

(5) How to Delete Informed Telephone Numbers or Telephone Numbers of ADEMCO CID Centre

Enter “ 11# ” to delete the first group of informed telephone numbers

Enter “ 12# ” to delete the second group of informed telephone numbers

Enter “ 13# ” to delete the third group of informed telephone numbers

Enter “ 14# ” to delete the fourth group of informed telephone numbers

Enter “ 15# ” to delete the fifth group of informed telephone numbers

Enter “ 16# ” to delete the sixth group of informed telephone numbers

Enter “ 17# ” to delete the first group of informed telephone numbers of ADEMCO CID Centre

Enter “ 18# ” to delete the second group of informed telephone numbers of ADEMCO CID Centre

Enter “ 19## ” to delete all informed telephone numbers including telephone numbers of alarm receiving center.

(6) How to Set Dialling Times of Informed Telephone Numbers

Enter “ 2#[dialling times]# ” to set dialling times of informed telephone numbers. The dialling times shall be set to 3-9.

Note:

The dialling times of informed telephone numbers means times of repeatedly dialling any group of telephone numbers when users can not be informed of any alarm information. The factory-set value of dialling times is 3 times.

(7) How to Set ADEMCO CID Centre User ID

Enter “ 24#[4-digit ID] ” to set User ID of ADEMCO CID alarm receiving centre.

Note:

If the system indicates “wrong input” during set-up, users can

enter “*” to return back to the previous menu.

How to Operate when Receiving Alarm Information

When receiving an alarm call, users will hear a 10-second alarm sound prompt after picking up the phone, and then hear a short “beep” sound prompt, after which users can perform some operations by entering the following information:

Enter 0# to stop receiving alarm calls and stop dialling any group of telephone numbers when no alarm occurs, which means users have received alarm calls.

Enter 5# to replay siren.

Enter 2# to disable alarm, which means telephone alarm function is terminated.

If users input an effective command, users can hear a short “beep” sound from telephone handset; otherwise, users shall input relevant commands again.

Note:

① If users enter “2#” to disable alarm after receiving alarm information, the wireless receiving host will stop dialing other groups of informed telephone numbers.

② If users do not perform any operation after receiving alarm information, the wireless receiving host will continue dialing one inities until other groups of informed telephone numbers .

VIII. How to Add/Remove Remote Controllers and Wireless Detectors

2020C Host can automatically learn the code with a remote controller (learning-type host). By learning codes with the host, the remote controller can disarm, turn on or turn off the host, or send an emergency alarm message to the host via remote control. 2020C Host can learn codes with a maximum of 4 remote controllers (00-03).

1. Description of Buttons on a Remote Controller

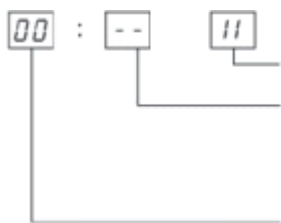
🔒 ON: When the host is in off mode, press “ON” to turn on the host (manual turn-on).

🔓 OFF: When the host is on mode, press “OFF” to turn off the host (manual turn-off).

🚫 Disarm: When pressed, the host will be disarmed.

🚨 Emergency: When pressed, the host will enter into emergency alarm status and will indicate there is an alarm occurring in defense zone E5.

2. How to learn the code with a remote controller: In power-off mode, press the “Reset” key of the host, and at the same time turn on the power switch, and then release the “Reset” key. At this time, the screen will display the following information:



Function Menu 11, code learning, flickering display

Display code learning status; “- -” (overline) means code learning has been completed. “--” (middle line) means code is being added or removed.

Display zone number

Press “<” key to select zone number. After determining the zone, press the “Function” key, and the host will give out a “beep” sound prompt, and at the same time, the screen displays “00: -- 11” and “11” stops flashing, which means the code for this zone has been emptied, and the host enters into code learning mode and waits for receiving signals emitted by the remote controller. At this time, press 🔒 on the remote controller once. Once the host has received correct code emitted by the remote controller, it will give out two “beep” sound prompts, and “--” will automatically turn into “_ _”, which means code learning is successful. And then press “<” key to set for other zones, or press

“Reset” key to exit code matching mode. If the host is required to learn the code with another remote controller, please select a new zone in accordance with above mentioned procedure, and let the host learn the code with the remote controller. To exit, please press “Reset”.

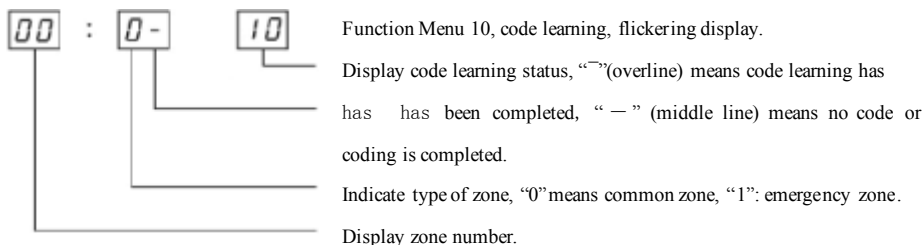
<二>. HB-2020 Series host can automatically learn code with wireless detectors. The host can receive alarm signals only when wireless detectors complete learning code with the host. The host can learn the code with a wireless detector in every defense zone. There are 100 defense zones in total (defense zone 00-99), and each zone can be set to common zone or emergency zone.

Common Zone: The wireless receiving host can't respond to wireless signals emitted by wireless detectors in power-off mode, but it still responds to operations of emergency button on remote control.

Emergency Zone: It is also called 24-hour defense zone. As long as the host is under working mode, it can respond to signals emitted by wireless detectors in this zone, and is not subject to pre-set power-on/power-off time. It can respond to operations of emergency button and can be applied in places requiring emergency help.

How to Learn Code with Detectors

In power-off mode, press the “Function” key of the host, and at the same time turn on the power switch, and then release the “Function” key. At this time, the screen will display the following information:



Press “<” key to select zone number. Press “>” key to change type of zone. After determining the zone, press the “Function” key, and the host will give out a “beep” sound prompt, and at the same time, the screen displays “01:0-10” and “10” stops flashing, which means the code for this zone has been emptied, and the host enters into code matching mode and waits for receiving signals emitted by detectors (transmitter). At this time, detectors (transmitter) will be triggered to emit signals once. If the host has received correct code emitted by detectors (transmitter), it will give out two “beep” sounds, and “-” will automatically turn into “_”, which means code learning is successful. And then press “<” key to set for other zones, or press “Reset” key to exit code matching mode.

For example: Set one of wireless detectors in zone 02, which is an emergency zone. Firstly, set this wireless detector in alert mode, power the host off, press the “Function” key and at the same time, power the host on, and then release the “Function” key. At this time, the screen will display “01:0- 10”. Press “<” key to set zone number to 02, and at the same time, the screen will display “02:0- 10”. Press “>” key, and the screen will display “02:1-10”. And then press the “Function” key, and detectors (transmitter) will be triggered to emit signals. If the host has received correct code emitted by detectors, it will give out two “beep” sounds, and “-” will automatically turn into “_”, which means code learning is successful.

IX. Main Technical Specifications

Receiving Frequency: HB-2020A 433 MHz

HB-2020C 433 MHz

Wireless Receiving Sensitivity: $\leq 0.2\mu\text{V}$ (12db SINAD)

signal receiving :Fsk multifrequency receiver.

Operating Voltage: AC220V \pm 15% 50Hz, DC 12V~13.8V

Operating Current: Standby Current $\leq 75\text{mA}$, Alarm Current:
 $\leq 300\text{mA}$

Operating Environment: $-10^{\circ}\text{C} \sim +50^{\circ}\text{C}$

Alarm Loudness: $\geq 100\text{ dB}$ within 1m

X. Packing List

(1) HB-2020 wireless receiving host	1 set
(2) Receiving Antenna	1 piece
(3) User Manual for HB-2020 Wireless Receiving Host System	1 copy
(4) Warranty Card	1 copy
(5) Remote Controller	2pcs
(6) Phone line	1pc

XI. List of Optional Parts

1. Solar-Powered Wireless Detector Series (433Mhz)
2. 12V12Ah Backup Battery
3. Clock Module (It works normally when the host is powered off)
4. DC12V15W Active Siren

XII. Simple Failure Recovery

Failure Symptom	Failure Reasons	Failure Recovery Methods
No sound prompt and clock display when powered on.	The power plug is badly connected, or the plug has no power, or fuse has burnt out.	Check the plug/socket, or check the fuse and replace damaged parts.

Backup battery can't work normally when power failure occurs.	Check whether the polarity of backup battery is wrongly connected, or check whether backup battery fuse has burnt out. backup battery out of life	Check if the polarity connection of backup battery is correct, or check if the fuse has burnt out. recharge the backup battery
There is low-voltage warning tone when alarm host provides power by backup battery.	Backup battery power lower. Backup battery is invalid.	Recharge backup battery. Change backup battery.
The receiving distance of the host becomes shorter	Antenna is damaged. The host shares the same socket with TV and microwave oven etc. Close to TV and microwave oven etc.	Replace the antenna. It is recommended to use an independent power socket. Avoid close to devices with high electromagnetic radiation.
Alarm information can not be received in some defense zones.	The code for this zone has been deleted. This zone has been bypassed by the host.	Relearn code under the direction of the distributor. Arm this zone again according to user manual.
Detector Misinformation	The installation position does not comply with installation requirements. The power of backup battery is low or invalid.	Adjust installation position according to installation requirements. Check backup battery.
The wireless detecting distance of wireless detectors becomes shorter.	The installation position of the detector is not suitable. The installation conditions are subject to interruption or obstruction.	Adjust installation position
The distance of	The emitting indicator lamp does not	Battery power low, it needs to

remote control becomes shorter.	flicker when emitting signals.	replace battery.
Failure to enter into set-up mode	The code entered is wrong, or the telephone is not accessible to internet.	Enter correct code, or replace the telephone with one with internet access
Dialing is abnormal	Wrong code input due to adoption of telephone without internet access Outside line is parallel-connected with telephone extension.	Use a telephone with internet access and enter code again. Telephone extension should be parallel connected with the output terminal of the wireless receiving host extension.
Facsimile equipment gives out urgent “beep •• beep” sound when working.	The input terminal of outside line of the wireless receiving host is not connected with the output terminal of facsimile equipment extension.	Connect facsimile equipment with the output terminal of the wireless receiving host extension.

List of Defense Zones

Zone No.	Zone Location	Zone No.	Zone Location	Zone No.	Zone Location
00		34		68	
01		35		69	
02		36		70	
03		37		71	
04		38		72	
05		39		73	
06		40		74	
07		41		75	
08		42		76	
09		43		77	
10		44		78	
11		45		79	
12		46		80	

13		47		81	
14		48		82	
15		49		83	
16		50		84	
17		51		85	
18		52		86	
19		53		87	
20		54		88	
21		55		89	
22		56		90	
23		57		91	
24		58		92	
25		59		93	
26		60		94	
27		61		95	
28		62		96	
29		63		97	
30		64		98	
31		65		99	
32		66		100	
33		67			

Statement

- 1. This product is a wireless transmitter, so it shall be deployed upon approval by the local radio regulatory authority.**
- 2. This product is an advanced wireless alarm device, but we can not guarantee no personal casualty and property loss happens when users have deployed this product.**

- 3. The solar-powered opposite-type wireless detector is a type of product which is powered by solar energy and charged using solar panel. Please make sure not to install this product in locations with no sunlight or sunlight intensity below 2200lux all the year round.**
- 4. This product is an advanced wireless alarming device, but like other electronic products, it may be subjected to failures, so users shall routinely test the system to ensure its stable and reliable operation. If any abnormality is detected, please connect local distributor timely.**
- 5. If users do not agree to the above-mentioned terms, you can return the product to us within 3 days from purchase date provided no man-made damage occurs, and we will refund users all money. Otherwise, users will be deemed to have agreed to the above-mentioned terms.**