

Hong Men

Road Barrier Control System

User Manual

HONGMEN ADVANCED TECHNOLOGY CORPORATION

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Please read the user manual carefully before using the product.

Preface

Thank you for choosing the control system of smart barrier gate which elaborately developed by HONGMEN ADVANCED TECHNOLOGY CORPORATION.

Please try to read the manual carefully and understand the related product information in order to ensure the safe use of the product and improve its service life.

The pictures in the manual are schematic diagrams for your reference. If the pictures are not corresponding with the real objects, please refer to the latter.

The corporation has the final interpretation of this manual. Please kindly understand us if we cause any inconvenience for you.

HONGMEN ADVANCED TECHNOLOGY CORPORATION

Catalogue

First, Product External View

Second, Product Use and Scope of Application

Third, Product Function Introduction

Fourth, Product Technical Description

Fifth, Technical Parameters of Products

Sixth, Installation and Debugging

Seventh, Instructions of 2.4G Wireless Remote Control

Eighth, Analysis and Processing of Common Faults

Ninth, Use and Maintenance Considerations

Tenth, Safety Precautions

Eleventh, Packaging and Storage

Twelfth, After-sales Service

Thirteenth, Information Feedback

First, Product External View

Remote control receiving end

Second, Product Use and Scope of Application

The product is designed for the management equipment of access entrance and exit to limit the movement of motor vehicles, which is now widely applied to highway toll station and parking lot system to manage the vehicle access, thus to manage the vehicle access. It applies to the management of entrance and exit access of various government agencies, residence, Science and Technology Park, Logistics Park, dedicated parking lot, expressway, housing estate, shopping malls, railroad crossing and other public places.

Third, Product Function

3.1 Many Kinds of Control Methods: Including onboard buttons, wireless remote control, external terminals, RS485 communication and other means to achieve such functions as raising the bar and dropping it.

3.2 Multiple Protection Functions: Including ground sense and infrared protection, to achieve the protection of application environment. (It is required to match with the appropriate sensor)

3.3 Various Application Modes: Multiple application modes such as the single, motorcade and counting modes are available for users to choose.

3.4 Multiple Motor Protection: such ways as overtime stop and bounce at resistance are available to protect the operation of the motor.

3.5 Emergency Linkage Function: It can keep the traffic smooth in emergency situations (such as fire control).

3.6 Status Output Function: The control panel can output the relay signal through the

status interface on the basis of actual application requirements.

3.7 Man-machine Interaction Function: The control panel provides a 4-digit nixie tube to display information. Customers can set the functions of the control panel according to the relevant operating instructions.

3.8 Self-test Function: Adjust the operation of the motor according to different types of brake bar to ensure accurate positioning.

3.9 Speed Regulation Function: Adjust the maximum running speed of the motor according to the parameters set to ensure smooth operation of different loads.

3.10 Fine-tuning Function: If the brake bar is not vertical or horizontal after the self-test is completed or long run, it is available to adjust the vertical or horizontal switch through the slide switch on the board, and then complete the fine-tuning through the plus or minus on the board, so that the brake bar can return the vertical or horizontal position.

Fourth, Product Technical Description

4.1 Speed Regulation Selection

The 1 ~ 2 place of S2 dial code on the control board is the setting terminal of the speed regulation. The specific parameters are as follows in Table 1 (It can be achieved when it is set as 2 shown in Table 5 10-1).


Speed Regulation Setting	DP1	DP2	Description
	ON	Retain	Fast running speed (factory default)
	ON	Retain	Fast running speed
	OFF	Retain	High running speed
	OFF	Retain	High running speed

Table 1

4.2 Working Mode Selection

The S1 dial-up 2 on the control board is used to select the working mode. "OFF" end stands for the automatic working mode, and "ON" end stands for the ordinary working mode. Please see Table 2.

Working Mode	DP2	OFF	Automatic working mode
		ON	Ordinary working mode

Table 2

Note: If you need the functions of ground sense and overtime drop lever, you must start the setting of automatic drop lever. All the following contents have a precondition of starting the setting of automatic drop lever.

【Ordinary Working Mode】

(1) All control methods are equipped with the function of a sense of delay

automatic drop lever. Such control signals as artificial (remote controller) and terminal block are equipped with overtime drop lever function. For more details, please refer to the parameter description of “3-1” selection in the parameter setting table (Table 5).

【Automatic Working Mode】

(1) Counting Mode: The control signal of control panel terminal strip is equipped with the function of passing several cars. The control system will automatically control the ground sensor rod according to the number of lever-raising signal. When the number of car passes is consistent with that of lever-raising signal, the control panel will execute delayed lever-dropping action. This working mode is equipped with overtime automatic lever-dropping function. For the detailed operation, please refer to the parameter description of "3--1" in the parameter setting table (Table 5).

(2) Motorcade Mode: If the artificial (remote control) is adopted to operate the raiselever, the bar cannot be dropped automatically after the vehicle passes. Once the signal of any other drop lever is executed, the motorcade mode will be relieved automatically. There is no overtime automatic lever-dropping function in this mode of operation.

4.3 Fixed Mode Setting

The S1 3-WAY on the control board is the setting terminal of barrier gate fixing mode. The system will automatically adjust the status of lever raising and lever dropping according to the installation method. "OFF" end stands for the left fixing way and "ON" end stands for the right fixing way. Please see Table 3.


	DP3	ON	Right Fixing
		OFF	Left Fixing

Table 3

Note: Please make sure the fixing mode is correct before completing the power debugging in case the barrier gate electric motor is blocked. It is forbidden to change the fixing orientation under the state of power supply, or it won't operate normally.

4.4 Automatic Identification of Self-test Torque

Turn on the power supply for the first time and press the raise lever or drop lever button into the self-test learning process, at this learning process all functions such as remote control, buttons, terminals, and 485 control are invalid. The barrier gate control system will automatically identify the torque according to different length and weight of the lever. Please study with the minimum torque to protect the motor and reduction gear box free of the impact of large torque in the learning process.

Learning Self-test Process:

4.4.1 Once power on, the digital tube shows F100, confirm whether the fixing mode is correct, and then press the lifting lever button.

4.4.2 The brake lever runs automatically, first drop the lever automatically, at the same time digital tube shows the changes of step numbers of Hall sensor; when the lever reaches the lowest point the brake lever stops for 2 seconds, and then raise the lever automatically, at the same time digital tube shows the changes of step numbers of Hall sensor. When the digital tube shows "YES" at the highest Point, it means the self-test is successfully finished. Then go back to the horizontal position.

4.4.3 If the self-test is completed, you can control the lifting lever in a normal way.

Note: The brake lever runs rather slowly at the self-test learning process. It is forbidden to touch or block the brake lever and the pedestrians or vehicles are prohibited from passing through.

4.5 Fine Tuning Function

The slide switch on the control panel is used to set the fine tuning function. See Table 4.


Fine Tuning Setting	Left	Fine Tuning Vertical Position
	Middle	Exit the Fine Tuning Setting
	Right	Fine Tuning Horizontal Position

Table 4

Operating Instructions:

4.5.1 Slide the switch to the position you want to fine-tune, the initial number XXXX will be shown on the digital tube.

4.5.2 Plus through the "raise lever" key and subtract through the "drop lever" key. The range of plus or minus numbers on the digital tube is from -300 to +300.

4.5.3 Press the "stop" key to confirm, slide the switch to the middle and exit the fine tuning setting to complete the operation.

4.5.4 Press the "raise lever" and "drop lever" keys to observe whether the brake lever is horizontal or vertical, if not please do it again.

Note: At the regulation, if the value is too large the brake lever may exceed the scope of the mechanical limit, so the brake lever may not run in place or form a stalling state.

4.6 Parameter Setting

The system is also equipped with the setting interface of special function parameter, which can set the corresponding parameters based on different application requirements. While adjusting the parameters, it is significant to ensure that the

control system is at a standstill so as to ensure the safety during operation. For more details of parameters, please See Table 5. Specific setting methods are as follows:

Adjust the "Setting" dial number to ON position, and then enter the function setting			
Menu name "1-2" is shown on the digital tube	Press "Raise Bar" Key	Show next page	Press "Stop" Key, the data are kept temporarily.
Press on the "stop" key for 3 seconds, the digital tube shows "SAVE", and then save the setting	Press "Drop Bar" Key	Show last page	Press "Drop Bar", parameter-1
	Press "Stop" Key	Enter the parameter modification	Press "Raise Bar", parameter+1
Adjust the "Setting" dial number to OFF position, and then exit the function setting			

Chart 1

4.6.1 Adjust the S1 "Setting" dial number DP1 to ON end, the digital tube shows menu "1-2".

4.6.2 Different menu items can be selected through operating the "raise lever" or "drop lever" key, meanwhile the digital display shows the current menu number.

4.6.3 Press "Stop" key to enter the corresponding menu item, meanwhile the digital tube shows the parameter value in the corresponding menu.

4.6.4 The content of parameter value can be "added" or "reduced" through the "raise lever" or "drop lever" key.

4.6.5 Press "Stop" key to temporarily store the contents of modified menu, meanwhile the digital tube resumes showing the current menu number.

4.6.6 If you want to modify other menu contents, you can repeat steps (2) ~ (5).

4.6.7 After completing the adjustment of parameters, press "Stop" key for 3 seconds to save all the modified parameters. After they are saved successfully, the digital tube will show "SAVE". After completing the setting, adjust the "Setting" dial code to OFF and exit the setting mode.

Note: While you are adjusting specific parameters, you can press the "Stop" key for 3 seconds to save the modified parameters, so that parameter errors can be avoided while modifying too many parameters. When setting the parameters, adjust the "Setting" dial code to OFF directly, the exit the parameter setting directly, but the unsaved parameters will not be saved any more.

Function	LED Display	Data/Selection	Description	Default Values
Software Version	F100		The version number is read-only and	F100

No.			cannot be modified.	
485 Address	1-2	1-255	Make sure that RS485 communication address is the same as the communication protocol address.	1
Delay Protection	1-3	Time	0: No running overtime protection	30
			1 ~ 180: Over this time, it will be shut down automatically.	
Restore Settings	1-4	Restore the default settings	Yes: Restore the default settings	NO
			No: Do not restore the default settings	
Linkage Ground Sense	2-1	Ground Sense Linkage /Non-Linkage	Yes: When the terminal strip lifting lever is valid, it needs to link the ground sense.	NO
			No: When the terminal row lever is valid, it is unnecessary to link the ground sense.	
Overtime Drop Bar	3-1	Time	0: No overtime automatic drop bar function	0
			1 ~ 60: If there is no vehicle passing through during this time, it will drop the lever automatically.	
Ground Sense Delay	3-2	Time	No: No ground sense delay function	0
			0 ~ 60: The time of ground sense delay is subject to this parameter.	

Status Output	4-1	Status 1 Output	0: No Output	1
			1: Output at raising lever	
			2: Output at dropping lever	
			3: Output at raising, dropping lever	
			4: Output when the raise lever is in place	
			5: Output when the drop lever is in place	
			6: Output when the raise, drop lever is in place	
			7: Output at raising lever or when raise lever is in place	
			8: Output at dropping lever or when the drop lever is in place	
	9: Illegal raise lever output (remote control raise lever output)			
	4-2	Status 2 Output	0: No Output	9
			1: Output at raising lever	
			2: Output at dropping lever	
3: Output at raising, dropping lever				
4: Output when the raise lever is in place				
5: Output when the drop lever is in place				
6: Output when the raise, drop lever is in place				

			7: Output at raising lever or when raise lever is in place	
			8: Output at dropping lever or when the drop lever is in place	
			9: Illegal raise lever output (remote control raise lever output)	
Obstruction Setting	5-1	Obstruction Rebound	Automatic Identification	
Fast Mode Speed Setting	8-1	Parameter Setting	Maximum output of the motor when raising the lever. (0-240)	80
	8-2		The size at the deceleration zone when raising the lever. (0-100)	50
	8-3		Maximum output at the deceleration zone when raising the lever. (0-100)	30
	8-4		Maximum output of the motor when dropping the lever. (0-240)	80
	8-5		The size at the deceleration zone when dropping the lever. (0-100)	50
	8-6		Maximum output at the deceleration zone when dropping the lever. (0-100)	30
High Mode Speed Setting	9-1	Parameter Setting	Maximum output of the motor when raising the lever. (0-240)	200
	9-2		The size at the deceleration zone when raising the lever. (0-100)	50
	9-3		Maximum output at the deceleration zone when raising the lever. (0-100)	30
	9-4		Maximum output of the motor when dropping the lever. (0-240)	200
	9-5		The size at the deceleration zone when dropping the lever. (0-100)	50
	9-6		Maximum output at the deceleration zone when dropping the lever. (0-100)	30
Mode Setting	10-1	Parameter Setting	1: Default mode only has fast mode.	1
			2: There are two modes: fast and high speed. (It's subject to dial switch)	

Table 5

Fifth, Technical Parameters of Products

5.1 Working voltage: 220VAC±20%/50HZ

5.2 Main board static power consumption: <3W

5.3 Ambient temperature in use: Industrial grade (-40℃ ~ +80℃)

5.4 Maximum output load power: 500W

5.5 Raising lever time: high speed $0.7 \pm 0.2S$; fast speed $1.5 \pm 0.2S$

5.6 Dropping lever time: high speed $0.7 \pm 0.2S$; fast speed $1.5 \pm 0.2S$

5.7 BLDC parameters: 12 slots 14 class, rated speed 3000RPM, rated working voltage

DC 310V, maximum current 6 A

Sixth, Installation and Debugging

Warning! ! Be sure to conduct the installation and debugging work carefully before normal use so that all devices are in good state and in case some incorrect operation will lead to the damage of electronic control system and external equipment.

Note: Please connect the wire correctly according to the wiring diagram. Make sure that the peripheral equipment is working properly (such as vehicle detector), meanwhile conduct normal parameter settings.

6.1 Basic Operation

6.1.1 Turn on the power supply to conduct self-test: After turn on the power supply, the screen shows "F100", press the "raise lever" or "drop lever" key, the system starts self-test. After it is completed, the brake lever is in a horizontal state.

6.1.2 Raise lever operation: at the status of non-lifting lever, press the "raise lever" key, the barrier gate raises the lever; if at the status of running the lifting lever, press the "stop" key, the barrier gate raises the lever.

6.1.3 Drop lever operation: Press the "Drop lever" key while the pressure wave and the vehicle detector do not detect any obstacle in the state of non-drop lever in place or raise lever and the barrier gate executes the drop lever function; at the status of operating the drop lever, press "stop" key, the barrier gate immediately stops the drop lever and raises it. If the protection signal is valid (emergency, vehicle detector, pressure wave, raise lever, stop, etc.) the lever will be raised automatically.

6.1.4 Stop Operation: When the protection signal is invalid, press the "stop" key, and the brake lever will rise.

6.1.5 Automatic Drop Lever: When the control board is set to drop automatically and the other protection signal is invalid, once the detector signal of vehicle is changed from active state to invalid state, raise the lever in place and change it to drop status according to the set delay time until the drop lever is in place.

6.2 Protection Operation

6.2.1 Anti-smashing Pressure Wave:

The installation of protective airbags can effectively avoid hitting people or things in the process of dropping lever. In this process, if the pressure wave sensor is valid, the brake lever will be changed from the dropping lever state to the raising lever state until the raising lever is in place.

6.2.2 Anti-smashing Ground Sense:

The installation of vehicle detector can effectively avoid hitting people or things in the process of dropping lever. In this process, if the vehicle detector is valid, the brake lever will be changed from the dropping lever state to the raising lever state until the raising lever is in place.

6.2.3 Resistance Rebound:

When it is equipped with an electronic anti-smash detector, if there is someone or any object that blocks the drop of brake lever, the brake lever will immediately change

from the dropping status to the raising status until the lever is in place.

6.2.4 Emergency Cut-off:

The brake lever is in the non-raising status in place (vertical), the brake lever will convert to raising lever status until it is in place. During the period other control signals will not be responded. The digital tube will show “Urge”.

6.2.5 Locked-rotor Protection:

It's equipped with double locked-rotor protection. The locked-rotor protection time of electric motor drive end is 4S; the locked-rotor protection time of barrier gate control is 2S. In the process of dropping the lever, if the locked-rotor effect occurs, it means resistance rebound; in the process of raising the lever, if the locked-rotor effect occurs, it means raising the lever in palce.

6.3 Status Output

The control panel is provided with a status output interface to output for the replay dry contact with the limit parameter: 3A 250VAC.

While in use, it can be adjusted according to the "Output Settings" in parameter settings Table 5.

6.4 Information Control

During normal use process, the digital tube will show different contents in different states. These contents are able to indicate some status of the system at present so that the maintenance personnel can understand the system information. For more details, please see Table 6.

Digital Tube Display Information	Status Description
F100	Current System Software Version
ErrH	Report an error after the self-test, no Hall switch or motor is detected
OPEN	The system is in the cut-off operation
CLOS	The system is in the switch off operation
SAVE	Parameter are saved successfully
L-XX	XX represents the number, which is in the countdown of ground sense drop lever
T-XX	XX represents the number, which is in the countdown of overtime drop lever
XX	XX represents the number, which counts the number of vehicles not gone through
Hori	In normal mode, the system is in a horizontal position
UerT	In normal mode, the system is in a vertical position
Coun	In automatic mode, the system is in a horizontal position
Car	Motorcade mode, the system is in a vertical position
PrES	The system is in an active state of pressure wave
Carl	The system is in an active state of ground sense
Urge	The system is in an emergency and valid state

Lock	The system is in a locked and valid situation
XXXX	Hall sensor code number during self-test learning process

Seventh, Instructions of 2.4G Wireless Remote Control

7.1 Power Supply Consumption

7.1.1 Wireless Console uses the AA1.5 * 2 alkaline battery to load into the battery case by polarity. (Optional)

Small remote control uses a 2450 (540mAh) button battery to load into a battery clamp by polarity.

7.1.2 Average Operating Current of RF Remote Control Transmitter: $\leq 15\text{mA}$.

7.1.3 Sleep Current: $\leq 5\mu\text{A}$.



无线台控



小遥控器



接收模块

对码键

Wireless Station Control:

Small Remote Control:

Receiving Module:

Match Code Key:

7.2 Normal Function of Remote Control

Remote control interface includes 3 keys and 1 indicator light; the operation and instructions are as follows:

7.2.1 After the remote controller is powered on, the indicator light flashes once slowly, which means it is successfully powered on.

7.2.2 Press any key it will be bright for a second then turn it off;

7.2.3 The remote controller cannot be used until it is operated on the code. Please refer to the match code operation steps as follow.

7.3 Match Code Operation Steps

7.3.1 Press the "▶◀" key and the "■" key together on the transmitting terminal for 3 seconds. If the indicator light on the transmitting terminal is bright normally, it means that the transmitting terminal enters the code state.

7.3.2 Press the code key on the receiver for 3 seconds, the indicator light on the

receiver flashes slowly, it means the receiver enters the code state;

7.3.3 When the pairing is successful, both indicator lights of the transmitting terminal and receiver will flash 3 times quickly (3 times per second), which means the pairing is successful. If the transmitter fails to be paired within 15 seconds, it automatically exits from the code mode and enters the sleep mode;

7.3.4 If the match code fails, it is necessary to repeat the above steps to re-code.

Note: 1> In the process of match code, the remote control should be kept within 2 meters from the receiving end.

2> After the match code is successful, one can re-code for replacement.

3> The installer has finished the match code operation when installing the equipment. Therefore, don't use the operation if there is no special case (such as the new remote control).

7.4 Sleep Mode and Wake up

7.4.1 The remote control will detect the data after the power is turned on, and goes to sleep after the indicator goes out.

7.4.2 Under normal function, press the key and the indicator goes out, and then it will enter to sleep in 2 seconds.

7.4.3 In sleep mode, press any key to wake it up

7.4.4 Treatment of Anti-compression Key: If any key on the remote control is squeezed by mistake for 10 seconds, the system will judge it as the wrong operation and automatically enter the sleep power-saving mode, so as to avoid the consumption of batter power. After it's bounced, it will enter the normal working mode.

7.4.5 Press any single key on the remote control, it just flashes for 1 second and enter the sleep mode after code sending. It is forbidden to press the key for a long time and always send the code.

Eighth, Analysis and Processing of Common Faults

If it is abnormal for the system, please refer to Table 5-7 to troubleshoot the situation to ensure that all the problems are solved before starting normal operation. If it is impossible to find out the cause of the fault, make sure to keep the barrier gate off and contact our maintenance staff for assistance.

Number	Fault Phenomenon	Fault Reason	Elimination Methods
1	The system is not powered	AC220V No Electricity	Check the power input
		Protective tube broken	Replace the protective tube with the same specifications
		Control panel destroyed	Replace the control board
2	The system cannot conduct self-test	Fixing way error	Set the correct way to fix it
		Motor wiring error	Check the motor wiring
		Hall device broken	Replace Hall devices
3	The system does	The system is in the set state	Exit the setting status

	not move	Control board broken	Replace the control board
		Electric motor damaged	Replace the electric motor
		Fixing way error	Set the correct way to fix it
4	The remote control is out of order.	Remote control battery has no power	Replace the remote control battery
5	(Raise) Drop Lever in place brake lever uneven	Structural components dislocation	Check the structural component
		Fine-tuning value hasn't been adjusted well	Repeat Fine-tuning
6	485 Communication is not on	485 line inversely connected	Check 485 line
		485 communication address wrong	Keep the same of the 485 address and communication association address
		485 module broken	Replace the new control board
7	Unable to drop the lever automatically	Auto-drop lever function is not enabled	Turn on the automatic drop lever function
		Wrong settings	Re-confirm the setting adjustment
8	Status port is not output	Setting error	Check the setting parameters
		Wiring is not normal	Check the line connection
9	Swiping card cannot raise the lever	Card reader damaged	Change the card reader
		Connection is not normal	Check the line connection

Ninth, Use and Maintenance Considerations

Make sure to conduct regular maintenance and inspection in use, so that your control panel can be kept at a normal operation for a long time.

9.1 Announcements at maintenance check:

9.1.1 When you maintain the check, be sure to first turn off the power supply of input control board (ACN, ACL).

9.1.2 Make sure the power of the control board is cut off. You cannot implement the maintenance and overhaul until the brightness of display screen and indicator light disappears.

9.1.3 Install and remove the control board. It's forbidden to make wrong of the electric wires, cables and plugs, otherwise the control board may be damaged.

9.1.4 The power input must be installed in the correct position during installation. (Pay attention to distinguish between the power line and the motor line)

9.1.5 At installation such accessories as screws cannot be placed on the control panel in case a short circuit will be caused on the circuit board.

9.2 Regular Inspection Items:

9.2.1 Confirm that the voltage of power supply conforms to the voltage range required by the control board, pay special attention to the damage of the power cord and the motor cable; otherwise it may cause electric leakage.

9.2.2 Check the wiring terminal and connector plug to see whether there is any loose, and whether there is any broken phenomenon between the power wire and terminals.

9.2.3 Check whether there is any dust, iron filings and corrosive liquids inside the

control panel, which must be cleaned and prevented completely.

9.2.4 Prohibit measuring the insulation resistance as high pressure will break down components on the control panel.

Tenth, Safety Precautions

CAUTION: DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE TO PREVENT FIRE OR ELECTRIC SHOCK.

Warning:

- Do not use hard objects to knock on or file the product.
- Place it carefully in use to avoid strong collision with hard objects.
- Do not put the product in water or corrosive liquids and put it in a non-humid environment.
- Avoid exposure or high temperature baking while using in hot days.
- If you find the product emits smoke or odor, switch off the power immediately.
- If the product is abnormal, please contact the distributor of HONGMEN ADVANCED TECHNOLOGY CORPORATION. Do not try to repair it by yourself. In the event of any damage, we will not be responsible for it.
- Pay attention to air circulation when installing the device, keep sufficient interval around the machine (Keep 10cm or more on both sides, upper part, lower part and rear part). Do not block the air hole as it may affect the heat dissipation.
- Do not use the machine in areas with heavy water.
- Do not put items filled with water or liquids (cosmetics and potions, fresh flowers, pot plants, cups, etc.) on top of the machine.

Eleventh, Packaging and Transport

11.1 The product should be handled gently.

11.2 The packaged products may be transported with conventional means of transport.

11.3 The product on the transport equipment should be placed according to the actual working state of the product and fixed firmly and there should be some protective measures.

11.4 The packaged products should be stored in the actual working state of the product in a dry place and the surrounding air does not contain corrosive and explosive gases, there should be measures to prevent moisture, rain, sunscreen, corrosion and so on.

Twelfth, After-sales Service

12.1 The company promises to repair the product for free for one year from the acceptance date of the product. Once it exceeds the warranty period, we will charge the spare parts and labor costs.

12.2 Scope of "Three Guarantees": If the product breaks down in strict accordance with the norms of the operation, it belongs to the scope of the Three Guarantees; if one violates the operation and causes any failure or damage to the product, it doesn't belong to the scope of the Three Guarantees, so the Company will charge for the maintenance.

(In case of product failures caused by force majeure and natural disasters, the Company will charge the material cost.)

12.3 The company is responsible for product life-long maintenance and repair consulting.

12.4 Non-warranty scope:

- ① Customer misuses or causes damage to the product due to unauthorized maintenance.
- ② Damages caused due to the use of parts not from HONGMEN.
- ③ Abnormity or damage caused by terrible use situation or use environment.

Thirteenth, Information Feedback

Sincerely welcome users to visit our website (www.hongmen.com) and understand the latest products and situation of our company. We hope that you can put forward valuable opinions and suggestions in the quality, installation, service and product technical performance, etc. of our products.

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HONGMEN ADVANCED TECHNOLOGY CORPORATION

No matter which way you choose, please try to leave your company's name, detailed address, product name that you've purchased from our company, model, specifications, factory number and your name and contact information, so that we can contact with you.

FCC Caution:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.