



HOPE[®]

SECURITY EQUIPMENTS PVT. LTD.

User Manual

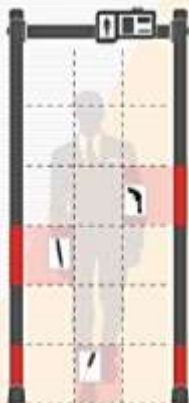
DOOR FRAME METAL DETECTOR
SCCORPION 700306/12/18



☐ 6 zones



☐ 12 zones



☐ 18 zones

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Company profile

HOPE SECURITY EQUIPMENTS PVT. LTD. here on referred to as HOPE, providing its customers with the most flexible solutions to meet their security needs involving a combination of products & services. We are successfully audited since 2005 by TÜV SÜD South Asia Pvt. Ltd. for ISO 9001:2015 Certification for the best quality products & after sales services since 1992.

HOPE is consulting and dealing in EOD (Explosive Ordnance Disposals) Equipments operated by highly trained personnel with a wealth of experience & knowledge.

Technology makes the world go round and HOPE, recognizes the importance of using the highest technologies-based EOD Equipments in rooting out the terrorism activity and are committed to remaining informed and up to date with new innovative equipments.

We work with various prestigious end users from MNC's to Government & Semi-Government Organizations like Military, Paramilitary Forces (BSF, ITBP, CRPF & CISF), Ministry of Defence (MOD) & Various States Police etc.

VISION:

A Journey a lot achieved a lot remains.

MISSION:

HOPE for safe secure & crime free society through professional & effective security equipments.

VALUES:

- Customer First
- Integrity, Honesty and Fairness in all matters
- Trusting and Respecting for Dignity of Individuals
- Ensure speed of Response
- Faster Learning, Creativity and Team work
- Loyalty and Pride in the company.

Product Introduction

Product description

Multi-zone intelligent walkthrough metal detector with high performance, in meanwhile, it has higher sensitivity, light weight, best resistance of interference and perfect stability. This model adopts high strength material, lighter and more convenient transportation, and installation.

Multi-zone intelligent walkthrough metal detector is widely used in athletic meeting, conference, school etc. Its detection theory is to be use electromagnetic field to detect metal object, and even detect Metal quantity by acousto-optic alarm mode. It consists of the main unit, HF signal generator, infrared sensor. It is most advanced metal detector gate. It is most advanced metal detector gate with elegant shape, super detection, unique operation network system, portable feature.

Excellent features which are as following:-

Exact positioning

The SCORPION™ DFMD is a multi-channel metal detector with multi detection zones. The zones create a sequential sine-wave magnetic field within the detection area of the WTMD (Walk-through Metal Detector)/DFMD (Door Frame Metal Detector).

The product has a unique configuration of the transmit-receive coil. This provides double-side transmission and double-side reception performance. Then the equipment can position the detected object exactly and indicate the alarm position directly.

Microprocessor technology

Scanning speed of the electromagnetic wave created by microcomputer control circuit can be controlled exactly. According to requirements, user can set program by using control panel, which makes sure that sensitivity setting is flexible, reliable, and stable.

Compound circuit design

The equipment has a counter that registers the number of persons passed through and the number of alarms. The counter, which can respond quickly and sends the identifiable signal to computer, then decreases the false alarms, the unwanted alarms and false counting.

DSP technology

The equipment uses digital signal processor to get reliable function of the metal detector, versatile features, and user-friendly operation. In addition, this provides the best interference immunity.

Adjustable sensitivity

There is 99-step adjustable sensitivity in each detecting zone, and user can define the sensitivity of each individual zone and system-level sensitivity according to application required.

Password protection

System password is 4 digits, which can be set by user. **ONLY** the password has been inputted correctly that user can change program, sensitivity, and other parameters.

Serial communication (Optional)

The equipment can connect to computer through the retained data communication interface.

Modular design

With modular design, the equipment is installed easily, and user can remove the faults quickly.

Electromagnetic sine wave field technology

Transmitter sinewave causes decaying eddy currents in metal objects inside the sensing area of the WTMD. The signal induces to the receiver by the eddy currents is sampled and processed in the electronics unit. The equipment is based on weak electromagnetic field technology.

Technology advantages

- Adaptive debugging system : the system can be adaptive debugging standard when entering the debugging system
- Start-stop technology : the infrared device has automatic start-stop technology, and its life extended 100 times.
- Recording sensitivity of each detection area can be adjusted arbitrary (with adaptive regulation technology)

- The detection defense area can be divided by self-adjustment (the number of detected defense areas can be complied by itself)
- Sound and light alarm, alarm tone and alarm duration can be adjusted.

Features

- Easy to operate.
- Automatic tuning (No adjustment required).
- Multi-tone audible & visual indication as per volumetric size of metal.

Application occasions

Walkthrough metal detector/Door frame metal detector is used to detect metal object in the body.

Typical application occasions as following:

- Airport, port, travelling check point
- Court, visiting checking point
- Conference, stadium, access control
- Power plant, factory, hotel, restaurant, entertainment

Keywords

The following are definition for some special name mentioned in this manual :-

Sensitivity

Sensitivity is used to define parameters for alarm metal object size. Raise the sensitivity; smaller metal objects can be detected.

Discriminating

The ability for DFMD to distinguish metals (especial metal weapon) and other articles. DFMD alarm rate can indicate the ability to DFMD discriminating. It is affected by many factors, such as sensitivity levels, passengers' body shape, season (temperature) and so on.

Useless alarm

alarm caused by carrying harmless metal objects

False alarm

Alarm caused by the reasons other than by a metal object (such as electronic interference). For DFMD, the alarm caused by the metal objects (useful or useless) is not false alarms.

Alarm rates

Alarm times (caused by metal objects) / Passengers *100%. Alarm rate is affected by DFMD discriminating ability. If discriminating ability is poor, for example: there are many alarms caused by harmless metal objects, the alarm rate will be higher. Alarm rates don't include alarms caused by electronic interference and other reasons.

Pass rate

At a given time, maximum number of passengers allowed. Pass rate shows the DFMD recover ability after the former detect. In practice, due to the check process and the maximum walk speed and other factors, while the maximum rate is only for theoretical.

Speed response

The ability for DFMD to maintain the same level of sensitivity, while inspecting passenger walk at different speed.

Calibration

To achieve optimum performance; set the parameter values for DFMD at the installation site.

Side by side use

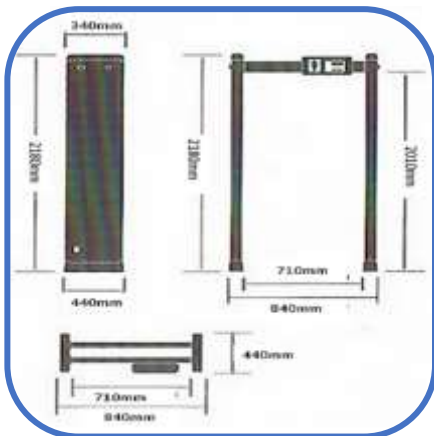
If two or more DFMD work side by side, their electromagnetic field will affect each other. Choose different frequency to reduce the interference.

Operating Frequency

frequency generated by DFMD electromagnetic field. During the calibration at site, choose different frequencies at the lowest interference level. DFMDs can be installed side by side.

Specification : -

- Detect object : Contraband including mobile phone and metal
- External size : 2200 x 850 x 340 mm (H x W x L)
- Passage size : 2000 x 720 x 340 mm (H x W x L)
- Packing size (Door Frame) : 2270 x 640 x 230 mm
- Packing size (Door Frame) : 390 x 190 x 250 mm
- Weight : Net weight 33kg, Gross weight 40 kg
- Working humidity : 99%, non- condensing
- Working temperature : - 20°C to 85°C
- Input : AC 100 V - 240 V/50HZ - 60HZ
- Output : DC 12 V/4.2A 12W
- Detection ability : At least detect 90 people within one minute



Installation, Operation and Attentions



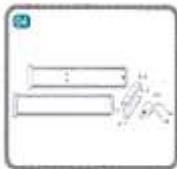
Please check weather packing is ok



Take out left and right door panels from carton box



Take out the manual, cross beam, Control Unit), power wire.



Prepare door panel, cross beam, control unit, screws according above diagram.



Install cross beam and control unit box according to above diagram, meanwhile tighten screws.



Connect the detection wire of control unit and both sides panels together.



Put up the equipment, and finish installation.



Connect power and device then open stating up button, so device can work normally.

Please read the follow introduction before installation Supplier is not response for damages caused by disobedience of follow instruction.

- Read this manual carefully before installation and operation. Take away of this manual for future reference.
- Manual has a detailed description of the installation, debugging method. Supplier is not responsible for the damage caused by human.
- Sensitivity and detection method are selected by the end user. The user should do commissioning work under supervision by professional and technical personnel for debugging.
- Whenever the DFMD has problem, the user must keep the DFMD in safe place to avoid accident, and requests for assistance.

The following problems are considered:

- ❖ A visual signal display of DFMD is not normal.
- ❖ The DFMD does not work well.
- ❖ DFMD was stored in unsatisfactory condition for a long time.
- ❖ DFMD suffered high pressure during shipment.
- ❖ Liquid has been spilled inside the DFMD.
- Carefully select the installation site.
- Do not install the DFMD in a location near a heat source.
- Also, avoid do not install in a location, where could have vibration, dust, moisture, high or low temperature place.
- Installation must be performed by specially trained the person. Keep enough space to do the installation job, to avoid hurting anybody. Keep the site in tidiness.

- Install the DFMD away from the location, where could emit electromagnetic interference, such as a location with transformer or motor.
- For best performance, the DFMD should be fixed on the ground. All connection between DFMD and power supply or other external line must be properly secured and protected in order to avoid unexpected accidents and injuries to passengers.
- Before power equipment, make sure the power supply voltage is accordance to the voltage indicated on the DFMD. Different voltage may cause damage. Only after the completion of all required connections, user can connect DFMD to electricity power.
- Power line connect to the DFMD, must have switch or any other component which can cut the power in case of accident.
- If the DFMD is powered through an external autotransformer to normal voltage, ensure that the autotransformer common terminal is connected to the power supply circuit hub. Socket must be grounded. Disconnect the ground without permission is strictly prohibited. If the DFMDs are not grounded, in exceptional circumstances may cause damage.
- Disconnect the power supply with a closing pull of the plug, not the wire.
- Standard configuration of the power adapter for non- waterproof type: Keep it in ventilated and dry place. Once get wet, there is the danger of electric shock and damage to DFMD.
- Electronics parts of DFMD may cause a fire. Do not install at flammable explosive location. In case of fire, don't use water or foam extinguisher to the power on DFMD.
- In case; thunderstorms, disconnect the power. Do not use DFMD in an explosive place. Avoid contact with flammable substances and explosive.

- Maintenance the DFMD in periodic (Refer to "Maintenance" chapter). Do not use water, detergents, or chemicals for cleaning. Use a damp, smooth cloth.
- Disconnect the DFMD power before maintenance, cleaning or moving.
- Please read the "Maintenance" chapter. No matter what kind of problems encountered, only the factory qualified engineer is permitted to do maintenance.
- Any necessary replacement parts must be factory original.
- Avoid maintained DFMD while power on. If have to, the engineer must be professional and fully understand the risks.
- Recommendations about the battery inside the DFMD:
- When replacing batteries, use the factory supplied battery.
- Do not throw used batteries in normal trash. Throw to the use battery collection facility, according to local regulations; or return to supplier.
- When handling the problem of DFMD, remove the battery from DFMD in advance. Supplier is not responsible for damage caused by incorrect using of batteries.

Only professional engineer are allowed to maintain components with follow marks.



- ❖ Before opening the package, please carefully read the following introduction. If not follow the installation procedure specification, supplier will not responsible for any problems that may occur.

Use and application

- Security Departments like public security, armed police, fire fighting, customs. Widely used in criminal investigation, explosive removal, security checking, search for smuggler, search & rescue and other relevant detection work.
- It can be real - time observing narrow space and dark area, taking pictures and videos as well as long distance transmitting image to provide intuitive image information for the site of criminal investigation and security checking.



Kind attention

The following are installation and daily operating instructions for our DFMD :

- In addition to these instructions, this should be in accordance with local laws and regulations and government requirements.
- Before installing or using DFMD, please read and learn this manual.
- This manual includes information required by the user about the structure, installation and operation.
- Follow the proper operation and maintenance procedures to keep the DFMD in reliable status.

- Total DFMD include two parts by the electronic control unit and two detectors. The electronic control unit includes a variable magnetic field generator, receivers, signal processors and process controllers; the door frame contains two transmitting and receiving SENSOR, which are pre-installed on the inner side of the two door panels. Among the above parts are connected via cables (electronic control unit out lead two pcs of cables, these cables connect control unit to the two detectors). # EXCEPT SINGLE PLOE DFMD

Installation environment

Shaking ground

Ground should be flat, with a solid support, to prevent vibration. Especially when there is presence of vibration of the metal structure under the surface, people walk through the detector may cause unnecessary alarms.

Fixed the metal objects

The distance between fixed or a large metal object should be at least 10cm (4in) away from the WTMD/DFMD to detect large metals. It has little effect on the sensitivity, but it may make WTMD/DFMD more susceptible to vibration.

{ THE DISTANCE OF THIS SECTION IS RECOMMEND DISTANCE, THE ACTUAL DISTANCE SHOULD BE DECIDED UPON THE INSTALLTION SITE CONDITIONS. }

The moving metal objects

The moving metal object outside the WTMD/DFMD should keep a distance of 0.5 – 2M (20 – 79in) away from the door, thus to avoid false alarms.

According to size of metal object, the distance between metal objects and the WTMD/DFMD may be different.

Radiated electrical interference

The distance between electronic interference source and the receiving coil is the largest. The recommended minimum distance should be 0.5 – 4m (20 – 157in). However, the actual distance should be depended on the real conditions. For example, you can move the WTMD/DFMD and the interference source to find the best position.

Interference may be provided be electronic control panel, radios and computers, image display, high-power motors and transformers, AC cord, thyristor control circuits, flash welding equipment fluorescent tubes and other equipment.

Conductivity electronic interference

Connect the power cord to which is not connected to other large load (such as high-power motors, etc.). They may result in a large power line or voltage shocks.

Attention

- ❖ Ground should be flat, with a solid support, to prevent vibration.
- ❖ The distance between fixed or a large metal object should be at least **10cm (4in)** from the DFMD to detect large metals.
- ❖ The moving metal object outside the DFMD should keep a distance of **0.5-2m (20-79in)** away from the door, thus to avoid false alarms.
- ❖ There must be no electrical interference sources, DFMD should keep a distance of **0.5-4m (20-157in)** away from the electrical interference sources, thus to avoid false alarms.

Multiple device work side by side

Work side by side to point multiple devices work close to each other.

When work side by side, walk through metal detector will interfere each other in certain extent. Interference level is decided the distance between the devices, working frequency, sensitivity.

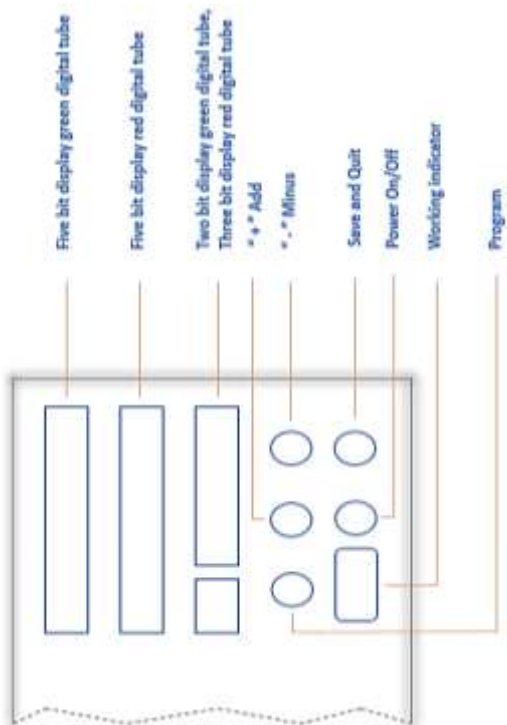
There is many different working frequencies chosen for walk through metal detector, so can reduce the interference between device in order to work side by side. Please note, when work side by side, all devices should set different working frequency.

Before working, device setting

Operator passes through walk through metal detector with need to be detected metal in the meantime adjust sensitivity and security level, so that achieve customer's demands.

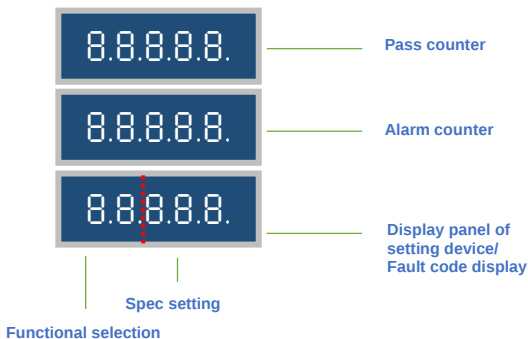
Control Panel Setting

(Zone 6/12/18)

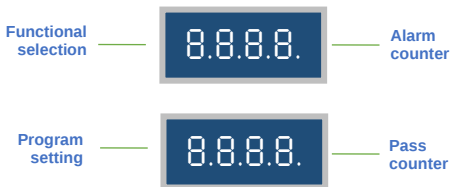


Function Setting

(Zone 6/12/18)



(Zone 1/3)



Parameter setting (Zone 6/12/18)

Functional selection		Spec setting	
Function	Code	Range	Description
Enter the password	P	P XXXX	Enter the password
Working frequency setting	F	1 ~ 50	50 level can be adjusted
Security level s	H	0 ~ 99	100 level can be adjusted
Partition setting	FL/ A	6/12/18/1/3/9	detection zones conversion
Left each zone sensitivity setting	1L	0 ~ 399	1 detector sensitivity 400 level
	2L	0 ~ 399	2 detector sensitivity 400 level
	3L	0 ~ 399	3 detector sensitivity 400 level
	4L	0 ~ 399	4 detector sensitivity 400 level
	5L	0 ~ 399	5 detector sensitivity 400 level
	So on.		*
Right each zone sensitivity setting	1R	0 ~ 399	1 detector sensitivity 400 level
	2R	0 ~ 399	2 detector sensitivity 400 level
	3R	0 ~ 399	3 detector sensitivity 400 level
	4R	0 ~ 399	4 detector sensitivity 400 level
	5R	0 ~ 399	5 detector sensitivity 400 level
	So on.		*
Alarm volume setting	yL	0 ~ 99	Alarm Volume 100 levels

Alarm tone setting	yd	0 ~ 99	100 levels
Alarm time length setting	yc / d	0 ~ 99	Alarm time length 100 levels
Scene setting	CJ / AP	1 ~ 72	72 scenes option (changing security level, each zone sensitivity mode)
LED light display setting	Ld / LP	LD 0 (Default)	When left and right panel are installed wrong (When detecting metal object, left and right panel alarm lights will display in the opposite side) changing the value into 1
Battery level	dc /BAT	0 ~ 100	Indicate the battery level
Automatic frequency adjustment	CF / AF	1 ~ 50	Choose suitable working frequency automatically
Infrared setting	LR / IR		4 kind infrared mode (IR 1 ON / IR 2 ON/ IR ON / IR OFF) 0: double IR both close, 1: only front IR open, 2: only back IR open. 3: double IR both open.
Revised password / New password	C0 / NP	**** / NP0000	Revise password

Fault Code

Left 1 Zone Fault

L.L.

-E.A.A.

Left 2 Zone Fault

2.L.

-E.A.A.

Right 1 Zone Fault

1.R.

-E.A.A.

Right 2 Zone Fault

2.R.

-E.A.A.

SD Card

Error

S.d.

-E.A.A.

Infrared Count Fault

L.A.

-E.A.A.

Battery Low Power

d.L.

-2.0.

Common Fault Handling

FAQ(Frequently asked questions)

NO.	Fault name	Fault description	Check Failure	Fault Judgment	Maintenance Tools
1	Can not-boot	Can't be normally used after installation and connect the power	1. Check whether the power line between main chassis and the door panels has been plugged in with AC 220V power cord 2. Check whether the power cord is damaged broken, poor contact, and the main chassis power supply is normal	1. Motherboard fault 2. Circuit fault	Visual, Manual operation
2	Boot does not show	The LCD screen does not light Digital board is not bright	Check whether the motherboard panel is inserted properly. We picked up a phone, turn on the camera, the lens on the dot at the door will emit a glowing red dot, which means the infrared emission is normal, if not, the infrared is broken.	Replace connecting line or display and digital board	Visual, Manual operation
3	No count	The through number shows 0001 or 0000or even not counting		Replace the infrared component.	Visual, Manual operation
4	Disorderly alarm	It may appear automatic alarm when there are not staff through the detector	1. Check the surrounding environment or try to change the frequencies. 2. When the sunlight direct to the infrared component, it may also appear automatic alarm.	1. Replace the infrared component. 2. Change the installation location to avoid the sun.	Visual, Manual operation
5	Omission	There is no alarm when walking through the detector with metal	Normally it is because the sensitivity is too low, try to increase the sensitivity of each zone.	Debugging capture card	Visual, Manual operation

Maintenance, Service, Storage

Maintenance & after service

DFMD is high-tech electrical device. The operator is requested not only to understand the technical performance, structural principle and operating procedures, but also good at doing the daily maintenance and maintenance work. This is to guaranty working efficiency and extend device life, and to ensure safety.

Routine maintenance

- To ensure the good working condition, DFMD should be checked and adjusted regularly.
- Maintenance job must be done by qualified people.
- Cut the electricity, in case of checking hardware.
- Daily maintenance work:
- The device should be installed in the ventilation, dust clear, dry environment, avoid high temperature, high humidity and direct sunlight.
- Clean the dust inside device.
- Tighten the loosen components or wiring plug, if any.
- If any parts damaged, please find out the reason and solve the trouble first, and then replace it. After replacement you need to adjust sensitivity again.
- Don't leave another object inside DFMD. This may course electricity accident.

Maintenance attentions

- Don't leave other object or water inside DFMD
- Cut the electricity and then check the device. If have to be on power, please know the risk well, and operator should be professional qualified.
- Before repair, prevent electrostatic damage to the precision electronics.
- Before power on, make sure that all cables are connecting right.

Storage conditions, storage period and attentions

- Device should be stored in a clean and dry place, excessive heat and moisture can damage the system components. If the device will not use for a long time, it should be stored in the original packaging box.
- The storage conditions of the equipment :-
 - In the transport or storage packing condition, the device must be set in follow condition
 - Storage temperature: - 20 ~ + 60 °C (condensate)
 - Humidity: 20% ~ 95%
 - The storage time cannot exceed 15 weeks.
- If need long-term storage, device should have good storage conditions. The warehouse should be clean and dry, well ventilated, there shall not be corrosive gas, the relative humidity is not more than 80%, and the equipment should be in the packaging box.

Maintenance and modification :

This product has not any spare part which can be repair by users. Any disassemble, refit or maintenance is not allowed. If damage and losses caused by this. Hope Security Equipments Pvt. Ltd does not assume and responsibility. The product maintenance is only affordable by HSEPL.

Service/Customer Support

Scan the QR code for
support on your phone :

www.hopesecurity.org





Warranty

Terms & Condition (Please Read Carefully)

- ❖ This warranty covers only the Product mentioned overleaf.
- ❖ This warranty will cease to be applicable if any repair is attempted by any unauthorized personnel
- ❖ This warranty does not cover any defect arising due to:
 - *Improper or unprofessional handling at the dealer end or by the person installing the product example of one such is giving improper input other than what the product had been designed to withstand for.*
 - *Using improper tools, damaging or defacing the physical attribute of the product.*
 - *Performance Variations arising due to passage of time sustained usage and climate conditions.*
 - *Extraneous practical entering the product or damaging its physical property like water, dust, soil, bun, or extreme temperature.*
 - *Incidental expenses incurred towards transportation & Installation, etc.*
 - *Use of sub-standard/un-stabilized power supplies and power fluctuations.*
 - *Defects arising due to Acts of God.*
- ❖ Warranty is Void if Hologram, warranty sticker or barcode label is Missing or Tampered in Product.
- ❖ This warranty covers for all manufacturing defects and all matters pertaining to the workmanship going into the manufacture of the product.
- ❖ The warranty covers this product only if purchased and used within the geographical boundaries of India.
- ❖ This warranty is applicable only for services at our service center and not at site.
- ❖ The items have to be sent back to our service centre in Noida for any warranty related works.
- ❖ This warranty entitles you for repair as per the technical feasibility.
- ❖ All disputes are subject to the jurisdiction of the U.P. High Court.
- ❖ This warranty is **NON-TRANSFERABLE**.

Product Model Name :

Product Sr. No. :

Date of PURCHASE :

Store Location :

Customer Name :

Address :

Phone :

Email :

Warranty Start Date :

Warranty End Date :

Signature

Stamp



HOPE[®]

SECURITY EQUIPMENTS PVT. LTD.



WARRANTY CARD

HOPE SECURITY EQUIPMENTS PVT. LTD.

Corporate Address : 502, Rishabh Corporate Tower,
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Karkardooma, New Delhi-110092

Factory Address : B-102, Sector- 65, Noida, Gautam
Buddha Nagar, Uttar Pradesh - 201301 (india)

Helpline No.: 8527992107
support@hopesecurity.org



0120-4176378

www.hopesecurity.org

Product Model Name :

Product Sr. No. :

Date of PURCHASE :

Store Location :

Customer Name :

Address :

Phone :

Email :

Warranty Start Date :

Warranty End Date :

Signature

Stamp



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