58kHz MONO-GUARD™ INSTALLATION MANUAL

WG SECURITY PRODUCT INC.

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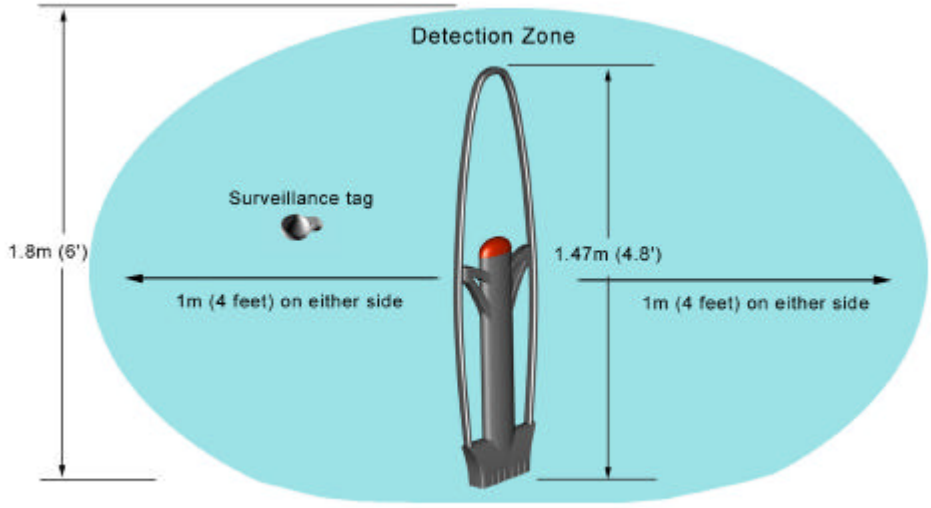
Overview

1. System Description

Mono-Guard is a single pedestal transceiver Electronic Article Surveillance system that detects 58KHz tags four feet either side of the pedestal. This system is plug and play, which eliminates the need for expensive technicians during installation.

The Mono-Guard is software driven EAS system that works in combination with any 58KHz tag and label. The system's transceiver listens for the unique signal that any 58KHz tag produces, and the sequence produced is then verified and multiplied in a fraction of a second.



Technical Data	Europe	United States
Height	1470mm	58"
Width	440mm	15.5"
Depth	100mm	3.5"
Weight	10Kg	22lbs
Power	200-220vac	110vac
Operating Frequency	58kHz	58kHz
Maximum Tag Detection	2.2 meters	8 feet

IMPORTANT NOTICE:

To turn off the unit please unplug it from the main power source.

When installing this unit it is important that you follow the National Electrical Code that governs your country.

Digital Signal Processing

The Mono-Guard™ system applies the latest and most technically advanced DSP technologies to address antitheft problems. It minimizes false alarms while maintaining considerable detection range.

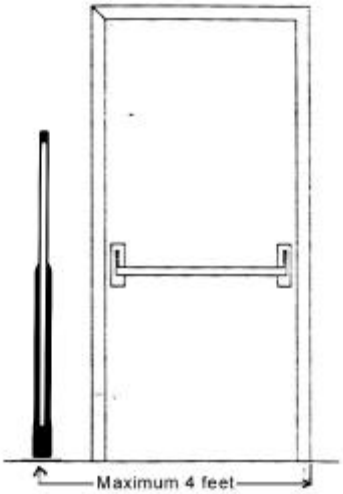
Self-Tuning Electronics

Other manufacturers need professional technicians to tune the system to ensure proper functioning. But once the environment condition changes, the systems best working position changes and requires tuning again. The Mono-Guard™ system, benefiting from its fully digital electronics, constantly detects the environment & automatically adapts to any changes. It will always operate at its optimum performance from the beginning.

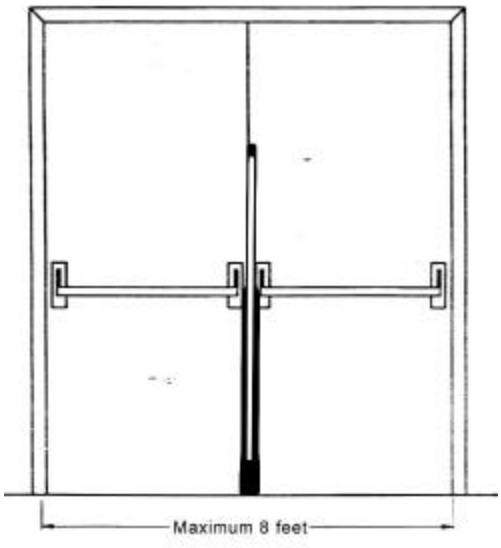
Software Driven

The Mono-Guard™ is fully digital software driven system, which allows unprecedented flexibility especially in later versions.

Applications



This type of installation also consists of a single Mono-Guard post while with coverage of a 6 foot wide opening. The post is mounted in the middle of the door with a 4 feet maximum detection on either side. The Mono-Guard can be installed close to a metal door or frame with out decreasing the detection range, how-ever we do recommend that the when using a neon light, the system should be installed 12 ft away, if this is not possible you can install our noise shield over the transformer to eliminate this problem.



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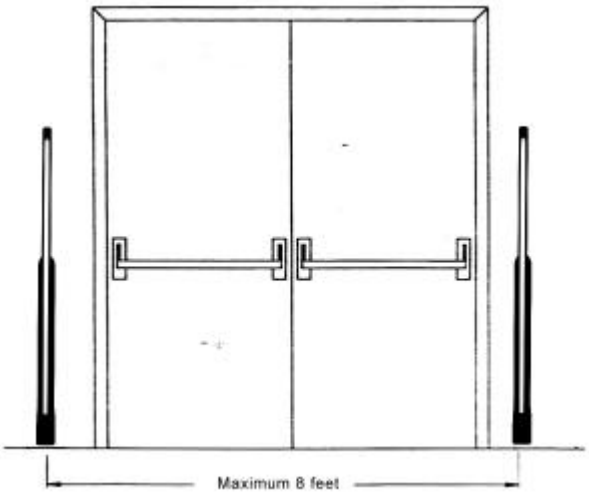

This type of installation consists of one master and one slave Mono-Guard system with one interconnection from slave to the master. The gates are mounted on both sides of the opening and can cover a maximum range of 8 feet between the pedestals.

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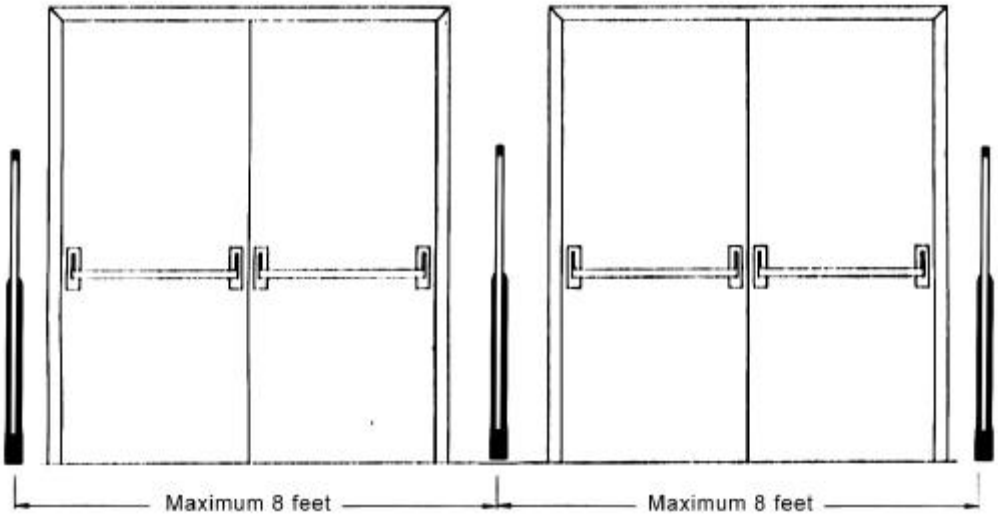


This type of installation consists of one master Mono-Guard system and two slaves with the master in middle and the slaves at the ends. Every gate-to-gate distance is both 8 feet maximum; the three gates will cover a maximum distance of 16 feet. Each slave post will be connected to master post.

The Mono-Guard can be installed close to a metal door or frame with out decreasing the detection range, how-ever we do recommend that the when using a neon light, the system should be installed 12 ft away, if this is not possible you can install our noise shield over the transformer to eliminate this problem.

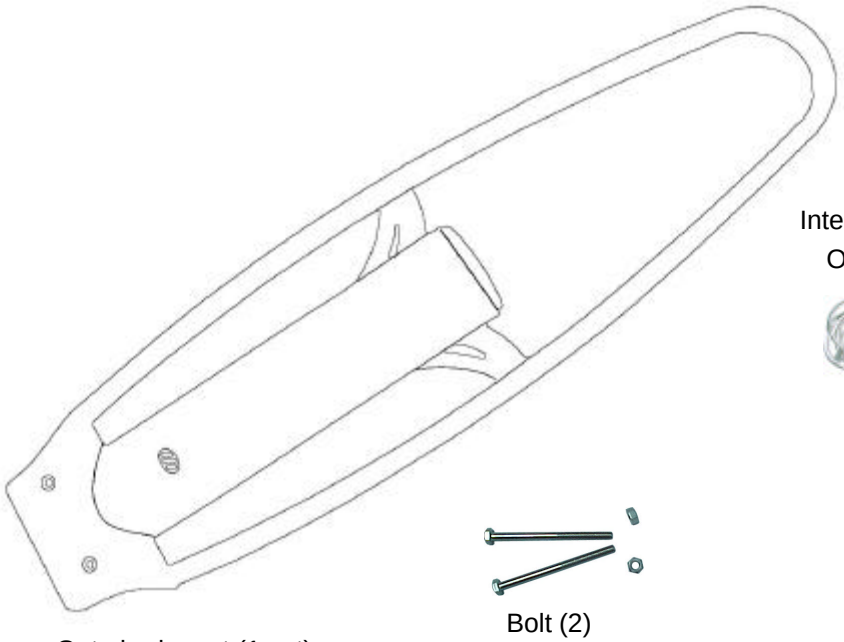
Installation Procedures

Parts List

Base (1)

Inflationary Spiral (6)

Tools (2 sets)



Gate body part (1 set)
Master or Slave Post

Bolt (2)

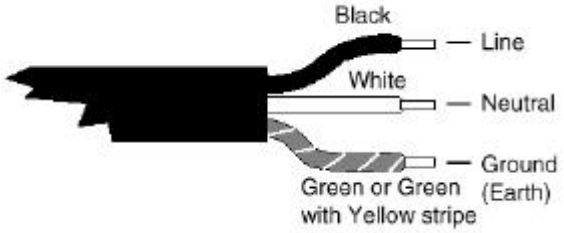
Interconnection line (1)
Only for slave post

Power Cord Notices

North American Power Supply Cords

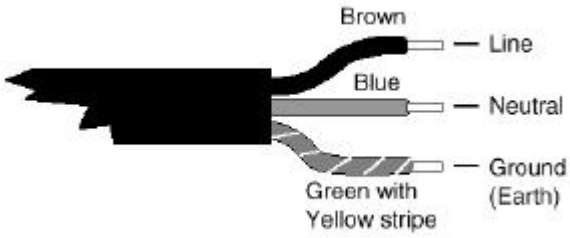
This equipment is supplied with an external power line at one end and a molded receptacle terminal block at the other end. Conductors are color coded white (neutral), black (line) and green or green/yellow (ground).

Operation of this equipment at voltages exceeding 130 Vac will require power supply cords which comply with NEMA configurations.



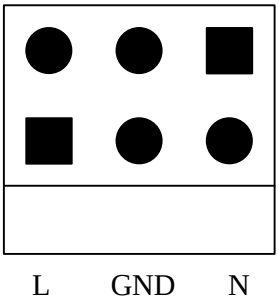
International Power Supply Cord

This equipment is supplied with an external power line at one end and a molded receptacle terminal block at the other end. Conductors are CEE color coded—light blue (neutral), brown (line) and green/yellow (ground). Other IEC 320 C-13 type power supply cords can be used if they comply with the safety regulations of the country in which they are installed.



We recommend that you use a CE approved power cord H05 VV-F or H05 VVH2-F2 (Refer to the Electrical code which governs your country for installation of an Anti-Theft Unit to the Main power Supply)

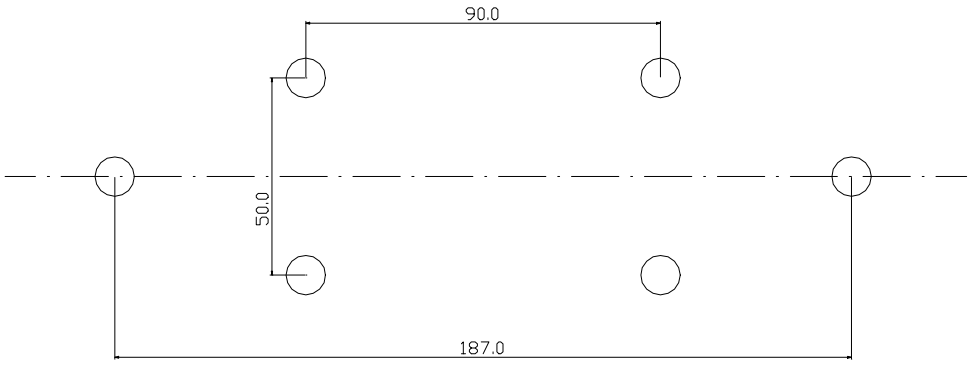
Attach the power cord to the field connector by following the wiring instructions below



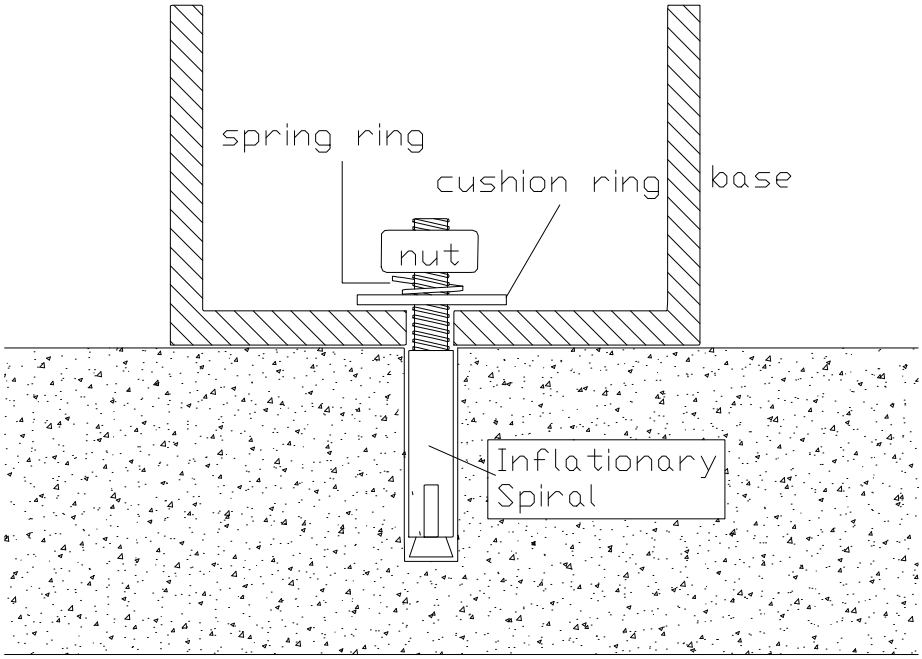
RED or BROWN = LIVE
BLACK or BLUE = NEATRAL
GREEN & YELLOW = GROUND

We recommend using a power cord with a maximum length of 3 meters

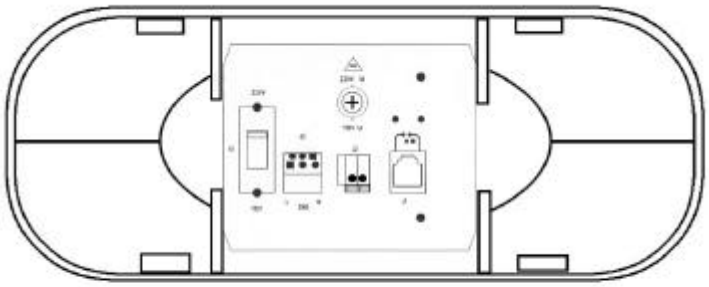
Drill six holes (10mm diameter 40mm deep) to install the base.



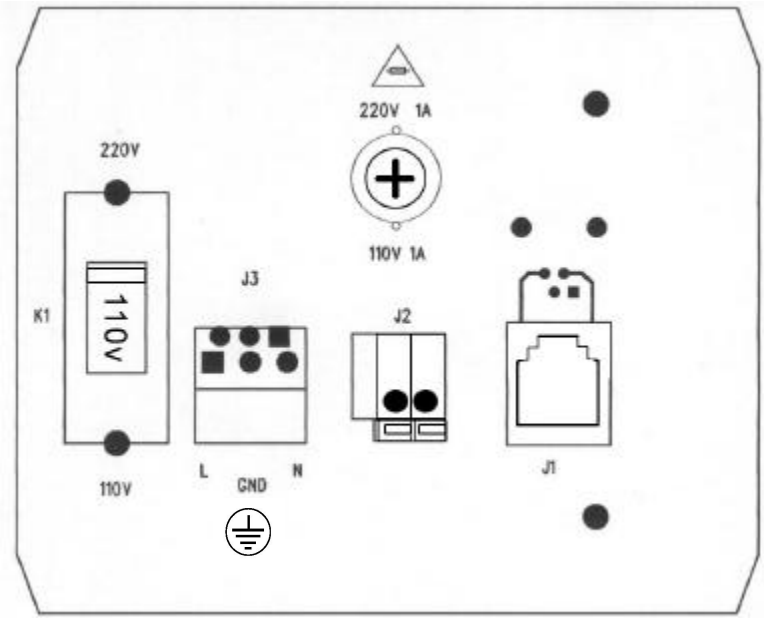
Put the Inflationary spirals into the holes
Install the base, allowing the spiral heads to go through the holes of the base
Attach the cushion rings then spring rings and nuts on the spiral heads, screw the nuts down this will fix the base to the ground.



Attach the bottom of the gate to the mount. Plug the power line into the power socket on the PC Board as the picture shows

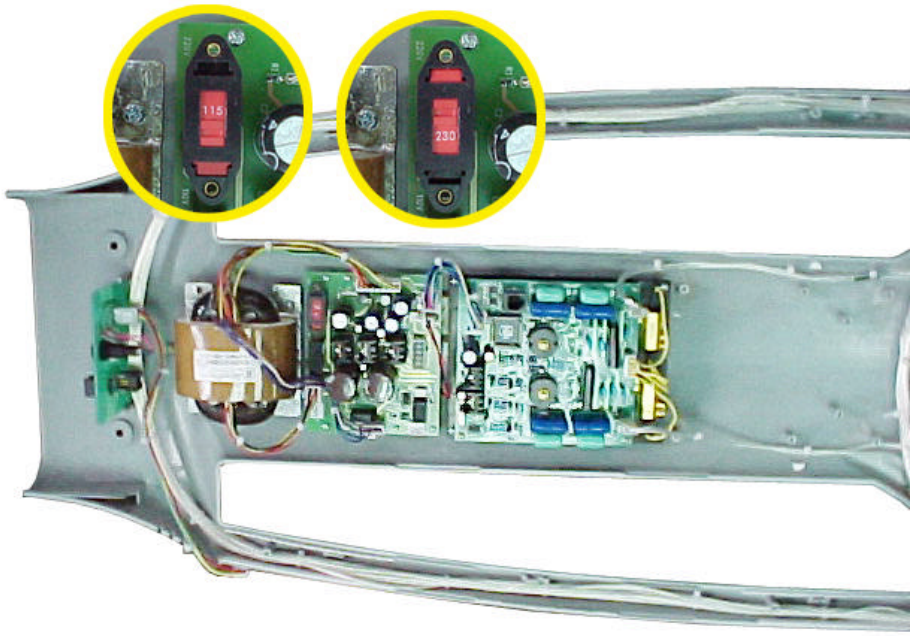


When using a slave post, connect the interconnection cable into the RJ45 socket on PC Board

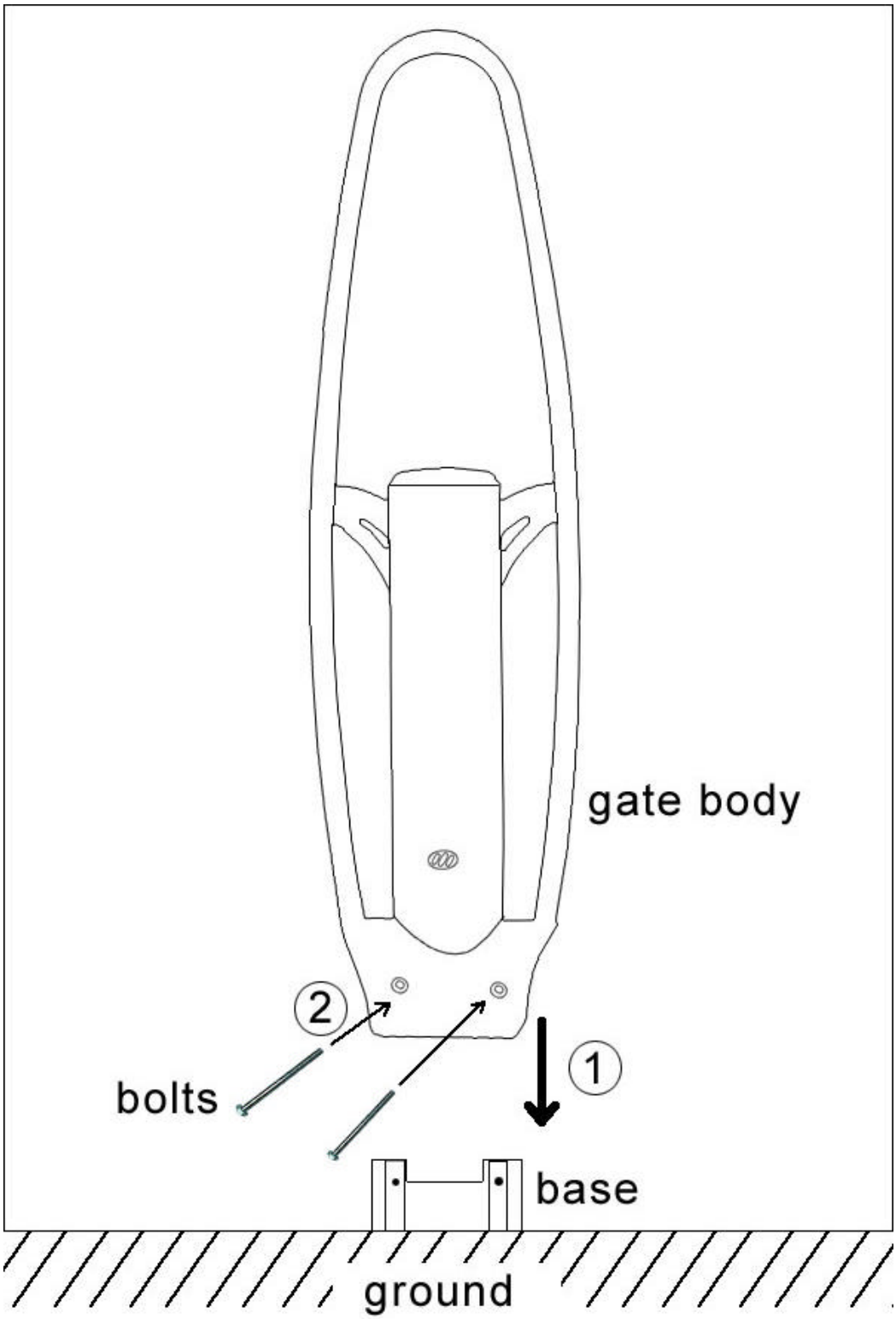


There are two external alarm outputs. First press down the yellow button, then insert the external alarm wire into the wire holding hole and release the yellow button, the wire will be fixed onto the system. Each external alarm output has a contact rating of 1A/220VAC

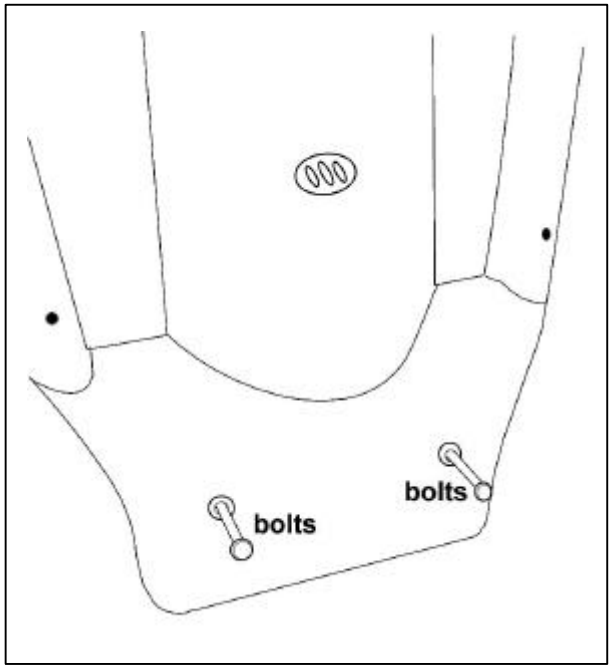
The system has a switch inside the gate body with an option of 220VAC (European system) and 110VAC input (American system), and it has been set correctly before out from the factory.



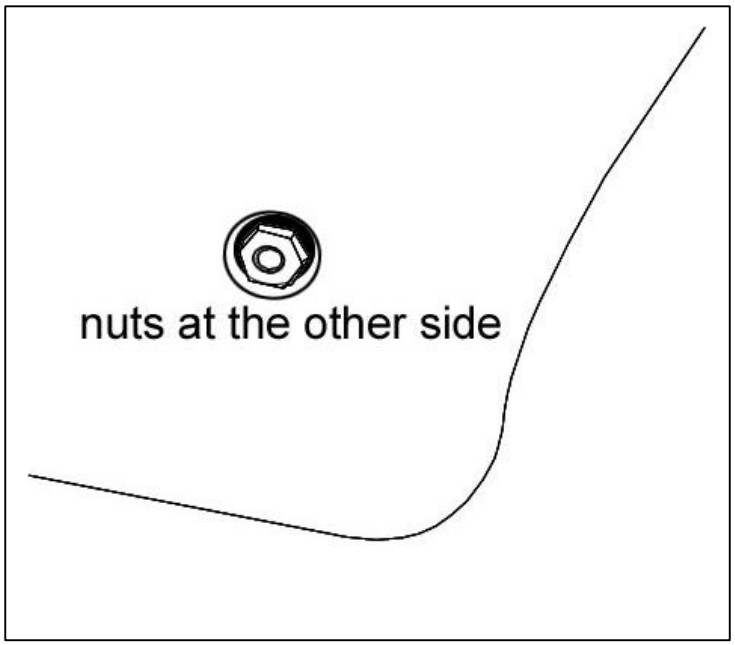
Place the gate body slick into the base track and cover the whole base. Put the two bolts through the two tunnels at the lower part of the gate body.



Put the nut onto the bolt head on the other side



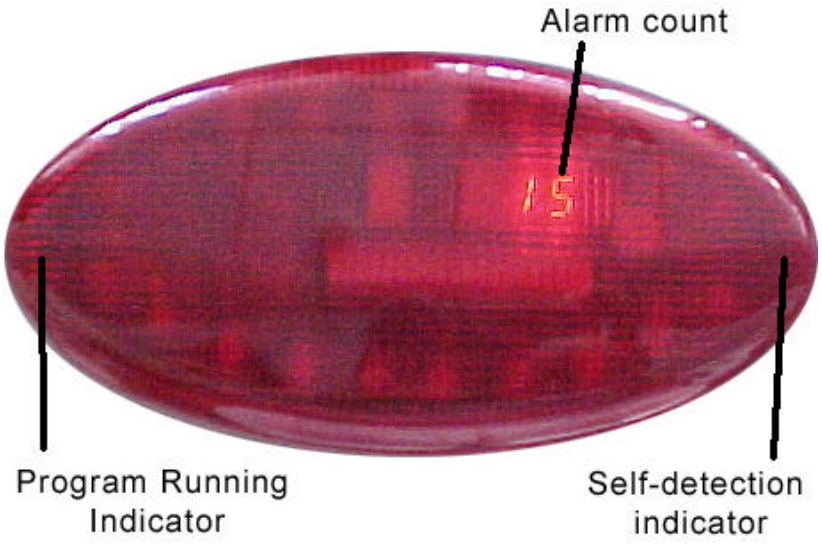
Use the tool provided to screw down the nuts



Operational Tests

The transceiver system is unique for its plug-on initial self-detection. When the first time the system is applied with electricity, it takes the system one minute to detect NONE-TAG environment around. Ensure that during this one minute any tag must be kept 12 feet away from the detection zone of the system.

And after one minute, the program running indicator (a yellow led locates at the one corner of alarm panel) will flash regularly, and the other green led (self-detection indicator) at another corner of the panel will shut off, which means the system is ready for detection.



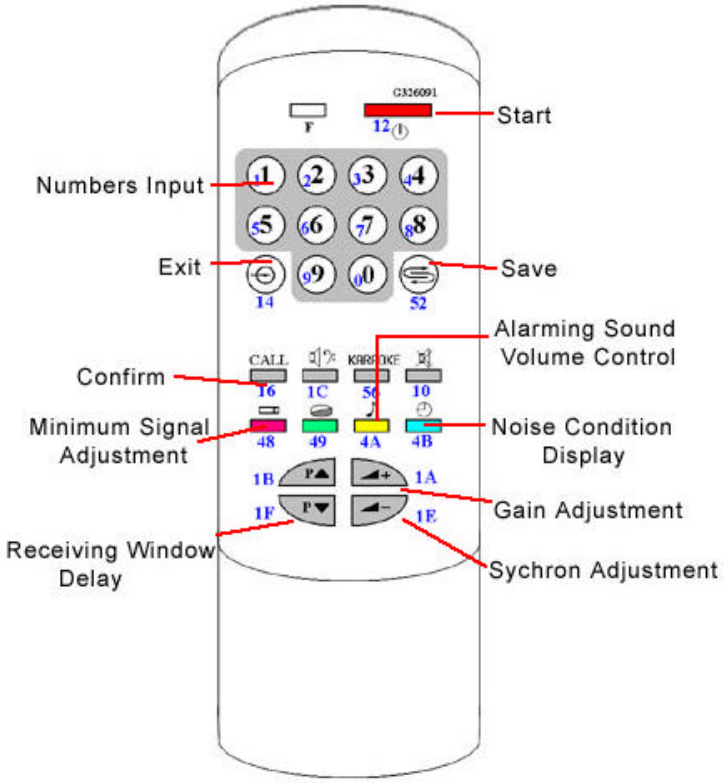
Problems Encountered

If you ensure every step of the installation is correct, all the connections are ok, and the system still malfunctions, Please call our technical support number (408) 530-8070)

Accessories

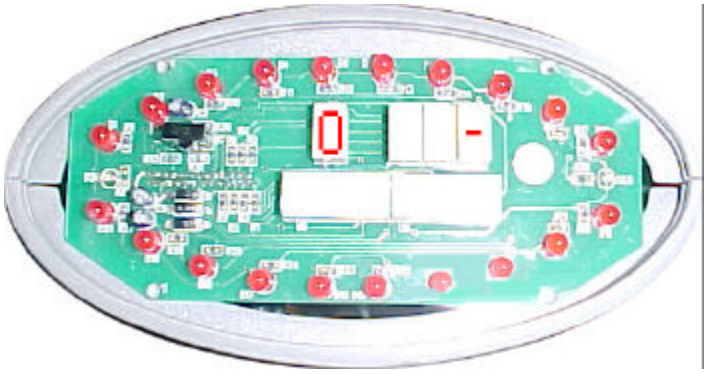
A noise shield is available to cover the electronic transformer. This eliminates the problem of noise from the proximity of Neon Lighting.

Appendix (IR control keyboard function description)

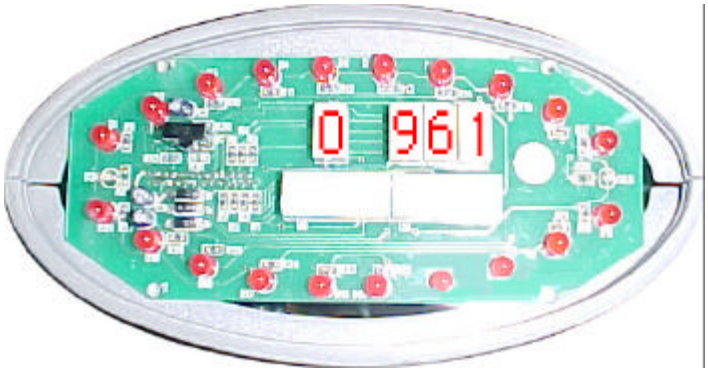


Usually, the most frequently used function is to adjust the Minimum Signal Adjustment figures, (see entry H). The smaller the figure is, the more sensitive the system is while the more vulnerable to false alarms. Properly tuning this figure to ensure the system works at the certain distance at best sensitivity and with minimum false alarms.

1. Press “start” button to initiate the control when panel shows the following state, initiation is ready.



2. Press password “961”

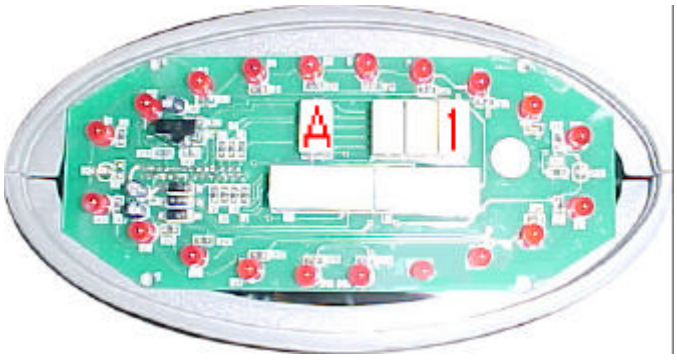


3. Press “confirm” button

Then enter the control parameters input state. There usually are three steps in parameters input. The first is select the parameter type, like Gain Adjustment, Sychron Adjustment or Noise Condition Display; the second step is input the numbers; the third step is to press “confirm” button.

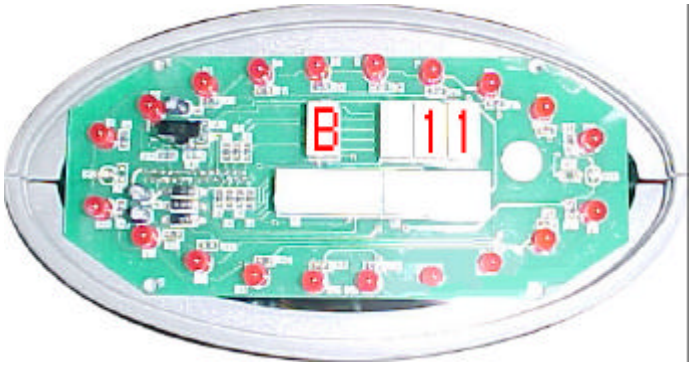
A. Gain Adjustment

There are two choices here, input 1 to select high gain, 0 to low gain.



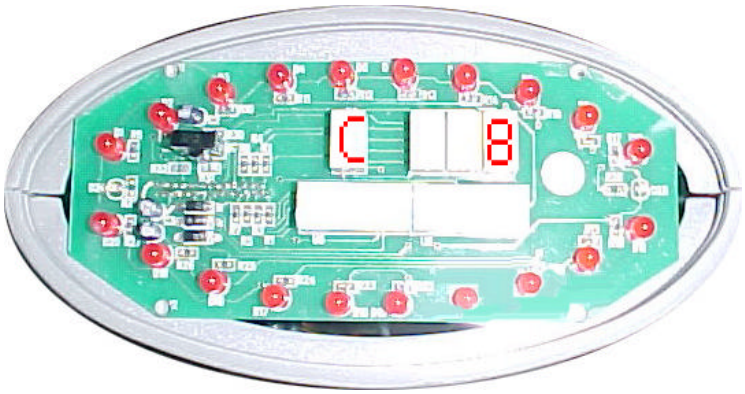
B. Sychron Adjustment

Here is the time from zero crossing point to the start point of transmitting burst. You can input 1~254, each stands for 30u seconds.



C. Receiving Window Delay

You can input a number from 1~14, the bigger the number, the later receiving window will be opened.

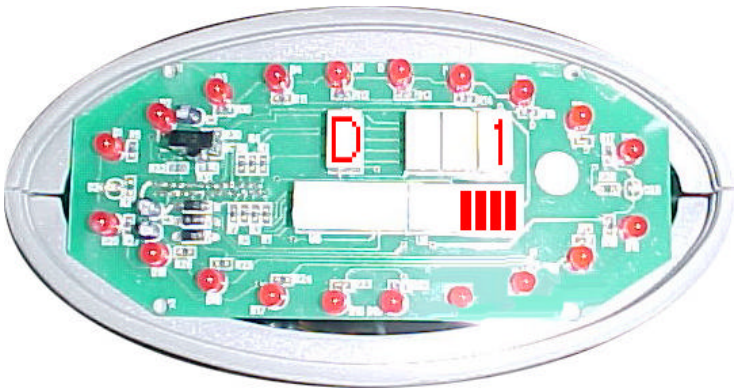


D. Noise Condition Display

Here input 1 to show noise condition

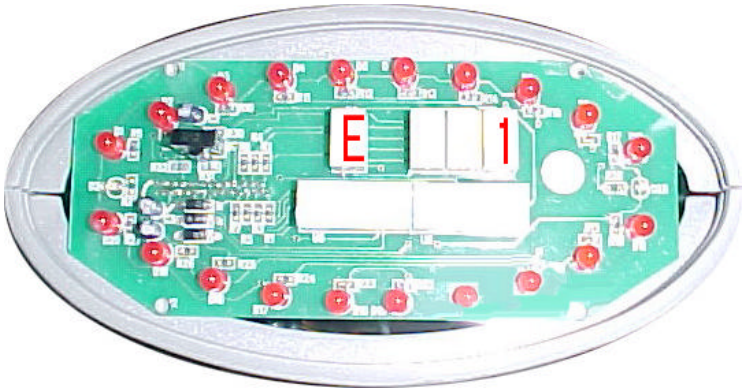
Input 2 to show average noise condition

Input 3 to show signal condition



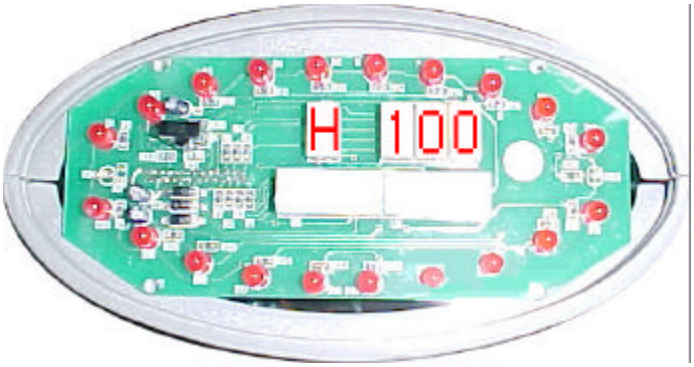
E. Alarming Sound Volume Control

The input range is 1~3, stands for three volume level from small to big.



H. Minimum Signal Adjustment

Change this figure to admit minimum signal amplitude, in another word any signal smaller than the level here will be ignored.



Exit button

This button will return control box to last state.

Save button

This button will save all parameters to flash ROM, so when power shut down the parameters will not be lost.

Note: after press this button, you should press “confirm” button to confirm saving.

Important Safeguards and *Regulatory Notices*

Information on the following pages provides important safety guidelines for both Operator and Service Personnel. Specific warnings and cautions will be found throughout the manual where they apply, but may not appear here. Please read and follow the important safety information, noting especially those instructions related to risk of fire, electric shock or injury to persons.

WARNING

Any instructions in this manual that require opening the equipment cover or enclosure are for use by qualified service personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

Symbols and Their Meanings

The exclamation point within an equilateral triangle alerts the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the equipment.

The fuse symbol indicates that the fuse referenced in the text must be replaced with one having the ratings indicated.

This symbol represents an internal protective grounding terminal. Such a terminal must be connected to earth ground prior to making any other connections to the equipment

Danger

Electrical potential is still applied to some internal components even when the power switch/breaker is in the off position. To prevent electrical shock when working on this equipment, disconnect the AC line cord from the AC source before working on any internal components.

A residual voltage may be present immediately after unplugging the system due to slow discharge of large power supply capacitors. Wait 30 seconds to allow capacitors to discharge before working on the system.

Warnings

Heed all warnings on the unit and in the operating instructions.
Do not use this equipment in or near water.
Disconnect ac power before installing any options.

The attachment plug receptacles in the vicinity of the equipment are all to be of a grounding type, and the equipment grounding conductors serving these are to be connected to earth ground at the service equipment.

This equipment is grounded through the grounding conductor of the power cord. To avoid electrical shock, connect the power cord to the equipment and plug it into a properly wired receptacle before connecting the equipment inputs and outputs.

Route power cords and other cables so that they are not likely to be damaged.

Do not wear hand jewelry or watches when troubleshooting high current circuits, such as the power supplies.

During installation, do not use the door handles or front panels to lift the equipment as they may open abruptly and injure you.

To avoid fire hazard, use only components of the specified type, voltage and current rating as referenced in the appropriate parts list.

Always refer fuse replacement to qualified service personnel.

To avoid explosion, do not operate this equipment in an explosive atmosphere unless it has been specifically certified for such operation.

Have qualified personnel perform safety checks after any completed service.

Risk of electric shock is present. A grounded circuit conductor (neutral) is provided with over current protection. Test all components before touching.

Cautions

To prevent damage to equipment when replacing fuses, locate and correct the trouble that caused the fuse to blow before applying power.

Verify that all power supply lights are off before removing the power supply or servicing equipment.

Use only specified replacement parts.

Leave the base of the system clear for air exhaust cooling and to allow room for cabling. Slots and openings in the system are provided for ventilation. Do not block them.

To prevent damage to this equipment read the instructions in this document for proper input voltage range selection.

Circuit boards in this equipment are densely populated with surface mount and ASIC components. Special tools and techniques are required to safely and effectively troubleshoot and repair modules that use SMT or ASIC components. For this reason, service and repair of products incorporating surface mount technology are supported only on a module exchange basis. Customers should not attempt to troubleshoot or repair modules that contain SMT components. It assumes no liability for damage caused by unauthorized repairs. This applies to both in- and out-of-warranty products.

Introduction

Congratulations on your purchase of one of the finest EAS systems on the market. This is the Installation Instructions manual.

Receiving Inspection

Inspect all shipping containers for any signs of damage. If any is found, notify the shipping company. If there is no obvious damage, continue with the unpacking instructions.

Unpacking Instructions

Place the containers on a flat level surface with enough room to move the container around as needed. Remove all the remaining manuals and the Floppy Disk software set. Compare the manuals against the Inventory sheet and make a note of any discrepancies.

Carefully remove the contents of container and place on a flat level surface. Compare the contents with the Part List to ensure that there no missing items. Make a note of any discrepancies.

Equipment Inspection

Inspect all equipment for damage. Items to specifically check, and damage to look for, are listed below:

All connectors for bent or broken pins

Cables for crimped or broken wires

Plastic housing for any obvious signs of damage

If any damage is found, contact Customer Service at the telephone number in the front of this manual. If any item is damaged, DO NOT make any power or signal connections to the unit unless otherwise advised to do so by Customer Service.

If there are any discrepancies between the Manual Set Inventory sheet and the manuals received, or between the Packing List and items received, contact Customer Service at the telephone number at the front of this manual. If there are no discrepancies and either no damage, or GVG-advised correction action is made, continue with this manual.

Facility Checklist

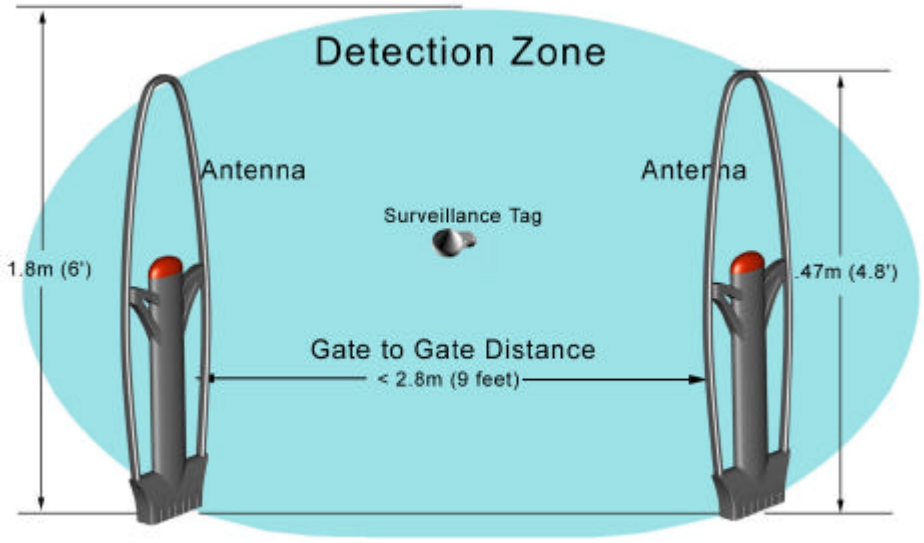
The following checklist is a synopsis of information found in the appropriate Installation Planning Guide. The Planning Guide should be referred to for detailed site preparation information. Ensure that there are sufficient AC power outlets of the required 3-prong grounded type and amp rating for the intended equipment.

Overview

System Description

The Multi-Guard system is a dual pedestal Electronic Article Surveillance system that works with any 58KHz accusto-magnetic tag. This system is plug and play, which eliminates the need for expensive technicians during installation.

The Multi-Guard system is fully digital, software driven, and has the latest DSP technology that constantly checks the environment: This eliminates false alarms that you get from using other systems. The Multi-Guard system can operate at a higher level of sensitivity, resulting in an excellent detection rate up to 2.8 meters (9 feet) between two pedestals.



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Height	1470mm	58"
Width	440mm	15.5"
Depth	100mm	3.5"
Weight	10Kg	22lbs
Power	200-220vac	110vac
Operating Frequency	58kHz	58kHz
Maximum Tag Detection	2.8 meters	9 feet

Features

Digital Signal Processing

The Multi-Guard system applies the latest and most technically advanced DSP technologies to address antitheft problems. It minimizes false alarms while maintaining considerable detection range.

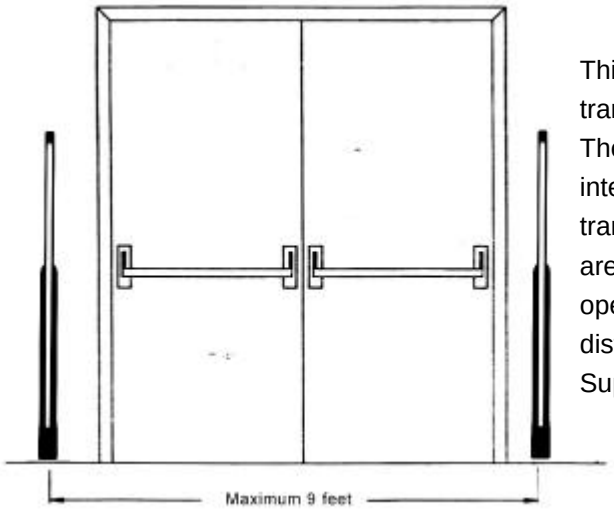
Self-Tuning Electronics

Other manufacturers need professional technicians to tune their systems to ensure proper functioning. But once the environment condition changes, the systems best working position changes and requires tuning again. The Multi-Guard system, benefiting from its fully digital electronics, constantly detects the environment & automatically adapts to any changes. It will always operate at its optimum performance from the beginning.

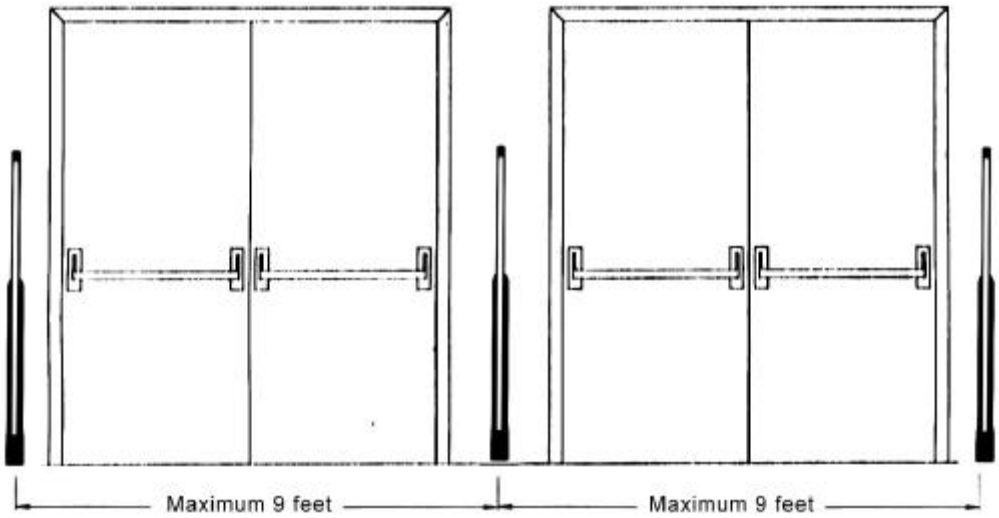
Software Driven

The Multi-Guard is fully digital software driven system, which allows unprecedented flexibility especially in later versions.

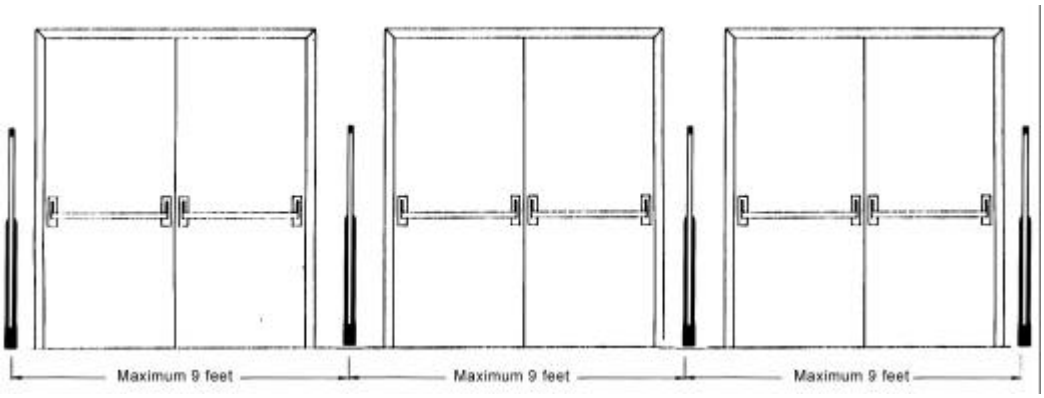
Applications



This type of installation consists of one transmitter and one receiver pedestal. The Multi-Guard system uses an interconnection cable from the transmitter to the receiver. The gates are mounted on both sides of the opening and cover a maximum distance of 9 feet (when using our Supersensor or Super Pencil tag)



This type of installation consists of one receiver and two transmitters. Installing the receiver in middle and the transmitters at the ends. Each transmitter post will be connected to the receiver post. The Multi-Guard system uses an interconnection cable from the transmitter to the receiver. The gates are mounted on both sides of the opening and cover a maximum distance of 18 feet (when using our Supersensor or Super Pencil tag)

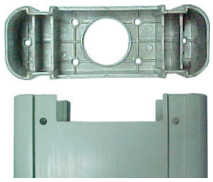


Then the wider the opening, the more systems are needed. This type of installation consists of two-transmitters and two-receiver pedestal with interconnection from the transmitter to the receiver. The gates are mounted on both sides of the opening and cover a maximum distance of 27 feet. (When using our Supersensor or Super Pencil tag)

Installation Procedures

Parts List

Base (2)



Inflationary spiral (12 sets)

Tools (2 sets)

Interconnection Cable (1)

Multi-Guard (1 Pair)
Transmitter & Receiver

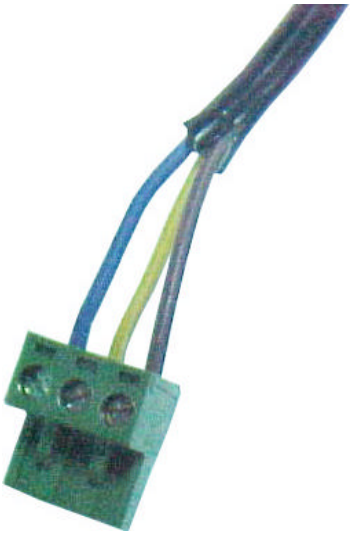
Bolts (2 sets)

Power
line plug
(2)

Installation Procedures

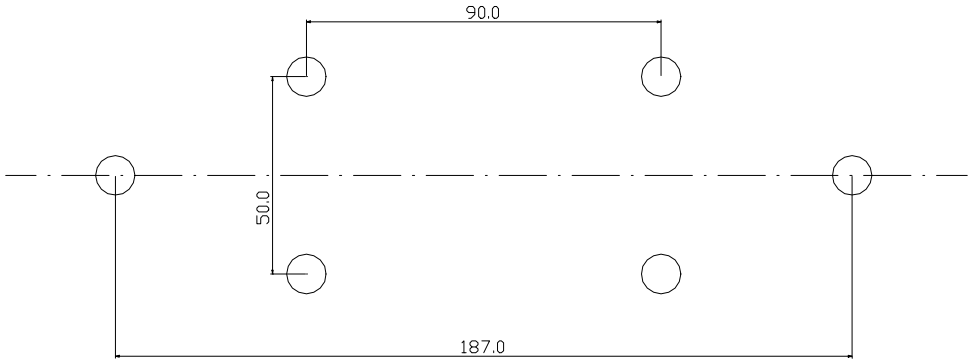
Pipe the power line to where the post will be mounted

Mount the plug on the power line

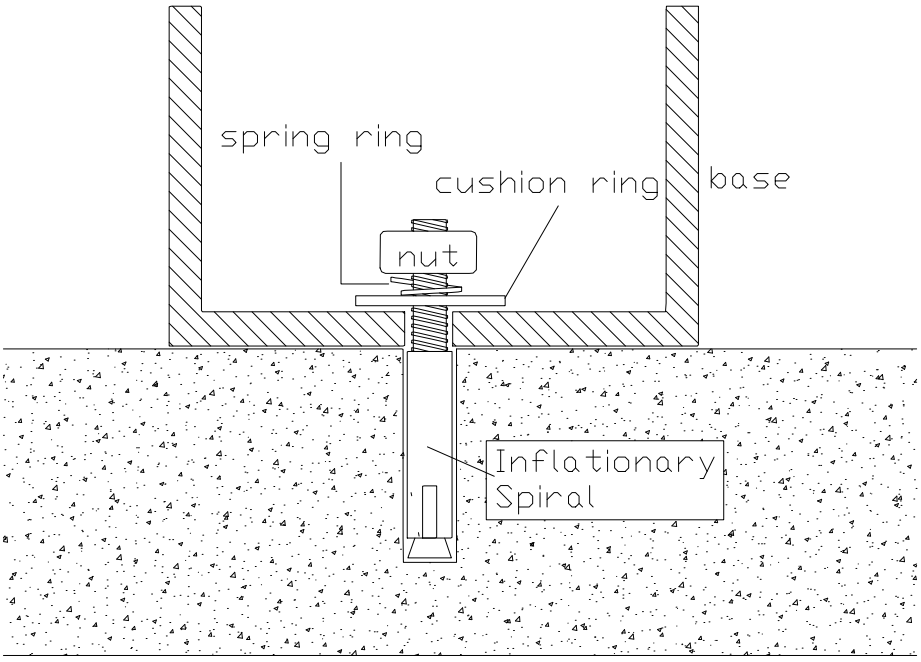


Put the plug to face towards you with the side where there are metal screws. Connect the N line to left terminal, the L line to right terminal, and the ground line to middle terminal.

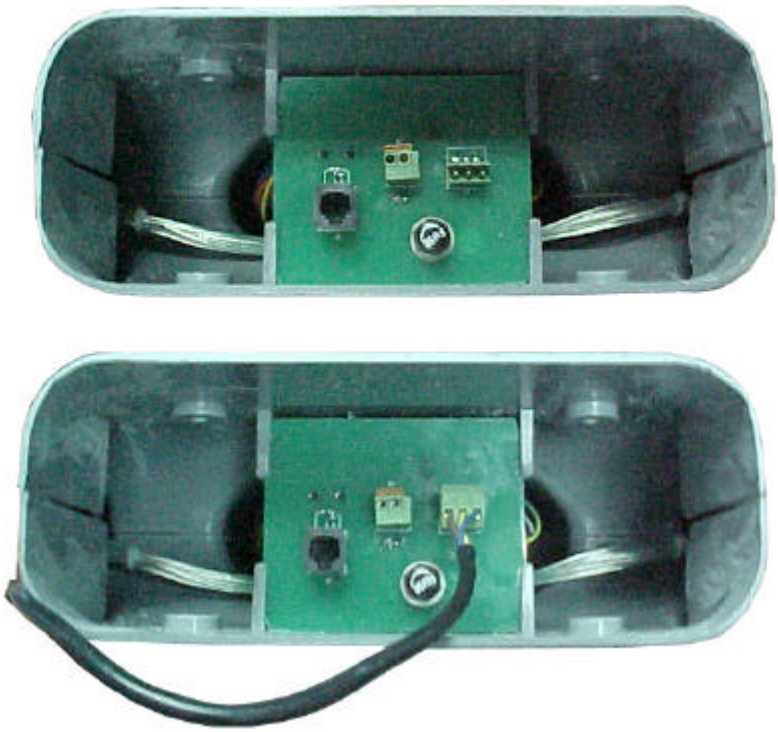
Drill six holes (10mm diameter 40mm deep) to install the base.



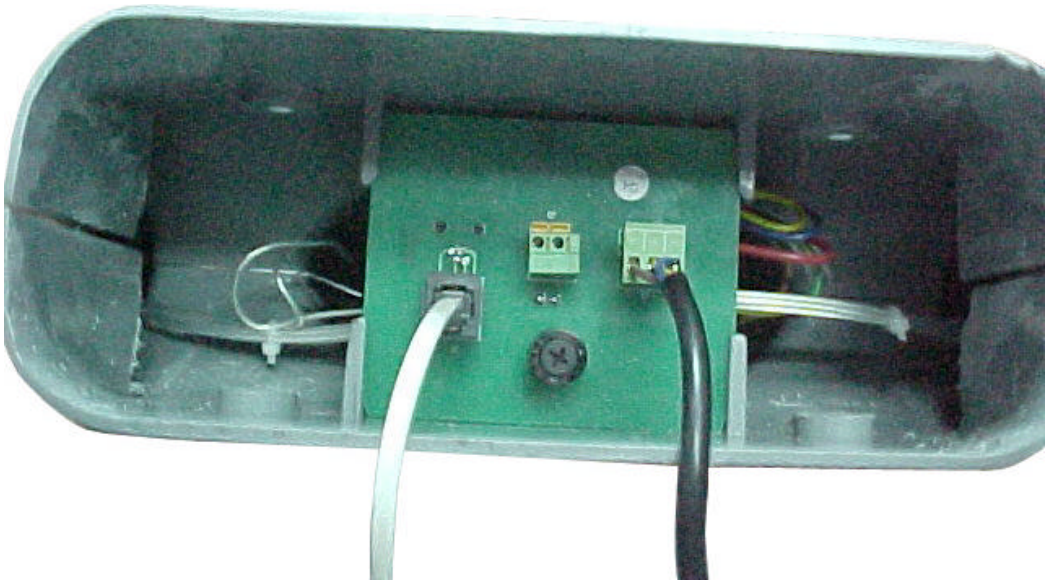
Put the Inflationary spirals into the holes
Install the base, allowing the spiral heads to go through the holes of the base
Attach the cushion rings then spring rings and nuts on the spiral heads, screw the nuts down this will fix the base to the ground.



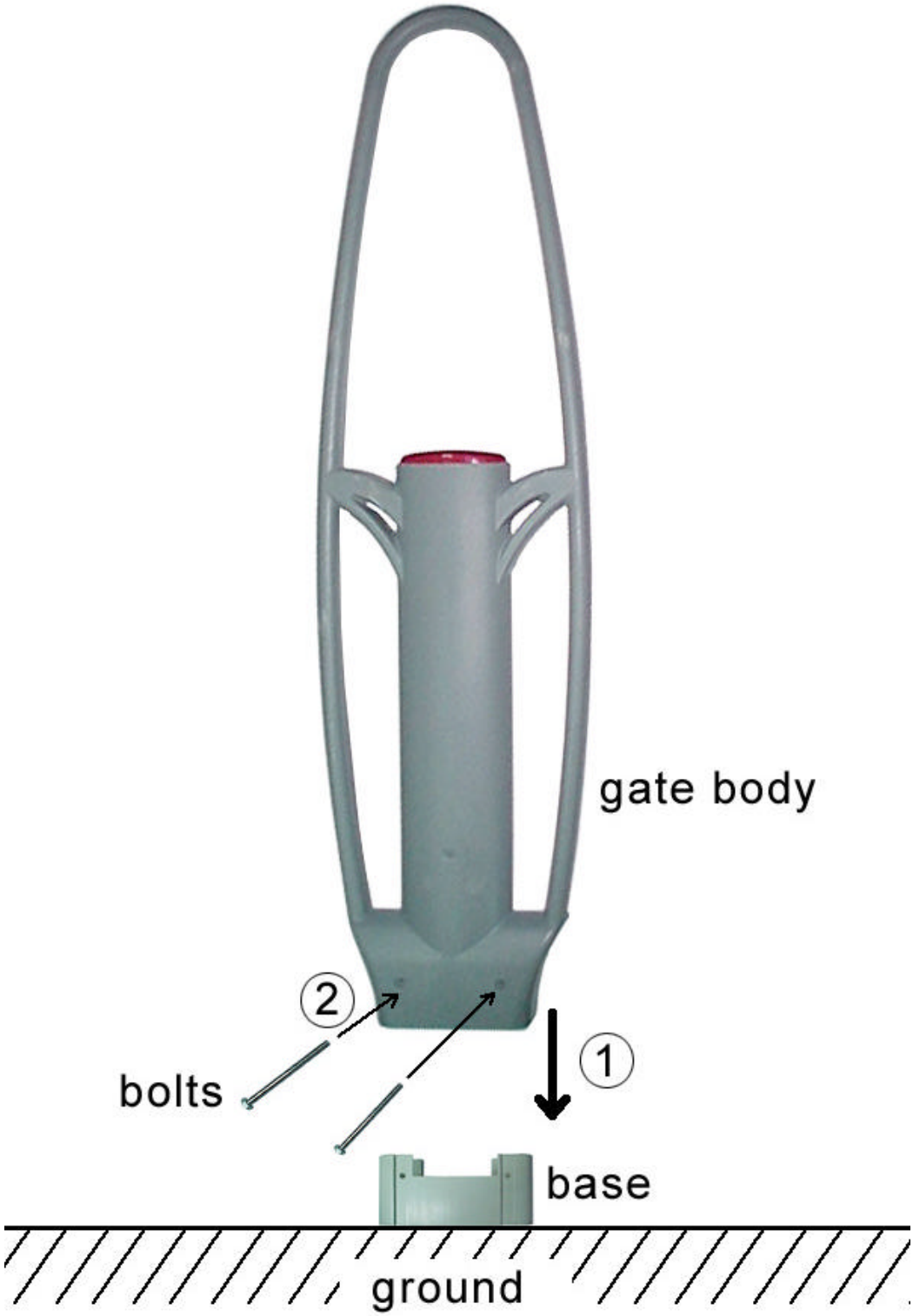
Lift the gate bottom mount the power line plug in to the power socket on the bottom of the PC Board as the picture shows

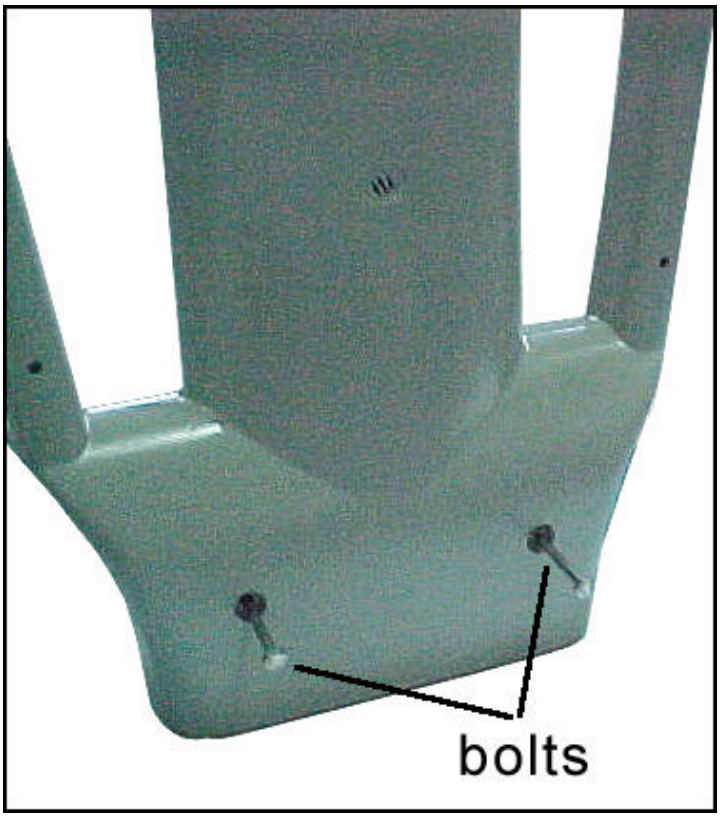


Connect the interconnection cable in to the RJ45 socket on PC Board as the picture shows, (both transmitter and receiver)



Put the gate body slick into the base track and cover the whole base.
Put the two bolts through the two tunnels at lower part of the gate body



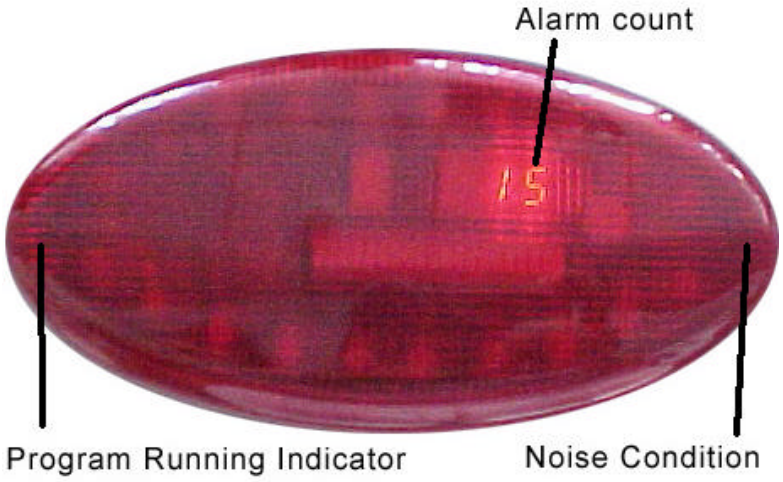


Put the nut onto the bolt head on the other side

Use the tool to screw down the nuts

Operational Tests

Turn the power on; the system will begin its environment check and start running the software program. Wait for several seconds and you will see the LED panel stop flashing. When the system is in the idle position the number 0 on the alarm count generator will be illuminated. On the left part of the panel, a program running indicator (Yellow Light) will flash regularly. On the right corner, a noise condition indicator light (green) will flash with a frequency associated with the noise level. The more frequently it flashes, the worse the noise is. At this stage, the system is ready for tag detection.



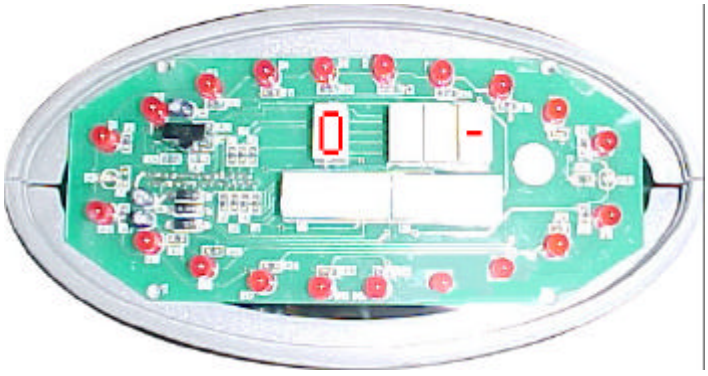
Encountering Problems

If you ensure every step of the installation is correct, all the connections are ok, and the system still malfunctions, Please call our technical support number (408) 530-8070)

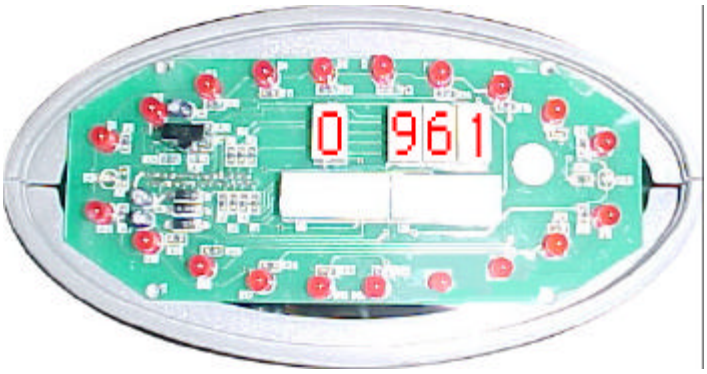
Appendix (IR control keyboard function description)

Press, “start” button to initiate the control

When panel shows the following state, initiation is ready



Enter password “961”

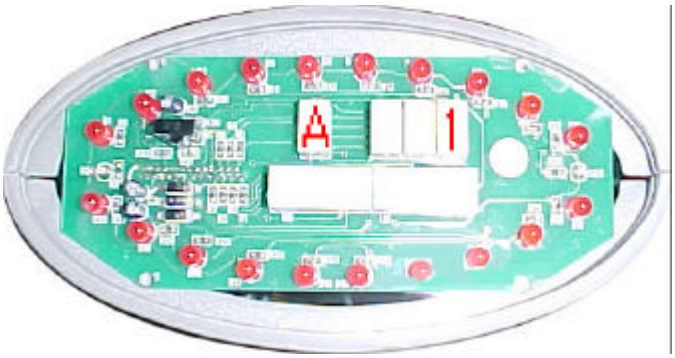


Press “confirm” button

Then enter the control parameters input state. There are three steps in the parameters input. The first is select the parameter type, like Gain Adjustment, Sychron Adjustment or Noise Condition Display; the second step is input the numbers; the third step is to press “confirm” button.

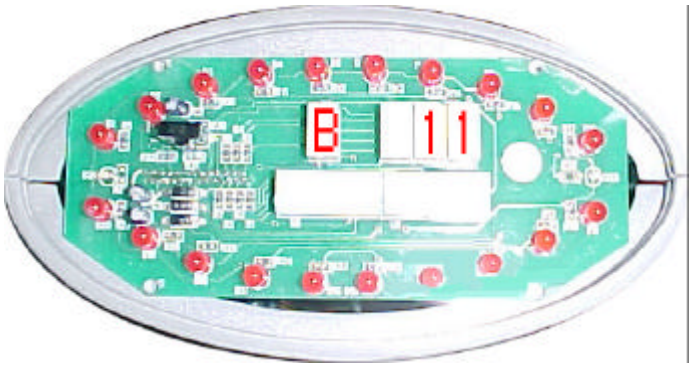
Gain Adjustment

There are two choices here, input 1 to select high gain, 0 to low gain.



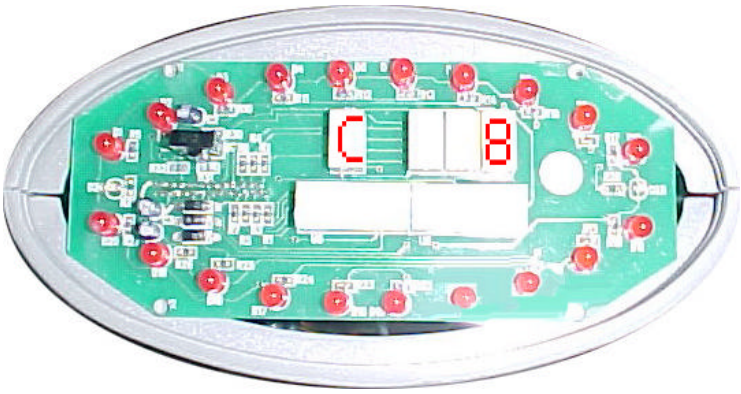
Synchrony Adjustment

This is the time from zero crossing point to the start point of the transmitting burst. You can input 1~254, each stands for 30 seconds.



Receiving Window Delay

You can input a number from 1~14, the bigger the number, the later receiving window will be opened.

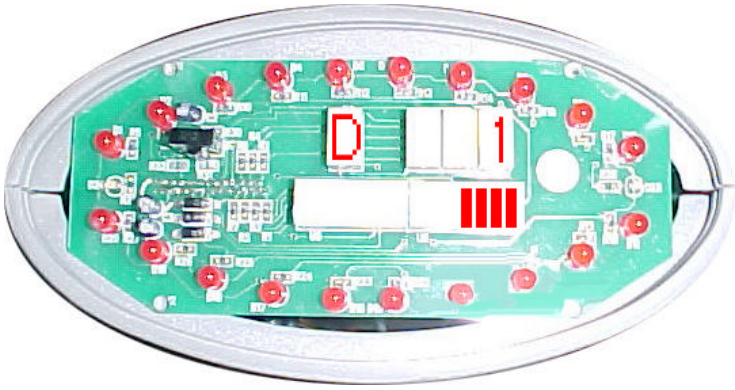


Noise Condition Display

Here input 1 to show noise condition

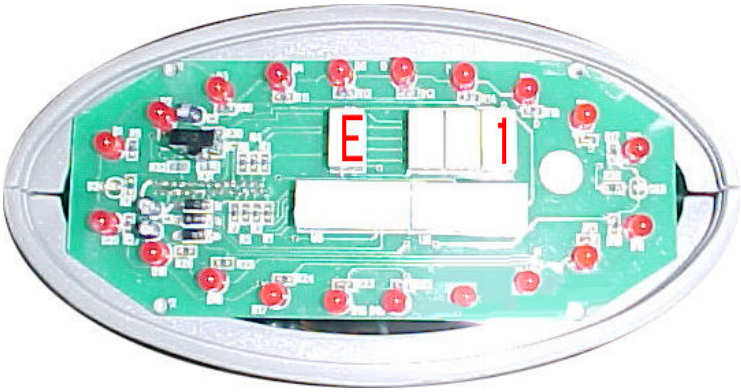
Input 2 to show average noise condition

Input 3 to show signal condition



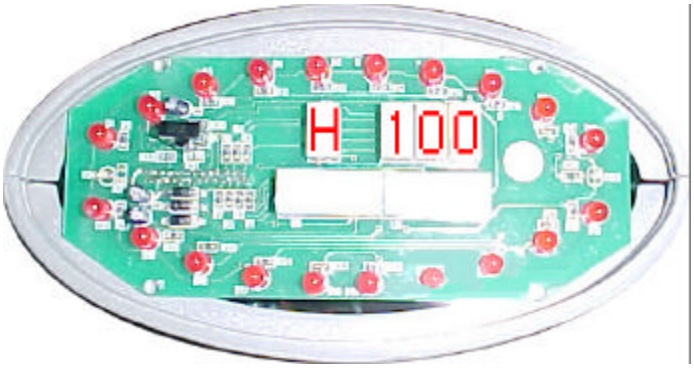
Alarming Sound Volume Control

The input range is 1~3, stands for three volume level from small to big.



Minimum Signal Adjustment

Change this figure to admit minimum signal amplitude, in others words any signal smaller than the level here will be ignored.



Exit button

This button will return control box to last state.

Save button

This button will save all parameters to flash ROM, so when power shut down the parameters will not be lost.

Note: After you have pressed this button, you should press the, “confirm” button to confirm you have saved the information.