Installation Manual

(AM-MSC1)

Youngil Electronics Co.,Ltd

System Overview.

This equipment has 58 KHz performance frequency. And can use all kind of hard tags, soft labels that have 58 KHz resonance frequency.
And this equipment manufactures to have perfect compatibility with existing products.
This equipment has Transmitter unit, Receive unit, alarm control unit, power unit on antenna interior and reduced occupying space. Also this has very simple installation. You can fix equipment in the floor and connect AC power source, than installation ends.
And equipment has factory setting which display most performance.
You can do simple tuning process with controller.
Controller connected equipment with D-sub connector.
And display alarm counter, noise level by real time.
Also, do as can control sensitivity of equipment through setting function.
It can have correct sensitivity in installation place through this function.

<Reference>
This manual made for master antenna. (Transmitter, Receiver, Alarm counter, power unit internal type).
In case use one master antenna with one slave antenna, is same performance such as that use two master antenna. And it can cost saving is possible than that use two master antenna.
(slave type is production available when customer's request.)
Master antenna is built in all function that controlled slave antenna.
Slave antenna's control is achieved through controller that is connected in master antenna.
This manual made for master antenna by standard.

1. Install configuration.

This system is extended according to way out's width.
Detection distance that offer in one antenna is extension from 80cm (use DR label) to 1.2m
(Use ferrite hard tag).
Maximum detection area is decided according to number of installed antenna.
This system built in all function in one antenna. All function that transmitting, receiving, alarming is work in one antenna. All functions are work normally installing only one antenna.
Detection territory of equipment is possible series extension according to number of installed equipment.

1.1 Install configuration method.

1.1.1 Have one entrance, and when width of entrance is within 1meter.

The antenna is mounted in the side of door with 1.2meters detecting distance with youngil's ferrite hard tags.

1.1.2 One entrance, entrance have two doors which have width 1meter.

This installation with detection range within 2.4 meters.

1.1.2.1 The antenna mounted in the middle of entrance, with 1.2 meters detection on both side with youngil's ferrite hard tags.

1.1.2.2 Antenna is mounted in both sides of the entrance and provides the detection distance of 2.4 meters with youngil's ferrite hard tags.
The two antennas use same power line with same phase to synchronize with each other.
In this case, does not close the entrance and not to be there is an effect which seems widely.

1.1.3 Two entrance, entrance have four doors which have width 1meter.
When being like this, three antennas do in necessary. And to the case which will use the master type antenna the inter-connection cable is not necessary. But in this case antenna is powered by the same power line with the same phase to synchronized with each other's.

If you mounted master with slave antenna, than you must have inter-connection cables between master and slave antennas.

2. Installation method.

2.1 When you arrive at install place.

Place the antenna where you have planned for the proper aisle width and to maintain clearance from fixtures that produce interference, and doors that open inward. Distances between antennas depend on tags or labels used with the system.
Don't share the mains AC source with neon signs, motors, computers, cash registers, terminals or data communication equipment. The interference will be able to occur in the equipment with other equipment. As a same reason, equipment use same power lines. If different power lines are supplied to installed antenna, antenna does not operate or false alarm will be occur.
Also all power lines must be 3phase power lines has a ground.
Please **confirm** a power lines before installing.

Note; We recommended uses the power line which different is separating with other equipment.

Attention; Remember to keep system at least 3meters from:

- Computer Monitors, TV's (CRT only).
- SMPS (switching mode power supply), neon displays.
- Any large metal objects.

And we **do not** recommend that install system under fluorescent light.

Note : ONLY if you test system operation to ensure there is no interference. If you detect interference, you must move the components further away from the object causing the interference

Use care when you place and install antenna. Let them stand unsupported only as long as required to verify their arrangement and mark mounting holes on the floor.
Remember checking the power sources phasing, as they are very important for AM systems.
AC power line is connected directly in power unit of the equipment inside.
When therefore installation, you must confirm beforehand and prepare according to this of what way power supply consists in equipment, and must prepare.
According to power supply method, there is case that must do power construction separately with system installation. In this case, request to customer, power construction should be completed before system installation.
This manual does not recorded about power lines work.

2.2 Tools.

Tools ; marker, hammer drill, hand drill, hand grinder, hammer, anchor, spanner and other tools.

3. Pre-installation test.

3.1 Test set-up

Stand antenna in place that wish to install.
Connect to AC power source to system and power ON.

CAUTION : Make sure to wire the mains plug correctly to prevent damage the system.

3.2 Check Function.

If everything works well (system is factory adjusted) you can test detection, if there are problems see the adjustment procedures for more details.
If the system works well and the customer is satisfied with the detection you can start the installation.

Important : ALWAYS OBTAIN FINAL CUSTOMER MANAGEMENT APPROVAL ON ANTENNA PLACEMENT BEFORE DRILLING HOLES.

Track any noise objects and try to remove them or fasten them so they can't be moved within a 2 meters radius around the system.

3.3 Install the antennas.

Note location of power outlet or conduit stub where master pedestal is to be located.
If installing with power cord, ensure that power cord will reach AC source.

3.3.1 Mark Mounting holes.

Use the antenna plates as a guide to mark the floor for holes that will accept mounting.
Marks all four holes in each antenna.
If floor is carpeted, **DO NOT** try to drill through the carpet. Doing so could damage the carpet. Instead, place the base and mark the floor with a felt pen. Then use a center punch to mark the floor through the carpet. Move the antenna out of the way. Cut 25mm square holes in the carpet.

3.3.2 Drill holes.

In cement floors, use a heavy duty rotary hammer with carbide tipped masonry bit to drill antenna all four mounting holes in the floor dig to depth that antenna fixing is available. Vacuum or seep drilling debris from around and inside holes immediately after drilling all holes.
In wood floors, use the hand drill to drill pilot holes for lag screw, which will secure the antenna.

3.3.3 Install anchors.

Install all four anchors in cement floors. Don't install lag screws on wood floors at this time.

3.4 Placing connecting wires.(install with master and slave antenna)

Cut a trench between the master and slave antenna for interconnect cable. (it's only need between mater and slave antenna)
If installation is in new construction, have the customer install a conduit that contains pull wires.
If the site has an accessible space in the floor, you can drill through the flooring and run the wires underneath the floor.

3.5 Complete the Installation.

3.5.1 Mount Antenna.

In cement floors, place the antenna over the anchors and attach nuts tight enough to support the antenna, yet loose enough to check the cable placement.
In wood floors, place the antenna over the mounting holes and insert lag screw ight enough to support the antenna, yet loose enough to allow for later cable placement.

3.5.2 Double check your work.

Double check all electrical connection check the ground connection. Even if you have installed many EAS systems, small interruption can cause you to overlook steps.
When you are convinced that the wiring is correct, you can connect main AC power to the antenna and power ON the system.
If the power LED off, there are two possibilities :

1. There is no mains power, check the mains cable.
2. Fuse is blow up, please replace fuse. fuse holder is located in power unit.
   System shall be electrically disconnected from the AC supply when replacing the fuse.
3. When system power unit breakdown, please send to factory.

WARNING ; To reduce the risk of damage. Replace fuse only with same type and rating of fuse.

3.6 Final installation steps.

Tighten the antenna on their mountings, than check system work normally.

3.6.1 Installing a more antenna.

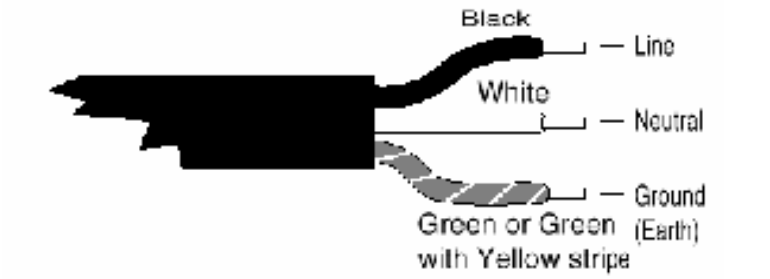
All antennas installed by same method in case install more than two.
All antennas have same AC mains power phase.
If all AC mains power phase of all systems are not same, system was not work or false alarm.
Is same case is installed with other company's AM products.

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).

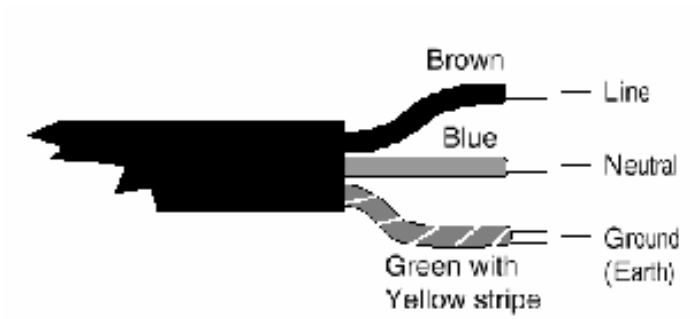
Operation of this equipment at voltages exceeding 130 VAC will require power supply cords, which comply with NEMA configurations



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.



Federal Communication Commission Interference Statement

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 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 con-nected.

• Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: To assure continued compliance, (example - use only shielded interface cables when connecting to computer or peripheral devices). Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.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

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IMPORTANT NOTE:

NOTE: THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY RADIO OR TV INTERFERENCE CAUSED BY UNAUTHORIZED MODIFICATIONS TO THIS EQUIPMENT. SUCH MODIFICATIONS COULD VOIDTHE USER&#65533;S AUTHORITY TO OPERATE THE EQUIPMENT.

IMPORTANT Safety Instruction:

CAUTION

To reduce the risk of electric shock, do not remove the top cover (or the rear section).
No user serviceable parts inside, refer servicing to qualified personnel.

This symbol, wherever it appears, alerts you to the presence of uninsulated dangerous voltage inside the enclosure-voltage that may be sufficient to constitute a risk of sock.

This symbol, wherever it appears, alerts you to the important operating and maintenance instructions in the accompanying literature. Please read the manual.

1) Read these instructions.

2) Keep these instructions.

3) Heed all warnings.

4) Follow all instructions.

5) Do not use this equipment near water.

6) Do not using near any heat sources such as radiators, heat resisters, stove, or other equipment that produce heat.

CAUTION
RISK OF EXPLOSION IF BATTERY IS REPLACED
BY AN INCORRECT TYPE.
DISPOSE OF USED BATTERIES ACCORDING
TO THE INSTRUCTIONS