

INSTALLATION AND MOUNTING MANUAL

HyperSpike® MA-Micro



This manual contains information that is proprietary to Ultra Electronics – USSI. It is intended solely for the education and use of parties operating and maintaining the equipment described herein.

1.0 INTRODUCTION

The MA-Micro is a speaker designed for indoor or outdoor wet applications. The MA-Micro produces 360 degrees of acoustic energy and excels in high ambient noise environments. It has an operation temperature range of -40°C to 60°C. The speaker comes in two easy-to-use wiring configurations: 10 foot leads or a military grade connector. This speaker meets UL Standard 1480A (Speakers for Commercial and Professional Use) and Hazardous Location Class I Division 2.

Models:

90145A-801-02-L:	Tan (10' Leads)	UL 1480A & CID2 MA-Micro
90145A-801-04-L:	Gray (10' Leads)	UL 1480A & CID2 MA-Micro
90145A-801-02:	Tan (10' Leads)	Uncertified MA-Micro
90145A-801-04:	Gray (10' Leads)	Uncertified MA-Micro
90145A-802-02:	Tan (Connector)	Uncertified MA-Micro
90145A-802-04:	Gray (Connector)	Uncertified MA-Micro

Note: CID2 = UL Class I Division 2, Groups A, B, C, and D outdoor wet listed

Specifications:

Product	dB SPL (Peak @ 1m)	dB SPL (Max @ 1m)	Usable Range (Feet @ 80dB)
90145A-801	134	125	656

Table 1: Emitter Head and dB Rating

Input Voltage: 41VRMS
 Power: 500 Watts
 Impedance: 4 Ohms
 Frequency Response: 125 Hz – 8000 Hz
 Directionality: 360 – Omni Directional
 Weight: 20 lbs.
 Dimensions: 12.8" DIA X 8.0" H

This equipment is suitable for indoor or outdoor wet location use in Class I Division 2, Groups A, B, C, D; or Non-Hazardous locations only.

Temperature Code: T3A



CAUTION: SOUND LEVEL EXCEEDS 120 dBA.



CAUTION: EXCEEDING THE MAXIMUM RATINGS OF THE SPEAKER WILL CAUSE EXCESSIVE DISTORTION AND MAY CAUSE PERMANENT DAMAGE TO THE SPEAKER AND ITS INTERNAL COMPONENTS.

2.0 MOUNTING



WARNING: WHEN MOUNTING OUTDOORS, MAKE SURE THAT THE SUPPORT SYSTEM USED HAS THE PROPER WIND LOAD RATING AND COMPLIES WITH LOCAL STANDARDS AND CODES.

The MA-Micro comes standard with a mast mount (Figure 1). A 10-foot conduit with electrical leads extends from the system.

The MA-Micro is intended to be pole mounted or suspended by the mast mount. The unit can be rigidly mounted or hung by the three eyelets.

- 1) To rigidly mount the MA-Micro, slide it into position with the mast mount around a 2" OD pipe (not included).

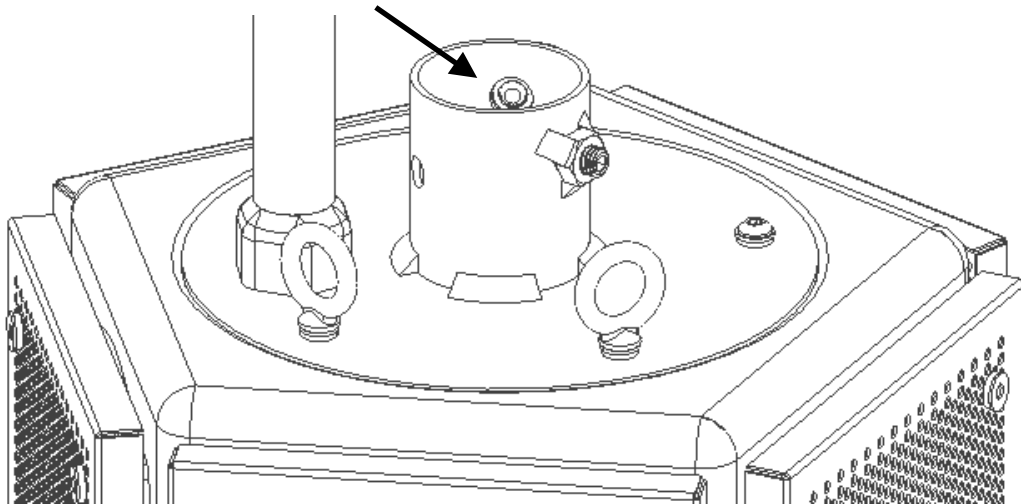


Figure 1: Location of the 2" mast mount

- 2) Two options for securing the pipe: Tighten the included set screws to 30 in-lbs or insert a locking pin through the mast mount and pipe (Figure 2). Locking pins are recommended for systems that are suspended by the mast mount.

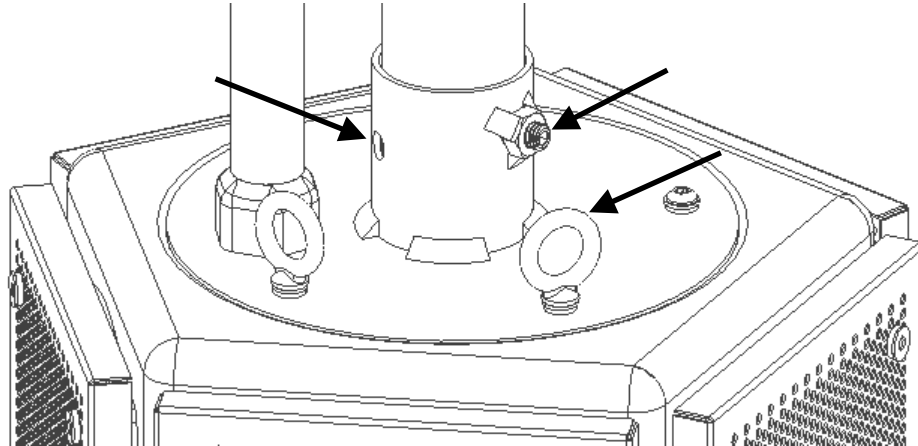


Figure 2: Location of screw to tighten to 2" pipe

- 3) Eyelets have been provided to secure a safety cable to the MA-Micro. The safety cable is a customer-supplied item.

3.0 FIELD WIRING



WARNING: EXPLOSION HAZARD. DO NOT DISCONNECT THE EQUIPMENT UNLESS POWER HAS BEEN SWITCHED OFF OR UNLESS THE AREA IS KNOWN TO BE NON-HAZARDOUS.

3.1. Cable Routing

3.1.1. Leaded Systems

The MA- Micro system comes with a 10-foot long 3/4" flexible conduit and 11-foot 14 AWG lead. The connection at the end of the conduit requires an installer-supplied junction box with a rating suitable for the installation environment of the box. See figure 3 for an example.

Route the conduit to a junction box approved by local electrical codes and standards.

Follow your integrator's instructions for installing into an appropriate junction system.

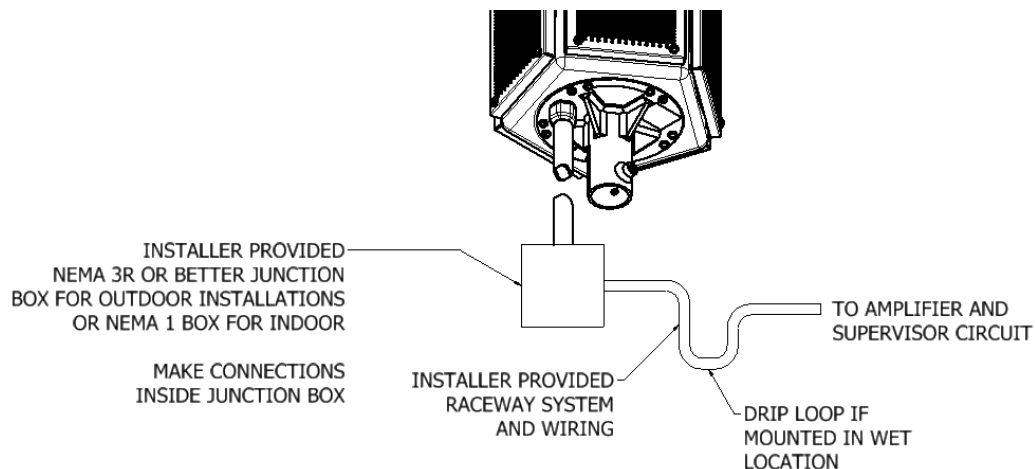


Figure 3: Example of field wiring

3.1.2. Connectorized Systems

The connectorized MA-Micro system has a four-pin connector that provides audio to the speaker from the amplifier (Figure 4). See section 3.2.2 for the pinout of the connector. The mating cable is sold separately.

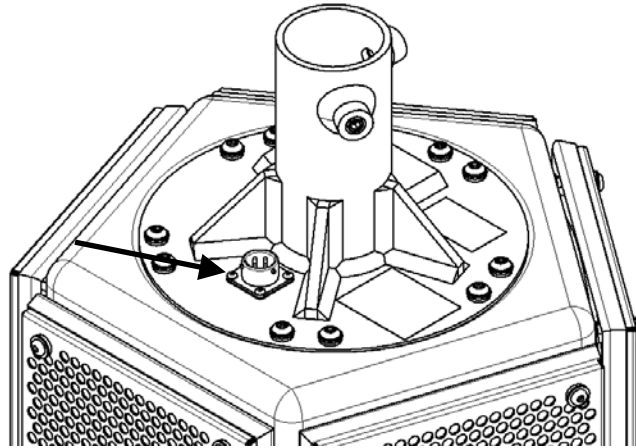


Figure 4: Connector Location

3.2. Wiring Diagrams

3.2.1. Leaded Systems

The MA-Micro has 14 AWG leads coming out of the speaker as depicted below (Figure 5). The red/black pair is used for attaching to the customer-supplied amplifier or the optional HyperSpike® amplifier kit.

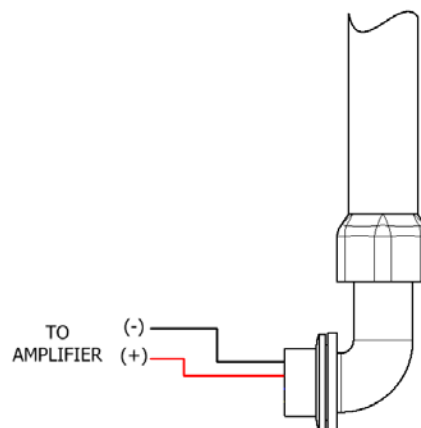
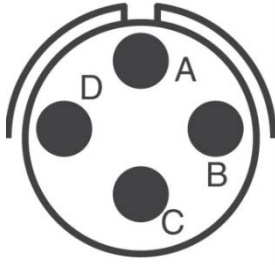


Figure 5: MA-Micro

3.2.2. Connectorized Systems

The connectorized MA-Micro has a four-pin connector. Included with the unit is a speaker cable used to connect the unit to a customer-supplied amplifier or the optional HyperSpike® amplifier kit.



Pin A – Channel 1 (-)

Pin B – Channel 1 (+)

Pin C – N/A

Pin D – N/A

4.0 WARRANTY

Ultra Electronics – USSI warrants its products to be free from defects in material and workmanship for a period of one (1) year from the date of shipment from USSI's facility. This warranty is extended to the original purchaser and all subsequent owners, provided a copy of the original dated bill of sale is presented when service is requested under warranty.

If your product should require service, write, phone, fax, or e-mail Ultra Electronics – USSI at:

Ultra Electronics – USSI
4868 East Park 30 Drive
Columbia City, IN 46725
Phone: 260-248-3665
Fax: 260-248-3510
E-mail: ServiceDepartment@ultra-ussi.com
URL: www.ultra-HyperSpike.com

We will either direct you to a local service agency or provide you with a Return Material Authorization (RMA) number so that you can ship the product to our factory. Do not ship the product to us without first obtaining an RMA number. Place the RMA number on all boxes returned to the factory to prevent equipment from being lost or mishandled. Merchandise returned to us for service under warranty must be accompanied by a copy of the original bill of sale, and shipped prepaid. You are responsible for transporting your product to our factory. We will pay the return shipping charges on all products repaired under warranty.

4.1. Failures Not Covered by This Warranty

This warranty covers manufacturing defects. The warranty **DOES NOT** cover:

- 1) Damage caused by accident, misuse, abuse, product modification, or neglect.
- 2) Damage incurred during shipment (you must claim these damages from the carrier).
- 3) Damage resulting from failure to operate the product in accordance with the instruction manual.
- 4) Damage resulting from attempted repairs by unauthorized personnel.
- 5) Claims based on any perceived agreement not explicitly stated in this warranty such as conversations with service personnel or sales representatives.

4.2. Limitation of Implied Warranties

All implied warranties, including warranties of merchantability, are limited in duration to a period of one (1) year from the date of shipment from Ultra Electronics – USSI.

4.3. Exclusion of Certain Damages

Ultra's liability is limited to the repair or replacement, at our option, of any defective product, and shall in no event include incidental or consequential commercial damages of any kind. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the preceding limitation or exclusion may not apply to you.

For further information regarding this warranty, parts, or service, please contact Ultra Electronics – USSI through one of the methods listed at the beginning of this warranty section.



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