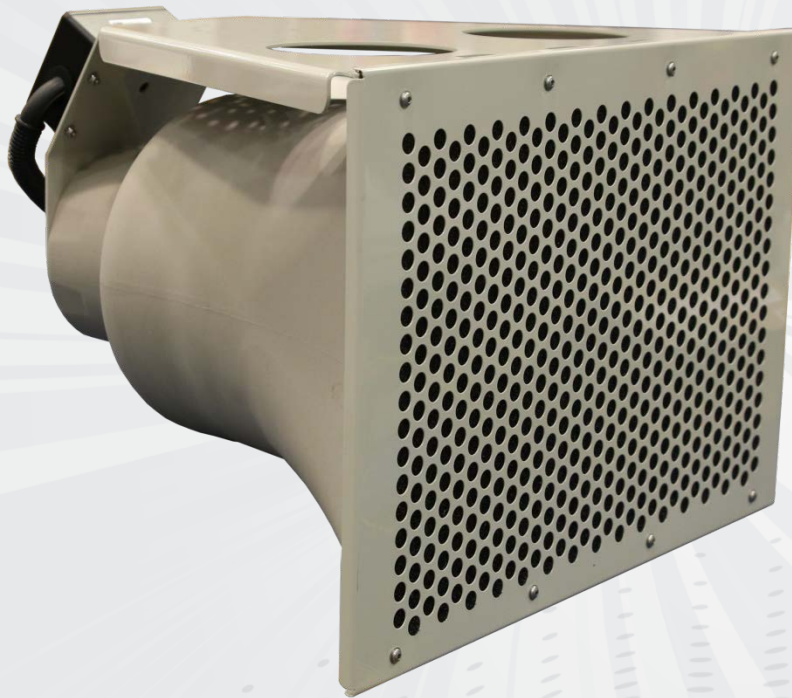


INSTALLATION AND MOUNTING GUIDE

HyperSpike® TCPA



Ultra
ELECTRONICS

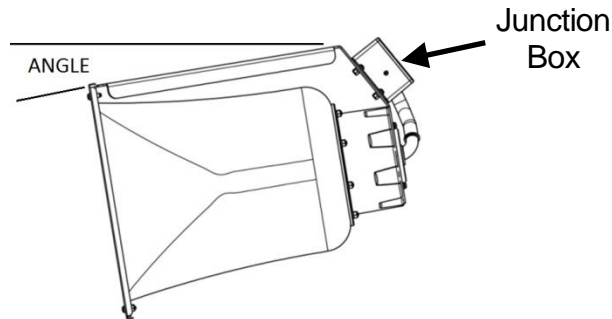

HYPERSPIKE

Sound that Moves

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.

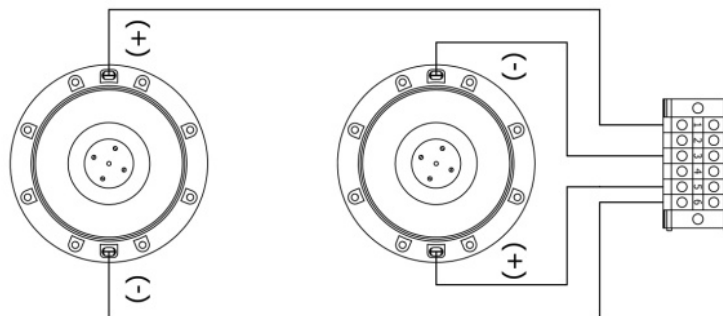
1.0 TCPA INSTALLATION AND MOUNTING GUIDE

- 1) The TCPA should be mounted with a slight downward angle as shown below. The horn should never be mounted with the opening facing up. Using the device in a manner contrary to these instructions will void factory warranty.

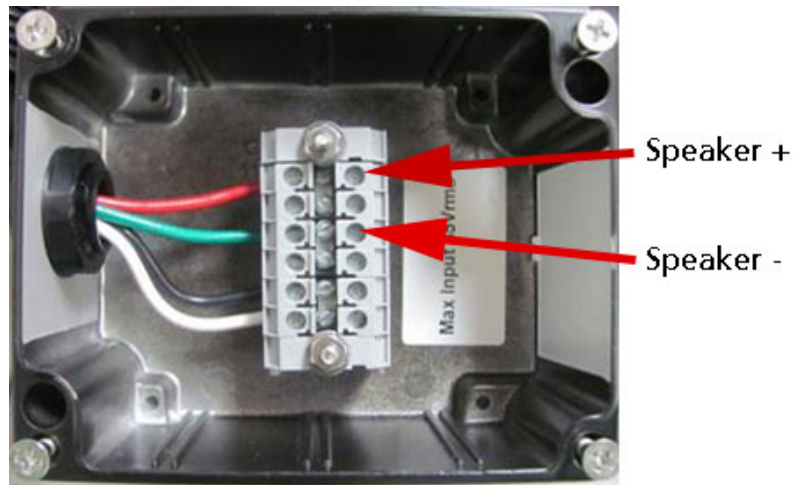


TCPA Downward Angle

- 2) The TCPA comes with a junction box for speaker connection. Speaker + should be wired into terminal block 1 and Speaker – should be wired into terminal block 3. The TCPA is rated at a maximum input voltage of 45 VRMS (64 V peak). Driving the unit beyond this voltage will void factory warranty.

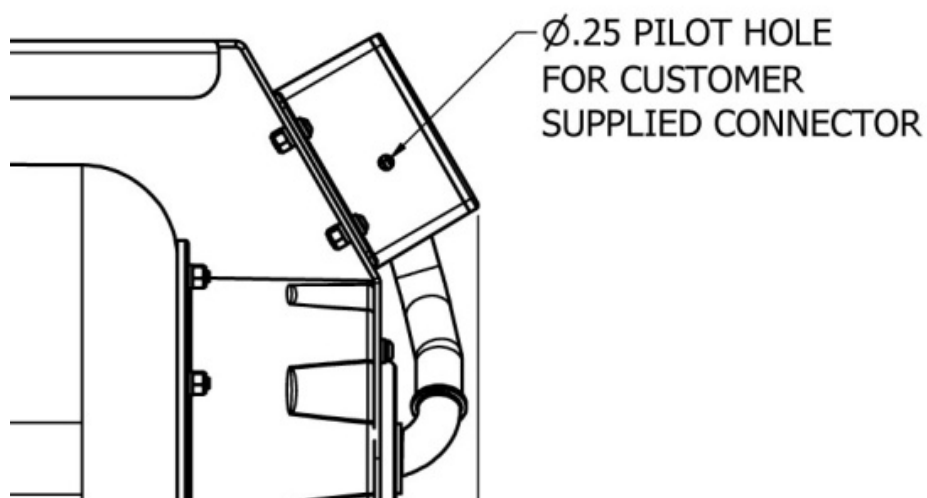


TCPA Junction Box



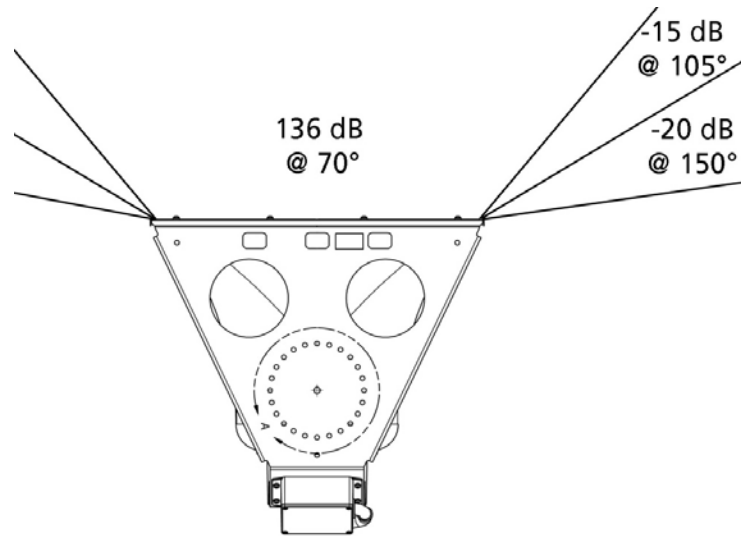
TCPA Junction Box Wiring

- 3) The junction box comes pre-drilled with a ¼" pilot hole. The installer must drill this hole to the correct size based on input conduit connection (not included). (Note: After drilling, ensure all metal shavings are removed from the box. Failing to properly seal this connection could result in premature failure of the device and void the factory warranty.)

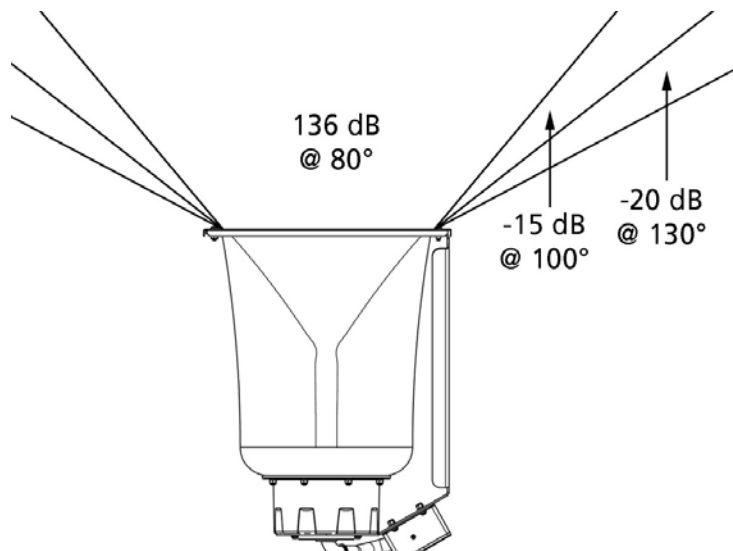


TCPA Junction Box Pilot Hole

- 4) The primary beam angle of the TCPA is 70° x 80° @ 1 kHz. Within the primary beam angle the user can expect to achieve the full rated SPL. Outside of the primary beam angle, the device will still be able to be heard but at a reduced output as depicted below.



TCPA Horizontal Beamwidth Reductions

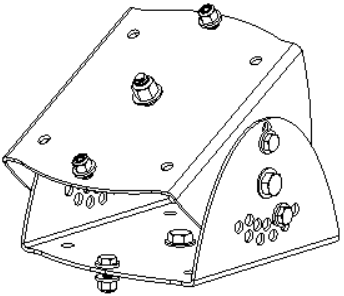
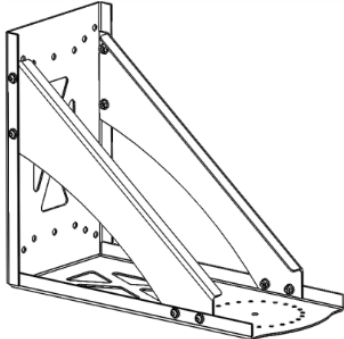


TCPA Vertical Beamwidth Reductions

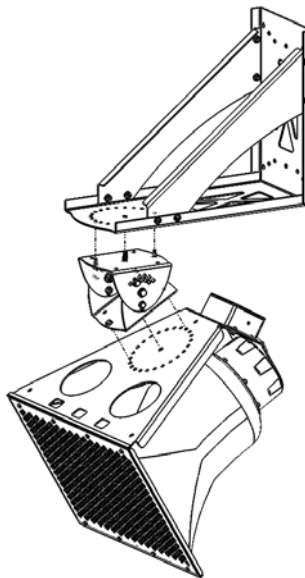
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3) Wall\Pole Mount Unit Kit Contents

1x		Pan/Tilt Bracket
1x		Wall Mount Bracket

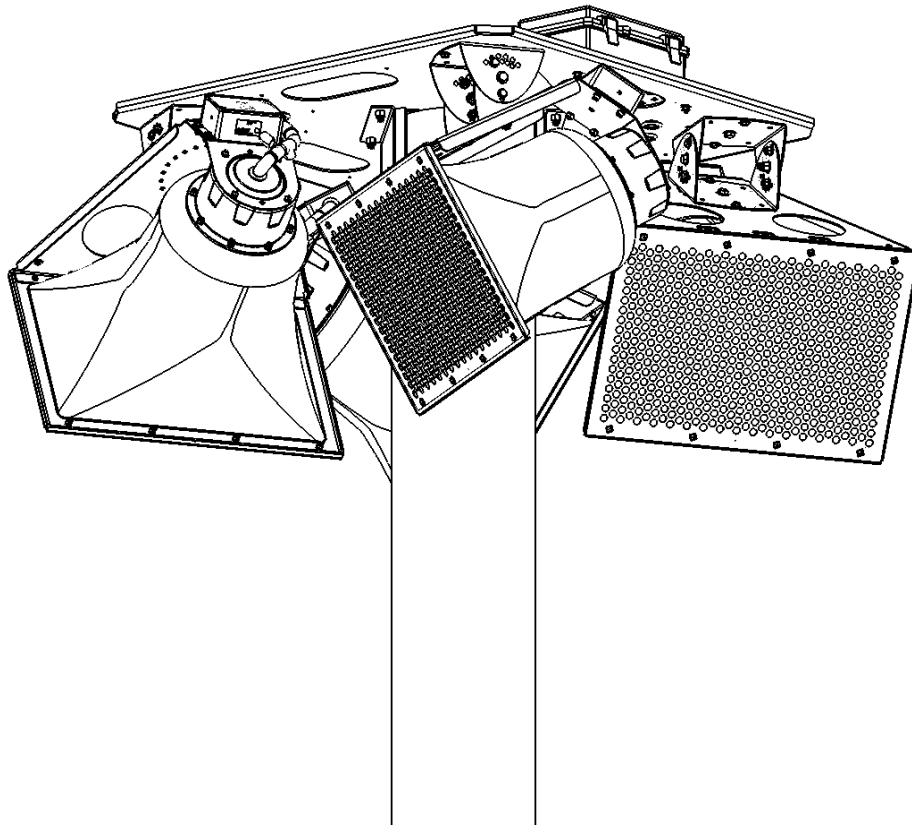
4) The kit allows for mounting the TCPA, pan/tilt bracket, and wall mount bracket as shown:



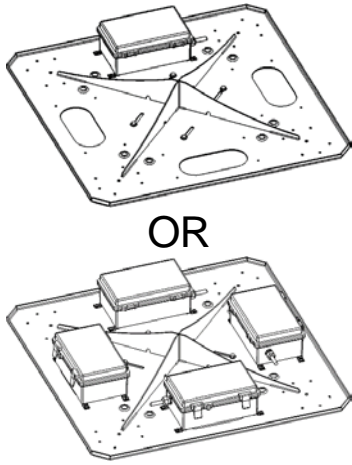
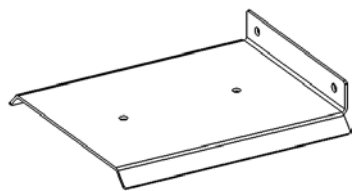
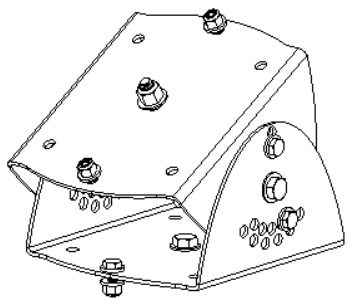
- 5) Wire directly into junction box as detailed in Section 1. Speaker + should be wired into terminal block 1 and Speaker – should be wired into terminal block 3.

3.0 TCPA 4X UNIT MOUNTING OPTION

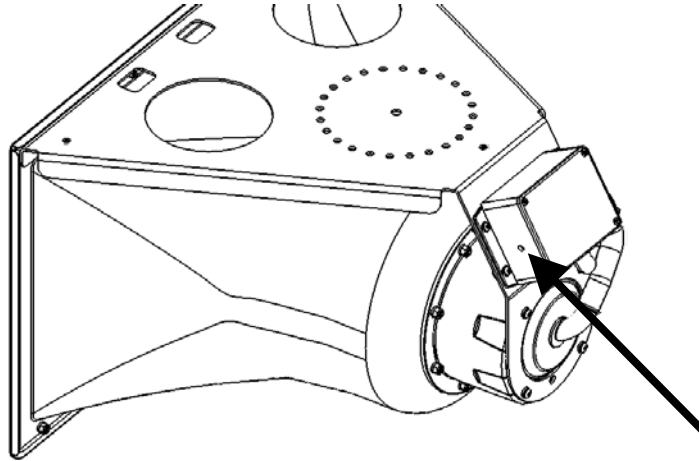
- 1) Mounting hardware is also available to mount four (4) TCPAs in a manner to create an omni-directional acoustic source. The kit provides the hardware necessary to mount the unit to the top of a pole up to 10" in diameter.



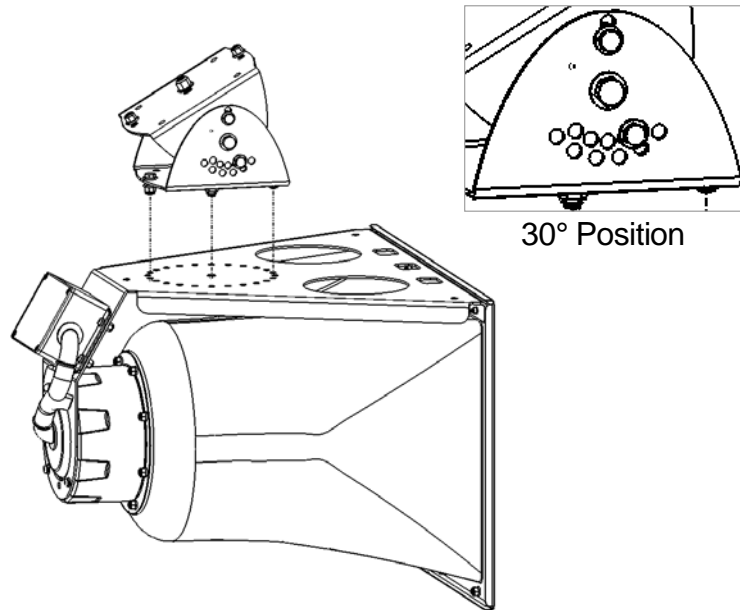
2) Kit Contents

1x	 OR	4X Mounting Plate
2x		Pole Mount
4x		Pan\Tilt Bracket

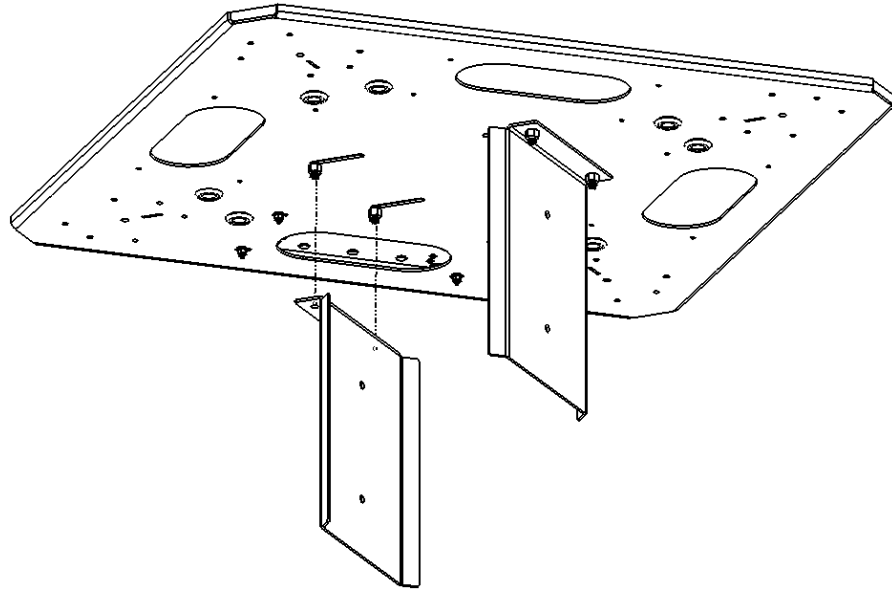
- 3) Drill a hole in the junction box. The location is indicated by the pilot hole on the side. (Note: Hole size to match transformer/junction box cable gland seal.) Remove the cabling provided with transformer/junction box and install into TCPA. Speaker + should be wired into terminal block 1 and Speaker – should be wired into terminal block 3.



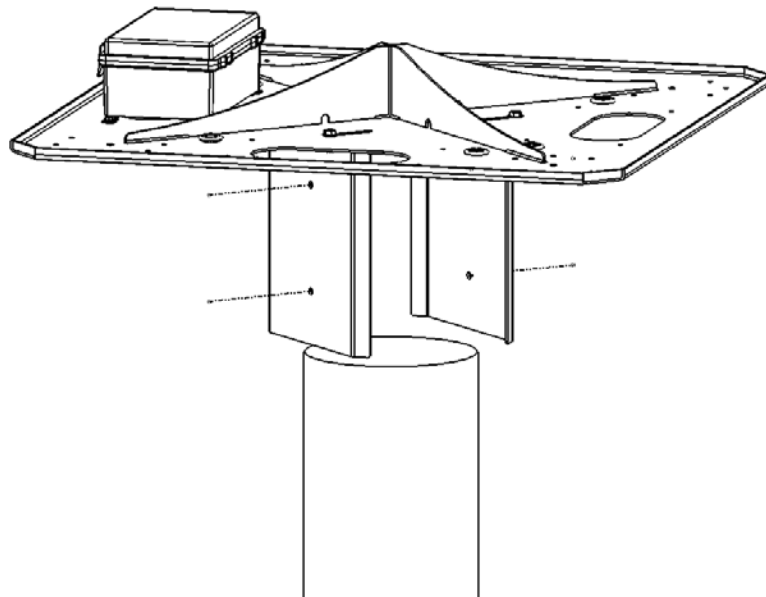
- 4) Attach the pan/tilt bracket to the TCPA mounting bracket.



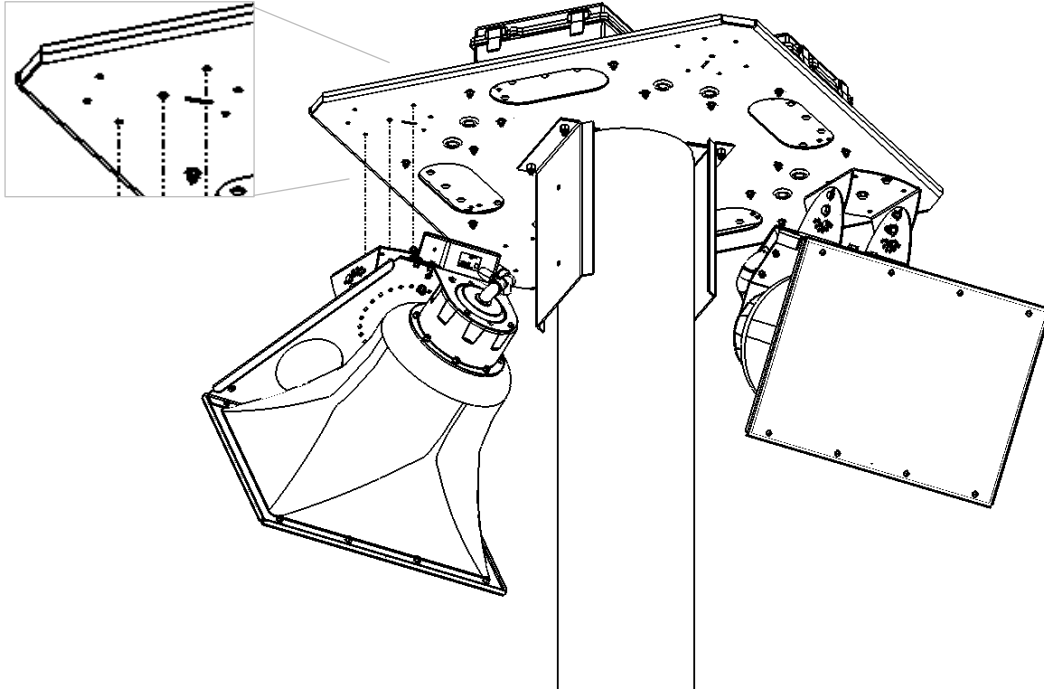
- 5) Attach the pole mounts to the 4X mounting plate as shown below.
(Note: Leave fasteners loose until system has been attached to the pole in step 6.)



- 6) Mount to pole and ensure the unit is level. Tighten all pole fasteners, and then tighten the fasteners left loose in previous step.
(Note: Pole fasteners not included.)

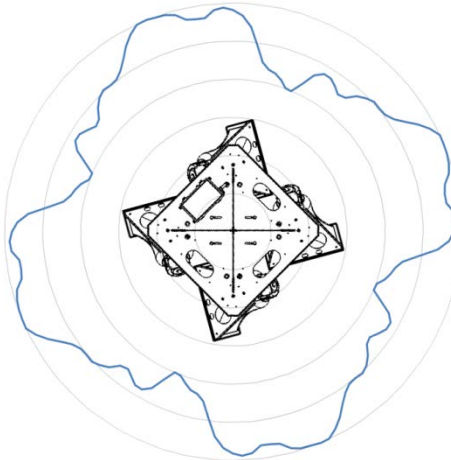


- 7) Mount the TCPA horns to the 4X mounting plate with the provided hardware.

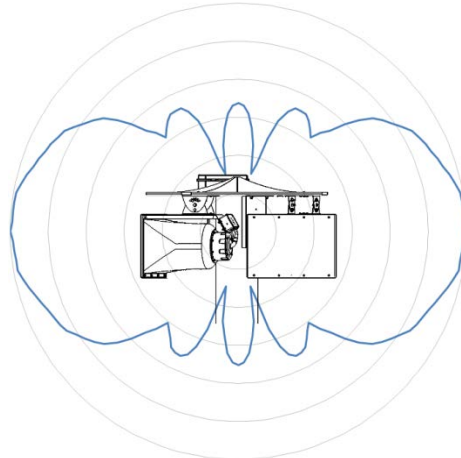


- 8) The horns can be rotated and tilted to optimize acoustic performance. Shown below are polar plots for recommended configurations.

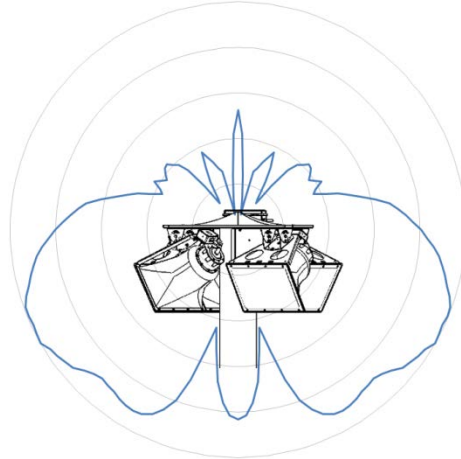
Horizontal
(for mount using
holes indicated in
step 7)



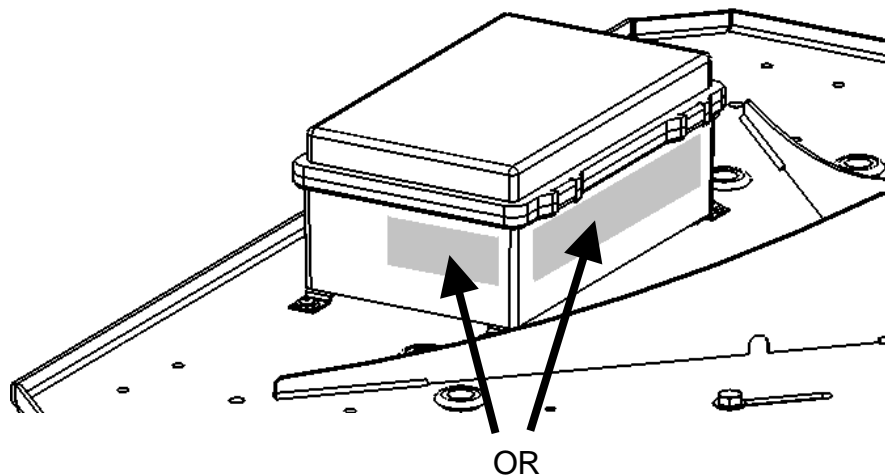
Vertical - 0° Tilt



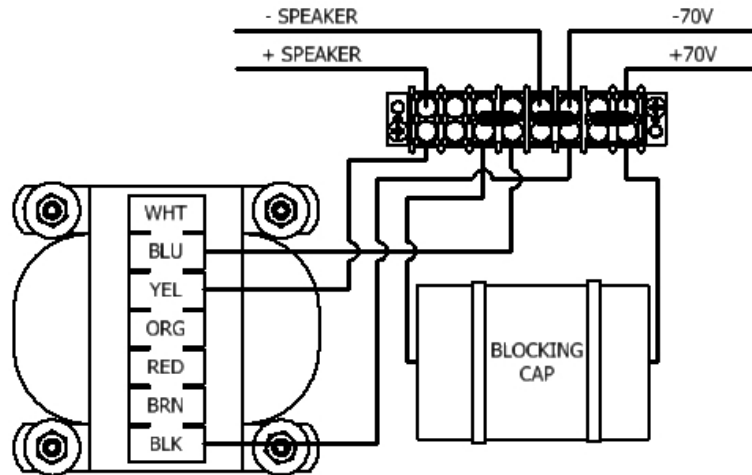
Vertical - 30° Tilt



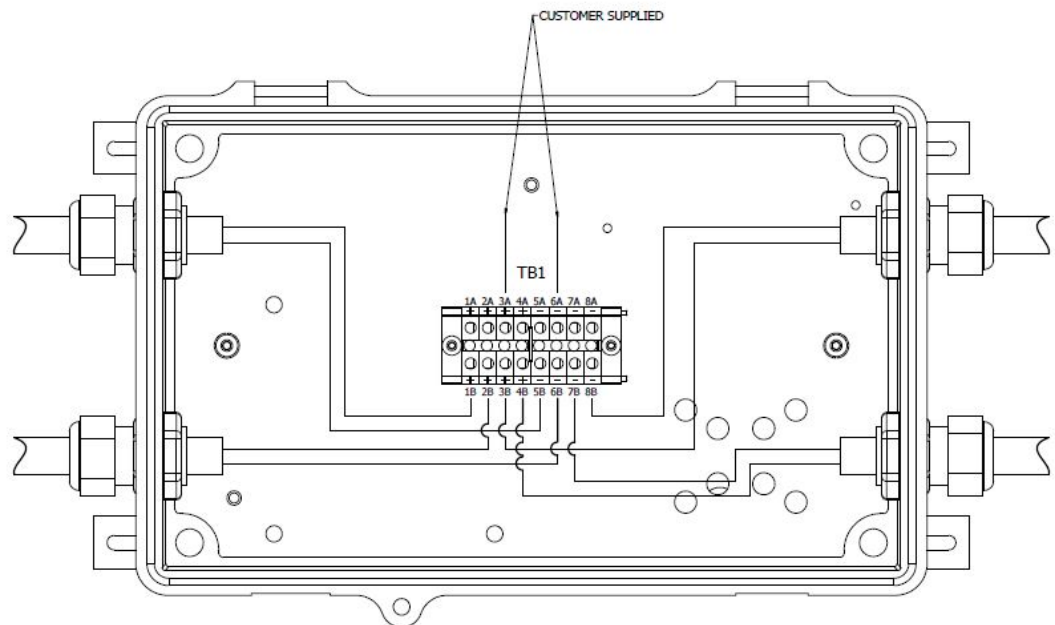
- 9) Drill hole in transformer/junction box where indicated based on audio source cable and corresponding sealed interface (not included).



10) Wire into transformer/junction box as shown in diagrams below.



TCPA TRANSFORMER BOX WIRING



TCPA JUNCTION BOX WIRING



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