# TCPA-10

UL1480, Class I Division 2 Medium Power Speaker

Audio Signaling & Notification Speaker

**Features:**

- Industry Leading Voice Intelligibility (STI PA = Excellent)
- 139dB Max SPL @ 1 Meter
- Rated for Indoor or Outdoor Applications
- Universal Mounting Interface
- Built-In Transformer (25V, 70V, & 100V) or 4/8 Ohm Configurable
- Durable Environmental Resistant Construction




**Specifications:**

| | |
|---|---|
| **Certifications** | UL1480, ULC, CSFM, Class I Division 2 |
| **Power Rating** | Up to 90W continuous (4 ohm model) |
| **Frequency Response** | 375Hz – 15kHz (nominal)<br>400Hz – 4kHz (general signaling) |
| **Sensitivity** | 112dB @ 1W/1m (Avg 400-4,000Hz) |
| **Dispersion Angle** | 60° (-3dB), 90° (-6dB) |
| **Weight** | 9lbs |
| **Dimensions** | 10.1”H x 10.1”W x 11.3” D |
| **Temperature Range** | -40°C - 60°C |

**Models:**

90XXXA-80X-0X-L

**CERTIFICATION:**
N/A – Not certified
L – 1480 and Class I Division 2 certified

**COLOR CODE:**
01 – Black
04 – Gray
05 – Red
06 - White

**CONFIGURATION:**
-801 – 8 ohm
-802 – 4 ohm (90219A only)

**PRODUCT:**
90215A – Distributed Audio
90219A – Direct Drive

**Description:**

The HyperSpike® TCPA-10 is intended for indoor and outdoor audio signaling and notification. The five power settings have been designed to interface with industry standard amplification. Its 90° wide acoustic beam makes it an ideal notification tool for indoor and outdoor areas. The optional dual mount system creates a 180° wide beam that is ideal for outdoor perimeter use. Its best-in-class acoustic coverage allows for fewer units to be installed in large indoor and outdoor areas, lowering installation and long-term maintenance costs while also improving intelligibility and esthetics. Best-in-industry voice quality and intelligibility, combined with sharp and high impact tone capability, make it the right choice for ensuring messages are heard and understood.

**Accessories:**

- 72377B-801 Wall Mount Bracket
- 72378B-801 Dual Unit Mounting Adapter
- 72379B-801 Pole Mount Adapter

**Architect and Engineer Specifications:**

Voice paging and tone signaling loudspeaker shall be Ultra Electronics Model _____ (see Model numbers above). Unit shall be UL1480 Listed and Class I Division 2 certified, weather resistant and constructed of rugged 5VA rated, UV resistant ABS plastic. The loudspeaker shall be able to operate within any ambient temperature environment ranging from -40°C to 60°C. The speaker shall have a sensitivity of 112dB when measured at 1m (AVG 400-4,000Hz) and a beamwidth of 90° (-6dB at 1kHz). Model shall be a non-re-entrant compression loaded transducer with a 3” polyimide diaphragm and power handling of 45W continuous. The coil shall be a nominal 8 ohm impedance and ferro-fluid shall surround the coil to optimize heat dissipation. When applicable, transformer power settings shall be selectable and include 100V: 45W, 32W, 24W, 16W, 8W; 70V: 24W, 16W, 12W, 8W, 4W; 25V: 3W, 2W, 1.5W, 1W, 0.5W. Speaker shall contain in-line capacitor to allow DC supervision of wiring and be supplied with three feet of conduit with flying leads. Frequency response shall be 375Hz – 15kHz. Dimensions shall be 10.1”H x 10.1”W x 11.3”D.

**Sound Output Ratings:**

| Input Voltage | Watts | dB SPL (Peak @ 1m) | dB SPL (Max @ 1m) | * dB SPL (Reverb @ 10ft) | Usable Range (Feet @ 80dB) |
|---|---|---|---|---|---|
| 25 | 0.5 | 119 | 114 | 90 | 160 |
| 25 | 1 | 122 | 117 | 96 | 230 |
| 25 | 1.5 | 124 | 119 | 98 | 290 |
| 25 | 2 | 126 | 121 | 99 | 360 |
| 25 | 3 | 128 | 123 | 100 | 460 |
| 70 | 4 | 129 | 124 | 102 | 520 |
| 70/100 | 8 | 131 | 126 | 104 | 650 |
| 70 | 12 | 133 | 128 | 107 | 820 |
| 70/100 | 16 | 134 | 129 | 107 | 920 |
| 70/100 | 24 | 136 | 131 | 109 | 1,160 |
| 100 | 32 | 137 | 132 | 110 | 1,300 |
| 100 | 45 | 139 | 134 | 112 | 1,640 |

| (90215A) Distributed Audio Tone dB SPL (Max RMS @ 1 meter) | | | |
|---|---|---|---|
| **Tone** | **25V** | **70V** | **100V** |
| Temporal 3 | 119 | 128 | 131 |
| Broadband Fast Siren | 121 | 130 | 133 |
| Slow Sweep Tone | 122 | 131 | 134 |

| Tap | Impedance (Ω) | Watts @ 25V | Watts @ 70V | Watts @ 100V |
|---|---|---|---|---|
| 1 | 1,250 | 0.5 | 4 | 8 |
| 2 | 625 | 1 | 8 | 16 |
| 3 | 416 | 1.5 | 12 | 24 |
| 4 | 312 | 2 | 16 | 32 |
| 5 | 208 | 3 | 24 | 45 |

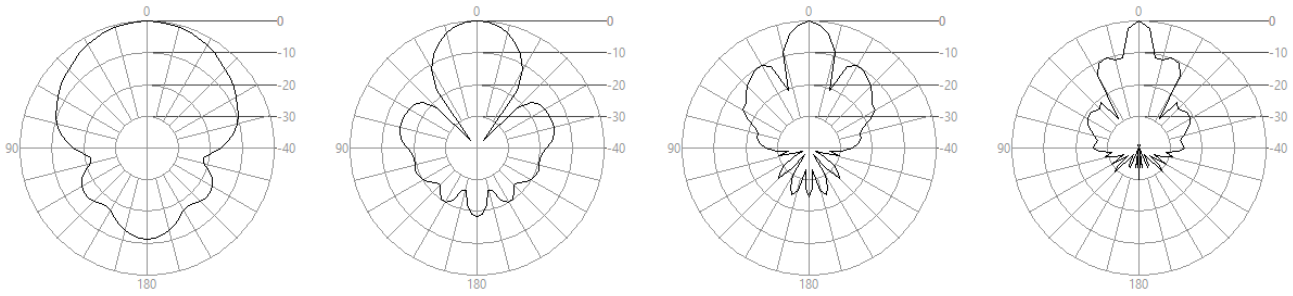
| Input Voltage | Impedance | dB SPL (Peak @ 1m) | dB SPL (Max @ 1m) | * dB SPL (Reverb @ 10ft) | Usable Range (Feet @ 80dB) |
|---|---|---|---|---|---|
| 22 | 8 Ohm | 139 | 134 | 112 | 1,640 |
| 22 | 4 Ohm | 142 | 137 | 114 | 2,320 |

| (90219A) Direct Drive Tone dB SPL (Max RMS @ 1 meter) | | |
|---|---|---|
| **Tone** | **4 Ohm (-802)** | **8 Ohm (-801)** |
| Temporal 3 | 134 | 131 |
| Broadband Fast Siren | 136 | 133 |
| Slow Sweep Tone | 137 | 134 |

* UL Standard SPL Measurement

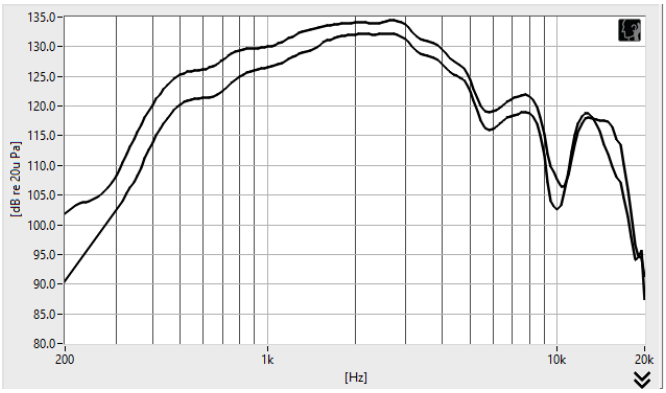
**Environmental Specifications:**

| | |
|---|---|
| Ingress Protection | Performs to NEMA 3R standards |
| Operating Temperature | -40°C - 60°C |
| Humidity Range | 0-75% non-condensing |

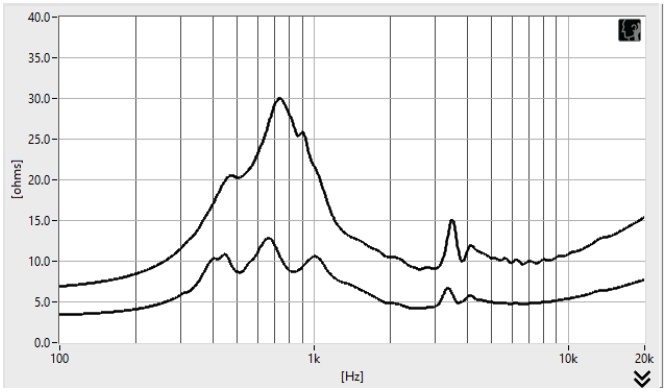



1kHz 2kHz 4kHz 8kHz

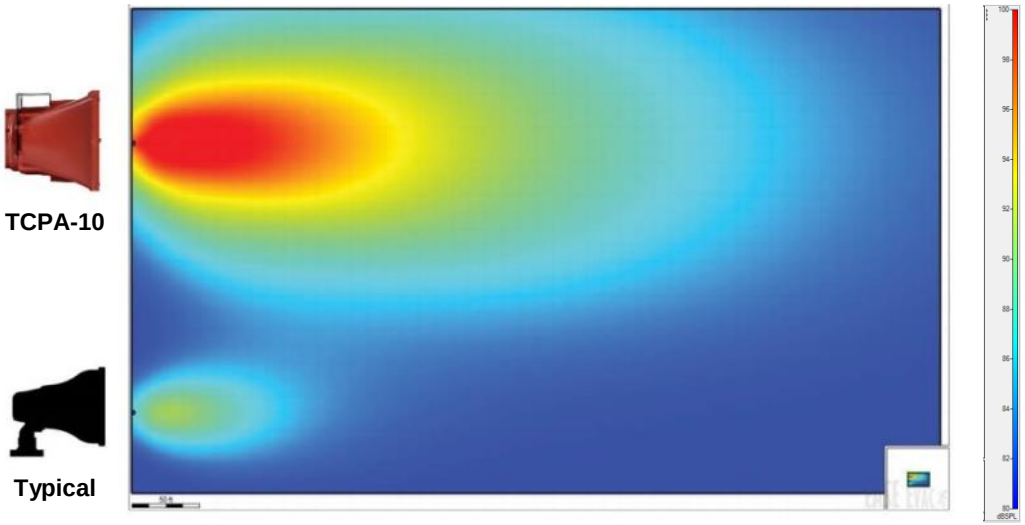
**Polar Patterns**




**Frequency Response 4Ω and 8Ω @ 1M**




**Impedance 4Ω and 8Ω**



**TCPA-10**

**Typical**

**EASE Comparison Plot**

**Wiring Reference:**

The TCPA-10 has a three-foot long ¼ Trade Size* flexible conduit with 20 AWG wires exiting the end. The power tap selection switch is located on the front of the unit (see Figure 2 in Interface and Mounting Reference).

** ¼ Trade Size Conduit has a nominal Ø.39" ID / Ø.57" OD*

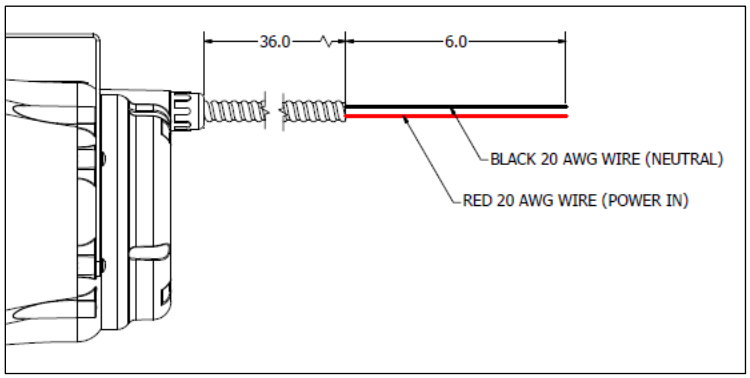



**Figure 1**

**Interface and Mounting Reference:**

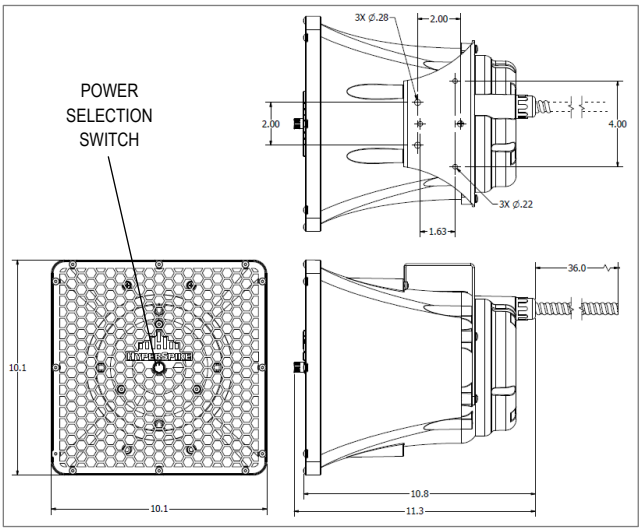



**Figure 2**

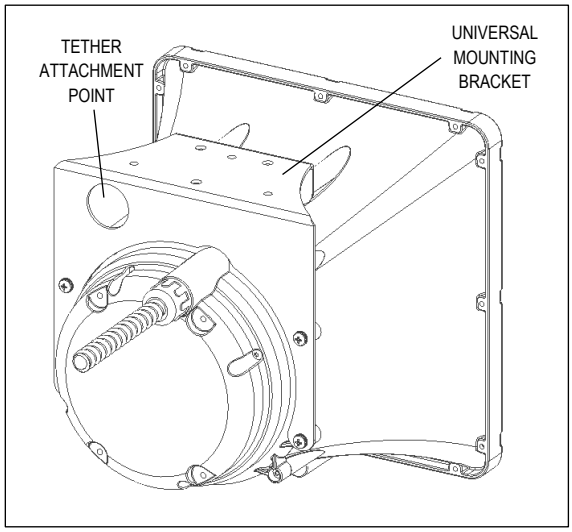



**Figure 3**

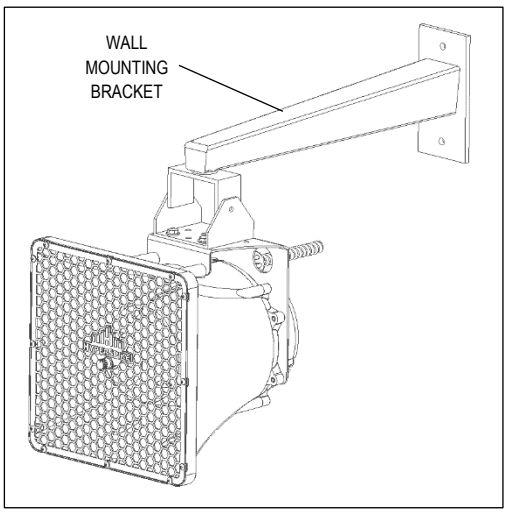



**Figure 4**
**(single unit)**

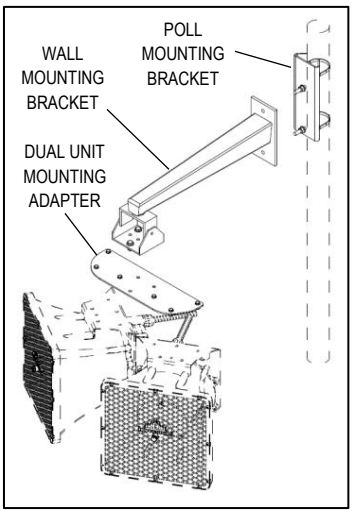



**Figure 5**
**(double unit)**