

# TCPA-10

## Medium Power

## Speaker

### HyperSpike Series

#### Overview

The EDWARDS HyperSpike® Series 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 aesthetics. 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.

#### Standard Features

- Industry Leading Voice Intelligibility (STI PA = Excellent)
- 139dB Max SPL @ 1 meter
- Rated for indoor or outdoor applications
- UL 1480 Listed
- Universal mounting interface
- Built-in transformer (25V, 70V, & 100V)
- Durable environmental-resistant construction
- Performs to NEMA 3R standards
- UL listed for Class I, Division 2, Groups A, B, C, D

## Sound Output Ratings

Input Voltage	Watts	dB SPL (Peak @ 1m)	dB SPL (Max @ 1m)	* dB SPL (Max @ 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)

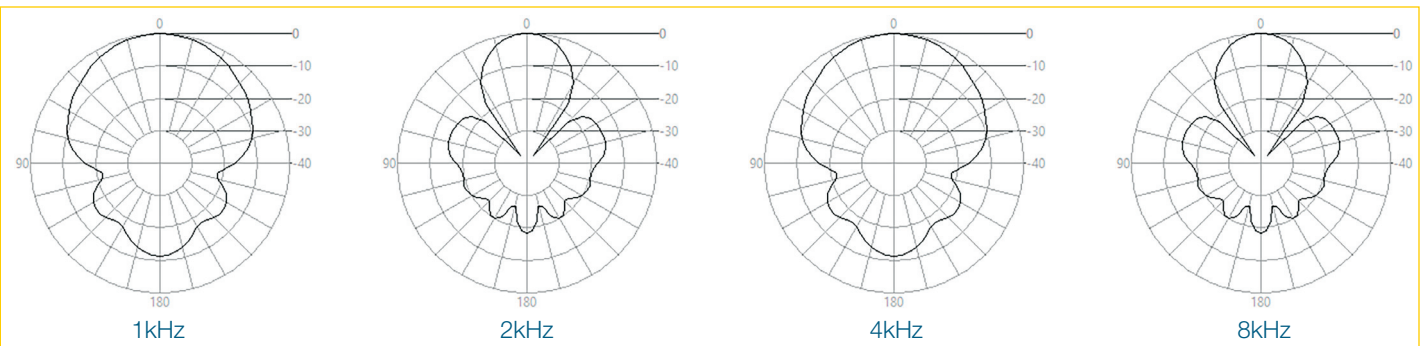
Tone	25V	70V	100V
Temporal 3	119	128	131
Broadband Fast Siren	121	130	133
Slow Sweep Tone	122	131	134

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

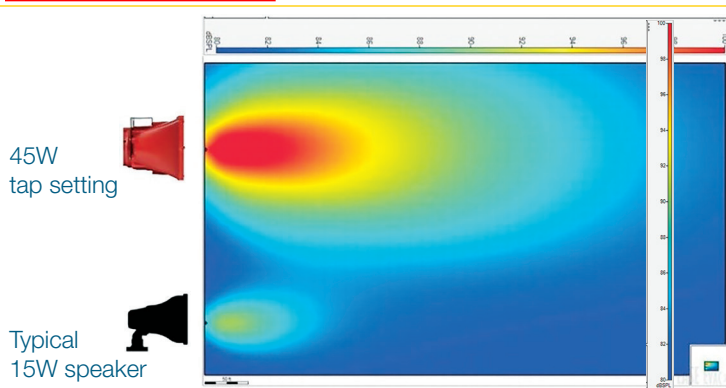
\*UL Standard SPL Measurement

## Sound Dispersion Patterns

### Polar Patterns



### EASE Comparison Plot



## Wiring

The TCPA-10 has a three-foot long  $\frac{1}{4}$  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).

\* $\frac{1}{4}$  trade size conduit has a nominal  $\emptyset.39$ " ID /  $\emptyset.57$ " OD

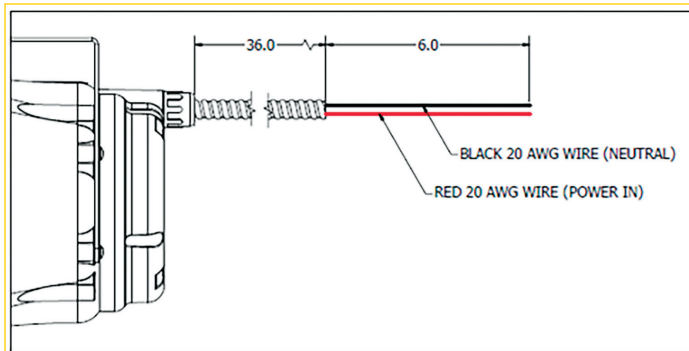


Figure 1

## Interface and Mounting Reference

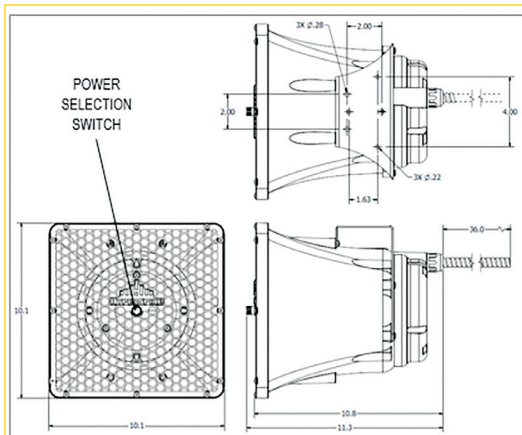


Figure 2

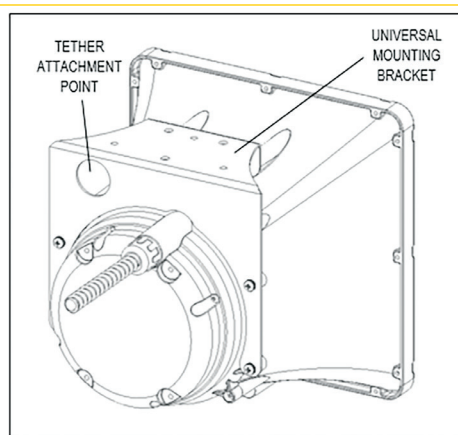


Figure 3

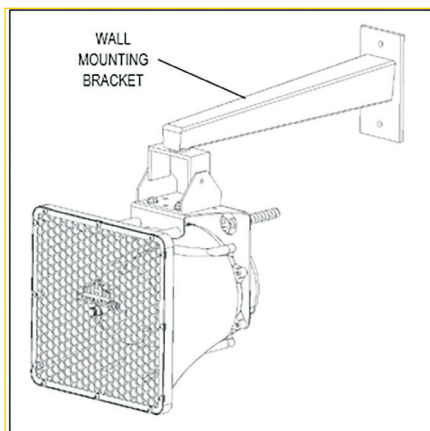


Figure 4  
(single unit)

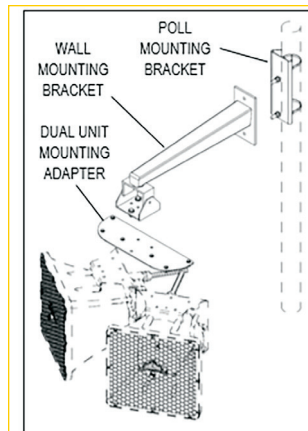


Figure 5  
(double unit)

## Specifications

### General Specifications:

Certifications	UL 1480, ULC, CSFM, Class I, Division 2, Groups A,B,C,D
Power Rating	Up to 45W continuous
Frequency Response	375Hz – 15kHz (nominal) 400Hz – 4kHz (general signaling)
Sensitivity	112dB @ 1W/1m (Avg 400-4,000Hz) frequency dependent
Dispersion Angle	60° (-3dB), 90° (-6dB)
Weight	9 lbs
Dimensions	10.1"H x 10.1"W x 11.3"D
Operating Temperature Range	-40°C - 60°C

### Engineer Specifications:

Voice paging and tone signaling loudspeaker shall be Edwards Part Number \_\_\_\_\_ (see Part Numbers in chart below). Unit shall be UL1480 listed and Class I Division 2 certified, weather resistant and constructed of rugged 5VA flammability 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 beam width 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 transducer coil shall be a nominal 8 ohm impedance and ferro-fluid shall surround the coil to optimize heat dissipation. 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 3" of 5VA flammability rated conduit with flying leads.

### Environmental Specifications:

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

## Ordering Information

Part Number	Description
<b>UL Listed Distributed Audio Speakers</b>	
90215A-801-01-L	UL 1480 listed C1D2 certified TCPA-10 Distributed Audio Speaker with 5 selectable power taps that run off of 25V, 70V and 100 VRMS audio systems. <b>Black.</b>
90215A-801-04-L	UL 1480 listed C1D2 certified TCPA-10 Distributed Audio Speaker with 5 selectable power taps that run off of 25V, 70V and 100 VRMS audio systems. <b>Gray.</b>
90215A-801-05-L	UL 1480 listed C1D2 certified TCPA-10 Distributed Audio Speaker with 5 selectable power taps that run off of 25V, 70V and 100 VRMS audio systems. <b>Red.</b>
90215A-801-06-L	UL 1480 listed C1D2 certified TCPA-10 Distributed Audio Speaker with 5 selectable power taps that run off of 25V, 70V and 100 VRMS audio systems. <b>White.</b>
<b>Mounting Hardware</b>	
72377B-801	TCPA-10 Wall Mount (includes ceiling and pole mount)
72378B-801	TCPA-10 Dual Unit Mounting Adapter