

# CELL10BDT CELL20BDT

## Bi-directional Extruded Aluminum 5" Sound Projectors



### ■ FEATURES

- Frequency Response Tailored for Music or Speech
- Rugged, Sealed, Extruded-Aluminum Housing
- Two 5" Twin-cone Speakers for Excellent Dispersion
- Hidden Set-screw Mounting

### ■ DESCRIPTION

The CELL10BDT and CELL20BDT from Penton Audio are rugged bi-directional sound projectors having two 5-1/4" full-range twin-cone speakers, one at either end of the rugged extruded aluminum housing. These models offer long-term reliability and even coverage for distributed audio, including transformer and stainless steel hardware.

Both use twin-cones for good sound dispersion. The CELL20BDT uses coated paper cones treated to withstand moisture, whereas the CELL10BDT cones are traditional paper for indoor applications.

Visually identical, they are white and equipped with stainless steel hardware. Both have matching aluminum grilles and slide-on mounting brackets. Units may be refinished with epoxy paint.

### ■ APPLICATION

Designed for use in the London Underground corridors these sturdy, but remarkably good-looking bi-directional speakers have a high output level with an exceptional intelligibility factor.

The CELL20BDT is ideally suited for outdoor installations such as transportation facilities, parking garages and military complexes. The CELL10BDT is designed for indoor applications such as schools, hotel/motels, office hallways and other traditional long passageways.

The slide-on bracket may be mounted onto a single-gang, e.o. box cover, or directly onto a wall. Unit then slides on and is secured with a recessed set hex screw.



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### ■ SPECIFICATIONS

#### • CONE SPEAKERS & SIZE:

Two 5-1/4" (134 mm)

#### • FREQUENCY RESPONSE (SEE FIG 1)

CELL10BDT: 170-19,000 Hz  $\pm$  6 dB

CELL20BDT: 190-17,000 Hz  $\pm$  6 dB

#### • POWER HANDLING

CELL10BDT: 30 Watts

CELL20BDT: 56 Watts

#### • SPL @ 1w 1m

CELL10BDT: 95 dB

CELL20BDT: 94 dB

#### • SPL @ FULL POWER, 1m

CELL10BDT: 105 dB

CELL20BDT: 107 dB

#### • DISPERSION @ 2 kHz (6 dB Down):

110° x 110° bi-directional

#### • DIRECTIVITY Q FACTOR @2 kHz:

2.2

#### • CONE DESIGN:

Twin Cone

#### • CONE MATERIAL:

CELL10BDT: Paper Cone

CELL20BDT: Coated Paper

#### • MAGNET WEIGHT:

CELL10BDT: 5.34 oz

CELL20BDT: 10 oz

#### • TRANSFORMER MAX INSERTION LOSS:

0.7 dB

#### • TRANSFORMER TAP CHANGE:

Via Color Coded Wire

#### • CONNECTION:

Via Wire Nuts

#### • TRANSFORMER

CELL10BDT: 70.7/25 volts

CELL20BDT: 70.7/25 volts

#### • 70.7-VOLT TRANSFORMER TAPS:

CELL10BDT: 20, 10, 5, 2.5

CELL20BDT: 40, 20, 10, 5

#### • 70.7-VOLT TRANSFORMER IMPEDANCE:

CELL10BDT: 250, 500, 1K, 2K

CELL20BDT: 125, 250, 500, 1K

#### • 25-VOLT TRANSFORMER TAPS:

CELL10BDT: 20, 10, 5, 2.5

CELL20BDT: 40, 20, 10, 5

#### • 25-VOLT TRANSFORMER IMPEDANCE:

CELL10BDT: 31.25, 62.5, 125, 250

CELL20BDT: 15.6, 31.25, 62.5, 125

#### • SUPPLIED MOUNTING ACCESSORIES:

Stainless Steel Bracket Bolts

#### • HOUSING MATERIAL:

Extruded Aluminum

#### • MOUNTING:

Slide-on Bracket

#### • FINISH:

Baked-on White Epoxy Paint

#### • APPROVALS:

CE

#### • DIMENSIONS, INCH (MM):

7.72 x 5.51 (196 x 140)

#### • BRACKET MOUNTING DIMENSIONS ON

CENTER, INCH (MM):

2.362 (60)

#### • NET WEIGHT LBS (KGS)

CELL10BDT: 5.29 (2.40)

CELL20BDT: 6.83 (3.10)

# CELL10BDT CELL20BDT

## ARCHITECTS' AND ENGINEERS' SPECIFICATIONS:

Loudspeaker system shall be Penton Audio USA Model (CELL10BDT/CELL20BDT) or approved equal. Assembly shall be bi-directional, comprised of two 5-1/4" twin-cone loudspeakers at either end of a white extruded aluminum housing, complete with stainless steel hardware and an integral 19", five-conductor cable. Unit shall all have an internal constant-voltage transformer with an insertion loss not to exceed 0.7 dB.

CELL10BDT shall be rated at 20 watts; 95 dB at 1 watt, 1 meter; have 110° dispersion at each end; a twin cone; and a smooth extended response over a range of 170-19,000 Hz. Its 70.7/25-volt transformer shall have 20, 10, 5 and 2.5-watt power taps.

CELL20BDT loudspeaker shall be rated at 40 watts; 94 dB at 1 watt, 1 meter; and have weather-treated twin cones; a 110° dispersion at both ends and a smooth extended response over a range of 190-17,000 Hz. Its 70.7/25-volt transformer shall have 40, 20, 10 and 5-watt power taps.

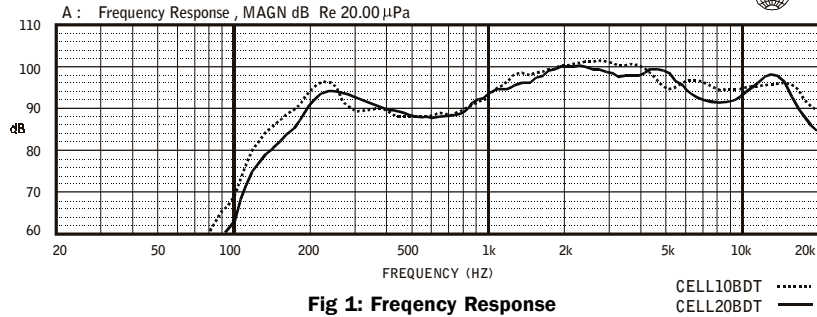


Fig 1: Frequency Response

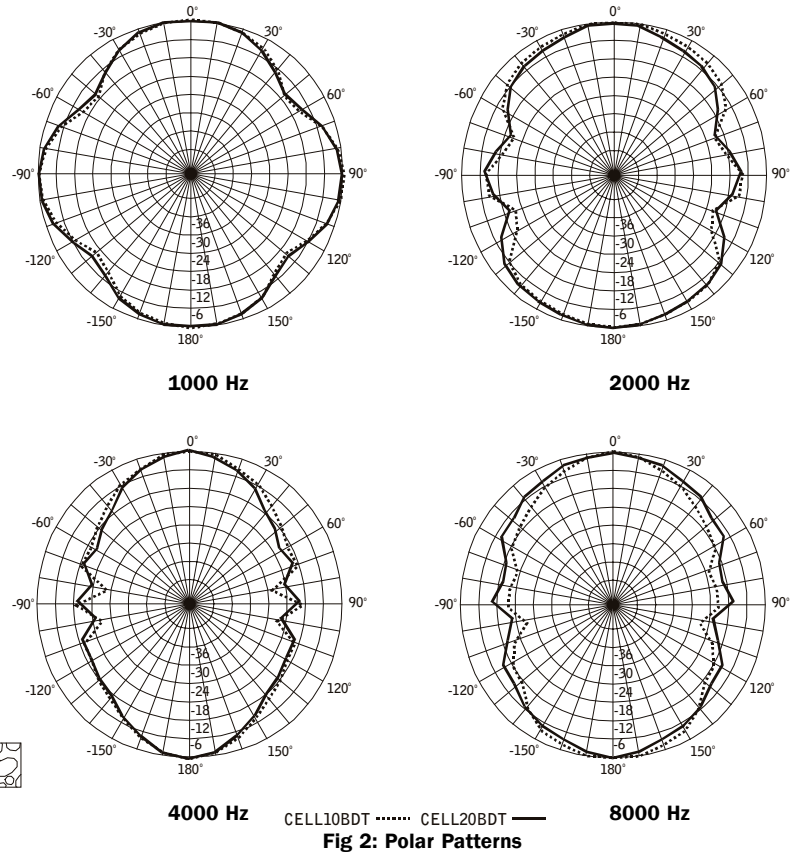


Fig 2: Polar Patterns

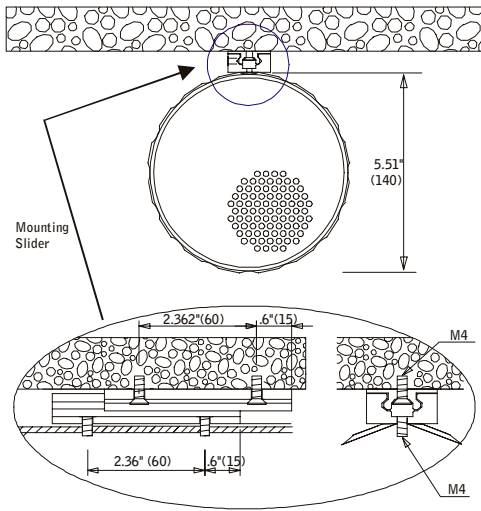


Fig 3: Front View

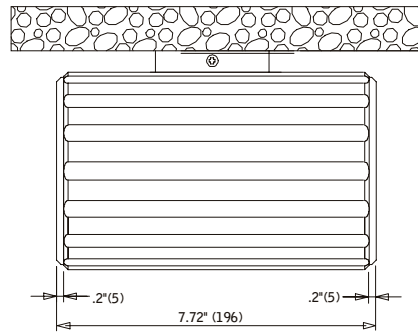


Fig 4: Side View



COLOR	CELL20BDT	CELL10BDT
Red	20W	10W
Blue	10W	5W
Orange	5W	2.5W
Yellow	2.5W	1.25W
Black	COM	COM

Fig 5: Circuit Diagram

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Specifications subject to change without notice

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