

Model No.

8C10MRB

8" Moisture-Resistant Single Cone Driver

Driver for utility paging and low level background music systems that may be subjected to high humidity such as greenhouses, locker rooms, hot tub areas, outdoor restaurants and cafes, and similar venues.

Construction & Features

- 8" single cone driver with 10oz. magnet, 1" voice coil, and cotton cloth cone that's treated with phenolic resin and coated with acrylic lacquer for moisture-resistant performance.
- For indoor or outdoor areas protected from direct exposure to elements (rain, snow, sun, etc.)
- Mounts to standard 8" grille and backbox
- Stamped 20-gauge steel basket with zinc-plated finish to prevent rust and corrosion.
- Standard E.I.A. mounting pattern

A&E Specifications

The moisture-resistant 8" single cone driver shall be AVLELEC Model No. 8C10MRB. It shall be the permanent magnet type with a cotton cloth cone treated with phenolic resin and coated with acrylic lacquer for moisture resistant performance. It shall be capable of producing a uniform audible frequency response over the range of 77Hz-7.5kHz (± 6 dB) and 50Hz-20kHz (± 18.3 dB) with dispersion angle of 90 degrees @2000Hz (-6dB). Average sensitivity shall measure 96.7dB (SPL at 1W/1M). Rated power capacity shall be 15 watts RMS. The voice coil shall have a diameter of 1" and operate in a magnetic field derived from a strontium ferrite (ceramic) magnet having a nominal weight of 10 oz. Voice coil impedance shall be 8ohms. The frame shall be stamped 20-gauge steel with over-



all diameter of 8.062" and eight obround holes equally spaced at 45 degrees on a 7.625" diameter mounting bolt circle. Overall depth shall not exceed 2.84". External metal parts shall be zinc-plated to resist rust and corrosion.

Compatible Components (order separately)

- No. A8AW round grille and No. 8PSBX recessed enclosure
- No. SQLK8L square grille and No. P875X4 or P875X6 recessed enclosures.

Driver Specifications

PERFORMANCE

Power Rating	15 watts RMS (nominal) measured per EIA Standard RS-426B
Sensitivity	96.7dB Average SPL (measured 2.83V @1m) 108.5 dB Maximum SPL (calculated based on power rating and measured sensitivity).
Impedance	8 ohms Nominal, Minimum 7.7 ohms @303Hz
Frequency Response	77Hz–7.5kHz (±6dB) 50Hz–20kHz (±18.3dB)
Dispersion Angle	90 degrees conical @ 2000Hz octave (-6dB)

PHYSICAL – WOOFER

Magnet Weight, Material	10 oz. (264g), strontium ferrite ceramic
Voice Coil Diameter, Material	1 in. (26mm), copper wire
Cone Material	Moisture-resistant impregnated cloth with self edge surround
Terminals	Quick disconnect type – spade lugs

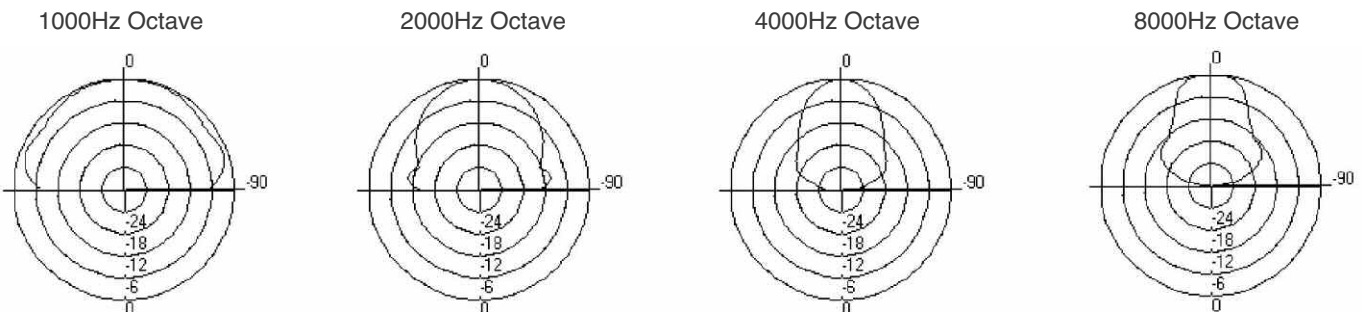
MECHANICAL

Basket	20 gauge stamped steel with zinc plating
Outside Diameter	8.062 in. [205mm]
Mounting Bolt Circle	Fits grilles with 7.5 in. — 7.75 in. [190.5mm—196.9mm] mounting centers, with 8 obround holes equally spaced at 45 degrees.
Cutout Diameter for rear mounting	6.875 in. [174.6mm]
Cutout Diameter for front mounting	7.15 in. [181.6mm]
Mounting Depth	2.84 in. [72mm]
Net Weight	2.0 lbs. [0.92kg]

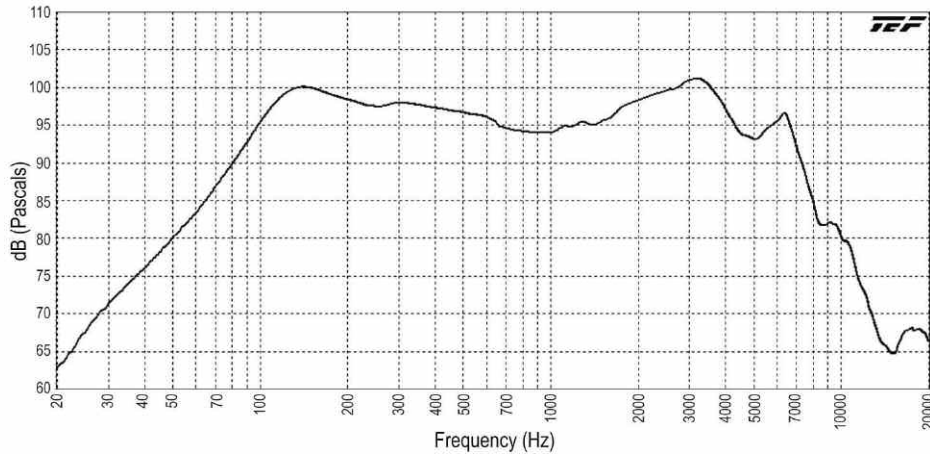
THIELE-SMALL PARAMETERS

Pe15 W	Qts.....1.225	BL6.3 Tm	Sd.....227.0 cm ²
Fs.....123.4 Hz	Qes1.451	Efficiency, h1.71%	Mms9.01 g
Xmax0.3 mm	Qms.....7.91	Vas13.7 liters	Cms187.8 uM/N
Re7.6 ohms			

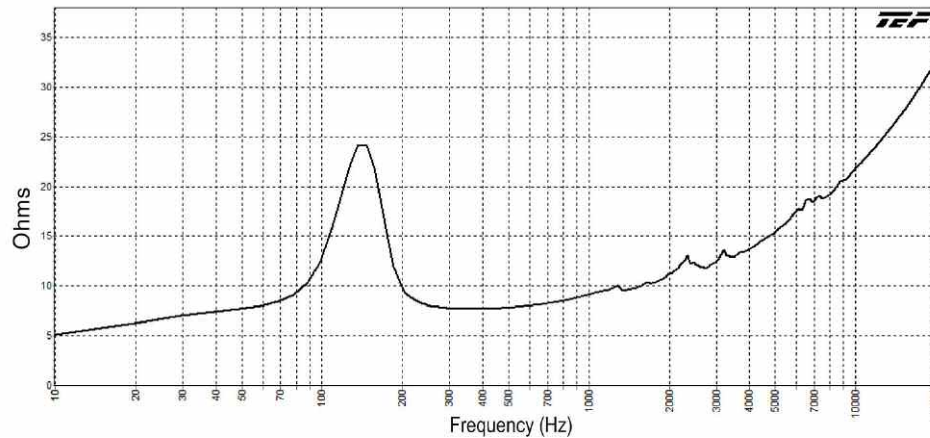
Polar Data (half space)



SPL vs. Frequency 1W/1M (half space) On-axis



Impedance



Scope of Performance and Power Tests

AVLELEC drivers and loudspeaker systems are tested to provide specifiers and contractors with data that reflects the performance of production products. Testing equipment includes the GoldLine TEF-20 analyzer (for performance measurements) and the LinearX LMS measurement system (for Thiele-Small Parameters).

Power Rating is tested based on EIA Standard RS-426B.

Frequency Response data is provided which is the measured frequency response range (defined by ± 6 dB) which is useful in predictive engineering calculations.

Sensitivity (SPL) data is presented in two ways: Log Average SPL is a computer calculated log average of the SPL measured at 1 meter with 1 watt input over the stated frequency response range. Maximum SPL is calculated based on the measured log average SPL and the 8-ohm power rating of the speaker.

Dispersion Angle is defined as the angle of coverage that is no more than 6dB down from the on-axis value averaged over the 2000Hz octave band. Since speech intelligibility is very dependent upon the 2000Hz octave, this specification is quite useful in designing speech reinforcement systems that provide even coverage and speech intelligibility.

Thiele-Small Parameters for raw drivers are measured using the LinearX LMS measurement system. These parameters are useful in determining the optimum type and size of enclosure for a specific driver.

Impedance data is presented in three ways: Nominal Impedance is the generally accepted impedance for use in making comparisons with competitive products; the Impedance Curve is a graphical representation of the impedance that is measured in the lab and gives the impedance of the device over the audio frequency range; Minimum Impedance is the lowest impedance measurement at a frequency within the specified frequency response range of the speaker. If a line matching transformer is included in the speaker assembly, relative impedance curves of the primary windings of the transformer when loaded by the driver may be shown.

Polar data is presented for the averaged one octave band surrounding the center frequencies of 1000Hz, 2000Hz, 4000Hz, and 8000Hz. Radial polar response curves show the relative change in sound pressure level as one moves from directly on-axis to an increasingly off-axis listening position.