

Model No. **JR410** High Compliance Cone Driver (4"/15W)

Commercial industry standard 4" (EIA 5") driver is engineered to provide wide frequency response and wide dispersion for solid performance in paging and background music systems. It's suitable for commercial, industrial and institutional applications including offices, public buildings, airport corridors, and educational/medical facilities. The small size and broadbeam width of 170 degrees make it especially useful in rooms with low ceilings.

Features

- Engineered to provide even coverage using fewer drivers
- 10 oz. ceramic magnet for high power handling and sensitivity
- 1" copper voice coil
- Treated cloth surround
- Plated steel basket
- Meets or exceeds all applicable EIA standards
- Designed to fit standard ceiling grilles/backboxes for 4" drivers

A&E Specifications

The high compliance 4 inch driver shall be Lowell Model No. JR410. It shall be of the permanent magnet type having a paper cone with a treated cloth surround. It shall be capable of producing a uniform audible frequency response over the range of 67Hz-16kHz (± 6 dB) and 53Hz-20kHz (± 8 dB) with a dispersion angle of 170 degrees @2000Hz (-6 dB). Average sensitivity shall measure 90.8dB (SPL at 1W/1M). Rated power rating shall be 15 watts RMS. The voice coil shall have a 1 in. diameter and shall operate in a magnetic field derived from a strontium ferrite (ceramic) magnet with 10 oz. nominal weight. Voice coil impedance shall be 8 ohms. The driver shall have a structurally reinforced stamped 20-gauge steel frame to maintain precise mechanical alignment and shall provide facilities for mounting a transformer. The driver shall have an overall diameter of 5.03 in. with four round holes equally



spaced at 90 degrees on 4.69 in. diameter mounting bolt circle. Driver depth shall be 2.08 in. External metal parts shall be zinc-plated to resist rust and corrosion.

Ordering Options

This driver is also available with a selection of mounted transformers. See individual product spec sheets for more information.

- Model No. JR410-T72: Driver with 70/25V dual voltage transformer (primary taps 0.25, 0.5, 1, 2, 5W)
- Model No. JR410-T470: Driver with transformer (primary taps 0.5, 1, 2, 4W)
- Model No. JR410-T870: Driver with transformer (primary taps 1, 2, 4, 8W)

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Driver Specifications

PERFORMANCE

Power Rating	15 watts RMS (nominal) measured per EIA Standard RS-426B
Sensitivity	90.8 dB log average SPL (1W/1M) 102.6 dB maximum SPL (calculated based on power rating and measured sensitivity)
Impedance	8 ohms (nominal), Minimum 7.9 ohms @ 508Hz
Frequency Response	67Hz-16kHz (± 6 dB), 53Hz-20kHz (± 8 dB)
Dispersion Angle	170 degrees @ 2000Hz octave (-6dB)

PHYSICAL - WOOFER

Magnet Weight, Material	10oz. (264g), strontium ferrite ceramic
Voice Coil Diameter, Material	1 inch (26mm), copper wire
Cone Material	Paper with treated cloth surround
Terminals	Quick disconnect type - spade lugs

MECHANICAL

Basket	20 gauge stamped steel with zinc plating
Outside Diameter	5.03 inch (128mm)
Mounting Bolt Circle	4.69 inch (119mm) with 4 round holes equally spaced at 90 degrees
Cutout Diameter	4.125 inch (105mm)
Mounting Depth	2.08 inch (53mm)
Net Weight	1.7 lbs. (0.76kg)

THIELE-SMALL PARAMETERS

Pe.....15 W	Qts.....0.627	BL.....4.7 Tm	Sd.....59.5 cm ²
Fs.....114.9 Hz	Qes.....0.734	Efficiency, h.....0.64 %	Mms.....2.99 g
Xmax.....-0.7 mm	Qms.....4.31	Vas.....3.2 liters	Cms.....0.643 mm/N
Re.....7.4 ohms			

Scope of Power and Performance Tests

Lowell 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 Handling capability 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.

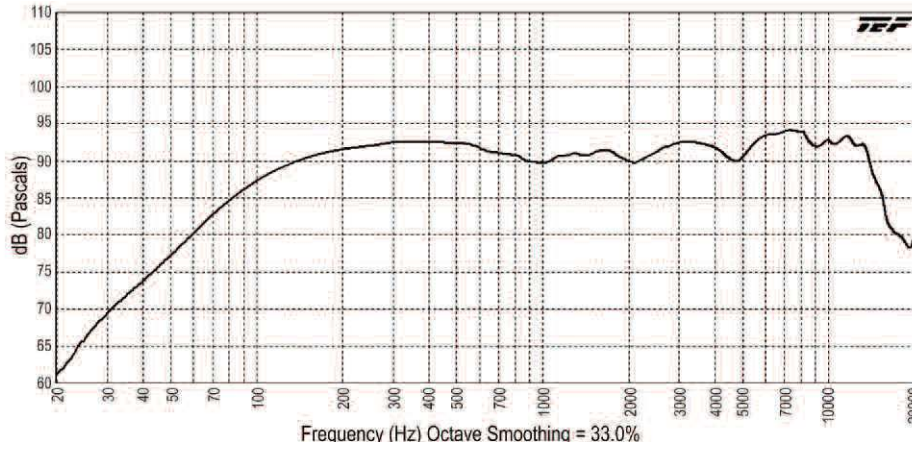
Thiele-Small Parameters for raw drivers are measured using the LinearX LMS measurement system. These parameters are useful in determining the optimum type and size of enclosure for a specific driver.

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.

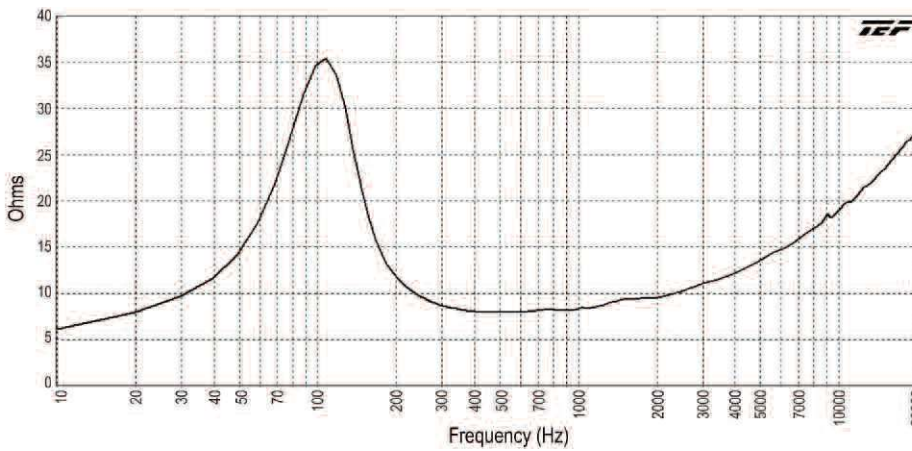
Polar data is presented for the averaged one octave band surrounding the center frequencies of 1000Hz, 2000Hz, 4000Hz, and 8000Hz. Radial polar response curves show the relative change in sound pressure level as one moves from directly on-axis to an increasingly off-axis listening position.

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



Impedence



Polar Data (Half Space)

