**FC104 Series**

*4" High-Compliance Loudspeaker with Transformer*

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### Applications

Utilize Atlas Sound 4" high-compliance loudspeaker Model FC104 for voice transmission, music and signal reproduction in commercial, industrial and institutional applications of all kinds, especially those where a high performance loudspeaker is required and wide dispersion is demanded.

### General Description

This compact, full-range, 4" (127 mm) loudspeaker is equipped with a damped, high-compliance cone which provides excellent low frequency reproduction and smooth extended response. Model FC104 also offers a wide dispersion angle which reduces the number of loudspeakers necessary to achieve total coverage in low-level distribution systems. The 10 watt, 8Ω model (w/o transformer) offers a frequency response range of 150 Hz – 17 kHz, sensitivity of 94 dB (1 W / 1 M) and a dispersion angle of 135° (-6 dB, 2 kHz octave band). The unit contains a 10 oz (283 g) ceramic magnet with a flux density of 10,500 gauss. Loudspeaker is available with three different factory installed line matching transformers to meet a variety of project requirements. A dual-purpose bracket securely mounts the transformer in a low profile position and enables torsion spring mounting found on many Atlas Sound baffles. (Bracket not included on base model FC104.) For additional information on Atlas Sound Transformer models, refer to #SL1-1369.

### Features

- Industry Standard, 10 watt, 4" High-Compliance Loudspeaker
- Offers Proven Performance with Wide-Angle Sound Dispersion
- Efficient Wide-Range Frequency Response
- Versatile 8 watt, 70.7V (25V / 70.7V with model LT-87) Transformer with taps from .5 – 8 watts
- Ideal for Public Address and Background Music Installations
- Mounts In a Large Selection of Atlas Sound 4" Enclosures and Baffles

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### Base Speaker Specifications

- **Speaker Size**: 4" (127 mm) (5" E.I.A. Standard)
- **Speaker Type**: High Compliance
- **Power Rating**: 10 watts Program
- **Frequency Response**: 150 Hz – 17 kHz (± 5 dB)
- **Magnet, Ceramic**: 10 oz. (283 g)
- **Resonance**: 101 Hz
- **Voice Coil Impedance**: 8Ω
- **Voice Coil Diameter**: 1" (25 mm)
- **Flux Density**: 10,500 Gauss
- **Depth (w/o Transformer)**: 2 1⁄4" (57 mm)
- **Sensitivity (Peak)**: 94 dB (1W / 1M)
- **Dispersion**: 135° (-6 dB, 2 kHz Octave Band)

### Transformer Models

**FC104T**
- **Transformer Model**: LT-70
- **Primary Voltage**: 70.7V
- **Transformer Freq. Resp.**: 100 Hz – 10 kHz (±1.5 dB)
- **Primary Taps**: .5, 1, 2, & 5 watts
- **Secondary Impedance**: 8Ω
- **Insertion Loss (Max)**: 1.5 dB
- **Core Size**: ½" x ⅝" (13 mm x 16 mm)
- **Power Rating**: 5 watts

**FC104T70**
- **Transformer Model**: LT-70
- **Primary Voltage**: 70.7V
- **Transformer Freq. Resp.**: 100 Hz – 10 kHz (±1.5 dB)
- **Primary Taps**: .5, 1, 2, & 5 watts
- **Secondary Impedance**: 8Ω
- **Insertion Loss (Max)**: 1.5 dB
- **Core Size**: ½" x ⅝" (13 mm x 16 mm)
- **Power Rating**: 5 watts

**FC104T72**
- **Transformer Model**: LT-72
- **Primary Voltage**: 25V / 70.7V
- **Transformer Freq. Resp.**: 100 Hz – 10 kHz (±1.5 dB)
- **Primary Taps**: .5, 1, 2, & 4 watts
- **Secondary Impedance**: 8Ω
- **Insertion Loss (Max)**: 1.5 dB
- **Core Size**: ½" x ⅝" (13 mm x 16 mm)
- **Power Rating**: 5 watts

**FC104T**
- **Transformer Model**: LT-87
- **Primary Voltage**: 70.7V
- **Transformer Freq. Resp.**: 50 Hz – 15kHz ±1.5dB
- **Primary Taps**: .5, 1, 2, 4, & 8 watts
- **Secondary Impedance**: 4Ω & 8Ω
- **Insertion Loss (Max)**: .6 dB
- **Core Size**: 1" x ⅜" (25 mm x 19 mm)
- **Power Rating**: 8 watts

*FC104T includes a special version of Model HT87 transformer that includes a .5 Watt tap.*
Architect & Engineer Specifications

Unit shall be Atlas Sound 4" diameter loudspeaker Model FC104 or loudspeaker / transformer Model ______. Loudspeaker shall be listed by Underwriters Laboratories (UL 1480 General Signaling) to U.S. and Canadian safety standards. The cone shall be the damped, high-compliance type. Base unit (without transformer) shall have a smooth extended frequency response over a range of 150 Hz – 17 kHz and a power rating of not less than 10 watts program. The dispersion angle shall be 135° (-6 dB, 2 kHz octave band). The magnet shall be a 10 oz. (283g) ceramic type providing the 1" (25 mm) voice coil to operate in a magnetic field of at least 10,500 gauss. Voice coil impedance shall be 8 ohms. Sensitivity shall be 94 dB (measured at 1 W / 1 M input). Free-air resonance shall be 101 Hz. Transformer primary voltage shall be ______ (25V, 70.7V, 100V) with a frequency response range of _______ and power taps at ______ watts. Insertion loss shall not exceed ___dB. The maximum depth of the loudspeaker (Not including transformer) shall not exceed 2 1/4" (57 mm). Unit shall be used in conjunction with Atlas Sound baffle Model _______ and Enclosure Model _______.

FC104 Beamwidth (-6dB)

FC104 Frequency Response

FC104 Impedance (Ohms) vs. Frequency

FC104 Polars (Normalized to Zero on Axis) (-6dB)