



C803A Series

8" Coaxial Loudspeaker Available With Transformer



C803A

Features

- Industry Standard 8" (203mm) Coaxial, 16 Watt, Loudspeaker
- Offers Proven Performance with Wide Frequency Response
- Post-Mounted Tweeter Adds Strength and a More Attractive Appearance
- Ideal for Multi-Purpose Commercial, Industrial, and Institutional Use

Applications

Use Atlas Sound 8" (203mm) diameter, multi-purpose, coaxial loudspeaker Model C803A for voice transmission, music and signal reproduction in high-quality commercial, industrial, and institutional applications.

General Description

Model C803A. High-quality, 16 Watt model C803A utilizes a post-mounted tweeter which adds strength to the assembly and provides an attractive appearance. This coaxial loudspeaker features a 70Hz–15.5kHz, (± 5 dB) frequency response and a broad, uniform dispersion pattern of 120°. Such provisions allow for highly intelligible sound reproduction and better distribution for high-quality sound systems. The C803A combines a full-size 8" (203mm) diameter low-frequency reproducer and a 3" (76mm) high-frequency reproducer. The two sections are coupled via a built-in crossover network. The woofer has a 10oz. (260g) ceramic magnet; the tweeter has a 2.35oz. (67g) ceramic magnet and the unit has a peak sensitivity of 98dB (at 1W/1M).

The loudspeaker is available with six different factory-installed line-matching transformers to meet a variety of project requirements (see chart). Model C803A mounts a wide variety of Atlas Sound baffles and enclosures, with the optimum sealed enclosure size being .36 ft³.

Specifications

Speaker Size	LF: 8" (203mm), HF: 3" (76mm)
Power Rating	16 Watts RMS
Sensitivity (SPL at 1W/1M)	98dB (peak), 95dB (avg)
Impedance	Nominal, 8 Ω
Frequency Response	70Hz–15.5kHz (± 5 dB)
Crossover Frequency	2,800Hz, First Order
Dispersion	120°
Mounting Dimensions	7 $\frac{5}{8}$ " (194mm) B.C.
Cone Material	Treated Paper
Surround Material & Damping	Self Edge with Dampener
Flux Density	10,600 Gauss, 1.06 Tesla
Magnet Weight	Nominal, 10oz. (260g)
Basket Material	20 gauge Stamped Steel
Voice Coil Diameter	1" (25mm)
Voice Coil Material	Copper
Voice Coil Former Material	Black Anodized Aluminum
Voice Coil Winding Width	.265 (7mm)
Top Plate Thickness	.239 (6mm)
Weight	2.4 lbs. (1060g)
Diameter Less Transformer	8 $\frac{1}{8}$ " (206mm)
Depth Less Transformer	2 $\frac{1}{8}$ " (73mm)

Thiele-Small Parameters

Pe	16 Watts
Fs	105Hz
Xmax	.05"
Resistance	6.4 Ω
Qts	.513
Qes	.556
Qms	6.58
BL	8.9 N/A
Efficiency	2.9%
Vas	.507 (ft ³)
Sd	33.1 (in ²)
Le@1kHz	.74 mH
Mms	.369oz.
Cms	.039 in./lb.

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Transformer Specifications

C803AT47

Includes Transformer	HT-47
Primary Voltage	70.7V
Transformer Frequency Response	60Hz – 12kHz, (±1dB)
Primary Taps	.5, 1, 2, & 4 Watts
Secondary Impedance	8Ω
Insertion Loss	1.0dB
Core Size	¾" x ¾" (16 x 16mm)
Power Rating	4 Watts

C803AT167

Includes Transformer	HT167
Primary Voltage	70.7V
Transformer Frequency Response	40Hz – 15kHz
Primary Taps	4, 8, 16 Watts
Secondary Impedance	8Ω
Insertion Loss	.6dB
Core Size	1" x 1"
Power Rating	16 Watts

C803AT70

Includes Transformer	LT-70
Primary Voltage	70.7V
Transformer Frequency Response	100Hz – 10kHz, (±1.5dB)
Primary Taps	.5, 1, 2, & 5 Watts
Secondary Impedance	8Ω
Insertion Loss	1.5dB
Core Size	½" x ¾" (13 x 16mm)
Power Rating	5 Watts

C803AT72

Includes Transformer	LT-72
Primary Voltage	25V/70.7V
Transformer Frequency Response	100Hz – 10kHz, (±1.5dB)
Primary Taps	.5, 1, 2, & 4 Watts
Secondary Impedance	8Ω
Insertion Loss	1.5dB
Core Size	½" x ¾" (13 x 16mm)
Power Rating	4 Watts

C803AT87

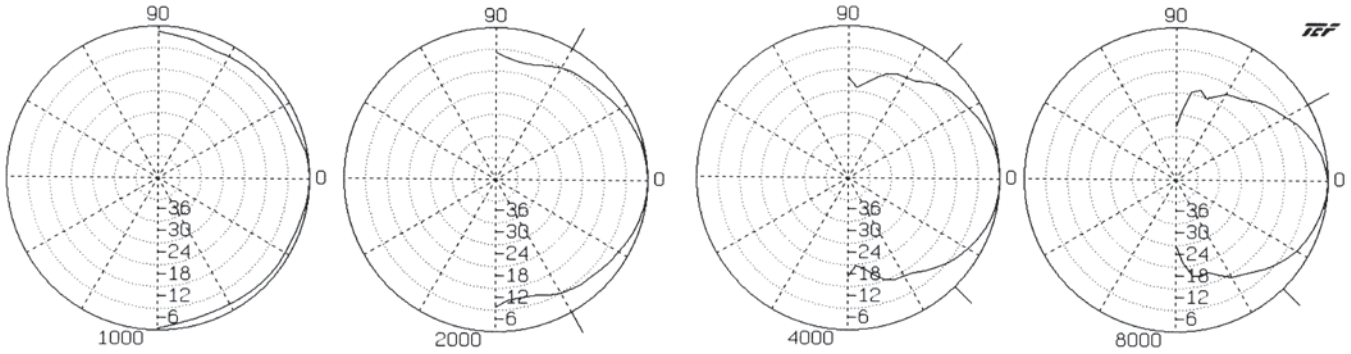
Includes Transformer	HT-87
Primary Voltage	70.7V
Transformer Frequency Response	50Hz – 15kHz, (±1dB)
Primary Taps	1, 2, 4, & 8 Watts
Secondary Impedance	4 & 8Ω
Insertion Loss	0.6dB
Core Size	1" x ¾" (25 x 19mm)
Power Rating	8 Watts

Architect and Engineer Specifications

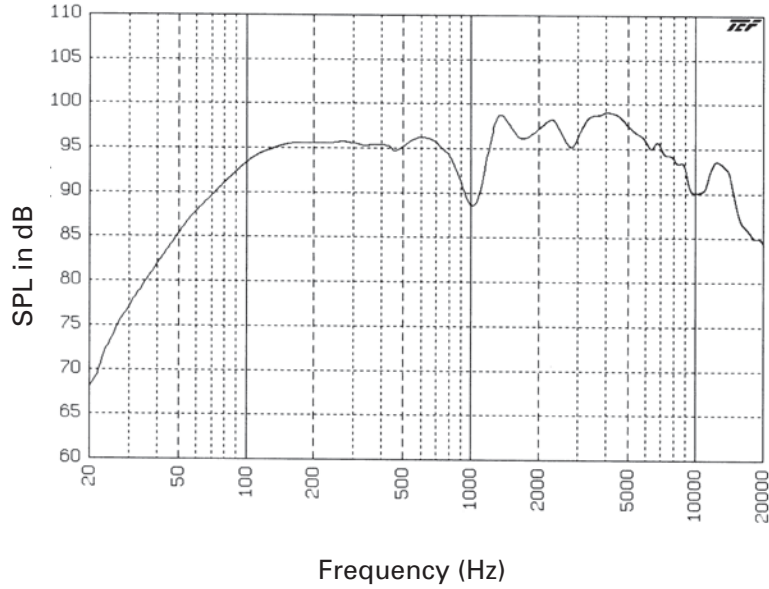
Unit shall be Atlas Sound 8" diameter loudspeaker Model C803A or loudspeaker /transformer combination Model _____ (utilizing Atlas Sound line-matching transformer Model _____). The low-frequency reproducer cone shall be a full 8" (203mm) in diameter and the high frequency reproducer cone shall be 3" (76mm) in diameter. The woofer shall have a 10oz. (260g) ceramic magnet; the tweeter shall have a 2.35oz. (67g) ceramic magnet. The two reproducer sections shall be coupled through a built-in crossover network.

The crossover frequency shall be at 2800Hz. Frequency response range shall be 70Hz – 15.5kHz, (±5dB). Sensitivity shall be 98dB at 1 Watt/ 1 meter. Voice coil impedance shall be 8Ω. Low frequency voice coil diameter shall be 1" (25mm) and operate in a magnet field of at least 10,600 gauss. Transformer primary voltage shall be _____ (25V, 70.7V, 25V/70.7V) with a frequency response range of _____ and power taps at _____ watts. Insertion loss shall not exceed _____dB. The maximum depth of the loudspeaker shall not exceed 2⅞" (73mm).

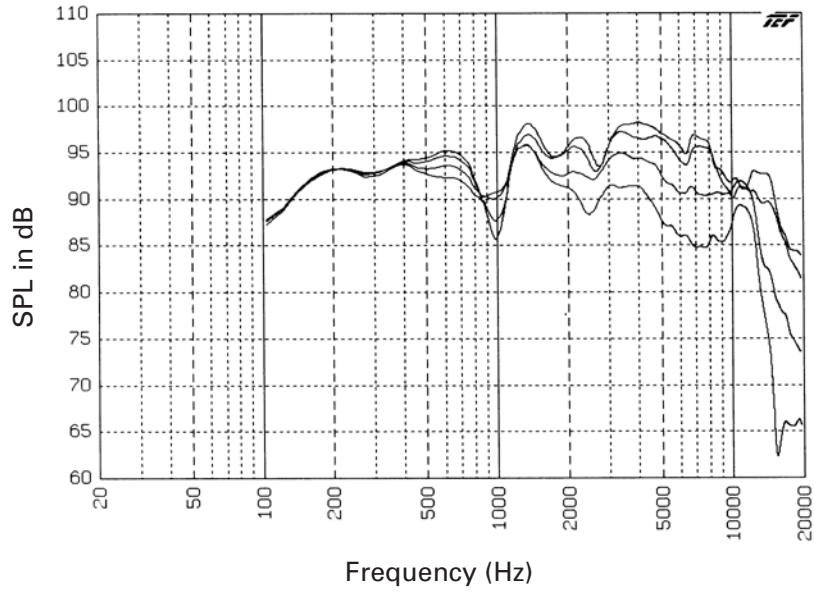
C803A Polars (Normalized to Zero on Axis) (-6dB)



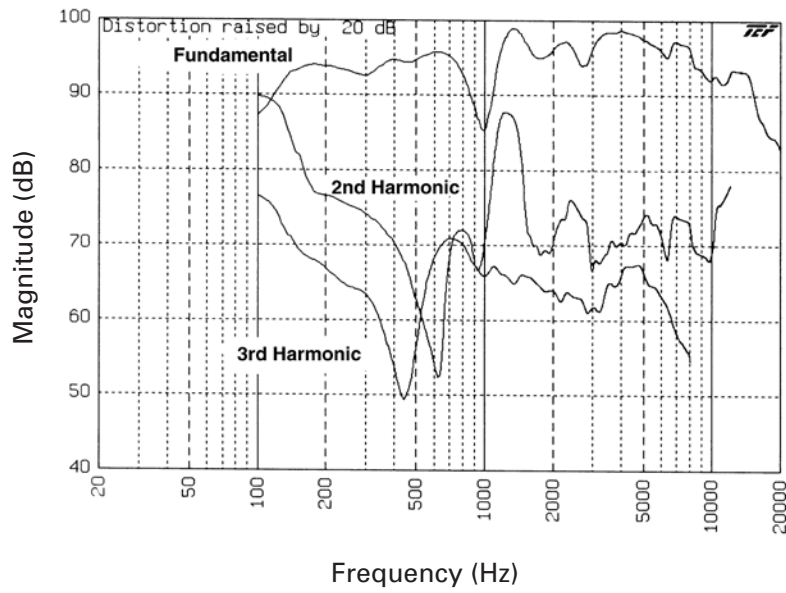
C803A Frequency Response



C803A Frequency Response Overlay



C803A Harmonic Distortion



C803A Impedance

