APF-15/APF-15T/L20 Series

Omni-Purpose® 15 Watt Flange-Mounting Loudspeakers

L20-100 with APF-15 and BX-3A

L20-101 with APF-15T

APF-15 Series

Specifications

Models	APF-15, APF-15T	
Power Rating	15 Watts Continuous	
Frequency Response	600 - 14,000 Hz (Nominal) 700 Hz - 5500 Hz (±5dB)	
Sensitivity	120dB at 15 Watts (Peak) 114dB at 15 Watts/1 Meter (Avg) 700 - 5500 Hz 104dB at 1 Watt/1 Meter (Avg) 700 - 5500 Hz	
Dispersion Angle	95˚ (-6dB, 2000 Hz Octave Band)	
Weight	APF-15: APF-15T:	1.7 lbs (.78kgs) 2.6 lbs (1.2kgs)
Finish	Baked Epoxy	
Dimensions	APF-15: APF-15T:	Dia 5⅝" x D 3⁷⁄₁₆" x Dia Flange 6¹⁵⁄₁₆" Dia 5⅝" x D 5³⁄₁₆" x Dia Flange 6¹⁵⁄₁₆"
Temperature Range	-40˚C - 70˚C	

Architect and Engineer Specifications

Loudspeaker shall be Atlas Sound Model _____ (APF-15 or APF-15T) or approved equal. Unit shall be double re-entrant type with compression driver mounted within weather-resistant housing. Audio power capability shall be 15 Watts continuous. Frequency response shall be 600-14,000 Hz (nominal), 700-5500 Hz (± 5dB). Sound pressure level shall be 114dB (15W/1M), 104dB (1W/1M). Sound dispersion angle shall be 95˚. Transformer-equipped loudspeaker shall have impedance selection via seven position switch of 5000, 2500, 1300, 666, 333, 89 and 45 Ohms. Power taps shall be available at .48, .94, 1.8, 7.5 and 15 watts on 25V line; 1, 2, 3.8, 7.5 and 15 Watts on 70.7V line; and 2, 4, 7.7, and 15 Watts on 100V line. Loudspeaker mounting shall be by eight ³⁄₁₆" evenly spaced holes. Model APF-15 dimensions shall be Dia 5⅝" x D 3⁷⁄₁₆" x Dia Flange 6¹⁵⁄₁₆". Model APF-15T dimensions shall be Dia 5⅝" x D 5³⁄₁₆" x Dia Flange 6¹⁵⁄₁₆". Finish shall be grey baked epoxy.

Features

- High-Efficiency, 15 Watt Compression Driver with Proven Record of Outstanding Service Reliability
- Double Re-Entrant Design Provides Superior Audibility of Voice and Tone Signaling
- Vandal and Environment-Resistant Metal Construction for Outdoor or Indoor Use
- Transformer (T) Equipped Models for Versatile 25, 70.7, or 100V Line Applications
- May Be Flange or Recess Mounted
- Choose From Matching Grilles, Enclosures, and Mounting Rings (Order Separately)

Applications

Communicate voice and electronic signals clearly in industrial, commercial, recreational, transportation and service facilities with APF Series loudspeakers. These environment-resistant flange and recessed-mounting units are ideal for indoor or outdoor applications where high-intelligibility paging or intercommunications are necessary.

Description

Provide 15 Watts of continuous power handling with superior intelligibility and efficiency with Atlas Sound APF Series Omni-Purpose® loudspeakers. Vandal-resistant units are designed for flange or recessed mounting to panels, interior/exterior walls, or ceilings. Metal construction withstands adverse temperatures, humidity and physical abuse. For flexibility and optimum adjustment convenience, transformer-equipped Model APF-15T includes the Vari-Tap® Control/connect center with 7 position, wattage/impedance selection switch. Magnet assembly is equipped with self-aligning field replaceable diaphragm. Weather-resistant metal construction and enclosed wiring terminals eliminate the need and cost of a backbox. However, for aesthetic consideration and retrofit convenience, models will flange mount to any standard size ceiling or wall baffle and/or enclosure capable of accommodating conventional 6" or 8" diameter loudspeakers. (See chart below). Model MK-2 or FAMT-6 mounting kit is required for 8" models. Recessed installation may be accomplished by mounting Models APF-15 or APF-15T into a 4" or 5½" deep opening, respectively, or to an L20 Series enclosure. L20 Series also includes mounting rings and baffles (see below). Loudspeakers are finished in grey baked epoxy. UL versions, Models APF-15TU and APF-15TUC are available. (Request SL2-1459).

Accessories

BX-3A

Vandal resistant cover plate for armored cable and conduit connection. Constructed of cast aluminum.

Grilles - 20 Gauge CRS White Enamel Finish	Enclosures - 20 Gauge CRS	or	Mounting Rings - 20 Gauge CRS
L20-100 Round Grille - Diameter 11" (279mm) x Deep ⅜" (10mm)	L20-201 Round Recessed - Diameter 8⁹⁄₁₆" (217mm) x Deep 6" (152mm)		L20-220 Round Style - Diameter 8⁹⁄₁₆" (217mm) x Deep ⅝" (16mm) L20-222 Same as L20-220 with Mounting Ears for 24" Lay-In Tile
L20-101 Square Grille - Square 10½" (267mm) x Deep ³⁄₁₆" (5mm)	193-8-6 Square Recessed - Square 9⅝" (244mm) x Deep 6" (152mm) L20-213 Square Surface Mount White Enamel - Square 10½" (270mm) x Deep 6" (152mm)		
VP161-APF Vandal Proof Square Grille - Square 10¾" (273mm) x Deep ¾" (19mm)	SE161-R6 Square Surface Mount White Enamel - Square 11" (279mm) x Deep 6" (152mm) 193-8-6 Recessed Enclosure, 161RES, 161SES (For Outdoor Use)		

Atlas Sound

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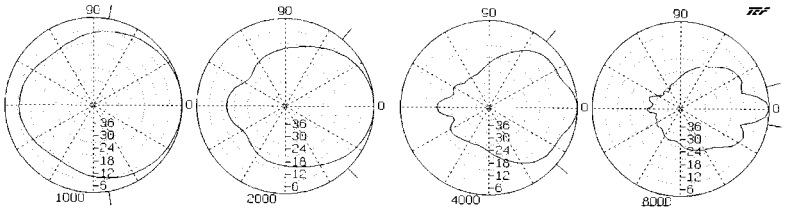
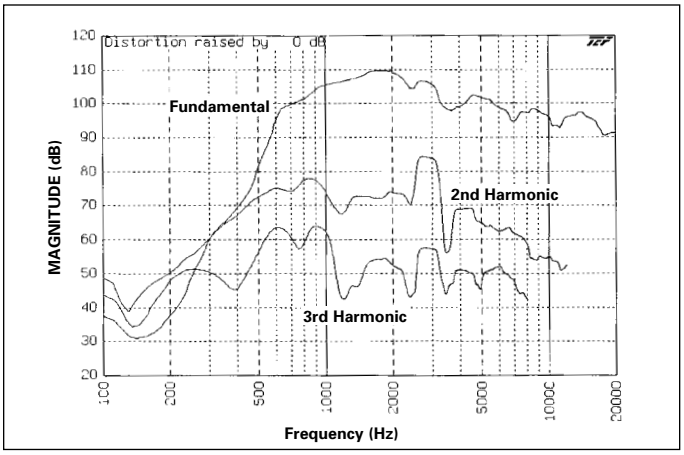
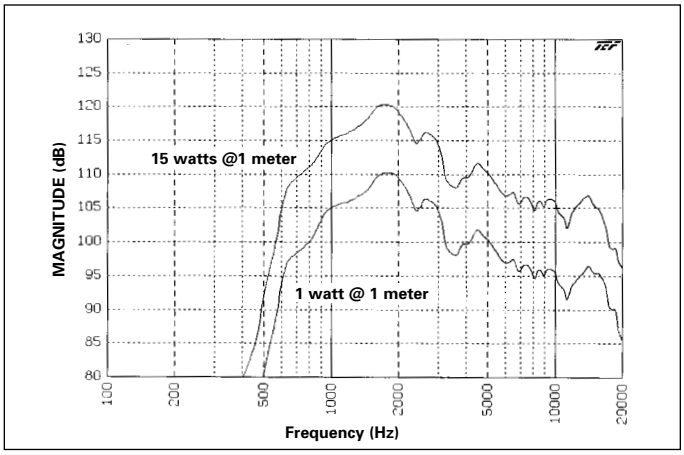


Frequency (Hz)	Q	Di	Beamwidth (Degrees)
1000	3.37	5.27	150
2000	7.30	8.63	95
4000	11.95	10.77	90
8000	44.29	16.46	25

Polars Are Normalized To Zero On Axis



APF-15(T) (Harmonic Distortion - 1.5 watts @ 1 meter)



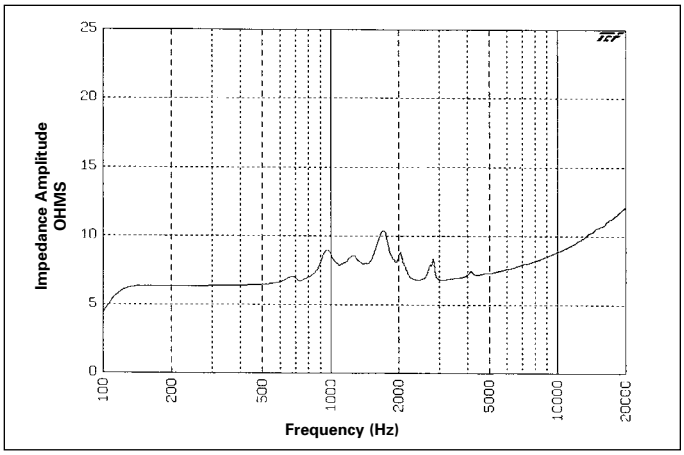
APF-15(T) Frequency Response

DRIVER PROTECTION: The horn loudspeaker should not be operated at frequencies outside the specified range, especially below horn cut-off. It is suggested that any program material be high-passed at 300 Hz with a 6dB per octave filter. This can be done by a low level filter at the amplifier input or by a series capacitor at each loudspeaker. Electrolytic capacitors can be used but they must be non-polarized (See Typical Capacitor Values Chart).

Typical Capacitor Values			
8 Ohm Driver	25 Volt Line	70 Volt Line	100 Volt Line
70 mfd	15 mfd	2 mfd	1 mfd

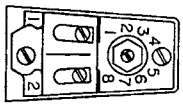
APF-15T Vari-Tap® Control Connect Center Xfmr. Power Taps				
Switch Position	Impedance (Ohms)	Watts @ 25V	Watts @ 70.7V	Watts @ 100V
1	5000	–	1	2
2	2500	–	2	4
3	1300	.48	3.8	7.7
4	666	.94	7.5	15
5	333	1.8	15	X*
6	89	7.5	X*	X*
7	45	15	X*	X*

* Do Not Use

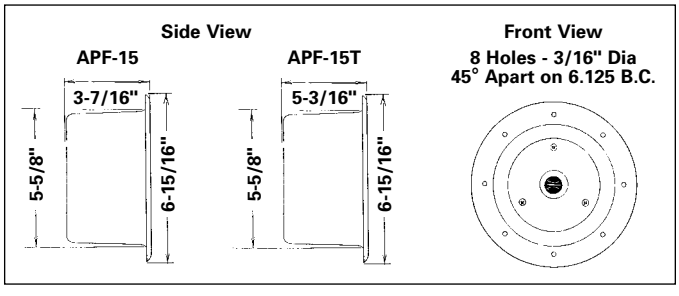


APF-15 (Impedance Sweep - 8 Ohm Speaker Only)

CAUTION: Amplifier output line connection is made to the screw terminals which are designed with wire retainers for insured reliability. Input terminals are numbered (#1 and #2) to maintain system phasing (#2 is the positive terminal). The wide and narrow slots adjacent to #1 and #2 are used for cable strain relief.



Vari-Tap® Selector Switch



Atlas Sound products are designed and tested in our well-equipped research laboratory which contains a fully anechoic chamber, complete analog Bruel & Kjaer measurement equipment and Techron® TEF 20® audio analyzer. Atlas Sound is proud to be a beta site for TEF software.

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