



APC-30T

Omni-Purpose® 30 Watt Wide Angle Horn Loudspeaker



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General Description

Atlas Sound transformer-equipped APC-30T offers 30 Watts of power handling capability. It features an integral high-efficiency compression driver consisting of a 1½" voice coil, a phenolic diaphragm and a ferrite magnet for extended reliability and performance. The wide-angle bell is engineered to increase frequency dispersion while retaining low frequency response. The exponential flare of the projector bell also allows for sound directivity. This unique design also provides for maximum sound angle projection in the horizontal or vertical plane by loosening the horn loudspeaker tip and changing horn orientation.

Model APC-30T includes a built-in transformer featuring the exclusive Vari-Tap® Control Connect Center. Simply use a screwdriver to adjust the 7-position watts/impedance switch or use the 45Ω tap for intercom and talk-back use.

Engineered for durability, this loudspeaker requires little or no maintenance. It features the cast aluminum Omni-Purpose® mounting bracket for precise positioning in vertical and horizontal planes with a single adjustment. The bracket includes provisions for secure installation of the loudspeaker to conventional surfaces as well as for strap-mounting to I-beams and pillars. Assemblies are manufactured of polycarbonate plastic and structural aluminum with a grey baked epoxy finish.

Features

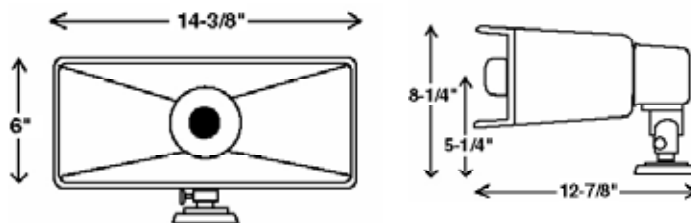
- High-Powered Compression Driver Projects Superior Voice and Tone Signalling
- Wide-Angle Sound Dispersion for Maximum Horizontal Pattern Coverage
- One-Step Method of Adjusting Bell from Horizontal to Vertical Positioning Increases Sound Angling Versatility
- Includes a 25V, 70.7V, 100V Transformer with a 45Ω Tap

Applications

APC-30T 30 Watt loudspeaker features an exponential-shape bell with 75° x 95° wide-angle sound dispersion for voice and signal messages. The bell may easily be rotated with one turn of the loudspeaker tip to loosen or tighten. This exclusive feature provides precise horizontal or vertical pattern control for most coverage areas. Install the highly efficient units in manufacturing facilities, commercial buildings, service/distribution centers, recreation areas, and civic sites where public address messages and emergency evacuation warnings are communicated. Use these sturdy units for indoor or outdoor applications where clear communication and weather-resistant performance are required.

Specifications

Power Rating	30 Watts
Frequency Response	300Hz – 12kHz
Sensitivity (SPL)	109dB at 1 Watt / 1 meter (avg)
Dispersion Angle	70° x 95° (-6dB, 2kHz octave band)
Width	14¾" (365mm)
Height	8¼" (210mm)
Depth	12⅞" (327mm)
Weight	8.0 lbs. (3.7kgs)
Finish	Grey Baked Epoxy



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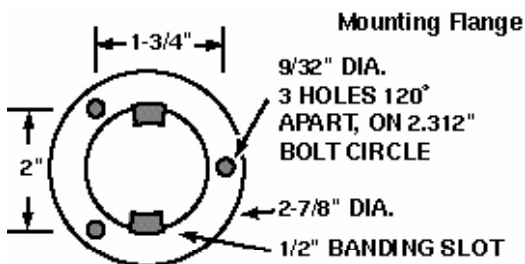
Vari-Tap® Control Connect Center Transformer Power Taps

Switch Position	Impedance (Ohms)	Watts @ 25V	Watts @ 70.7V	Watts @ 100V
1	2,500Ω	–	2	4
2	1,300Ω	–	3.8	7.7
3	666Ω	0.9	7.5	15
4	333Ω	1.8	15	30
5	167Ω	3.7	30	X*
6	89Ω	7.5	X*	X*
7	45Ω	15	X*	X*

(* Do Not Use)

Driver Protection

The horn loudspeaker should not be operated at frequencies outside the horn cut-off. It is suggested that any program material be high-passed at 300Hz 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.



Typical Capacitor Values Chart

Impedance	Watts @25V	Watts @70.7V	Watts @100V	Recommended Series Capacitor Value
2500	.25	2	4	.15μF
1300	.5	3.8	7.5	.33μF
666	.9	7.5	15	.56μF
333	1.8	15	30	1.5μF
167	3.7	30	Do not use at 100V	2.2μF
89	7.5	Do not use at 70V	Do not use at 100V	4.7μF
45	15	Do not use at 70V	Do not use at 100V	8μF

Atlas Sound products are designed and tested in our well-equipped research laboratory which contains a fully anechoic chamber, the TEF 20® audio analyzer.

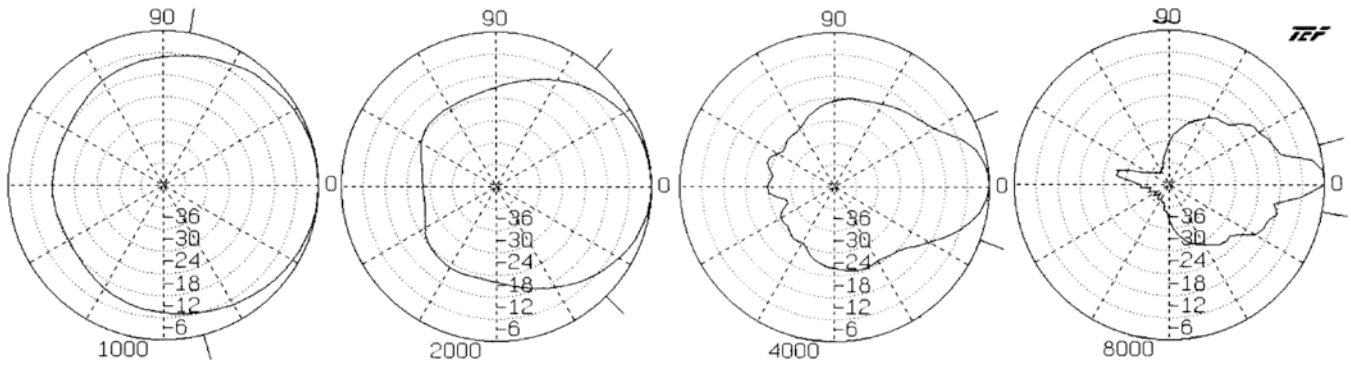
Architect and Engineer Specifications

Loudspeaker shall be Atlas Sound Model _____ transformer equipped APC-30T or approved equal. Weatherproof unit shall be a double re-entrant type design with audio power capability of 30 Watts (continuous). Frequency response shall be 300Hz–12kHz (nominal), 400Hz–3kHz (+5dB). Sound pressure level shall be 119dB (30W/1M), 109dB (1W/1M). Dispersion shall be 70° x 95° (-6dB, 2kHz octave band). Voice coil impedance shall be 8Ω. Model APC-30T shall be equipped with transformer having impedance selection via seven-position switch with 2500, 1300, 666, 333, 167, 89 and 45Ω. Power taps shall be available at 0.9, 1.8, 3.7, 7.5, 15 Watts on 25V line, 2, 3.8, 7.5, 15, 30 Watts on 70.7V line and 4, 7.7, 15, 30 Watts on 100V line. Unit shall be furnished with self-aligning, field-replaceable diaphragm and Omni-Purpose® mounting bracket. Bracket allows adjustment in the vertical and horizontal planes and includes provisions for surface mounting, banding, or strapping. Unit shall be constructed of environment-resistant polycarbonate plastic, treated heavy-gauge aluminum and structural aluminum die-casting. Finish shall be grey baked epoxy. APC-30T weighs 8 lbs. and measures 14 3/8"W x 8 1/4"H x 12 7/8"D (365mm x 210mm x 327mm).

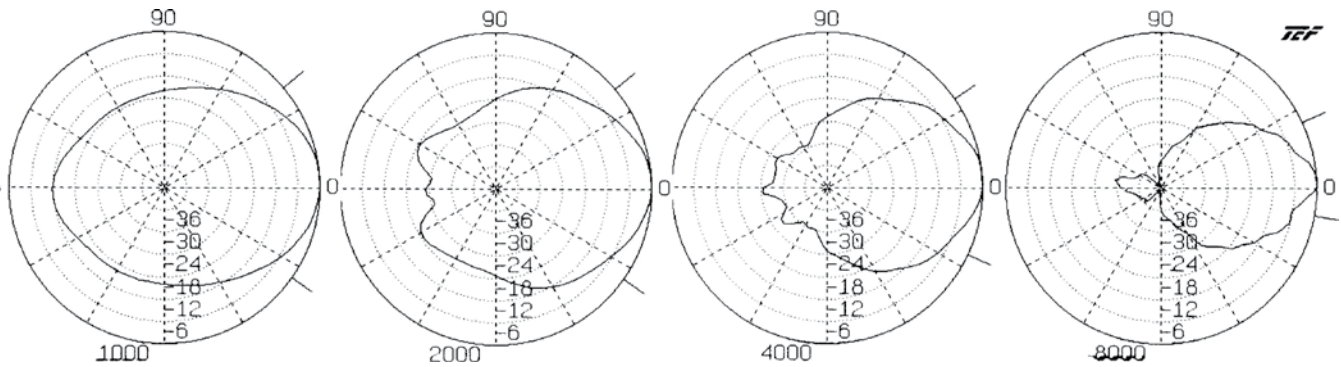
Accessories

- BX-1A. Vandal Resistant Cover Plate for Armored Cable and Conduit Connection. Constructed of Cast Aluminum.

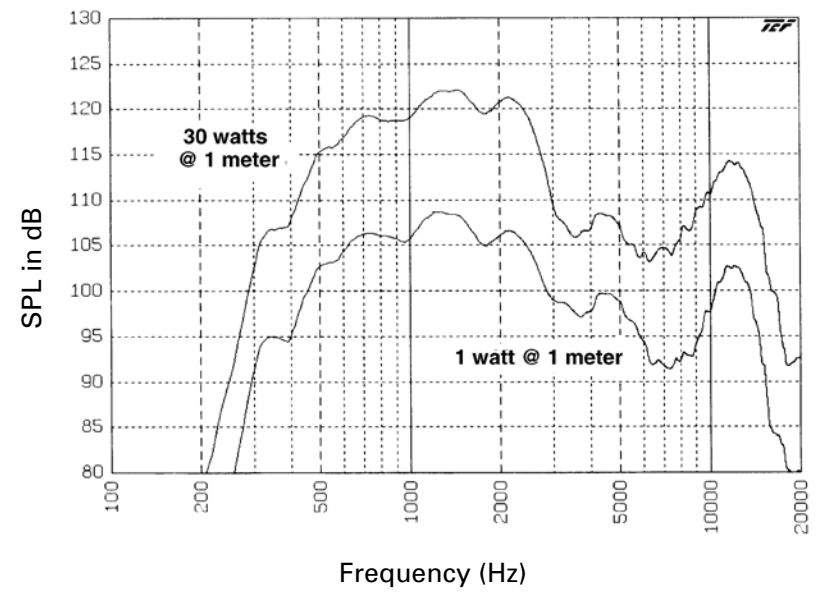
APC-30T Vertical Polars (Normalized to Zero on Axis) (-6dB)



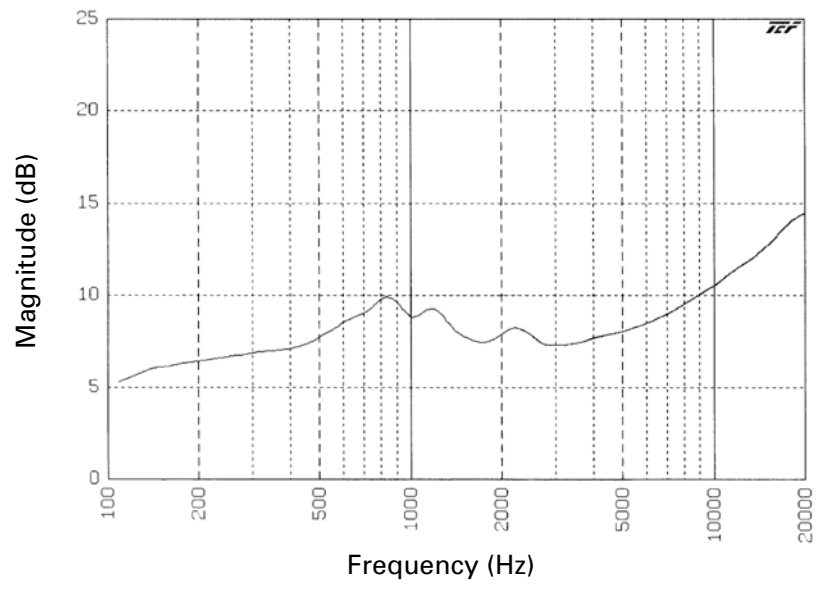
APC-30T Horizontal Polars (Normalized to Zero on Axis) (-6dB)



APC-30T Frequency Response



APC-30T Harmonic Distortion



APC-30T Impedance

