



SM82TUC-B / SM82TUC-WH **Surface Mount Loudspeakers**



SM Series

Owner's Manual

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Introduction

Thank you for purchasing the AtlasIED SM82TUC Strategy Series® surface mount loudspeakers. The SM82TUC loudspeaker is designed to provide high fidelity, long life and installation convenience for commercial and residential applications. Their weather-resistant properties make them perfect for use indoors or out. The SM82TUC is available in either black or white.

Key Features

- Includes internal, high efficiency 70.7V / 100V transformer
- Barrier strip input with weather resistant cover
- Bracket included for wall mounting (UL Mounting Evaluated)
- Also compatible with optional mounting systems (UL Mounting Not Evaluated)
- Mounting system must be rated to support at least 10 lbs (4.5kg)

Placement

Outdoor Use

The materials used in the construction of the SM82TUC loudspeaker systems are weather resistant. The hardware is brass, the grille is powder-coated aluminum, and the bracket is zinc plated, powder coated steel. The enclosure itself is shatter resistant. Adhering to these mounting guidelines will further extend the life of the product when installed outdoors:

- Whenever possible, mount the speaker under an eave or other protective overhang
- Always aim the speaker at a slight downward angle to prevent water from accumulating on the speaker cone
- Do not place the speaker in a location where water, snow, or ice will accumulate on the speaker for extended periods of time

Indoor Use

The SM82TUC loudspeaker works very well when it is wall-mounted in indoor applications. When the loudspeaker is placed on a wall, it can take advantage of the natural boundary effect that occurs when a loudspeaker system is placed against one or more surfaces. This boundary effect will provide increased overall output. When mounted against one surface (on a wall), the loudspeaker output will increase by 3dB. When mounted against two surfaces (on the wall near the ceiling or corner), the loudspeaker output increases by 6dB. When mounted against three surfaces (in a corner near the ceiling), the loudspeaker output increases by 9dB.

Shelf Mounting

The bottom surface of the SM82TUC is a flat 90° to the speaker baffle to maintain level surface when placing on shelves. All models can also be horizontally installed in any placement option.

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Installation

Fixed Install

The SM82TUC loudspeaker includes a versatile yet simple U-bracket designed to provide easy vertical or horizontal installation on almost any surface. The loudspeaker may be installed using screws or bolts placed through the "Keyhole" shaped holes in the mounting bracket. The center $\frac{5}{8}$ " hole allows wire to exit through the bracket when wall mounting, for a clean installation. The unused inserts on the rear of the SM82TUC are $\frac{1}{4}$ "-20. These openings can be used with forged eyebolt and approved safety cable (wire rope sling) where redundant support is required for seismic or safety considerations. These parts are available through multiple sources:

- Eyebolt, Lifting With Shoulder, Steel, Plain Finish, $\frac{1}{4}$ "-20 Thread Size, 1" Thread Length, 1" Shank Length, $\frac{17}{32}$ " Shoulder Diameter, $\frac{5}{32}$ " Shoulder Length, $\frac{3}{4}$ " Eye Inside Diameter, $1\frac{1}{4}$ " Eye Outside Diameter, $2\frac{3}{8}$ " Overall Length, 500 lb. Working Load Limit
- Galvanized Steel Cable Spool, $\frac{1}{8}$ "
- Sleeve N Thimble™ Kit for $\frac{1}{8}$ " Cable
- Swage It Tool for $\frac{1}{16}$ ", $\frac{3}{32}$ ", and $\frac{1}{8}$ " Cable Size
- The mounting knobs included with the SM82TUC may be easily interchanged with standard, $\frac{1}{4}$ "-20 vandal proof hardware
- TORX Drive Button Head $\frac{1}{4}$ " Machine Screw, Tamperproof, $\frac{1}{2}$ " Length
- One-Way Round Head $\frac{1}{4}$ " Machine Screw, Tamperproof, $\frac{1}{2}$ " Length
- Spanner Flat Head $\frac{1}{4}$ " Machine Screw, Tamperproof, $\frac{1}{2}$ " Length

Overhead Suspension

CAUTION: Suspending any object is potentially dangerous and should be attempted only by individuals who have thorough knowledge of the techniques and regulations of rigging objects overhead using ONLY hardware approved for this type of installation. AtlasIED strongly recommends that SM82TUC loudspeakers only be suspended overhead when taking into account all current national, federal, state, and local regulations. It is the responsibility of the installer to insure that the speaker is installed according to those regulations. If the SM82TUC loudspeaker is suspended, AtlasIED strongly recommends that the system be inspected at least once a year. If any signs of weakness or damage is detected, remedial action should be taken immediately.

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Line Matching Transformer Connections

The SM82TUC includes a two pole barrier strip housed by a weather-resistant cover. The barrier strip is designed to accept either spade connectors or bare wire. AtlasIED recommends using #18AWG for wire runs up to 500', #16AWG for wire runs of 500' to 1000', and #14AWG for runs over 1000'. Building codes often dictate that speaker wire must be plenum rated and run in conduit. Be sure to check local code requirements before installation.

The SM82TUC is equipped with line matching transformers. These types of loudspeakers require an amplifier capable of driving a 70.7V line in order to ensure that the wattage taps selected will be appropriate. If the amplifier is not rated for 70.7V output, the AtlasIED AF140 autoformer can be used and configured as a step-up transformer for this purpose. Contact a local dealer for details.

Connect the speaker cable to the (+) and (-) barrier strip terminals on the back of the SM82TUC. Using a small screwdriver, adjust the wattage selector switch on the back of the SM82TUC to the desired wattage tap.

Quantity of loudspeakers per amplifier will be dictated by the amplifier's wattage rating (at least 20% headroom should be allowed for extended range program material such as paging or digital music sources) i.e. a 120-watt amplifier will power 6 loudspeakers tapped at 15-watts each.

$6 \times 15 = 90 \text{ Watts} + 20\% (120 \times 0.2) \text{ headroom} (24 \text{ Watts}) = 114 < 120\text{W}$ (See Figure 2)

$6 \times 15 \text{ Watts} = 90 \text{ Watts Total Load on Amplifier}$

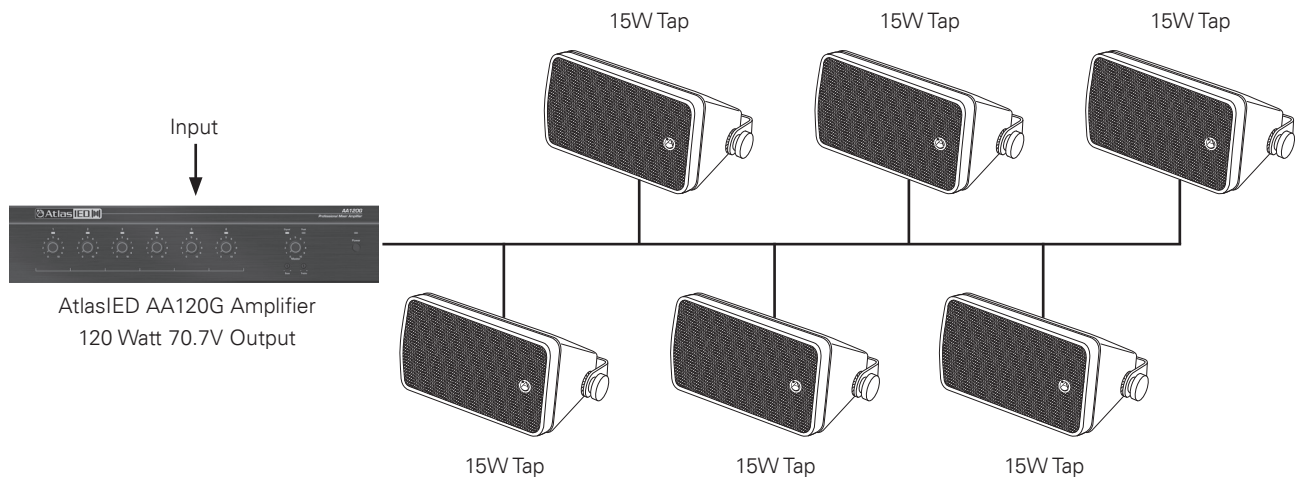


Figure 2

Maintenance and Care

AtlasIED surface mount loudspeakers have been designed and manufactured for years of trouble-free service. Clean the SM82TUC with a dampened soft cloth or paper towel. If the loudspeaker is mounted high on a wall or ceiling, use a broom or duster to gently brush it off. Spraying the speaker with high-pressure water is not recommended and will void the warranty.

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System	
Type	Surface Mount Loudspeaker
Frequency Response	65Hz - 20kHz (±3dB)
Usable Low Frequency Limit (10dB Down Point)	55Hz
Transformer Taps - 70V	1.9W, 3.8W, 7.5W, 15W, 30W, 60W
Transformer Taps - 100V	1.9W, 3.8W, 7.5W, 15W, 30W
Sensitivity (1W / 1M)	92dB
Nominal Coverage Angle	65° x 65°
Transducer Complement	
High Frequency	1" Exit Compression Driver
Low Frequency	8" Hycone Treated Woofer
Crossover Frequency	1.650kHz
Crossover Slope	12dB / Octave
Input Connections	2 Pole Barrier Strip with Weather-Resistant Cover
Driver Protection (High Frequency)	AtlasIED PolyGuard™
Mechanical	
Materials	UV-Resistant Fiberglass Filled Polycarbonate / ABS Injection Molded Weatherproof Enclosure. (Black or White Finish) Perforated Powder Coated Aluminum Grille Matches Enclosure Color
Weight (Less Bracket)	18.08 lbs (8.2kg)
Dimensions	9" W x 16.5" H x 8.5" D (229mm x 419mm x 216mm)

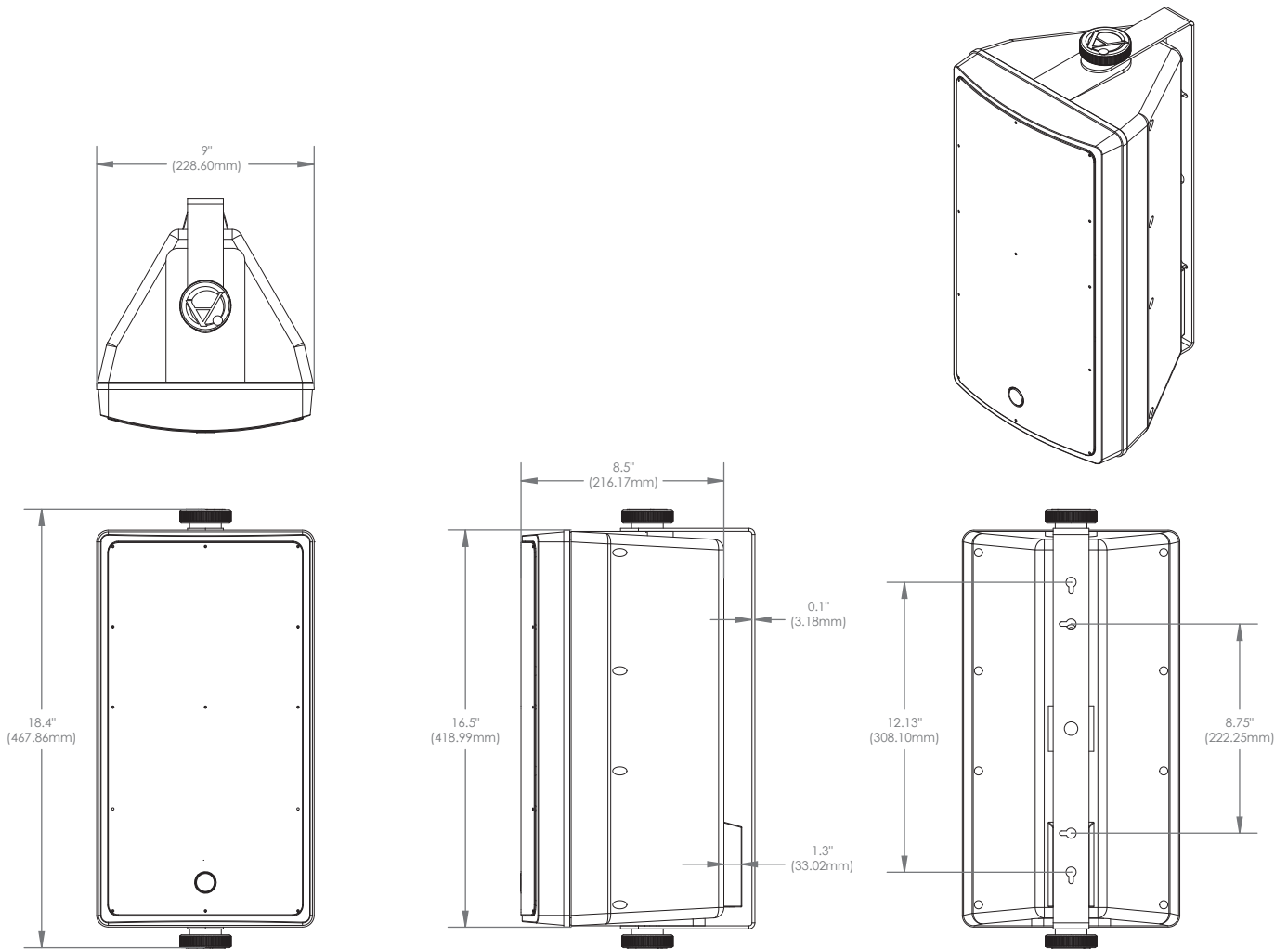
Voltage (Vrms)	Power Tap (W)	OSPL (dBA) at 10ft	
		UL1480 Reverberant	ULC-S541 Anechoic
70.7	1.9	79.8	81.5
	3.8	82.7	84.3
	7.5	85.8	87.3
	15	88.7	90.3
	30	91.6	92.9
	60	94.3	96.0
100	3.8	82.9	84.5
	7.5	85.7	87.3
	15	88.7	90.3
	30	91.5	93.0
	60	94.2	95.9

Horizontal and Vertical Dispersion Characteristics	
Axis Angle	dBA
0	0
±15	-3
±40	-6
±90	-13.7

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Dimensional Drawings



Limited Warranty

All products manufactured by AtlasIED are warranted to the original dealer/installer, industrial or commercial purchaser to be free from defects in material and workmanship and to be in compliance with our published specifications, if any. This warranty shall extend from the date of purchase for a period of three years on all AtlasIED products, including SOUNDOLIER brand, and ATLAS SOUND brand products except as follows: one year on electronics and control systems; one year on replacement parts; and one year on Musician Series stands and related accessories. Additionally, fuses and lamps carry no warranty. AtlasIED will solely at its discretion, replace at no charge or repair free of charge defective parts or products when the product has been applied and used in accordance with our published operation and installation instructions. We will not be responsible for defects caused by improper storage, misuse (including failure to provide reasonable and necessary maintenance), accident, abnormal atmospheres, water immersion, lightning discharge, or malfunctions when products have been modified or operated in excess of rated power, altered, serviced or installed in other than a workman like manner. The original sales invoice should be retained as evidence of purchase under the terms of this warranty. All warranty returns must comply with our returns policy set forth below. When products returned to AtlasIED do not qualify for repair or replacement under our warranty, repairs may be performed at prevailing costs for material and labor unless there is included with the returned product(s) a written request for an estimate of repair costs before any nonwarranty work is performed. In the event of replacement or upon completion of repairs, return shipment will be made with the transportation charges collect.

EXCEPT TO THE EXTENT THAT APPLICABLE LAW PREVENTS THE LIMITATION OF CONSEQUENTIAL DAMAGES FOR PERSONAL INJURY, ATLASIED SHALL NOT BE LIABLE IN TORT OR CONTRACT FOR ANY DIRECT, CONSEQUENTIAL OR INCIDENTAL LOSS OR DAMAGE ARISING OUT OF THE INSTALLATION, USE OR INABILITY TO USE THE PRODUCTS. THE ABOVE WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

AtlasIED does not assume, or does it authorize any other person to assume or extend on its behalf, any other warranty, obligation, or liability. This warranty gives you specific legal rights and you may have other rights which vary from state to state.

Service

Should your SM Series loudspeaker require service, please contact the AtlasIED warranty department at 1-877-689-8055, ext. 277 or www.atlasied.com/support to obtain an RA number.

AtlasIED Tech Support can be reached at 1-800-876-3333 or www.atlasied.com/support.

Visit our website at www.AtlasIED.com to see other AtlasIED products.