ATON Technology in reach.™

Storm Series

Ceiling Speakers

A60C/A61C/A62C/A63C/A62ST
A81C/A82C

ATON STORM SERIES

www.atonhome.com

1. Introduction

Thank you for choosing ATON Storm Series Ceiling Speakers. All models were voiced in our sound labs by musicians with years of critical listening experience and crafted for your listening enjoyment. To see the complete line of ATON products, visit us online at ***www.atonhome.com***.

Storm Series All ceiling models feature 1" pivoting tweeters, excellent off-axis response, high power handling, custom driver materials, and network components that provide the best price/performance ratio in the industry.

Storm Series Ceiling Speakers are available in several configurations - for stereo or Home Theater listening, install two-way models like the A60C, A61C, A62C or A63C. A62ST Dual Voice Coil speakers are designed for rooms without designated listening areas. For the bass enthusiast, install a pair of A81C or A82C 8" speakers for deep, rich, thumping bass at any volume level! ATON Ceiling Speakers are weather/moisture resistant and can be installed outdoors or in bathrooms and saunas.

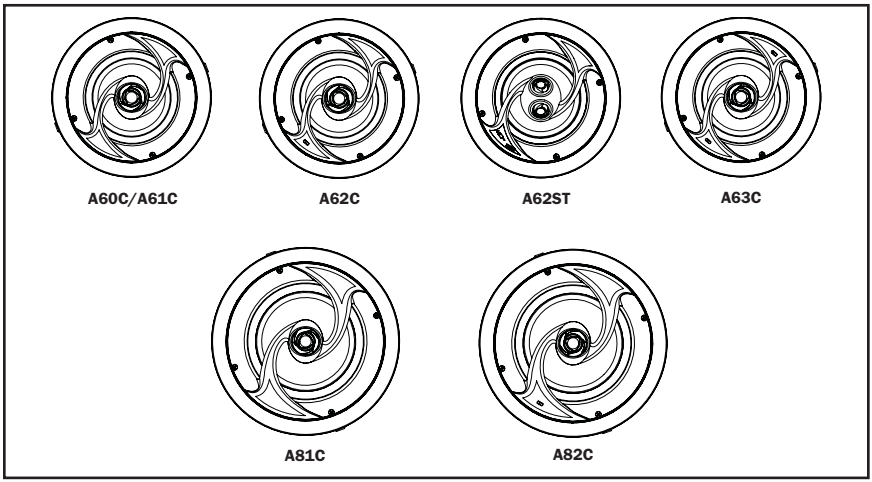

Figure 1.1 - Front View

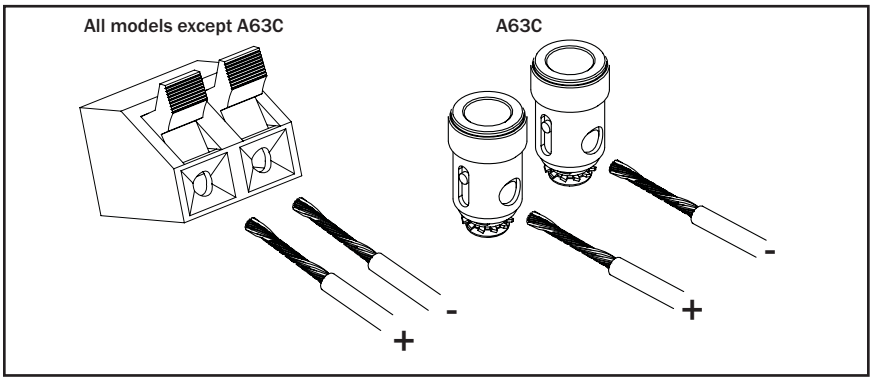

Figure 1.2 - Speaker Terminals

2. System Design/Applications

ATON Ceiling speakers are designed primarily to be installed in drywall ceilings, but it is possible to install them in other materials. Prior to installation, it is essential to determine the type of application, and, therefore, the placement of the speakers in the ceiling. There are three typical applications that ATON Ceiling speakers will be used for: **Stereo**, **Mono/DVC**, and **Home Theater**.

Stereo

In areas that have a defined listening area where two speakers will be mounted more or less equidistant from each other, use a stereo setup with left and right speakers each connected to their own channel of a stereo receiver or amplifier. This application provides the best sound quality, staging, and depth possible in areas with a defined listening position. ***Figure 2.1*** shows an example of a stereo listening area.

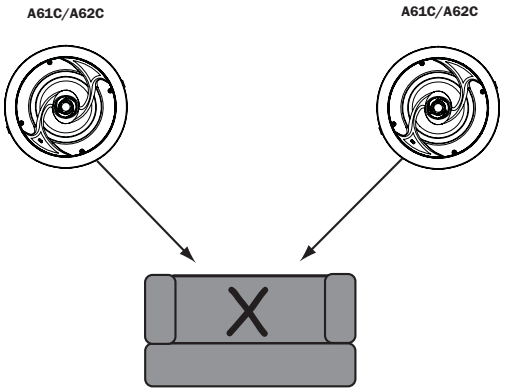

Figure 2.1 - Stereo Application

Mono/DVC

In many instances, mono or DVC setup will provide a better listening experience in spaces without a defined listening area. Mono applications combine the left and right signals to provide the full sound of an audio signal to each speaker in the system without left/right separation. DVC applications send the left signal to one voice coil and the right signal to another voice coil, essentially creating a stereo pair in one speaker cabinet. ***Figure 2.2*** shows an A62ST DVC Speaker in a kitchen.

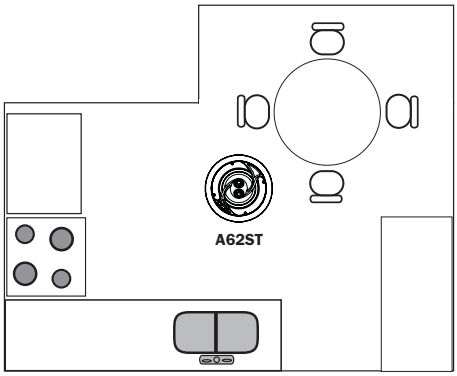

Figure 2.2 - Mono/DVC Application

Home Theater

ATON Ceiling Speakers provide unobtrusive, high-quality Home Theater sound when installed in the correct locations. It is critical to identify the primary listening position before installation! See ***Figure 2.3*** for a system design utilizing *all* ceiling speakers and ***Figure 2.4*** for a system design utilizing ceiling speakers as rear surround speakers.

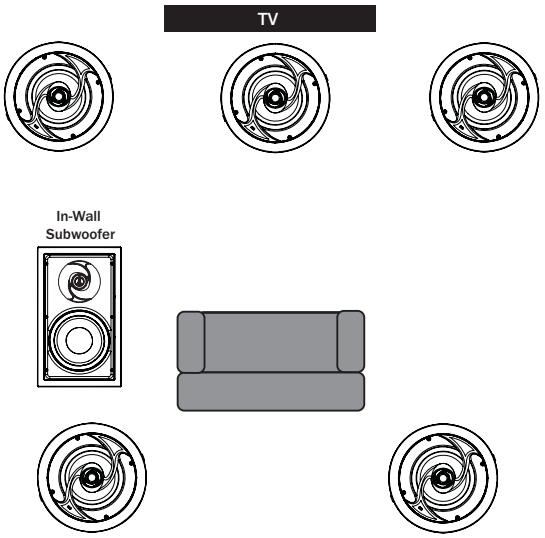

Figure 2.3 - Home Theater-All Ceiling Application

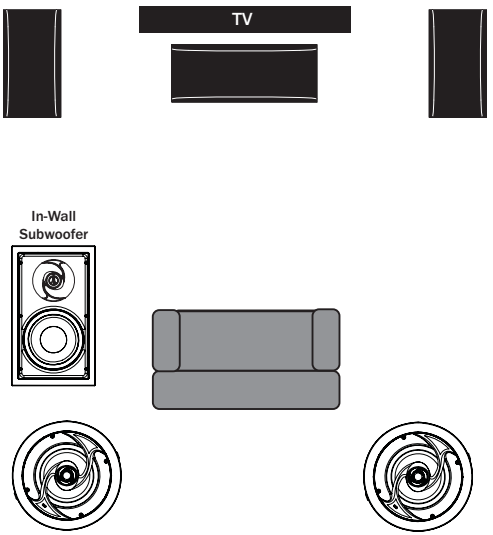

Figure 2.4 - Home Theater-Rear Surround Application

3. Installation

The Installation process is divided into three distinct processes: **Wiring**, **Mounting** and **Setting Switches**. After carefully considering the intended application (Defining a Listening Area, Mono/Stereo, Home Theater, etc.), specific mounting locations can be decided upon. Once the specific locations are determined, installation can commence.

Wiring

Before actually running any wire or cable, take the time to look around each room or area of the house and plan your wire paths for maximum efficiency. Look for routes through uncluttered parts of the stud wall or ceiling that allow you to group all low-voltage (video, speaker wires, Cat-5, telephone, etc.) wires wherever possible. It is a good practice to label both ends of all cables and to protect wires by tying a plastic bag over the ends.

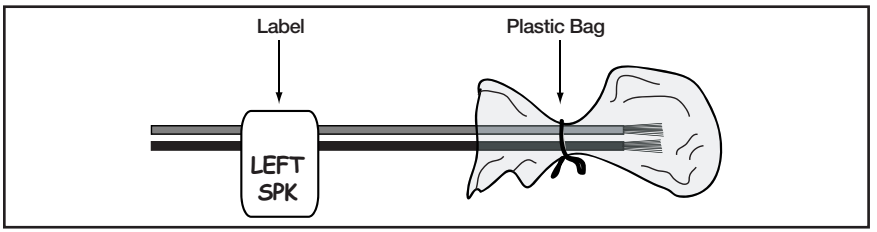

Figure 3.1 - Wiring Label & Plastic Bag

Wiring Methodology

There are three common scenarios for connecting speaker to an audio system. ***Figures 3.2*** to ***3.4*** show stereo pairs, while ***Figures 3.5*** and ***3.6*** show examples of mono and DVC applications, respectively. **Each stereo method can also be used for mono or DVC applications.** ***Figure 3.7*** shows a Home Theater wiring scheme.

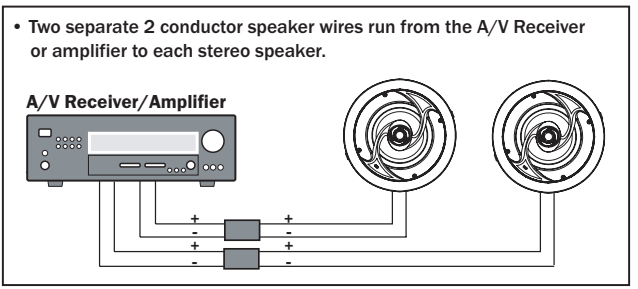

Figure 3.2 - Wiring: Amplifier to Speakers-2 Conductor Direct

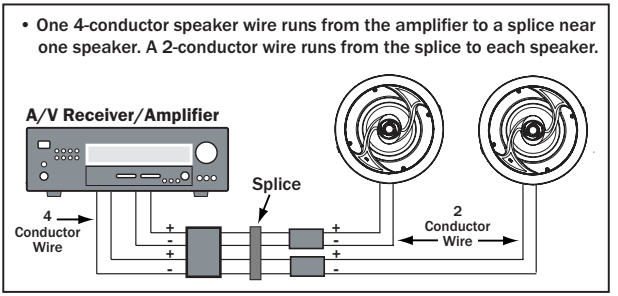

Figure 3.3 - Wiring: Amplifier to Speakers-4 Conductor to 2 Conductor

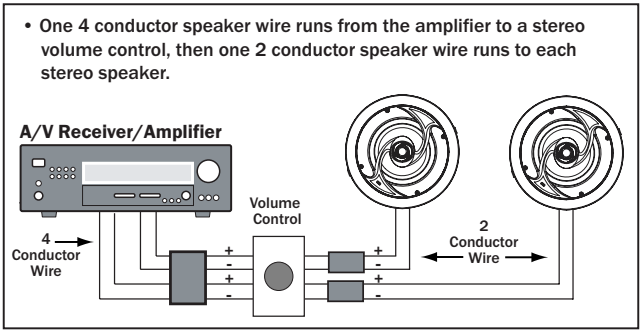

Figure 3.4 - Wiring: Amplifier to Speakers w/ Volume Control

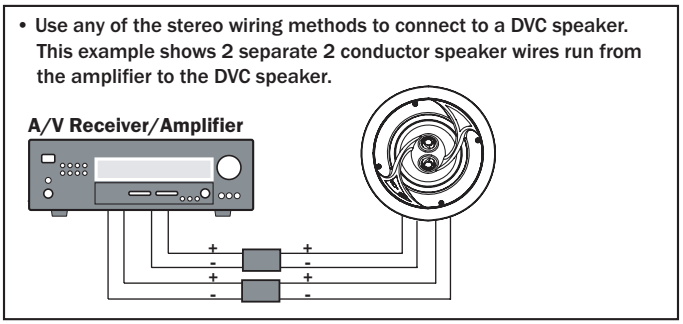

Figure 3.5 - Wiring: Amplifier to Speaker-DVC

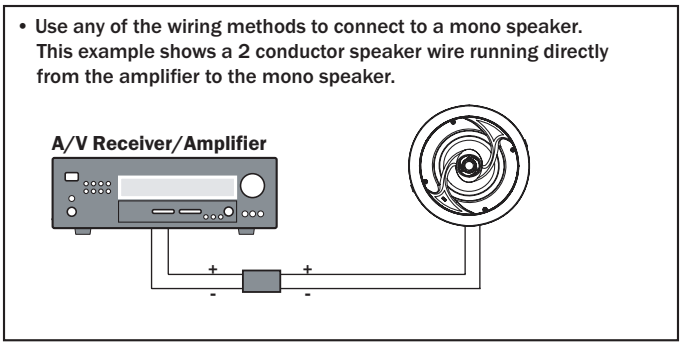

Figure 3.6 - Wiring: Amplifier to Speaker-Mono

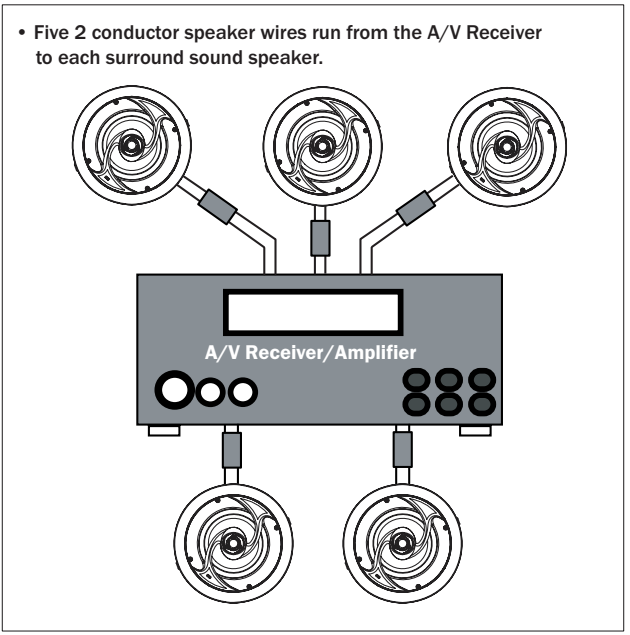

Figure 3.7 - Wiring: Amplifier to Speakers-Home Theater

Note 1: Low voltage wiring must be run in accordance with the National Electrical Code as well as any other applicable provisions of the local building codes in your area. In some cases (such as commercial installations), running the wire in conduit may be required. If you have any questions concerning the wiring of speakers in your home, contact your local building and inspection department.

Note 2: It is recommended that you use quality CL-2 or CL-3 rated stranded speaker wire when installing ATON speakers. Solid-core "Romex" type wire is not acceptable! Use at least 16AWG speaker wire for runs up to 100 feet, and at least 14 AWG speaker wire for runs up to 200 feet. If you must cross high-voltage lines, always do so at a 90 degree angle to avoid audible hum through the speakers!.

Note 3: When pre-wiring for ceiling speakers, it is essential to make direct wire runs from the head-end to each speaker. Do not run speaker wires in series or parallel, and do not "daisy-chain" speakers to common wiring.

Pre-Wiring

The audio/speaker cable runs should be routed from the head-end location to the speaker rough-in brackets (if used). At the speaker locations, securely fasten the speaker wire to the speaker rough-in bracket. If not using speaker rough-in brackets, staple speaker wire runs in a loose zigzag between the studs where the speaker is to be mounted to make it easier to find the cable after the drywall is installed. Zig-zagging the cable also allows flexibility in the placement of the speaker. ***Note: Do not run speaker wires closer than 12" from high voltage wires.***

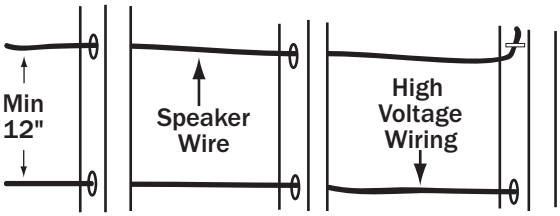

Figure 3.8 - 12" From High-Voltage Wiring

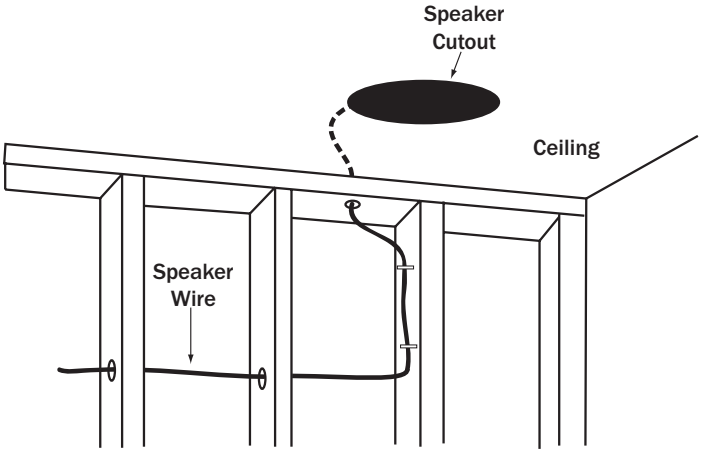

Figure 3.9 - Pre-Wiring

Mounting

Two situations that can exist when mounting ceiling speakers:

- **Pre-Construction** - Installations that occur in new homes being built and in remodel situations where walls and/or ceilings will be exposed.
- **Retro-Fit** - Installation that involve existing homes with walls and ceilings finished.

While the end result of either type of installation is similar, the process is quite different.

Pre-Construction

In a pre-construction installation, walls and ceilings are open with no drywall installed. This is desirable and allows the installer greater access than in retro-fit applications. ATON model BK6C Rough-In Brackets are specifically designed to work with models A60C/A61C/A62C, A62ST/A63C while model BK8C Rough-In Brackets are designed to work with A81C/A82C speakers. Rough-in Brackets should be used whenever possible to reserve a neat hole in the drywall, ensuring proper speaker placement and making trim-out and final installation neat and organized.

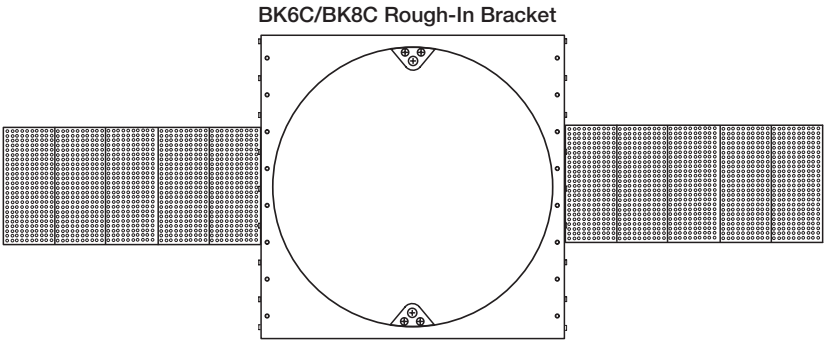

Figure 3.10 - Rough-In Bracket

Mounting Rough-In Brackets

Once the mounting locations are decided upon, assemble the brackets and secure them to the ceiling joists using flat-head screws or heavy-duty staples (see the *ATON Ceiling/In-Wall Rough-In Brackets Manual* for detailed steps).

Retro-Fit

Retro-fit installations are more difficult to complete than pre-construction because walls and ceilings are intact. Typically wires must be fished into position through walls, floors and ceilings. Holes must be cut and speakers mounted directly in the ceiling with no rough-in brackets.

Note: Before cutting holes in any existing wall or ceiling surface, probe the cavity behind each speaker's installation location for obstructions!

Cutting Speaker Openings in Ceiling-No Rough-in Brackets

1. Use a stud finder to locate the studs around the intended speaker location.

   Note: A stud-finding device may not detect pipes, wiring, or other obstructions located behind the drywall.

2. Use the inside portion of the speaker cutout template to confirm speaker placement.
3. Remove templates and drill or carefully punch a pilot hole in the ceiling. A bent piece of wire or a coat hanger may be use to probe the stud bay for obstructions. If you experience resistance of any kind–STOP! If any obstructions are detected, patch the pilot hole and try again in another location.

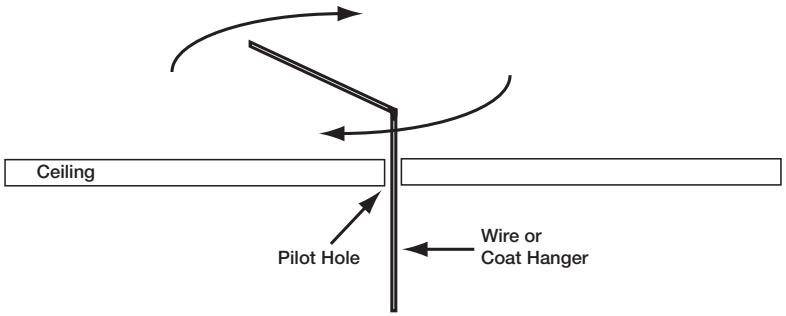

Figure 3.11 -Probe Stud Bay Before Cutting!

4. Once it has been determined that the cavity is free from obstructions, position the cutout template and use a pencil to lightly trace the perimeter of the template.
5. Cut the opening using a keyhole saw, drywall router, or razor knife.

Mounting Speakers in Ceiling (Pre-Construction or Retro-Fit)

1. Remove speaker grille and place speaker face down.
2. Locate the speaker wire and pull through the ceiling opening.
3. Connect the speaker wire. BE SURE TO OBSERVE CORRECT POLARITY!
4. Insert the speaker into the opening in the ceiling (or Rough-in Bracket opening) and *carefully* tighten each of the four clamping screws, alternating diagonally between each screw position to ensure proper fit.
5. Aim the pivoting tweeter at the listening area.
7. Set the **Treble** (A62C/A62ST/A63/A82C) and **Bass** (A63C) switches if applicable. See ***Setting Switches*** for details.
8. Replace the speaker grille.

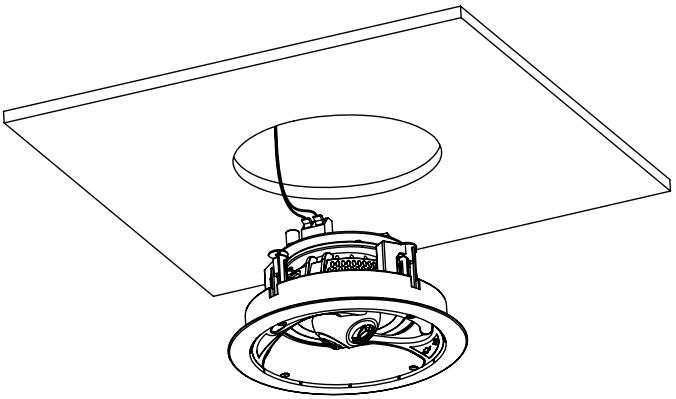

Figure 3.12 -Mounting Speakers In Ceiling

Setting Switches

Once the speakers are wired, mounted, and positioned correctly, use the **Bass** and **Treble** switches (if applicable) to fine-tune the speakers based on local environmental variables such as hardwood floors, thick draperies, etc. Select the "**+**" position to increase Bass/Treble response or select the "**-**" position if no increase or decrease is desired.

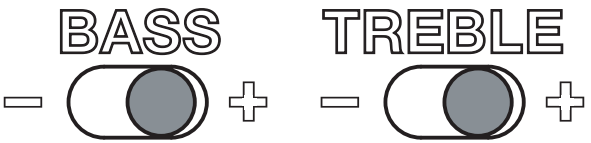

Figure 3.12 -Mounting Speakers In Ceiling

4. Specifications

A60C

System Type	2-Way
Woofer	6-1/2" Polypropylene
Tweeter	1" Pivoting Mylar
Crossover	6dB/Octave
Switches	None
Impedance	8 Ohms
Sensitivity	90dB
Frequency Response	45Hz to 20kHz
Power Handling	75 Watts
Cutout Dimensions	8-1/16" (205mm)
Outer Frame Dimensions	9-1/4" (242mm)
Mounting Depth	4-1/4" (107mm)
Pre-Construction Bracket	BK6C

A61C

System Type	2-Way
Woofer	6-1/2" Polypropylene
Tweeter	1" Pivoting Silk Dome
Crossover	6dB/Octave
Switches	None
Impedance	8 Ohms
Sensitivity	91dB
Frequency Response	36Hz to 20kHz
Power Handling	100 Watts
Cutout Dimensions	8-1/16" (205mm)
Outer Frame Dimensions	9-1/4" (242mm)
Mounting Depth	4-1/4" (107mm)
Pre-Construction Bracket	BK6C

A62C

System Type	2-Way
Woofer	6-1/2" Injection Molded Graphite (IMG)
Tweeter	1" Pivoting Aluminum
Crossover	12dB/Octave
Switches	2 Position Treble
Nominal Impedance	8 Ohms
Sensitivity	91dB
Frequency Response	34Hz to 20kHz
Power Handling	115 Watts
Cutout Dimensions	8-1/16" (205mm)
Outer Frame Dimensions	9-1/4" (242mm)
Mounting Depth	4-1/2" (107mm)
Pre-Construction Bracket	BK6C

A62ST

System Type	Dual Voice Coil (DVC)/Dual Tweeter
Woofer	6-1/2" Injection Molded Graphite (IMG)
Tweeter	Dual 3/4" (19mm) Aluminum
Crossover	12dB/Octave
Switches	2 Position Treble
Impedance	DVC 8 Ohms
Sensitivity	92dB
Frequency Response	34Hz to 20kHz
Power Handling	115 Watts
Cutout Dimensions	8-1/16" (205mm)
Outer Frame Dimensions	9-1/4" (242mm)
Mounting Depth	4-1/2" (107mm)
Pre-Construction Bracket	BK6C

A63C

System Type	2-Way
Woofer	6-1/2" Woven Kevlar
Tweeter	1" Pivoting Titanium
Crossover	12dB/Octave
Switches	2 Position Bass/Treble
Impedance	8 Ohms
Sensitivity	92dB
Frequency Response	32Hz to 22kHz
Power Handling	125 Watts
Cutout Dimensions	8-1/16" (205mm)
Outer Frame Dimensions	9 1/4" (242mm)
Mounting Depth	4-13/16" (122mm)
Pre-Construction Bracket	BK6C

A81C

System Type	2-Way
Woofer	8" Polypropylene
Tweeter	1" Pivoting Silk Dome
Crossover	6dB/Octave
Switches	None
Impedance	8 Ohms
Sensitivity	92dB
Frequency Response	32Hz to 20kHz
Power Handling	135 Watts
Cutout Dimensions	9-3/4" (248mm)
Outer Frame Dimensions	11-13/16" (285mm)
Mounting Depth	4-13/16" (122mm)
Pre-Construction Bracket	BK8C

A82C

System Type	2-Way
Woofer	8" Injection Molded graphite (IMG)
Tweeter	1" (25mm) Aluminum
Crossover	12dB/Octave
Switches	2 Position Treble
Impedance	8 Ohms
Sensitivity	92dB
Frequency Response	30Hz to 22kHz
Power Handling	150 Watts
Cutout Dimensions	9 3/4" (248mm)
Outer Frame Dimensions	11 13/16" (27.8cm)
Mounting Depth	4-13/16" (122mm)
Pre-Construction Bracket	BK8C

Notes:

Limited Lifetime Warranty

ATON warrants to the purchaser/end user ("you") that all Storm Series Speakers are to be free from defects in materials and workmanship. This warranty is transferable to subsequent owners of the product as long as the original proof of purchase is retained. If you discover a defect in material or workmanship, you can obtain warranty service by contacting ATON at (859)-422-7137 or service@atonhome.com. If ATON determines that the product is in fact defective, ATON shall, at its option, repair or replace the product free of charge to you. This warranty shall not apply (a) to equipment not manufactured by ATON, (b) to equipment which was improperly installed, (c) which was repaired or altered by others than ATON, or its authorized representatives or subject to unauthorized tampering, alteration, or modification, (d) damaged due to misuse, negligence, accident, acts of God (including, but not limited to, excess moisture, insects, lightning, flood, electrical surge, tornado, earthquake, or other catastrophic events beyond ATON's control), or (e) subject to improper operation, maintenance or storage, or unreasonable use. The foregoing warranties do not cover reimbursement for labor, transportation, removal, installation or other expenses which may be incurred in connection with repair or replacement. The foregoing remedies shall be your exclusive remedies for any breach of warranty. Further, the foregoing warranty does not extend to equipment sold, but not manufactured by, ATON ("Third Party Products"). With respect to any Third Party Products, the warranty for such product shall be as provided by the manufacturer of such product, who will also be responsible for warranty service, and ATON will pass through to you any transferable warranty actually extended to ATON by the manufacturer.

THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESSED AND IMPLIED WARRANTIES. ATON EXPRESSLY DISCLAIMS ALL SUCH OTHER WARRANTIES, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT. Notwithstanding the above, where applicable, if you qualify as a "consumer" under the Magnuson-Moss Warranty Act, then you may be entitled to any implied warranties allowed by law for the Warranty Period. Some states do not allow limitations on how long an implied Limited Warranty lasts, so the above limitation may not apply to you.

ATTENTION: TO OUR VALUED CONSUMERS
Valid proof of purchase is required for all warranty services. Warranty service requests made without proof of date of purchase will be denied. Please keep the original sales receipt for your records and send a copy to request warranty service. This warranty gives you specific legal rights, and you may also have other rights which vary state to state.
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www.atonhome.com
or
service@atonhome.com

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