

# 8-Ohm Ceiling Speakers



**For Music and Home Theater**

*Owners Manual*



## INTRODUCTION

M&S ceiling speakers are designed to provide clear, sharply-focused audio reproduction while remaining unobtrusively in the background. You'll find a variety of power ratings and designs in flush-mount or recessed versions. M&S Systems has a full range of ceiling speakers that will bring out the best in any home-theater or whole-house stereo music system. These products also offer many features, including the following:

- Swivel tweeter (S40C, S50C, S70C)
- Designed to handle power requirements of most stereo amplifiers
- Ceiling mount
- Discrete design
- Cam-lock mounting system

## DESCRIPTION

### ***STEREO CEILING SPEAKERS (SOLD IN PAIRS)***

#### **S70C**

<b>Frequency Response</b>	35 Hz to 20 kHz
<b>Maximum Power Rating</b>	70 Watts
<b>Impedance</b>	8 Ohms
<b>Overall Dimensions</b>	10 3/4" Diameter x 4" Depth
<b>Specifications</b>	Two way; 8" woofer, 1" soft dome swivel tweeter
<b>Mounting Dimensions</b>	9 3/8" Diameter x 3 1/2" Depth
<b>Grille</b>	Metal
<b>Color</b>	White

**S50C**

<b>Frequency Response</b>	50 Hz to 20 kHz
<b>Maximum Power Rating</b>	50 Watts
<b>Impedance</b>	8 Ohms
<b>Overall Dimensions</b>	9" Diameter x 3 3/8" Depth
<b>Specifications</b>	Two way; 6 1/2" woofer, 1" soft dome swivel tweeter
<b>Mounting Dimensions</b>	7 3/4" Diameter x 3" Depth
<b>Grille</b>	Metal
<b>Color</b>	White

**S40C**

<b>Frequency Response</b>	60 Hz to 20 kHz
<b>Maximum Power Rating</b>	40 Watts
<b>Impedance</b>	8 Ohms
<b>Overall Dimensions</b>	9" Diameter x 3 3/8" Depth
<b>Specifications</b>	Two way; 6 1/2" woofer, 1" mylar swivel tweeter
<b>Mounting Dimensions</b>	7 3/4" Diameter x 3" Depth
<b>Grille</b>	Metal
<b>Color</b>	White

**S30C**

<b>Frequency Response</b>	70 Hz to 16 kHz
<b>Maximum Power Rating</b>	30 Watts
<b>Impedance</b>	8 Ohms
<b>Overall Dimensions</b>	10 3/4" Diameter x 3 1/4" Depth
<b>Specifications</b>	Dual cone 8", wide range response
<b>Mounting Dimensions</b>	9 3/8" Diameter x 2 3/4" Depth
<b>Grille</b>	Metal
<b>Color</b>	White

### S30C3

<b>Frequency Response</b>	70 Hz to 16 kHz
<b>Maximum Power Rating</b>	30 Watts
<b>Impedance</b>	8 Ohms
<b>Overall Dimensions</b>	10 3/4" Diameter x 4" Depth
<b>Specifications</b>	Dual cone 8", wide range response
<b>Mounting Dimensions</b>	9 1/2" Diameter x 3 3/4" Depth
<b>Grille</b>	Metal
<b>Color</b>	White

### S30C2

<b>Frequency Response</b>	100 Hz to 15 kHz
<b>Maximum Power Rating</b>	30 Watts
<b>Impedance</b>	8 Ohms
<b>Overall Dimensions</b>	7 3/4" Diameter X 3 3/8" Depth
<b>Specifications</b>	Dual cone 5 1/4", wide range response
<b>Mounting Dimensions</b>	6 1/2" Diameter X 3 1/8" Depth
<b>Grille</b>	Metal
<b>Color</b>	White

### S100CS\*

<b>Frequency Response</b>	35 Hz to 20 kHz
<b>Maximum Power Rating</b>	100 Watts
<b>Impedance</b>	8 Ohms
<b>Overall Dimensions</b>	10 3/4" Diameter x 4 1/8" Depth
<b>Specifications</b>	Two way; 8" woofer, 1" swivel tweeter
<b>Mounting Dimensions</b>	9 3/8" Diameter x 3 5/8" Depth
<b>Grille</b>	Metal
<b>Color</b>	White

*\*Note: Recommend using MR82 mounting rings with this speaker.*

## MONO CEILING SPEAKERS (SOLD SEPARATELY)

### S40C2

<b>Frequency Response</b>	45 Hz to 15 kHz
<b>Maximum Power Rating</b>	40 Watts
<b>Impedance</b>	8 Ohms / 8 Ohms
<b>Overall Dimensions</b>	9" Diameter x 3 1/2" Depth
<b>Specifications</b>	Dual Voice coil; Dual cone 6 1/2" speaker
<b>Mounting Dimensions</b>	7 3/4" Diameter x 3" Depth
<b>Grille</b>	Metal
<b>Color</b>	White

### UNPACKING YOUR SPEAKERS

After carefully unpacking your speakers, the carton and the packing material should be saved for possible use later. If any speaker appears to be damaged, do not attempt to repair or to connect the unit to the amplifier. Repack the speaker and notify your distributor or M&S Systems for replacement or repair.

### SPEAKER LOCATION

Careful consideration must be given to the speaker location to realize the full frequency range. Ceiling speakers should be spaced 6 to 8 feet (6 feet for 8-foot ceilings and 8 feet for 10-foot ceilings and above) apart but no closer than 2 feet to any adjacent wall. Avoid placing speakers in air return cavities. Some type of protection will be required for the back of the speaker if blown insulation is used. The following is a partial list of ways to protect the speaker:

- Use an RE-16 speaker cover (sold separately).
- Use a piece of wood that will cover at least 3' on either side of the speaker opening. The ends may be partially closed to keep the blown insulation from reaching the speaker, however, a minimum gap of 2" at each end is better than a sealed box.

- Use a piece of bat insulation at least 3” thick over the back of the speaker. This insulation should not have a backing or if it does, the backing must be installed facing away from the speaker.
- Use a fine mesh to cover the back of the speaker to protect against bulk type insulation materials. This will not work with insulation containing fine powders.

**Do not** install speakers in stud cavities containing 120/240V appliances, within 18 inches of dimmer light fixtures, security wiring and other control wiring.

## **SPEAKER INSTALLATION FOR NEW CONSTRUCTION**

**Step 1.** After you have determine the speaker locations using the guidelines above, secure a 16 gauge 2 conductor cable, such as the M&S Systems MSI6X, (DO NOT USE STAPLES) for attachment to the speakers after the dry wall has been installed. **NOTE:** On the model S40C2, you will need to run 2-2 conductor cables to the speaker location for connecting the left and right signals to produce a monaural sound. Leave at least 18 inches additional cable for the connection during final speaker installation. Run the other end of the speaker cables to the speaker volume control location and secure in a single gang box along with a 4 conductor 16 gauge cable, such as the M&S Systems MSI64X, that will connect to the amplifier. **NOTE:** Make a drawing of each speaker location. This will assist you in locating the wires that have been covered after the sheet rock has been installed.

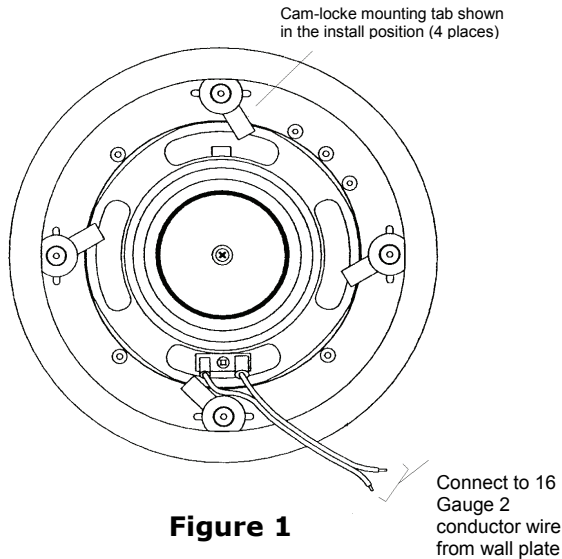
**Step 2.** To begin installation of the speakers, first locate the area where the wires are installed. At each location, cut a hole to the dimensions shown for the model being installed (Mounting Dimensions) in the tables found on pages 1-3. The cutout should be centered in the stud space opening. Prepare the speaker wiring by stripping off approximately 3 inches of the outer jacket (care should be taken so the insulation on the wires inside the jacket are not damaged) also strip approximately 3/8 inch off the ends of the two inside conductors. Twist the ends of the stranded cable so the wires are tight.

**Step 3.** You are now ready to install the speaker. Remove the front grille from the speaker. (Be careful not to touch the speaker cones in order to prevent any damage). Attach the speaker cable to the speaker by pressing down on the red (+) or black (-) tabs and inserting the red wire in the red terminal and the black wire in the black terminal. See Figure 1. Make sure that none of the strands from the black and red wires are touching each other. This can create a short circuit that can damage your electronics. Index the mounting tabs to make sure that all tabs will clear the opening. Insert the speaker in the wall and tighten the tabs with the screws on the front of the grille. **DO NOT OVERTIGHTEN THE SCREWS**, the screws should only be tight enough to secure the speaker.

**Step 4.** After the speaker is mounted, adjustments to the swivel tweeter (small speaker) can be made by either directing the sound visually or by using a musical source to determine the best sound coverage for the listening area. To position the tweeter, press at the outside edge of the tweeter cone area (**DO NOT PRESS ON THE CONE DIRECTLY**).

**Step 5.** Divide each adhesive bead strip in half. (Adhesive bead strips are in the clear self-closing bag). Place strips on the edge of the grill as shown in Figure 2. Reinstall the grill on the speaker.

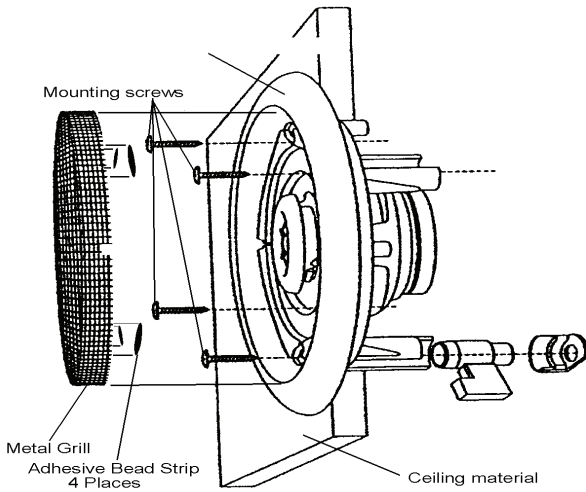
**Step 6.** Follow the instructions included with the volume control and amplifier to complete the installation.



## **SPEAKER INSTALLATION FOR EXISTING CONSTRUCTION**

For existing construction, use the same guidelines for new construction with the following precautions. It is very important to determine what is behind the wall space that you will open when installing the speakers. Check for standard stud spacing (16" on center preferred) so you will not need to cut studs and check the wiring path to the volume control and amplifier. Avoid 120V wiring and air return duct and pipe. Proper speaker spacing is also critical to a good system.

The only difference between new and existing construction is the order in which the process is done (steps 1, 2 and 3). In existing construction the speaker hole is cut, the wire is run to the volume control box, and the speaker is connected to the wiring and installed in the wall. You are ready to complete the process using steps 4, 5, and 6 for new construction.



**Figure 2**



## **SERVICE & TROUBLESHOOTING**

M&S Systems is committed to producing high quality products for the home. If you have any questions or problems with the speaker systems or the system is not operating properly, contact your M&S installer or call M&S Systems at (800) 366-9422.

## **M&S SYSTEMS Limited 2-Year No-Fault Product Warranty**

M&S SYSTEMS warrants for 2 years all products to be free of defects (M&S SYSTEMS honors the 10-Year No-Fault warranty for AirVac Gold power units). The warranty period begins from either (1) the date of "first user" purchase of this product or (2) the first close of escrow date on a residence in which this new product was originally installed. This warranty extends to the original user of the product and to each subsequent owner of the product during the term of this warranty. M&S SYSTEMS will repair or replace, at its option, parts and materials at no charge. Parts supplied under this warranty may be new or rebuilt at the option of M&S SYSTEMS.

If, during the limited warranty period, it appears as though this product contains a defect, which is covered by this limited warranty, call our toll free service number before dismantling the product (1-800-877-6631). Remember to attain a Return Authorization Number (RAN) before returning any product to M&S SYSTEMS. Send the product freight pre-paid and insured to our service center for warranty repair. You will be advised on shipping instructions when you call the toll free service number. M&S Systems will return the repaired product freight pre-paid within the U.S.A. The installing dealer or distributor may assist you, at your choice and expense, with returning product for repair. Please include a brief description of the problem and a dated proof-of-purchase receipt with any product that is returned for warranty repair. ANY PRODUCT RETURNED WITHOUT A RETURN AUTHORIZATION NUMBER WILL BE REFUSED.

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