

Rough-In Frame

MODEL IR-106

Model IR-106 Rough-In Frame is to be used with NuTone Model SR-9000 Stereo Receiver master unit. This literature also includes information regarding the accessory rough-ins for this Master Unit.

OVERVIEW OF INSTALLATION PROCEDURE

1. Determine the exact location of all components. See "Planning Guide" below. Contact the architect, builder or homeowner for the system plans.
2. Mount the rough-in frames for the master station, room volume controls, speakers, etc. Note that all components may not require rough-in frames.
3. Run appropriate wiring to all component locations, including 120vAC power wiring to the master unit rough-in frame's transformer. See "Master Unit Rough-In Frame", page 4.
4. At this point, the rough-in installation is complete. See the installation instructions packaged with the master units and other units for instructions to complete the final installation of the system.

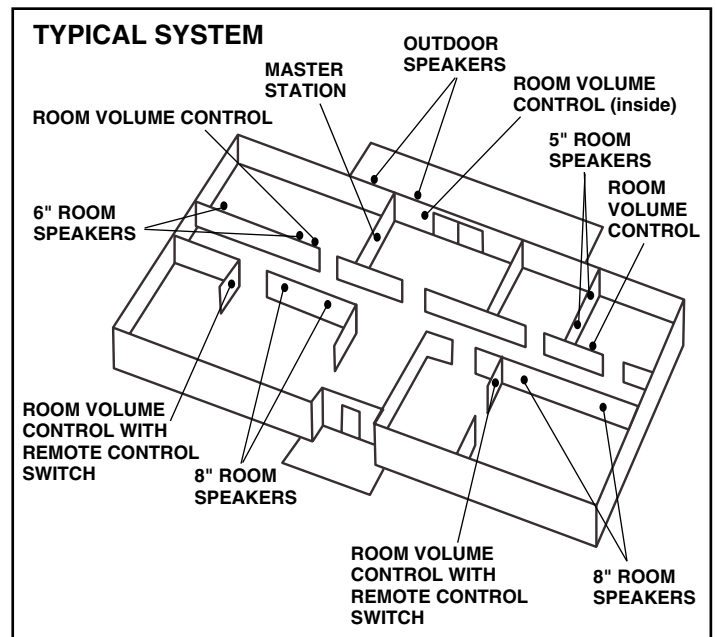
PLANNING GUIDE

To determine all the components required in the installation, layout the system plans on the building plans or on a sketch of the building.

Familiarize yourself with the available components by studying the "Typical System" and NuTone catalog.

COMPONENTS

Where will the **master station** be located? How many pairs of **speakers** are required? What size speakers? How many **room volume controls**? Where will the controls and speakers be located? How many outside speakers? Where will they be located? Will an optional chime module be used?



SYSTEM WIRING

SPEAKER SPECIFICATIONS

The SR-9000 will support (6) pairs of NuTone 25 ohm speakers. Never use 8 ohm stereo speakers or the master station and room volume controls will be damaged.

WIRING SPECIFICATIONS

The following cable must be used to connect the SR-9000 and accessories.

NuTone IW-6UL: 22 ga. three (3) twisted pair cable. UL Listed.

NuTone IW-2UL: 22 ga. twisted pair cable. UL Listed.

No. 14/2: with ground, 60 Hz power cable Class 1 UL Listed (not supplied by NuTone).

Shielded audio cable (not supplied by NuTone).

The SR-9000 Series Stereo Receiver System is designed to be used only with NuTone specified wire. No other wire should be used. The use of wire other than NuTone wire may result in faulty installation and improper operation and will void all NuTone warranties.

IMPORTANT: NuTone cannot be responsible for improper operation that results from interference generated by light dimmers, fluorescent lighting fixtures, and similar electrical products. Such interference must be corrected at the source. As an aid to help reduce this interference, all room volume controls, speaker and auxiliary input wires and cables must be placed at least 12 inches from any AC house wiring.

USE (1) NUTONE IW-6UL, 22 GA. THREE (3) TWISTED PAIR CABLE OR (3) NUTONE IW-2UL, 22 GA. TWISTED PAIR CABLE FOR CONNECTING:

- Master station to ICS-1000 room volume control with remote control switch.

NOTE: You may use either IW-2UL or IW-6UL cable for connecting the master station to the room volume control.

- Maximum number of ICS-1000 or IC-1000 room volume controls - 6.
- Maximum IW-2UL or IW-6UL cable length for total system - 600 feet.
- Maximum IW-2UL or IW-6UL cable length per room volume control - 100 feet.

MASTER STATION TO ICS-1000 ROOM VOLUME CONTROL USING IW-2UL CABLE

1. A separate IW-2UL cable (3 total) must be routed for the LEFT/RIGHT audio channels and the remote control switch. Route these cables between the master station location and the room volume control location. Leave approximately 24" of extra cable at the room volume control location and master station location for final connections. Be sure to label the cables to allow for identification after the finished wall is installed.
2. Never route cables parallel to 120/240 volt AC house wiring. Cable too close to AC house wiring may cause buzzing and humming noise. To aid in reducing these type of noises, keep all room volume control wiring a minimum of 12" from AC house wiring. If crossing AC house wiring is required, cross at a right angle to reduce exposure to noise.

MASTER STATION TO ICS-1000 ROOM VOLUME CONTROL USING IW-6UL CABLE

1. A single IW-6UL cable must be routed for the LEFT/RIGHT audio channels and the remote control switch. Route the cable between the master station location and the room volume control location. Leave approximately 24" of extra cable at the room volume control location and master station location for final connections. Be sure to label the cables to allow for identification after the finished wall is installed.
2. Never route cables parallel to 120/240 volt AC housing wiring. Cables too close to AC wiring may cause buzzing and humming noise. To aid in reducing these type of noises, keep all room volume control wiring a minimum of 12" from AC house wiring. If crossing AC house wiring is required, cross at a right angle to reduce exposure to noise.

USE (2) NUTONE IW-2UL, 22 GA. TWISTED PAIR FOR CONNECTING:

- Master station to IC-1000 room volume control.
- IC-1000 or ICS-1000 room volume control to left and right channel speakers.
- Chime module to pushbutton.

MASTER STATION TO IC-1000 ROOM VOLUME CONTROL USING IW-2UL CABLE

- Maximum number of ICS-1000 or IC-1000 room volume controls - 6.
 - Maximum IW-2UL cable length for total system - 600 feet.
 - Maximum IW-2UL cable length per room volume control - 100 feet.
1. A separate IW-2UL cable (2 total) must be routed for the LEFT/RIGHT audio channels. Route these cables between the master station location and the room volume control location. Leave approximately 24" of extra cable at the room volume control location and master station location for final connections. Be sure to label the cables to allow for identification after the finished wall is installed.
 2. Never route cables parallel to 120/240 volt AC house wiring. Cables too close to AC house wiring may cause buzzing and humming noise. To aid in reducing these type of noises, keep all room volume control wiring a minimum of 12" from AC house wiring. If crossing AC house wiring is required, cross at a right angle to reduce exposure to noise.

IC-1000 OR ICS-1000 ROOM VOLUME CONTROL TO LEFT AND RIGHT CHANNEL SPEAKERS

- Maximum IW-2UL cable length from speakers to room volume control - 50 feet.
 - Do not connect more than one pair of 25 ohm speakers per room volume control.
1. A separate IW-2UL cable (2 total) must be routed for the LEFT/RIGHT audio channels. Route these cables between the room volume control location and the left/right channels speaker locations. Leave approximately 24" of extra cable at

SYSTEM WIRING (Continued)

the room volume control location and the speaker locations for final connections. Be sure to label the cables to allow for identification after the finished wall is installed.

- Never route cables parallel to 120/240 volt AC house wiring. Cables too close to AC house wiring may cause buzzing and humming noise. To aid in reducing these type of noises, keep all room volume control wiring a minimum of 12" from AC house wiring. If crossing house wiring is required, cross at a right angle to reduce exposure to noise.

CHIME MODULE TO PUSHBUTTON

■ Maximum IW-2UL cable length from pushbutton to chime module - 300 feet.

- An individual twisted pair (IW-2UL) cable must be connected from each pushbutton location to the master station location. Leave approximately 24" of extra cable at the pushbutton location and master station location for final connections. Be sure to label the cables to allow for identification after the finished wall is installed. Never connect more than one (1) pushbutton to each of the (3) chime module door screw terminals.

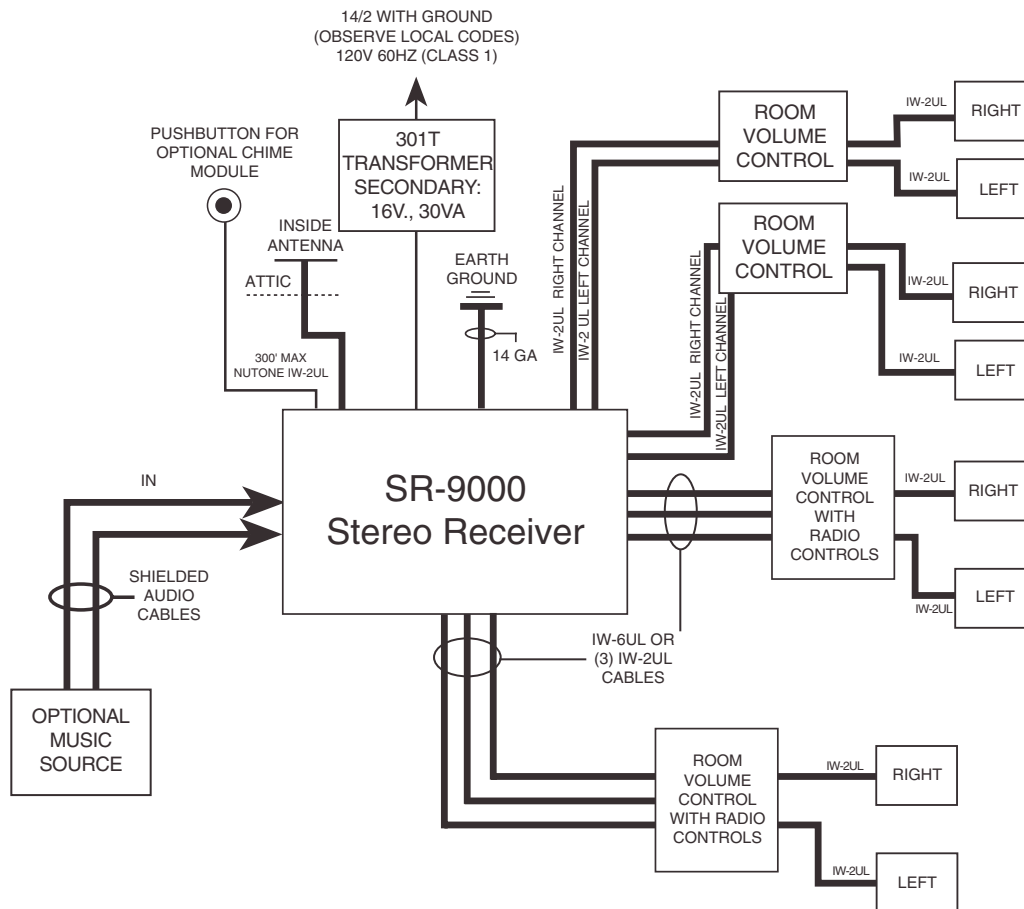
USE NO. 14/2 WITH GROUND, 60 Hz POWER CABLE CLASS 1 UL LISTED FOR CONNECTING:

- 301T transformer in rough-in to 120 volts AC power source.
 - Always observe local electrical codes when connecting 120 volts AC house wiring to the 301T transformer.
 - Be sure the rough-in is properly grounded to an earth ground source.

USE SHIELDED AUDIO CABLE FOR CONNECTING:

- External stereo audio source to master station.
 - Two shielded audio cables (not supplied by NuTone) must be connected from the external audio source (CD player, Cassette player, etc.) location to the master station location. Leave approximately 24" of extra cable at the external audio source location and master station location for final connections. Be sure to label the cables to allow for identification after the finished wall is installed.
 - Keep shielded cables as short as possible to reduce buzzing and humming noise. Never exceed 25 feet.
 - Never route cables parallel to 120/240 volt AC house wiring. Cables too close to AC house wiring will cause buzzing and humming noise. To aid in reducing these type of noises, keep shielded audio cable a minimum of 12" from AC house wiring. If crossing AC house wiring is required, cross at a right angle to reduce exposure to noise.

SR-9000 SERIES REPRESENTATIVE WIRING ILLUSTRATION



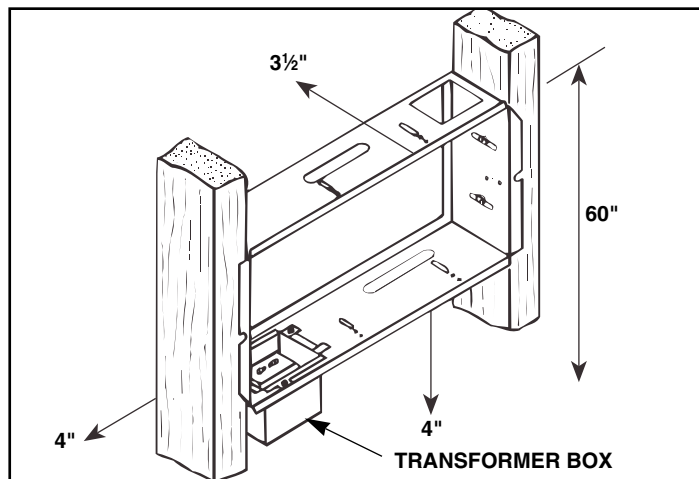
MASTER UNIT ROUGH-IN FRAME

MODEL IR-106 FRAME

Note: Do not mount frame on outside wall.

1. **REQUIREMENTS** – Mounts between 16" center-to-center wall studs, with a minimum wall depth of 3½". Allow at least 4" from edge of frame to adjacent wall or cabinet.
2. Position frame only as shown. Install square and level at a convenient operation height (about 60" above floor to top of frame is normal for some installations).
3. Using screws or nail, mount frame between wall studs, securing through mounting slots in side of frame. Slots are provided so the frame may be adjusted to fit flush against the finished wall surface.

FOR EXISTING WALL CONSTRUCTION – Make wall cutout 14½" wide by 7" high between wall studs.



TRANSFORMER INSTALLATION

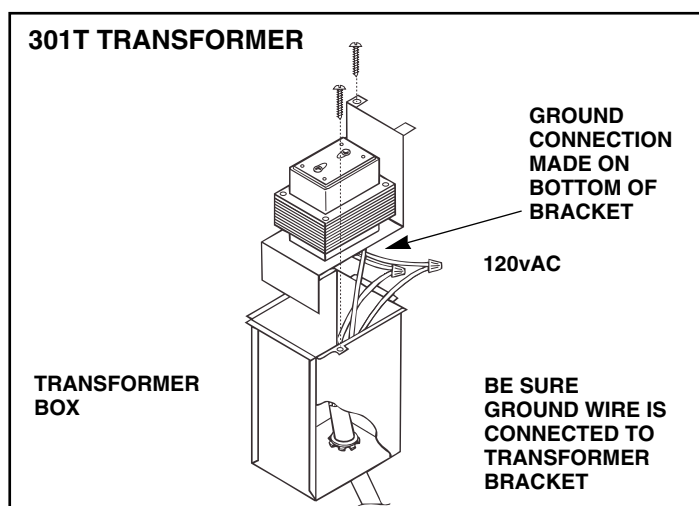
301T TRANSFORMER (packed with rough-in)

1. Place transformer box into IR-106 frame as shown in illustration.
2. Pull 120vAC house wiring through the hole in the bottom of transformer box and secure with box connector (not supplied).
3. Connect transformer primary leads to 120vAC house wiring as shown in illustration. **Be sure ground wire is connected to transformer bracket.**
4. Place transformer into the transformer box. See illustration.
5. As illustrated, secure transformer box with two screws.

AM/FM ANTENNA

Refer to page 7.

Install antenna as described in provided instructions. Leave 12" of antenna lead with pin connector for connection to master unit.



ACCESSORY ROUGH-IN FRAMES

NOTE: Refer to NuTone's catalog for model number information of the rough-in(s) that are required for mounting the components of the stereo receiver system.

Each rough-in has been illustrated in the following pages of this booklet; a brief description of the installation procedure is provided for each rough-in.

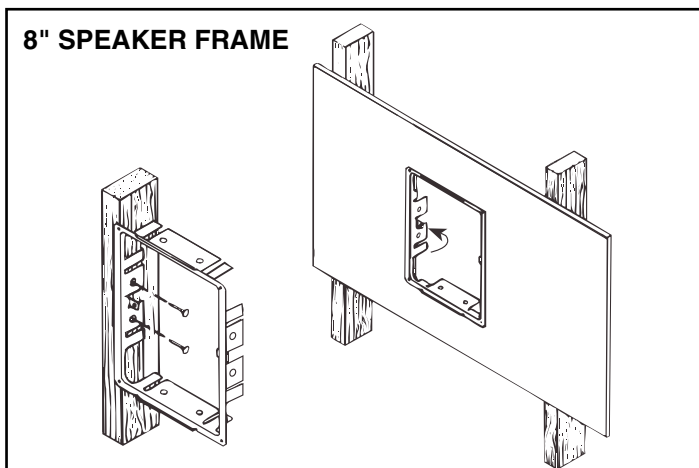
Refer to the installation instructions packaged with each rough-in for a more detailed installation procedure.

IR-80 SPEAKER FRAME (for 8" ISA-78 speakers)

1. **REQUIREMENTS** – To accommodate the speaker panel, allow a minimum clearance – on all sides of the rough-in frame – of two inches (2").
Wall depth required: 1½".

The Speaker Frame must be mounted in vertical position.

2. **NEW CONSTRUCTION** – Position frame against wall stud. Use nails or wood screws to secure frame to stud.
3. **EXISTING CONSTRUCTION** – Frame may be mounted next to a wall stud or between wall studs. Mounting tabs make mounting easy. Frame used as template for cutout. See instructions provided with frame.

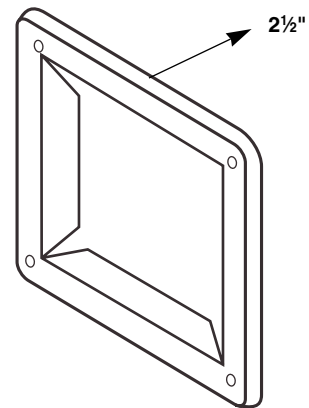


ACCESSORY ROUGH-IN FRAMES (Continued)

IR-9 SPEAKER FRAME (for 8" IS-79 speaker)

1. **REQUIREMENTS** – Make an opening in an outside wall 10 $\frac{1}{16}$ " wide by 11 $\frac{1}{16}$ " high. The frame requires a minimum wall depth of 2 $\frac{1}{2}$ ".
2. Locate frame where desired (generally, top of frame about 60" from ground). For wood construction, mount frame through slots on each side. For other construction, frame must be grouted in place.

8" OUTSIDE SPEAKER FRAME



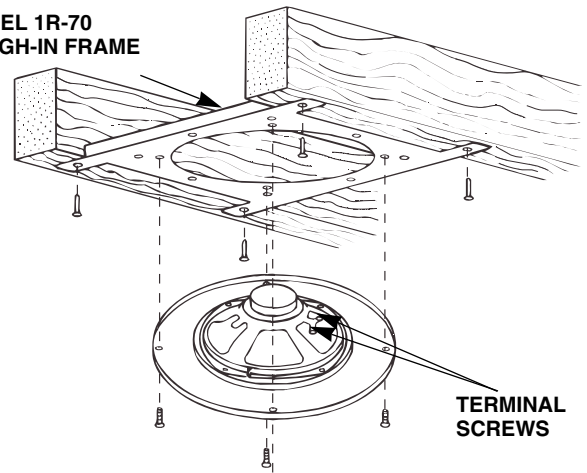
IR-70 ROUND CEILING SPEAKER FRAME (for 8" IS-76 speaker)

1. **REQUIREMENTS** – To accommodate the speaker, allow a minimum clearance of 7" radius from the center of the speaker. Wall depth requirement: 3".

NEW CONSTRUCTION - Position frame against framing members with roofing or drywall nails.

EXISTING CONSTRUCTION - Cut (4) mounting ears from frame. Using bracket as template mark and cut opening between framing members. Feed frame through opening and secure with two #10 screws.

MODEL 1R-70
ROUGH-IN FRAME

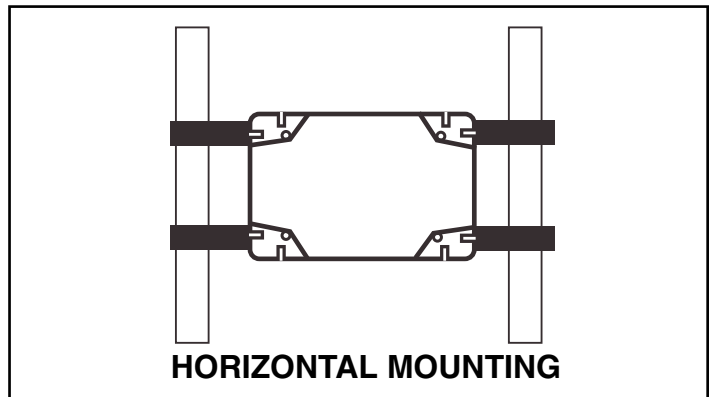
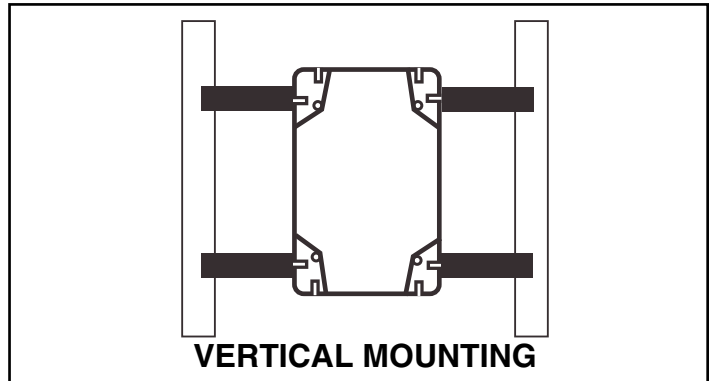


ACCESSORY ROUGH-IN FRAMES (Continued)

IR-905 SPEAKER FRAME (for IS-905 speaker) and IR-908 SPEAKER FRAME (for IS-908 speaker)

NEW CONSTRUCTION

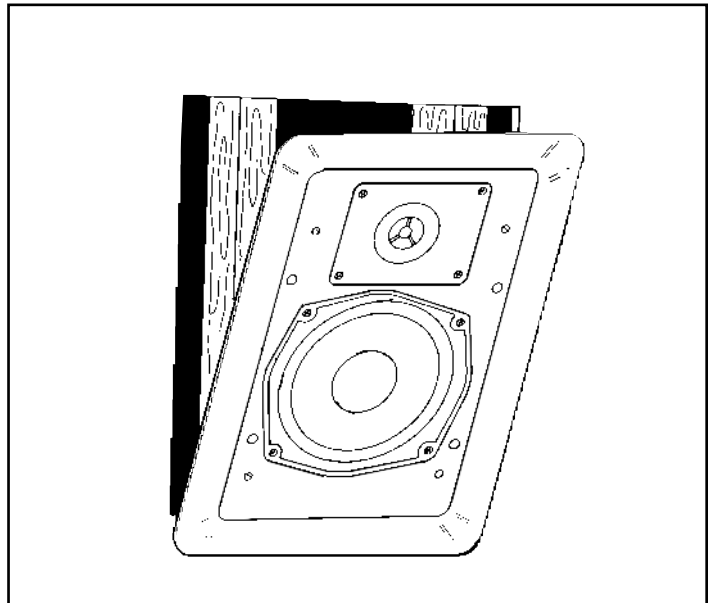
1. **REQUIREMENTS** – To accommodate the speaker panel, allow a minimum clearance on all sides of the rough-in frame of two inches (2"). Wall depth required: IS-905 - 2½", IS-908 - 3½".
2. Determine the position of your speakers in relation to the wall studs. As illustrated, the rough-in frames can be mounted vertically or horizontally.
3. Assemble the frame and attach to the wall studs using (4) 00 x ½" wood screws with flat or countersunk heads (not supplied by NuTone).



IR-906 SPEAKER FRAME (for IS-905 speaker) and IR-909 SPEAKER FRAME (for IS-908 speaker)

EXISTING CONSTRUCTION

1. **REQUIREMENTS** – To accommodate the speaker panel, allow a minimum clearance on all sides of the rough-in frame of two inches (2"). Wall depth required: IS-905 - 2½", IS-908 - 3½".
2. Determine the position of your speakers being sure to locate the speakers in the space between the wall studs. Use speaker template to outline and cut the wall board (**be sure there are no obstructions behind wall before cutting**).
3. Attach the frame to the speaker using screws supplied (do not tighten screws). Connect speakers wires (observe polarity).
4. Install bottom of speaker so frame is located behind wall board. Next, position the speaker so it is centered in the wall cutout. Level and tighten screws. Install speaker grille.



INSTALLING THE AM/FM ANTENNA

The folded dipole antenna has a 20' lead which may be increased by attaching standard 300 ohm twin lead (T.V. antenna wire) and should be installed by one of the following methods.

INSTALLATION METHODS

DIMENSIONS

Antenna Span: 60 inches.
Lead Length: 20 feet.

STAPLING

Refer to Figure 1.

Use staples to attach twin lead wire to rafters or joists. Insert the staple lengthwise in the plastic between the wires. **Do not staple across the wires.**

NAILING

Refer to Figure 2.

Nails may also be used to attach the twin lead wire to rafters or joists. Place nails in the plastic between the two wires. **Do not nail over or through a wire. Do not wrap the twin-lead wire around a nail.**

Refer to Figure 3.

Nails may be used to attach the plastic center block and the two plastic end caps. Use nail holes provided in these pieces.

ATTIC RAFTER INSTALLATION

1. Refer to Figure 4. Staple antenna to attic rafters horizontally.
2. Refer to Figure 5. Nail a 5 foot piece of scrap board horizontally between rafters to provide a clear span of 60". Nail the center block to the center of the board. Staple antenna leads to board.

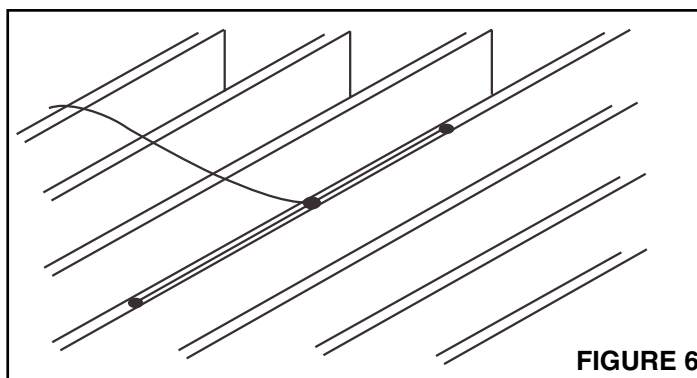
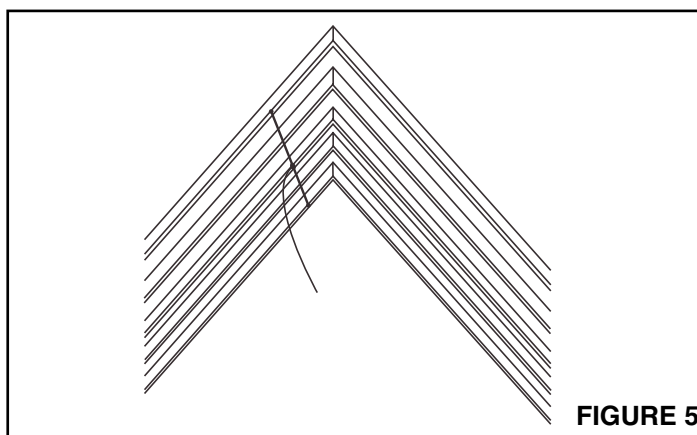
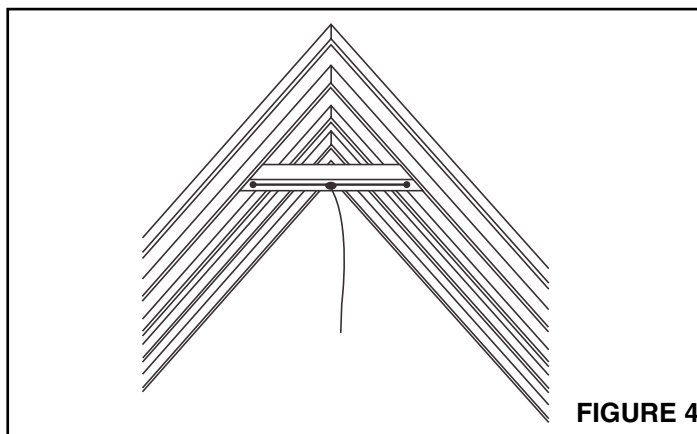
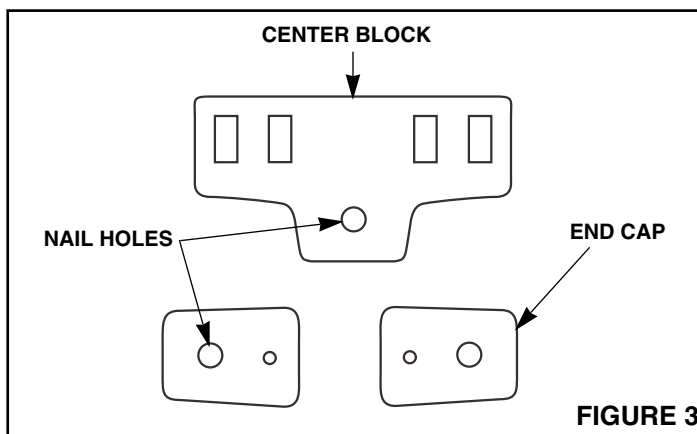
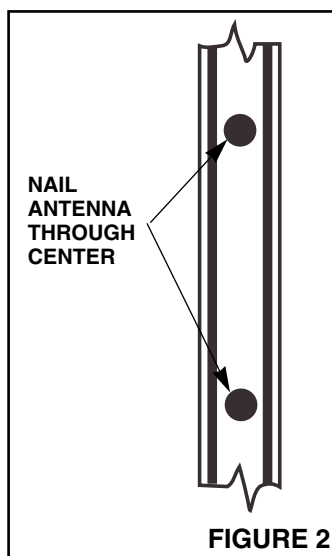
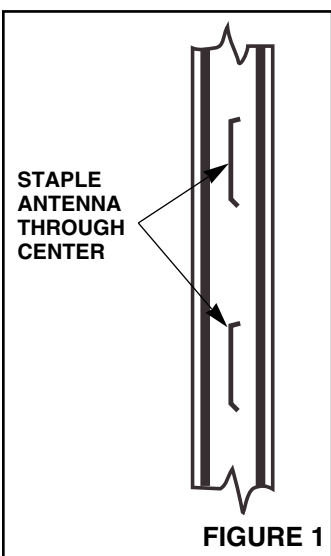
CEILING JOIST INSTALLATION

Refer to Figure 6.

When attic space is limited, staple antenna to ceiling joists.

TWIN-LEAD CONNECTION

1. Run the 20 foot twin lead to the master unit.
2. Plug the antenna's connector into the two pins on the master unit's tuner board as specified in the master unit's installation instructions.



NuTone®

Two Year Limited Warranty

WARRANTY OWNER: NuTone warrants to the original consumer purchaser of its products that such products will be free from defects in materials or workmanship for a period of two (2) years from the date of original purchase. **THERE ARE NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**

During this two year period, NuTone will, at its option, repair or replace, without charge, any product or part which is found to be defective under normal use and service. **THIS WARRANTY DOES NOT EXTEND TO FLUORESCENT LAMP STARTERS OR TUBES, FILTERS, DUCT, ROOF CAPS, WALL CAPS AND OTHER ACCESSORIES FOR DUCTING.** This warranty does not cover (a) normal maintenance and service or (b) any products or parts which have been subject to misuse, negligence, accident, improper maintenance or repair (other than by NuTone), faulty installation or installation contrary to recommended installation instructions.

The duration of any implied warranty is limited to the one year period as specified for the express warranty. Some states do not allow limitation on how long an implied warranty lasts, so the above limitation may not apply to you.

NUTONE'S OBLIGATION TO REPAIR OR REPLACE, AT NUTONE'S OPTION, SHALL BE THE PURCHASER'S SOLE AND EXCLUSIVE REMEDY UNDER THIS WARRANTY. NUTONE SHALL NOT BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES ARISING OUT OF OR IN CONNECTION WITH PRODUCT USE OR PERFORMANCE. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state. This warranty supersedes all prior warranties.

WARRANTY SERVICE: To qualify for warranty service, you must (a) notify NuTone at the address stated below or telephone 1/800-543-8687, (b) give the model number and part identification and (c) describe the nature of any defect in the product or part. At the time of requesting warranty service, you must present evidence of the original purchase date.

Date of Installation

Builder or Installer

Model No. and Product Description

IF YOU NEED ASSISTANCE OR SERVICE:

For the location of your nearest NuTone Independent Authorized Service Center:

Residents of the contiguous United States Dial Free 1-800-543-8687

Please be prepared to provide:

Product model number • Date and Proof of purchase • The nature of the difficulty

Residents of Alaska or Hawaii should write to: NuTone Inc. Attn: Department of National Field Service, 4820 Red Bank Road, Cincinnati Ohio 45227-1599.

Residents of Canada should write to: Broan-NuTone Canada, 1140 Tristar Drive, Mississauga, Ontario, Canada L5T 1H9.

Rev. 03/2001