



**NuTone**

**Solid-State  
Radio-Intercom  
System**

**Model IMA-303**

**Home Owner's  
Operating  
Manual**

**INSTALLER**

• Do not discard!

• Hang this booklet on the Radio-Intercom Master Station.

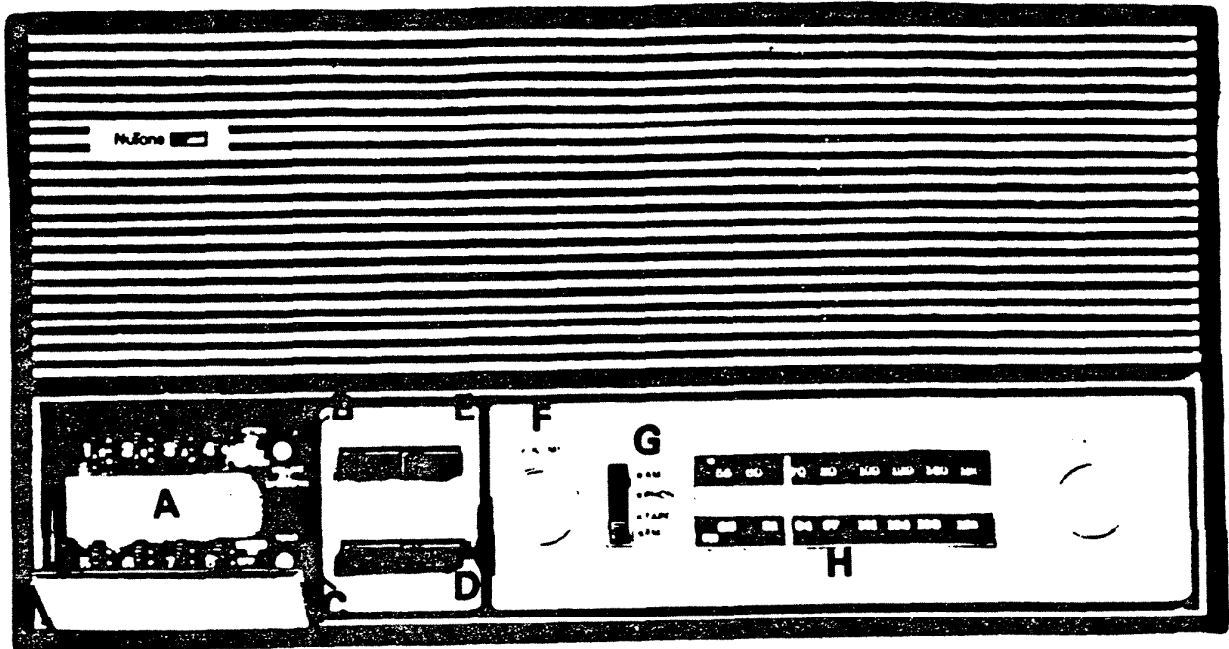
**Important Facts!**

**Read This First!**

Before you operate the system, understand these 4 concepts. (1) The VOLUME ALL SPEAKERS control (page 5, ref. B) should be set just high enough to give adequate volume to all speakers, which have their volume controls set in NORMAL RANGE (page 6, paragraph 7). (2) The Remote Station Control Switches (page 5, ref. A) control the function of each remote speaker station; if a speaker is not working, check to be sure its function control switch is set properly. (3) If the radio or intercom is not working, first check to be sure the on/off switch (page 5, ref. F) is on. (4) The optional speaker/clock timer (page 10) will shut off the system when it is in either "wake" mode; if the radio is on but not heard, check the optional speaker/clock timer to be sure it is in the RADIO ON position. This NuTone Radio-Intercom System is engineered with solid-state circuitry from components that have a history of proven quality. However, to enjoy the designed convenience and service from the system, you must operate it properly. Take a few minutes now to familiarize yourself with the correct operating procedures for the system.

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## Description Of Controls On Master

- (A) **Remote Station Control Switches**  
Control the operation of Inside and Patio Speakers individually with these eight switches.
- (B) **Volume/All Speakers**  
Use this control to set the volume level for the entire system. Generally, this control does not have to be set above 1/3 of its rotation.
- (C) **Tone Control**  
You can vary the range of Radio sound from bass to treble to please your ear.
- (D) **Door Talk/Listen Switches**  
Lets you answer your door without opening it. A great security feature you'll certainly appreciate.
- (E) **Inside and Patio Talk/Listen Switches**  
Communicate within and without your home with these convenient switches.
- (F) **Volume (Master Speaker)**  
Use this knob to turn the system ON and OFF... and to control the volume of the Master's Speaker.
- (G) **Function Selector Switch**  
Choose AM or FM Radio, Phono to play optional Record Changer, or Tape to play optional 8-Track Tape Player.
- (H) **Tuning Dial Indicator**  
The illuminated Slide Rule Dial points out your station clearly. The upper scale is for AM; the bottom scale is for FM.
- (I) **Tuning Knob**  
Tune in your favorite AM or FM Radio stations with ease.

5.

## Setting Volumes For Remote Speaker Stations



1. Go to each remote station and turn the volume control to maximum volume.
  2. Return to the Master Station and set the 8 Remote Station Control Switches to the RADIO/INTERCOM position. These switches are located behind the door at the lower left corner of Master Station.
  3. Turn the VOLUME ALL SPEAKERS control to about 1/3 of its rotation. This control is also located behind the door at lower left corner.
  4. Turn the Master Station's volume control on and to maximum volume. This is also the on/off switch for the entire system.
  5. Set the Function Selector Switch in AM or FM and tune in a radio station of reasonable strength and quality.
  6. Increase or decrease the VOLUME ALL SPEAKERS control so there is sufficient volume at the remote speaker station that requires the highest volume (such as a large living room or family room). Generally, the VOLUME ALL SPEAKERS control does not have to be set above 1/3 of its rotation.
  7. Adjust all other remote speaker stations' volume control as necessary; do not have the control below the "NORMAL RANGE" setting.
  8. Adjust the Tone control as desired.
- IMPORTANT:** If the volume controls on the remote speaker stations are turned too low and the VOLUME ALL SPEAKERS control on the master station is turned too high, distortion may result. For best results, keep the speaker's volume control within the NORMAL RANGE settings and turn down the VOLUME ALL SPEAKERS control if necessary.

6.

# **Setting Functions For Remote Speaker Stations**

There are 8 Remote Station Control Switches which set the operating mode for the system's speakers. These switches are located behind the door at the lower left corner of the master station. The 3 available operating modes are: radio/intercom, off, and listen-in.

**RADIO/INTERCOM** – Speakers set for this mode will receive all programs (radio, intercom, and any NuTone optional sources wired in the system, such as a NuTone record changer or electronic door chime).

**OFF** – All programs (radio, intercom, options, etc.) are shut off to speakers set in this mode, however, intercom calls can be made from a speaker set in the OFF mode.

Remember, intercom calls cannot be received at a speaker set in the OFF mode.

**LISTEN-IN** – Speakers set for this mode will transmit most sounds that originate at the speaker location over the system's speakers. The purpose for this mode is to monitor specific locations, such as a child's room or patio at night.

**NOTE, MASTER STATION SPEAKER:** The master station speaker is permanently set for the radio/intercom mode.

7.

## **How To Make Intercom Calls**

**IMPORTANT:** The speaker volume control and the VOLUME ALL SPEAKERS control on the master should be set according to the instructions on page 6.

**TO TALK** – press the TALK button and speak with a normal voice into the speaker. Your voice will be heard at all speakers set in the radio/intercom mode.

**TO HEAR REPLY** – the person called answers by pressing the TALK button on his speaker.

**NOTE:** When you press the TALK button, the radio (or other program source) will be automatically muted so the intercom call will be heard.

**NOTE, MASTER STATION CONTROLS:** The master station has a LISTEN button for the inside/patio speakers, which allows you to talk and listen without the other person using any controls.

## **How To Answer The Door**

To converse with someone at the door, use the TALK and LISTEN buttons for the door speaker. The person at the door has no intercom controls to use; you control the conversation from inside your house.

8.

# How To Listen-In To Specific Locations (Monitoring)

The listen-in feature of this system has several useful applications. Wherever you need to monitor someone or something... keep an ear on the baby's room, listen-in on a bed-ridden person, or monitor the patio area at night.

The speakers set for the listen-in mode will transmit most sounds that originate at the speaker location to all other speakers that are in the radio/intercom mode. The sounds will be transmitted at a higher volume level than that of the radio if it is playing.

1. Be sure to set the volume controls as instructed on page 6.
2. Set the appropriate Remote Station Control Switch (located on master station) as follows:

The area to be monitored should have the nearby speaker set in the LISTEN-IN mode.

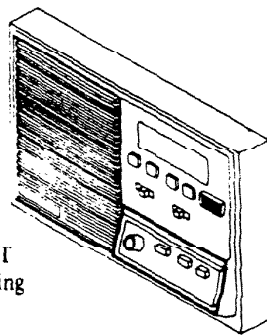
The areas where you wish to hear the monitored sounds should have the nearby speakers set in the RADIO/INTERCOM mode.

**HINT:** If you do not wish the radio to play while monitoring an area, simply place the Function Selector Switch (on master station) in PHONO and do not turn on the accessory.

9.

## Optional Accessories

**SPEAKER/CLOCK TIMER** – The NuTone speaker/clock timer is a combination intercom speaker and alarm clock. The Speaker controls work the same as the standard intercom speaker. The clock controls work as follows:



**SET-LOCK** – used to control the FAST and SLOW buttons (“set” – for changing time, “lock” – to inactivate the FAST and SLOW buttons).

**FAST and SLOW** – used to set the time display.

**ALARM** – to set alarm time, used in conjunction with the FAST and SLOW buttons.

**SLEEP** – to set the “pre-sleep” radio time (time before radio silences for the night, used in conjunction with the FAST and SLOW buttons).

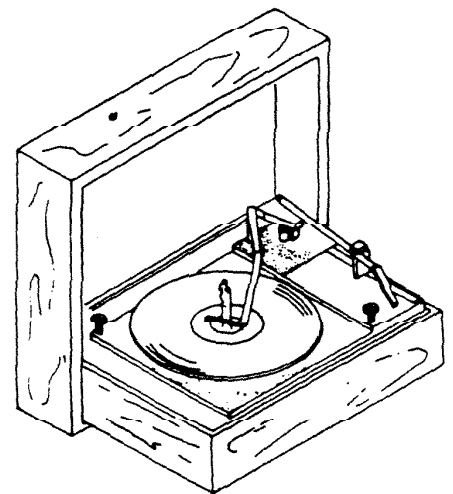
**DOZE** – doze time after alarm, 9 minutes.

**CONTROL SWITCH** – “RADIO ON” position for normal radio/intercom operation. “WAKE TO ALARM” or “WAKE TO MUSIC” shuts off radio for entire system until wake up time.

**IMPORTANT:** Keep Control Switch in RADIO ON position at all times, except when setting alarm in either “wake” mode which shuts off the radio for the entire system.

**NOTE:** An Owner's Manual is supplied with the unit.

### RECORD CHANGER



NuTone's built-in record changer tilts down for playing and tilts back into the wall when not in use.

Place no more than 6 records on changer. For automatic play, place control arm onto records over spindle. Adjust speed and size switches. Turn the control switch to AUTO and release. Play of records will be automatic. Changer will stop after playing last record.

**NOTE:** An Owner's Manual is supplied with the unit.

## Optional Accessories - *Co. (nued*

### 8-TRACK TAPE PLAYER

NuTone's built-in 8-track tape player tilts down for playing and tilts back into the wall when not in use.

Insert tape cartridge into slot; tape player will turn on automatically when tape is inserted. Press Program Selector button to change tape program. Remove tape to turn off player.

**NOTE:** An owner's manual is supplied with the unit.

### ELECTRONIC CHIME

A NuTone Electronic Door Chime can be wired to the master station to sound the door chime through the intercom speakers.

If the radio is playing when the door chime is activated, the chime should be heard clearly over the radio. If not, the chime volume control (on chime baseplate) should be adjusted.

### SECURITY SYSTEM

A NuTone Security System can be wired to the radio/intercom system so the alarm can be heard through the intercom speakers.

### UNINTERRUPTED RADIO

Your intercom radio (or optional music accessories) can be channelled through an auxiliary amplifier to provide uninterrupted radio (no intercom) to separate speakers. Designed to provide radio (or music) to areas where intercom is not needed.

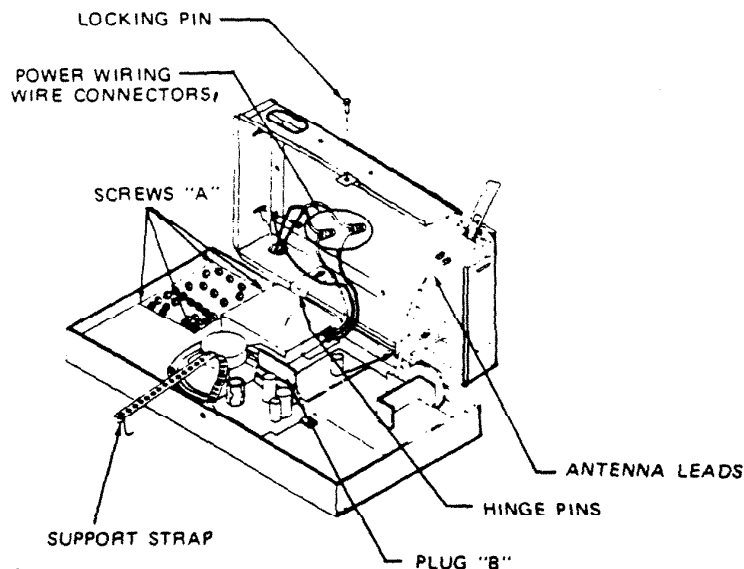
### NUTONE SALES OUTLETS

See your local NuTone Sales Outlet for these optional accessories. For the name of your nearest NuTone Sales Outlet, call toll free 1-800-543-8687 (in Ohio, 1-800-582-2030), or write to: NuTone, Scovill Inc. - Madison and Red Bank Roads, Cincinnati, Ohio 45227. Attention: Department of Consumer Relations.

11.

## How To Remove Master Station For Service

Your NuTone Master Station has been designed for easy removal should service be required. To remove Master Station, follow the procedure outlined below.



12.

1. Turn VOLUME (Master Station) control knob fully counterclockwise to turn power off. Shut off house current to Master.
2. Remove Locking Pin from top center of Master Unit panel to release the unit from its housing. The Master Unit will drop forward.
3. Disconnect power wiring by removing wire connectors. Replace wire connectors over wires coming from wall.
4. Disconnect antenna leads from antenna terminal strip in upper right corner of housing. Remove ground wire from underneath hinge assembly.
5. Remove 4 screws "A" from each corner of terminal board on Master.
6. Unplug terminal board assembly by removing plug "B".
7. With Master Unit open, and perpendicular to wall, grasp it firmly and lift straight up to remove the unit from the hinge pins. Unhook nylon support strap from top of housing. Be sure to connect the support strap when reinstalling Master Unit.

# How to Adjust Radio Volume for Listen-In Operation

Whenever the radio tends to overpower transmissions from a remote speaker in the listen-in mode, follow these instructions to get the proper balance between them.

1. Set system volume control to mid-rotation.
2. Set master to tape or phono position.
3. Turn volume control for each remote speaker and speaker in master station to the middle of the normal range.
4. Set master to AM or FM and tune to a strong AM or FM station.
5. Adjust system volume control for a desired listening level.

13.

## Special Instructions For Converted Systems

The IMA-303 Master may have been used to replace an early intercom Master. If you have a converted system — one that used the IMA-303 Master (shown on page 4) and Door Speakers like those shown in Figures 1–7, your system will operate in the same manner as the system described in this booklet, with the following exception:

The DOOR SPEAKERS "TALK" and "LISTEN" buttons on the Master Station are not functional.

### DOOR SPEAKER OPERATION

Determine which of the Remote Station Control Switches (located behind the door panel on the left of Master) controls the Door Speaker (usually Switch number 1). Place the Switch that controls the Door Speaker in the RADIO/INTERCOM position — in order to speak to the Door Speaker, the Door Speaker must be set on RADIO/INTERCOM.

### TO ANSWER DOOR FROM MASTER

1. TO TALK — push INSIDE/PATIO SPEAKERS "TALK" button in and hold in while speaking.
2. TO LISTEN — push INSIDE/PATIO SPEAKERS "LISTEN" button in and hold in to receive your answer.

### TO ANSWER DOOR FROM REMOTE STATIONS

1. TO TALK — operate the "TALK" switch on the Remote Station.
2. TO LISTEN — release the "TALK" switch on the Remote Station; the person at the Door Speaker may reply by operating the "TALK" switch on the Door Speaker.

**NOTE:** If your Door Speaker resembles Figure 7 (Door Speaker has no switches), conversations to the Door Speaker can only be carried out from the Master Station.

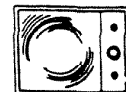


FIG. 1

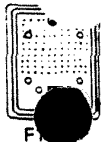


FIG. 2

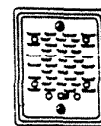


FIG. 3

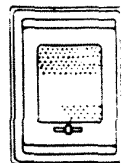


FIG. 4

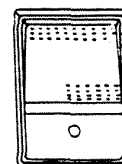


FIG. 5

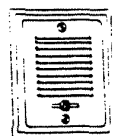


FIG. 6

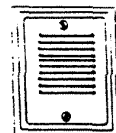


FIG. 7

14.

## Limited Warranty

NuTone products are warranted to be free from defects in material and workmanship for the "Warranty Period" which is (a) five years from date of original manufacture in the case of Motors employed in all NuTone Paddle Fans; and (b) twelve months from date of original installation in the case of all other NuTone products. Light bulbs, dial lights, record changer needles, batteries (with the exception of those specifically designated as rechargeable) and other consumable items, are not warranted or guaranteed in any manner for any length of time.

Our warranty does not cover damage or failure caused by Acts of God, abuse, misuse, abnormal usage, faulty installation, improper maintenance or any repairs other than those provided by a NuTone Authorized Service Center. There are no obligations or liabilities on the part of NuTone or Scovill Inc., for consequential damages arising out of or in connection with use or performance of the product or other indirect damages with respect to loss of property, revenues or profit, or costs of removal, installation or reinstallation. All implied warranties with respect to NuTone products, including implied warranties for merchantability and implied warranties for fitness, are limited in duration to (a) five (5) years from date of original manufacture in the case of Motors employed in all NuTone Paddle Fans; and (b) twelve (12) months from date of original installation in the case of all other NuTone products.

Some states do not allow the exclusion or limitation of incidental or consequential damages and some states do not allow limitations on how long an implied warranty lasts, so the above exclusions or limitations may not apply to you.

During the "Warranty Period", NuTone will repair or replace, at NuTone's sole option, free of charge, any defective parts returned prepaid to our closest NuTone Authorized Service Center, provided, however, NuTone will not be responsible for and will not pay for any costs or expenses relative to the removal or reinstallation of any product or any part of any product after the first 12 months of the "Warranty Period" have expired. Please provide the model number of the product, original date of installation and nature of difficulty being experienced. There will be charges rendered for product repairs made after our "Warranty Period" (as defined above) has expired. This warranty gives you specific legal rights and you may have other rights which vary from state to state.

For the name of your nearest NuTone Authorized Service Center, residents of the contiguous United States should call, Toll Free, 800-543-8687

Residents of Alaska, Hawaii and other locations outside the contiguous United States should write to NuTone Division, Scovill Inc., Madison and Red Bank Roads, Cincinnati, Ohio 45227 - Attention: Department of Consumer Relations. PR-2899 - Rev. 9/11/81

15.

## Troubleshooting Guide - - Read this before calling the Service Center.

TROUBLE	POSSIBLE REMEDY
1. System not working.	1. Be sure the on/off control on the master station is on. If the radio dial lights are not on, the master is probably not receiving household current. Check house fuse or circuit breaker.
2. No radio. Intercom working.	2. Optional speaker/clock timer may be in either "wake" mode. Be sure the optional speaker/clock timer is in the RADIO ON mode.
3. Low or distorted radio volume.	3. Volume controls may not be set properly. See page 6.
4. Low or no intercom volume from a radio speaker set in the listen-in mode.	4. Follow "SETTING VOLUME" instructions under "Operational Checkout" in installation instructions.
5. Speaker squealing.	5. The VOLUME ALL SPEAKERS control may be set too high; reduce this setting (see page 6). If two speakers are located too close to one another, this may cause the noise; reduce the volume of one or both of the speakers.
6. Poor FM radio reception.	6. Be sure the master's antenna is connected to the in-house antenna. See page 12 for location of this connection.

**NuTone**

Product specifications subject to change without notice.

**Housing Group Scovill**

Madison and Red Bank Rds., Cincinnati, Ohio 45227

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Part No. 48733



INSTRUCTION UPDATE

# To Homeowner's Operating Manuals For Radio-Intercom Systems

MODELS IMA-303, IMD-313, IMA-323, IMA-406 and SM-428

The **Level Set Control** mentioned and illustrated in the enclosed operating manual is no longer used in this model.

Instead, follow the instructions (right) whenever the radio tends to overpower transmissions from a remote speaker in the listen-in mode. These instructions will help you get the proper balance between the radio and the listen-in speaker.

1. Set system volume control to mid-rotation.
2. Set master to tape or phono position.
3. Turn volume control for each remote speaker and speaker in master station to the middle of the **normal** range.
4. Set master to AM or FM and tune to a strong AM or FM station.
5. Adjust **system** volume control for a desired listening level.

These instructions also apply to item 4 of the troubleshooting guide on the last page of the operating manual (except IMA-406).

For your convenience, you may wish to tape or staple this sheet in your operating manual over the page titled "**How to Adjust Radio Volume For Listen-In Operation**" (page 16 in the IMA-406 operating manual).

**NuTone** Housing Products

**Scovill**

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