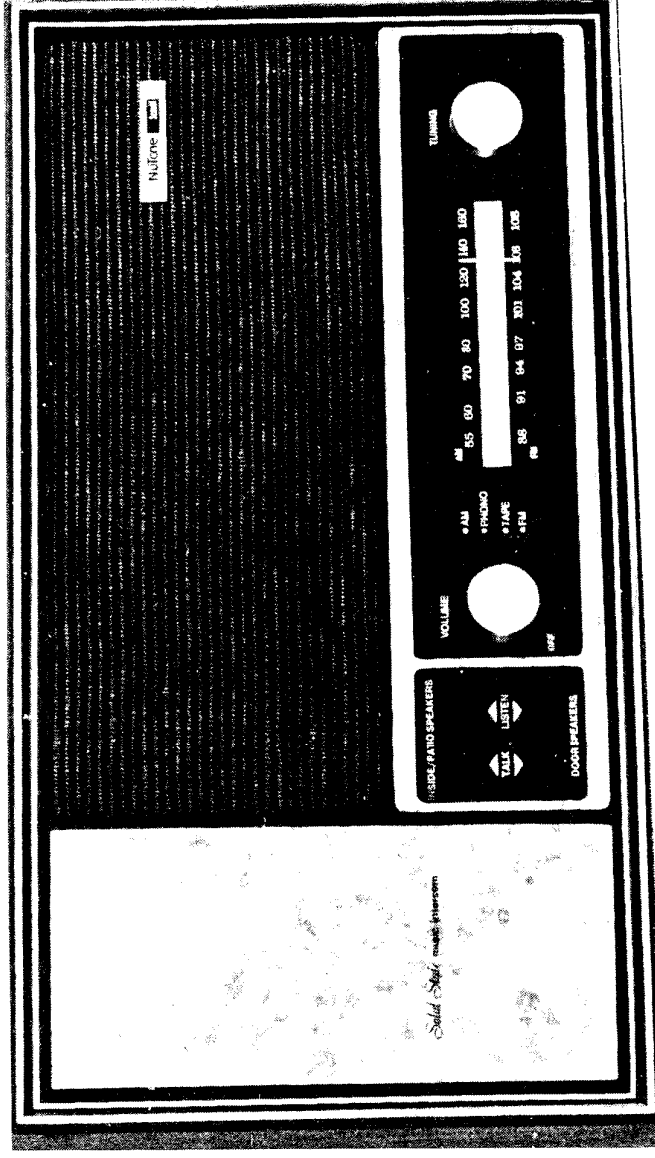


NuTone

SOLID-STATE RADIO INTERCOM SYSTEM

MODEL IMA-406

Home Owner's Operating Manual



IMPORTANT INFORMATION:

Hang this booklet on front of the NuTone Radio Intercom. It contains information necessary for proper operation of this system!

YOUR FUTURE WITH NuTone



What can you expect from our NuTone Radio Intercom System?

The IMA-406 is NuTone's best Radio Intercom System . . . with extra power and convenience features for the utmost in performance. So you can expect a sound future of exceptional quality with NuTone!

Expect the convenience of having a centrally controlled system to allow you to set whatever intercom functions you wish for each Remote Station . . . from the Master. To suit the needs of your family — choose either "Radio/Intercom," "Listen-in," "Off," or "Intercom only."

And for more convenience — only the person who originates the call has to operate the controls during Intercom conversations . . . so whoever makes a call, works the controls and persons answer "hands free." Even callers at your front door can have Intercom conversations without operating any controls.

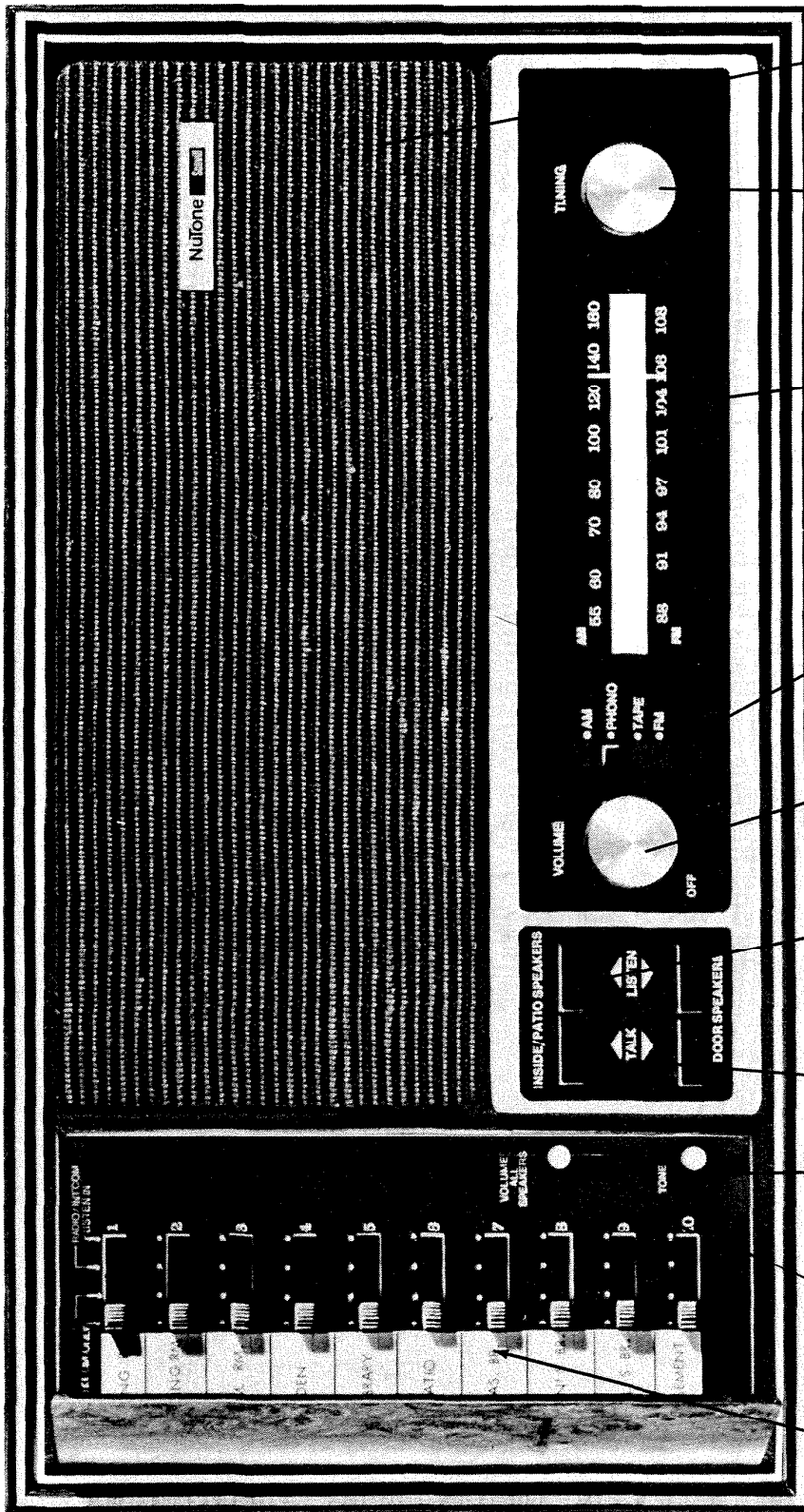
You can expect pleasure from an AM/FM Radio that has advanced solid-state design with features like . . . automatic squelch to eliminate interstation noise . . . a field effect transistor to reduce multiple reception . . . an illuminated slide-rule station indicator . . . and an omni-directional AM/FM antenna.

For the security of your family, you'll be able to listen-in to different stations and know first hand what is occurring throughout your home . . . even at night, while you sleep, your Intercom System can keep an "ear" on things and notify you of any disturbing noises inside or outside your home.

Just take a few minutes now to follow the easy to understand step-by-step instructions and learn how to make this precision instrument work for you and benefit your household. Then sit back and be assured years of sound pleasure from the finest Radio-Intercom anywhere.

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- REMOTE STATION CONTROL SWITCHES
- VOLUME/ALL SPEAKERS
- DOOR TALK/LISTEN SWITCHES
- INSIDE AND PATIO TALK/LISTEN SWITCHES
- FUNCTION SELECTOR SWITCH
- TUNING DIAL INDICATOR
- MASTER STATION SPEAKER
- TUNING KNOB
- VOLUME/THIS SPEAKER
- TOUR CONTROL

DESCRIPTION OF CONTROLS ON MASTER

CONCEALED CONTROL: The concealed controls help make your operation of the system simpler and provide a clear, uncluttered control panel area.

Remote Station Control Switches

Control the operation of Inside and Patio Speakers individually with these ten switches.

Volume/All Speakers

Use this control to set the volume level for the entire system.

Tone Control

You can vary the range of Radio sound from bass to treble to please your ear.

PANEL CONTROLS: The panel controls are handsomely designed to accent the finish of your Master Station.

Door Talk/Listen Switches

Lets you answer your door without opening it. A great security feature you'll certainly appreciate.

Inside and Patio Talk/Listen Switches

Communicate throughout your home with these convenient switches.

Volume/This Speaker

You use this knob to turn the system ON and OFF. . . and to control the volume level of the Master Station Speaker. Turn to "Normal Range" setting.

Function Selector Switch

Choose AM or FM Radio, Phono, or Tape with this switch . . . a selection to please all of your family.

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.

Tuning Knob

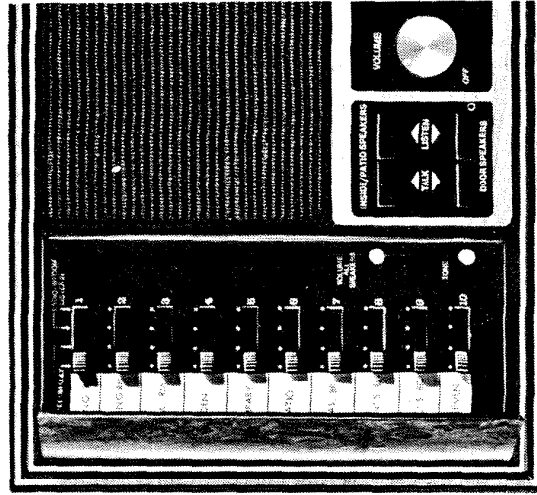
Tune-in your favorite AM or FM Radio stations with ease

ENTIRE SYSTEM

SETTING THE VOLUME OF THE ENTIRE SYSTEM

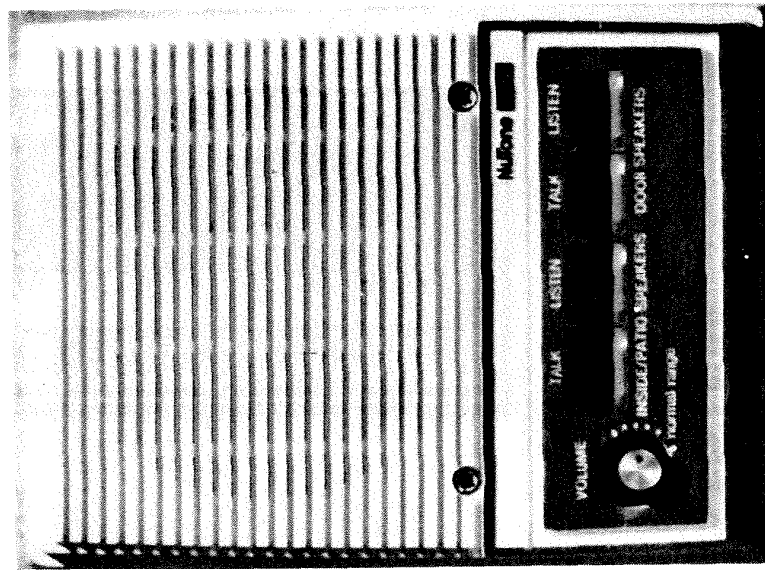
1. Go to each Remote Station and turn the VOLUME control to the complete clockwise position (maximum volume).
2. Return to the Master Station. Open the panel on the left of the Master and be sure the VOLUME/ALL SPEAKERS control is turned completely counterclockwise (minimum volume).
3. Turn ON the system (VOLUME control on the Master). Rotate this control to the complete clockwise position (Maximum volume).
4. Set the 10 slide switches (behind door panel on left of Master) to RADIO/INTERCOM.
5. Turn the VOLUME/ALL SPEAKERS control (behind door panel) approximately 1/3 clockwise, then tune in your favorite radio station.
6. Now, adjust the VOLUME/ALL SPEAKERS control until you have enough volume at the Remote Station requiring the highest volume (such as a large living room or family room).
7. Go to each Remote Station and adjust the VOLUME control for the desired sound level.
8. Finally, adjust the TONE control (behind door panel on Master) to please yourself.

CAUTION: If the VOLUME controls on the Remote Stations are turned too low and the VOLUME/ALL SPEAKERS control on the Master Station is turned too high, distortion may result. Best Intercom operation is obtained with each Station's VOLUME control set in the "Normal Range."



Master

ENTIRE SYSTEM



Remote Station

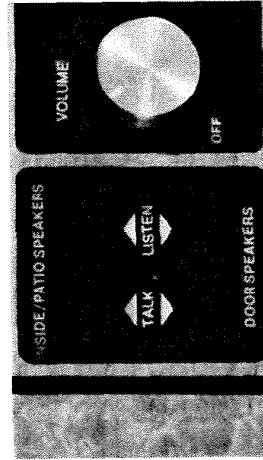
INDIVIDUAL STATION VOLUME CONTROL

The Master Station Speaker and all Inside and Patio Speakers (the Door Speaker excluded) have their own volume control with an OFF setting for Privacy.

1. Master Station – Turn the knob on your Master Station marked **VOLUME** counterclockwise to make sounds softer and clockwise to make sounds louder. Set the knob just before the **OFF** position and have **Privacy** at your Master Station. But remember, if you turn the control knob **OFF**, you will shut off the entire system.
2. Inside and Patio Stations – Turn the **VOLUME** control knob counterclockwise to make it softer and clockwise to make it louder. Maximum counterclockwise setting will turn the Speaker **OFF** for Privacy.

NOTE:

No individual Station **VOLUME** control can increase the volume level greater than that set by the **VOLUME/ALL SPEAKERS** control knob on the Master Station.



Master

ENTIRE SYSTEM

SETTING REMOTE STATIONS FOR INTERCOM FUNCTIONS

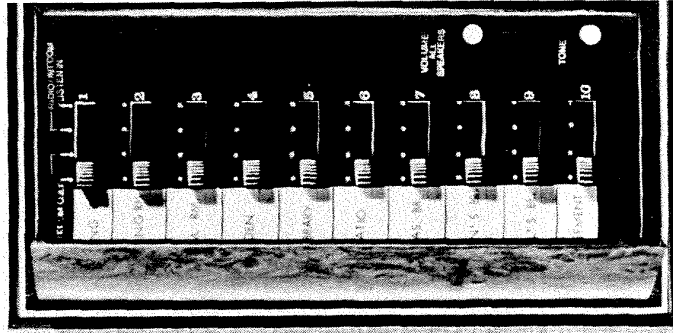
Your Master Station has ten 4-position Station Control Switches for control of your Remote Stations. They are located behind the burlled panel on the left of your Master Station. With these controls, you can set your Stations for ... **INTERCOM ONLY** ... **OFF** ... **RADIO/INTERCOM** ... or **LISTEN-IN**.

INTERCOM ONLY — You can shut off the Radio to any Station selected, but still allow those to receive and answer Intercom calls as well as make calls to other Stations.

OFF — With this setting, you can turn off any Station selected and it will not receive Intercom calls or Radio programs. You may, however, make calls from Stations set in the OFF position and receive answers by pressing the **INSIDE/PATIO SPEAKERS "LISTEN"** button.

RADIO/INTERCOM — To Stations selected, this setting transmits Radio, Intercom, and optional accessories such as Phonograph or 8-Track Tape, and Electronic Door Chime signal.

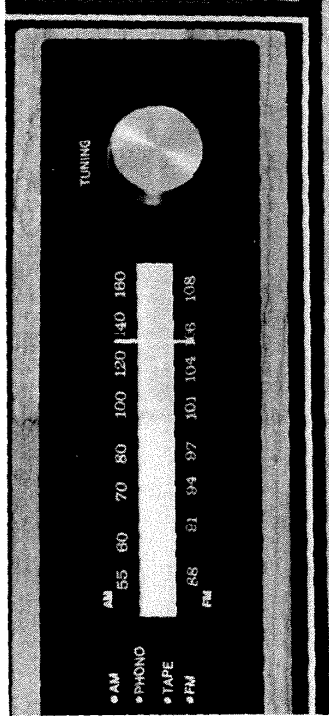
LISTEN-IN — To keep an "ear" on the children, or a sick member of your family ... just set the Station nearest them to the **LISTEN-IN** position. The Station will then relay sounds to all pre-selected Stations set at **RADIO/INTERCOM**.



Master

RADIO

TUNING IN



Master

1. First, turn the control knob on the Master Station marked VOLUME "ON."
2. Switch your Function Selector switch to AM or FM.
3. Next, select the station you want. The illuminated Slide Rule Dial helps you tune in with ease. Use the bottom scale for FM stations, the top scale for AM.
4. Adjust the volume for the entire system with the VOLUME/ALL SPEAKERS control knob. Due to the varying signal levels of Radio stations, you may have to adjust the VOLUME/ALL SPEAKERS control when you change stations.
Remember, no Inside or Patio Station VOLUME control can increase the volume that is set at the Master Station.

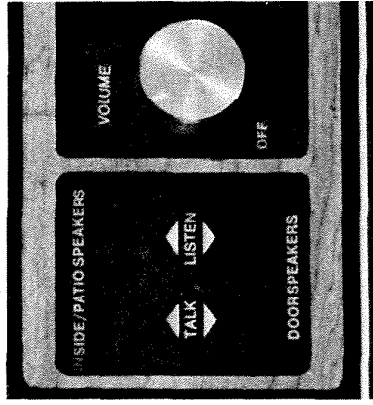
5. For those rooms where you want Radio — Set the Remote Station Control Switches on your Master Station to the RADIO/INTERCOM setting.

IMPORTANT: If the VOLUME controls on the Remote Stations are turned too low and the VOLUME/ALL SPEAKERS control on the Master Station is turned too high, distortion may result. To set system volume, see page 4.

Best Intercom operation is obtained with each speaker's VOLUME control set in the "Normal Range."

INTERCOM

HOW TO HAVE A
TWO WAY CONVERSATION
FROM THE MASTER TO
ANY REMOTE STATION



Master

1. Be sure the power [VOLUME (Master Speaker)] is turned ON. 8
2. Turn the VOLUME (Master Speaker) control knob to the maximum clockwise position.

IMPORTANT:

Your messages will be transmitted to all Stations set at RADIO/INTERCOM and INTERCOM ONLY.

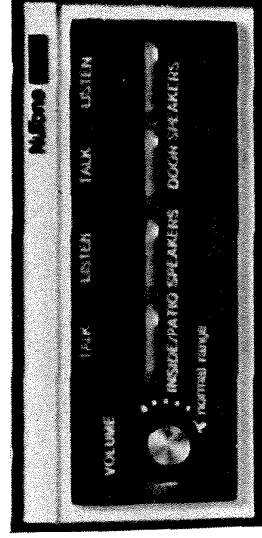
3. TO TALK – press the TALK button for the INSIDE/PATIO SPEAKERS and hold while speaking.

NOTE:

Radio and optional music sources playing will be silenced at all Stations AUTOMATICALLY!

4. TO LISTEN – press the LISTEN button for the INSIDE/PATIO SPEAKERS and hold in while listening. With your LISTEN button pushed in, persons can reply to your call without touching their Station controls.

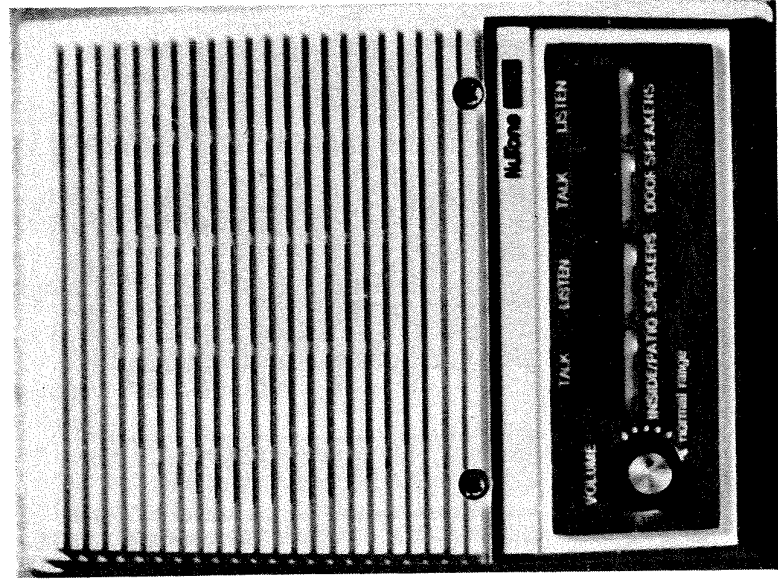
As an alternative way of listening, the person called may reply by pushing in their TALK button at the Remote Station. Then the person at the Master Station doesn't have to operate his LISTEN button.



Remote Station

INTERCOM

HOW TO MAKE CALLS FROM REMOTE STATIONS



Remote Station

You can make calls from any Remote Station at any time, as long as the entire system is turned ON [VOLUME (Master Station)].

Since your NuTone Intercom System is fully transistorized and when left ON, ready for use, uses only a little more electricity than an electric clock . . . it is desirable to leave your unit on all the time.

1. Turn your Remote Station VOLUME control knob to the full clockwise position.
2. TO TALK – press the INSIDE/PATIO SPEAKERS "TALK" button and hold in while talking.
3. TO LISTEN – press the INSIDE/PATIO SPEAKERS "LISTEN" button and hold in so you can receive your reply. With the LISTEN button pushed in, persons can reply to your call without touching their Station controls.

INTERCOM

HOW TO ANSWER
YOUR DOOR WITH
YOUR NEW INTERCOM

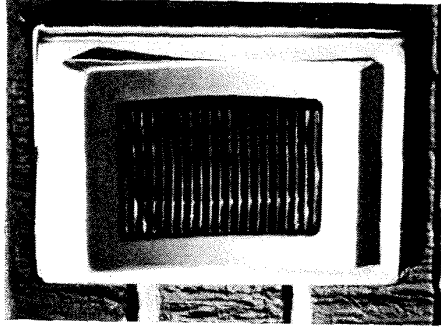
Safely — you'll never have to open your door to strangers again. Answer from within the security of your home.

Conveniently — you'll save lots of steps and time.

1. **TO TALK** — press the **DOOR SPEAKERS "TALK"** button and hold in while talking.
2. **TO LISTEN** — press the **DOOR SPEAKERS "LISTEN"** button and hold in to receive your reply.

NOTE:

It's never necessary for the caller at the door to operate any controls. Conversations can be carried out from the Master Station or the Remote Stations.



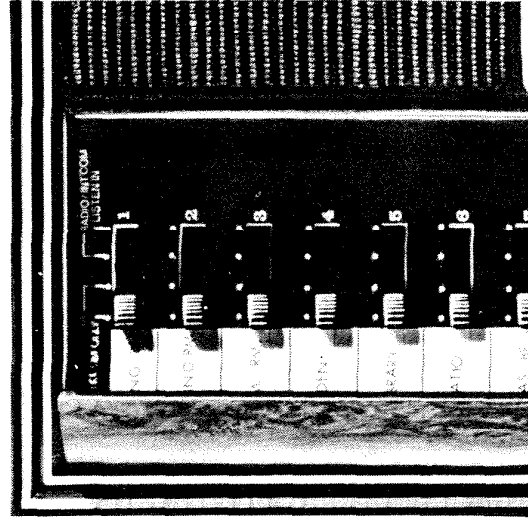
Door Speaker



Remote Station

INTERCOM

HOW TO LISTEN-IN TO ONE OR MORE ROOMS

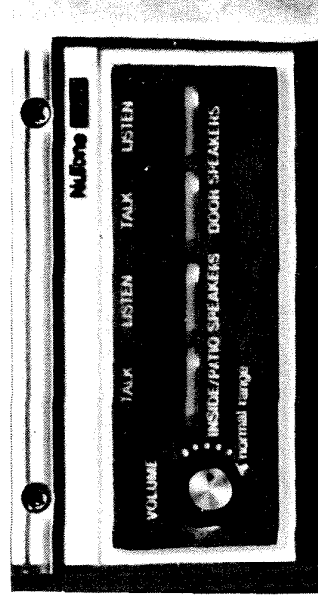


The ideal feature for keeping an "ear" on the children's rooms or a "sick-room" . . . or even the outside, if you have a Patio Speaker.

1. Just set the Station Control Switches on the Master to the LISTEN-IN position for all Speakers you wish to listen-in on.

The Speakers set at LISTEN-IN will transmit sounds to all Speakers set at RADIO/INTERCOM. The sounds will be transmitted at a higher volume level than your Radio.

2. To make sure sounds will be transmitted adequately, turn the individual VOLUME control of the Speakers set for LISTENING-IN to the maximum clockwise position ("NORMAL RANGE" setting).



Remote Station

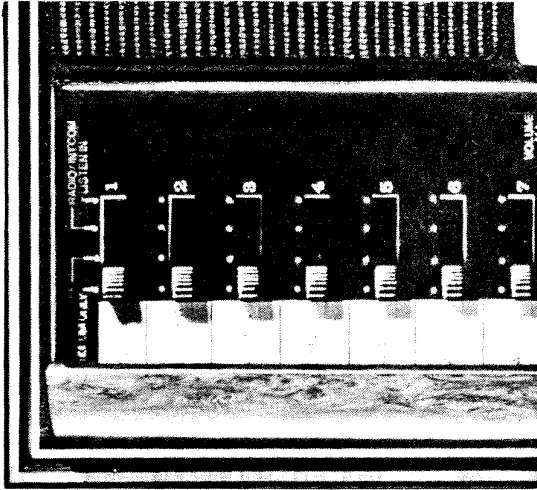
INTERCOM

HOW TO HAVE A "NIGHT WATCHMAN"

For added security during the night, listen-in to your entire home and be able to hear any disturbing noises.

1. For rooms you want to listen-in on during the night, set the Remote Station Control Switches on the Master Station to the LISTEN-IN position.
2. For Stations from where you wish to listen, set the Remote Station Control Switches to the RADIO/INTERCOM position.
For example, if you wish to listen-in on the Patio area and the living room, set those Stations on LISTEN-IN; if you want to listen-in from your bedroom, set that Station on RADIO/INTERCOM. Any other Station set on RADIO/INTERCOM will also be listening-in along with the Station in your bedroom.
3. So that your System will transmit sounds from Remote Stations to other Remote Stations, you must have the Master Station ON.
4. With the Master switched ON, one of its Functions will be operating (AM or FM Radio, Phono, or Tape). Set the Function Selector switch on Phono or Tape but do not turn ON the component.

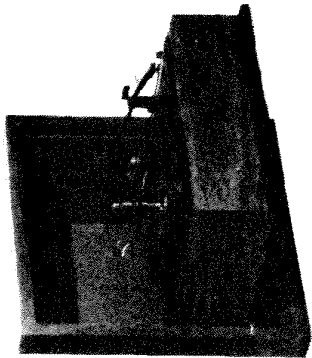
Remember, you must have your System ON [VOLUME (Master Station)] to be able to listen-in to Remote Stations.



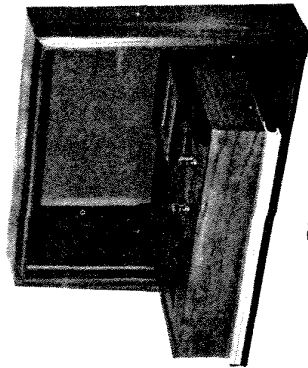
Master

OPTIONAL ACCESSORIES

RECORD CHANGER & CASSETTE PLAYER/RECORDER



Record Changer



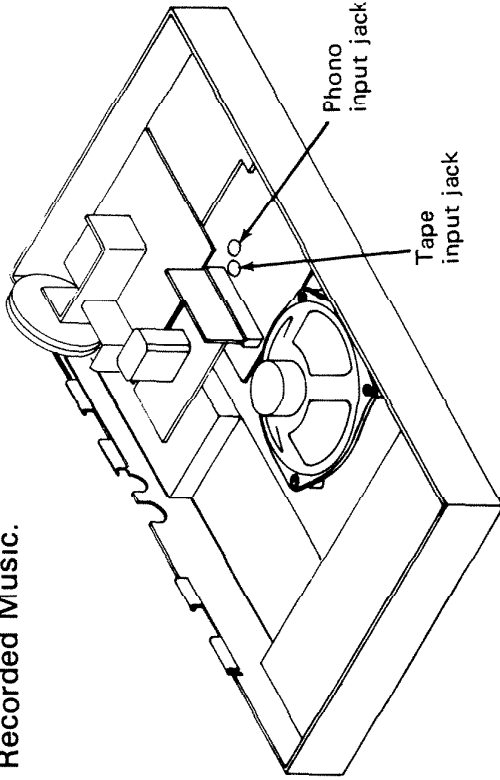
Tape Player

More sound in your future with NuTone . . . Have the advantages of popular music sources. Plus the convenience of having units that tilt out for use and back to store. NuTone's Record Changer (Model RC-91-1) and Cassette Player/Recorder (Model CP-82) can easily be added to your NuTone Radio Intercom Master Station. Separate input jacks are located on the back of your Master Unit for In Wall connection of the Phono and Cassette Player/Recorder. (See photo below)

If you choose to use your own Phono or Cassette Player, the input jacks may be repositioned to allow you to connect these accessories into the Master Station from underneath. (See photo below)

PROVISION FOR UNINTERRUPTED RADIO/MUSIC

Your NuTone Radio Intercom Master Station is also equipped to play background music without Intercom. Two wires (BLACK and BLUE) from the Function Selector switch on the Master Station may be connected with 2 Conductor Shielded wire to an auxiliary amplifier and speaker system (NuTone Model IMA-516 amplifier and speakers: Model SS-48, IS-78, IS-25, IS-28D, or IS-28W) to provide uninterrupted background AM or FM Radio, or Recorded Music.



MORE ACCESSORIES

ELECTRONIC DOOR CHIME

More luxury and convenience in your household A NuTone Electronic Door Chime connected to your Intercom System will be heard through the Intercom Speakers. So when a caller rings your Door Chime you can hear it from any part of your home.

TO ADJUST THE VOLUME — set the Function Control switch on AM or FM Radio. Select a station with clear reception and ring Chime. The Chime should be heard clearly at any Station set on RADIO/INTERCOM while the Radio is playing. Adjust the volume control on the Chime base plate to the volume you wish.

SECURITY/FIRE ALARM

Sound protection for your family and your possessions! Security through your Intercom System . . .

NuTone's Security/Fire Alarm System including an Electronic Horn Alarm can also be connected to your Radio Music Intercom System to sound the alarm signal through the System Speakers.

SPEAKER/CLOCK-TIMER

For additional information regarding accessories, send your request to:

NUTONE — DIVISION OF SCOVILL
Department of National Field Service
Madison & Red Bank Roads
Cincinnati, Ohio 45227

or dial NuTone for the name of the dealer nearest you: 800-543-8687

An extra convenience accessory that allows you to awaken to music at a pre-set time. The ISA-47 Speaker/Clock Timer has the same Radio-Intercom controls as your Remote Stations.

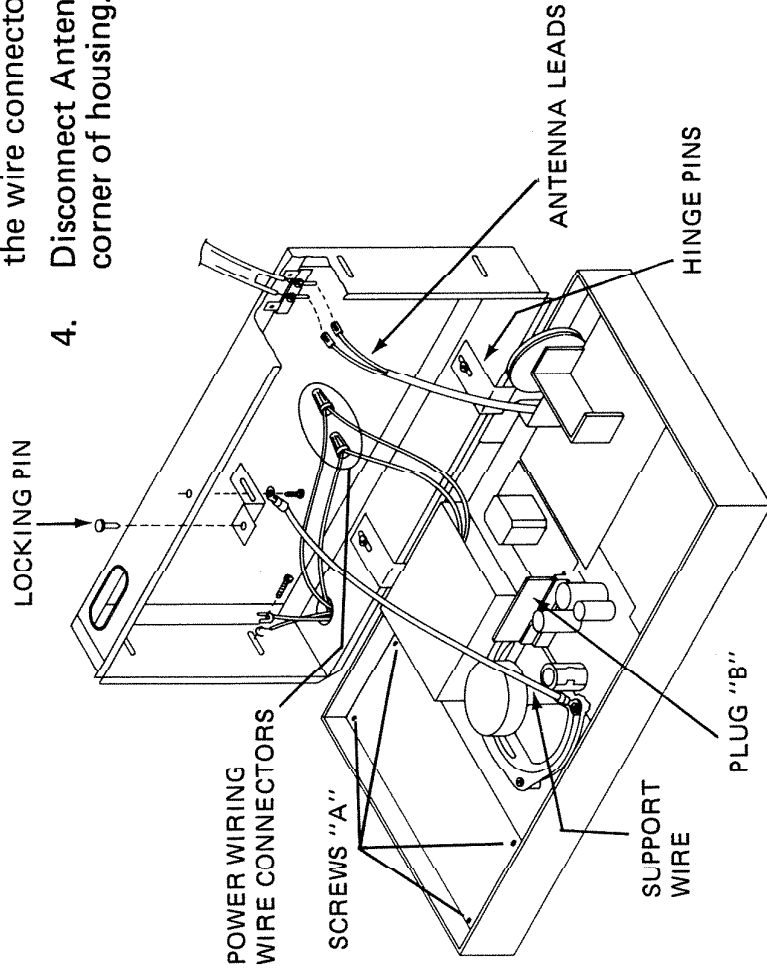
The function switch on the clock-timer gives you a choice between four settings — OFF for intercom only . . . ON for Radio and Intercom . . . AUTO to turn off radio; radio will come on at a pre-set time . . . A LARM to turn off radio; radio will come on at a pre-set time and, also, sound a buzzer signal.

TO SET ALARM — Turn TIME/ALARM SET (located on the left) clockwise. **TO SET TIME** — depress the TIME/ALARM SET and rotate to the left or right.

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.

1. Turn **VOLUME** (Master Station) control knob fully counterclockwise to turn power **OFF**.
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 low voltage power leads from the power source by removing the wire connectors. Replace connectors on power cables.
4. Disconnect Antenna leads from Antenna terminal strip in upper right corner of housing.
5. Remove 4 screws "A" from terminal board on Master.
6. Unplug terminal board assembly by removing plug "B".
7. With Master Unit open, and resting perpendicular to wall, grasp it firmly and lift straight up to remove the unit from the hinge pins. Be sure to connect the support wire when re-installing 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.

HELPFUL HINTS

1. If you wish to have Intercom but not Radio, place the Station Control Switches in the INTERCOM ONLY position.
2. Be sure to leave VOLUME/ALL SPEAKERS control knob at a reasonably high level. This setting determines the amount of volume for the entire system. If this control is too high and the individual VOLUME controls at the Remote Stations are too low, distortion may result.
3. If squealing should develop on the Intercom, one of two things has probably occurred:
 - (a) The VOLUME/ALL SPEAKERS control is too high. To set system volume, see page 4.
 - (b) Two or more Speakers are located too close together. If this is the case, first reduce the VOLUME/ALL SPEAKERS control setting; if this does not stop the squeal, reduce the volume of one or both of the Speakers that are affecting one another.

If trouble persists, it could be in the wiring – notify your installer.
4. If FM reception is not satisfactory, an external FM Antenna may help. It should be installed on the roof or in the attic, pointed in the direction of the desired FM Stations. If FM stations are widely separated, an omnidirectional - type antenna may be required.
5. HOW TO CLEAN – If the surfaces of the Master or Remote Speakers should become finger-marked or dirty, they can be cleaned by wiping with a damp cloth.

NuTone Warranty

LIMITED WARRANTY – NUTONE DIVISION, SCOVILL INC.
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, 800-543-8667
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

Product specifications subject to change without notice.

NuTone
Housing Group **Scovill**

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