

Operating Instructions
NuTone
SOLID STATE
COMMUNI-CENTER



MODEL 2542-B

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GENERAL DESCRIPTION OF YOUR NUTONE COMMUNI CENTER SYSTEM

Your NuTone Built-In CommuniCenter is a complete "home broadcasting" network enabling you to play AM and FM radio programs and pre-recorded tapes throughout your home, plus the convenience of a message center, intercom and automatic clock-timer. Special controls provide for recording messages and instructions to other members of the family through the Master Station Speaker. The message light indicates a message is waiting to be played back. The intercom feature of your system provides room to room and patio communications, plus a step saving door-answering convenience.

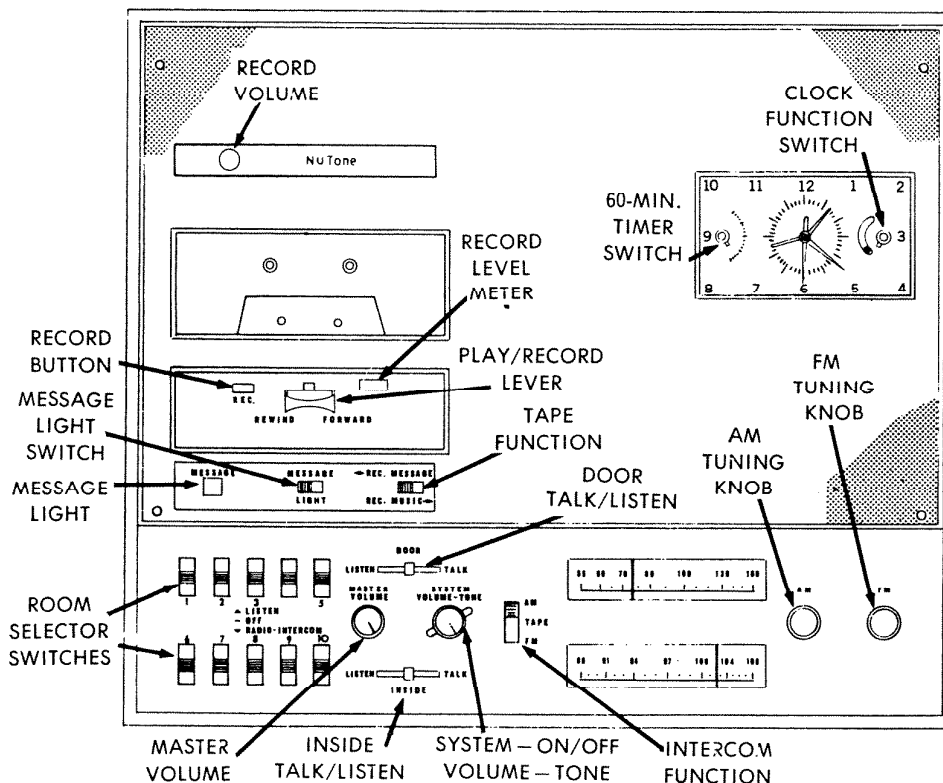
The Master Station includes a fully transistorized FM-AM Radio-Intercom, cassette tape player-recorder and clock-timer. The ten selector switches, on the master, control the function of as many as ten stations in your home in addition to the door speakers.

FUNCTIONS OF INTERCOM CONTROLS ON MASTER PANEL

Remote Speaker Selector Switches — provide individual control, for as many as ten remote speakers.

"Inside" Talk/Listen Switch — for talking on intercom, from Master to inside speakers only. Use separate, "Door" Talk/Listen switch, for communicating, with outside door speakers only.

System Off-On, Volume Tone — a dual control and switch, the rear control knob will vary the tone range from deep bass to high treble. The front control switches the power ON and sets the volume level for the entire system.



MASTER VOLUME — rotating the Master Volume control to the right increases the sound at the Master Station speaker. It will NOT vary the sound level at any of the other stations. The Master Volume control should be set near maximum when operating the unit in Intercom.

FUNCTION SELECTOR — the three positions of the Function Selector are TAPE/AM/FM. The functions of the unit at the various positions of the Selector switch are as follows:

TAPE — For recording a message or playing pre-recorded tapes. When the tape Player/Recorder is not operating, the tape position can be for Intercom only use of the system.

AM — In this position you can select an AM station and tape the program or "pipe" it throughout the system.

FM — In this position you can select an FM station and tape the program or "pipe" it throughout the system.

NOTE: You always have full-time Intercom service regardless of the setting of the Function Selector Switch. FM or AM Radio is automatically silenced when intercom calls are originated or received. During use of the intercom "Listen In" feature, voice transmissions will be heard — above the music level.

AM Tuning — The AM Tuning knob is for quick and easy AM station selection on the Slide Rule Dial.

FM Tuning — The FM Tuning knob is for ready selection of FM stations of the Slide Rule Dial.

PRELIMINARY PROCEDURES COMMON TO OPERATION OF ENTIRE SYSTEM

1. **TO SWITCH THE ENTIRE SYSTEM "ON"** turn the POWER OFF-ON SYSTEM VOLUME CONTROL knob clockwise — until you hear a click.

Note: The Master Station of your system is fully transistorized. This means that the current drain is negligible, being little more than that required to operate an Electric Clock. The small amount of current drain coupled with the lasting characteristics of transistors make it possible and desirable to leave your unit on all the time. In this way you will derive maximum benefit from your system.

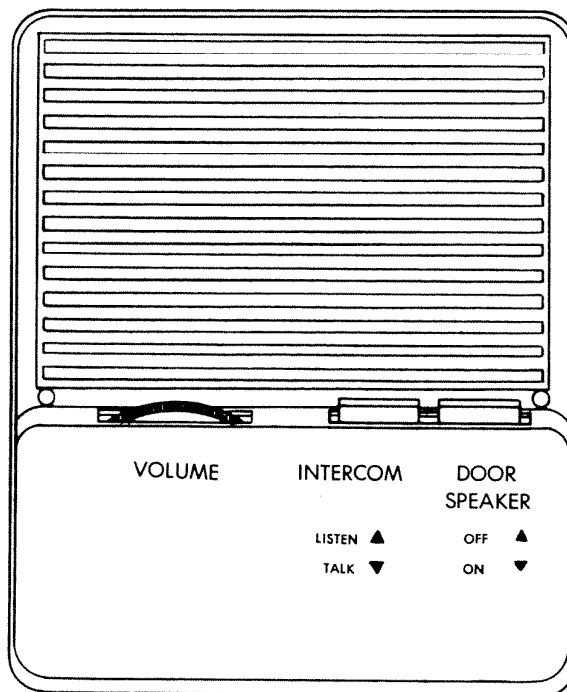
2. **ADJUST THE VOLUME LEVEL** of the entire system by turning the SYSTEM VOLUME CONTROL knob, clockwise, to the right. The setting of this control determines the maximum volume attainable at any remote station speaker. The individual volume controls of the remote speakers can vary this volume downward but they cannot increase it above the level set by the System Volume Control.

3. **ADJUST THE TONE CONTROL** to your preference, rotating the knob, clockwise, to the right, increases treble response, for high musical notes, while rotating the knob to the left, increases the bass response for deep mellow tones.
4. **POSITION THE MASTER STATION REMOTE SPEAKER SELECTOR SWITCHES AS FOLLOWS:**
 - a. For rooms where you want Radio, Music, or Intercom, place corresponding switches in the RADIO-INTERCOM (down) position.
 - b. For rooms in which you do not wish to "pipe" programs, place corresponding switches in the OFF (middle) position.
 - c. To "Listen" to one or more rooms, place corresponding switches in the "Listen" (up) position. You will be able to hear every sound from these rooms, but the speakers in these rooms will be silent. Refer to "HOW TO LISTEN IN TO ONE OR MORE ROOMS" for complete instructions.

OPERATING REMOTE SPEAKER VOLUME CONTROLS




ADJUST REMOTE SPEAKER VOLUME CONTROL(s) as follows:

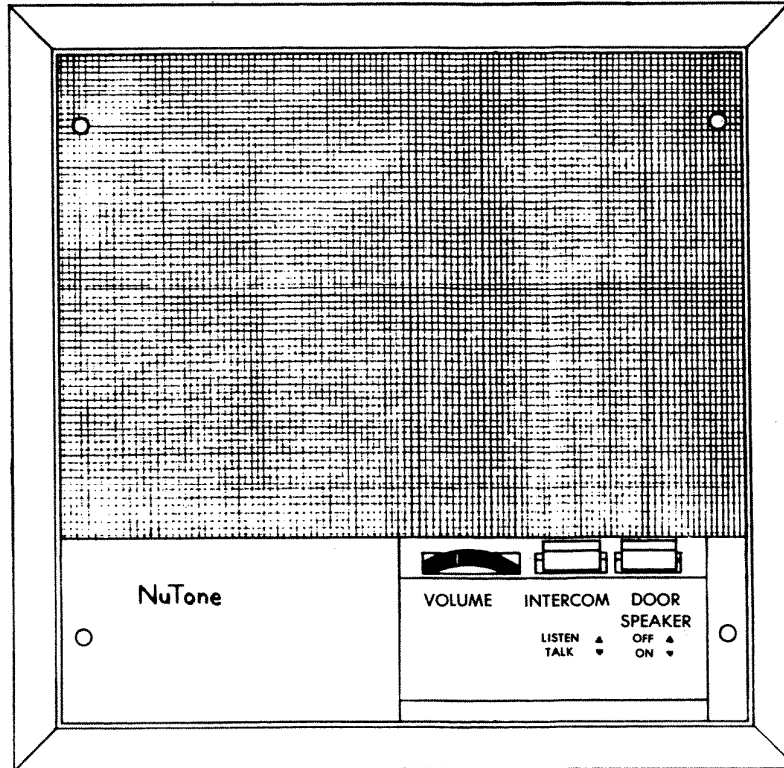
- a. Turn speaker Volume Control(s) to the right ↷ to increase volume.
- b. Turn speaker Volume Control(s) to the left ↶ to decrease volume.



MODEL 2550
Remote Station Speaker

- c. Turn speaker Volume Control(s) all the way to the left to turn speaker(s) off.

Note: If the volume level is too low when the remote speaker volume control is turned all the way to the right  the System Volume Control at the master unit should also be turned, farther to the right . If, when this is done, the volume level is too high in other rooms, the remote speaker volume controls, in those rooms, should be turned to the left  until all rooms have the desired sound level.



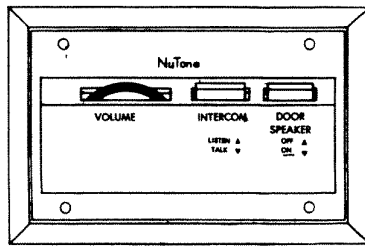
MODEL 2553
Remote Station Speaker

OPERATING THE AM FM RADIO

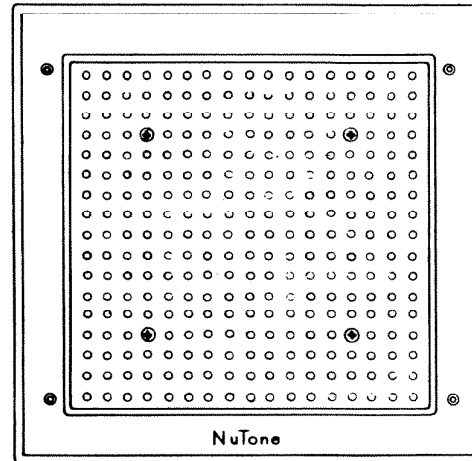
1. **MAKE SURE THE MASTER STATION SYSTEM VOLUME CONTROL,** is turned far enough to the right, to provide sufficient sound level.

Caution. The setting of the SYSTEM VOLUME CONTROL on the Master determines the maximum volume that can be obtained at any speaker.
2. **POSITION THE SELECTOR KNOB** for the type of reception desired:
 - a. If AM is desired, slide the SELECTOR SWITCH to the AM position.
 - b. Rotate the AM TUNING KNOB to select the desired station.
 - c. If FM is desired, slide the selector switch, to the FM position. Select the desired station by rotating FM TUNING KNOB.

- d. Adjust SYSTEM VOLUME CONTROL for desired volume, without distortion, and decrease volume as desired at each remote station by adjusting individual remote volume controls. Avoid turning system volume control too high, with all remote volume controls turned down, to prevent sound distortion.



MODEL 2556
Remote Control Panel



MODEL 2556
Hi-Fidelity Outside Remote
Patio Speaker

USING YOUR SYSTEM FOR INTERCOM

HOW TO CARRY ON CONVERSATION BETWEEN MASTER AND REMOTE SPEAKERS.

1. Be sure the POWER OFF-ON switch is in the "ON" position and that the level of volume is sufficient.
2. Place REMOTE SELECTOR switches in the "Radio/Intercom" (down) position, for room(s) you wish to call. Leave switches in Center or "OFF" positions for room(s) you do not want to receive message.
3. Turn MASTER VOLUME Control to maximum clockwise position.
4. To Talk, Push Master TALK LISTEN switch to RIGHT (Talk Position) and HOLD while speaking. (Radio will be silenced. Voice will override "TAPE" Music Level.)
5. To hear answer, push Master Inside TALK LISTEN Switch to LEFT (Listen Position) and HOLD. Person at Remote Speaker can answer without pushing TALK Button.

NOTE: Alternate method to receive answer: When listening to reply, leave TALK/LISTEN switch in "Center" position. Person at Remote Speaker must "push" TALK Button on Speaker to reply.

HOW TO ORIGINATE CALLS FROM SPEAKER TO MASTER

1. Turn Speaker VOLUME Control fully clockwise.
2. To TALK — push TALK button DOWN and HOLD while speaking. Release TALK button to receive reply. (Radio will be silenced. Voice will override Tape Music level.)

NOTE: You can call Master from a Remote Speaker regardless of how the Remote Selector Switch(s) at the Master have been set. However, Selector Switch(s) must be set in Radio/Intercom (down) position to answer. Radio will not be silenced, if Remote Switch is "OFF" at Master, indicating the remote, originating a call, cannot hear your reply.

HOW TO CARRY ON CONVERSATION BETWEEN REMOTE SPEAKERS

1. Check that Power switch is "ON."
2. Be sure all REMOTE SELECTOR switches on the Master are in the RADIO/INTERCOM (Down) position.
3. Each Remote Speaker VOLUME control should be turned up to listening level. If turned too high, feedback (howl) may be induced. If so, turn controls down slightly.
4. To TALK, push TALK Button IN and HOLD while speaking. Release button to receive answer.
5. The person in another room can answer by using the TALK button of their Speaker as outlined in Step 4.

HOW TO ANSWER DOOR SPEAKERS

HOW TO ANSWER DOOR FROM MASTER

1. To Talk, push Door TALK/LISTEN switch to the right (talk position) and hold while you are speaking.
2. To hear answer, push Door TALK/LISTEN switch to LISTEN (left) position. Caller at door can answer without operating any controls.
3. When conversation is completed, allow Door TALK/LISTEN switch to return to center (OFF) Position. No music, or room to room intercom, will be heard at the door.

TO ANSWER DOOR FROM REMOTE SPEAKER

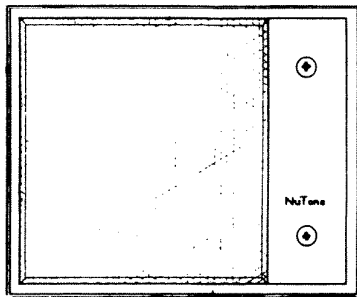
1. The SELECTOR switch(s) on the Master for the Remote Speaker(s) must be pre-set to the RADIO/INTERCOM (Down) position.
2. Depress the Remote Speaker Door Button, and HOLD in this position, while you are speaking or receiving answer.
3. To Talk, also depress TALK/LISTEN Button In. Release only the TALK/LISTEN Button to receive answer from door. Continue to hold Door Button IN until conversation is completed.

HOW TO "LISTEN IN" TO ONE OR MORE ROOMS

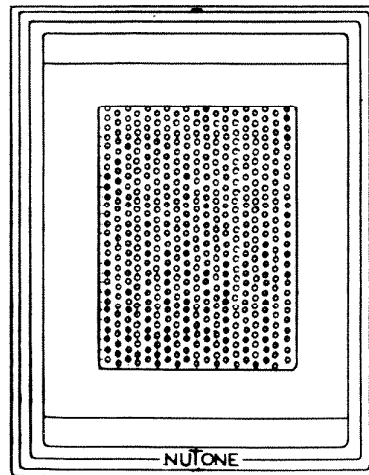
1. Place the Master REMOTE SPEAKER SELECTOR Switch(s) in the LISTEN (up) position for any room or rooms you want to hear (monitor). The Speakers in these rooms will be silent; however, you will hear every sound from these rooms at the Master, as they are acting as Microphones.
2. To "Listen In" at any other speaker in the System (Bedroom, Living Room, etc.) place the SPEAKER SELECTOR switch for that room in the RADIO/INTERCOM (down) position.
3. If you so desire, you can "Listen IN" to rooms even while listening to a radio program. Should you not want to listen to a radio program, place the FUNCTION SELECTOR switch in TAPE position.

FOR "SPOT" MONITORING

Push the Master TALK/LISTEN Switch to the LISTEN (left) position to momentarily "LISTEN IN" (Spot Monitor) at the Master to any Speaker(s) of the system whose Selector Switch(s) is in the RADIO/INTERCOM (down) position.



MODEL 412
Surface Mounted
Outside Door Remote



MODEL 2571
Built-In
Outside Door Remote

NIGHT WATCHMAN LISTENING FEATURE

This feature enables you to "Monitor" sounds in or near the house through the inside and Patio speakers. Note: The Master Station and Door Speakers cannot be monitored.

1. Be sure the POWER Switch is "ON" and the SYSTEM VOLUME turned high.

2. Put the Function Selector Switch in the "TAPE" Position.
3. Push the REMOTE SPEAKER SELECTOR Switch for your room to the RADIO/INTERCOM (down) position.
4. Set all other REMOTE SPEAKER SELECTOR Switches (Inside and Patio Speakers) to the LISTEN (up) position.
5. Turn Remote Volume Control, in your bedroom, to its highest position, to the right.

HOW TO USE AND OPERATE THE CASSETTE TAPE PLAYER/RECORDER

FUNCTIONS OF CONTROLS

Record Volume — Sets the volume for the tape recorder when taping voice or music. Does not affect volume during playback.

Tape Function — This control is used in conjunction with Intercom function control and determines information recorded on tape. When in "Record Message" position, tape will record voice for message and "Message Light" will be illuminated. When in "Record Music" position, AM or FM Radio program can be recorded.

Play-Record Lever — Move to "Rewind" (left) position for fast rewind of tape. Move to "Forward" (right) position for fast forward tape advance. Push "Up" to record or play a pre-taped message or music program. When returned to the "Down" position all tape movement stops and cassette is "Off."

Record Button — To record a message or radio program push and hold in while Play-Record lever is pushed "Up," then release.

Message Light — This light is illuminated only when a message has been recorded or is being recorded. Light is not turned off until "Message-Light" switch is moved to the "Right" manually.

Message Light Switch — This switch is automatically pushed to the left, to illuminate the message light, when the Tape Function switch is set in "Record Message" position. After the message has been recorded, this switch should remain to the left to indicate a message is waiting. After the message tape has been played, this switch should be pushed to the right to turn the message light off.

HOW TO RECORD

TO RECORD A RADIO PROGRAM —

1. Install blank cassette tape cartridge with full reel to left. Be sure exposed tape is toward bottom. Insert top of cartridge into top of recessed area, position holes over spindels and press bottom of cartridge back until it stops.

2. Set "Intercom Function" switch to "AM" or "FM" position.
3. Push "Tape Function" switch to right "Record Music" position.
4. Press Red "Record" button in and hold while "Play/Record" lever is pushed up, then release. Increase "Record Volume" control until record level meter needle deflects just below Red area on loud sounds. The selected radio program is now being recorded.

NOTE: When recording Radio Programs, do not use Intercom Talk/Listen Switches, as Intercom operation will mute the radio causing a blank tape.

5. Upon completion of recording — push "Play/Record" lever to "Off" (down) position.

TO RECORD A MESSAGE —

1. Install blank cassette tape cartridge with full reel to left. Be sure exposed tape is toward bottom.
2. Set "Intercom Function" switch to "Tape", "AM" or "FM" position.
3. Rotate "Master Volume" control to the extreme clockwise position.
4. Rotate "System Volume" control approximately ½ turn clockwise.
5. Push "Tape Function" switch to left "Record Message" position. This will also light the "Message" light indicating a message is being recorded.
6. Press Red "Record" button in and hold while Play/Record lever is pushed up, then release.
7. Talk directly into master speaker and adjust "Record Volume" control until "Record Level" meter needle deflects to just below Red area on loud sounds. Upon completion of recording — push "Play/Record" lever to "Off" position.
8. After recording message, push "Tape Function" switch to the right "Record Music" position. Message light will remain on indicating message is on tape.
9. Move "Play-Record" lever to left to rewind recorded tape.

IMPORTANT: Do not use remote speaker Talk/Listen switches during message recording, as all Intercom will be recorded.

HOW TO PLAYBACK RECORDED TAPE

Set "Intercom Function" switch to "Tape" position, be sure "Tape Function" switch is in "Record Music" position and push Play-Record lever up to play tape.

(Do Not depress red "Record" button.)

Recorded message or music will be received.

Move "Play-Record" lever to left to rewind recorded tape.

IMPORTANT: Set the Play-Record lever to the "Off" (down) position immediately after "Record" or "Playback" operation is completed as some tapes may be damaged by continuous operation of the Capstan Drive Mechanism.

HOW TO ERASE A TAPE

The Tape Player/Recorder is designed to automatically erase the tape as a new recording is made. To erase a tape completely without recording, set Intercom "Master Volume" Controls and "Record Volume" control to lowest volume setting. (**Do Not** turn Radio-Intercom "system volume" control to "Off"). Set "Tape Function" switch to "Record Music" position.

Depress red "Record" button and hold in while "Play/Record" lever is pushed "Up," then release. Tape is now being erased without recording.

Cassettes are safeguarded to prevent accidental erasure of recorded material. Removing the tabs in the rear of the Cassette will prevent depressing the Red Record button. If at some later time erasure of a pre-recorded tape is desired, place adhesive tape over the tab holes. This will allow the Red Record button to be depressed and you can then follow the erasing procedure outlined.

HOW TO CLEAN RECORDING HEADS

Oxide from new recording tape will accumulate on record and erase heads causing poor performance. Symptoms of oxide-laden head would include "fuzziness" in record, print-thru due to incomplete erase and might even result in a distorted or weak recording. Heads should be cleaned whenever oxide build-up is noticed, and before any important recording session.

TO CLEAN MECHANISM, PROCEED AS FOLLOWS:

1. Remove the tape cartridge from the cassette unit.
2. Push the Play/Record lever "Up."
3. Wrap a bit of lint-free cloth around a small stick, or use a cotton-tipped stick. Saturate the cloth or cotton with alcohol only. Clean the front of the recording and erase heads.
4. Return the Play/Record lever to the "Off" position, so that the rubber drive wheel of the capstan assembly is retracted. Clean the capstan with the cloth or cotton. Be sure not to allow the alcohol to come in contact with the rubber drive wheel.
5. Accumulations of oxide can be removed with a soft brush.

CAUTION: Never use other cleaning fluids, and never clean the heads with any object that is sharp or contains metal. Do not use a brush with a metal band around the bristles.

HOW TO OPERATE THE CLOCK-TIMER

The clock function switch has four positions to provide various types of Radio operation. The Intercom system "On-Off" switch must be "On" for clock-timer control.

1. "On"— Provides fulltime radio, tape and intercom operation.
2. "Off"— Turns radio only "Off".
3. "Auto-Radio"— Turns radio off and back on again at preset alarm time.
4. "Auto-Radio Alarm"— Turns radio off and back on at the preset alarm time and sounds a buzzer alarm approximately 10 minutes later at the master unit location.

"Off", "Auto-Radio" and "Auto-Radio Alarm" positions of clock function switch will control AM and FM Radio only. Cassette playback and Record operations are not affected.

Full time Intercom and "Record Message" operation are available regardless of the clock-function switch setting.

HOW TO SET MINUTE AND HOUR HANDS

Push Clock Function switch in and rotate in a counterclockwise direction to desired hour and minute hand setting.

HOW TO SET FOR AUTO-RADIO OPERATION

Set Clock Function switch to "Auto-Radio," push the Clock function switch in, rotate White hand in a clockwise direction to desired time for Radio to turn on.

HOW TO SET FOR AUTO-RADIO ALARM OPERATION

Set Clock Function switch to "Auto-Radio Alarm" position. Push the Clock Function switch in and rotate White hand in a clockwise direction to desired time for Radio alarm. In this position the Radio will turn on at Pre-selected time and an audible alarm will sound approximately 10 minutes later, at the master unit only.

HOW TO SET TIMER SWITCH

The timer switch located on the left side of the clock provides up to 60 minutes of Radio operation after the clock function switch has been set in the "Off", "Auto-Radio", or "Auto-Radio Alarm" position. Radio will turn off automatically after selected time has elapsed, but Intercom will still be in operation. To set "Timer Switch", place clock function switch in "Off", "Auto-Radio", or "Auto-Radio Alarm" position and turn timer switch counter-clockwise to the number of minutes desired, Radio will turn off immediately after selected time has elapsed, but intercom function will still be in operation.

ELECTRONIC CHIME AND INTRUDER-FIRE ALARM ACCESSORIES

If your system includes an Electronic Chime, it will be heard through any speaker whose REMOTE SPEAKER SELECTOR Switch on the Master Panel is in the RADIO/INTERCOM (Down) position. TO CONTROL THE VOLUME set Function Selector Switch in RADIO position. Select a station with clear reception and ring the Chime. The Chime tones should be heard clearly throughout the system while the radio is playing. Adjust the volume control on the chime base plate for desired chime volume.

NuTone's Intruder-Fire Alarm System including an Electronic Horn Alarm can also be connected to your Music Intercom System to sound the alarm signal through the system speakers.

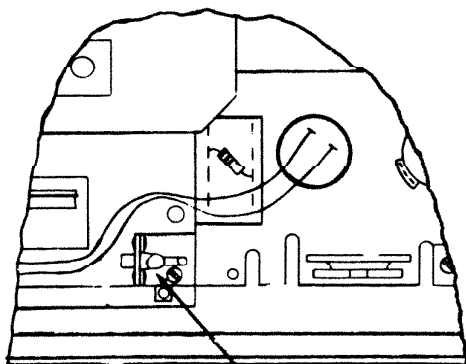
LOW LEVEL RADIO OUTPUT

Two wires from the Master Function Switch are provided so FM or AM Radio, or recorded MUSIC ONLY can be connected with shielded wire to an Auxiliary Amplifier and Speaker System. Intercom operation through the regular system, will not be heard through the Auxiliary Speaker System. For further information, contact NuTone Field Engineering Department.

IN WALL WIRING OF AUXILIARY RECORD CHANGER TO MASTER STATION

For in wall wiring of auxiliary record changer, remove master station from wall. See page 15 for master station removal procedure.

Run shielded signal lead from changer, through master rough-in housing and connect into phono jack on rear of master station. Replace master station.



PHONO JACK - FOR IN-WALL WIRING

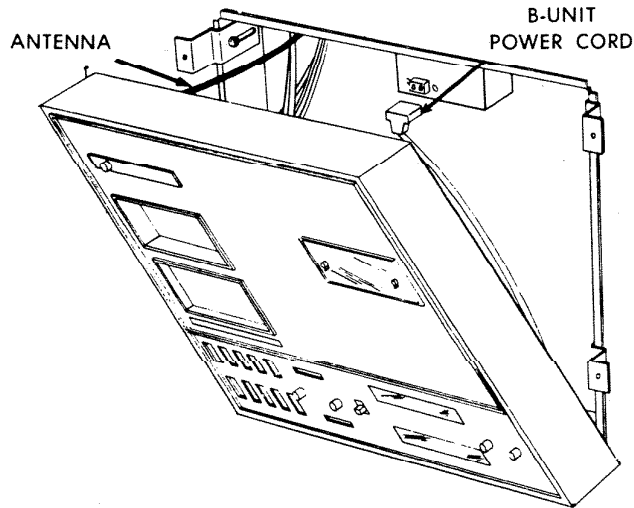
Set intercom function switch to "Tape" position to play records.

With the intercom function switch in the "Tape" position, a cassette tape recording of records may be made by following the recording instructions outlined on page 10.

HOW TO REMOVE MASTER UNIT FOR SERVICE

The Nutone Intercom Master has been designed for easy removal without disconnecting speaker wiring. Should service be required, follow the procedure outlined below.

1. Turn SYSTEM VOLUME knob fully to the Left to turn the power OFF.



2. Remove two front panel mounting screws.

3. Pull Master Unit slightly forward, disconnect power cord, and pull off antenna connections from terminals in upper right corner of housing. Depress white tabs to remove blue signal plug from switch housing.

HELPFUL HINTS

1. If you do not want Radio, but wish to leave the Intercom System functioning, set Function Selector to TAPE position.
2. Be sure to leave SYSTEM VOLUME control at a reasonably high level. This setting determines the maximum sound available at any remote station speaker. Avoid turning system volume control too high, while all remote volume controls are turned down, to prevent the sound from becoming distorted.
3. If squealing should develop on intercom, one of two things has probably happened.
 - a. The SYSTEM VOLUME control is too high.
 - b. Two or more speakers are located too close together.First reduce the SYSTEM VOLUME control setting; if this does not cure the squeal, reduce the REMOTE STATION SPEAKER volume of one or both the Speakers that are affecting each other. You can determine which Speakers are causing the squeal by turning all remotes "OFF" at the Master Unit, then on again — one at a time. If trouble persists, it could be in your wiring, notify your installer.
4. If AM or FM Radio does not play when master unit On-Off switch is turned "On" — check to be sure clock-timer function switch is in "On" position.
5. If FM reception is not satisfactory, an outside FM Antenna may help. We recommend that a NuTone Model #2420 FM Antenna, or its equivalent, be installed on the roof or in the attic, pointed in the direction of desired FM Stations. If FM stations are widely separated, an omnidirectional type antenna may be required.
6. 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

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