



NuTone®

**Intercoms and Home
Entertainment Systems**



**Radio-Intercom Retrofit Updating Guide
3/4-Wire & 6/8-Wire Systems**

3/4-Wire Radio-Intercom Updating Guide for the NM100 Series Radio-Intercom System

Older 3-wire systems may be converted to an NM100 Series Radio-Intercom System. This booklet outlines the updating procedure; indicating the components that may be retained from the existing system and the units that should be replaced.

NOTE: Due to component size differences, some wall patching may be required when installing new system.



NM100 Series

Master Station:

NM100WH White Finish

- System may include a maximum of thirteen (13) remote stations and three (3) door speakers.

Wiring Requirements:

Three-wire system.

- Maximum of 350 feet per remote station.
- Maximum of 1000 feet total per system.

Rough-In Frame for Master Station Only:

Model NWH300 Rough-In Frame

(includes transformer, omni-directional AM and FM antennas and 75 feet of door speaker cable.)

Power Source:

NA300TA Transformer

Supplied with NWH300 rough-in. Mounts in bottom of rough-in frame. 20 VAC 60 Hz circuit must be provide from the circuit breaker panel to the master station location.

(includes transformer (1), omni-directional AM and FM antennas and 75 feet of door speaker cable.)

Power Source:

NA300TA Transformer (master)

Supplied with NWH300 rough-in. Mounts in bottom of rough-in frame.

Contact one of our technical service representatives with questions regarding updating your system by calling 888-336-6151, by faxing 800-873-2311, or by E-mailing customer service at nutonecs@broan-nutone.com

UPDATING 3/4-WIRE RADIO-INTERCOM SYSTEMS

Master Station Model Numbers: 2011, 2012, 2015 or 2016

Wiring Requirements:

Use existing 3-conductor wiring from the master station to remotes. Use **Appendix A** "NM100 Series Intercom Master Station to Remote Station Retrofit Installation using Existing NuTone IWA3 3-Wire Flat Ribbon Cable" at the end of this document for proper wire connections. AM only systems will require the installation of the FM antenna included with the master station rough-in.

Rough-In Frame for Master Station:

Replace existing rough-in and patch wall surface as necessary. If installing NM100WH master station use NWH300 rough-in and NF100MWH master retrofit frame.

Power Source:

Use transformer(s) supplied with new master station rough-in housing.

5" Speakers with Controls:

Indoor: Replace existing indoor remote station with NRS103WH remote station and NF300RWH indoor remote station retrofit frame (use existing rough-in).

Outdoor: Replace existing outdoor remote station with NPS103WH remote station. When replacing existing surface mount remote station, remove existing surface mount frame and replace with NRKS200PWH surface mount frame. When replacing existing flush mount remote station, use NF300PWH retrofit frame (use existing rough-in).

8" Speakers with Controls:

Patch wall and replace with NRS103WH remote station and NRKR200R remote station rough-in frame.

Remote Controls:

Patch wall and replace with NRS103WH remote station and NRKR200R remote station rough-in frame.

Door Speakers:

Replace existing speaker with NDB300WH door speaker and NF300DWH door station retrofit frame. For best operation, replace cable between door speaker and master station with NW4S cable provided with the master station rough-in. In some cases it **MAY** be possible to use the existing 2 wire cable, but the system may encounter hum, noise and oscillation. If this occurs, replace existing cable with NW4S cable. If the system includes a chime module the chime wires in the NW4S cable must be connected to the door speaker chime pushbutton and master station chime module.

Master Station Model Numbers: 2031, 2032, 2034-2036, 2053-2058, 2062-2065, 2067, 2068, 2090 or 2091

Wiring Requirements:

Use existing 3-conductor wiring from the master station to remotes. Use **Appendix A** "NM100 Series Intercom Master Station to Remote Station Retrofit Installation using Existing NuTone IWA3 3-Wire Flat Ribbon Cable" at the end of this document for proper wire connections. AM only systems will require the installation of the FM antenna included with the master station rough-in.

Rough-In Frame for Master Station:

Replace existing rough-in and patch wall surface as necessary. If installing NM100WH master station use NWH300 rough-in and NF100MWH master retrofit frame.

Power Source:

Existing power source is a remotely located transformer. This transformer cannot be used to power the NM100 system. Use transformer(s) supplied with new master station rough-in housing. Have a qualified electrician run a 120 VAC circuit to the master station location and following the installation instruction provided with the NM100 master station to connect the transformer(s) in the master station rough-in.

5" Speakers with Controls:

Indoor: Replace existing indoor remote station with NRS103WH remote station and NF300RWH indoor remote station retrofit frame (use existing rough-in).

Outdoor: Replace existing outdoor remote station with NPS103WH remote station. When replacing existing surface mount remote station, remove existing surface mount frame and replace with NRKS200PWH surface mount frame. When replacing existing flush mount remote station, use NF300PWH retrofit frame (use existing rough-in).

8" Speakers with Controls:

Patch wall and replace with NRS103WH remote station and NRKR200R remote station rough-in frame.

Remote Controls:

Patch wall and replace with NRS103WH remote station and NRKR200R remote station rough-in frame.

UPDATING 3/4-WIRE RADIO-INTERCOM SYSTEMS (Continued)

Door Speakers:

Replace existing speaker with NDB300WH door speaker and NF300DWH door station retrofit frame. For best operation, replace cable between door speaker and master station with NW4S cable provided with the master station rough-in. In some cases it **MAY** be possible to use the existing 2 wire cable, but the system may encounter hum, noise and oscillation. If this occurs, replace existing cable with NW4S cable. If the system includes a chime module the chime wires in the NW4S cable must be connected to the door speaker chime pushbutton and master station chime module.

Master Station Model Numbers: IM/IMA-203, IM-2003

Wiring Requirements:

Use existing 3-conductor wiring from the master station to remotes. Use **Appendix A** "NM100 Series Intercom Master Station to Remote Station Retrofit Installation using Existing NuTone IWA3 3-Wire Flat Ribbon Cable" at the end of this document for proper wire connections. Use existing AM/FM antenna.

Rough-In Frame for Master Station:

Replace existing rough-in and patch wall surface as necessary. If installing NM100WH master station use NWH300 rough-in and NF100MWH master retrofit frame.

Power Source:

IM/IMA-203 existing power source is a remotely located transformer. This transformer cannot be used to power the NM100 system. Use transformer(s) supplied with new master station rough-in housing. Have a qualified electrician run a 120 VAC circuit to the master station location and following the installation instruction provided with the NM100 master station to connect the transformer(s) in the master station rough-in.

IM-2003, use transformer(s) supplied with new master station rough-in housing. Have a qualified electrician reconnect existing 120 VAC circuit to the transformer(s) master station location and following the installation instruction provided with the NM100 master station to connect the transformer(s) in the master station rough-in.

5" Speakers with Controls:

Indoor: Replace existing indoor remote station with NRS103WH remote station and NF300RWH indoor remote station retrofit frame (use existing rough-in).

Outdoor: Replace existing outdoor remote station with NPS103WH remote station. When replacing existing surface mount remote station, remove existing surface mount frame and replace with NRKS200PWH surface mount frame. When replacing existing flush mount remote station, use NF300PWH retrofit frame (use existing rough-in).

8" Speakers with Controls:

Patch wall and replace with NRS103WH remote station and NRKR200R remote station rough-in frame.

Remote Controls:

Patch wall and replace with NRS103WH remote station and NRKR200R remote station rough-in frame.

Door Speakers:

Replace existing speaker with NDB300WH door speaker and NF300DWH door station retrofit frame. For best operation, replace cable between door speaker and master station with NW4S cable provided with the master station rough-in. In some cases it **MAY** be possible to use the existing 2 wire cable, but the system may encounter hum, noise and oscillation. If this occurs, replace existing cable with NW4S cable. If the system includes a chime module the chime wires in the NW4S cable must be connected to the door speaker chime pushbutton and master station chime module.

Master Station Model Numbers: IM/IMA-303, IM/IMA-323

IM-, IMA, B-, C-, D-313

Wiring Requirements:

Use existing 3-conductor wiring from the master station to remotes. Use **Appendix A** "NM100 Series Intercom Master Station to Remote Station Retrofit Installation using Existing NuTone IWA3 3-Wire Flat Ribbon Cable" at the end of this document for proper wire connections. Use existing AM/FM antenna.

Rough-In Frame for Master Station:

Replace existing rough-in and patch wall surface as necessary. If installing NM100WH master station use NWH300 rough-in and NF100MWH master retrofit frame.

NOTE: For 313 Series, the wall must be framed and patched to accommodate the NWH300 rough-in frame.

