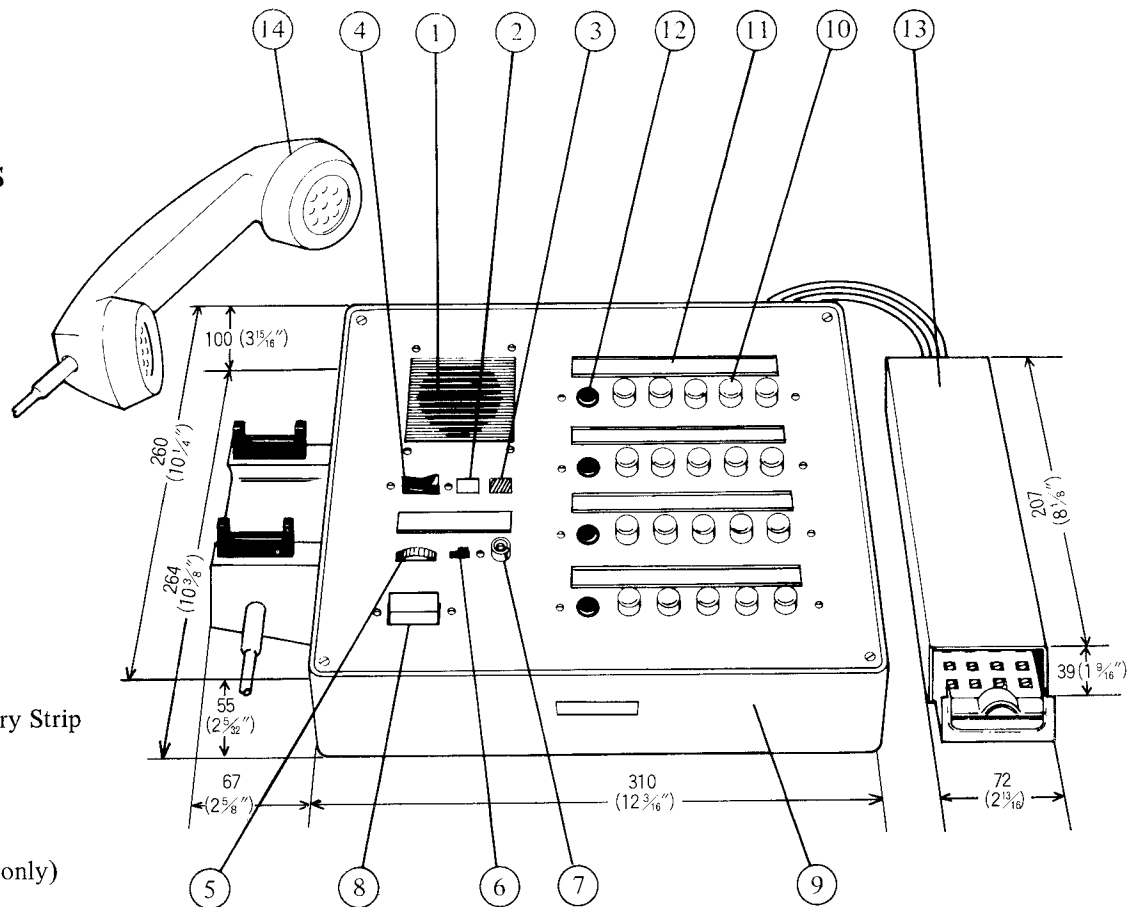


# AIPHONE

## LAMP MEMORY INTERCOM SYSTEM N-SERIES

### NAMES & FUNCTIONS

- ① Microphone/Speaker
- ② On Lamp
- ③ Occupied Lamp
- ④ Off/On Switch
- ⑤ Volume Control
- ⑥ Buzzer/Music Switch
- ⑦ All Call Button
- ⑧ Push to Talk Switch
- ⑨ Case
- ⑩ Station Button
- ⑪ Annunciator/Directory Strip
- ⑫ Cancel Button
- ⑬ Junction Box
- ⑭ Handset (NAP series only)





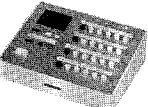
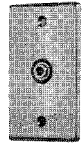
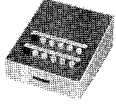

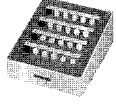
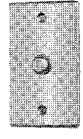
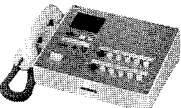
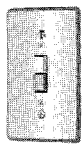
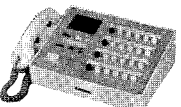
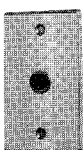
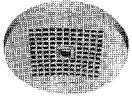
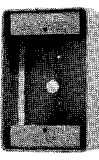







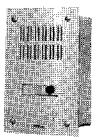

### SPECIFICATIONS

- \* Power source: DC 24 V, 1A. Use PS-24D (PS-24C in North America) or N-15W.
- \* Current consumption: 24 VA (talking and signaling) 3 VA (standby)
- \* Calling: Station button is depressed and communication is accomplished by using push-to-talk switch or handset.
- \* Wiring: Two conductors per station plus one common wire throughout system from master.

### FEATURES

- \* Basic console in either 10 or 20 substations.
- \* Add-on consoles in 10 or 20 substations.
- \* Maximum of 50 substations using N-15W.
- \* Lamp memory call from substations.
- \* Choice of buzzer or music annunciation.
- \* Voice actuated switching of amplifier using handset on NAP- series.
- \* Wide choice of substations to fit various applications.
- \* Only one master console per system.

## EQUIPMENT AVAILABLE IN N SERIES

	N-10M: Master station for 10 substations.		NP-3: Round corridor lamp
	N-20M: Master station for 20 substations.		NP-1: Cord receptacle.
	N-10A: Add on selector for 10 additional substations.		NP-8: Cord for NP-1.
	N-20A: Add on selector for 20 additional substations.		NP-2: Remote reset button.
	NAP-10M: Master station with handset for 10 substations.		NP-8N: Privacy call button for use with ceiling speakers.
	NAP-20M: Master station with handset for 20 substations.		NP-8S: Remote call button.
	NS-1: Round frame. N-E: Surface mount frame for NS-1. N-S: Square flush mount frame for NS-1.		NP-W: Box for surface mounting of buttons or lamps.
	NP-11: Remote buzzer.		PS-24D: Power supply, not required with N-15W (Available everywhere except North America).
	NS-2: Open type desk substation.		PS-24C: CSA & UL LISTED Power supply, not required with N-15W (Available only in North America)
	NS-2N: Privacy type desk substation.		N-15W: Booster amplifier, also replaces PS-24D (PS-24C in North America).
	NP-3S: Square corridor lamp.		NS-3: Flush mount weatherproof.
	NS-3SW: Square Corridor lamp with white and red lamps.		

### INSTALLATION:

Do not attempt to install your Aiphone intercom system until you read and understand these instructions. Aiphone's warranty is void if the system is installed in any manner other than that described in this manual.

### WIRING:

Lay out your system in advance. Determine the locations of each substation and wire to each. Two conductors per substation plus one common wire.

#### \* Wiring Hints

Several methods may be used:

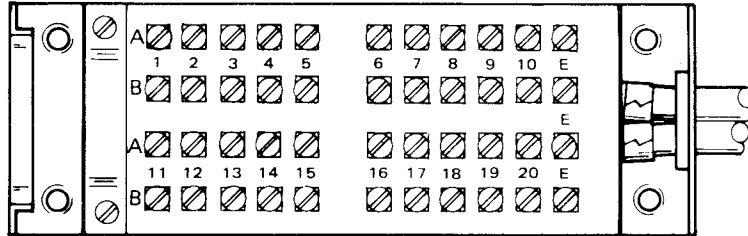
1. Three conductors from each substation to the master station junction box.
2. Three conductors from each substation to a remote terminal block, then use a multi-conductor cable to master station junction box.

3. Use a multi-conductor cable looped to each substation. (Remember: If using a multi-conductor cable, two wires are needed per substation and one additional wire is common to all substations.) Mount the power supply or booster as near the master station as possible.

Refer to the chart below and select the proper wire gauge to meet your requirements.

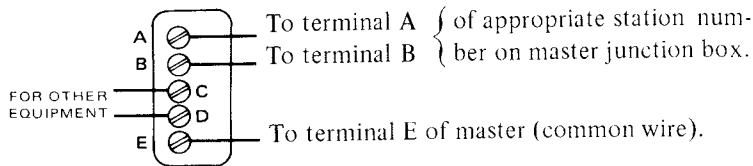
WIRE SIZE	22 AWG	20 AWG	18 AWG	0.65 mm	0.8 mm	1.0 mm
COMMUNICATION DISTANCE	1000"	1400"	2300"	300 m	450 m	700 m

**ACTUAL TERMINAL LOCATION**



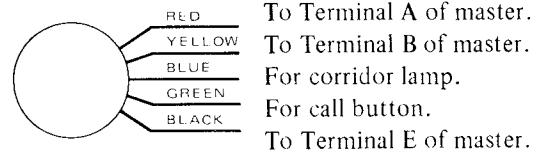
**TERMINAL IDENTIFICATION: NS-2, NS-2N**

**Desk Type**



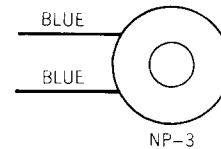
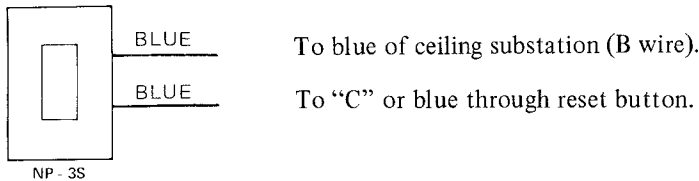
**WIRE IDENTIFICATION: NS-1, NS-1E**

**Ceiling Type:**

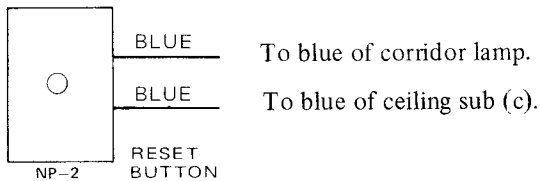


**NP-3, NP-3S CORRIDOR LAMPS**

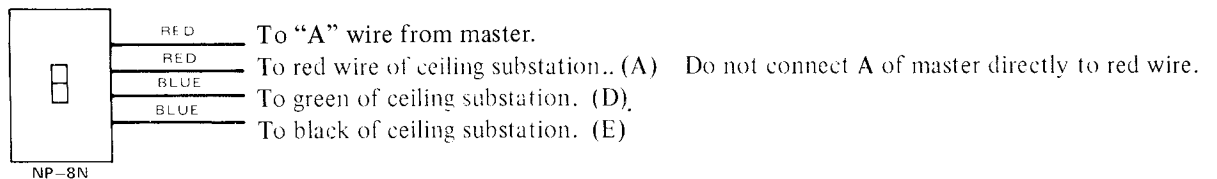
Remove 25 ohm resistor from inside substation if using corridor lamps.



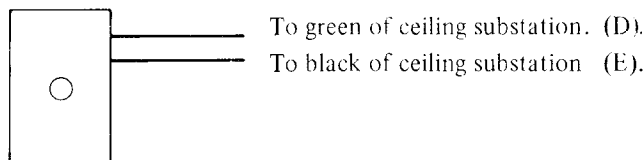
**NP-2 RESET BUTTON**



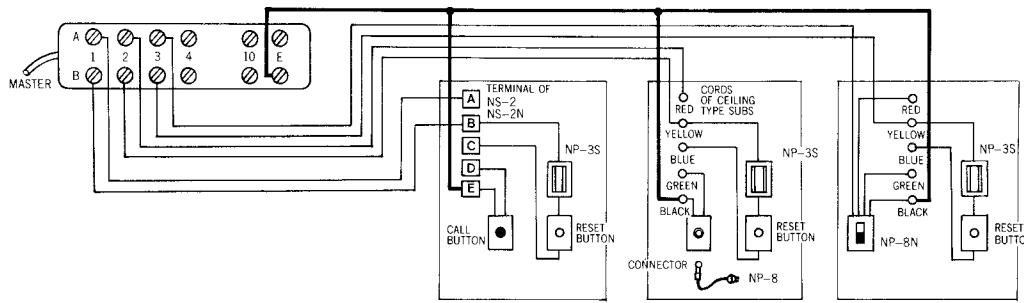
**NP-8N**



**NP-1 PUSHBUTTON AND NP-8S WITH NP-8 CALL CORD**



TERMINAL OF MASTER OR ADDITIONAL SELECTOR



**CONNECTING POWER SUPPLY PS-24D or PS-24C** (See page 5 for illustration.)

– NOT REQUIRED IF USING N-15W. –

1. Open bottom of master by removing four screws around outer edge.
2. Connect (-) wire to minus terminal on terminal board in left rear corner of base.
3. Connect (+) wire to plus terminal on the same terminal board.
4. Be sure jumper is installed between terminals 1 & 2.
5. Close bottom of master locating power cable through notch in back. Secure bottom with four screws.

**CONNECTING BOOSTER N-15W** (When using more than 31 substations)

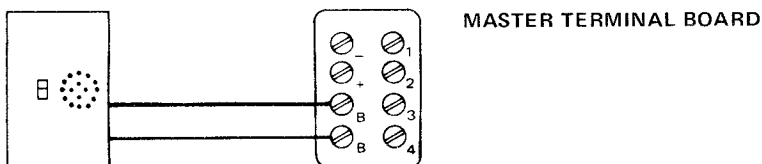
1. Open bottom of master by removing four screws around outer edge.
2. Remove jumper between terminals 1 and 2 on power supply terminal board in left rear corner of base.
3. Remove cover of N-15W by removing four screws on sides of cover exposing terminal board.
4. Install and connect a 6 conductor cable between N-15W and master station as follows:
  - (minus) of N-15W to --(minus) terminal of master.
  - + (plus) of N-15W to + (plus) terminal of master.
  - 1 (one) of N-15W to 1 (one) terminal of master.
  - 3 (three) of N-15W to 3 (three) terminal of master.
  - 4 (four) of N-15W to 4 (four) terminal of master.
  - \* { 2A(two-A)of N-15W to 2 (two) terminal of master if using less than 30 substations.
  - 2B(two-B)of N-15W to 2 (two) terminal of master if using 31 to 40 substations.
  - 2C(two-C)of N-15W to 2 (two) terminal of master if using 41 to 50 substations.

\*Only one of these connections is used, depending on number of substations.

**CONNECTING ADDITIONAL SELECTORS TO MASTER STATION**

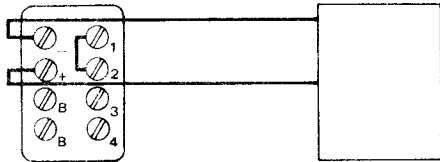
1. Open bottom of master by removing four screws around edge of bottom.
2. Open selector bottom in the same manner.
3. Plug 9 pin male connector of selector into matching receptacle in right rear corner of master.
4. Plug additional selectors together in same way.
5. Close bottoms of units and apply metal strip provided to secure units together.

**NP-11 REMOTE BUZZER**



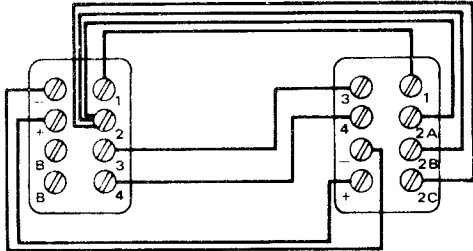
Use two conductor cable from NP-11 to master terminal board and connect to B terminal -- no polarity.

## Power supply (PS-24D or PS-24C) CONNECTIONS



NOTE: Jumper between No. 1 and 2 must be in place.

## N-15W CONNECTIONS



NOTE: Remove jumper between No. 1 and 2 on master terminal 2A, 2B, 2C on N-15W -- only one is used at a time depending on number of substations.

10 to 30 substations use 2A.

31 to 40 substations use 2B.

41 to 50 substations use 2C.

## ALL CALL

A maximum of ten substations may be selected at a time for communication; however, the incoming voice and background noise would make this impractical for monitoring.

If more than 10 stations need to be communicated with, the all call switch can be depressed which puts the amplifier to full volume and cuts out incoming signals. Depressing the talk switch will now connect the microphone to the amplifier and then to the speakers in all substations.

## OPERATION OF MASTER STATION

1. Check that power supply and master station power switches are on and the pilot lamp is lit.
2. Select substation you wish to communicate with and depress its white button. You now can monitor the station you have selected unless it is of the non-open type. (NS-2N or NP-8N)
3. Communicate with substation in the following manner:
  - a. Depress talk-listen switch and talk to station.
  - b. Release talk switch for response from substation or pick up handset (NAP-10 - 20M only) and communicate with substation without using talk switch.
4. The black cancel button must be depressed after the finish of a conversation or the next call will not have an audible tone.
5. If a second substation should call in during the communication with the first one, its annunciator will light but the buzzer or music will not sound until the cancel button is depressed.

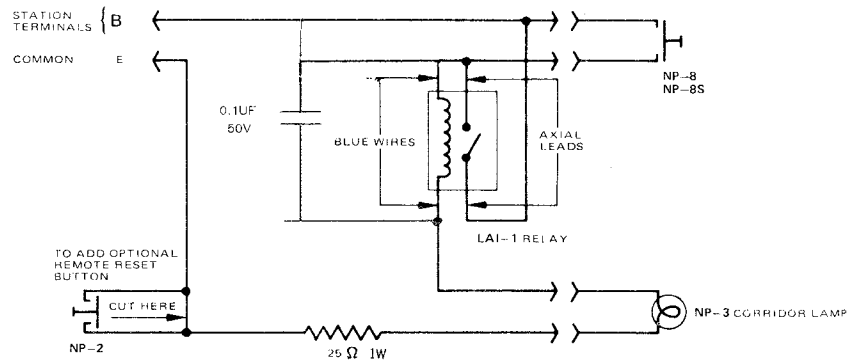
## CALL IN FROM SUBSTATION

Substation calls master by pushing button on NS-2, NP-8S, NP-8N, or NP-8 whichever is used.

1. a. If NS-1 series speaker or NS-2 series substation are used, a light will indicate that master is called and if multiple NS-2 substations are used in same room (see special notes) light will indicate which substation called.  
b. If NS-2N or NP-8N privacy unit is used, depressing call button releases privacy function allowing you to communicate hands free. If you are called by master you must release privacy button to communicate by voice back to master.
2. a. At the master a light will indicate which substation is calling as well as an audio tone of buzzer or music. Dependent on position of selector switch, NP-11 will only receive buzzer.  
b. Depress lighted station button, and follow instruction of item 3 of master operation, remembering to push black cancel button when conversation is completed.

## SPECIAL NOTES

1. If you do not use substations NS-1 or NS-2 series and are using NP-8 or NP-8S, you **must** use holding relay L-A1-1. Wire as follows:



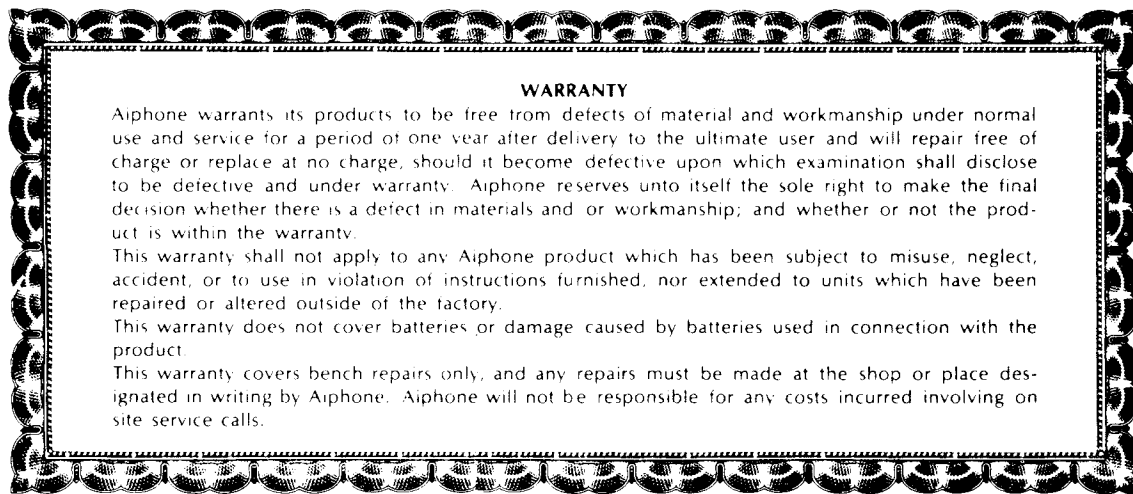
2. More than one NS-2 or NS-2N may be paralleled in the same room. The light in the substation that called will light, the others will not. This indicates exactly which patient called. The audio however will come through all substations in the room that are paralleled.
3. When using NS-2N substation, you will note incoming conversation from master has a slight distortion when NS-2N is in privacy mode. This is normal due to diode bridge circuit. Conversation is normal when privacy button is released.

## CLEANING YOUR INTERCOM STATIONS

- \* Your Aiphone intercom stations may be cleaned with a soft cloth dampened with household cleanser, such as Mr. Clean or Fantastik.

We at AIPHONE are proud of our products. Our designers and engineers strive to bring you the finest in communication equipment. Each item has been carefully tested and inspected before leaving our factory. Properly installed and used, your Aiphone intercom system should give years of trouble-free service.

We are pleased to offer the following warranty:



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