

# Installation Instructions

## 470 Series COMMU-NI-COM SYSTEMS

(For Apartment House and Townhouse Installation)

### RECOMMENDED AMPLIFIER LOCATION AND MOUNTING

Locate amplifier in an area that is convenient and will permit easy access for service. Amplifier surface mounts direct to finished wall or on a single gang junction box. To mount amplifier to junction box, use packing bolts and washers which hold amplifier for shipment. Insert washers between bolt head and printed circuit board and secure to junction box through mounting holes in amplifier baseplate. Use screws supplied in envelope and washers to mount direct to wall surface. (Fig. 1.)

**CAUTION:** To prevent circuit board damage, do not fasten mounting screws too tight.

### SYSTEM POWER WIRING

A low voltage transformer (NuTone model 105-N, 16 volt, 15 amp.), not furnished, is required to supply AC power to amplifier and must be located in an area that is accessible after installation such as — apartment service panel, fuse box or basement — and not more than 50' from AMPLIFIER unit location.

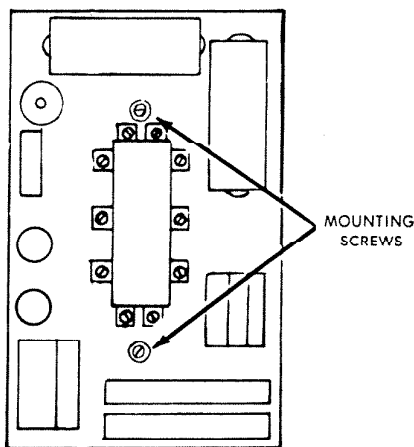


Fig. 1

**NOTE:** Transformer will supply power for call buzzers and/or chime (if included in installation), door release, and 470 amplifier.

Connect transformer into power line. Be sure all wiring complies with local code.

Run and connect 2-conductor, 18 gauge, wire from transformer to amplifier location. Run and connect ground wire to amplifier location. (Fig. 2.)

Install wiring for door release, call buzzer, and/or chimes, in accordance with Figs. 9, 10, 11, or 12, depending on Apartment Speakers used.

### SYSTEM AMPLIFIER WIRING (Audio)

Install 6-conductor wire (NuTone model 447 or 448) between 470 Amplifier and Apartment Speakers (loop wiring, Figs. 9, 10, 11, or 12).

Feed wiring through hole in amplifier baseplate. Connect 6-conductor wire to terminals according to color code. (Fig. 2.)

**NOTE:** For Townhouse installation, connect Red and Orange pairs only. Do not use Black pair.

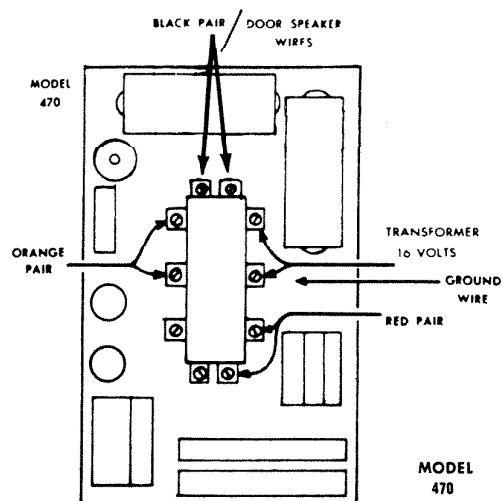


Fig. 2

## SYSTEM WIRING FOR "APARTMENT HOUSE" INSTALLATION

### APARTMENT SPEAKER MODEL 481B (Includes Buzzer)

Connect 6-conductor wire (Model 447 or 448) from amplifier to speaker terminal strip as color code indicates (Black to Black, Red to Red, Orange to Orange). (Fig. 3.)

Connect 18 ga. wire from directory panel or foyer pushbutton to apartment speaker buzzer. (Fig. 3.)

Connect 2-conductor wire, from entrance door release and System transformer, to apartment speaker door release switch and buzzer. See Fig. 3 and (Fig. 9) (Fig. 10)

Test system for volume level in each apartment, adjust control as required to increase or decrease. (Fig. 3.)

**NOTE: Speaker must be removed to adjust volume.**

Secure speaker to "A" frame with screws provided.

### MODEL N-482B APARTMENT SPEAKER (With Separate Chime)

Connect 6-conductor wire (Model 447 or 448) from amplifier to speaker terminal strip as color code indicates (Black to Black, Red to Red, Orange to Orange). (Fig. 4.)

Connect 18 ga. wire from door release to apartment speaker door release switch.

Connect 18 ga. wire from System transformer to door release switch and "Trans" Terminal of Chime. (See Fig. 4 and Fig. 10.) This is a common connection to supply power for the chime and door release.

### MODEL 491 ENTRANCE DIRECTORY (When used with 481B Speaker)

Connect 18 ga. wire from grounded "Trans" terminal of amplifier to the common buss of the directory. (Fig. 5.)

Connect 18 ga. wire from the individual pushbuttons of entrance directory to each apartment speaker buzzer. (When model N482-B Apartment speakers with individual apartment chimes are used, connect wires from directory pushbuttons to "Front" terminals of chime terminal board.) (Fig. 5.)

Connect 2-conductor (22 ga.) wires from "Door Speaker" terminals of amplifier to terminals of entrance directory speaker.

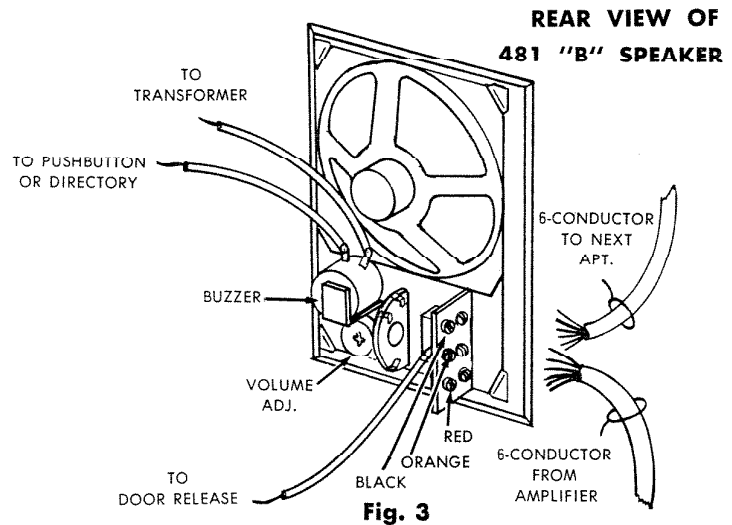
### MODEL 491-P DIRECTORY

Same connections as model 491 plus connect postal lock switch to the door release and transformer as shown by dotted lines in apartment house system wiring diagrams. (Figs. 9 & 10.)

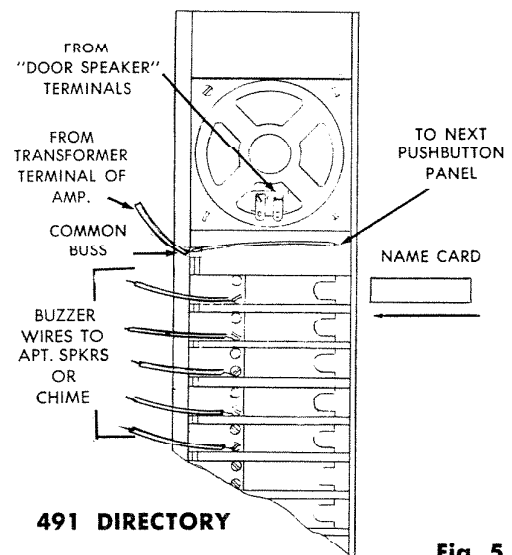
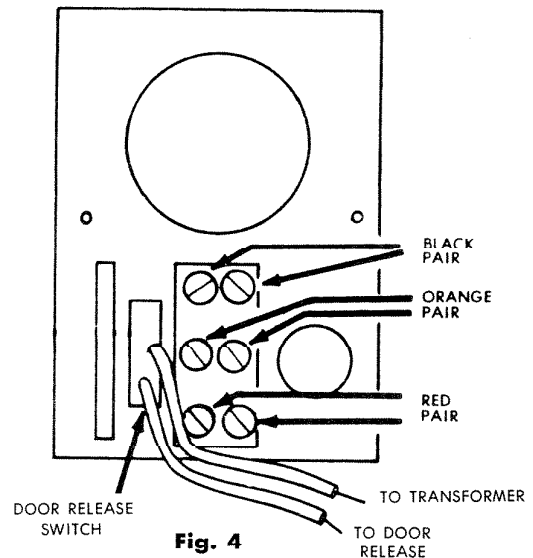
### DR-1 DOOR RELEASE

The DR-1 Door Release mounts in place of the lock strike plate on the left or right door jamb. It should be flush mounted and mortised in place.

Connect single conductor (18 ga.) wire from one side of DR-1 Door Release to "Door Release" switch of apartment speaker. Connect a single conductor (18 ga.) wire from the remaining side of door release to the grounded terminal of transformer or to the common "Buss" of directory.



### MODEL N-482B SPEAKER



## SYSTEM WIRING FOR "TOWNHOUSE" INSTALLATION

### MODEL 481-B APARTMENT SPEAKER (With Buzzer)

Connect Red and Orange pairs of 6-conductor wire from amplifier to Terminals Marked "Red" and "Orange." Do not connect black pair of wires. (Fig. 3)

Connect 18 ga. wire, from System transformer, to apartment speaker buzzer. See Fig 3 and Fig12.

### 471 Door Speaker

Run and connect 2-conductor, 22 ga. wire from 471 Door Speaker to terminals labeled "Black" on 481-B Apartment Speaker.

### Pushbutton Wiring

Connect 18 ga. wire from door pushbutton to buzzer on 481-B speaker. (Fig. 3.)

Connect 18 ga. wire from grounded "Trans" terminal of amplifier to the other terminal of the door pushbutton. A separate pushbutton should be installed for each apartment. (Fig. 11.) (Fig. 12)

### MODEL N-482-B APARTMENT SPEAKER (With Separate Chime)

Run NuTone 6-conductor wire (model 447 or 448)

from 470 amplifier to Model N-482-B Apartment Speaker.

Connect Red and Orange pairs of wires to the Spkr Terminals marked "Red" and "Orange." Do not connect "Black" pair of wires.

Run and connect 2-conductor, 22 ga. wire from 471 Door Speaker to terminals marked "Black" on N-482 Apartment Speaker.

### Chime Wiring

Connect 18 ga. wire from one of the transformer terminals of 470 amplifier to the "Trans" terminal of the chime.

Connect 18 ga. wire from pushbutton to the "Front" terminal of the chime.

### Built-In Entrance Speaker (2413-B) Optional (Alternate Speaker when 471 Speaker is not used)

Install 2006 "A" housing per instructions packed with housing. (Fig. 7.)

Connect 2-conductor, 22 ga. wire from 2413 "B" speaker to terminals labeled "Black" on N-482 apartment speaker. (Fig. 8.)

Fasten speaker assembly to housing with screws provided. (Fig. 8)

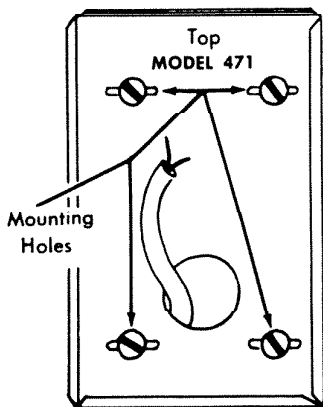


Fig. 6

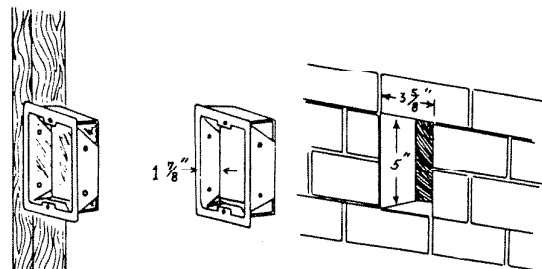


Fig. 7

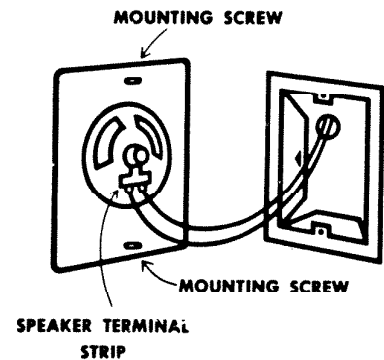


Fig. 8

# 470 APARTMENT HOUSE INTERCOM WIRING DIAGRAM

Apartment House System Using Model 481 Speakers (with Buzzer)

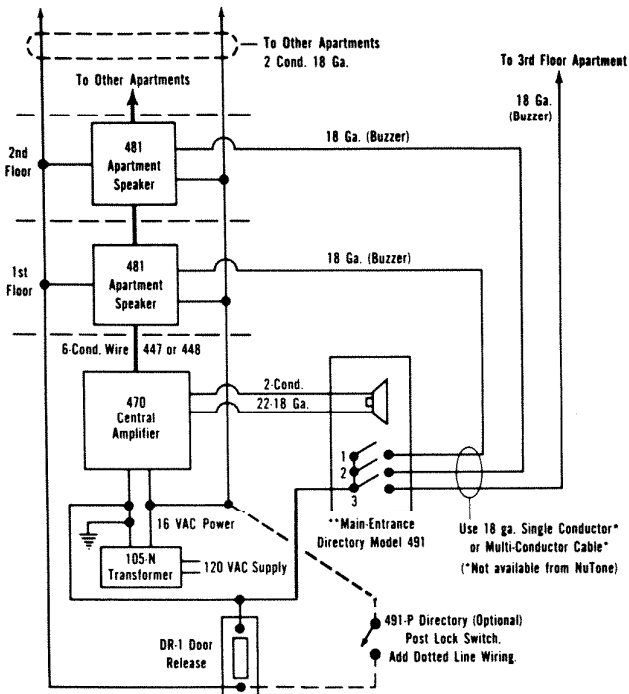


Fig. 9

Apartment House System Using Model N-482 Speakers and Separate Chimes

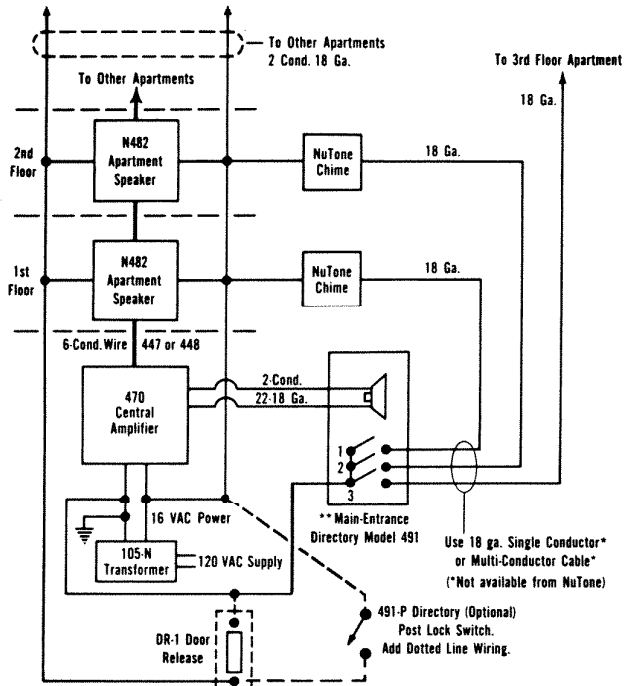


Fig. 10

# 470 TOWNHOUSE INTERCOM WIRING DIAGRAM

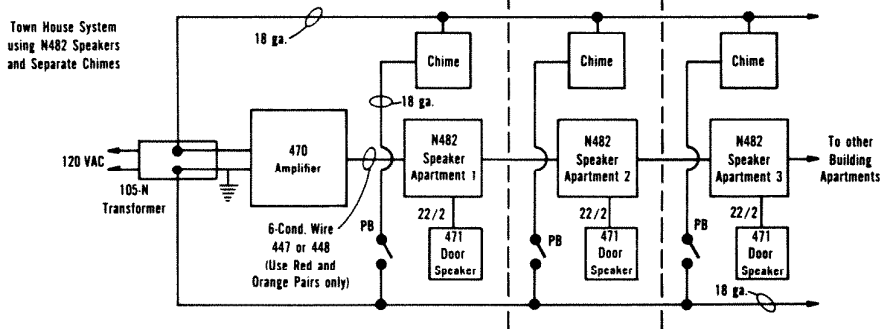


Fig. 11

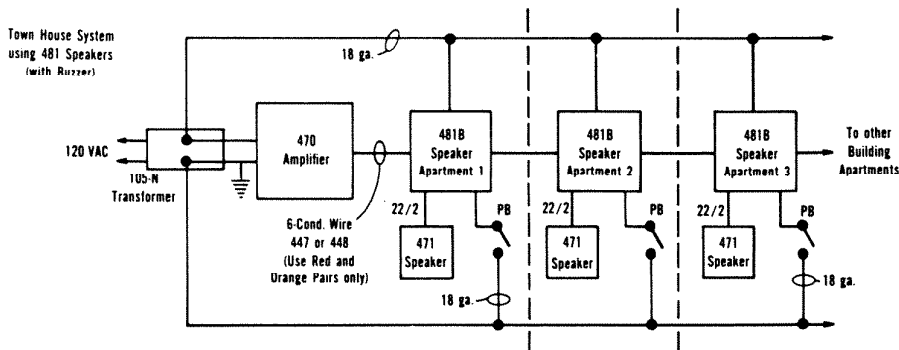


Fig. 12