

Multi Entrance Control Unit

INSTALLATION & WIRING INSTRUCTIONS

APPLICATION

The LEE DAN® PK-502B Dual Entrance Control Unit provides a means to connect LEE DAN® or TekTone® Apartment Intercom amplifiers to more than one entrance. Voice and door release functions are automatically transferred to the calling entrance. The quantity of PK-502Bs needed is equal to one less than the number of entrances. For example, a two-entrance system will have one PK-502B.

PROCEDURE

Warning: This switching unit will not function unless programmed for use—see Test Step #1.

1. Determine equipment location.
2. Install wiring.
3. Install equipment.
4. Check wiring and make connections.
5. Apply power and check operation.

EQUIPMENT LOCATION

Locate the PK-502B within 3 feet (1 meter) of the intercom amplifier. If more than one PK-502B is used, install them all in the same area. Keep the PK-502B away from direct heat or extreme cold. Operating temperature should be between 10°F and 90°F.

WIRING

1. PK-502B is only used for multi-entrance buildings. A system amplifier (i.e. PK-543, PK-543A, PK-205) must be used for the first building entrance
2. The first PK-502B will support the second entrance; each additional PK-502B will support one additional entrance. For example, a three-entrance system will have two PK-502Bs. See *Figure 2* for an example with additional entrances.
3. Wire the suite station common wires to the amplifier, and wire the power transformer according to instructions supplied with the amplifier.
4. If more than one PK-502B is used, run 1 cond. #18 plus 7 cond. #22 between PK-502Bs. Run 3 cond. #18 plus 3 cond. #22 from the last PK-502B to the amplifier.
5. Run 2 cond. #22 twisted shielded (2 cond. #22, plus 2 cond. #22 shielded for PK-205 amplifiers) from each entrance panel to the associated PK-502B.

6. Run multi-cond. #22 cable (use 1 cond. per suite station) from entrance panel to entrance panel, and from one entrance panel to the suite stations, as required by instructions supplied with amplifier.
7. From each entrance door release, run 1 cond. #18 to the PK-502B and 1 cond. #18 to the amplifier.
8. If a Post Office (P.O.) lock adapter is used, run 1 cond. #18 to the amplifier, and 1 cond. #18 to the associated door release from the P.O. lock adapter. In the wiring diagram, the P.O. lock adapter is shown connected to door release #1, but it may be connected to whichever door release is required.

CONNECTIONS

1. Make connections as shown on the wiring diagram for the amplifier being used. (For PK-543 or PK-543A amplifier, refer to *Figures 1, 2 and 3*. For PK-205 amplifier, refer to *Figures 4 and 5*.) If more than two PK-502Bs are used, break the connections going from the PK-502Bs outside the dashed lines to the amplifier and insert the wiring shown inside the dashed lines for any additional PK-502Bs.
2. If a P.O. lock adapter is used, do not connect it until a P.O. lock is obtained from the post office. When ready, make connections as shown on the appropriate wiring diagram.
3. Connect transformer to power source and follow the test procedures in the next section.

TEST

After performing the test required in the amplifier's instructions, do the following:

1. **The PK-502B must first be programmed to operate with the amplifier being used!** Locate the programming switch and set switches as follows.
To use a PK-543, PK-543A or PK-205 amplifier, set switches 2 and 4 **on** and switches 1, 3 and 5 **off**. Failure to set the programming switches properly will result in faulty operation, but will not cause permanent damage to the PK-502B.
2. Perform tests required in the amplifier's instructions, then at each entrance, press a call button and observe the following:
 - a. The buzz tone should be heard at the called suite station.
 - b. If the Entrance Tone is enabled at the amplifier, then the buzz tone should be heard at the entrance panel.

- c. Voice communication should be possible with the called suite station.
 - d. If the door button is pressed at the suite station, the door release should operate. When the door release time has passed, the PK-502B's red test light should be *off*.
3. If the P.O. lock adapter is installed, it may be tested by using a postal service key, or by operating the P.O. lock adapter micro switch if a key is unavailable. The door time delay on the amplifier does not affect the P.O. lock adapter.

TROUBLESHOOTING

If the system fails to operate properly, check all wiring. If the wiring is correct, check the troubleshooting points on the amplifier installation instructions. Then check the following:

No Buzz:

Check wiring to terminal Z1 and Z2. If more than one PK-502B is used, then the entrance #2 buzz wire must connect to all PK-502B's.

No Voice Communication:

Check wiring to terminals S0, S1, S2, M0, M1 and M2.

No Door Release:

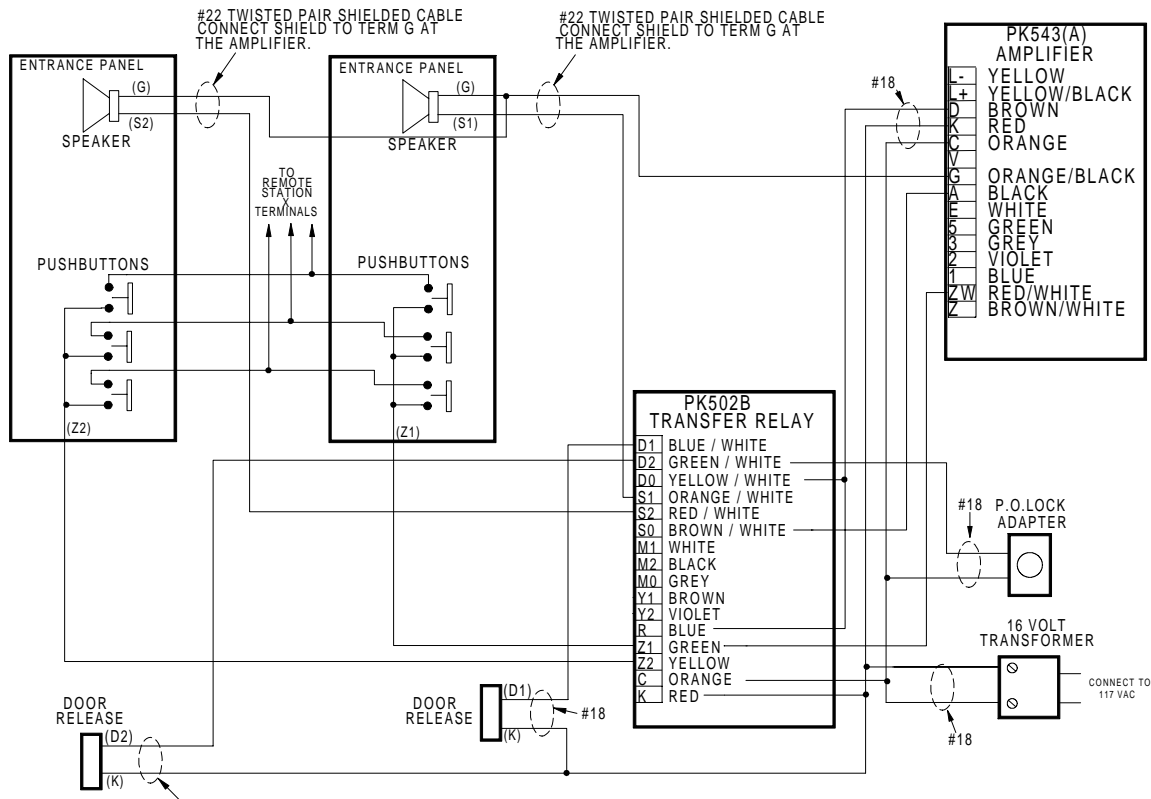
Check wiring to terminals D0, D1 and D2.

The PK-502B has a built-in test circuit. This step should normally be unnecessary, but to test the PK-502B do the following:

1. Set all programming switches *off*.
2. The red test light, located behind the wiring connector, should be *off*. If it is *on*, wait 3 minutes for time out, and it should be *off*.
3. Set programming switch #1 *on*. The red test light should be *on*.
4. Set programming switch #2 *on*. The red test light should be *off*. In a quiet location, a click may be heard as the internal relay operates.
5. Set all programming switches *off*. The red test light should remain on for about 2 minutes. It is not necessary to wait for it to go *off* unless busy light trouble is encountered.
6. Reset programming switches to the desired amplifier setting as shown in *step 1 of the Test Section*. Failure to set the programming switches properly will result in faulty operation.

If the test circuit fails this procedure, replace the PK-502B.

Figure 1—PK-502B Wiring Diagram for the PK-543, or PK-543A and 2 Entrances



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Figure 2—PK-502B Wiring Diagram for the PK-543, or PK-543A and 3 to 8 Entrances

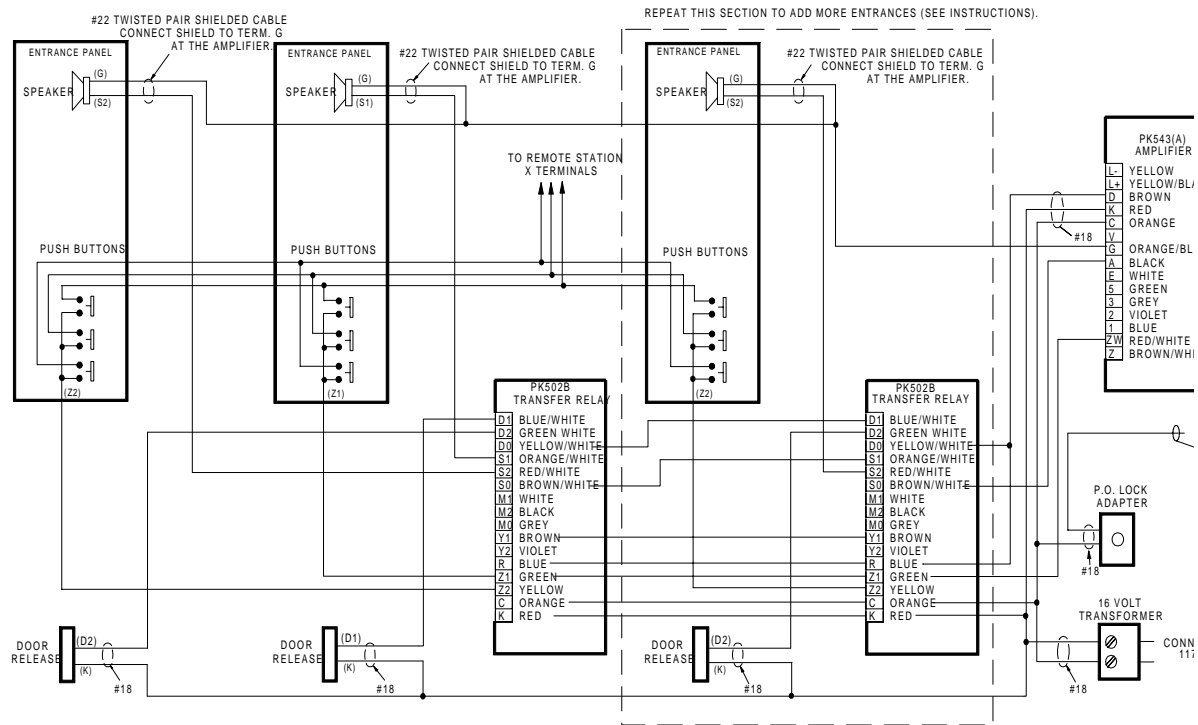


Figure 3—Using a CT-502A Connector to Interconnect the PK-502B and the PK-543A

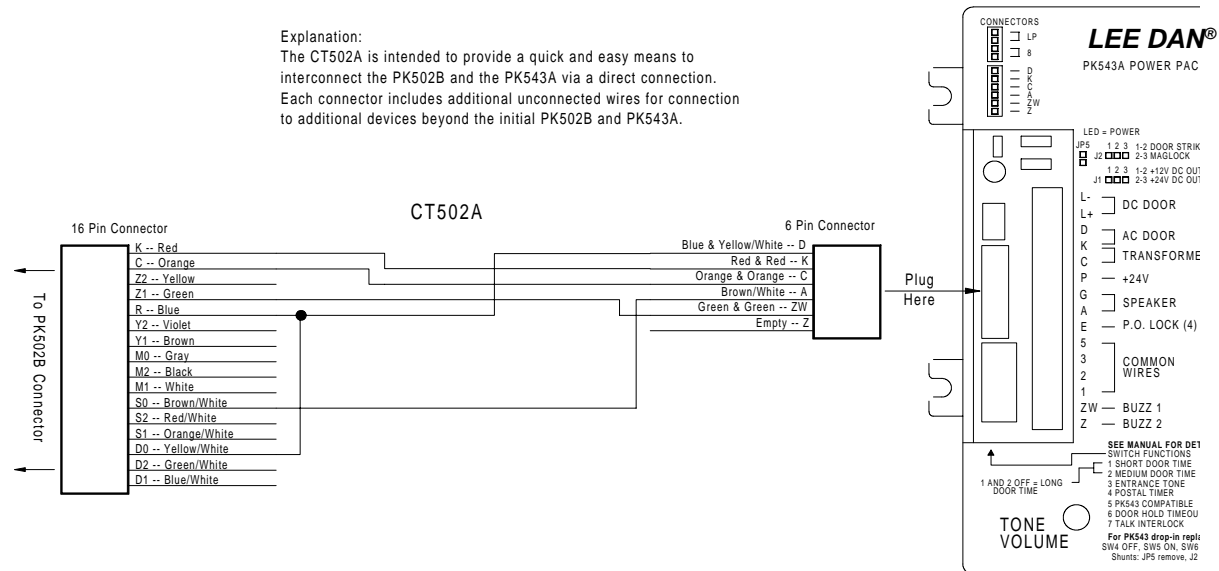
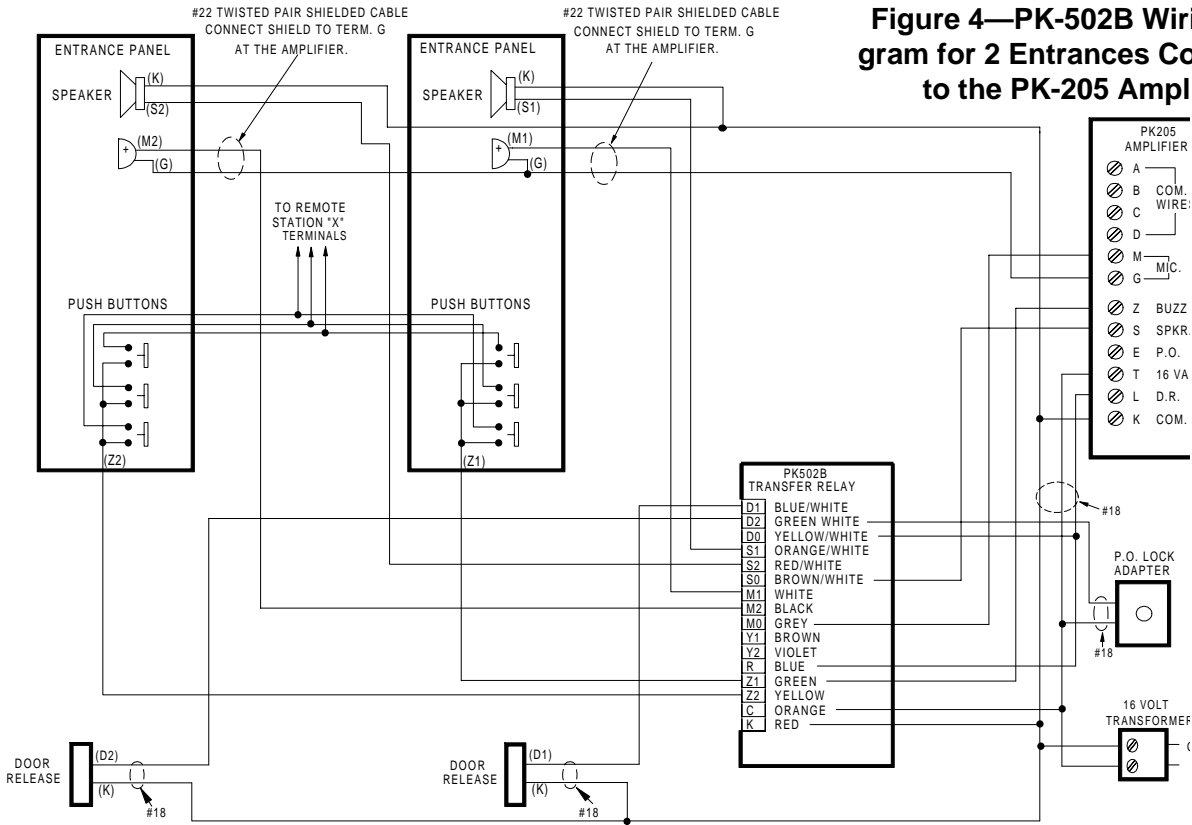


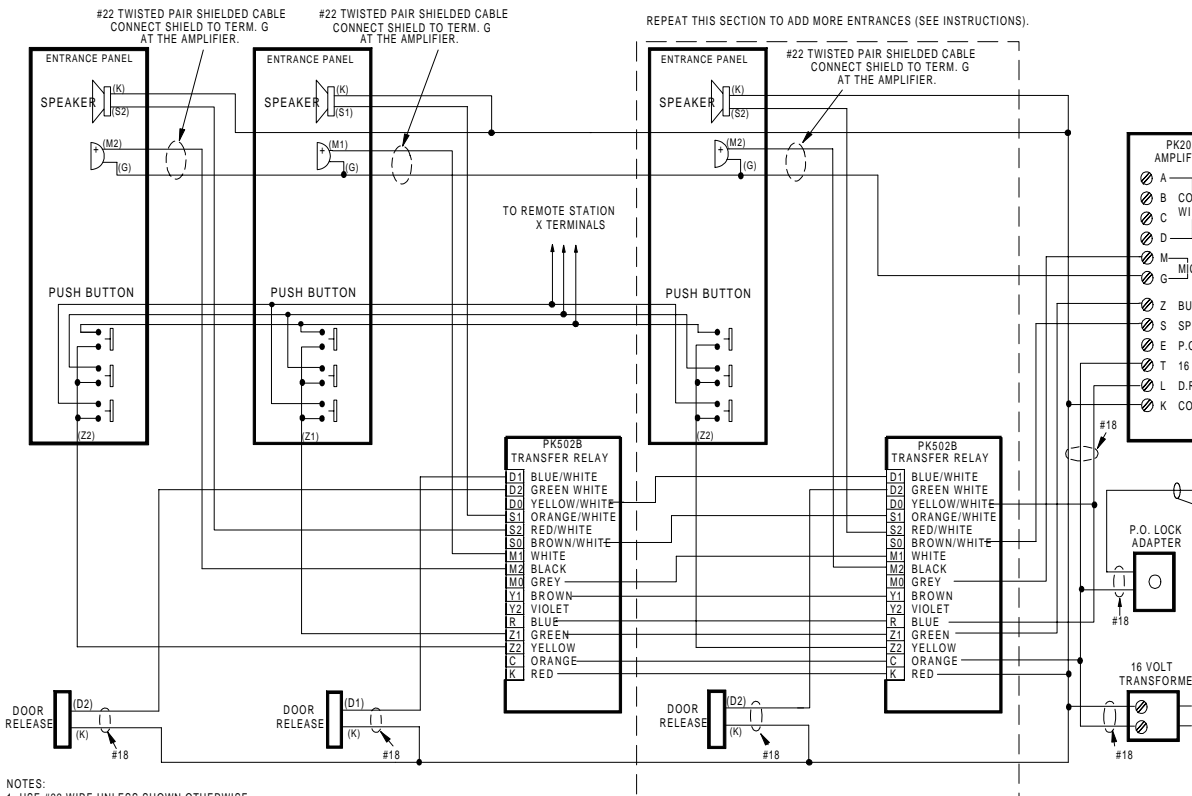
Figure 4—PK-502B Wiring Diagram for 2 Entrances Connected to the PK-205 Amplifier



- NOTES:
1. USE #22 WIRE UNLESS SHOWN OTHERWISE.
 2. USE SHIELDED WIRE FOR MICROPHONES AS SHOWN.
 3. CONNECT SPEAKER COMMONS DIRECTLY TO THE AMPLIFIER.
 4. CONNECT REMOTE STATION COMMON WIRING AS REQUIRED FOR SINGLE ENTRANCE.

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Figure 5—PK-502B Wiring Diagram for 3 to 8 Entrances Connected to the PK-205 Amplifier



- NOTES:
1. USE #22 WIRE UNLESS SHOWN OTHERWISE.
 2. USE SHIELDED WIRE FOR MICROPHONES AS SHOWN.
 3. CONNECT SPEAKER COMMONS DIRECTLY TO THE AMPLIFIER.
 4. CONNECT REMOTE STATION COMMON WIRING AS REQUIRED FOR SINGLE ENTRANCE.

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