



# Installation Instructions for Tek-ENTRY® Series

Apartment Entry Systems with PK205 Amplifier

IL418  
Section A  
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## APPLICATION

The CM193/CM493 Tek-ENTRY® Intercom provides two-way communication between the building entrance and each suite/apartment. Hands-free loudspeaking at the entrance panel and telephonic communication at suite locations provide for easy operation. Controlled entry is permitted by push button operation of the electric door release.

If using the optional LI404B Strobe, see *IL554 LB404B Installation Instructions*. Other optional equipment is available to provide a wide variety of functions, such as delayed door lock operation, post office key door release, and additional entrance panels.

## PROCEDURE

1. Read instructions to determine equipment location and installation methods.
2. Install housings (or boxes) and wiring.
3. Check wiring, connect and install equipment.
4. Apply power and check operation.

## EQUIPMENT LOCATION AND HOUSING INSTALLATION

### *Suite/Apartment Phones (TA205B/C)*

Locate suite phones where convenient for use. To wall-mount, install a single-gang outlet box vertically at the desired location.

### *Entrance/Lobby Panel*

Use an OH190 and OF190 series housing and frame for flush wall mounting. Use an OF190S series frame for surface mounting. Use OH600 series for flush mounting AM613/AM643. Locate the entrance panel where it is sheltered from the weather.

### *PK205 Amplifier*

Install the amplifier inside the entrance panel when using an OH190 series housing. The amplifier must be installed outside the entrance panel when using an OF190S or OH600 series surface frame. Refer to *Connections Section, Item #3* for further details.

## WIRING

### *Suite/Apartment Phones*

Suite phones may be connected in risers as shown in *Figure 1—Block Wiring Diagram* and *Figure 2—Wiring Layout Diagram*. Each riser requires 2 twisted pairs #22 plus one conductor #22 for each suite served by the riser. Maximum length is 400 feet (120 meters). Additional risers may be added as needed. Cable should not be run in the same conduit with (or too close to) electrical wiring, background music wiring, fluorescent lights or other electrical equipment. Leave sufficient cable in each back box to make connections. Number risers at entrance panel to facilitate final connections.

### *Transformer*

Wiring must be 2 conductor #18 cable. Maximum cable length is 80 feet (25 meters) using #18 wire, or up to 200 feet (60 meters) using #14 wire. Route cable away from suite phone wiring.

### *Door Release*

Wiring must be 2 conductor #18 cable. Maximum length is 50 feet (15 meters). To use 24 VAC door release, use a TekTone® SS106 Transformer and connect as in *Figure 3*.

## CONNECTIONS

Before connecting, make certain that wires are free from shorts or grounds. Make connections as shown in *Figure 2*, observing the following:

1. Do not apply power to the transformer primary until the entire system has been installed and all wiring checked for shorts and grounds.
2. Use twisted pair wiring where shown. Do not interchange wires or reverse polarity.
3. Install the PK205 amplifier inside the entrance panel housing when using an OH190 Series housing. If it is necessary to install the amplifier elsewhere due to temperature extremes, or because OF190S Series frame or OH600 Series housing is being used, 2-conductor shielded cable must be used for the entrance panel microphone wiring. Connect the shield to amplifier terminal G. **NOTE:** The amplifier should be located at least 3 feet (1 meter) away from transformers or other electrical devices and must be kept away from direct heat or extreme cold. Operating temperature is 0°C–30°C.

## OPTIONAL ACCESSORIES

Install optional accessories according to the instructions provided.

## FINISH INSTALLATION

1. Install the amplifier in the entrance panel housing (OH190 series only) so that it will not interfere with panel mounted equipment. Directory panel removal and replacement instructions are included with the entrance panel.
2. Install suite phones on boxes. Do not over-tighten screws.
3. Connect power transformer primary to 117 VAC. Observe local electrical codes.

## TEST AND CHECKOUT

At the entrance panel, push each button and determine if the correct suite is called each time. At each suite, pick up the phone to communicate with someone at the entrance panel, and then push the button to check door release operation.

## TROUBLESHOOTING

If the system fails to operate properly, check wiring. If wiring is correct, check the following points.

### Entire System Dead

Check 117 VAC at transformer primary; 16 VAC at transformer secondary, and wiring to amplifier terminals T and K.

### No Talk at Suite

Check wiring to terminals A and B shorted or open; wiring to entrance panel speaker shorted or open. Suite phone may be checked by replacement.

### No Listen at Suite

Check wiring to terminals C and D shorted or open; suite phone defective.

### No Door Operation

Check wiring to door release defective; door button on suite phone.

### No Call Tone

Check wiring to amplifier terminal Z; entrance panel push buttons; wiring to suite phone's terminal X.

### Excessive Hum or Distortion

Check wiring installed too close to electrical wiring or device; amplifier installed too close to transformers or electrical devices; twisted-pair wiring not used as required; or amplifier volume control set too high.

### Radio Interference

Check connection from amplifier terminal G to electrical ground. **NOTE:** This connection is not shown on the wiring diagram, since the situation is not always improved by adding it.

If these check points fail to indicate the problem, there may be an equipment failure. Consult factory or with a qualified service company.

Figure 1—Block Wiring Diagram

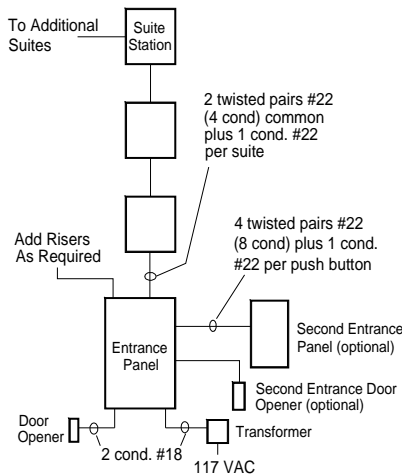


Figure 3—Alternate Door Release Wiring Diagram

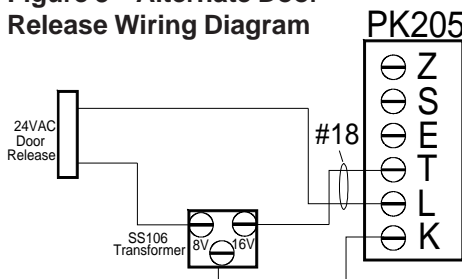
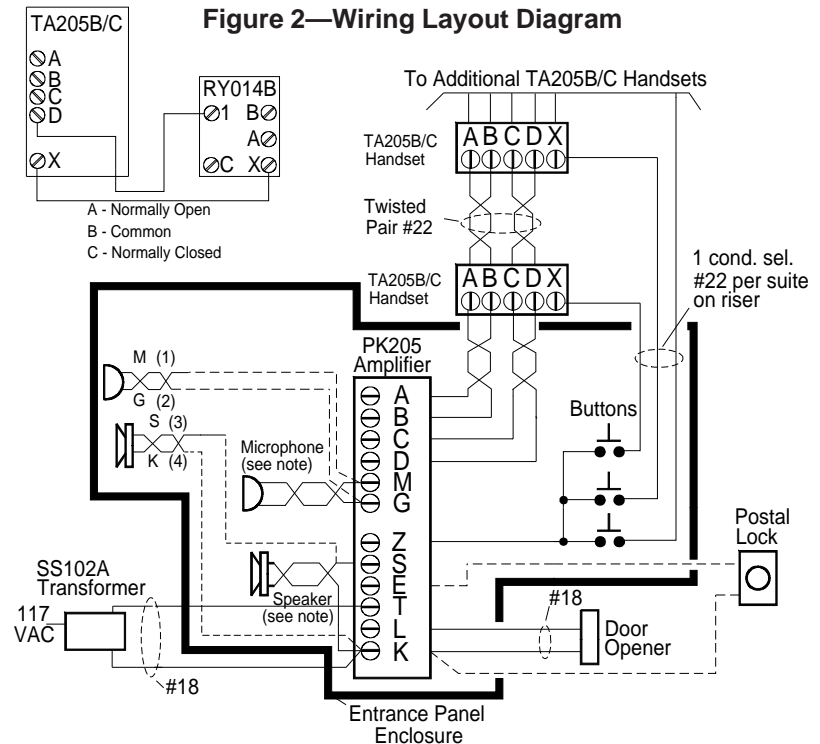


Figure 2—Wiring Layout Diagram



**NOTES:** When using optional TA305 handset at entrance panel, delete microphone and speaker connections shown here. The optional RY014B Auxiliary Relay supplies a momentary closure to operate ancillary devices such as strobes, bells or lights for handicapped tenants, and is located in the apartment station back box.