



## Installation Instructions



**EK804A MASTER RADIO INTERCOM STATION**

### APPLICATION & PLANNING

**System features:**

1. Master-to-remote communication is hands-free at remote when communication is initiated by the master.
2. Room to room communications.
3. Communication with visitors at the entrance from master, inside or patio stations with automatic reply. Chime signal indicates a caller is present.
4. Inside and patio stations can be monitored at any other station.
5. Stations may be turned off for full privacy.
6. Music is available at all patio, inside and master stations from the built-in AM/FM tuner or from an auxiliary music source.
7. Music is automatically silenced during all intercom calls.
8. Auxiliary input is provided.

The master station should be located in the kitchen or other convenient area, leaving sufficient wall clearance to permit easy use of master controls.

Inside stations may be used where communication or door answering is needed - such as bedrooms, garage, or den. Stations should be located on inside walls, free from obstructions and where convenient for operation. (Suggested height from the floor is 4-1/2 feet.) To avoid feedback, stations should not be installed back to back on a common wall or too close to each other or the master.

Door remotes are usually installed on the exterior wall near the entrance, but may be installed on overhang or ceiling.

Read and follow all instructions and use the recommended wire and cable.



## SYSTEM COMPONENTS EQUIPMENT

Model No.	Description
EK804A	Master Radio Intercom Station H:9"; W:16"; D:1-3/4"
IR804A	Inside Remote w/4" x 6" Speaker H:7-1/8"; W:9-1/4"; D:2-1/4"
IR704B	Inside Remote Station H:6-7/8"; W:5"; D:2-3/8"
IR704BD*	Inside Remote Station w/Door Button H:6-7/8"; W:5"; D:2-3/8"
OR601**	Outside Remote Station H:5-1/4"; W:4"; D:1-1/4"
OR603**	Outside Remote w/Pushbutton H:5-1/4"; W:4"; D:1-1/4"
OR604**	Outside Remote w/Lighted Pushbutton H:5-1/4"; W:4"; D:1-1/4"
SS102A	Hardwire Transformer 16 VAC, 10 VA
SS105B	Plug-in Transformer 16 VAC, 10 VA

\* IR704BD requires additional pair #22 for door button.

\*\*Do not use IH-series housing. Use single gang electrical box or ring.

## HOUSINGS & CABLE

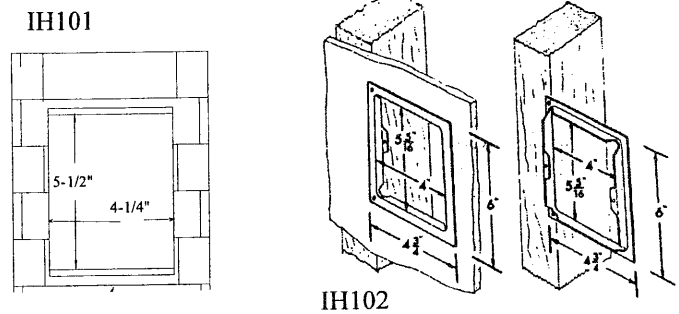
Model No.	Description
IH101	Housing (backbox for IR704B/IR704BD when used w/conduit or flush to a brick wall) H:5-1/2"; W:4"; D:1-3/4"
IH102	Housing (plaster ring for IR704B/IR704BD) H:6"; W:4-3/4"; D:1/2"
IH110R	Housing (plaster ring for IR804A) H:5-7/8"; W:8-1/4"; D:1-3/4"
IH704	Housing (Master Station) H:8-1/8"; W:15-1/4"; D:1-3/4"
IH400A	Desk Cabinet or Surface box (IR704B/IR704BD) H:1-7/8"; W:5"; D:6-7/8"

## INSTALLATION PROCEDURE

1. Read installation instructions for each unit completely to determine component location before proceeding.
2. Install housings as shown in diagrams. Run wire/cable to component locations.
3. Install indoor/outdoor remote stations and master station.
4. Check for shorts or grounds and connect transformer.

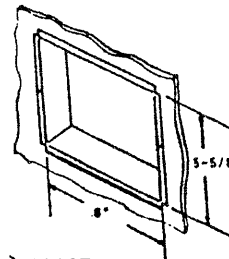
## HOUSING INSTALLATION

1. Locate master where convenient.
2. Master must be kept away from extreme cold or direct heat.
3. Remote stations must not be located on a common wall between rooms or too close to each other or the master.
4. Install housings as shown in Housing Diagrams. Leave at least 2" of wall space (4" for the master) on all sides of the housing. Use standard single gang ring for mounting OR600 series outside stations.

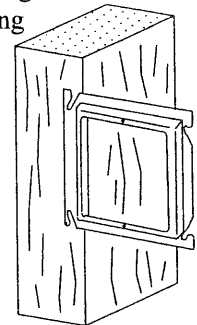


IH102

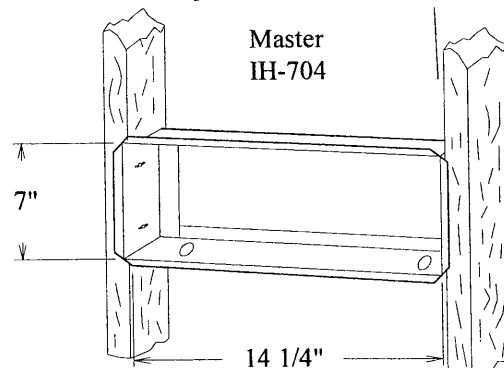
Standard Single Gang Ring



IH110R



Front of housing must be flush with the finished wall



Master  
IH-704

\*Wall cut out sizes indicated for IH101, IH102, IH110R

NOTE: TekTone® warranty is void if this system is installed or used in any manner other than described in this installation instruction sheet. Consult the price list for complete warranty information.

## WIRING INSTALLATION

**Station Wiring:** Run wire as shown on the system wiring layout (Fig. 1), with the following restrictions:

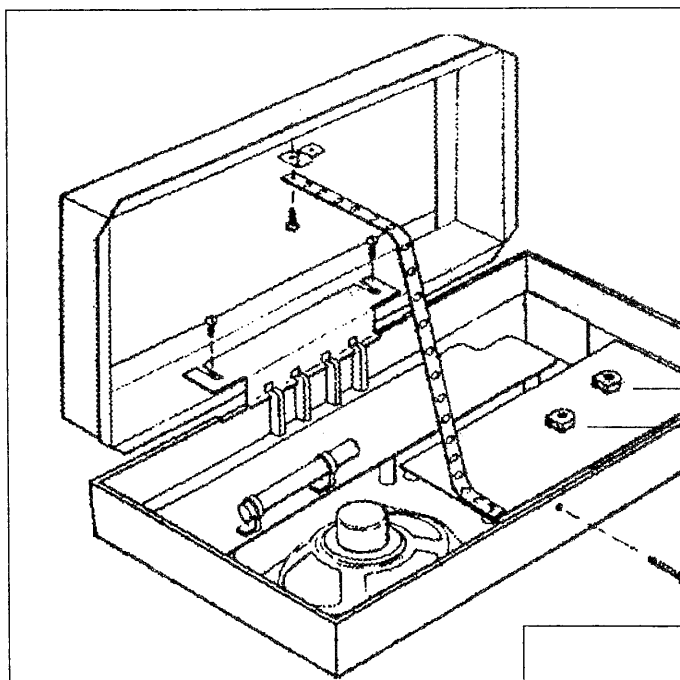
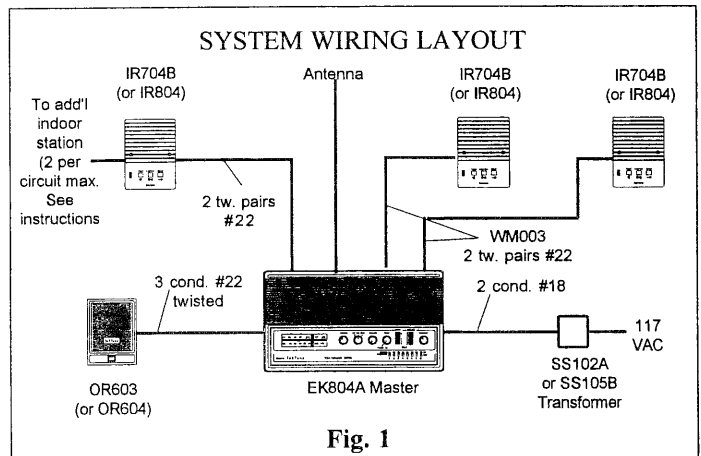
1. Wire from inside station terminal 3 is selective and must be connected to different selective terminal on the master for each station (or pair of stations, if more than 8 are used).
2. Maximum number of stations per cable is 2. (NOTE: Stations connected to the same cable will be selected by the same selector switch at the master.)
3. Maximum cable length is 500 feet for inside stations.
4. Maximum number of inside stations per system is 16, with 10 on at one time.
5. Maximum number of door stations per system is 2. Use a separate cable for each door station. Maximum cable length is 150'.
6. Route cable away from inside station cable, A.C. power wiring, transformers, fluorescent lights, light dimmers and all other electrical devices. All cable must be protected from damage. Shielded cable should be used if A.C. interference may be a problem. If shielded cable is used, connect drain wire to "G" terminal on master.

**Music Input:** Run single conductor shielded #22 wire from the auxiliary music source to the master. If music source has

low impedance output, 2-conductor twisted pair wiring may be used.

**Antenna:** Master includes built-in antennas for AM/FM reception. In some locations, an additional antenna may be needed for proper FM reception. Run six feet of 300 ohm antenna wire from master to attic or crawl space.

**Transformer:** Run 2-conductor #18 wire, from the master to transformer location. If the distance is greater than 50 feet, use #16 wire. Route away from station wiring. (NOTE: The SS105B is a plug-in device; and if used, must be provided with an electrical outlet at an accessible location. If the SS102A is used, it may be installed on the fuse box or other accessible source of 117 VAC. Observe local electrical codes.)



### FINISH INSTALLATION

FASTEN STRAP WITH SCREW  
HOLDING P.C. BOARD AS SHOWN

GAIN  
CHIME

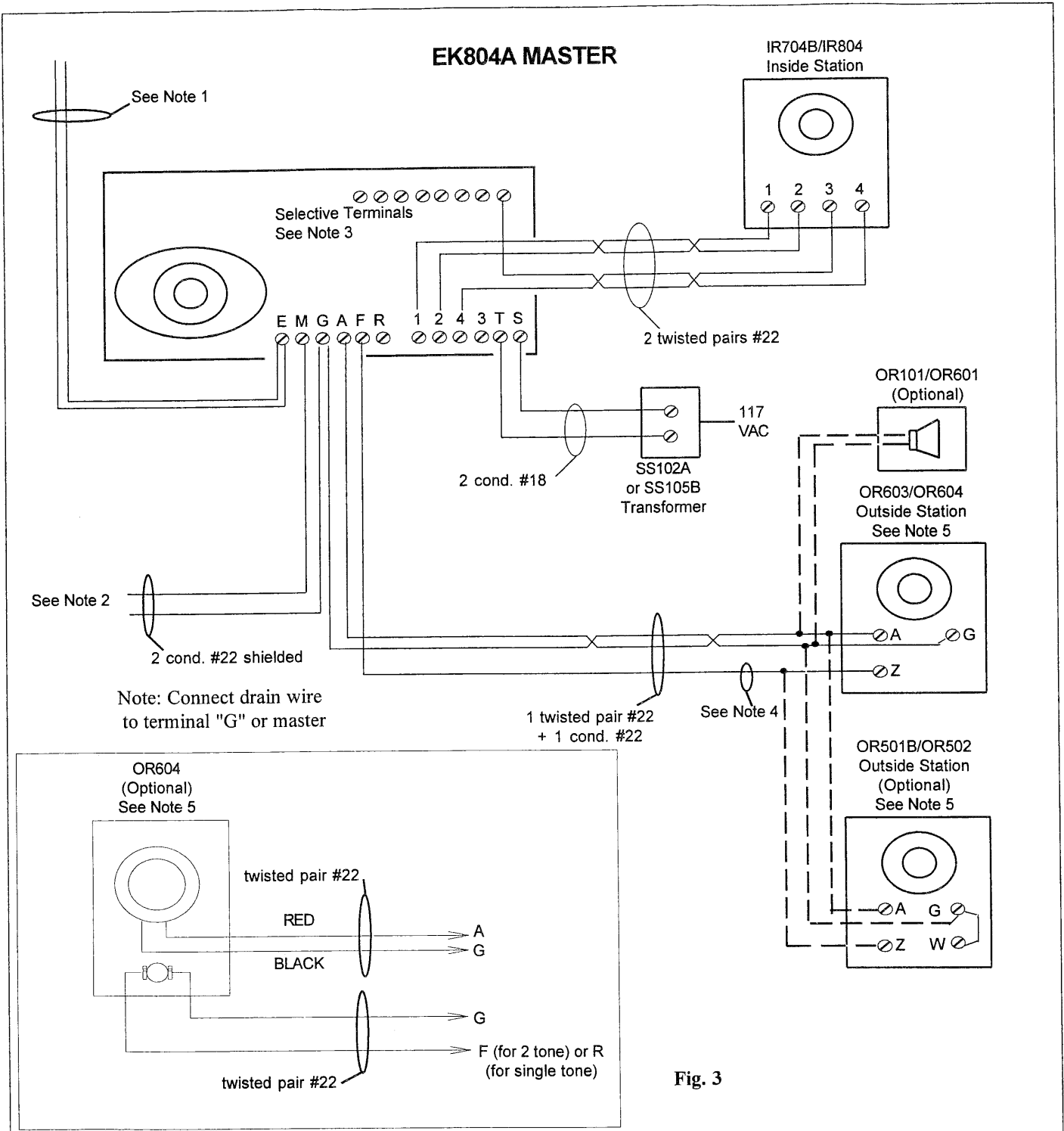
Fig. 2

**Master:** Fasten the master station's hinge bracket to the housing as shown in Fig. 2. Connect the wires to master as shown on the Connecting Diagram (Fig. 3). Use twisted pairs as indicated. Do not reverse polarity. Before connecting, make certain all wires are free from shorts or grounds.

Secure top of master to housing using a screw through the hole provided in the top of the frame (Fig. 2). The mounting brackets may have to be adjusted to make the master fit tight to the wall.

**Transformer:** For SS105B transformer (plug-in type), connect cable from the master to the terminals and plug the transformer into a suitable outlet. If SS102A is used, install on the fuse panel and connect cable from master to transformer screw terminals. (NOTE: Do not use these transformers for chimes or other devices in addition to the EK704A intercom.)

**Remote Stations:** Connect wires as shown on the connecting Diagram (Fig. 3). Use twisted pairs as indicated. Do not reverse polarity. Fasten to housing with screws. Do not overtighten.



**Notes:**

1. Antenna: Use 6' length of 300 ohm antenna wire. Route to attic, if better FM reception is desired.
2. For AUX music input wire as shown. If AUX device is low impedance, twisted pair wiring may be used. Maximum audio signal for input is .5 volt.
3. Terminal 3 on remote station goes to selective terminals on master. Each remote station cable connects to a different selective terminal.
4. For back door or patio station, terminal Z should be

connected to terminal R. For connection to front door station, terminal Z connects to terminal F.

5. For installation of OR604 station, connect red wire to terminal A and black wire to terminal G on EK804A master. These connections provide for speaker operation. For internal chime, make connections as stated above and wire one OR604 push button terminal to F or R (see Note 4) and one push button terminal to G on EK804A master. If desired, push button may be wired to external chime instead of internal.

## OPERATING INSTRUCTIONS

**Master:** To turn the system on, turn the tone control clockwise until a click is heard. Select AUX, AM or FM as desired and tune in the radio station. Adjust the SPEAKER VOLUME control to the maximum, then adjust the RADIO VOLUME to the desired listening level and adjust the TONE control. The SPEAKER VOLUME may now be readjusted to the background music level as desired.

To call an inside station, first make certain that the required station is selected by pushing the associated selector switch to the ON position, then press the inside talk button and talk into the master station in a normal voice. The call will be heard at all inside stations that are turned on and are selected at the Master, and are not being monitored. Release the inside talk button to hear the reply.

**Remote to Remote Communication:** To call or reply from the INSIDE stations, press the INSIDE button and talk in a normal voice. The reply will be heard at all remote stations that are turned on and at the master, if its speaker control is turned on.

To answer the door station(s), press the OUTSIDE button and speak into the master in a normal voice. Release the OUTSIDE button to hear the reply. (The reply from the OUTSIDE stations is automatic and does not require operation of any controls.) When answering the door the radio is automatically silenced, but will resume operation approximately 30 seconds after releasing the OUTSIDE button.

**Door Chime:** To sound the chime, push the button on the door station (if connected). Call tone will be heard at all stations that are turned on.

The system may be left on at all times, if desired, as electrical consumption is low. If left off, no door signal can be heard.

**Monitoring:** To monitor a room, press the monitor button on the remote station (or the master) that is in the desired listening area. (Sounds from that room will be heard at any remote station that is turned on, or at the master, if its speaker control is turned on.) To release the monitor button, push the inside TALK button momentarily. A maximum of three stations may be monitored at one time.

## RADIO OPERATION

**Master:** Set the volume and tone on the master as needed and choose AM, FM or auxiliary station, as desired.

**Note:** The speaker control should be turned on fully when using the intercom, but may be returned to a lower level for music listening, when the conversation is completed.

**Remote Stations:** Adjust volume as desired. The volume should be turned on fully when using the intercom, but may be returned to a lower level when the conversation has been completed.

**Note:** Remote speakers cannot listen to the radio unless turned on at the Master using the associated selector switch.

The radio program will be automatically silenced whenever the intercom is being used. The automatic reply will also silence the radio, but the radio program will return after approximately 30 seconds.

**Privacy:** If the volume control on a remote station or the speaker control on the master is turned off, that station will be private and will not hear the intercom or radio programming, and it will not be possible to monitor that station.

## CHECK OUT

Check each unit in the system for operation in accordance with operating instructions. If there are more than ten stations in the same system, only ten may be turned on at one time. If feedback occurs between stations, then reduce the volume. The intercom gain is pre-set at the factory, but may be readjusted if necessary.

## TROUBLESHOOTING

1. Entire system dead — Check:
  - a) 16 VAC at transformer
  - b) Connections at master terminals T and S
  - c) Wiring from transformer to master
  - d) 117 VAC at transformer primary
2. No sound from master — Check:
  - a) Speaker control turned off
  - b) Monitor button pushed in
3. No sound from remote station — Check:
  - a) Station volume control turned off
  - b) Station monitor button pressed
  - c) Wiring to terminals 3 and 4
  - d) Wiring to master terminals 3 and 4
4. Intercom volume too low — Check:
  - a) Volume control on remote station set too low (Volume should be on fully for intercom use.)
  - b) Master gain control (preset) set too low
5. Squealing or howling on intercom — Check:
  - a) Master gain control (on circuit board in master) set too high
  - b) Stations installed too close together or on a common wall
  - c) Twisted pair wiring not used or pairs interchanged
6. Remote stations unable to talk — Check:
  - a) Station volume control turned off
  - b) Wiring to terminals 1 and 2
  - c) Wiring to master terminals 1 and 2
7. Unable to talk to door — Check:
  - a) Connections to door remote station
  - b) Wiring to master terminals A and G
  - c) Remote station volume controls or master station control set too low
8. Unable to listen to door — Check:
  - a) Wiring to terminals 1 and 2 shorted to terminal 4 or ground
  - b) Remote station volume controls or master station control set too low
9. Unable to monitor remote stations — Check:
  - a) Remote station volume control set too low
10. No call tone at any station — Check:
  - a) Connections at door remote station push button
  - b) Wiring to master terminals G and Z
11. Radio interference on intercom — Check:
  - a) Consult factory for literature
12. FM radio not working — Check:
  - a) Master volume control too low
  - b) FM antenna wire connections (In some areas an additional FM antenna may have to be installed.)
  - c) Remote station or master with monitor button pushed in
  - d) Wiring to terminals 1 and 2
13. AM radio not working — Check:
  - a) Master volume set too low
  - b) AM/FM selector switch
  - c) Wiring to terminals 1 and 2
14. Distortion in all stations — Check:
  - a) Radio volume set too high
  - b) Too many remote stations connected and turned on at the same time
15. Hum or buzz — Check:
  - a) Speaker wiring installed too close to power wiring or electrical boxes.

If these checkpoints fail to indicate the problem, there may be an equipment fault. Check with the factory or with a qualified service company.