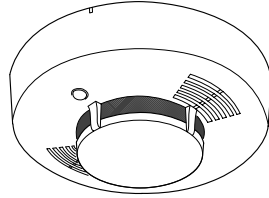


TSD-90A

SUPERVISED DIGITAL SMOKE ALARM



Installation Instructions

Linear

(760) 438-7000 • FAX (760) 438-7043
USA & Canada (800) 421-1587 & (800) 392-0123
Toll Free FAX (800) 468-1340

DESCRIPTION The TSD-90A is a high quality, photoelectric smoke alarm with a built-in supervised digitally-coded radio transmitter. The TSD-90A is supervised to monitor alarms, restorals, low battery, status, tamper, and test conditions. **The TSD-90A transmitter is compatible with any Linear SX format supervised security receiver.**

The TSD-90A sounds a local alarm as soon as smoke is detected. Twenty seconds after the local alarm sounds, the TSD-90A's transmitter will send an alarm signal to the supervised receiver. The alarm signal will be repeated every 20 seconds as long as smoke is still present. A restoral report will be sent when the smoke detection chamber clears.

Supervisory status reports are sent from the TSD-90A every hour.

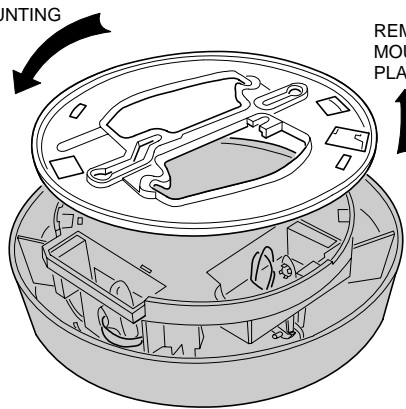
Coding switches are not required or used in the TSD-90A. Each transmitter is pre-coded at the factory to a unique code. With the SX format, there are more than sixteen million codes possible.

The smoke alarm and transmitter are powered by two 9-volt batteries. These batteries are supplied with the transmitter and can power the unit for up to two years. If the battery voltage drops below a preset level, a low battery report is sent to the receiver with any status, alarm, tamper or test transmission.

NOTE: After replacing batteries, press transmitter test button to reset "low battery circuit".

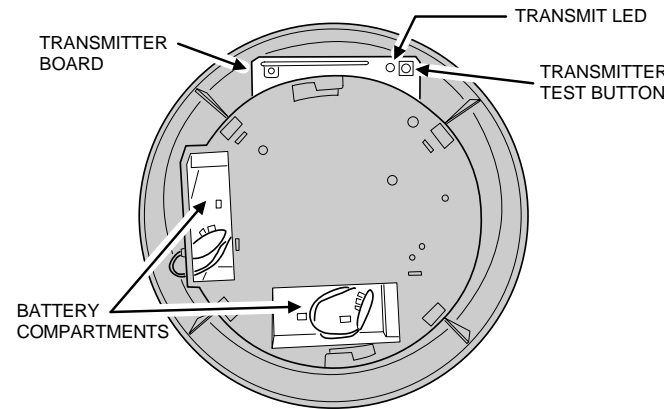
STEP 1 Remove mounting plate. Remove the TSD-90A mounting plate by turning the plate counterclockwise.

TWIST MOUNTING
PLATE TO
UNLOCK

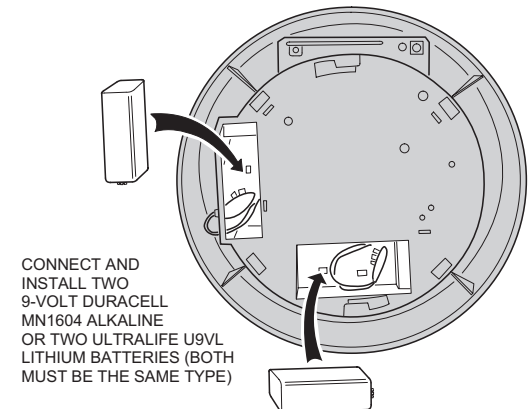


REMOVE
MOUNTING
PLATE

STEP 2 Identify components. Examine the TSD-90A to identify the component locations.

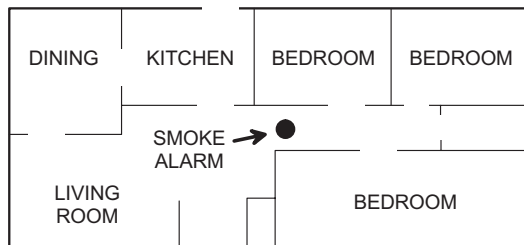


STEP 3 Install batteries. Connect the two 9-volt batteries and place them into battery holding cups.

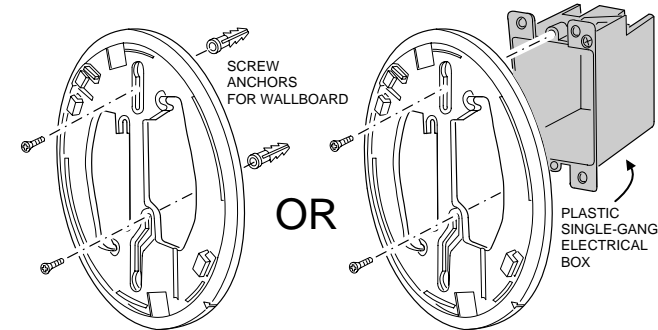


CONNECT AND
INSTALL TWO
9-VOLT DURACELL
MN1604 ALKALINE
OR TWO ULTRALIFE U9VL
LITHIUM BATTERIES (BOTH
MUST BE THE SAME TYPE)

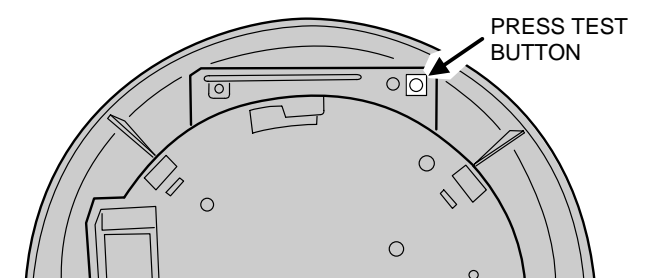
STEP 4 Pick smoke alarm location. Referring to the NFPA standard on the back of this sheet, select a good location to mount the TSD-90A. **Mounting the TSD-90A on foil-backed wallpaper or on a metal single-gang electrical box is not recommended because the radio range will be reduced.**



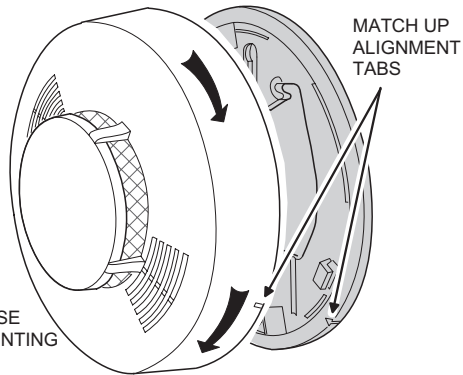
STEP 5 Install mounting plate. Use the two screws and anchors provided to attach the mounting plate to the wall or ceiling. Alternately, the mounting plate can be attached to a plastic single-gang electrical outlet box. For the best radio range, observe the "best signal" label on the bottom of the unit.



STEP 6 Program TSD-90A into receiver and test. Follow the receiver's instructions to set it in a program or learn mode. Press the TSD-90A's transmitter test button (not the smoke alarm's test button) to send a test signal. The transmit LED should light. Verify that the signal was received and that the transmitter was properly entered into the receiver's memory.



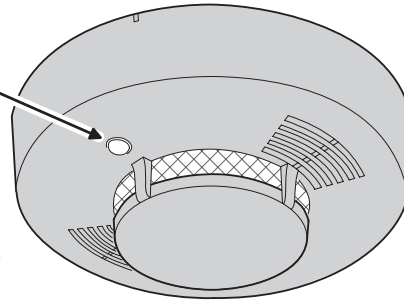
STEP 7 Attach TSD-90A to mounting plate. Match up alignment tabs on alarm and plate. Turn alarm clockwise until it locks in place (tamper switch will click as alarm locks onto plate).



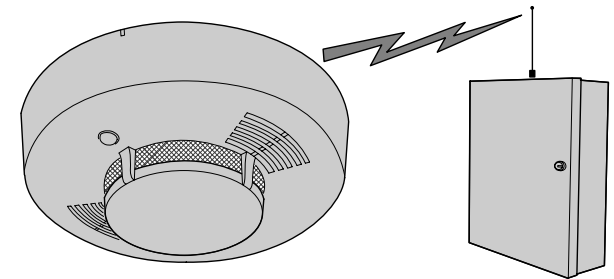
STEP 8 Test smoke alarm. Set the receiver into a test mode. Press and hold the smoke alarm test button. Continue to hold the test button for at least 30 seconds after the noisemaker starts. Verify that the signal was received.

PRESS AND HOLD ALARM TEST BUTTON

HOLD BUTTON FOR AT LEAST 30 SECONDS AFTER NOISEMAKER STARTS TO SEND AN ALARM TRANSMISSION



STEP 9 Complete receiver programming. Refer to the instructions supplied with the supervised receiver to program the TSD-90A as a 24-hour fire alarm. Repeat the previous step to verify that the TSD-90A triggers the correct zone on the receiver and that the correct report is sent to the central station (if the system is monitored).



NFPA 72 STANDARD FOR SMOKE ALARM LOCATION

The TSD-90A should be installed in accordance with National Fire Protection Association (NFPA) Standard 72, which reads as follows:

2-1.1.1 Smoke alarms shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms and on each additional story of the family living unit including basements and excluding crawl spaces and unfinished attics. In new construction, a smoke alarm shall be installed in each sleeping room.

2-1.1.2 For family living units with one or more split levels (i.e., adjacent levels with less than one full story separation between levels), a smoke alarm required by 2-1.1.1 shall suffice for an adjacent lower level, including basements. (Exception: Where there is an intervening door between one level and the adjacent lower level, a smoke alarm shall be installed on the lower level.)

☞ Ceiling mounted smoke alarms should be located in the center of the room or hall, or not less than 4 inches from any wall. When the alarm is mounted on a wall, the top of the alarm should be 4 to 12 inches from the ceiling.

☞ Do not install smoke alarms where normal ambient temperatures are above 100°F (37.8°C), or below 40°F (4°C). Also, do not locate alarm in front of air conditioners, heating registers, or other locations where normal air circulation will keep smoke from entering the detector.

A-2.5.2.1 Smoke Detection - Are More Smoke Alarms Desirable? The required number of smoke alarms might not provide reliable early warning protection for those areas separated by a door from the areas protected by the required smoke alarms. For this reason, it is recommended that the householder consider the use of additional smoke alarms for those areas for increased protection. The additional areas include the basement, bedrooms, dining room, furnace room, utility room, and hallways not protected by the required smoke alarms.

The installation of smoke alarms in kitchens, attics (furnished or unfurnished), or garages is not normally recommended, as these locations occasionally experience conditions that can result in improper operation.

FIRE PREVENTION AND ESCAPE

The purpose of an early warning smoke alarm is to detect the presence of fire in its early stages, and sound an alarm giving the occupants more time to exit the premise before the smoke reaches a dangerous concentration level.

Fires start even with the best of housekeeping and fire prevention procedures. Fire is an unexpected event. Early warning detection alerts occupants in time to act.

KNOW FIRE HAZARDS. No detection device can protect life in all situations. Therefore, safeguards should be taken to avoid such potentially dangerous situations as: smoking in bed, leaving children home alone, cleaning with flammable liquids such as gasoline.

The best fire protection is minimizing fire hazards through proper storage of materials and general good housekeeping techniques. A cluttered basement, attic, or other storage area is an open invitation to fire.

Careless use of combustible materials and electrical appliances, or overloading of electrical outlets are other prime causes in starting fires.

It is most important that explosive and/or fast burning materials be eliminated from the home, if at all possible.

Even after proper precautions have been taken, fires can start. Be prepared.

IN CASE OF FIRE. Leave immediately. Don't stop to pack or search for valuables. In heavy smoke, hold your breath and stay low - crawl if necessary. The clearest air is usually at the floor.

If you have to go through a closed door, carefully feel the door and door knob to see if undue heat is present. If they seem relatively cool, brace your foot against the bottom of the door with your hip against the door and one hand against the top edge. Open it slightly. If a rush of hot air is felt, slam the door quickly and latch it. Unvented fire tends to build up considerable pressure. Be sure all the household realizes and understands this danger.

Use your neighbor's phone or a street fire alarm box. The job of extinguishing the fire should be left to the professionals. Too many unforeseen things can occur when inexperienced people try to extinguish a fire.

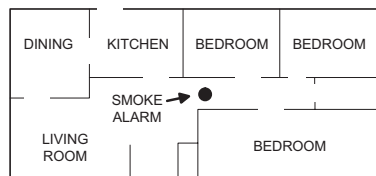
BE PREPARED. Perform fire drills regularly. Use them to assure recognition of an alarm signal. For your protection, simulate different circumstances (smoke in hall, in living room, etc.). Then have everyone react to the situation.

Draw a floor plan and show two exits from each room. Frequently a knotted rope or ladder from a window will serve this purpose. It is important that children be instructed carefully, because they tend to hide in times of crisis.

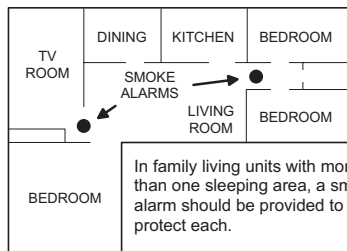
It is imperative that one meeting place outside the home be established. You should insist that everyone meet there during an alarm. This will eliminate the tragedy of someone reentering the house for a missing member who is actually safe.

If you have children and/or invalids residing in your household, you can help your fire department. Most fire departments have window decals available for use in children's or invalid's bedrooms. Properly used, these decals will quickly identify sleeping quarters of these individuals and show the fire department where to look first for members of your household.

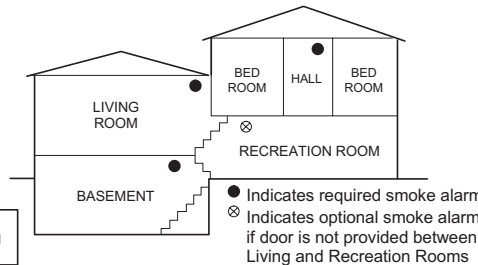
☞ Additional information on Household Fire Warning is available at nominal cost from: The National Fire Protection Association, Batterymarch Park, Quincy, MA 02269. Request Standard No. NFPA 72.



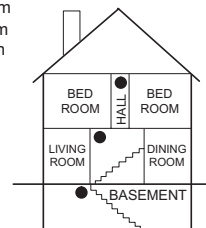
A smoke alarm should be located between the sleeping area and the rest of the family living unit.



In family living units with more than one sleeping area, a smoke alarm should be provided to protect each.



● Indicates required smoke alarm
⊗ Indicates optional smoke alarm if door is not provided between Living and Recreation Rooms



A smoke alarm should be located on each story.

LINEAR LIMITED WARRANTY

This Linear product is warranted against defects in material and workmanship for twelve (12) months. The Warranty Expiration Date is labeled on the product. This warranty extends only to wholesale customers who buy direct from Linear or through Linear's normal distribution channels. **Linear does not warrant this product to consumers.** Consumers should inquire from their selling dealer as to the nature of the dealer's warranty, if any. **There are no obligations or liabilities on the part of Linear corporation for consequential damages arising out of or in connection with use or performance of this product or other indirect damages with respect to loss of property, revenue, or profit, or cost of removal, installation, or reinstallation.** All implied warranties, including implied warranties for merchantability and implied warranties for fitness, are valid only until Warranty Expiration Date as labeled on the product. **This Linear Corporation Warranty is in lieu of all other warranties express or implied.**

All products returned for warranty service require a Return Product Authorization Number (RPA#). Contact Linear Technical Services at 1-800-421-1587 for an RPA# and other important details.

IMPORTANT !!!

Linear radio controls provide a reliable communications link and fill an important need in portable wireless signalling. However, there are some limitations which must be observed.

- * For U.S. installations only: The radios are required to comply with FCC Rules and Regulations as Part 15 devices. As such, they have limited transmitter power and therefore limited range.
- * A receiver cannot respond to more than one transmitted signal at a time and may be blocked by radio signals that occur on or near their operating frequencies, regardless of code settings.
- * Changes or modifications to the device may void FCC compliance.
- * Infrequently used radio links should be tested regularly to protect against undetected interference or fault.
- * A general knowledge of radio and its vagaries should be gained prior to acting as a wholesale distributor or dealer, and these facts should be communicated to the ultimate users.