



AN SPX BRAND

# TIF8800X

## Combustible Gas Detector



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*Owner's Manual*



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# Safety Precautions



**WARNING:** To prevent personal injury,



- Study, understand, and follow all safety precautions and instructions relating to this tool.



- Wear eye protection that meets ANSI Z87.1 and OSHA standards when using the TIF8800X Gas Detector.
- Verify the instrument is functioning correctly by testing it on a known combustible leak source before approaching a suspected hazardous area.



- Charge or replace battery pack in an area known to be non-hazardous. The process of charging or replacing the battery pack could cause a spark and, in an environment containing combustible gas, could lead to an explosion.
- Reinstall the rubber boot and battery cover after replacing the battery pack. Operating the instrument with the rubber boot removed may impair the intrinsic safety of the tool—without the rubber boot in place, there is a possibility of static charge leading to explosion.



- This instrument is not designed to reliably detect carbon monoxide and should not be used as a detector for carbon monoxide.

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# General Description

The TIF8800X is a battery-operated combustible gas detector that provides a ticking signal that increases in frequency as the source of combustible gas or vapor is approached. This tool is ideal for pinpointing the location of combustible gas leaks as small as 1 ppm (gasoline vapor).

## Applications

The TIF8800X may be used in almost any situation where a combustible gas, vapor, or residue needs to be found. Some applications are

- Gas lines and pipes
- Fuel leaks
- Liquid or gas-fired heating systems
- Propane filling stations



**WARNING: The TIF8800X is not designed to reliably detect carbon monoxide. To prevent personal injury, do NOT attempt to use this instrument to detect carbon monoxide.**

## Features:

- Audible “ticking” signal
- Leak strength indicating LEDs
- Adjustable sensitivity
- Cordless operation
- Rechargeable battery pack
- Battery pack status indication
- One-year warranty

## Parts and Controls



*Side View*

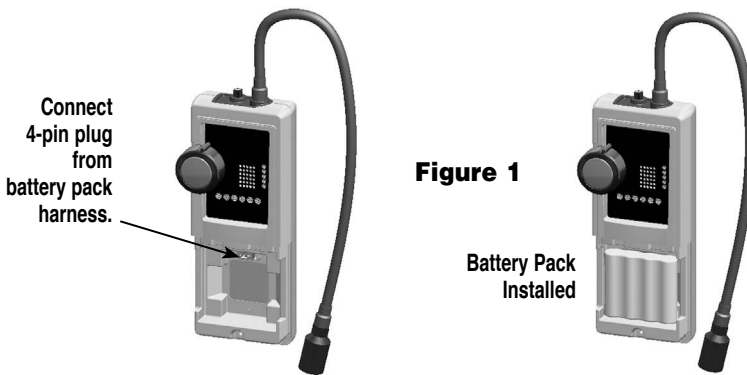
1. ON/OFF switch
2. Instrument status indicators (five LEDs)
3. Probe tip and sensor
4. NiMh battery pack (behind cover)
5. Charger input jack
6. Leak intensity indicators (six LEDs)
7. Sensitivity control

# Setup

## Install the Battery Pack

Before using the TIF8800X, it is necessary to install and charge the supplied NiMh battery pack.

1. Remove the rubber boot from around the tool.
2. Unthread the screw holding the battery cover in place, and remove the cover.
3. Connect the 4-pin plug on the battery pack harness to the tool, and position the battery pack in the chamber. See Figure 1.



4. Reinstall the battery cover and screw.
5. Reinstall the rubber boot.



**CAUTION: To prevent personal injury, always reinstall the rubber boot. Failure to do so may impair the intrinsic safety of the tool—without the rubber boot in place, there is a possibility of static charge leading to explosion.**

*Note: If the boot or the battery cover is lost or damaged, replacement parts are available. Refer to the Replacement Parts section of this manual for details.*

# Setup

## Charge the Battery Pack

Before using the gas detector for the first time, you will need to charge the battery pack in order for the unit to function correctly.

**CAUTION:** To prevent equipment damage,

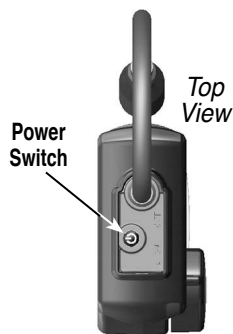
- Charge the battery pack only in temperatures between 32°F and 104°F (0°C and 40°C). Charging outside this temperature range may cause permanent damage to the battery pack.
- Use only the AC adapter that is included with the TIF8800X to charge the battery pack. If a replacement adapter is needed, refer to the *Replacement Parts* section of this manual.

1. Place the power switch in the OFF / CHARGE position. See Figure 2.
2. Plug the AC adapter (included with the TIF8800X) into an appropriate wall outlet, and connect the charger jack to the charge input on the tool. See Figure 3.

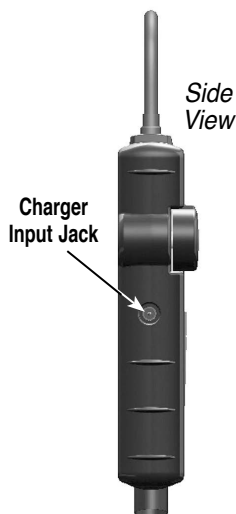
During the charge cycle, the yellow LED (CHARGE) is illuminated. Once charging is complete, the green LED (READY) will also illuminate.

*Notes:*

- Leaving the AC adapter connected to the tool after charging will not damage the tool. However, the tool will not operate until the AC adapter has been disconnected.
- The battery pack is shipped pre-charged but its condition upon arrival to the user is unknown due to parasitic drainage that occurs during storage and shipment. An initial charge cycle is recommended to achieve full performance of the tool. This initial charge will take 2-6 hours depending on the actual condition of the battery pack. Subsequent charges (applied after the red low-battery LED illuminates) will take approximately 15 hours.
- New battery packs need to be conditioned before they're capable of optimum performance. To condition a new battery pack: charge it fully, then operate the tool as normal until the low battery LED illuminates. Repeat this procedure a minimum of 3 to 5 times.



**Figure 2**



**Figure 3**

# Operating Instructions

Once the battery pack is fully charged, the TIF8800X is ready to use.

1. Move to a known, non-contaminated atmosphere.
2. Turn the sensitivity control fully counter-clockwise.
3. Turn the power switch ON. The power light should be illuminated and no sound should be heard. Once the instrument has warmed up for about 30 seconds, a ticking sound will be heard.
4. Rotate the sensitivity control to the highest setting that does not cause the instrument to alarm.
5. Search the general area of the suspected leak.  
When a detectable compound enters the tip, the tick rate speeds up. Along with the increased tick rate, the leak intensity LEDs illuminate from left to right. The larger the concentration, the more LEDs will light up. See Figure 4.
6. In most cases, it is not necessary to adjust the sensitivity of the instrument. However, if the alarm sounds before a leak source can be found, it is likely the air is contaminated with heavy concentrations of gas. You may desensitize the instrument by turning the sensitivity knob counter-clockwise to a lower setting in order to pinpoint the leak location.



Leak Intensity LEDs

**Figure 4**

## Tech Tip



Joint compounds used on newly installed piping may contain combustible solvents and could cause a false alarm.



# Instrument Status Indicators



Instrument  
Status  
Indicators

There are five (5) instrument status indicators, or LEDs, on the front of the instrument. The indicators are explained below, from top to bottom.

**Power Indicator (red):** This LED illuminates when the instrument is ON.

**Low Battery (red):** This LED illuminates when a battery charge is needed. The battery pack must be fully recharged before the tool is used again.

**Charge (yellow):** This LED illuminates during the recharge process.

**Ready (green):** This LED illuminates when the charge cycle is complete.

A fully charged battery pack provides up to three (3) hours of continuous operation.

**Fault (red):** This LED illuminates only if there is a problem with charging the battery pack. Refer to the *Troubleshooting* section of this manual.

# Maintenance

## General Care

- Do not allow dirt or grease to obstruct the charger input jack on the side of the instrument.
- Use only a soft cloth dampened with mild soap to clean the body of the tool.
- This tool is a precision electronic device. Avoid extreme mechanical shock, exposure to strong magnetic fields, and extreme temperatures. Never immerse the tool into a liquid.

## Battery Pack

The unit is equipped with a nickel–metal–hydride (NiMh) battery pack.

If the low battery LED is ON, the battery pack needs to be charged before the tool is used again. Keeping the battery pack charged is important for the tool to function correctly, especially when detecting very small leaks.

## Charging the Battery Pack

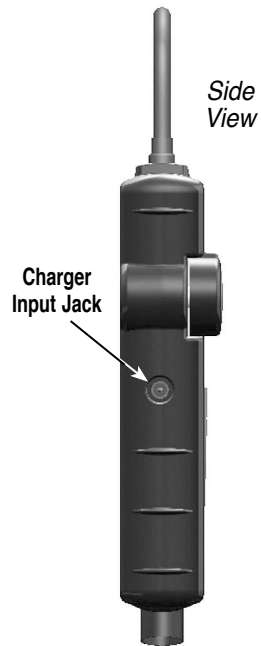
**CAUTION: Charge the battery pack in temperatures ranging between 32°F and 104°F (0°C - 40°C). Charging outside this temperature range may cause permanent damage to the battery pack.**

1. Place the power switch in the OFF / CHARGE position.
2. Plug the AC adapter into an appropriate wall outlet, and connect the charger jack to the tool.

During the charge cycle, the yellow LED (CHARGE) is illuminated. Once charging is complete, the green LED (READY) will also illuminate.

### Notes:

- *Leaving the AC adapter connected to the tool after charging will not damage the tool. However, the tool will not operate until the AC adapter has been disconnected.*
- *Charges done after the low-battery indicator (red LED) illuminates take approximately 15 hours.*



**Figure 5**

# Maintenance

## Disposal of Batteries



Batteries are recyclable. Do not incinerate or expose batteries to open flames. Dispose of batteries according to local, state, and federal regulations.

## Sensor

If the tool does not sound an alarm in the presence of a known leak, the sensor may need to be replaced. Refer to *Replacement Parts* for the sensor part number.

1. The sensor is located on the end of the probe tip. Place the power switch in the OFF / CHARGE position, grip the end of the probe tip and pull the sensor straight out of the sensor socket.
2. Align the pins in the new sensor with the receptacles in the sensor socket, and push the sensor into place.
3. Test the tool in the presence of a known leak. If it still does not alarm, immediately discontinue using the tool and return it to TIF for service. Refer to the *Warranty* section of this manual.

## Specifications

|                            |                                               |
|----------------------------|-----------------------------------------------|
| Power Supply:              | 4.8V NiMH rechargeable battery pack           |
| Continuous Operation Time: | Up to 3 hours                                 |
| Battery Pack Lifetime      | Approximately 200 charge cycles               |
| Warm-up Period:            | Approximately 30 seconds                      |
| Duty Cycle:                | Continuous; no limitation                     |
| Response Time:             | Instantaneous                                 |
| Sensitivity:               | Variable; as low as 1 ppm (gasoline vapor)    |
| Operating Environment:     | 32°F to 125°F (0°C to 52°C)                   |
| Dimensions:                | 8 in. x 3 in. x 1.8 in. (20.3 x 7.6 x 4.6 cm) |
| Weight:                    | Approximately 16 ounces (454 grams)           |
| Probe Length               | 15 in. (38 cm)                                |

## Replacement Parts

Several components of the unit are consumable and will eventually require replacement. Additionally, optional accessories for the unit are available through your dealer. Specify the part number below to ensure obtaining the correct part.

**⚠ CAUTION: Use only the TIF8809 battery pack in this instrument. Substitution of components may impair the intrinsic safety rating of the tool and cause personal injury.**

|          |                                          |
|----------|------------------------------------------|
| TIF8801  | Sensor                                   |
| TIF8802  | AC Adapter (battery charger)             |
| TIF8802A | AC Adapter (Australian style)            |
| TIF8802E | AC Adapter (European style)              |
| TIF8802J | AC Adapter (Japanese style)              |
| TIF8808  | Battery Cover                            |
| TIF8809  | Nickel Metal Hydride (NiMH) Battery Pack |
| TIF8818  | Rubber Boot                              |

## Warranty

*This product has been produced to provide unlimited service. Should it become inoperable after the user has performed the recommended maintenance, a no-charge repair or replacement will be made to the original purchaser. This applies to all repairable units that have not been damaged or tampered with. The claim must be made within ONE YEAR of the date of purchase.*

*The following items are consumables and are not covered under warranty :*

*Sensor  
Battery Pack  
Charger*

*Damage caused by the user's failure to perform the required maintenance on this tool will not be covered under warranty. Damage caused by abuse or misuse of this tool is not covered under warranty.*

### Repair Information

Before returning the instrument for repair, carefully review the *Troubleshooting* section of this manual to determine if the problem can be solved.

# Troubleshooting

| Symptom                                                               | Possible Cause                                                      | Solution                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------------------------------------------------------|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Power indicator LED does not light; tool is non-responsive.           | 1) Battery pack not charged.<br>2) AC adapter is connected to tool. | 1) Connect AC adapter to tool and charge battery pack. Refer to <i>Setup</i> for instructions.<br>2) Remove AC adapter.                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Fault LED lights during charging.                                     | 1) Problem with battery pack.<br>2) Internal failure.               | 1) Disconnect AC adapter from tool and wait one hour for battery pack to cool. Do not use tool or attempt to charge battery pack during this time. After one hour, reconnect AC adapter to tool. If red LED (fault) illuminates again, replace battery pack.<br>Refer to <i>Replacement Parts</i> section of this manual.<br>2) If battery pack is not the problem, discontinue using tool and return it for service.<br><b>⚠ CAUTION: This tool should be serviced by TIF only. Failure to do so may impair the intrinsic safety of the device.</b> |
| Tool does not seem operable; does not alarm in the presence of leaks. | 1) Sensor failed.<br>2) Internal failure.                           | 1) Verify unit on known combustible gas leak source. If no response, replace sensor. Refer to <i>Maintenance</i> for instructions.<br>2) If replacing sensor does not solve problem, immediately discontinue using tool and return it for service.<br><b>⚠ CAUTION: This tool should be serviced by TIF only. Failure to do so may impair the intrinsic safety of the device.</b>                                                                                                                                                                    |

## Troubleshooting (continued)

| Symptom                                                                                                                              | Possible Cause                           | Solution                                                                                                                                                           |
|--------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Power indicator LED does not light; tool is non-responsive.                                                                          | 1) Battery pack not charged.             | 1) Connect AC adapter to tool and charge battery pack. Refer to <i>Setup</i> for instructions.                                                                     |
|                                                                                                                                      | 2) AC adapter is connected to tool.      | 2) Remove AC adapter.                                                                                                                                              |
| Battery life is less than 3 hours of operation.                                                                                      | 1) Battery pack needs to be conditioned. | 1) To condition battery pack: charge it fully, then operate tool as normal until the low battery LED illuminates. Repeat this procedure a minimum of 3 to 5 times. |
| Tool does not operate and battery pack charge cycle will not complete (24+ hour charge applied and green light does not illuminate). | 1) Battery pack not connected.           | 1) Follow instructions in the <i>Setup</i> section of this manual to check that the battery pack connection is secure.                                             |
|                                                                                                                                      | 2) Bad battery pack.                     | 2) Replace battery pack.<br><br>Refer to <i>Replacement Parts</i> section of this manual.                                                                          |

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