



# Combustible Gas Detectors

OWNER'S MANUAL  
MANUAL DEL PROPRIETARIO  
MANUEL DE L'UTILISATEUR  
BEDIENUNGSANLEITUNG

**Covers:** **TIF8800** Combustible Gas Detector  
and  
**TIF8800A** Combustible Gas Detector  
w/Visual Leak Size Indicators

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## GENERAL INFORMATION

The 8800 tools are broad-band, battery operated, solid state electronic combustible gas detectors.

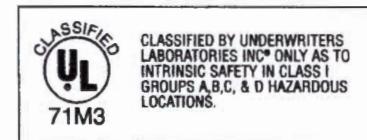
The instruments provide a "geiger counter" ticking signal which increases in frequency as the source of combustible gas or vapor is approached. They are excellent for pinpointing the location of combustible gas leaks as minute as 5 PPM. These units include a carrying case, rechargeable batteries and recharger.

The units are ideal for pinpointing known leaks, checking for leaks and verifying safety of potentially hazardous locations.

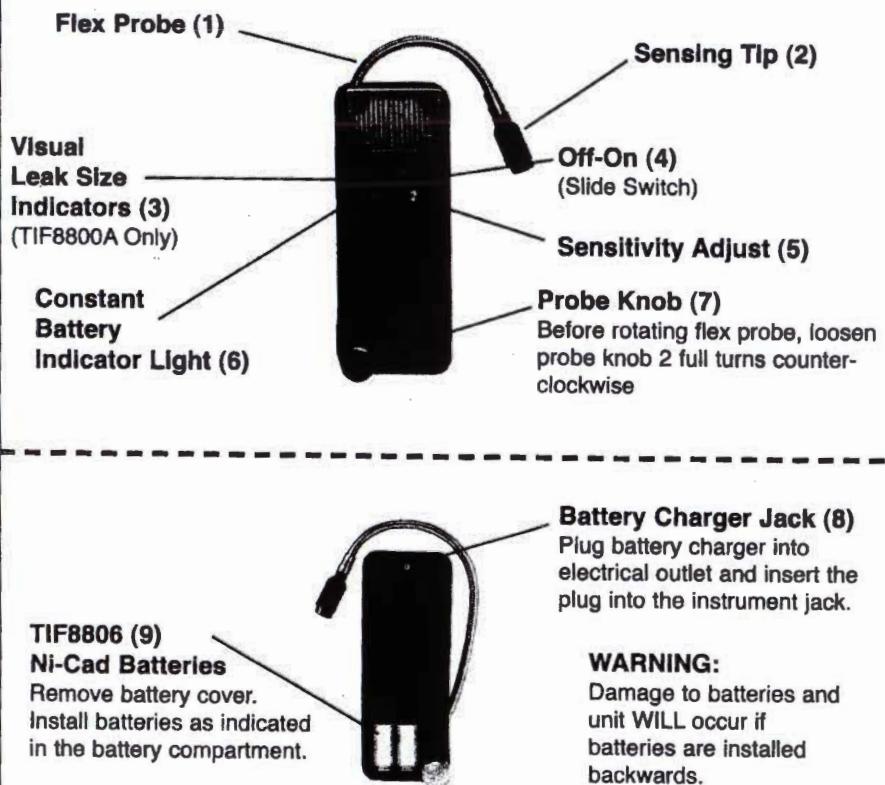
**NOTE:** This manual covers both the TIF8800 and TIF8800A models. The only difference is the addition of six (6) Visual Leak Size Indicators on the TIF8800A. Operation and use is identical; any specifics for the TIF8800A only, are identified as such within the text.

### ATTENTION:

Batteries must be charged for 24 hours before initial use. If this is not done, the unit will not function properly.



## PARTS AND CONTROLS



### Español

- (1) Sonda flexible
- (2) Punta sensora
- (3) Indicadores visuales del tamaño de la fuga (TIF8800A solamente)
- (4) Off-On (interruptor deslizante)
- (5) Ajuste de la sensibilidad
- (6) Luz indicadora constante de la batería
- (7) Perilla de la sonda. Antes de girar la sonda flexible afloje la perilla de la sonda con 2 vueltas completas en sentido contrario a las manecillas del reloj.
- (8) Enchufe del cargador de la batería. Conecte el cargador de la batería al tomacorriente e inserte el enchufe en la toma del instrumento.
- (9) TIF8806 Baterías Ni-Cad. Quite la tapa de la batería. Instale las baterías en la forma que se indica en el compartimento para las baterías.

### Français

- (1) Sonde flexible
- (2) Pointe de détection
- (3) Témoin lumineux de niveau de fuite (TIF8800A seulement)
- (4) Marche-arrêt (Interrupteur d'alimentation à glissière)
- (5) Réglage de la sensibilité.
- (6) Témoin de charge de pile
- (7) Bouton de la sonde. Avant de tourner la sonde flexible, faites deux tours complets dans le sens contraire des aiguilles d'une montre pour dévisser le bouton.
- (8) Prise du chargeur de piles. Branchez le chargeur de piles à la prise d'alimentation et insérez la fiche dans la prise de l'appareil.
- (9) TIF8806 Piles au Cadmium-Nickel Retirez le couvercle du logement des piles. Installez les piles en suivant les indications figurant dans le logement.

### Deutsch

## FEATURES

- Audible "geiger counter" signal.
- Visual Leak Size Indicators (TIF8800A only)
- Adjustable sensitivity
- Cordless operation
- Fast warm-up
- Low battery indicator
- Made in the U.S.A.
- One Year Warranty

## SET-UP

Before using your new instrument, it is necessary to install and charge the supplied Ni-Cad batteries. NOTE the Warnings and Cautions below.

1. Install batteries as indicated in the diagram on page 3- pay careful attention to the polarity indication.
2. Place the unit in a non-hazardous location and plug the charger into an electrical outlet.
3. Insert the plug into the jack on the back of the instrument.
4. Initially it is necessary to charge the batteries for 24 hours. Subsequent recharges can normally be done in approximately 12-16 hours.

## PRODUCT WARNINGS

### Caution:

- The unit should always be switched on and calibrated in non-contaminated atmosphere in order to insure correct operation and indication.
- Approach suspected hazardous areas with the unit on.
- Always check the instrument on a known combustible leak source before using.

### WARNING!

- Batteries must only be changed or recharged in an area known to be non-hazardous. To avoid damage to the recharger or unit, make sure the recharger plug is completely plugged into the unit and the batteries are installed in the correct orientation.
- After the automatic warm-up period, turn the sensitivity adjustment knob from left to right(full clockwise rotation). A change in the ticking rate should be heard ascending from a ticking sound to a siren. If this does not occur, do not use the instrument! Recharge the batteries and/or replace sensing element. Repeat the above described test procedure. If this does not correct the problem, the instrument should be returned for repair.

## OPERATING INSTRUCTIONS



Once the batteries are fully charged, the instrument is ready to use (before use, carefully read and understand the Warnings and Cautions on the previous page).

1. Turn the sensitivity control fully counter clockwise.
2. Turn the instrument on in a non-contaminated atmosphere by moving the slide switch to the "ON" position. The power light should be lit. No sound will be heard.
3. After the automatic warmup period is completed, about 30 seconds, a ticking sound will be heard.
4. Adjust the sensitivity control until a rapid ticking signal is heard (Hi sensitivity).
5. The frequency of the tick is an indication of the sensitivity. Rotate the knob until the ticking is rapid, for Hi sensitivity, or slow, for Lo sensitivity.

**NOTE:** If a steady tick rate cannot be maintained, it is indicative that the batteries may need to be recharged.

6. Search the general area of the leak. When a detectable compound enters the tip, the tick rate speeds up.

**TIF8800A Only-** In conjunction with the increased tick rate, the LEDs will light from left to right as a combustible is detected. The larger the concentration, the more LEDs will light.

7. In most cases, it will not be necessary to adjust the sensitivity of the unit. However, if the siren sounds before a possible leak source can be found, it is likely that air is contaminated with heavy concentrations of gas. Therefore, you may desensitize the instrument by turning the control knob counterclockwise to Lo sensitivity (slow ticking).
8. If you are searching for extremely small leaks, make certain the control knob is in the Hi sensitivity position (rapid ticking).

**NOTE:** Occasionally, on newly installed piping, a joint compound may be used which contains a combustible solvent. This could result in an erroneous signal.

## APPLICATIONS



The 8800 series are general purpose combustible gas detectors which 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 in marine bilges
- Exhaust and fuel leaks
- Liquid or gas fired heating systems
- Propane filling stations
- Check manholes for safety

## APPLICATIONS



**Note:** Although the unit will respond to high levels of Carbon Monoxide (above 2000ppm), it should not be used as a detector for this gas in normal room or working atmospheres. It can, however, be used to pinpoint a leak as described in the Operating Instructions.

## MAINTENANCE



### BATTERY PERFORMANCE

The unit is equipped with a low battery indicator. When the instrument is turned on, the indicator light should be lit. If the light is not on, then recharge the batteries, using the recharger.

To install batteries, unscrew and remove the battery cover (see figure on page 3). Be sure to install batteries as indicated in the battery compartment. Before operating the instrument, new batteries must be initially charged for 24 hours.

### TO RECHARGE BATTERIES

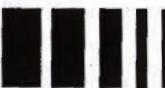
With the tool switch off, plug your recharger into the jack on the back of the instrument and plug it into an electrical outlet in a non-hazardous area; See Warnings and Cautions on p.4.

## SPECIFICATIONS



For the SAFT and NEA NiCad batteries:	(2) 2.4v/.75 ampere hour
Continuous Operation Time:	Approximately 4 hours
Power Supply:	4.8v; Ni-Cad Rechargeable batteries
Sensitivity:	Variable, as low as 5ppm (gasoline)
Operating Temperature Range:	32° to 125°F (0° to 52°C)
Duty Cycle:	Continuous; no limitation
Response Time:	Instantaneous
Warm-Up Time:	Approximately 30 seconds
Weight:	16 ounces (450 grams)
Dimensions:	8" x 3" x 1.8" (20.3 x 7.6 x 4.6 cm)
Probe Length:	15" (38 cm)

## WARRANTY AND REPAIR



### Limited Warranty and Repair/Exchange Policy

This instrument has been designed and manufactured to provide unlimited service. Should the unit be inoperative, after performing the recommended maintenance, a no charge repair or replacement will be made to the original purchaser if the claim is made within one year from the date of purchase. This warranty applies to all repairable instruments that have not been tampered with or damaged through improper use.

This warranty does not cover batteries, or any other materials that wear out during normal operation of the instrument.

### Returning Your Unit For Repair

Before returning your instrument for repair please make sure that you have carefully reviewed the **Unit Maintenance** section of this manual to determine if the problem can easily be solved.

If the instrument still fails to work properly, call the repair facility phone number on the back cover of this manual. Repaired or replaced tools will carry an additional 90 day warranty. For more information call (800) 327-5060.

## ESPAÑOL

### DETECTORES DE GASES COMBUSTIBLES

#### MANUAL DEL PROPIETARIO

Cubre:	TIF8800	Detector de Gases Combustibles y
	TIF8800A	Detector de Gases Combustibles con Indicadores Visuales del Tamaño de la Fuga

#### DESCRIPCION GENERAL

La serie 8800 está constituida por detectores de gases combustibles electrónicos de estado sólido, de banda ancha y alimentados por batería.

El instrumento emite una señal de «contador geiger» que aumenta su frecuencia a medida que se acerca a la fuente de gas combustible o vapor. Son excelentes para indicar la ubicación de fugas de gases combustibles tan diminutas como 5 PPM (partes por millón). Estas unidades incluyen una maleta para transportarlas, baterías recargables y un cargador.

Las unidades son ideales para localizar fugas conocidas, comprobar la existencia de fugas y verificar la seguridad de los lugares potencialmente peligrosos.

NOTA: Este manual cubre los modelos TIF8800 y TIF8800A. La única diferencia es la adición de seis (6) Indicadores Visuales del Tamaño de la Fuga al TIF8800A. Su operación y uso son idénticos; en el texto se identificarán las especificaciones que son del TIF8800A solamente.

### ATENCION:

Las baterías se deben cargar durante 24 horas antes de usarlas por primera vez. Si no se hace esto, la unidad no funcionará de forma apropiada.

### ¡ADVERTENCIA!

Se dañarán las baterías y la unidad si estas se colocan al revés.

### PIEZAS Y CONTROLES P.3

#### CARACTERISTICAS

- Señal audible tipo «contador geiger»
- Indicadores visuales del tamaño de la fuga (TIF8800A solamente).
- Operación sin cordón
- Calentamiento rápido
- Indicador de batería baja
- Hecho en los EE.UU.
- Un año de garantía

### MONTAJE

Antes de usar su nuevo instrumento, es necesario instalar y cargar las baterías Ni-Cad que se suministran. **LEA** las Advertencias y Precauciones de abajo.

1. Instale las baterías en la forma indicada en el diagrama de la página 3; preste mucha atención a la indicación de polaridad.
2. Coloque la unidad en un lugar que no ofrezca peligro y conecte el cargador a un tomacorriente.
3. Inserte el enchufe en la toma que está en la parte de atrás del instrumento.
4. La primera vez que se usa es necesario cargar las baterías durante 24 horas. Las recargas subsiguientes se pueden hacer normalmente durante un tiempo aproximado de 12 a 16 horas.

### ADVERTENCIAS DEL PRODUCTO

#### Precaución:

- Siempre se debe encender y calibrar la unidad en una atmósfera no contaminada para asegurar una operación e indicación correctas.
- Acérquese a las áreas donde se sospecha que hay peligro con la unidad encendida.
- Verifique siempre el instrumento en una fuente conocida de fugas de gases combustibles antes de usarlo.

### ¡ADVERTENCIA!

- Las baterías sólo se deben cambiar o recargar en un área que se sabe que no es peligrosa. Para evitar daño al cargador o a la unidad, asegúrese de que el enchufe del cargador está completamente conectado a la unidad y que las baterías están instaladas en el sentido correcto.
- Después del período de calentamiento automático, gire la perilla de ajuste de sensibilidad de izquierda a derecha (giro total en sentido de las manecillas del reloj). Se debe oír un cambio ascendente en el ritmo del sonido, pasando de un sonido intermitente al de una sirena. Si esto no sucede, ¡no use el instrumento! Recargue las baterías y/o sustituya el elemento sensor. Repita el procedimiento de prueba descrito previamente, y si esto no corrige el problema, se debe devolver el instrumento para que sea reparado.



**Miramar, FL**  
**Phone: 954-499-5400**  
**Fax: 954-499-5454**  
**[www.amprobe.com](http://www.amprobe.com)**

**PM147A RevC**

# TIF8800A Combustible Gas Detector

with LED  
Visual Leak  
Size Indicators



CLASSIFIED BY UNDERWRITERS  
LABORATORIES INC.® ONLY AS TO  
INTRINSIC SAFETY IN CLASS I,  
GROUPS A, B, C, & D HAZARDOUS  
LOCATIONS.  
71M3



The TIF8800A Combustible Gas Detector with Visual Leak Size Indicators gives you the response you want. This highly reliable broad-band combustible gas detector is extremely useful as a general purpose tool in any environment where gasoline, propane, natural gas or fuel oil are used.

In conjunction with specific carbon monoxide measuring equipment, it is a valuable adjunct in diagnosing heating system problems. As the combustible gas or vapor source is approached, a "geiger counter" signal increases in frequency and the red lights illuminate in sequence to show the intensity of the leak. Now you can see and hear your way to pinpointing dangerous leaks. UL classified for intrinsic safety in contaminated atmospheres and approved by the Mine Safety and Health Administration (MSHA) for use in Methane-Air mixtures.

## FEATURES

- Visual Leak Size Indicators
- Automatic Warm-up
- Audible "Geiger Counter" Signal
- Adjustable Sensitivity
- Cordless Operation
- Rechargeable Batteries
- Low Battery Indicator
- Long, Flexible Probe
- Includes Deluxe Carrying Case, Batteries and Recharger
- UL Classified and MSHA certified
- Made in U.S.A
- One Year Warranty

## SPECIFICATIONS:

Power Supply: Two (2.4V) Ni-Cad Batteries  
Battery Life: Four Hours Continuous. Over 2000 Hours lifetime.  
Sensitivity: as low as 5 ppm. (see back)  
Warm-Up Time: Automatic, Approximately 15 Seconds  
Response Time: Instantaneous  
Weight: 15.5 ounces (439 grams)  
Dimensions: 8" x 3" x 1.8" (20.32 cm x 7.62 cm x 4.57 cm)  
Duty Cycle: Continuous, no limitations  
Operating Temperature Range: 33° F to 125° F (0° C to 52° C)  
Probe Length: 15 inches (38.1 cm)

## REPLACEMENT PARTS:

DESCRIPTION ..... PART#  
Sensing Tip ..... TIF8801  
Battery Recharger .. (110V) TIF8803A  
..... (220V) TIF8806B  
Carrying Case ..... TIF8804  
Plug-in Cigarette ..... TIF8805  
Lighter Recharger  
2 (2.4V) Ni-Cad Batteries ... TIF8806A

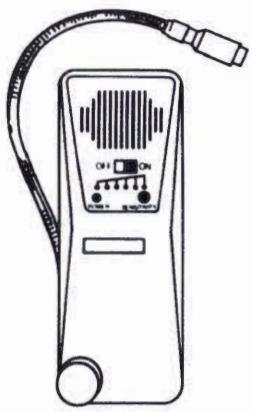
## TIF INSTRUMENTS INC.



3270 Executive Way  
Miramar, FL 33025

800-327-5060

SEE BACK FOR APPLICATIONS AND  
DETECTABLE COMPOUNDS



# Applications:

- Detect Leaks in Automobile Exhaust and Fuel Systems.
- Detect Leaks in Liquid or Gas Fired Heating Systems.
- Safety Checks at Propane Filling Stations.
- Search for Arson Residue (Detects Accelerants).
- Detect fuel in Marine Bilges.
- Check Fuel Tanks Before Welding.
- Check Manholes/Sewers for Safety.
- Check for Cracked Heat Exchangers.
- Detect Solvent Residue.

## PARTIAL LIST OF DETECTABLE COMPOUNDS AND SENSITIVITY TO SELECTED ONES:

### HYDROCARBONS

- Methane (Natural Gas)
- Ethane
- Propane
- Benzene
- Acetylene
- Butane
- N-Butane
- Isobutane
- Pentane
- Hexane
- Gasoline

### HALOGENATED HYDROCARBONS

- Methyl Chloride
- Methylene Chloride
- Trichloroethane
- Vinyl Chloride

### ALCOHOLS

- Methanol
- Ethanol
- Propanol
- Butanol

### ETHERS

- Methyl Ether

### KEYTONES

- Methyl Acetate
- Acetone
- Methyl Ethyl Ketone

### OTHER GASES

- Sulfur Dioxide
- Ammonia
- Carbon Monoxide
- Hydrogen Sulfide
- Hydrogen
- Toluene
- Naptha
- Chlorine

### CHEMICALS

- Industrial Solvents
- Dry Cleaning Fluids
- Lacquer Thinners
- Refrigerant Gases

	Molecular Formula	Minimum detectable Concentrations (ppm) 1 5 10 20 50 100 200 500 1000 2000
<b>COMBUSTIBLE GASES</b>		
ACETYLENE	$C_2H_2O$	x
iso-BUTANE	$C_4H_{10}$	x
METHANE (Natural Gas)	$CH_4$	x
ETHANE	$C_2H_6$	x
PROPANE	$C_3H_8$	x
ETHYLENE	$C_2H_4$	x
HYDROGEN	$H_2$	x
METHYLETHER	$C_2H_5O$	x
<b>DERIVATIVES OF HYDROCARBONS</b>		
VINYL CHLORIDE	$C_2H_3Cl$	x
METHYL CHLORIDE	$CH_3Cl$	x
METHYLENE CHLORIDE	$CH_2Cl_2$	x
ETHYLENE OXIDE	$C_2H_4O$	x
ACRYLONITRILE	$C_3H_3N$	x
<b>OTHER GASES</b>		
HYDROGEN SULFIDE	$H_2S$	x
CARBON MONOXIDE	CO	x
SULFUH DIOXIUE	$SO_2$	x
CHLORINE	$Cl_2$	x
AMMONIA	$NH_3$	x
<b>LIQUID</b>		
ACETONE	$C_3H_6O$	x
METHANOL	$CH_3O$	x
n-PENTANE	$C_5H_{12}$	x
n-HEXANE	$C_6H_{14}$	x
BENZENE	$C_6H_6$	x
METHYLETHYL KETONE	$C_4H_8O$	x
DIMETHYL AMINE	$C_2H_7N$	x
ETHANOL	$C_2H_5O$	x
METHYL ACETATE	$C_2H_6O$	x
GASOLINE	-----	x