

TARGET Training

I. General

- A. **Display** (20 character, four line LCD)
 - 1. Gas concentration, unit and name are always displayed.
 - 2. Bottom line is a status line with information about faults.
- B. **Visual Alarm** (front of enclosure)
 - 1. Back light activates for any alarm.
 - 2. Individual LEDs for each gas
- C. **Audio Alarm** (top of enclosure)
- D. **Operation Buttons**
 - 1. **ON/OFF/Back light** (Turns instrument on/off and back light on)
 - 2. **SELECT** (Acknowledges an operation or silences audio alarm)
 - 3. **MENU** (increments a menu or display)
- E. **Location of sensors** (bottom of enclosure)
- F. **Gasketing of Enclosure** (between end-caps, around sensors, around horn)

II. Turn instrument on (press **ON/OFF** button, hold for a second, and release).

- A. LEDs come on and audio alarm beeps.
- B. Instrument performs a self-test and warm up for approximately 60 seconds.
- C. After test, Pop-Up menu appears where an auto-zero can be performed, calibration status of sensors can be checked, change the combustible display or activate the internal pump if available.
- D. Confidence chirp every two minutes.
- E. To turn instrument off, press and hold the **ON/OFF** button for 3 seconds, display counts down.

III. Auto-Zero

Auto-Zero is a function that makes the toxic and combustible gas displays read zero and the oxygen display read 20.9%. The Auto-Zero function allows the instrument to be compensated for minor "zero-drift" of the sensors. **It should only be done in a fresh air environment.** Some users may want to do this before each use. The factory does not have a recommended frequency for this function. **Warning: Auto-Zero is NOT a substitute for calibration.** At the Pop-Up menu press the **SELECT** button with the asterisk is located next to the Autozero prompt. Press **SELECT**. The instrument displays all of the gases that have been properly "zeroed" by showing an OK next to them.

IV. Combustible Gas Display

The instrument combustible has been pre-programmed for 10 different combustible gas and vapor responses. At the Pop-Up menu press the **MENU** button until the asterisk is located next to the Comb disp. Press **SELECT**. Now press **MENU** until the desired gas is displayed.

REMEMBER: Do not infer from the ability to change the combustible gas display that the combustible sensor only detects the chosen gas. The sensor is not specific and therefore responds to many combustible gases without the ability to differentiate them. The correct use of the instrument depends upon the user's knowledge of the application to identify which combustible gas to display.

V. Alarms

- A. Alarms are preset, but can be changed in the Advanced Maintenance menu.
- B. When alarm concentration is reached audio and visual alarms activate. (simulate if possible)
- C. Visual alarms latch until condition clears.
- D. Audio alarm can be acknowledged (silenced) by pressing the **SELECT** button.
- E. There are two levels of gas alarms. A low level which provides a flashing visual alarm and pulsed audio alarm and a high level alarm which provides a steady visual and steady audio alarm. Fault alarms are also steady tone.

VI. Batteries/Charging

- A. 4.8 Volt nickel metal hydride (NiMH) pack is supplied standard. Runs for 11-16 hours (or longer) on a full charge. (An internal pump AND MOS sensor combination may reduce battery run time to 8 hours.)
- B. To charge the instrument batteries, plug the charger into the wall and plug the charger connector into the bottom of the battery pack. The charger is a dual-rate charger that charges the instrument batteries in usually 3-4 hours. The instrument can be left on the charger indefinitely and it is recommended to do so for optimum sensor stability. It is however, a good idea to run the batteries down at least once a month.
- C. An optional alkaline battery pack insert is available.

VII. Operation Menu

The TARGET series has two operational menus. The default menu shows only date/time/battery, and alarm values. The advanced operation menu can be activated in the advanced maintenance menu. In addition to the date/time/battery and alarm value screens, the advanced operational menu also shows min/max readings, and STEL and TWA calculations. They are all listed below.

- A. Press **MENU** button to cycle through display screens.
- B. **Date/time/battery** shows the current time and date of the internal clock and the current battery voltage. 5.40 volts is common after being charged, instrument goes into low battery alarm around 4.3 volts. The vertical bars across the last line of the display are a relative battery gas gauge..
- C. **Alarm Values** shows the current alarms programmed into the instrument. If the advanced operational menu is active, it also shows the STEL and TWA alarm concentrations.
- D. **Min and Max Values** (Advanced Menu) shows the minimum and maximum values the instrument has seen for that gas since it has been turned on.
- E. **TWA gas** (Advanced Menu) shows the current TWA calculation for that toxic gas. There is a TWA reading for each electrochemical toxic sensor installed.
- F. **STEL gas** (Advanced Menu) shows the current STEL calculation for that toxic gas. There is a STEL reading for each toxic sensor installed.
- G. **Maintenance Menu** is the entry point to the maintenance menus of the instrument.

VIII. Maintenance Menu

There are two maintenance menus available. The default menu is the Standard (Std.) menu. It provides access to only instrument calibration. The Advanced menu provides access to other functions such as setting the date and time, alarm values, turning sensors on and off, and choosing the operational menu type.

***** Turn the instrument off if a menu has been entered that shouldn't have been *****

- A. Enter 1270 as the password at the Maintenance Menu screen. To choose the Std or Adv maintenance menu, press and hold the **MENU** key for about two seconds before selecting the last digit. Note that the Maintenance Menu description toggles between STD and ADV.
- B. **Calibrate** allows you to calibrate a single sensor or all (except for MOS) simultaneously. Press **SELECT**. Press **MENU** to highlight desired gas. Press **SELECT** to initiate the procedure. If in the Standard Menu, the calibration procedure is timed and the calibration gas values fixed. If in the Advanced Menu, the procedure is manual and the calibration gas values may be changed.
- C. **Set Alarms** (Advanced Menu) is used to change the instantaneous alarms. Press **SELECT**. Press **MENU** to highlight the desired gas. Press **SELECT** to choose the sensor. Use **MENU** to increment the digit and **SELECT** to choose it and move the cursor over.
- D. **Enable Sensors** (Advanced Menu) is used to enable and disable sensors. Press **SELECT**. Press **MENU** to highlight the desired gas. Press **SELECT** to choose the sensor. Press **SELECT** to toggle the sensor on and off. When a sensor is disabled, "Off" appears in its location on the main display. Factory programming is required to completely remove the sensor location from the display.
- E. **Set Clock/Chirp** (Advanced Menu) is used to set the instrument date and time, and the confidence chirp interval. Press **SELECT**. Press **MENU** to highlight the desired function. Press **SELECT** to enable the cursor. Use **MENU** to increment the digit and **SELECT** to choose it and move the cursor over.
- F. **Set Password** (Advanced Menu) is used to change the password to a new value. Press **SELECT**. Use **MENU** to increment the digit and **SELECT** to choose it and move the cursor over.
- G. **Set Battery** (Advanced Menu) is used to set the low battery detection circuit for the type of battery installed. Press **SELECT**. Press **MENU** to toggle between NiMH (rechargeable) and alkaline. Press **SELECT**.
- H. **Set Op. menu type** (Advanced Menu) is used to change the operation menu configuration. Press **SELECT**. Press **MENU** to toggle between Basic and Advanced. Press **SELECT**.

Sections I through VI are for basic users.

Sections I through VII are for advanced users.

Sections I through VIII are for advanced users and maintenance personnel.