M40·M
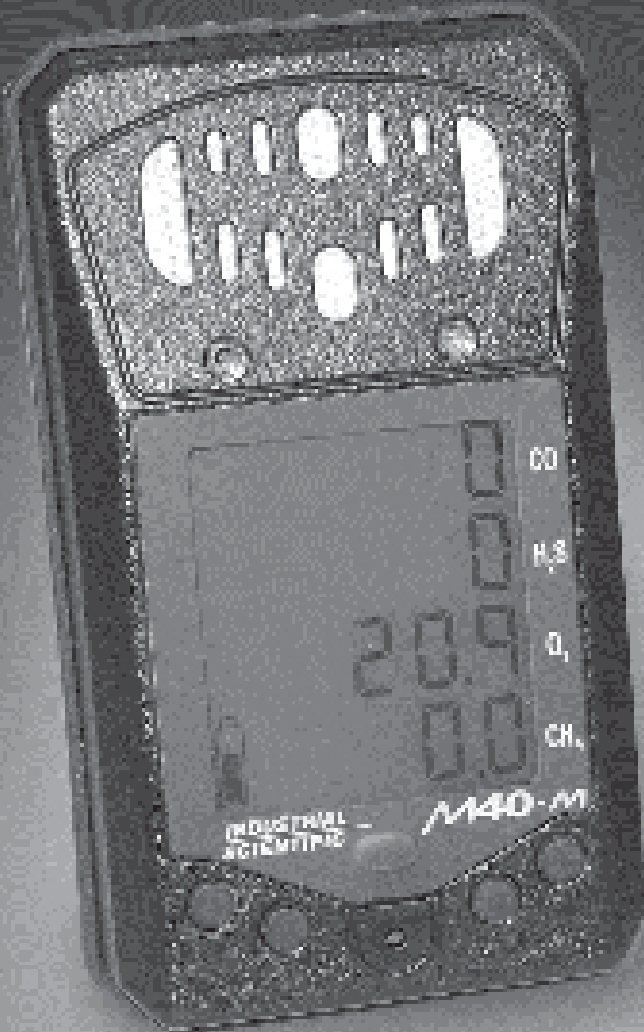## MULTI-GAS MONITOR

Instruction
Manual

OUR MISSION

Design - Manufacture - Sell:
Highest quality products
for the preservation of
life and property.

Provide:
Best customer service.

Dear Valued Customer,

Thank you for buying and using Industrial Scientific's M40•M Multi-Gas Monitor.

Your M40•M can be relied upon for dependable service, day after day. It has been designed, manufactured, tested and proven under the most scrutinizing conditions possible. With the minimal care and maintenance described in this Instruction Manual, it will provide you with years of reliable monitoring.

I am most concerned that you be pleased with the performance of your M40•M in the months and years ahead. I urge you to call us with any questions or comments you may have. Often times a phone call and a question can save you hours of frustration. Please never hesitate to contact me at 1-800-DETECTS (338-3287).

All of us at Industrial Scientific appreciate the opportunity to serve you.

Sincerely,

Kent D. McElhattan
President & CEO
Industrial Scientific Corporation

M40•M
MULTI-GAS MONITOR

Warnings and Cautionary Statements

Failure to perform certain procedures or note certain conditions may impair the performance of the instrument. For maximum safety and performance, please read and follow the procedures and conditions outlined below.

Oxygen deficient atmospheres may cause combustible gas readings to be lower than actual concentrations.

Oxygen enriched atmospheres may cause combustible gas readings to be higher than actual concentrations.

Verify the calibration of the combustible gas sensor after any incident where the combustible gas content has caused the instrument to display an OVER-RANGE condition.

Silicone compound vapors or other known contaminants may affect the combustible gas sensor and cause readings of combustible gas to be lower than actual gas concentrations. If the instrument has been used in an area where silicone vapors were present, always calibrate the instrument before next use to ensure accurate measurements.

Sensor openings and water barriers must be kept clean. Obstruction of the sensor openings and/or contamination of the water barriers may cause readings to be lower than actual gas concentrations.

Sudden changes in atmospheric pressure may cause temporary fluctuations in the oxygen reading.

Charge battery, service unit, and use its communication port only in non-hazardous locations. Not for use in oxygen enriched atmospheres.

WARNING: SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY AND MAY CAUSE AN UNSAFE CONDITION.

AVERTISSEMENT: LA SUBSTITUTION DE COMPOSANTS PEUT COMPOMETTRE LA SECURITE INTINSEQUE!

CAUTION: FOR SAFETY REASONS, THIS EQUIPMENT MUST BE OPERATED AND SERVICED BY QUALIFIED PERSONNEL ONLY. READ AND UNDERSTAND THE INSTRUCTION MANUAL COMPLETELY BEFORE OPERATING OR SERVICING.

ATTENTION: POUR DES RAISONS DE SÉCURITÉ, CET ÉQUIPMENT DOIT ÉTRE UTILESÉ ENTRETENU ET RÉPARÉ UNIQUEMENT PAR UN PERSONNEL QUALIFIÉ. ÉTUDIER LE MANUEL D'INSTRUCTIONS EN ENTIER AVANT D'UTILISER, D'ENTRETENIR OU DE RÉPARER L'ÉQUIPEMENT.

CAUTION: HIGH OFF-SCALE READINGS MAY INDICATE EXPLOSIVE CONCENTRATION.

ATTENTION: DES LECTRURES SUPÉRIEURES A L'ÉCHELLE PEUVENT INDIQUER DES CONCETRATOINS EXPLOSIVES.

CAUTION: ANY RAPID UP-SCALE READING FOLLOWED BY A DECLINING OR ERRATIC READING MAY INDICATE A GAS CONCENTRATION BEYOND THE UPPER SCALE LIMIT WHICH MAY BE HAZARDOUS.

WARNING: THE ALARMS ON THE MODEL M40•M ARE NON-LATCHING ALARMS.

CAUTION: BEFORE EACH DAY'S USAGE, SENSITIVITY MUST BE TESTED ON A KNOWN CONCENTRATION OF PENTANE OR METHANE EQUIVALENT TO 25%-50% OF FULL SCALE CONCENTRATION. ACCURACY MUST BE WITHIN +/- 20% OF ACTUAL CONCENTRATION. ACCURACY MAY BE CORRECTED BY REFERRING TO THE ZERO/CALIBRATION SECTION OF THE INSTRUCTION MANUAL.

THE MODEL M40•M IS CERTIFIED FOR USE WITHIN AN AMBIENT TEMPERATURE RANGE OF -20°C TO 40°C ONLY.

THE MODEL M40•M MUST BE USED ONLY WITH MODEL SP40-M EXTERNAL SAMPLING PUMP.

UNPACKING THE INSTRUMENT

The shipping box should contain the following items. Account for each item before discarding the box.

QUANTITY	PART NUMBER	DESCRIPTION
1	1810-5940-XXXXX	M40•M
1	1710-8630	Swivel Belt Clip (Plastic)
1	1710-8879	Manual
1	1710-8622	Cal-Cup
1	1710-2005	Urethane Tubing
1	1710-7582	Suspender Clip
1	1810-5981	Carrying case
1	1810-5957*	SP40-M sampling pump
1	1810-5999*	Carrying case
1	1711-6096*	T-Fitting Assembly

Items are only included in 1810-5940-XXXXX part numbers.

After unpacking, if any listed item is missing, contact either your local distributor of Industrial Scientific products or call Industrial Scientific Corporation at 1-800-DETECTS (338-3287) in the United States and Canada, or 412-788-4353.

Sensor Openings

**SP40-M
Contacts**

Display

CO

H₂S

O₂

CH₄

Visual Alarm

Key

Audible Alarm

Key

Key

INDUSTRIAL
SCIENTIFIC

M40·M

Key

**Charger/
Datalink
Port**
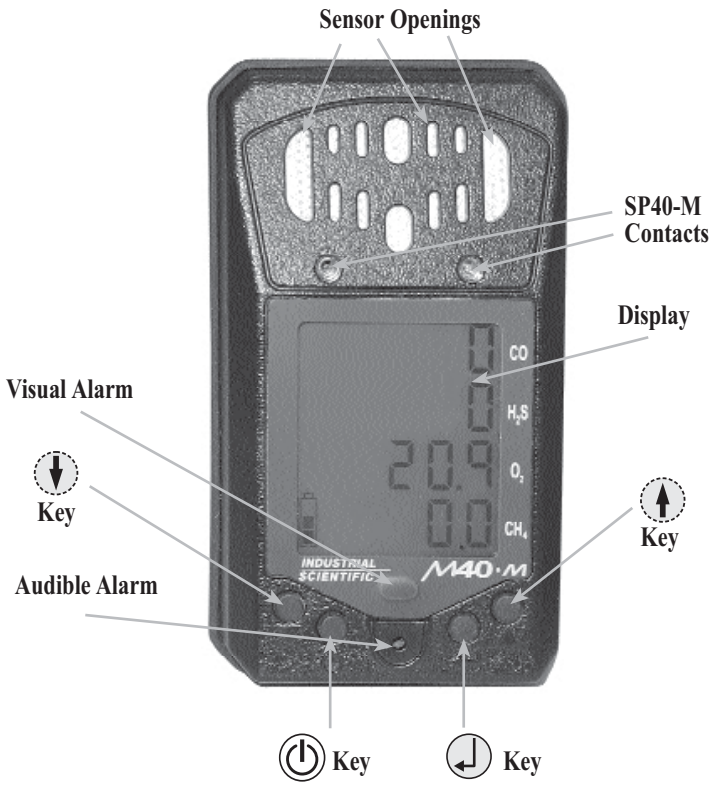
BACK

SIDE

INTRODUCTION

The M40•M is a portable gas monitor capable of continuously and simultaneously monitoring 4 standard gases; O_2, $\%CH_4$, CO and H_2S. Each gas reading is displayed on a custom graphic LCD. The instrument provides user configurable low and high alarms as well as STEL and TWA alarms. When alarm conditions are exceeded, the M40•M has audio, visual and a standard vibrating alarms to alert the user.

INSTRUMENT OPERATION

To turn on the M40•M, press and hold the button for 1 second. The unit will emit a single beep and go into a display test. All icons and segments on the LCD will light. Next the software revision will be displayed. After this, the instrument will go into a 20 second countdown. During the countdown sequence, if the and arrow keys are pressed simultaneously, the user will enter into the Configuration Mode. When the countdown is complete, the M40•M will be in its normal Gas Reading Mode. To turn off the M40•M instrument press and hold the button for 5 seconds. The instrument will beep 5 times and then shut off.

M40•M GAS READING MODE

Once the M40•M enters into the Gas Reading Mode, all 4 gases (O_2, $\%CH_4$, CO and H_2S) will be continuously monitored and the readings updated on the liquid crystal display. As gas levels increase, the corresponding reading will reflect the current gas concentrations. A battery life indicator is also displayed in the lower left corner. As battery life decreases, the shaded area of the battery icon decreases. If any of the gas concentrations exceed the low or high alarm limits (as well as STEL/TWA), the M40•M will go into alarm. When in alarm, the audible and visual alarms will beep and flash at set frequencies, and the vibrating alarm will be pulsed. When the gas concentrations drop below the alarm set points, the M40•M will go back to the Gas Reading Mode. From the Gas Reading Mode, there are four other modes that can be accessed. These other modes are reached by pressing the arrow key.
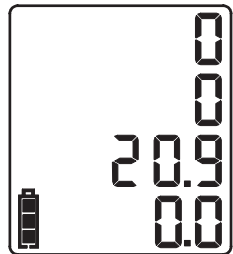
OPERATING MODES

Zero/Callibration Mode

Display Peaks Mode

Gas Reading Mode

View TWA Mode

View STEL Mode
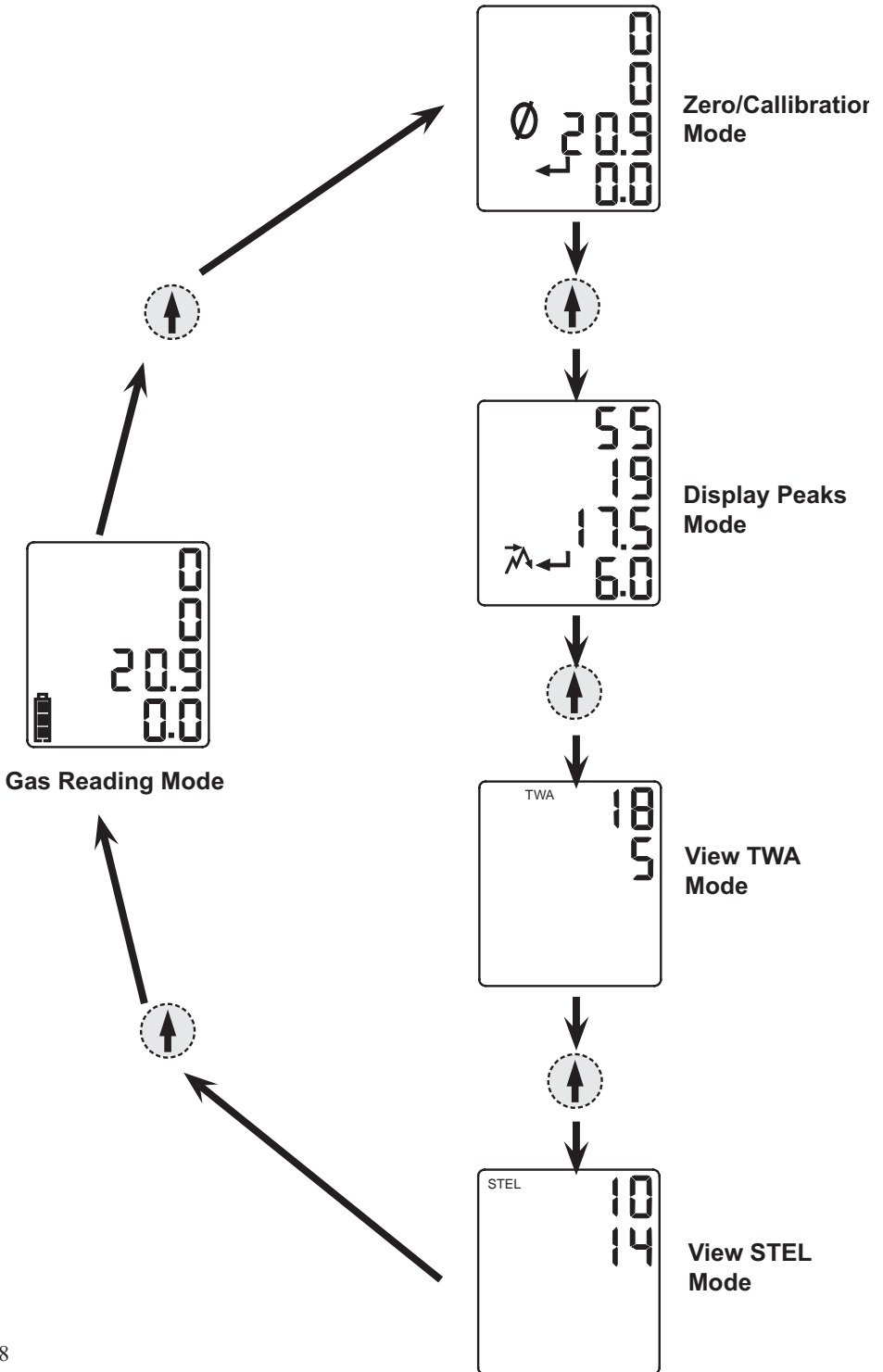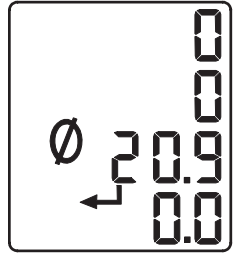
ZERO/CALIBRATION MODE

Pressing the ⬆ arrow key once from the Gas Reading
Mode will put the M40•M in the Zero/Cal Mode. When
this mode is entered, the "Zero" icon and the "Enter"
icon will be displayed along with all four gas readings.
Pressing the ⬆ arrow key a second time will advance
you to the Display Peaks Mode. Pressing the ⮐ key
will start the zeroing process. When the CO, H_2S, and
%CH_4 sensors have finished the zeroing process, the
oxygen sensor will start to span. During this process, the
"Clock" icon and oxygen full span value will be displayed.
When this process is complete, the instrument will display
the "Span" icon and "Enter" icon. Pressing the ⮐ key
at this time will cause the M40•M to begin calibration for
the remaining sensors. For more information, reference
the calibration section on page 15.
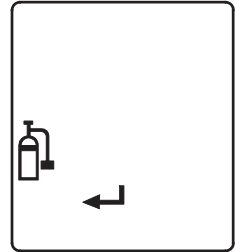
The M40•M calibration gases are fixed values. You must
calibrate the instrument on a blended cylinder containing
25 ppm H_2S, 100 ppm CO, 2.5 %CH_4 Methane, and 19%
Oxygen at 0.5 LPM flow.

DISPLAY PEAKS MODE

Pressing the ⬆ arrow key from the Zero/Calibration
Mode will advance the M40•M to the Display Peaks
Mode. When in this mode, the M40•M will display the
peak gas readings seen by the toxic and combustible
sensor as well as the lowest reading for the oxygen sensor.
The "Peak" and "Enter" icons are displayed. Pressing the
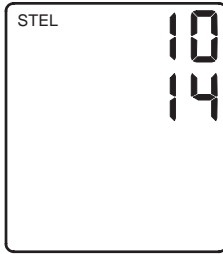⮐ key will reset all the peak values to the current
reading.
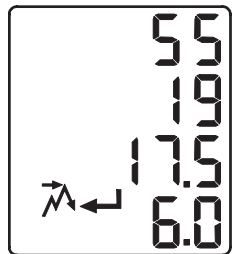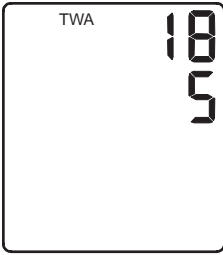
VIEW TWA MODE

Pressing the ⬆ arrow key a third time will put the
M40•M in the View TWA Mode. The TWA screen
will show the "TWA" icon along with the TWA (Time
Weighted Average) values for the two toxic sensors. TWA
values are reset every time the instrument is powered
down, and the time base is set for 8 hours.

STEL

10
14

VIEW STEL MODE

Pressing the ⬆ arrow key a fourth time from the Gas
Reading Mode will put the M40•M in the View STEL
Mode. The STEL screen with display the "STEL" icon
along with the STEL values for the two toxic sensors.
STEL (Short Term Exposure Limit) for the toxic sensors
will be reset every time the unit is powered down. The
time base for the STEL is set for 15 minutes.

CONFIGURATION MODE

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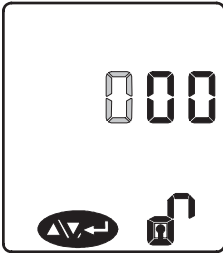
Pressing the ⬆ and ⬇ arrow keys simultaneously
during the twenty second countdown will put the M40•M
into the Configuration Mode. The Configuration Mode
allows the user to change the Low, High, TWA, and STEL
alarm levels, as well as set the time, date and security code
(if desired). Once the Configuration Mode is entered, a
Security Code screen will be displayed. If no security
code has been set (000), the M40•M will go directly to
the low alarm setpoints. If a security code has been set,
use the ⬆ and ⬇ arrow keys to change the value of
the flashing digits to match the code. Once the desired
number is reached for the first digit, press the ⏻ key
to select the next digit. Continue this process until all
three digits are correct, then press the ⏎ key. For any
changes made in the Configuration Mode to take affect,
the instrument must be turned off and restarted.

LOW ALARM SET POINTS

This is the first of the configuration screens. The display will show the "Buzzer", "Low", "Enter", and "Up/Down/Enter" icons along with the four low alarm set points. If no changes are needed, press the ⬆ arrow key to move to the next screen. If changes are desired, press the ⏎ key. The first low alarm value will be flashing. To adjust this value, use the ⬆ and ⬇ arrow keys. Once the desired value is met, press the ⏎ key to select the next low alarm value. Continue this process until all four low alarm set points have been set. Once all four values are set, the display will again show the "Buzzer", "Low", "Enter", and "Up/Down/Enter" icons along with the four low alarm set points. Pressing the ⏎ key will re-enter the mode and let you set the low alarm levels again; pressing the ⬆ arrow key will move you to the High Alarm Set Points screen. Pressing the ⏻ key at any time will take you back to initial Low Alarm screen, and no changes will be saved. Pressing the ⏻ key a second time will take you to the normal Gas Readings screen. The low alarm is a non-latching alarm.
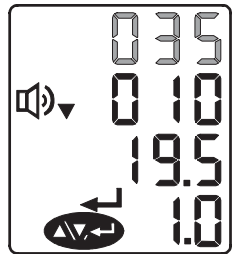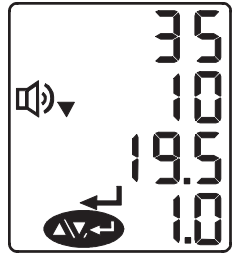
HIGH ALARM SET POINTS

This is the second of the configuration screens. The display will show the "Buzzer", "High", "Enter", and "Up/Down/Enter" icons along with the four high alarm set points. If no changes are needed, press the ⬆ arrow key to move to the next screen. If changes are desired, press the ⏎ key. The first high alarm value will be flashing. To adjust this value, use the ⬆ and ⬇ arrow keys. Once the desired value is met, press the ⏎ key to select the next high alarm value.
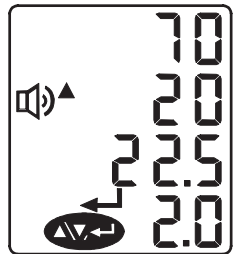
Continue this process until all four high alarm set points have been set. Once all four values are set, the display will again show the "Buzzer", "High", "Enter", and "Up/Down/Enter" icons along with the four high alarm set points. Pressing the (↵) key will re-enter the mode and let you set the high alarm levels again; pressing the (↑) arrow key will move you to the TWA Alarm Set Points screen. Pressing the (⏻) key at any time will take you back to initial High Alarm screen, and no changes will be saved. Pressing the (⏻) key a second time will take you to the normal Gas Readings screen. The high alarm is a non-latching alarm.
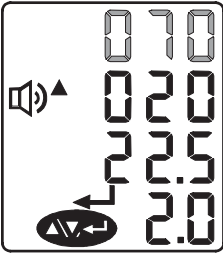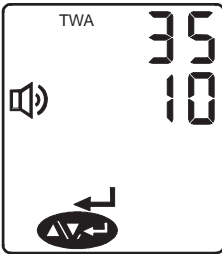
TWA ALARM SET POINTS

This is the third of the configuration screens. The display will show the "TWA", "Buzzer", "Low", "Enter", and "Up/Down/Enter" icons along with the two TWA alarm set points. If no changes are needed, press the (↑) arrow key to move to the next screen. If changes are desired, press the (↵) key. The first TWA alarm value will be flashing. To adjust this value, use the (↑) and (↓) arrow keys. Once the desired value is met, press the (↵) key to select the next TWA alarm value. Continue this process until both TWA alarm set points have been set. When both values are set, the display will again show the "TWA", "Buzzer", "Low", "Enter", and "Up/Down/Enter" icons along with the two TWA alarm set points. Pressing the (↵) key will re-enter the mode and let you set the TWA alarm levels again; pressing the (↑) arrow key will move you to the STEL Alarm Set Points screen. Pressing the (⏻) key at any time will take you back to the initial TWA Alarm screen, and no changes will be saved. Pressing the (⏻) key a second time will take you to the normal Gas Readings screen.
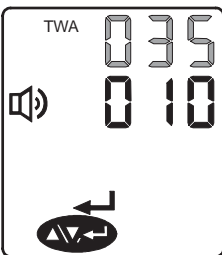
STEL ALARM SET POINTS

The fourth of the configuration screens is the STEL alarm values. The display will show the "STEL", "Buzzer", "Low", "Enter", and "Up/Down/Enter" icons along with the two STEL alarm set points. If no changes are needed, press the ⬆ arrow key to move to the next screen. If changes are desired, press the ↵ key. The first STEL alarm value will be flashing. To adjust this value, use the ⬆ and ⬇ arrow keys. Once the desired value is met, press the ↵ key to select the next STEL alarm value. Continue this process until both STEL alarm set points have been set. When both values are set, the display will again show the "STEL", "Buzzer", "Low", "Enter", and "Up/Down/Enter" icons along with the two STEL alarm set points. Pressing the ↵ key will re-enter the mode and let you set the STEL alarm levels again; pressing the ⬆ arrow key will move you to the Clock Setting screen. Pressing the ⏻ key at any time will take you back to initial STEL Alarm screen, and no changes will be saved. Pressing the ⏻ key a second time will take you to the normal Gas Readings screen.
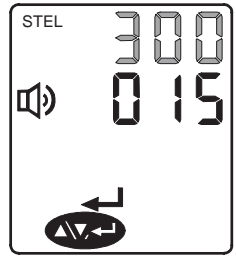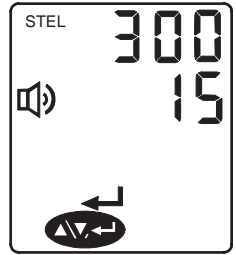
CLOCK SETTING

Setting the clock is the next configuration screen. The display will show the "Clock", "Enter", and "Up/Down/ Enter" icons along with two rows of digits. If no changes are needed, press the ⬆ arrow key to move to the next screen. If changes are desired, press the ↵ key. The first value that will be flashing is the hours setting of your clock. To adjust this value, use the ⬆ and ⬇ arrow keys. Once the desired value is met, press the ↵ key to select the minutes value. Continue this process until both hours and minutes have been set. When both values are set, the display will again show the "Clock", "Enter", and "Up/Down/Enter" icons along with the two rows of digits. Pressing the ↵ key will re-enter
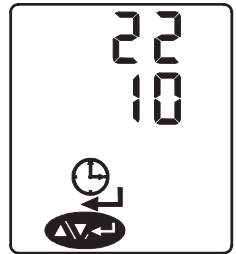
the mode and let you set the hours and minutes again; pressing the (↑) arrow key will move you to the Calendar Setting screen. Pressing the (⏻) key at any time will take you to the normal Gas Readings screen.

CALENDAR SETTING
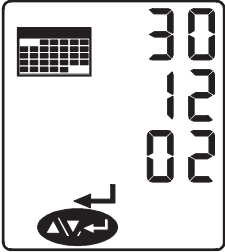
Setting the calendar is the configuration screen after the clock set up. The display will show the "Calendar", "Enter", and "Up/Down/Enter" icons along with three rows of digits. If no changes are needed, press the (↑) arrow key to move to the next screen. If changes are desired, press the (↵) key. The first value that will be flashing is the month setting of your clock. To adjust this value, use the (↑) and (↓) arrow keys. Once the desired value is met, press the (↵) key to select the day value. Continue this process until the month, day and year have been set. When all three values are set, the display will again show the "Calendar", "Enter", and "Up/Down/Enter" icons along with three rows of digits. Pressing the (↵) key will re-enter the mode and let you set the calendar again; pressing the (↑) arrow key will move you to the Security Code Settings screen. Pressing the (⏻) key at any time will take you to the normal Gas Readings screen.

SECURITY CODE SETTING
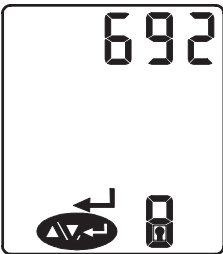
The next setting is the Security Code Settings. The display will show the "Closed Lock", "Enter", and "Up/Down/Enter" icons along with the top row of digits displaying the current security code. If no changes are needed, press the (↑) arrow key to move to the %CH4 settings. If changes are desired, press the (↵) key. The current security code will be flashing. To adjust the first value, use the (↑) and (↓) arrow keys. Once the desired value is met, press the (↵) key to select the next digit. Continue this process until all three digits have been set. When all three values are set, the display will again show the "Closed Lock", "Enter", and "Up/Down/Enter"

icons along with the top Security Code. Pressing the (↵) key will re-enter the mode and let you set the security code again Pressing the (⏻) key at any time will take you back to the initial Security Code screen, and no changes will be saved. Pressing the (⏻) key a second time will take you to the normal Gas Readings screen. If a security code is set, the user will not be able to calibrate the instrument in the field or make any changes to the instruments settings without entering the proper code. To Calibrate the instrument when a security code is set, the user must turn on the instrument and enter the Configuration Mode. Once the proper password is entered, the user can select the Protected Zero/Cal Setting to zero and calibrate the instrument.

PROTECTED ZERO/CAL SETTING

The final configuration screen is a protected zero and calibration screen. This setting allows the user to zero and calibrate the instrument when a security code is set. For more information on how to calibrate the M40•M, please see the Zero/Calibration section.

ZERO/CALIBRATION

The M40•M's calibration procedure is a 'Quick-Cal' procedure that will calibrate all four sensors simultaneously with a single blended cylinder of gas. The 'Quick-Cal' feature offers calibration times of <60 seconds. The M40•M can be calibrated with or without the external pump. If calibrating with the SP40-M pump on the instrument, please attatch a piece of tubing from the end of the pump to the demand flow regulator on the blended gas cylinder. When using a pressure regulator to calibrate with the SP40-M pump, attach the supplied T-fitting/tubing assembly to the pressure regulator and SP40-M pump. If calibrating without the SP40-M, securely place the M40•M cal-cup over the sensors. With a piece of tubing, connect the cal-cup to the regulator on the blended gas cylinder.
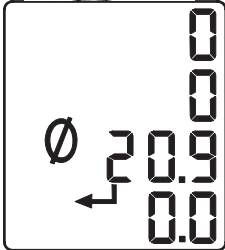
Pressing the ⬆ arrow key once from the Gas Reading Mode will put the M40•M in the Zero/Cal Mode. When this mode is entered, the "Zero" icon and the "Enter" icon will be displayed along with all four gas readings. Pressing the ⏎ key will start the zeroing process. When the CO, H2S, and %CH$_4$ sensors have finished the zeroing process, the oxygen sensor will start to span. During this process, the "Clock" icon and oxygen full span value will be displayed. When this process is complete, the instrument will display the "Span" icon and "Enter" icon. Pressing the ⏎ key at this time will cause the M40•M to begin calibration for the remaining sensors. If this occurs, the display will flash the "Clock" icon along with the span values of the sensors. When gas is detected, the display will show the span readings as well as the "Calibration" icon. This is a quick calibration ('Quick-Cal') process, and should take no longer than 60 seconds. At the end of the calibration, the display will flash between the span readings and a pass/fail indication for ten seconds. Full span values between 50 and 70 percent are considered marginal calibrations, and the sensor may soon need replaced. Full span values less than 50 percent will result in a failed calibration. To abort calibration at any point in the process, press the ⏻ key.
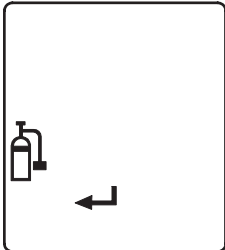
The M40•M calibration gases are fixed values. You must calibrate the instrument on a blended cylinder containing 25 ppm H$_2$S, 100 ppm CO, 2.5 %CH$_4$ Methane, and 19% Oxygen at 0.5 LPM flow.

Note: If a security code is set, user will not be able to calibrate instrument in the field. Please refer to Security Code Setting for more information.
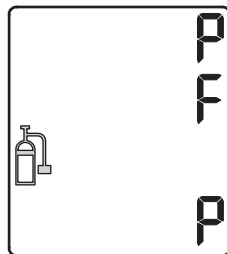
DATA LOGGING

The M40•M comes standard with a continuous loop data logger. The data logger has enough memory to store 50 hours of data for all four sensors as well as the temperature. When the 50 hours is exceeded, the data logger will go back and start overwriting the oldest data in memory. Data is logged in one minute intervals and can be downloaded to a PC via the software package and Datalink Module.

Data is extracted from the M40•M via a Datalink Module (1810-5528). To purchase a Datalink Module please contact either you local distributor of Industrial Scientific Products, or call Industrial Scientific Corporation at 1-800-DETECTS. To use the Datalink Module, you must first install the setup software located on the CD (comes with Datalink). Also make sure there is a fresh battery in the Datalink Module. Once the Datalink is connected to the M40•M, and to the COM port on your PC, click on the "Connect" button to establish communication. Once communication is established, data can be downloaded or cleared from the interface menu. To view data, select "File Open", and to view graphics, select "Graphics" from the spreadsheet menu. To disconnect at anytime, click on the "Disconnect" button and unplug the M40•M.

Note: When a sensor is in an over range condition, a value of 1000 will be logged into the datalog memory for that sensor.

CH$_4$ OVER RANGE

When a CH$_4$ over range condition occurs, the M40•M instrument will enter into a CH$_4$ over range condition. This condition is identified as a continous high alarm. To clear the CH$_4$ over range, power down the M40•M and restart it. After any over range it is good practice to verify the calibration of the combustible gas sensor.

MAINTENANCE

With normal routine maintenance the M40•M can be relied upon to provide years of dependable service. The following guidelines should be followed when performing maintenance on the M40•M.

CLEANING

When necessary, wipe the outside of the M40•M with a soft, clean cloth. Never use solvents or cleaning solutions of any type. Make sure the sensor diffusion membrane is free of debris. Clean sensor openings with a soft, clean cloth or soft brush.

CHARGING THE BATTERIES

The lithium-ion (Li-ion) battery pack should be fully charged before using the M40•M. To charge the internal battery, plug the flying lead of the M40•M battery charger into the charging port located at the bottom of the instrument. This port is protected with a rubber flap. To ensure proper connection, line up the arrow on the charger plug with the arrow on the label located on the bottom of the M40•M. The battery pack should be fully charged in 5 hours. With a fully charged battery pack, the M40•M typically will run 18 hours in the diffusion mode, or 12 hours with the SP40-M. As the battery life decreases, the shaded area of the battery icon will also decrease. With a maximum of 10 minutes left in the life of the battery, the M40•M will emit a periodic tone alerting you to charge the unit.

SP40-M SAMPLING PUMP

The SP40-M external sampling pump is available for the M40•M. The SP40-M is a parasitic pump that draws its power from the M40•M's battery pack. The pump attaches to the M40•M via two captive screws on the face of the M40•M. The SP40-M has a flow rate of .5 SCFH (0.25 LPM), and can draw up to a 50 foot sample. If flow is restricted to the pump, the M40•M will go into a low flow alarm to alert the user.

If the M40•M gets a low flow alarm, make sure there are no visible restrictions in the sampling line. If the unit stays in alarm, the internal dust/water filter should be replaced. To replace the filter, power down the M40•M and remove the end nozzle of the SP40-M. Once the nozzle is removed, replace the internal filter. With the new filter in place, screw the end nozzle back onto the SP40-M and power up the M40•M.

Note: Proper verification of the SP40-M flow alarm is recommended before each days use. To verify operation, restrict flow to the SP40-M by blocking the inlet with a finger and making sure the M40•M goes into a flow alarm. A flow alarm is indicated by a high alarm with a flashing fan icon on the screen.

M40•M SPECIFICATIONS

Size:	4.30" x 2.45" x 1.27" (109mm x 62mm x 35mm)
Weight:	8.6 oz. without SP40-M (243 grams)
	11.5 oz. with SP40-M (326 grams)
Display:	Custom Grahic LCD with Backlight

SENSOR SPECIFICATIONS:

Gas	Range	Resolution	T90
Carbon Monoxide (CO)	0-999 ppm	1 ppm	48 sec
Hydrogen Sulfide (H_2S)	0-500 ppm	1 ppm	30 sec
Oxygen (O_2)	0-30%	0.1%	10 sec
Combustible (%CH_4)	0-5.0 %CH_4	0.1%	35 sec

TEMPERATURE AND HUMIDITY RANGE:

Operating Temperature:	-20ºC to +50ºC (-4ºF to 122ºF), all sensors
	per CSA standard C22.2 No. 152, %CH_4 sensor tested to 0ºC to 40ºC (32ºF to 104ºF)
Operating Humidity:	15-95% RH, typical 0-99%, intermittent, non-condensing
Storage Temperature:	0 to 20ºC (32º to 68ºF)

BATTERY SPECIFICATIONS:

Rechargeable Lithium-Ion battery
    3.6 Volts, 1.8 Amp/hr.

CHARGER SPECIFICATIONS:

Runtimes:
    18 hours diffusion, 12 hours with pump

Runtimes are specified at room temperature with no alarm conditions.

REPLACEMENT PARTS LIST

PART NO.	DESCRIPTION
Accessories	
1810-5957	SP40-M Sampling pump
1810-5528	Datalink
1810-5478	M40•M Nylon Carrying Case
1810-5486	M40•M/SP40-M Combination Carrying Case
1810-5494	Compact Charger 120 VAC
1810-5668	Compact Charger 230 VAC
1810-5890	Compact Charger 230 VAC (UK)
1810-5908	Compact Charger 230 VAC (Aus)
1810-5502	12 VDC Automotive Charger
1810-5510	6 Unit Charger
1710-8895	Swivel Belt Clip (standard)
1709-2941	Metal Belt Clip
1710-7582	Suspender Clip
1810-5981	M40•M Leather Case
1810-5999	M40•M/SP40-M Combination Leather Case

Calibration Stations

M-CAL 401:	Single Unit M40•M calibration station:
	18105965-10X X = 0 (US plug)
	= 1 (UK plug)
	= 2 (European plug)
	= 3 (Australian plug)
M-CAL 401:	Single Unit M40•M/SP40-M combination calibration station:
	18105965-01X X = 0 (US plug)
	= 1 (UK plug)
	= 2 (European plug)
	= 3 (Australian plug)
M-CAL 406:	Six Unit Configurable Calibration Station
	18105973-ABC A = # of M40•M bays (0-6)
	B = # of SP40-M bays (0-6)
	C = 0 (US plug)
	= 1 (UK plug)
	= 2 (European plug)
	= 3 (Australian plug)

Confined Space Kits

M40M-KIT-11111	M40•M/SP40-M - O_2, %CH_4, CO, H_2S
M40M-KIT-11101	M40•M/SP40-M - O_2, %CH_4, H_2S
M40M-KIT-11110	M40•M/SP40-M - O_2, %CH_4, CO

Warranty

Industrial Scientific Corporation's M40•M portable gas monitors are warranted to be free from defects in material and workmanship for a period of two years after purchase.

The above warranty includes sensors, battery pack, and sampling pump (SP40-M). Filters are warranted to be free from defects in material and workmanship for 18 months from date of shipment, or 1 year from date of first use, whichever occurs first, except where otherwised stated in writing in Industrial Scientific literature accompanying the product.

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of non-approved consumables or spare parts. As with any other sophisticated product, it is essential and a condition of Industrial Scientific's warranty that all personnel using the products be fully acquainted with their use, capabilities and limitations as set forth in the applicable product literature.

Buyer acknowledges that it alone has determined the intended purpose and suitability of the goods purchased. It is expressly agreed by the parties that any technical or other advice given by Industrial Scientific with respect to the use of the goods or services is given without charge and at Buyer's risk; therefore, Industrial Scientific assumes no obligations or liability for the advice given or results obtained.

M40-M Manual (1711-9496) Addendum
Software Version 6.2
(Rev. 1)

Calibration:

Software version 6.2 modifies the calibration sequence of the M40-M. The sequence is changed by removing the "ENTER" icon from the calibration initiation screen. This icon is present in previous software versions (and as stated in the Rev 3 of the user manual).

For Software version 6.2, once the zeroing process is complete, the display will flash only the cylinder icon, indicating that the instrument is ready to enter the calibration process. If the user presses the "ENTER" button, calibration will be initiated. If the "MODE" button is pressed, the instrument will enter the normal operating mode. If no buttons are pressed, the instrument will automatically enter the normal operating mode.

The M40-M multi-gas monitor is capable of being calibrated manually, as described in the user manual (part# 1711-9496), or calibration and bump testing can be performed automatically on the M-Cal calibration station product. The M-Cal calibration station automatically delivers calibration gas to the instrument upon the push of a button. No user-intervention is required. For more information on the M-Cal calibration station, please visit www.indsci.com.