

Volume

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SCHAUENBURG FLEXADUX (PTY) LTD

Gas Detection Instrumentation (GDI)

Observer Calibrator Users Guide

SCHAUENBURG ELECTRONIC TECHNOLOGIES

A Division of the Schauenburg Group of Companies

Gas Detection Instrumentation (GDI)



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Introduction

This manual contains information on the working operation of the instrument calibration unit that must be understood and adhered to. The reliability and safe working operation of the calibrator is dependant on the correct handling and care taken.

GDI equipment has adequate protection against most environmental conditions like dust, moisture and shock.

All users of GDI equipment must be trained and/or educated on the use and service of the OEM (Original Equipment Manufacturer) supplied instruments.

The safety of the person using the instrument is dependant on the condition and serviceability of the instrument.

Any Schauenburg GDI equipment and / or User manual must be supported with a full training session! The user must be able to understand the use and / or operation of the equipment fully.

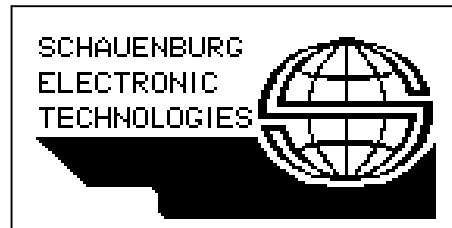
Specification

Min & max pressure	- 10 KPa to + 50 KPa	Ambient \pm 10%
Max relative humidity	95 % Non condensing	
Sample velocity	20-40 litres per hour	
Operating temperature	-10 to + 40°C	
Storage temperature	0 – 20°C	
Power source	110 Volt AC / 220 Volt AC.	
Dimensions	430 x 380 x 170 (mm)	
Weight	6.0 Kg	
Housing	ABS plastic	
Warranty	* 1 (one) year on all electronic parts and workmanship	

Functional Description

Start-up sequence

When power is applied to the unit it will display the company logo.



After the power up sequence the calibrator will display the various menu options that can be selected to configure the calibration unit for proper calibration of Observer instruments.

MAIN MENU	
1	SETUP GAS PORTS
2	SETUP GAS VALUES
3	SETUP RTC
4	CALIBRATE
5	SET CONTRAST

The setup and menu options of the calibrator are very simple and basic as the instrument does the control of the calibration process.

Removing the Observer instrument from its charger the instrument will detect this state change (Charging to Discharging) and go into a start-up mode. The instrument must be displaying the normal operational screen before any calibration is attempted.

0.00	000	
CH4 %	CO PPM	
	20.8	-048 dBm
	O2 %	SIGNAL
		88 %
		BATT CAP

Usual display screen of Observer instrument.

Normal operation

MAIN MENU	
6	SETUP GAS PORTS
7	SETUP GAS VALUES
8	SETUP RTC
9	CALIBRATE
10	SET CONTRAST

The main menu has 5 options to choose from by pressing the number on the keypad associated with that menu option.

1 SETUP GAS PORTS

Option 1 is the setup of the calibration gas valves that the Observer instrument is to be calibrated with. Each valve fitted to the calibrator can either be enabled or disabled.

PORT SELECT	
GAS PORT 1	ENABLED
GAS PORT 2	ENABLED
GAS PORT 3	DISABLED
GAS PORT 4	ENABLED
GAS PORT 5	DISABLED

Using the keypad select the port to be enabled or disabled. Key “2” will scroll up and key “8” will scroll down. Change the state of the port using key “4” and “6”. Depressing these keys will alternate the states from **ENABLED** to **DISABLED**.

If key “*” is depressed the calibrator will leave this menu without saving the changes made. Depressing the “#” key will save all changes made.

2 SETUP GAS VALUES

The initial gas setup menu that will be displayed will have no gas types selected and no gas concentrations assigned.

SETUP GASSES			
GAS PORT 1	NONE	----	
GAS PORT 2	NONE	----	
GAS PORT 3	NONE	----	
GAS PORT 4	NONE	----	
GAS PORT 5	NONE	----	

If you are on the gas type select row select the port to edit using key “2” and “4” to scroll up and down. Pressing key “5” will select the highlighted port and the calibrator will allow selection of a gas type.

SETUP GASSES		TYPE
GAS PORT 1	NONE	NONE
GAS PORT 2	NONE	CH4
GAS PORT 3	NONE	H2 H
GAS PORT 4	NONE	C2H2
GAS PORT 5	NONE	C3H8
		CO2

Using key “2” and “4” scroll up and down to select the gas type connected to this specific port. Depress key “5” to select.

SETUP GASSES			
GAS PORT 1	NONE	----	
GAS PORT 2	CH4	----	
GAS PORT 3	NONE	----	
GAS PORT 4	NONE	----	
GAS PORT 5	NONE	----	

Using key “4 and / or “6” move the cursor to the gas value selection area.

SETUP GASSES			
GAS PORT 1	NONE	----	
GAS PORT 2	CH4	----	
GAS PORT 3	NONE	----	
GAS PORT 4	NONE	----	
GAS PORT 5	NONE	----	

Pressing key “5” will select the highlighted gas value selection and the calibrator will allow selection of a gas value.

SETUP GASSES			
GAS PORT 1	NONE	----	
	GAS VALUE	----	
	1.25 %	----	
GAS PORT 5	NONE	----	

Using any of the numeric keys enter the gas values that are obtained from the calibration card of the bottled gas to be used for calibration.

Depress the “#” key to accept the value entered.

SETUP GASSES			
GAS PORT 1	NONE	----	
GAS PORT 2	CH4		1.25
GAS PORT 3	NONE	----	
GAS PORT 4	NONE	----	
GAS PORT 5	NONE	----	

Once all gas types and calibration gas values have been selected the values must be save by depressing the “#” key. If the “*” key is depressed the calibrator will return to the main menu without saving any of the selections.

3 SETUP RTC

To setup the Real Time Clock on the calibrator unit depress the “3” key. The calibrator will now allow the user to change the RTC time and date.

MAIN MENU	
6	SETUP GAS PORTS
7	SETUP GAS VALUES
8	SETUP RTC
9	CALIBRATE
10	SET CONTRAST

Using the “2” and “8” keys scroll the selected number to the desired value. Using the “4” and “6” keys select the field to be changed.

MAIN MENU	
CLOCK SET	
12 : 00 : 00	
5	SET CONTRAST

When the desired values for the time and date have been entered depress the “5” key to update the RTC. The calibrator will now use this time for any time and date stamps.

4 CALIBRATE


To enable the calibrator to calibrate an instrument depress the “4” key and the calibrator will now search for an instrument to calibrate.

MAIN MENU	
1	SETUP GAS PORTS
2	SETUP GAS VALUES
3	SETUP RTC
4	CALIBRATE
5	SET CONTRAST

The calibrator sends out a message that continuously checks to see if an instrument is place into the calibration receptacle.

CALIBRATE	
SN: 1234567890ABCDEF	
* ESC	# ENT

The calibrator will display the instruments serial number as soon as it is detected. The calibrator will now scroll a bar across the screen to indicate that calibration is in progress.

CALIBRATE	
SN: 1234567890ABCDEF	
	
* ESC	# ENT

The calibration process will continue until all the fitted sensors of the instrument or the enabled gasses to the calibrator have been calibrated. Once calibration is complete the calibrator will display the status of each port.

CALIBRATE		
SN: 1234567890ABCDEF		
PASS	FAIL	PASS
CH4	CO	H2S
N.G.C .	PASS	
	O2	
* NEXT	# ESC	

Once finished the user can now depress the “*” key to calibrate the next instrument. Depressing the “#” key will cause the calibrator to return to the main menu.