MicroDock II

Automatic Test and Calibration Station

User Manual

"INNOVATORS IN GAS DETECTION"

BW Technologies

Limited Warranty & Limitation of Liability

BW Technologies LP (BW) warrants this product to be free from defects in material and workmanship under normal use and service for a period of two years, beginning on the date of shipment to the buyer. This warranty extends only to the sale of new and unused products to the original buyer. BW's warranty obligation is limited, at BW's option, to refund of the purchase price, repair, or replacement of a defective product that is returned to a BW authorized service center within the warranty period. In no event shall BW's liability hereunder exceed the purchase price actually paid by the buyer for the Product.

This warranty does not include:

a) fuses, disposable batteries or the routine replacement of parts due to the normal wear and tear of the product arising from use;
b) any product which in BW's opinion, has been misused, altered, neglected or damaged by accident or abnormal conditions of operation, handling or use;
c) any damage or defects attributable to repair of the product by any person other than an authorized dealer, or the installation of unapproved parts on the product; or

The obligations set forth in this warranty are conditional on:

a) proper storage, installation, calibration, use, maintenance and compliance with the product manual instructions and any other applicable recommendations of BW;
b) the buyer promptly notifying BW of any defect and, if required, promptly making the product available for correction. No goods shall be returned to BW until receipt by the buyer of shipping instructions from BW; and
c) the right of BW to require that the buyer provide proof of purchase such as the original invoice, bill of sale or packing slip to establish that the product is within the warranty period.

THE BUYER AGREES THAT THIS WARRANTY IS THE BUYER'S SOLE AND EXCLUSIVE REMEDY AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. BW SHALL NOT BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OR LOSSES, INCLUDING LOSS OF DATA, WHETHER ARISING FROM BREACH OF WARRANTY OR BASED ON CONTRACT, TORT OR RELIANCE OR ANY OTHER THEORY.

Since some countries or states do not allow limitation of the term of an implied warranty, or exclusion or limitation of incidental or consequential damages, the limitations and exclusions of this warranty may not apply to every buyer. If any provision of this warranty is held invalid or unenforceable by a court of competent jurisdiction, such holding will not affect the validity or enforceability of any other provision.

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Standard MicroDock II Kit includes:

- Shipping case
- MicroDock II base station and docking modules as specified
- 110 – 240 Vac universal power adapter
- 32 MB (or higher) MultiMediaCard (MMC) inserted
- Set of four C-cell alkaline batteries
- USB connector cable
- Fresh air inlet filter
- Two 2 ft. (0.6 m) calibration gas hoses
- Two gas cylinder inlet fittings
- CD: MicroDock II User Manual and MicroDock II Quick Reference Guide translations
- MicroDock II Quick Reference Guide
- Fleet Manager Deluxe CD

⚠CAUTION

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

MicroDock II

Introduction

⚠ Warning

To ensure personal safety, read the Safety Information before using the MicroDock II Base Station.

The MicroDock II Automatic Test and Calibration Station (“the station”) provides automated calibration and bump testing for

- GasAlertClip Extreme,
- GasAlert Extreme,
- GasAlertMicro,
- GasAlertMicro 5,
- GasAlertMicro 5 PID, and
- GasAlertMicroClip detectors.

The station also provides data transfer for

- GasAlert Extreme, and
- GasAlertMicroClip detectors.

A maximum of ten modules can be connected to the station.

Note

There is a maximum of six charging modules.

Six charging modules plus four non-charging modules can be connected to the station.

Contacting BW Technologies

To contact BW Technologies, call:

USA: 1-888-749-8878
Canada: 1-800-663-4164
Europe: +44 (0) 1295 700300
Other countries:+1-403-248-9226

Address correspondence to:

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Email us at: info@bwnet.com
Visit BW Technologies' web site at: www.gasmonitors.com

ISO 9001

Safety Information - Read First

Use the station only as specified in this manual.

International symbols used on the station and in this manual are explained in Table 1.

Read the **Caution** statements on the following pages before using the station.

Note

This instrument contains batteries. Do not mix with the solid waste stream. Spent batteries should be disposed of by a qualified recycler or hazardous materials handler.

⚠ Caution

MicroDock II Base Station

- ⇒ **If the station is damaged or parts are missing, contact BW Technologies immediately.**
- ⇒ **The station must be used only in an area that is free of background gas. Do not use the station in a hazardous area. Failure to adhere to this caution can lead to fire and/or explosion.**
- ⇒ **This equipment uses potentially harmful gas for calibrations. The station must be attached to a venting system or be used in a well-ventilated area.**
- ⇒ **Perform calibrations and bump checks only in a clean atmosphere that is free of background gas.**
- ⇒ **The maximum recommended exhaust line length is 50 ft. (15.24 m).**
- ⇒ **Ensure that the inlet filter is clean.**
- ⇒ **Ensure that all gas cylinders contain enough gas.**
- ⇒ **Ensure the exhaust line is not connected to a negative pressure system.**
- ⇒ **A demand flow regulator must be used with all gas cylinder connections.**
- ⇒ **Do not expose the station to electrical shock or severe continuous mechanical shock.**
- ⇒ **The station warranty will be void if the unit is disassembled, adjusted, or serviced by non-BW Technologies personnel.**
- ⇒ **Do not immerse the station in liquids.**

GasAlertMicro, GasAlertMicro 5, GasAlertMicro 5 PID, and GasAlertMicroClip Chargers

- ⇒ **If the charger is damaged or parts are missing, contact BW Technologies immediately.**
- ⇒ **Do not change or charge the batteries in a hazardous location. Do not use the charger in a hazardous location. Failure to adhere to these precautions can lead to fire and/or explosion.**
- ⇒ **Read and adhere to all instructions and precautions that are provided with the charger. Failure to do so can result in fire, electric shock, or other personal injury and/or property damage.**

⚠ Caution

- ⇒ **Use only BW approved batteries; do not use alkaline or other rechargeable batteries with this charger.**
- ⇒ **For indoor use only.**
- ⇒ **Do not immerse the charger in liquids.**
- ⇒ **Do not expose the charger to electrical shock or severe continuous mechanical shock.**
- ⇒ **Ensure the detector battery pack is locked in place before operating the detector.**
- ⇒ **To eliminate the risk of electrical shock, disconnect and deactivate the charger when cleaning or performing maintenance.**
- ⇒ **Avoid touching the charger and detector contact pins.**
- ⇒ **Substitution of components may impair Intrinsic Safety of the detector under charge.**
- ⇒ **Do not charge the battery pack with any other charger.**
- ⇒ **Do not attempt to disassemble, adjust, or service the charger unless instructions are provided to perform a procedure, or a part is listed as a replacement part in the user manual . Use only BW Technologies replacement parts.**
- ⇒ **The charger warranty will be void if a customer, personnel, or third parties damage the charger during repair attempts. Any non-BW Technologies service/repair attempts will void this warranty.**

Table 1. International Symbols

Symbol	Description
C SP US	Approved to both U.S. and Canadian Standards by the Canadian Standards Association

Getting Started

Confirm that the items below are included with the station. If the station is damaged or parts are missing, contact the place of purchase immediately.

- Batteries (four replaceable C-cell alkaline batteries)
- 32 MB (or higher) MultiMediaCard (MMC) inserted
- USB cable
- Two calibration gas hoses with quick connect fittings
- Inlet filter assembly
- Power adapter
- Charger adapter (charger models only)
- CD: MicroDock II User Manual and MicroDock II Quick Reference Guide translations
- MicroDock II Base Station Quick Reference Guide
- Fleet Manager Deluxe CD

Note

A standard MicroDock II base station is shipped with two inlets. A maximum of four calibration gas inlets can be included if specified by the user before purchasing.

To order replacement parts, refer to Replacement Parts and Accessories.

For information regarding the operations and functions of the station, refer to the following figures and tables.

- Figure 1 MicroDock II Base Station and Docking Modules
- Figure 2 and Table 2 The MicroDock II (describes the station)
- Table 3 Display Elements (describes the station LCD icons)
- Table 4 Docking Module Pushbuttons
- Figure 3 and Table 5 Station Pushbuttons
- Figure 4 and Table 6 Station Connections

MicroDock II Base Station and Docking Modules

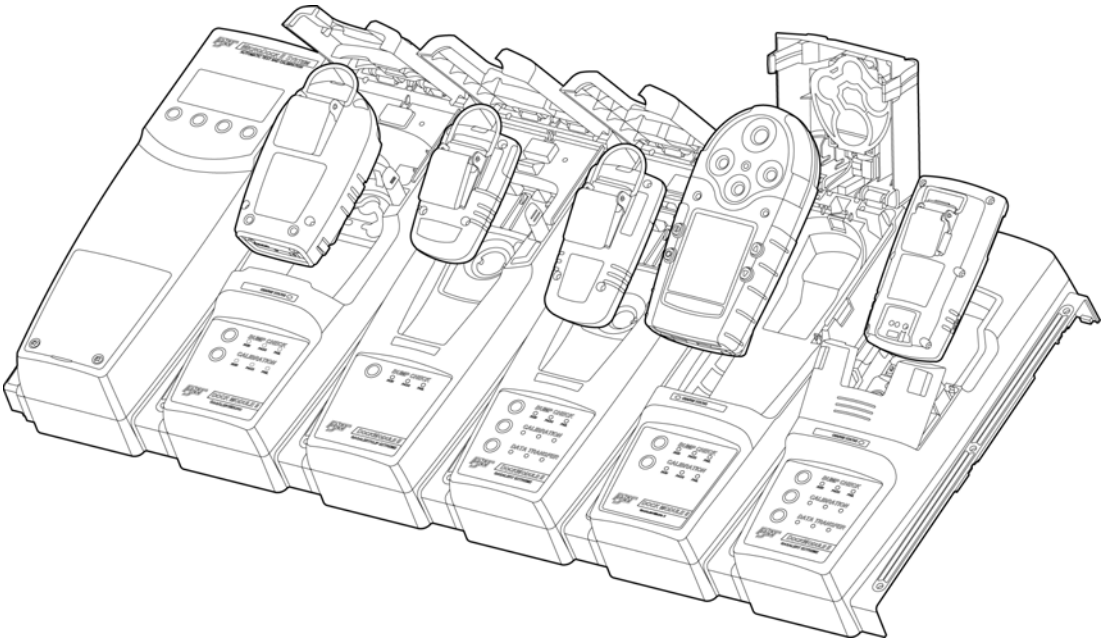


Figure 1. MicroDock II Base Station and Docking Modules

To connect additional docking modules and for procedures to correctly insert detectors into docking modules, refer to Installation.

Parts of the MicroDock II and Docking Module

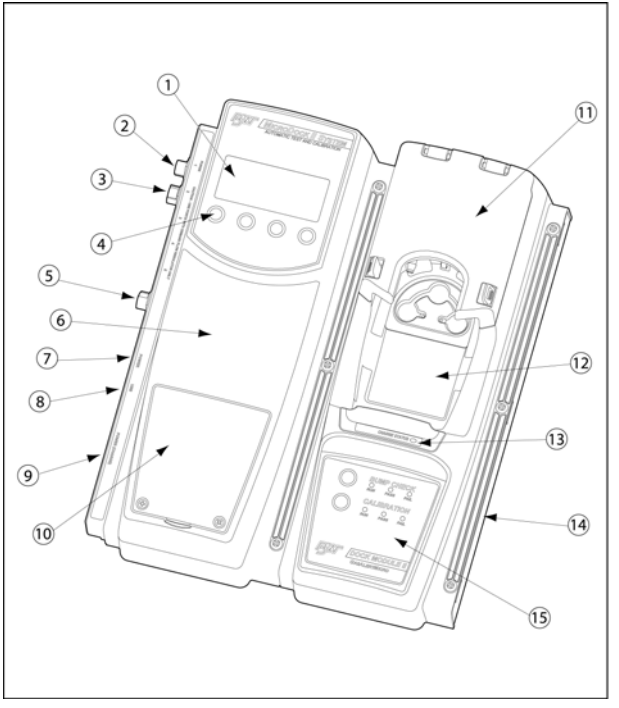


Figure 2. The MicroDock II Docking Module

Table 2. The MicroDock II and Docking Module

Item	Description
1	Liquid crystal display (LCD)
2	Zero air/purge inlet (inlet 1)
3	Calibration gas inlet (inlet 2)
4	Station pushbuttons
5	Exhaust outlet
6	Base station
7	Power port
8	USB port
9	Charger port (optional)
10	Battery cover
11	Docking module lid
12	Detector bay
13	Charger status LED (optional)
14	Docking module
15	Docking module pushbuttons and status LEDs

Display Elements

Table 3. Display Elements

Icon	Description
	AC power
	Batteries charged
	Batteries half-charged
	Batteries at low level
	MultiMediaCard (MMC)
	MultiMediaCard (MMC) not inserted
	Test pass
	Test fail
	Cursor and sensor disabled
	Scroll up
	Scroll down
	Selection arrow
	Selected to be modified
	Pass code protected

Pushbuttons

Docking Module Pushbuttons

Table 4. Docking Module Pushbuttons

Pushbutton	Description
◯BUMP CHECK	To bump a detector, press ◯ BUMP CHECK. After connecting a new docking module, press and hold ◯ BUMP CHECK to send a confirmation signal back to the base station.
◯CALIBRATION	To calibrate a detector, press ◯ CALIBRATION. (optional feature)
◯DATA TRANSFER	To transfer datalog/event log information from a detector, press ◯ DATA TRANSFER. (GasAlert Extreme and GasAlertMicroClip only)

Station Pushbuttons

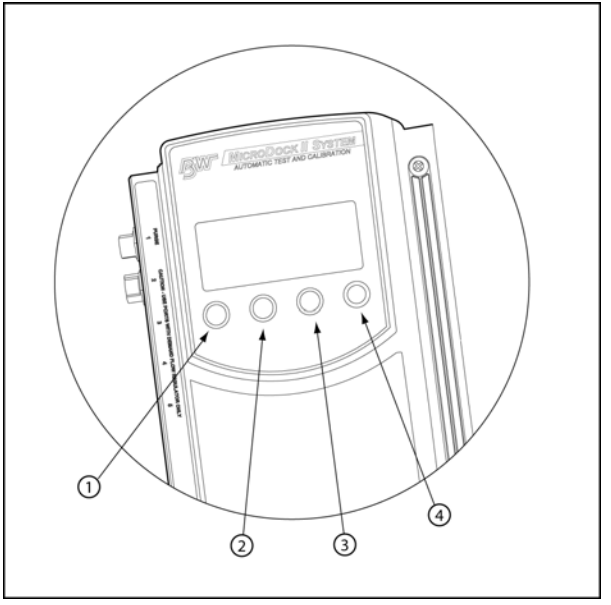


Figure 3. Station Pushbuttons

The station pushbuttons are used to activate, deactivate, scroll, select options, and perform functions.

Table 5. Station Pushbuttons

Item	Description
1	• Activate the base station • Select **menu** to access the user options • Scroll up to different user options or to other functions/selections within a user option • Select **OK**
2	• Select **log** to view the results history log • Select the **sel** (select option) function • Activate a modifiable field
3	• **exit** from a modifiable option, and • **exit** from the user options menu to access the normal operating screen.
4	• Deactivate the base station • Scroll down to different user options or to other functions/selections within a user option

Installation

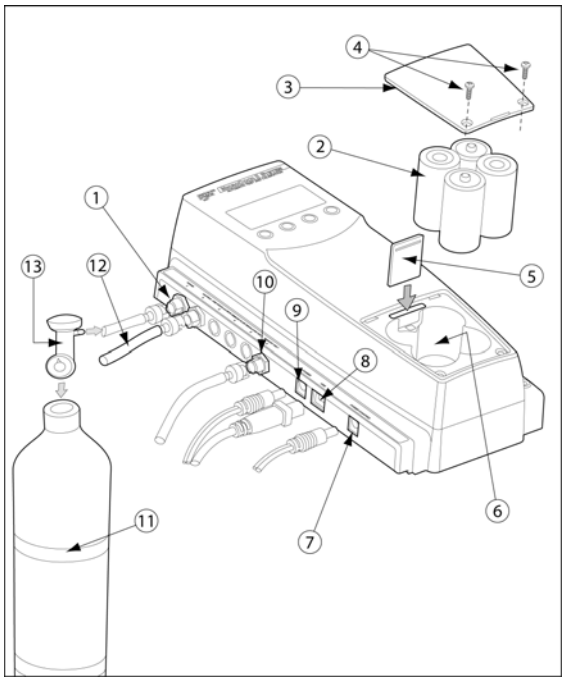


Figure 4. Station Connections

Table 6. Station Connections

Item	Description
1	Inlet filter assembly (PURGE 1)
2	C-cell batteries (4)
3	Battery cover
4	Philips pan-head retaining screws (2)
5	MultiMediaCard (MMC)
6	Battery compartment
7	Charger port
8	USB port
9	Power port
10	Exhaust outlet
11	Gas cylinder
12	Calibration gas hose
13	Demand flow regulator

⚠Warning

The atmosphere must be free of background gas. Do not use the station in a hazardous area.

All required national electrical codes (NEC) and safety standards must be followed.

Note

The station can operate from either an electrical power source or by using batteries. The batteries will provide automatic backup power if the main power fails.

1. Connect the power cord to the POWER port on the station and then plug the cord into an ac outlet. Or install the batteries. Refer to Battery Installation.
2. Connect the charger cord to the CHARGER port on the station and then plug the cord into an ac outlet (if applicable).
3. Attach all gas connections. Inlet 1 (PURGE) is configured for ambient air and inlets 2 - 5 are configured for calibration/test gases. Refer to Confirming Inlet Setup.
4. A demand flow regulator must be used with all gas cylinder connections.
5. Ensure the exhaust line is not connected to a negative pressure system.

For ac main installation, a circuit breaker must be integrated in the building installation as a disconnect device for the station.

The disconnect device must be installed in close proximity to the station and must be marked as a disconnecting method for the station.

Battery Installation

⚠Warning

Only change batteries in an atmosphere that is clear of hazardous gas. Failure to adhere to this warning can result in personal injury and/or property damage.

To install batteries into the station, refer to Figure 4 and complete the following:

1. Loosen only; do not remove the retaining screws from the battery cover.
2. Remove the battery cover and set it aside.
3. Insert four C-cell batteries into the battery compartment.
4. Replace the battery cover and tighten the retaining screws. Do not over tighten the screws. Refer to Table 11. Torque Specifications.

Inserting the GasAlertClip Extreme and the GasAlert Extreme

⚠Caution

Infrared or intense ambient light (sun or halogen) may interfere with the station/detector communication.

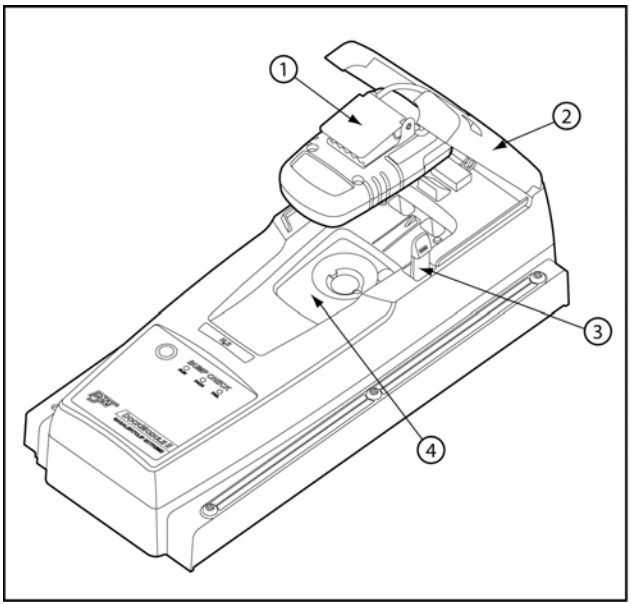


Figure 5. Inserting the GasAlertClip Extreme and the GasAlert Extreme

Table 7. Inserting the GasAlertClip Extreme and the GasAlert Extreme

Item	Description
1	Alligator clip
2	Docking module lid
3	Release tabs
4	Detector bay

1. Activate the detector and wait until it is in normal operating mode.
2. Ensure the alligator clip is closed and the ring is resting flat to prevent disruptions with the transmission.
3. Press the two release tabs on the docking module and raise the lid.
4. Lower the detector (LCD face down) into the detector bay. Push forward to ensure the top of the detector connects with the top of the bay.
5. Lower the lid and press down until the release tabs click.

When the detector has been inserted correctly, the RUN LED(s) on the docking module lights yellow and **Unit Inserted** displays.

The station LCD displays the following docking module identification; the

- type of detector that is inserted, and
- bay and serial number of the docking module.

6. To bypass the station identification screen, press any ◯ button on the base station.

Inserting the GasAlertMicro

⚠ Caution

Infrared or intense ambient light (sun or halogen) may interfere with the station/detector communication.

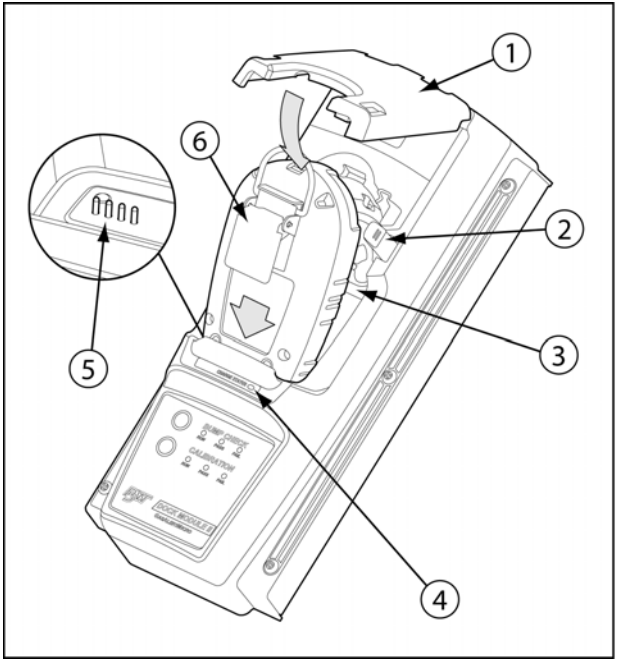


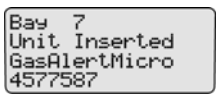
Figure 6. Inserting the GasAlertMicro

Table 8. Inserting the GasAlertMicro

Item	Description
1	Docking module lid
2	Release tabs
3	Detector bay
4	Charge status indicator (charging model only)
5	Connector pins (charging model only)
6	Alligator clip

1. Activate the detector and wait until it is in normal operating mode.
2. Ensure the alligator clip is closed and the ring is resting flat on the detector to prevent disruptions with transmission.
3. Press the two release tabs on the docking module and raise the lid.
4. Insert the bottom of the detector into the detector bay (LCD face down) and then lower the top into place.
5. Lower the lid and press down until the release tabs click.

   When the detector has been inserted correctly, the RUN LEDs on the docking module light yellow and **Unit Inserted** screen displays.

   The station LCD displays the following docking module identification; the

   - type of detector that is inserted, and
   - bay and serial number of the docking module.

6. To bypass the station identification screen, press any ◯ button on the station.

Inserting the GasAlertMicro 5 and GasAlertMicro 5 PID

⚠Caution

Infrared or intense ambient light (sun or halogen) may interfere with the station/detector communication.

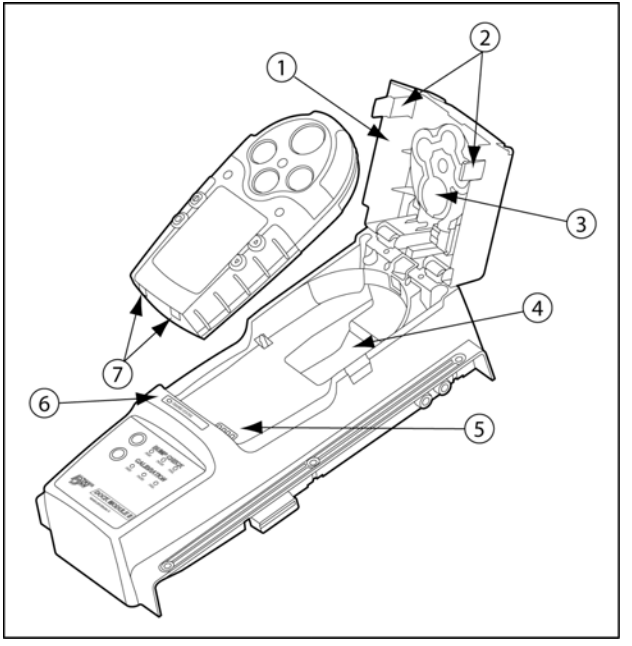


Figure 7. Inserting a GasAlertMicro 5 or the GasAlertMicro 5 PID

Note
Table 9 references Figure 7 and Figure 8.

Table 9. Inserting the GasAlertMicro 5 or the GasAlertMicro 5 PID

Item	Description
1	Docking module lid
2	Release tabs
3	Diffusion adapter
4	Detector bay
5	Connector pins (charging model only)
6	Charge status indicator (charging model only)
7	Connector outlets
8	Diffusion adapter release tab
9	Tool used to push down on diffusion adapter release tab

1. Activate the detector and wait until it is in normal operating mode.

2. Ensure the alligator clip is closed and the ring is resting flat on the detector to prevent disruptions with the transmission.

3. Press the two release tabs on the docking module and raise the lid.

Important: If the GasAlertMicro 5 or GasAlertMicro 5 PID detector is fitted with a pump, the diffusion adapter must be removed from the docking module lid.

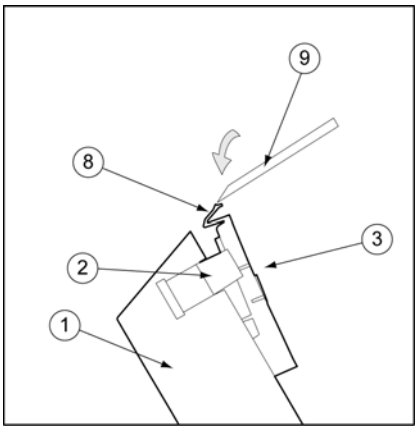


Figure 8. Removing the Diffusion Adapter

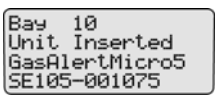
Using a small flathead screwdriver, press the release tab downwards. Pull the adapter forward slightly and then lift upwards to remove.

4. Hold the detector (LCD face up) at a 45^{o} angle and insert the bottom into the detector bay.

   Ensure that the connector outlets on the bottom of the detector lock into place over the connector pins in the docking bay, and then lower the top into place.

5. Lower the lid and press down until the release tabs click.

   When the detector has been inserted correctly, the RUN LEDs on the docking module light yellow and **Unit Inserted** displays on the station.

   The station LCD displays the following docking module identification; the

   - type of detector that is inserted, and
   - bay and serial number of the docking module.

   The GasAlertMicro 5 and GasAlertMicro 5 PID detector LCDs display **Microdock**.

6. To bypass the station identification screen, press any ◯ button on the station.

Inserting the GasAlertMicroClip

⚠ Caution

Infrared or intense ambient light (sun or halogen) may interfere with the station/detector communication.

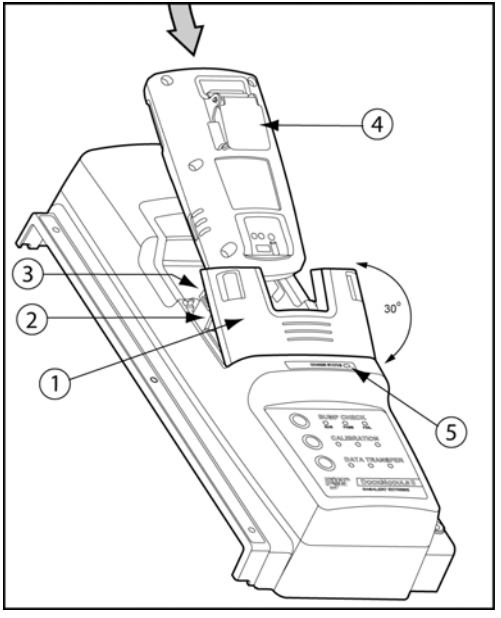


Figure 9. Inserting the GasAlertMicroClip

Table 10. Inserting the GasAlertMicroClip

Item	Description
1	Module lid
2	Release tabs
3	Detector bay
4	Alligator clip
5	Charger status indicator

Note

If the GasAlertMicroClip detector is fitted with a calibration cap or auxiliary filter, it must be removed prior to inserting it into the docking module.

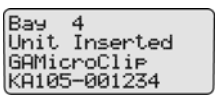
1. Activate the detector and wait until it is in normal operating mode.
2. Ensure the alligator clip is closed and the ring is resting flat on the detector to prevent disruptions with the transmission.
3. Press the two release tabs on the docking module and raise the lid.

⚠Warning

The docking module lid only raises upward 30°. Do not force the lid beyond its limit.

4. Insert the bottom of the detector (serial number face up) at a 30° angle into the detector bay and then lower the top into place.

5. Lower the lid and press until the release tabs click. When the detector has been inserted correctly, the RUN LEDs on the docking module light yellow and **Unit Inserted** displays on the station.



   The station LCD displays the following station identification; the

   - type of detector that is inserted, and
   - bay and serial number of the docking module.

6. To bypass the station identification screen, press any ◯ button on the station.

Adding Another Docking Module

If required, refer to How to Use the Base Station before adding a docking module.

⚠ Warning

Only one module can be connected at a time. Complete steps #1-19 for each docking module that is added.

To add another docking module, refer to Table 11 and 12, Figure 9, 10, and 11, and complete the following procedures:

Table 11. Torque Specifications

Housing Assembly	Torque
Alligator clip	4-5 in lbs
Wall mounting plate	9-10 in lbs

Table 12. Adding Another Docking Module

Item	Description
1	Phillips pan-head screw (3)
2	End plate
3	Barbed fitting ports
4	Gasket block
5	Phillips flat-head screw
6	PCB connectors
7	Bottom cover plate

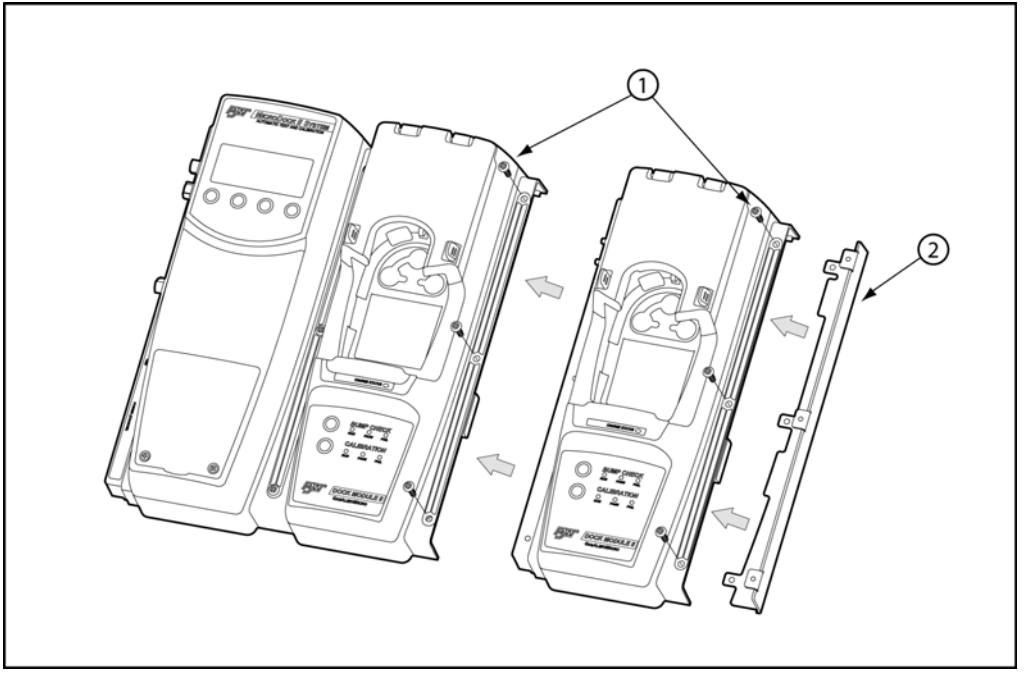


Figure 10. Adding Another Docking Module (Front View)

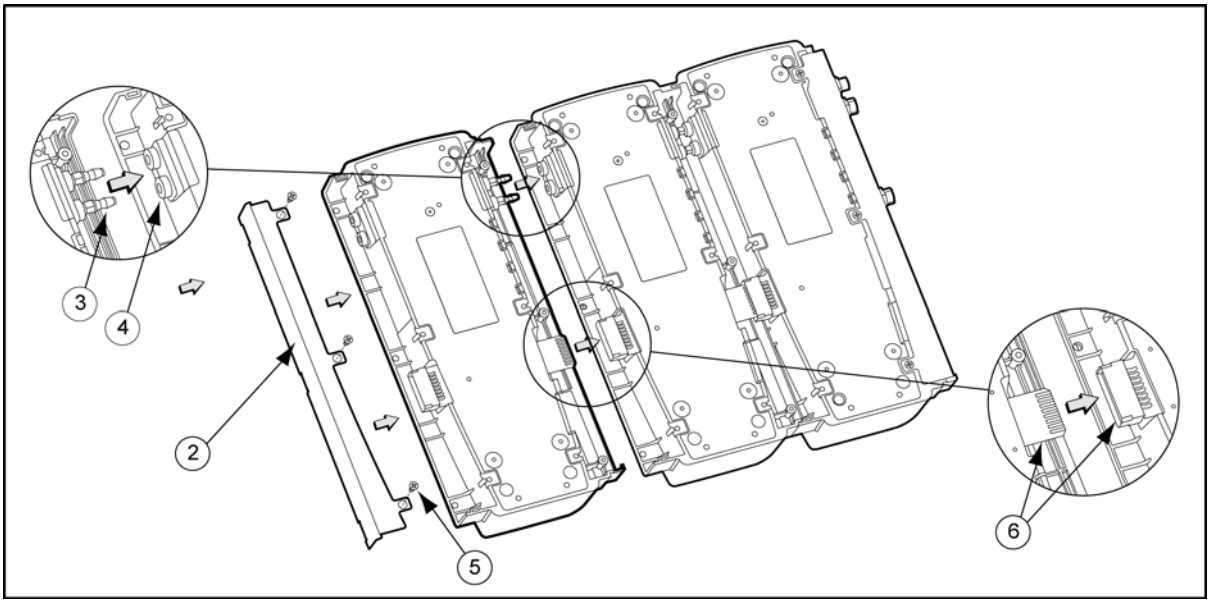


Figure 11. Adding Another Docking Module (Back View)

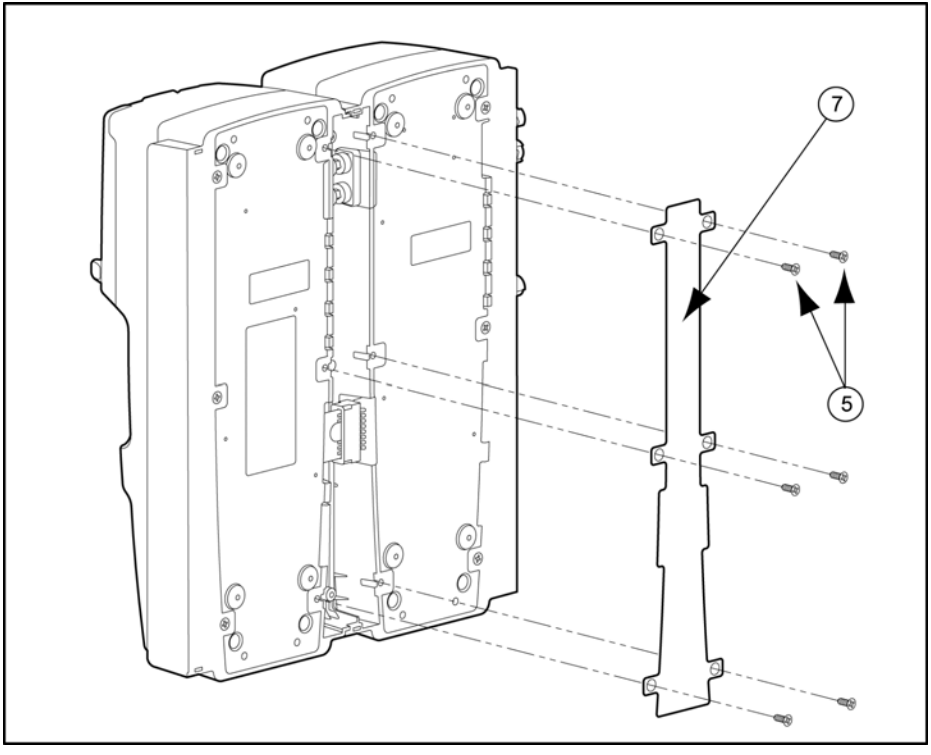


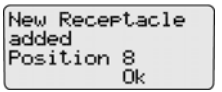
Figure 12. Attaching Back Cover Plate (Back View)

1. Deactivate the station.
2. Remove the power cord from the POWER port.
3. Remove the end plate. There are three Phillips screws on the front and three Philips screws on the back.
4. Attach the new docking module.
5. Ensure the barbed fitting ports mate correctly with the gasket block. Ensure that the male and female PCB connectors mate correctly.

Initializing the New Docking Module

When a new docking module is connected, it must be initialized (setup to communicate with the station).

6. Activate the station.
7. Simultaneously press and hold ◯ BUMP CHECK on the new docking module while pressing ◯ (leftmost button) on the station.
8. All of the LEDS on the new docking module light. On the station, the following screen displays to confirm that the new docking module has been successfully added.



9. Press ◯ **Ok** to save the setting.
10. Deactivate the station.

⚠ Warning

The station must be deactivated after each module has been added.

Pump Setup

The pump speed must be set for each new docking module that is connected.

⚠ Warning

Perform the pump setup procedures in a clean atmosphere only.

11. Reactivate the station and wait until the normal operating screen displays.
12. Connect the hose to a flow meter and to inlet 1 (PURGE) on the station.

    Allow the flow meter sufficient time to stabilize (approximately 30 minutes) before using to ensure accurate flow readings.

13. From the station, access the user options menu.
14. Press ◯ ∨ or ◯ ∧ to scroll to the **Pump Setup** option.
15. Press ◯ **sel** to activate the pump setup field (**:** changes to *****).

The station immediately begins pumping the ambient air.

The factory default pump speed displays beside **Pump Setup**. The station pump setup is measured as a percentage (**%**) and the flow meter is measured in ml/min.

Note

*The station is shipped with the factory default pump speed set to 350 ml/min. (**40**-**45%**).*

16. Monitor the flow meter until the unit stabilizes (5-20 minutes depending upon the type of flow meter).
17. From the station, press ◯ ∧ or ◯ ∨ until the flow meter displays 350 ml/m.
18. From the station, press **exit** ◯ to save the new value and deactivate the **Pump Setup** field (***** changes to **:**).
19. Press ◯ **exit** again to return to the normal operating screen.
20. Repeat steps # 1-19 for each docking module that is added. Continue to step #21 and 22 for the last module added.
21. After all of the modules have been added, attach the end plate (refer to Figure 11).
22. Fasten the bottom cover plate to the space between the two docking modules using six Philips flat-head screws (refer to Figure 12).

Note

When assembling or reassembling parts of the station and docking modules, refer to the Table 11 Torque Specifications.

Mounting the MicroDock II

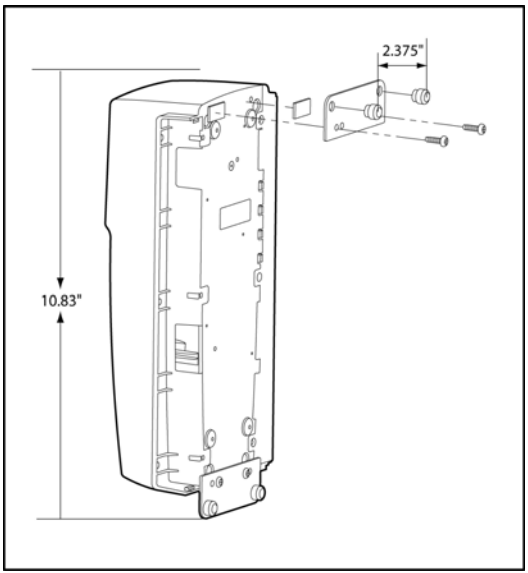


Figure 13. Attaching the Wall Mounting Plate

Note

When mounting two or more docking modules, each docking module requires an individual set of wall mounting plates.

Because of the variety of surfaces that the station can be mounted to, mounting screws are not provided.

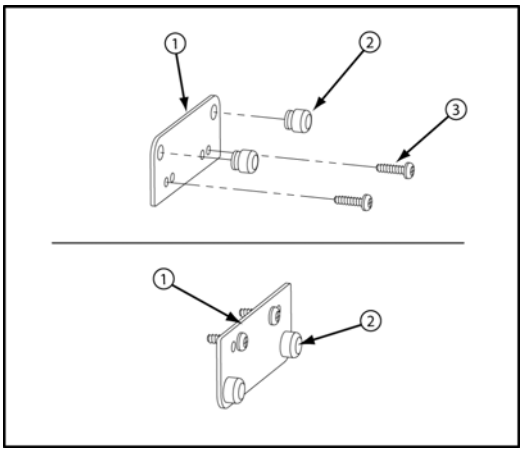


Figure 14. Parts of the Wall Mounting Plate

Table 13. Mounting the MicroDock II

Item	Description
1	Wall mounting plate (2)
2	Grommet (4)
3	Phillips self-tapping screw (8)

The MicroDock II station can be easily mounted to a secure surface. To mount the station, complete the following:

1. Determine a secure location where the station is to be mounted.

   Using the screws that are provided, attach the wall mounting plates to the station/docking modules.

2. When the plates are mounted on the station, measure horizontally on the wall the width of the station; 2.38 in. (60.32 mm).

   If two or more docking modules that are attached together are being mounted on the wall, measure a distance of 1.64 in. (41.7 mm) of space between each docking module.

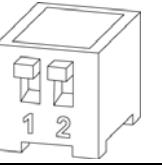
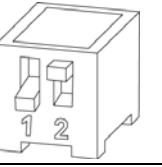
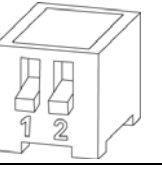
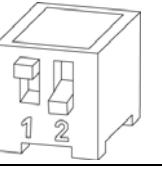
3. Use four screws to attach the station to the secure surface.

Changing Dip Switch Settings

(GasAlertClip Extreme only)

The GasAlertClip Extreme docking module provides the option to change the gas type for bump checks by setting the dipswitch within the docking module.

Table 14. Dip Switch Settings

Gas Type	Dip Switch Setting
Sulphur dioxide (SO_2)	
Oxygen (O_2)	
Hydrogen sulfide (H_2S)	
Carbon monoxide (CO)	

To change the dipswitch setting on a GasAlertClip Extreme docking module refer to tables 14 and 15, figures 15 and 16, and complete the following:

1. Deactivate the station.
2. Remove the three Phillips pan-head screws from the front and the six Philips flat-head screws from the back cover plate.
3. Gently separate the docking module from the station or other docking module.
4. Configure the gas type by setting the dip switches to the desired gas. Refer to Table 14 for gas type and dip switch settings.
5. Reconnect the GasAlertClip Extreme docking module.

   Refer to Table 11. Torque Specifications.
6. Fasten the bottom cover plate using the six Phillips flat-head screws. Fasten the remaining three Phillips pan-head screws to the top of the docking module.

Table 15. Changing Dip Switch Settings

Item	Description
1	Bottom cover plate
2	Phillips flat-head screw (6)
3	Phillips pan-head screw (3)
4	Barbed fitting ports
5	Dip switch

Note

When reattaching the docking module, ensure the barbed tubing is inserted correctly. Ensure to correctly label the gas type on the docking module.

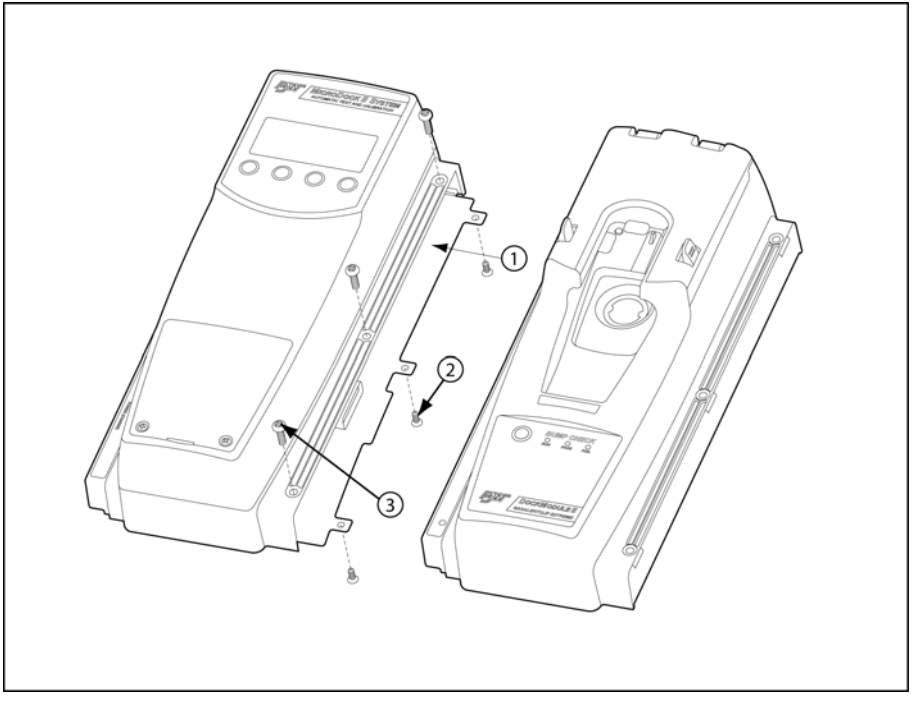


Figure 15. Detaching the GasAlertClip Extreme Module

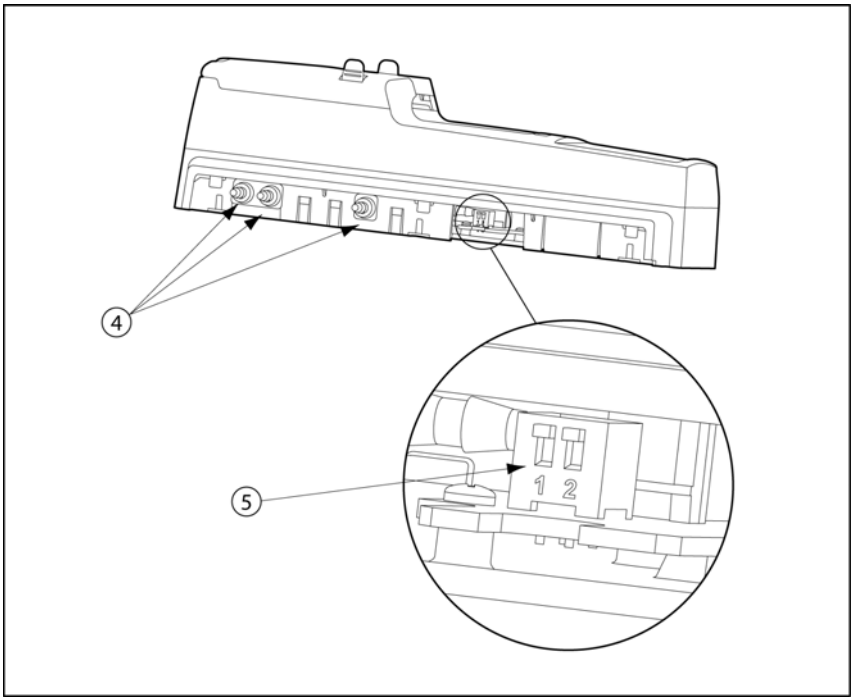


Figure 16. Changing Dip Switch Settings

How to Use the Base Station

⚠ Warning

To prevent possible injury and/or property damage, only use the station in an atmosphere that is clear of hazardous gas.

Ensure that the station is attached to a venting system or used in a well ventilated area.

The station pushbuttons are not labelled. The station is operated by pressing the ◯ pushbutton that is located directly below the option that displays on the LCD.

Confirming Inlet Setup

⚠ Warning

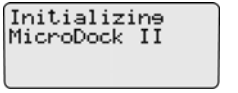
Failed tests can result if the inlets are not setup correctly.

Before activating the station for the first time, ensure that the gas cylinders are connected to the inlets correctly. Refer to Installation. To confirm that the inlets are setup correctly, refer to Inlet Setup in the User Options Menu section.

Activating the Station

To activate the station, complete the following:

1. Connect power to the station. Refer to Installation.
2. Press and hold ◯ (the left most button) until the initializing screen displays.

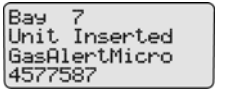


The LCD immediately then displays the normal operating screen.

Self-Test

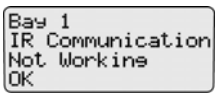
The station automatically performs a self-test during start-up.

Docking Module/Detector: The station checks for connected docking modules and inserted detectors.



The LCD displays information about the docking modules, the model of the detector, and the detector serial number.

If a detector is inserted but not activated, the LCD displays the following message.



Press ◯ **OK** to acknowledge the error message.

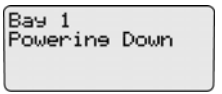
Batteries: The batteries are tested during activation and continuously thereafter. If battery power is extremely low, the low battery icon flashes.

MultiMediaCard (MMC): The MMC icon ( ) displays continuously on the normal operating screen when the MMC is inserted. The MMC records a variety of data.

Pass Code Protection: If the station is pass code protected, the pass code protect icon displays on the normal operating screen.

Deactivating the Station

The station must be in the normal operating mode to deactivate. From the normal operating screen, press and hold ◯ (the rightmost button) until **Powering Down** displays.



The power down screen displays briefly before the station deactivates.

User Options Menu

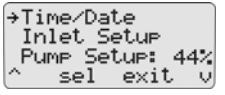
The user options menu provides access to ten options. The following user options are listed in the order they are displayed on the station LCD.

Note

Bump or calibration tests cannot be performed while the user options menu is accessed. However, if a test is initiated before or while accessing the user options menu, the test automatically begins when the user options menu is exited.

To access the user options menu, complete the following:

1. Press and hold ◯ **menu** to access the first screen.



   If the station is pass code protected, refer to Entering User Options when Pass Code Protected.

2. Press ◯ ^ or ◯ v to scroll to different options. When the → icon displays beside the required option, press ◯ **sel** to select.

3. To exit the options menu and return to the normal operating screen, press ◯ **exit**.

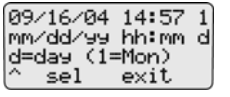
Time/Date

The **Time/Date** option is used to adjust the time (hour/minute), the date (month/day/year) and the day of the week (1-7) of the station.

To change the date, time, and/or day of the week, complete the following:

1. From the user options menu, press ◯ ^ or ◯ v to scroll to the **Time/Date** option.

   Press ◯ **sel** to confirm the selection and access the time/date screen.

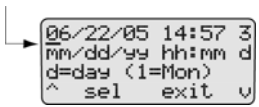


mm: month
dd: day
yy: year
hh: hour
mm: minute
d: day of the week Monday = **1**, Tuesday = **2**, Wednesday = **3**, etc.

Note

*The time and date values can only be changed in the order they are presented in this table. To bypass any time/date setting, press ◯ **sel**. The station automatically retains the current value and proceeds to the next date/time value.*

The cursor automatically displays below the first value of the month. Each value is selected, changed, and bypassed individually.



2. Press ◯ ^ to toggle between **0** or **1**. When the correct value displays, press ◯ **sel** to confirm the change. The cursor then automatically moves to the second value of the month.

   Or

   Press ◯ **sel** to bypass the first value. The station automatically retains the current value and proceeds to the second value of the month.

3. Repeat step #2 for the remaining time and date values.

4. Press ◯ **exit** to return to the user options menu.

5. Press ◯ **exit** again to return to the normal operating screen.

Inlet Setup

The **Inlet Setup** option is used to setup the specific gas cylinders for bump checks and calibrations. This option is used to

- select the gas type(s)
- enter the corresponding gas concentrations level(s), and
- enter the gas cylinder lot # of each selected gas.

⚠ Warning

Failed tests can result if the inlets are not setup correctly.

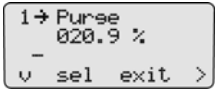
For initial station activation, ensure the inlets are installed correctly as follows:

- Inlet 1 is the default connection for ambient air.
- Inlet 2 is the default connection for four-gas mix, unless otherwise specified at purchase.
- Inlets 3-5 are designed connections for additional gases. However, unless specified at the time of purchase, inlets 3-5 are configured for ambient air.

To confirm that the inlets are setup correctly, complete the following:

1. From the user options menu, press ◯ ^ or ◯ v to scroll to the **Inlet Setup** option.

2. Press ◯ **sel** to confirm the selection and access the inlet 1 (ambient air) screen.

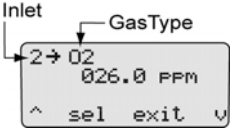


Note

Inlet 1 is designated for ambient air only and cannot be changed.

3. From the inlet **1** screen, press ◯ > to access the inlet **2** screen.

   Continue to press ◯ > to access the inlet **3**, **4**, and **5** screens. The **O_2** gas type displays when each of the inlet screens are accessed for the first time.

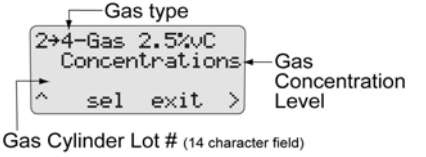


The inlet screens (2-5) have three options to modify:

- Gas type
- Gas concentration level
- Gas cylinder lot # field (field initially displays blank until data is entered).

Gas Type Screen

Multi-gas Type Screen



4. To select a gas type, proceed to Gas Type. Refer to Table 16 for available gas types.

Gas Type:

There are thirty-three gas types to select from. Refer to the following table.

Table 16. Inlets 2-5 – Available Gas Types

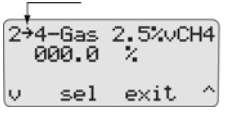
Gas Type	Gas Concentration	
Note *The * icon in column three indicates that the gas concentration level can be modified on the station.*		
Purge (ambient air)	%	
O_2 (oxygen)	%	
NH_3 (ammonia)	ppm	*
CO (carbon monoxide)	ppm	*
ETO (ethylene oxide)	ppm	*
H_2 (hydrogen)	ppm	*
Cl2 (chlorine) **bump only**	ppm	*
HCN (hydrogen cyanide)	ppm	*
H_2S (hydrogen sulfide)	ppm	*
NO (nitric oxide)	ppm	*
NO_2 (nitrogen dioxide)	ppm	*
PH_3 (phosphine)	ppm	*
SO_2 (sulfur dioxide)	ppm	*
Ethanol	% LEL	*
Ethanol Equiv.	% LEL	*
Hexane	% LEL	*
Hexane Equiv.	% LEL	*
Methane	% LEL	*
Methane Equiv.	% LEL	*
Pentane	% LEL	*
Pentane Equiv.	% LEL	*
Propane	% LEL	*
Propane Equi	% LEL	*
4 – Gas 2.5%vCH4 (H_2S, CO, LEL, O_2)	ppm and %LEL	
4 – Gas Equiv.	ppm and %LEL	
Custom 4-Gas	ppm and %LEL	*
Custom 3-gas	ppm and %LEL	*
Custom 2-Gas	ppm and %LEL	*
3 – Gas SO_2 Mi (3-gas mix)	ppm and %LEL	
Isobutylene	ppm	*
LEL	%LEL	*
CO_2	ppm	*
CO_2 zero	ppm	

Note

The → icon is used to scroll to different options and functions. The ✱ icon displays when a field is selected and can be modified.

To select a gas type, complete the following:

From the required inlet screen, the → icon displays.



5. If the required gas type is displayed, press ◯ v to move down to the gas concentration level. Proceed to the Gas Concentration Level section.

6. To select a different gas type, press ◯ **sel**. The → changes to✱ to indicate that the field is activated. Press ◯ ^ or ◯ v to scroll through the list of gas types.

7. When the required gas type displays, press ◯ **sel**. The ✱ changes to → to confirm the new selection and to deactivate the field.

8. To enter the gas concentration level for the selected gas, proceed to the following section Gas Concentration Level.

   Or

   Press ◯ **exit** to return to the user options screen.

9. Press ◯ **exit** again to return to the normal operating screen.

Gas Concentration Level:
Depending upon the gas type selected, **ppm**, **LEL%**, or **%** displays beside the gas concentration level.

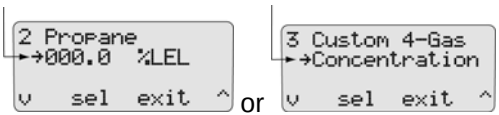
Note

The following gas concentrations are factory configured and cannot be changed:

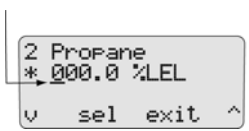
- *Four-gas-mix (**4-Gas 2.5% vCH4**)*
- *Four-gas equivalent (**4-Gas Equiv.**)*
- *Three-gas SO_2 mix (**3-Gas SO2 Mi**)*

*The **Custom 4-Gas**, **Custom 3-Gas**, **and Custom 2-Gas** can be modified; however, only the gas concentration levels can be changed.*

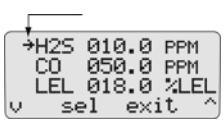
10. Press ◯ ∨ to move the → icon down to the gas concentration level.



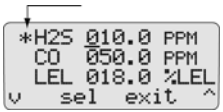
11. Press ◯ **sel**. If the gas concentration level can be modified, the → changes to the ✱ icon and the cursor displays below the first value selected to modify.



For custom and multi-gas: All of the applicable gases display (for **4-Gas** press ◯ ∨ to scroll to the remaining gas type not currently displayed).



Press ◯ **sel** to select the required gas. The → icon changes to ✱ and the cursor automatically displays below the first value selected to modify.



12. Press ◯ ∨ or ◯ ^ to scroll to the required value. Press ◯ **sel** to save the new value.

    Or

    Press ◯ **sel** to retain the current value. The cursor automatically moves to the next value.

13. Repeat step #12 for the remaining values, then press ◯ **exit**. The ✱ then changes back to the → icon.

14. To enter a lot number for the corresponding gas cylinder, proceed to Gas Cylinder Lot # Field.

    Or

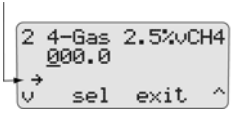
    Press ◯ **exit** to return to the user options screen.

15. Press ◯ **exit** again to return to the normal operating screen.

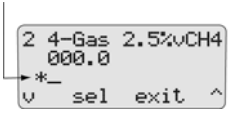
Gas Cylinder Lot # Field:
Although this field is designed to enter the lot number of the corresponding gas cylinder, it can be used to enter other

data. A maximum of fourteen characters (letters and/or numbers) can be selected.

16. Press ◯ ∨ to move → down to the lot number field. Initially this field is blank.



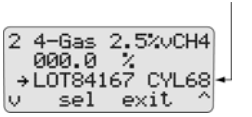
17. Press ◯ **sel**. The → changes to ✱ and the cursor displays for the first value.



18. Press ◯ ^ or ◯ ∨ to scroll to the first desired letter/number. Press ◯ **sel** to accept the value and automatically move the cursor to the next space.

19. Repeat step #18 for the remaining values.

The following screen displays the corresponding lot number for the attached gas cylinder.



20. Press ◯ **exit**. The ✱ changes back to the → icon.

21. To setup another inlet, repeat the procedures listed in the Gas Type, Gas Concentration Level, and the Gas Cylinder Lot # Field sections.

22. When all of the entries are completed, press ◯ **exit** to return to the user options menu.

23. Press ◯ **exit** again to return to the normal operating screen.

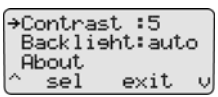
Pump Setup

Refer to Pump Setup in the Adding Another Docking Module section.

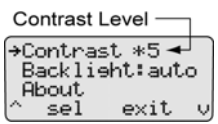
Contrast

The **Contrast** option is used to brighten or darken the LCD. To adjust the contrast level, complete the following:

1. From the user options menu, press ◯ ^ or ◯ v to scroll to the **Contrast** option.



2. Press ◯ **sel** to confirm the selection and activate the field (**:** changes to *****).



The contrast levels range from **2** (brightest) to **10** (darkest).

Note

*The station is shipped with the contrast level set to **5**.*

3. Press ◯ ^ or ◯ v to select the desired contrast level.

4. Press ◯ **sel** to save the new value and deactivate the field (***** changes back to **:**).

5. Press ◯ ^ or ◯ v to scroll to another user option.

   Or

6. Press ◯ **exit** to return to the normal operating screen.

Backlight

This **Backlight** option is used to enable, disable, or set to auto mode for the LCD lighting. The **auto** option can be selected to automatically disable the backlight when the station is not in use.

Note

*The station is shipped with the auto backlight option enabled. While operating from battery power only, select **auto** mode or ⁙ (off) to conserve the batteries.*

To enable/disable or select **auto** backlight, complete the following:

1. From the user options menu, press ◯ ^ or ◯ v to scroll to the **Backlight** option.

2. Press ◯ **sel** to select the option and activate the field (**:** changes to ✱).

3. Press ◯ ^ or ◯ v to scroll through the options.

✓	Enabled
✗	Disabled
auto	Automatic

Each selection displays beside **Backlight** and the backlight activates and deactivates, depending upon the selection.

4. Press ◯ **sel** to save the selection and deactivate the field (✱ changes back to **:**).

5. Press ◯ ^ or ◯ v to scroll to another user option.

Or

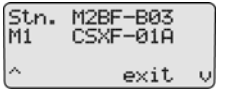
Press ◯ **exit** to return to the normal operating screen.

About

The **About** option displays the serial number for the station and for each docking module that is connected. To view the serial numbers for the station and docking module(s), complete the following:

1. Press ◯ ^ or ◯ v to scroll to the **About** option.

2. Press ◯ **sel** to access the about station screen.



3. If more than one docking module is connected to the station, press ◯ ^ or ◯ v to scroll to the additional docking module serial numbers (**M1** - **M10**).

Note

Maximum ten docking modules per station. There is a maximum limit of six charging modules. Six charging modules plus four non-charging modules can be connected to the station.

Format the MultiMediaCard (MMC)

This option is used to format the MultiMediaCard (MMC).

Note

If a previously formatted MMC is used to reformat, all of the data on the card will be erased.

To format an MMC, complete the following:

1. Activate the station if required.
2. On the station, remove the cover from the battery compartment. Refer to Battery Installation.
3. Insert the MMC into the slot above the battery compartment.

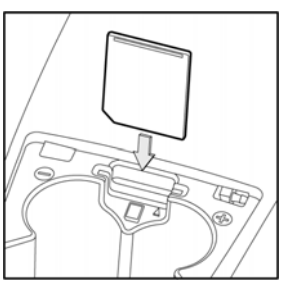
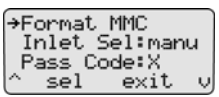


Figure 17. Insert the MMC into the Station

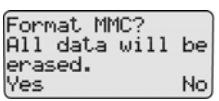
Note

If the MMC has never been formatted, the station will automatically prompt to format the card (refer to step #5-6).

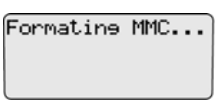
4. Press ◯ ^ or ◯ v to scroll to the **Format MMC** option.



5. Press ◯ **sel** to confirm the selection and to access the formatting confirmation screen.

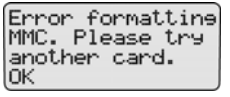


6. Press ◯ **Yes** to initiate formatting. The following screen displays.



When formatting is complete, the LCD automatically returns to the user options screen.

If **No** is selected, the LCD automatically returns to the user options screen. If there is a problem with the card, the following screen displays.



Press ◯ **OK** to acknowledge and insert a new card and repeat the procedures.

7. Press ◯ ^ or ◯ v to scroll to another user option.

   Or

   Press ◯ **exit** to return to the normal operating screen.

For additional information about the MMC, refer to Base Station MultiMediaCard (MMC).

Inlet Select

Note

Applicable only to custom and multi-gas types.

The **Inlet Sel** option is used to enable either the automatic (**auto**) or manual (**manu**) function for selecting an inlet.

If the **auto** option is enabled, the station automatically selects the correct gas inlet for the bump check or calibration.

If **manu** is enabled, the applicable test gas must be selected each time a bump/calibration is performed. If the **manu** option is enabled, refer to Order of Gases Applied for Bump Checks and Calibrations for important information.

To enable either the **auto** or **manu** option, complete the following:

1. From the user options menu, press ◯ ^ or ◯ v to scroll to the **Inlet Sel** option.
2. Press ◯ **sel** to confirm the selection and activate the field (**:** changes to ✱).

3. Press ◯ ^ or ◯ v to toggle between the **auto** and **manu** option.
4. When the desired option displays, press ◯ **sel** to confirm the selection and deactivate the field (✱ changes back to **:**).
5. Press ◯ ^ or ◯ v to scroll to another user option.

   Or

   Press ◯ **exit** to return to the normal operating screen.

Pass Code

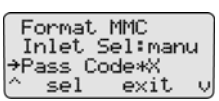
The **Pass Code** option is used to prevent unauthorized access to the user options menu. When the station is pass code protected, displays on the normal operating screen.

Note

The pass code is provided separately.

To enable/disable pass code protection, complete the following:

1. From the user options menu, press ◯ ^ or ◯ v to scroll to the **Pass Code** option.
2. Press ◯ **sel** to select the option and activate the field (**:** changes to **✱**).



   The current mode displays beside the **Pass Code** option.

   Pass code protect enabled

   Pass code protect disabled

3. Press ◯ ^ or ◯ v to toggle between the options.
4. When the desired option displays, press ◯ **sel** to confirm the selection and deactivate the field (**✱** changes back to **:**).
5. Press ◯ ^ or ◯ v to scroll to another user option.

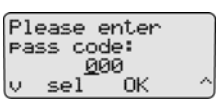
   Or

   Press ◯ **exit** to return to the normal operating screen.

Entering User Options When Pass Code Protected

To access the user options menu when the station is pass code protected, complete the following:

1. From the normal operating screen, press ◯ **menu** to access the user options. The enter pass code screen displays.



   The cursor displays below the first value.

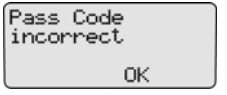
2. Press ◯ v or ◯ ^ to scroll to the first number of the pass code.

When the correct value displays, press ◯ **sel** to save the first value. The cursor automatically moves to the next value.

3. Repeat step #2 for the remaining values.

4. Press ◯ **OK**. If the correct pass code is entered, the user options main screen displays.

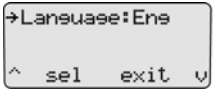
   Incorrect Pass Code Entered: If an incorrect pass code is entered, the following screen displays.



   Press ◯ **OK**. The LCD returns to the normal operating screen. Repeat steps #1-4.

Language

The station provides five language options and is used to display all text on the LCD to a selected language.



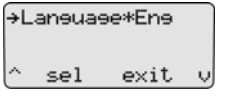
To select a different language, complete the following:

1. From the user options menu, press ◯ ^ or ◯ v to scroll to the **Language:** option.

Note

*The station is shipped with the factory default set to English (**Eng**).*

2. Press ◯ **sel** to confirm the selection and activate the field (**:** changes to ✱).

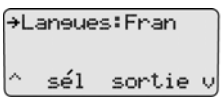


3. Press ◯ ^ or ◯ v to scroll to the different language options. The available options are

   - **Eng** (English),
   - **Fran** (French),
   - **Deut** (German),
   - **Port** (Portuguese), and
   - **Espa** (Spanish).

4. When the desired language displays, press ◯ **sel** to confirm the selection and deactivate the field (✱ changes to **:**).

   The LCD now displays all of the screens in the selected language.



5. Press ◯ ^ or ◯ v to scroll to another user option

   Or

   Press ◯ **sortie** (exit) to return to the normal operating screen.

Results History

The results history function is used to display the results of the last ten records of both bump checks and calibrations (combined total).

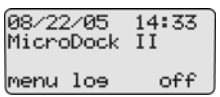
The results display from most recent to the oldest record. Test errors display as the type of error; **Unit removed**, **MMC error**, and **IR error**.

Note

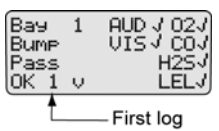
The results history log is erased when the station is deactivated.

To view the results history log, complete the following:

1. From the normal operating screen, press ◯ **log**.



   The most recent history log (**1**) displays.



2. To access the next log, press ◯ v. Continue to press ◯ v to view the remaining logs.

3. Press ◯ **OK** to return to the normal operating screen.

Reconfiguring the Detector

(Not applicable to the GasAlertClip Extreme)

The detector can be reconfigured prior to performing a bump check or calibration to change the alarm setpoints and other settings.

Fleet Manager

- GasAlert Extreme
- GasAlertMicro
- GasAlertMicro 5 and GasAlertMicro 5 PID
- GasAlertMicroClip

Changing Settings

1. Ensure that a correctly formatted MultiMediaCard (MMC) is inserted in the station. Refer to Inserting/Replacing a MMC.
2. Connect the USB cable to the computer and to the USB port on the station.
3. Activate the detector and wait until it is in normal operating mode. Insert it into the detector bay.
4. Activate the station.
5. From the computer, open Fleet Manager.
6. Located at the bottom of the left menu bar, click **Administrator**.
7. Enter your password in the password pop-up.
8. From the left menu bar, click the **Configure Detectors** icon.
9. The configuration pop-up displays. Select either
   - **Load Existing MicroDock Configuration File** (select to use an existing file to configure/reconfigure a detector), or
   - **Create New MicroDock Configuration File** (select to create a new configuration file to configure/reconfigure a detector).
10. Click the tab of the required detector (e.g. **GasAlertMicro 5**) to access the corresponding configuration screen.

11. Each configuration screen provides the following options to select from:

    - **Do Not Reconfigure**
    - **Reconfigure with user's consent**
      (Date and Time NOT reconfigured)
    - **Automatic Reconfigure**
      (Date and Time NOT reconfigured)
    - **Reconfigure with user's consent**
      (Date and Time ARE reconfigured)
      Not applicable to GasAlertMicroClip
    - **Automatic Reconfigure**
      (Date and Time ARE reconfigured)
      Not applicable to GasAlertMicroClip

    Click the checkbox of the desired option.

12. Click the remaining checkboxes on the screen to make the desired configuration changes.

Note

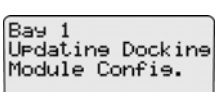
If the time and date are set to be reconfigured in Fleet Manager, ensure the time and date is set correctly on the station.

13. Determine if the configuration is to be saved to the station or to a folder on the hard drive.

    Save to MicroDock II Base Station

    - Located at the bottom right of the configuration screen, click the checkbox beside **Save file to MMC**.
    - The station and corresponding docking module(s) serial numbers display below. Click the required station serial number.
    - From the top left of the configuration screen, click **Save**. The configuration file automatically transfers to the station.
    - To update the detector, perform a bump check or calibration. When **Reconfigure detector?** displays on the station LCD, press ◯ **Yes**.

      The data automatically transfers from the station to the detector. The following screen displays on the station LCD.



Save to File to Hard Drive

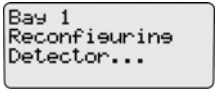
- Located at the bottom left of the configuration screen, enter the folder name of where the file is to be saved.

  Or, press [...] to browse for the required folder.

- From the top left of the configuration screen, press **Save**. The data automatically saves to the selected file.

Automatic Reconfiguration

Successful Reconfiguring: After reconfiguring the detector when a bump test or calibration is initiated, the following screen displays.



Unsuccessful Reconfiguration: If reconfiguration is not successful, the following screen displays.

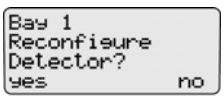
Press ◯ **ok**. The LCD then returns to the main menu.

Resolving IR Errors: Refer to the following solutions. If the following solutions do not resolve the IR error, refer to Troubleshooting.

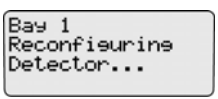
- Check the lighting conditions. Infrared or intense light (sunlight or halogen) can cause IR disruptions.
- Remove and reposition the detector in the docking module.
- Communication between the detector and station may have been temporarily disrupted. Complete the procedures again.

Reconfigure with User's Consent (Manual Reconfiguration)

If **Reconfigure with User's Consent** is selected in Fleet Manager, the station queries if the detector is to be reconfigured each time a bump check or calibration is initiated.



Press ◯ **yes** to reconfigure the detector. The following screen displays and the station begins reconfiguring the detector.



Or

Press ◯ **no** to bypass reconfiguration and automatically initiate the bump check or calibration.

If there are no additional bump checks/calibrations to perform, the station returns to normal operating mode. The LCD displays the main menu screen.

If **OK** or **cancel** is not selected within 15 seconds of being displayed, the station automatically defaults to continue the bump check or calibration test without reconfiguring the detector.

Gas Conflicts

When performing a bump check or calibration, gas types must follow a specific order to prevent gas conflicts that can result in damaging the sensors within the detectors.

Note

Ensure that the gas inlets are configured correctly. Refer to Inlet Setup.

The gas conflicts feature automatically displays if a gas conflict occurs when a bump check or calibration is initiated.

There are two types of gas conflicts:

1) Conflicts: More than one inlet is configured for a specific gas type.

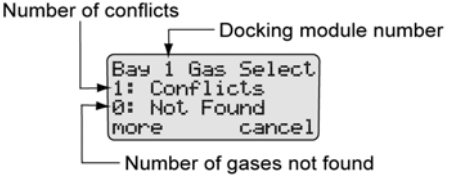
Example: Inlet 2 is configured for SO_2 and inlet 3 is configured for the 3-gas SO_2 mix.

2) Not Found: The station is unable to locate the required gas type for a specific sensor on the detector.

The station displays additional information regarding the

- number of gas conflicts,
- number of gases not found,
- docking module (e.g., **Bay 1**),
- detector gas type(s),
- inlet, and
- inlet gas type(s).

If a gas conflict is detected by the station, the gas select screen automatically displays.



Refer to the following sections, Conflicts and Not Found. Before proceeding to resolve gas conflicts, refer to the following section Abort Option.

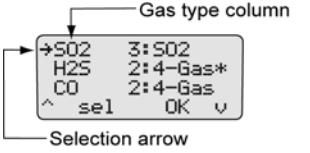
Abort Option

The **Abort** option is located in the gas type column and is used to quit the gas conflict function.

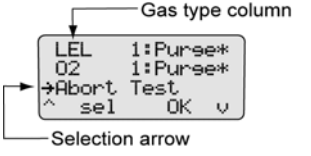
If inlets have not been setup or are setup incorrectly, select **Abort** to exit the bump check or calibration. Proceed to the user options menu and select the **Inlet Setup** option.

To abort a gas conflict, complete the following:

1. From the gas conflicts screen, press ◯ **more**. The conflicts/not found screen displays.



2. Press ◯ ^ or ◯ v to scroll to the **Abort Test** option.

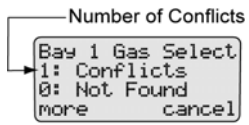


3. When the → displays beside **Abort Test**, press ◯ **sel** or press ◯ **OK**. The station automatically exits the gas conflict and returns to the normal operating screen.

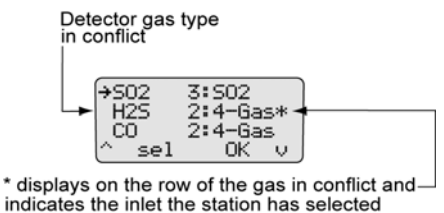
Conflicts

If a conflict occurs, it must be resolved to continue the bump check or calibration. The option is provided to manually select a gas inlet or to accept the default inlet that the station selects.

If one or more **Conflicts** display, complete the following steps or press ◯ **cancel** to quit the current bump/calibration.



1. Press ◯ **more** to access the gas type/inlet screen to view which gas is configured for more than one inlet.



The ✱ icon displays on the far right side on the row of the gas that is setup for more than one inlet. The ✱ also indicates the inlet that the station has selected as the optimum inlet.

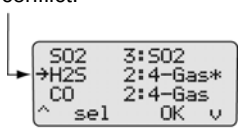
2. Press ◯ **OK** to accept the inlet that is selected and automatically resume the bump check or calibration.

Note

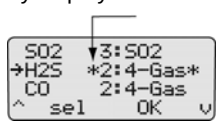
*If **sel** is not selected within 30 seconds, the station automatically defaults to the inlet it has selected.*

Or

3. Press ◯ ^ or ◯ v to move the → icon to the gas that is in conflict.



4. Press ◯ **sel** to activate the inlet field. The ✱ automatically displays on the left side of the inlet.



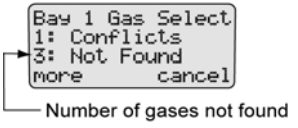
5. Press ◯ ^ or ◯ v to scroll to the desired inlet (**1**-**5**).

6. When the required inlet value displays, press ◯ **sel** to confirm the selection and deactivate the field. The ✱ no longer displays to the right of the inlet indicating the conflict has been resolved.

Unsuccessful Conflict Resolution: If the conflict is not resolved by selecting a different inlet, refer to the following:

- Ensure that the selected inlet is correct.
- Ensure the gas cylinder that is attached to the selected inlet is correct.
- Press ◯ **OK** to accept the station's default selection.

Not Found

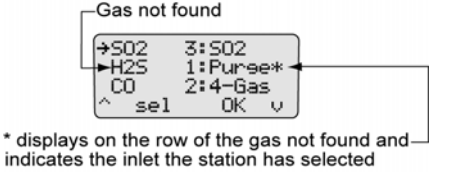


If a value of **1** or more displays before **Not Found**, complete the following:

Or

Press ◯ **cancel** to quit the current bump check/calibration.

1. Press ◯ **more** to access the gas type/inlet screen to view which gas type(s) cannot be found.



The ✱ icon displays on the far right side on the row of the gas that cannot be found. The station automatically defaults to the **Purge** inlet.

2. Press ◯ **OK** to accept the default **Purge** inlet.

   Or

   Press **sel** to select a different inlet.

Note

*For gases not found: If **sel** is not selected within 30 seconds, the station automatically defaults to the **Purge** inlet.*

3. If required, repeat steps #1-2 for any additional gases not found and confirm the following:

- Ensure that the selected inlet is correct.
- Ensure that the gas cylinder attached to the selected inlet is correct.
- Press ◯ **OK** to accept the station's default selection.

Accessing the MMC During a Test

If an attempt is made to access the MMC on the station from a PC while a bump check or calibration is being performed, the following screen displays.

Note

BW recommends that bump checks and calibrations be completed before attempting to access test results from the PC.

Order of Gases Applied for Bump Checks and Calibrations

⚠Warning

It is extremely important that gases are applied in the order that is specified in this manual.

Failure to adhere to the rules in Table 17 and Table 18 of this manual will result in incorrect sensor readings and possible personal injury and/or property damage.

Note

Manual application of gas types is available for the GasAlertMicro 5 and GasAlertMicro 5 PID detector only.

To manually apply gases for bump checks and calibrations, complete the following:

1. Review Table 17. Gas Type Application Table, and Table 18. Gas Application Rules.
2. Determine the gases that are to be applied.
3. Using Table 17, locate the first gas type (sensor) to be bump checked or calibrated on the top row.
4. Within the far left column, locate the next gas type (sensor) to be bumped or calibrated and refer to the rule number (if applicable).
5. Using Table 18, locate the corresponding rule number. Ensure that the desired order to apply gases corresponds to the gas application rules.
6. Continue to reference the table and rules to ensure the gases will be applied in the correct order.
7. When the correct order is determined, proceed to the Bump Check or Calibration section.

Table 17. Gas Type Application Table

Gases	H_2S	CO	Cl_2 Bump only	NH_3	HCN	NO_2	COSH (H_2S/CO)	SO_2	PH_3	PID
H_2S		Quad gas	Cl_2 Rule 4	NH_3	HCN	NO_2	quad gas - one step calibration	SO_2	PH_3 Rule 11	H_2S
CO			Cl_2 Rule 5	NH_3	HCN	NO_2	quad gas - one step calibration	SO_2	PH_3 Rule 11	CO
Cl_2 Bump only				NH_3 Rule 9	HCN	NO_2 Rules 8 & 10	Cl_2 Rule 6	Cl_2 Rule 9	PH_3 Rule 9	Cl_2
NH_3					HCN Rule 9	NO_2	NH_3 Rule 6	NH_3 Rule 9	PH_3 Rules 9 & 10	NH_3
HCN						HCN	HCN Rule 6	HCN Rules 8 & 10	PH_3 Rules 8 & 10	HCN
NO_2							NO_2 Rule 6	NO_2	NO_2 Rule 1	NO_2
COSH H_2S/CO								SO_2 Rule 6	PH_3 Rules 10 & 11	COSH H_2S/CO
SO_2									PH_3 Rules 9 & 10	SO_2
PH_3										PH_3
PID										

Table 18. Gas Application Rules

Rule #	Gas Type	Apply	Exception(s)
1	PH_3	First	Two exceptions: NO_2 and O_3
2	HCN	First	Three exceptions: PH_3 and ClO_2
3	NO_2	First	Three exceptions: HCN
4	H_2S	Last	One exception: PID
5	CO	Last	One exception: PID
6	COSH (H_2S/CO)	Last	One exception: PID
7	PID	Last	No exceptions
8	Toxic gas		Both toxic sensors are cross sensitive to each other – wait 5 minutes (minimum) between calibrations and before verifying sensors
9	2^{nd} Toxic gas		Wait 5 minutes (minimum) after the second toxic gas is applied before verifying calibration. Verify calibration: Apply the same test gas from a different cylinder to ensure the calibration is successful.
10	Cross gas		Must perform individual calibrations to avoid incorrect calibration from cross gas
11	H_2S/PH_3		H_2S contaminates PH_3 – calibrate and verify PH_3 sensor prior to applying any quad gas

.

Bump Check

A bump check is a test that is performed to confirm that the detector is responding to gas, and that the audio and visual alarms are operational.

Note

If the GasAlertMicro, GasAlertMicro 5, GasAlertMicro 5 PID, or GasAlertMicroClip are set to be reconfigured, reconfiguration must be completed prior to performing a bump check. Refer to Reconfiguring the Detector.

To perform a bump check, complete the following:

1. Ensure the MultiMediaCard (MMC) is inserted if datalogging is required.

   If the MMC is not inserted, 🖹! displays on the LCD when the station attempts to log results to the MMC. If required, refer to Inserting/Replacing a MMC.

2. Activate the detector and wait until it is in normal operating mode. Insert it into the docking module.

3. Activate the station and access the normal operating screen.

   If a bump check is initiated while in the user menu: Bump checks that are queued while in the user option menu are initiated only when the user options menu is exited.

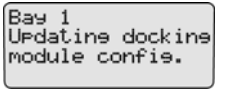
   When the normal operating screen displays, the station automatically begins the bump check.

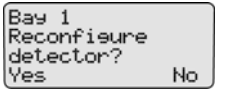
   If more than one docking module is queued: If more than one docking module is queued for a bump check, the first module queued begins the bump check.

   The RUN LED flashes yellow on the remaining docking modules that are queued for a bump check. When the first module is complete, the next module in the queue begins the bump check.

4. From the docking module, press ◯ BUMP CHECK. The RUN LED lights yellow.

5. Depending upon the type of detector, the option to reconfigure is provided. If the detector can be reconfigured, the following two screens display.





To reconfigure the detector, press ◯ **Yes**. The MMC then transfers the new configuration data to the detector. If required, refer to Reconfiguring the Detector.

Or

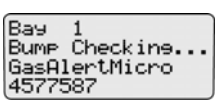
Press ◯ **No** to continue with the bump check.

Note

*If a selection is not made within 15 seconds, the station automatically defaults to the **No** selection and proceeds with the bump check.*

6. The station begins the bump check and displays the

   - bay number,
   - process being performed,
   - type of detector, and
   - serial number of the detector.

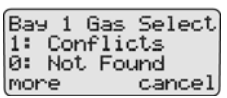


Note

The serial number of the GasAlertClip Extreme does not display on the station when performing a bump check.

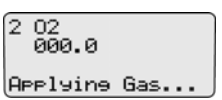
The GasAlertMicro 5 and GasAlertMicro 5 PID beep and flash twice to test the sensors when the bump check begins.

7. If there is a gas conflict or a selected gas cannot be found, the gas select screen displays.



Gas conflicts must be resolved to continue the bump check. Refer to Gas Conflicts.

If there are no gas conflicts, the station then applies the gas.

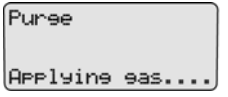


If more than one gas is being applied, the station performs a purge between each gas. Depending upon the gas type, the purge time(s) will vary.

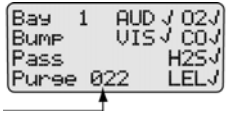
⚠ Important

If the Automatic Datalog Download (GasAlertMicroClip only) is enabled in Fleet Manager, data transfer automatically begins during the purge. Do not remove the detector until the DATA TRANSFER PASS LED lights, otherwise the transfer will fail.

For more information, refer to Automatic Datalog Download.



8. After the bump check is complete, the station displays the results of the bump check and performs a final purge to clear any remaining gas.



The countdown of seconds remaining displays beside **Purge**.

Bump Check Results

After the bump check is complete, the station displays the results of the test.

✓	Pass
✗	Fail
H2S–	Gas type not detected (H_2S is used as an example, this applies to all gases)
–	Sensor is disabled

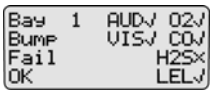
Note

After a bump check is performed, the GasAlertMicro, GasAlertMicro 5, GasAlertMicro 5 PID, and GasAlertMicroClip deactivate in 5 minutes if no activity is detected.

Bump Pass

✓ indicates that the bump test has passed. The detector is now ready for use. Press ◯ **OK** to return to the normal operating screen.

Bump Fail



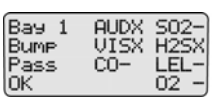
If a bump test fails, ✕ displays beside the applicable gas (e.g., **H2S**✕).

If an audible or visual test fails, ✕ displays beside the applicable test (**AUD** or **VIS**). For information regarding solutions, refer to Troubleshooting.

Note

If a gas type fails, calibrate the detector prior to use.

If an inlet is not setup correctly, the result of the bump check displays as the gas type followed by a hyphen (–).



This example displays **SO_2**, **CO**, **LEL**, and **O_2** as gases not detected.

If a test gas fails, verify that the

- gas cylinder is not empty,
- connections are attached correctly, and
- inlets are setup correctly.

Sensor Disabled

⚠ Warning

To prevent personal injury and/or property damage, replace the sensor immediately. Refer to the corresponding detector user manual for sensor replacement procedures.

If a sensor is disabled, results from the sensor do not display on the station LCD.

– displays where the gas type typically displays on the LCD.

Note

If a sensor is disabled, it is not recorded in the results log.

Calibration

Guidelines

⚠ Caution

If adjustments are made to the real-time clock, the calibration due date will be invalid for the

- GasAlert Extreme,

- GasAlertMicro,

- GasAlertMicro 5,

- GasAlertMicro 5 PID, and

- GasAlertMicroClip detectors.

Recalibrate the detector immediately.

When calibrating the detector, adhere to the following guidelines:

- Recommended gas mixture:
  O_2: clean air, 20.9% vol.
  CO: (low H2 sensitivity): 50 to 500 ppm balance N_2
  CO: 50 to 500 ppm balance N_2
  H_2S (high range): 10 to 100 ppm balance N_2
  H_2S (low methanol): 10 to 100 ppm balance N_2
  H_2S: 10 to 100 ppm balance N_2
  PH_3: 1 to 5 ppm balance N_2
  SO_2: 10 to 50 ppm balance N_2
  NH_3: 20 to 100 ppm balance N_2
  NH_3: (high range) 20 to 100 ppm balance N_2
  NO_2: 5 to 50 ppm balance N_2
  HCN: 5 to 20 ppm balance N_2
  ETO: 5 to 50 ppm balance N_2
  NO: 10 to 250 ppm balance N_2
  Cl_2: 3 to 25 ppm (for bump checks only)
  VOC: 100 ppm isobutylene
  LEL:10 to 100% LEL or 0.5 to 5% by vol. methane balance air
- Calibrate only in a clean atmosphere that is free of background gas. Do not operate the station in a hazardous area. Failure to adhere to this guideline can result in possible personal injury and/or property damage.
- BW recommends using premium grade calibration gases and cylinders that are certified to National Standards. The calibration gases must meet the accuracy of the detector.
- Do not use a gas cylinder beyond its expiration date.
- All calibration cylinders must be used with a demand flow regulator and must meet the following maximum inlet pressure specifications:
  i. Disposable cylinders 0-1000 psig/70 bar
  ii. Refillable cylinders 0-3000 psig/207 bar
- Refer to the detector manual for recommended calibration frequencies.

- For ETO detectors (before each work shift) allow the instrument to fully stabilize in the temperature that it is to be operated in, and then zero the detector.
- It is necessary to periodically re-zero the ETO detector.
- Calibrate the detector if the ambient gas display varies during start-up.
- Calibrate a new sensor before use. Allow the sensor to stabilize before starting calibration:

  Used sensor: 60 seconds
  New sensor: 5 minutes.
- Calibrate the detector at least once every 180 days, depending upon use and sensor exposure to poisons and contaminants. For HCN detectors, calibrate at least once every 90 days.
- Calibrate the sensor before changing the alarm setpoints.
- When calibrating multiple times, wait 10 minutes between calibrations to allow the sensor to stabilize.
- If a certified calibration is required, contact BW Technologies.

Calibration Procedure

(All models excluding the GasAlertClip Extreme)

Calibrations are performed to adjust the sensitivity levels of the sensor(s) to ensure accurate responses to gas(es).

The station automatically accepts an unusually large span adjustment notification for the GasAlertMicro 5 and the GasAlertMicro 5 PID. Refer to the G*asAlertMicro 5 and GasAlertMicro 5 PID User Manual.*

To perform a calibration, complete the following:

1. Ensure the MultiMediaCard (MMC) is inserted if datalogging is required.

   If the MMC is not inserted, displays on the LCD when the station attempts to log the results of the calibration. If required, refer to Inserting/Replacing a MMC.
2. Activate the detector and wait until it is in normal operating mode. Insert it into the docking module.
3. Activate the station and access the normal operating screen.
4. Press ◯ CALIBRATION on the corresponding docking module.

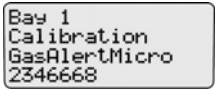
If calibration is initiated while in the user menu: Calibrations that are queued while in the user options menu are initiated only when the user options menu is exited.

If more than one docking module is queued: If more than one docking module is queued for calibration, the first module queued begins the calibration.

The RUN LED flashes yellow on the remaining docking modules that are queued for calibration. When the first module is complete, the next module in the queue begins calibration.

The station begins the calibration and displays the

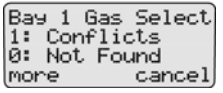
- bay number,
- process being performed,
- type of detector, and
- serial number of the detector.



Note

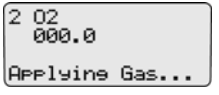
The GasAlertMicro 5 and GasAlertMicro 5 PID beep and flash twice to test the sensors when calibration begins, and the GasAlertMicroClip beeps and flashes once.

If there is a gas conflict or a selected gas cannot be found, the gas select screen displays.



Gas conflicts must be resolved to continue calibration. Refer to Gas Conflicts.

If there are no gas conflicts, the station then applies the gas.

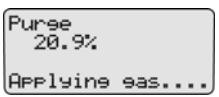


If more than one gas is being applied, the station performs a purge between each gas. Depending upon the gas type, the purge time(s) will vary.

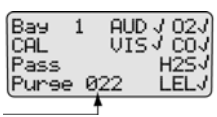
⚠ Important

If the Automatic Datalog Download (GasAlertMicroClip only) is enabled in Fleet Manager, data transfer automatically begins during the purge. Do not remove the detector until the DATA TRANSFER PASS LED lights, otherwise the transfer will fail.

For more information, refer to Automatic Datalog Download.



After calibration is complete, the station displays the results and performs a final purge to clear any remaining gas.



The countdown of seconds remaining displays beside **Purge**.

Note

After calibration, the GasAlertMicro 5 and GasAlertMicro 5 PID automatically deactivate. To bypass the automatic shutdown, remove the detector within 15 seconds after the final purge begins.

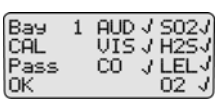
*If **Automatic Datalog Download** is enabled in Fleet Manager, the GasAlertMicroClip automatically deactivates after the transfer is complete. To bypass the shutdown, remove the detector within 15 seconds after the DATA TRANSFER PASS LED lights.*

Calibration Results

After the calibration is complete, the station displays the results.

✓	Pass
✗	Fail
H2S–	No gas found (H_2S is used as an example, this applies to all gases)
–	Sensor is disabled

Calibration Pass

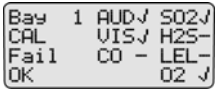


✓ and **Pass** indicates that the calibration has passed. The detector is now ready for use. Press ◯ **OK** to return to the normal operating screen.

Calibration Fail

If calibration fails, ✕ displays beside the applicable gas (e.g., **H2S**✕).

If an inlet is not setup correctly during a calibration, the station displays the gas type followed by a hyphen (—) and the result of the test as **Fail**.



This example displays **H2S**, **CO**, and **LEL** as gases not detected.

If a test gas fails, verify that the

- gas cylinder is not empty,
- connections are attached correctly, and
- inlets are setup correctly.

If an audible or visual test fails, ✕ displays beside the applicable test (**AUD** or **VIS**). For information regarding solutions, refer to Troubleshooting.

Sensor Disabled

⚠Warning

To prevent personal injury and/or property damage, replace the sensor immediately. Refer to the corresponding detector user manual for sensor replacement procedures.

If a sensor is disabled, results from the sensor do not display on the station LCD.

— displays where the gas type typically displays on the LCD.

Note

If a sensor is disabled, it will not be recorded in the results log.

Data Transfer

(GasAlert Extreme and GasAlertMicroClip only)

Transferring Datalogs

The data transfer function is used to transfer datalogs from the detector to the station's MMC.

Depending upon the amount of information stored in the detector, the transfer of data may require 12-14 minutes (1-2 minutes for GasAlertMicroClip) to complete. To transfer a datalogs from the detector to the docking module and then to a MMC, complete the following:

1. Activate the detector and wait until it is in normal operating mode. Insert it into the docking module.
2. Activate the station.
3. Press ◯ DATA TRANSFER on the docking module. The yellow RUN LED flashes rapidly and the docking module begins to transfer the datalogs to the station.

   When the transfer process is complete, the docking module indicates the status of the transfer as PASS or FAIL.

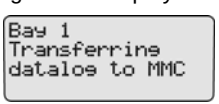
Successful Transfer: If the datalog transfer is successful, the PASS LED lights green, the RUN LED flashes yellow slowly, and the detector beeps.

Unsuccessful Transfer: If the datalog transfer is unsuccessful, the FAIL LED lights red and the RUN LED flashes slowly.

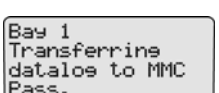
If a failure occurs during the transfer of a datalog, typically some of the data transfers to the MMC. To determine if any data has been transferred, access the MMC data using Fleet Manager.

If required, repeat step #3 to transfer the datalog.

After a successful transfer to the station, the station transfers the datalog to the MMC. The RUN and the PASS LEDs light on the docking module and the following screen displays on the station.



When the datalog has successfully transferred from the station to the MMC, the following screen displays.



4. On the station, press ◯ **Pass** to return to the normal operating screen.

Note

A maximum of ten data logs from all modules combined can be stored on an MMC (one hundred datalogs for GasAlertMicroClip). When the maximum storage is reached, the station replaces the oldest datalogs with the newest datalogs. Datalogs are not recorded in the Results History.

Automatic Datalog Download

(GasAlertMicroClip only)

The station can be configured through Fleet Manager to automatically transfer datalogs every time a bump check or calibration is performed using the GasAlertMicroClip docking module.

To transfer datalogs automatically, complete the following:

1. From Fleet Manager, click the **GasAlertMicroClip** tab.

2. Located in the bottom left under **MicroDock Test Options**, click ◯ **Automatic Datalog Download** to enable the automatic data transfer.

   Enabled ☑
   Disabled ☐

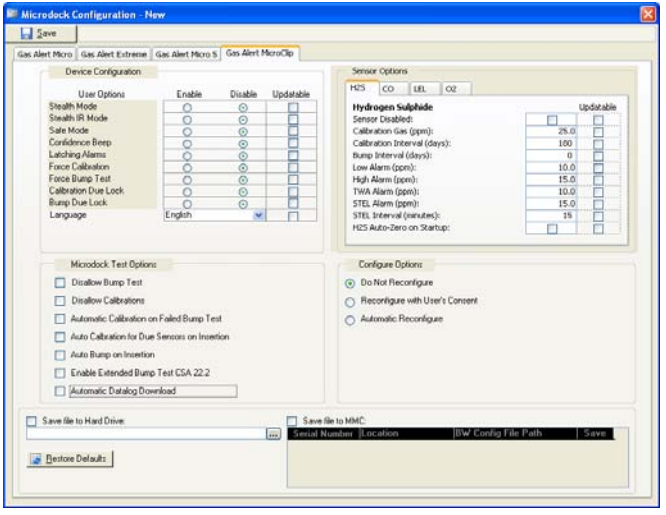


Figure 18. GasAlertMicroClip Window in Fleet Manager

3. If the station is connected using a USB cable, click the **Save File to MMC** checkbox, otherwise click the **Save File to Hard Drive** checkbox.

   For additional information, refer to the *Fleet Manager Support CD*.

Base Station MultiMediaCard (MMC)

Event Logging

Bump checks and calibrations are recorded on a MultiMediaCard (MMC). The MMC is located on the station inside the battery compartment. It is used to store test records that are then downloaded from the station to a PC.

Inserting/Replacing a MMC

The MMC is inserted in the station inside the battery compartment. To insert or replace the MMC, refer to Figure 19 and complete the following:

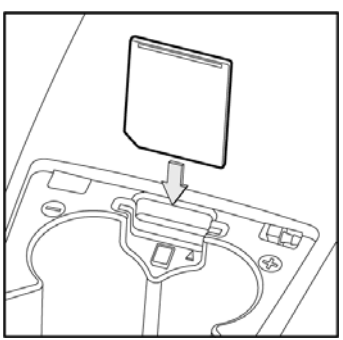


Figure 19. Replacing a MMC

1. Deactivate the station.
2. Loosen, the retaining screws from the battery cover.
3. Remove the battery cover and set it aside.
4. Remove the current MMC (if applicable).
5. Insert the new MMC into the memory card slot.
6. Replace the battery cover and tighten the retaining screws.

Data that is saved on the MMC can be transferred to a PC.

To format an MMC, refer to Format the MultiMediaCard (MMC) in the User Options Menu section.

The transferred data is then compiled using a computer software application called Fleet Manager. Refer to the *Fleet Manager Deluxe CD* for installation and user instructions.

Accessing Test Results

To access and view test results using the Fleet Manager software application, refer to the *Fleet Manager Deluxe CD*.

PC Requirements

- Microsoft® Windows 98 or later
- 100 MB of available hard-disk space
- 1024 x 768 or higher resolution display
- USB port
- CD-ROM or DVD-ROM drive

Accessing Test Results Using Windows 98, SE, or 2000

To access test results using Windows '98, SE, or 2000 (without Fleet Manager), complete the following:

1. Connect the USB cable to the PC and to the USB port on the station.
2. Activate the station.
3. From the computer, access Windows Explorer.
4. Locate the **Removable Drive** and open.
5. Double-click **LOGFILE0.CSV** to view the test results.

Accessing Test Results Using Windows XP

To access the test results using Windows XP (without Fleet Manager), complete the following:

1. Connect the USB cable to the PC and to the USB port on the station.
2. Activate the station.
3. From the computer, access Windows Explorer.
4. The **Removable Drive** automatically opens. Double-click the required file.

Note

BW recommends that bump checks and calibrations be completed before attempting to access results on the PC.

Charging the Battery Pack

(Excluding GasAlert Extreme and GasAlertClip Extreme)

⚠ Warning

A maximum of six charging docking modules can be installed on a MicroDock II station. Four non-charging modules can be added to the six charging modules for the maximum total of ten docking modules per station.

To charge successfully, the temperature must be between 50°F to 95°F (10°C to 35°C). Charge the battery when the detector emits a low battery alarm.

When charging for the first time, allow the battery to obtain a full charge (approximately 3.5 hours).

Charger/Battery Pack Guidelines

- When charging is complete, the detector can remain in the detector bay without wear or damage to the battery.
- Charging the battery pack in temperatures above 86°F (30°C) greatly reduces the number of possible charges to the battery pack.
- When charging is complete, the battery pack may be hot.
- The battery pack requires approximately three charges to achieve full charge capacity.
- The MicroDock II only charges using dc power.
- Charging more than four units simultaneously increases the total charge time.
- When charging an extremely depleted battery, the battery requires a longer charging time.
- The detector cannot charge during bump checks or calibrations. If battery power is low, charge the detector for 30 minutes and then initiate the bump/calibration. When it is completed, resume charging the battery.
- When a fully charged battery is inserted into the detector bay, the charger LED lights red for 6 to 10 minutes before lighting green. This action will not wear or damage the battery.

Charging Procedure

(Excluding GasAlert Extreme and GasAlertClip Extreme)

Table 19. Charger Status LED

Charger Status	Description
Red	Charging normally
Green	Charge complete
Off	Charge or temperature fault

To charge a detector in a charging docking module, complete the following:

1. Connect the ac adapter of the charger to the CHARGE port on the station and then plug the cord into the ac outlet. The charging LED briefly lights red then green during the self-test. The light then powers off.

2. Deactivate the detector and insert into the charging cradle (bottom first). The charging LED then lights red.

   Ensure the detector is inserted correctly onto the contact pins.

3. Allow the battery to obtain a full charge. A full charge requires 2-4 hours, depending upon how many docking modules are connected to the station.

   The charging LED turns green when charging is complete.

   The charging LED powers off when the detector is removed from the charger.

Maintenance

⚠ Warning

No user-serviceable parts inside.

To maintain the station in good operating condition, perform the following basic maintenance as required.

- To ensure quality product operation, maintain a log of all maintenance that is performed.
- Clean the exterior with a soft, damp cloth. Do not use solvents, soaps, or polishes.
- Confirm that the inlet filter is free of dirt and replace it if required. To order replacement parts, refer to Replacement Parts and Accessories.
- Do not immerse the station in liquids.

Battery Pack Storage

(GasAlertMicro, GasAlertMicro 5, and GasAlertMicro 5 PID)

When storing for extended periods of time, ensure that the detector is fully charged and recharged every 30 days.

Troubleshooting

If a problem is encountered, refer to the solutions provided in the following table. If the problem cannot be resolved, contact BW Technologies. [✱Select GasAlertMicro, GasAlertMicro 5, and GasAlertMicro 5 PID docking modules only].

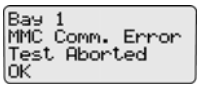
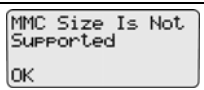
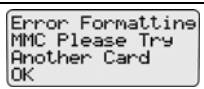
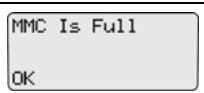
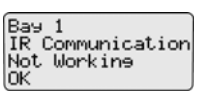
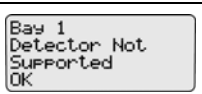
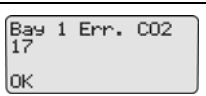
Table 20. Troubleshooting Tips

Problem	Possible Cause	Solution
The station does not activate.	No power connection	Connect the power adapter.
	No batteries	Insert the batteries.
	Depleted batteries	Replace the batteries.
	Damaged or defective station	Contact BW Technologies.
The detector fails a bump test.	Barbed fittings not connected correctly with the gasket	Confirm connection - refer to Adding Another Docking Module.
	Detector alarm setpoints are set higher than the gas concentration levels of the gas cylinder	Connect a gas cylinder that has a higher gas concentration level than the alarm setpoints.
	Gas connections are not attached correctly or are blocked	Confirm that all gas connections are attached correctly.
	Gas inlets are not setup correctly	Refer to Inlet Setup and Installation.
	Gas cylinder is empty	Use a new gas cylinder.
	Detector and/or station are damaged or defective	Contact BW Technologies.

Problem	Possible Cause	Solution
The oxygen sensor fails a bump check.	Oxygen alarm setpoints of the detector are set to the same concentration level as the gas cylinder	Connect a quad-gas cylinder that has 18% O_2.
	Ambient air (inlet 1) is blocked or the inlet filter is contaminated	Remove the blockage or replace the inlet filter.
	Zero gas cylinder is empty	Use a new zero gas cylinder.
The detector fails a calibration.	Gas cylinder is empty	Use a new gas cylinder.
	Barbed fittings are not connected correctly to the gasket	Confirm connection - refer to Adding Another Docking Module.
	Gas connections are not attached correctly or are blocked	Confirm that all gas connections are attached correctly
	Detector and/or station are damaged or defective	Contact BW Technologies.
Flashing battery icon	Batteries are extremely depleted	Replace the batteries.
The station is activated but does not respond to button presses.	Irregular power (not continuous or reliable) electrostatic discharge	Deactivate the station, wait 5 seconds, then reactivate.
There is no audible beep (GasAlertMicro, GasAlertMicro 5, and GasAlertMicro 5 PID).	Internal damage to battery or docking module	Contact BW Technologies.

Problem	Possible Cause	Solution
The docking module does not recognize the detector.	Detector is deactivated	Activate the detector.
	Detector does not have IR communication capabilities	Refer to the label located on the back of the detector for IR capabilities.
	Firmware of the detector requires an update	Contact BW Technologies.
	Station is currently attempting to establish communication with the detector	Wait approximately 30 seconds.
	Docking module is not initialized to the correct number	Re-initialize the docking module - refer to Adding Another Docking Module.
	Detector and/or station are damaged or defective	Contact BW Technologies.
There is an audible beep but no charge (GasAlertMicro, GasAlertMicro 5, and GasALertMicro 5 PID docking modules).	Battery is above or below the operating temperature 50°F-95°F (10°C-35°C)	Allow the battery pack time to adjust to the specified operating temperature (approximately 60 minutes).
	Severely depleted battery	Charge (2-4 hours) or replace old battery with new battery. If problem persists, contact BW Technologies.
	Damaged or defective battery pack	Contact BW Technologies.

Problem	Possible Cause	Solution
The charger LED does not light when the detector is inserted GasAlertMicro, GasAlertMicro 5, GasAlertMico 5 PID, and GasAlertMicroClip docking modules.	Detector is not inserted into the detector bay correctly	Firmly insert the detector into the detector docking bay.
	The battery pack is above or below the operating temperature 50°F-95°F (10°C-35°C)	Allow the battery pack time to adjust to the specified operating temperature (approximately 60 minutes).
	The battery pack is severely depleted	Allow the detector to charge (2-4 hours).
No drive letter is created for the MicroDock II (Windows XP).	Windows XP is not correctly mapping the drive	Ensure Windows XP assigned a drive letter to the MicroDock II. Solution: 1) Right-click **My Computer** and then click **Manage**. 2) Under **Computer Management (Local)** click **Disk Management** 3) In the list of drives in the right pane, right-click the new drive and then click **Change Drive Letter and Path(s)**. 4) Click **Change** and in the drop-down box, select a drive letter for the new drive (cannot be assigned to a mapped network drive). 5) Click **OK** and then click **OK** again.

Problem	Possible Cause	Solution
	Problem transferring to the MMC during a calibration or bump test	Repeat the test. Ensure the MMC is inserted.
	Size of MMC is not supported	Use only 32 MB MMCs or higher
	MMC is not correctly formatted	Refer to Format the MMC. Replace with a new MMC.
	Log file has exceeded maximum size	Refer to Format the MMC. Replace with a new MMC.
	IR not working when detector is inserted into the module	Check for dirt on the sensor. Confirm the detector is activated. Charge the detector battery if too low.
	Non-datalogger detector is inserted in the docking module	Insert only datalogger models.
	Software exception	If debug code displays on the LCD, record it and contact BW Technologies.

Replacement Parts and Accessories

⚠ Warning

To avoid personal injury or damage to the station, use only the specified replacement parts.

To order parts or accessories, contact BW Technologies.

Table 21. Replacement Parts and Accessories

Model Number	Description
GasAlertMicro Docking Module	
DOCK2-0-1A-00-N	Non-charging
DOCK2-0-1B1C-00-N	Charging (power supply included)
GasAlertMicro 5/GasAlertMicro 5 PID Docking Module	
DOCK2-0-1J-00-N	Non-charging
DOCK2-0-1C1K-00-N	Charging (power supply included)
GasAlert Extreme Docking Module	
DOCK2-0-1D-00-N	With datalogging
GasAlertClip Extreme Docking Module	
DOCK2-0-1E-00-N	H_2S (hydrogen sulfide)
DOCK2-0-1H-00-N	O_2 (oxygen)
DOCK2-0-1G-00-N	CO (carbon monoxide)
DOCK2-0-1F-00-N	SO_2 (sulfur dioxide)
GasAlertMicroClip Docking Module	
DOCK2-0-1C1L-00-N	Charging (power supply included)
MMC Communication Devices and Accessories	
CR-MMC-USB1	MMC USB Reader (USB port) for MMC
DOCK2-LAN1	Network USB communication device
MMC32	MultiMediaCard (MMC) 32 MB
MMC64	MultiMediaCard (MMC) 64 MB
Wall Mount Adapters	
WMA-DOCK	For MicroDock II and the GasAlertMicro charger (kit of 2)
MK-CG2-34B	For 34 l gas cylinder (black)
MK-CG2-58	For 58 l gas cylinder (red)
Replacement Parts and Accessories	
DOCK2-DA-1	Diffusion adapter
Carrying Cases	
DOCK2-CC1	Hard-sided (1 module system)
DOCK2-CC2	Heavy duty (1 to 3 module system)
Demand Flow Regulators	
REG-DF1	Demand flow regulator
REG-DF2	For refillable cylinders CGA connector

Specifications

The MicroDock II is for indoor use only.

Instrument dimensions: 21.2 x 26.3 x 8.2 cm (8.3 x 10.4 x 3.2 in.) base station and one docking module

Weight: 0.98 kg (2.15 lb)

Enclosure: Impact resistant PC/ABS (polycarbonate)

Operating temperature: +10°C to +35°C (+50°F to +95ºF)

Humidity: 0 to 50%

Altitude: 2000 m (6561.66 ft.)

Storage temperature: -10°C to 60°C (14°F to 140 ºF)

Power supply: 6 Vdc ⎓, 1.5 A wall adapter or four C-cell batteries (be advised that the main supply voltage fluctuations are not to exceed 10% of the nominal supply)

Pollution degree: 2

Installation category: I

Real-time clock: Provides time and date stamp

Data storage: Automatic (instrument and base station)
64 MB MMC data storage system

External interface: USB interface for PC

Pump: dc motor, micro-diaphragm; 6V PCB mount

Flow rate: Maximum recommended 350 ml/min.

Calibration gas cylinder inputs:
2-gas inlets (standard)
4-gas + air inlets (maximum)

Automatic tests: Functional bump check, calibration, data transfer, audible alarm, visual alarm

Configuration recognition: Automatic (instrument and sensor)

Alarm/calibration parameters: User-settable

Calibration gas connections: Built-in (base station)

Gas connection: 1/8″ SMC connect sub-miniature coupling

Solenoid: Built-in (docking modules)

LED indicators: (on each docking module)
Yellow – Test
Green – Pass
Red – Fail

Command keys:

Base station:	Menu navigation
Docking module:	One touch bump check initiation One touch calibration initiation (not applicable to the GasAlertClip Extreme) One touch data transfer initiation (GasAlert Extreme and GasAlertMicroClip only)

Communications method: Infrared (two-way)—between docking module and detector (not applicable to the GasAlertClip Extreme – one way communication only)

USB port for connection to a:

- Personal computer (PC), or
- USB over IP HUB

Sensors: Audio
Optical

LCD: 4 line x 16 characters, wide viewing angle, user selectable backlighting

Warranty: 2 years

Charger Specifications

Size: 8.6 x 8.2 x 7.8 cm (3.4 x 3.2 x 3.1 in.)
Weight: 97 g (3.4 oz)
Charger system ingress protection: IP20
Operating temperature: 10°C to 35°C (50°F to 95°F)
Humidity: 0% to 50%
Altitude: 2000 m (6561.66 ft.)
Power: 6 Vdc ⎓, 2.5 A
Charging LED: Colour-coded LED advises: charging, charge complete, and charger fault.
Charge time: Typically 2.5 hours
Pollution degree: 2
Installation category: I

This device complies with the FCC Part 15 and ICES-003 Canadian EMI requirements. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and

2. This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules and ICES-003 Canadian EMI requirements.

These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his/her own expense.

⚠ Warning

This product is designed for installation in an indoor location only. All required National Electrical Codes and Safety Standards must be followed.

For ac main installation, a circuit breaker should be included in the building installation as a disconnect device for the equipment. The disconnect device should be installed in close proximity to the equipment and the device should be marked as a disconnecting means for the equipment.

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