



USER MANUAL

PDM

Family Multi Dock



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**Warning**

- Any unauthorized attempt to repair or modify the product, or any other cause of damage beyond the range of the intended use, including damage by fire, lightening, or other hazard, voids liability of the manufacturer.
- Do not use if the device appears to be damaged.
- Use the device in a clean environment, which has no hazardous gases.
- Do not use the expired gas cylinders.
- Ensure to use the certified gas cylinders.
- Ensure gas types and concentrations match with manuals and devices.
- Severe vibration or shock to the device may cause a sudden reading change and cause the device malfunction.
- Do not allow water and liquids to reach this device.

READ THE OPERATION MANUAL BEFORE USE

- Before operation, read the manual carefully and follow all the instructions.
- IR link only works when it is placed at the bay 1 on the docking station.
- The device only operates when the power LED turns green.
- Before upgrading firmware, connect the plug to avoid any data loss and malfunction by unexpected power off. And the file name is fixed as below.

1. Overview

The WatchGas PDM Docking Station keeps monitor correctly configured and tested and fully functional without the actual presence of a certified service technician. Bump testing portable monitors is becoming more and more prevalent in the market. Ensuring sensors are responding to a known concentration of gas remains the best way to verify the monitor has not become impeded. WatchGas PDM docking station provides bump testing, event management and calibration from a simple to use multi-unit station and gives fleet or safety managers the ability to update configurations on large fleets. It also maintains the all important event logs that demonstrate users are working within company requirements.

Gas usage controlled	Lowers the cost of bump testing
Manages calibration	Manages calibration and stores records of the event
Flexible	Can monitor a wide array of test parameters and detector settings, providing excellent traceability
All data is stored in a USB stick	Simple to transfer the data
Rechargeable battery or power	Ideal for in-vehicle or multi-site use
Holds up to 4 PDM's at once	Faster testing of larger fleets

Power

- Built-in internal battery for 1000 of bump tests
- Automatic shutdown mode (default: 5 minutes)
- Press Calibration or Bump test button for a second to turn on

Buttons

Bump Test :

1. Press the yellow button for a second to execute Bump test
2. Automatic gas injection
3. Check normal operation of the sensor and alarm

Calibration:

1. Press the green button for a second to execute Calibration mode
2. Calibrate the sensor to match with the type of the gas

Bump Test + Calibration:

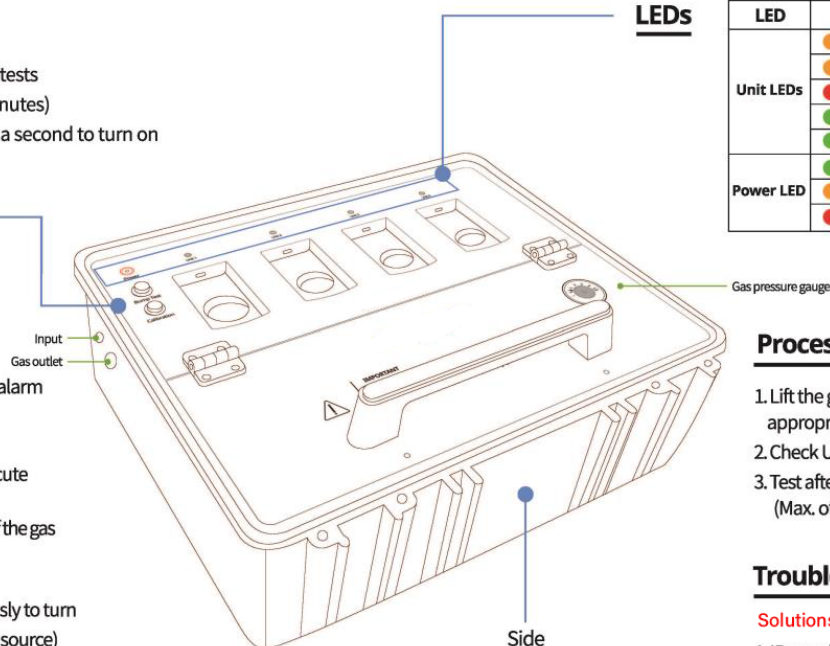
Press both buttons for a second simultaneously to turn off/put to sleep (when connected to a power source)

Notes

- Available to upgrade or change settings through Docking manager
- Test result can't be saved if USB drive is not connected
- Every test is available to proceed only when the concentration value is below 1st alarm

LEDs

LED	Description
Unit LEDs	<ul style="list-style-type: none"> ● Cycling Charging ● ON Testing ● ON Test Failed ● ON Test Succeeded ● ON and Blinking Updating Firmware ● ON Standby mode
Power LED	<ul style="list-style-type: none"> ● Blinking (5 sec) No USB/Exceed memory ● ON Low Battery



Process

1. Lift the gas cover handle and connect with appropriate gas
2. Check USB connection
3. Test after checking the gas pressure gauge (Max. of 58L bottle: 500PSI)

Troubleshooting

Solutions for the most common problems

1. IR panel at the top of the detector needs to be cleaned
2. Check the remaining gas on the Gas pressure gauge
3. Try to keep the Docking station away from bright light. It could disturb the IR communication between Docking station and detector
4. If the problem still occurs, please inquire of Watchgas

2. PDM Dock Configuration

EASY TO MAINTAIN

Changeable alarm levels	Ensures compliance with changing regulations or company procedure
WatchGas PDM Docking Station	Keeps monitors correctly configured without service or technician team
'Bump test due' indication	Alerts the user and team members that the monitor is not compliant

USER FRIENDLY

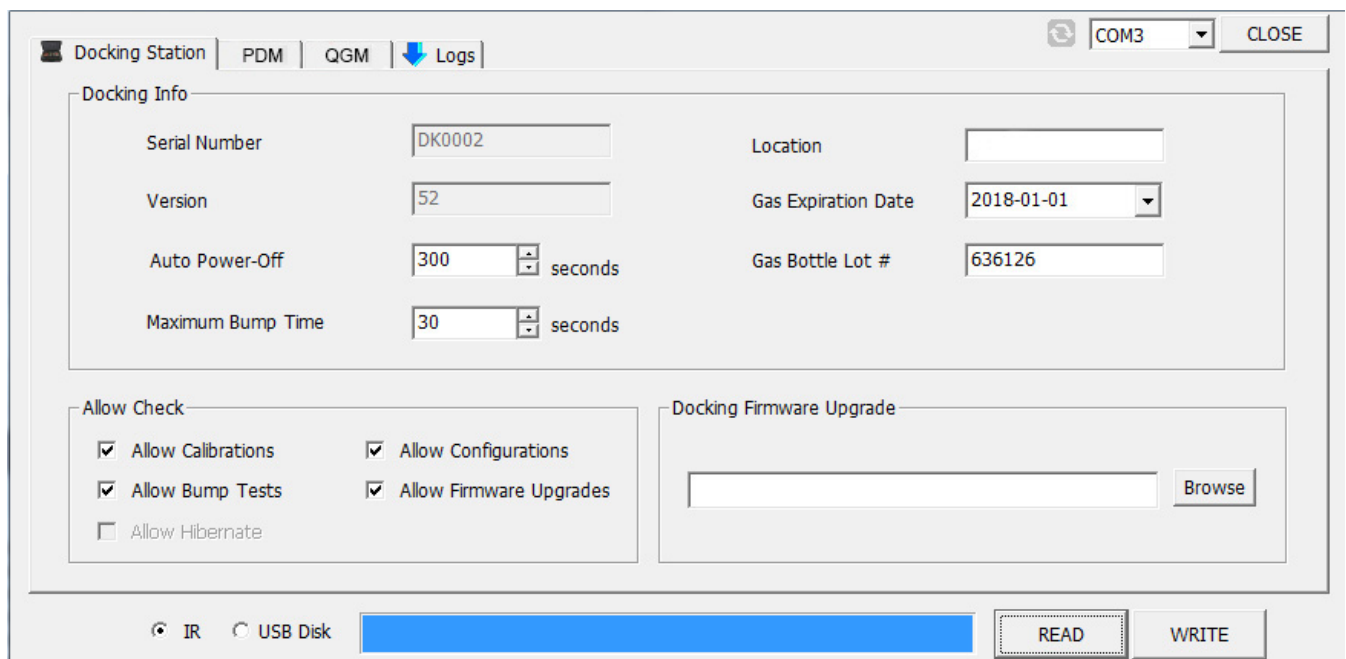
Compact and lightweight	Non-intrusive
Single button operation	Delivers simplicity for users
	Reduces training time

EFFICIENT

Wide operating temperature range	Effective in a wide variety of harsh environments: 41 to + 104°F (5 to + 40°C)
IP Rating	IP66 and IP67

Note

Users can change settings, upgrade firmware and download log events through the Docking Station IR-Link**



The screenshot shows the 'Docking Station' software interface. At the top, there are tabs for 'Docking Station', 'PDM', 'QGM', and 'Logs'. The 'PDM' tab is selected. On the right, there is a 'COM3' dropdown menu and a 'CLOSE' button. The main area is divided into several sections:

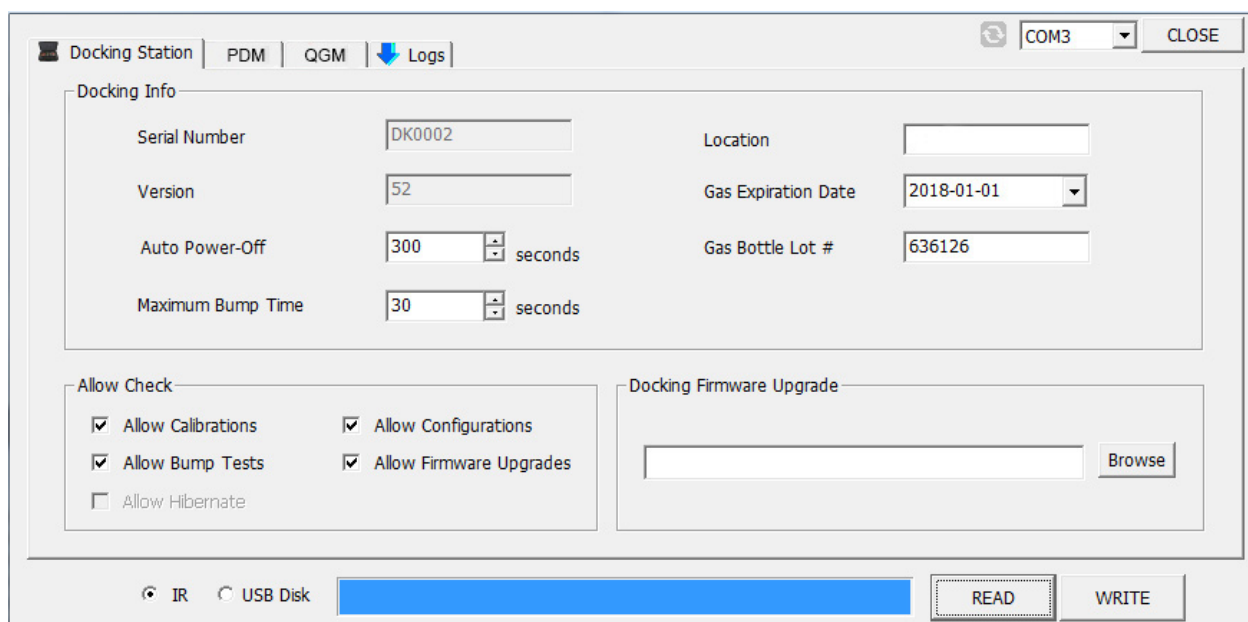
- Docking Info:** Contains fields for 'Serial Number' (DK0002), 'Version' (52), 'Location' (empty), 'Gas Expiration Date' (2018-01-01), 'Auto Power-Off' (300 seconds), 'Gas Bottle Lot #' (636126), and 'Maximum Bump Time' (30 seconds).
- Allow Check:** A section with four checkboxes: 'Allow Calibrations' (checked), 'Allow Bump Tests' (checked), 'Allow Configurations' (checked), and 'Allow Firmware Upgrades' (checked). There is also an unchecked 'Allow Hibernate' checkbox.
- Docking Firmware Upgrade:** A section with a text input field and a 'Browse' button.

At the bottom, there are radio buttons for 'IR' (selected) and 'USB Disk'. To the right of these are 'READ' and 'WRITE' buttons.

- Docking PC Programs are as above image.
- To interact with Docking Station, ensure to instal the Docking Station software and have the IR Link cable** plugged into the computer. Place the topside of the IR Link face down on the detector bay #1.

* IR-Link only operates on the bay #1 and power should be on.

** IR-Link is available seperately.



DOCKING INFO

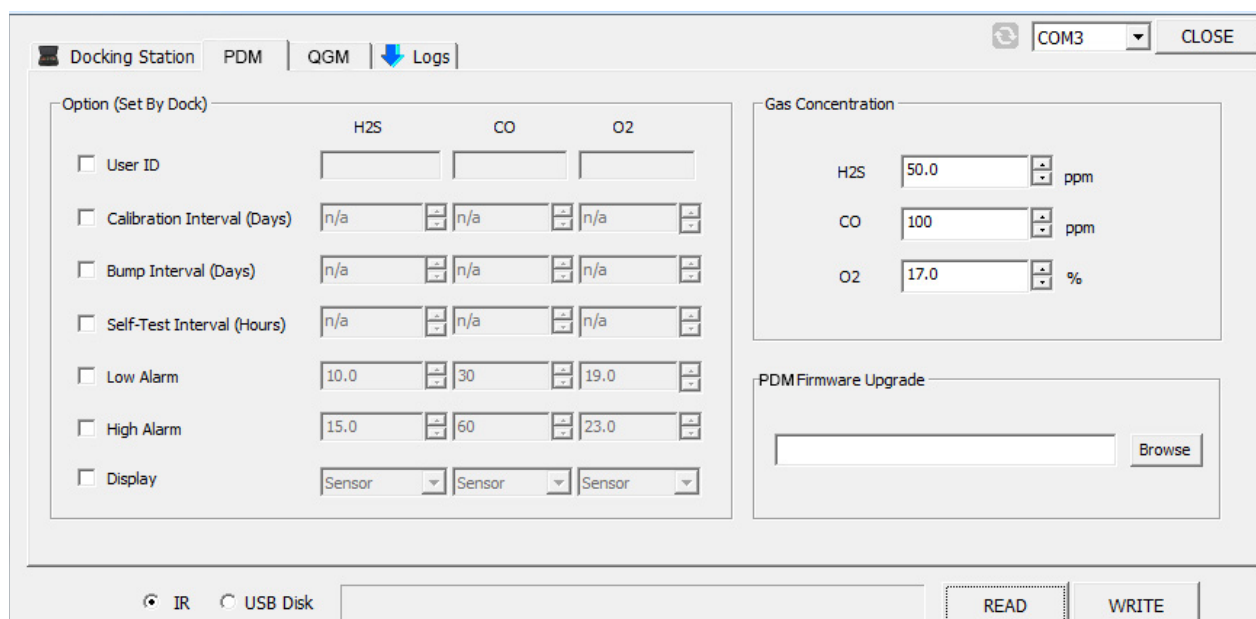
Serial S/N:	Factory Serial S/N
Version:	Docking station firmware version
Auto Power-Off (Max 3600 seconds):	Auto Power-Off
Maximum Bump Time:	Default: 30 / Min: 20 / Max: 120 seconds
Location:	Configure a location of the docking station installed.
Gas Expiration Date:	Set up the expiration date of a gas cylinder manually.
Gas Bottle Lot #:	Set up a bottle serial number manually.

ALLOW CHECK

Users can enable/disable the following options by checking each box.
Calibration/Bump test/Hibernation/Configuration(Detector)/Firmware Upgrade

Read: Retrieve the stored settings

Write: Update the adjusted settings



OPTION (SET BY DOCK)

User ID configuration

Calibration Interval (0~365 days): Set up an interval of the calibration alert

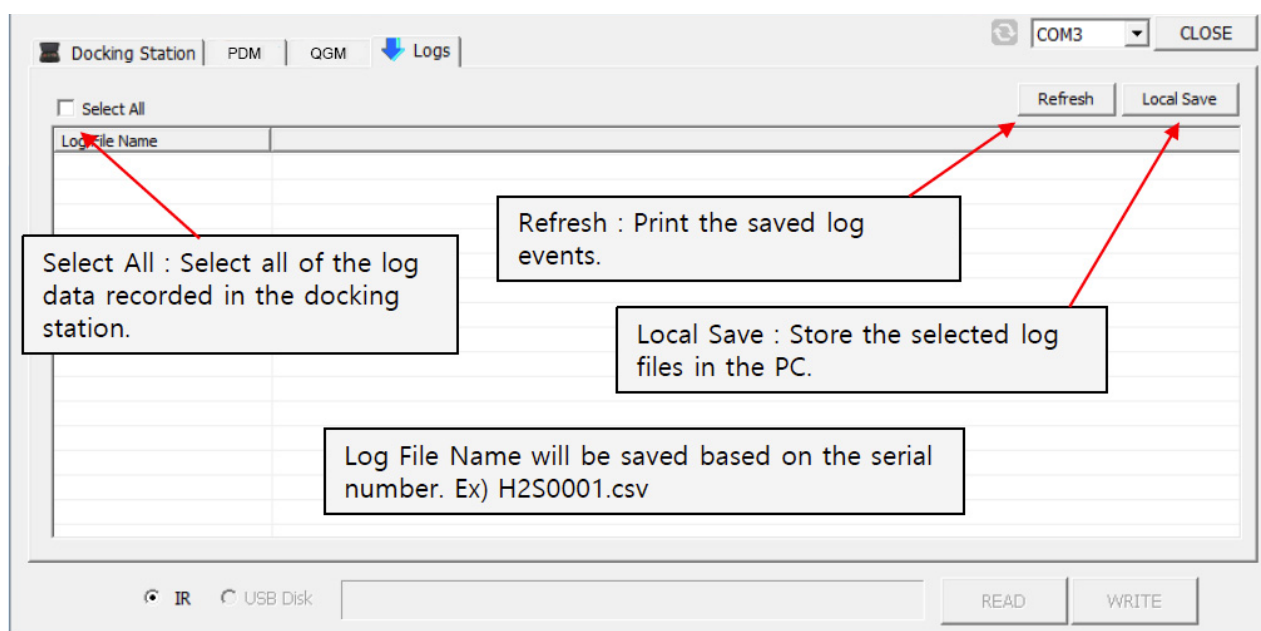
Bump Station Interval (0~24 hours): Set up an interval of the self test.

Low/HIGH Alarms: (Default is as below)

Alarms	O ₂	H ₂ S	CO
LOW	1%vol	5 ppm	25 ppm
HIGH	23% vol	5 ppm	25 ppm

Display: Choose either displaying "Sensor Reading" or "Sensor life remaining."

Gas	O ₂	H ₂ S	CO
Concentration	18%vol	10 ppm	50 ppm

Read: Retrieve the stored settings**Write:** Update the adjusted settings**3. Log Configuration****EVENT LOGGER PDM (FOR THE LAST 30 ALARMS)**


Log

Product Name	PDM	Life Remaining	18 months 11 days
Serial Number	SJ0115150	Total Number of Events	16
Log Type	Alarm Log	Duration of Events	00:01:53
Firmware	1.2.5	Zero Cal Time	-
1st / 2nd Alarm	19.5 / 23.0	Span Cal Time	-

Event Date	Event Time	Bump Test	Duration[s]	Sensor Read...	Alarm
2019/04/25	12:20:41	No	00:00:10	30.0	HIGH Alarm
2019/04/25	12:20:57	No	00:00:02	19.4	LOW Alarm
2019/04/25	12:21:18	No	00:00:09	30.0	HIGH Alarm
2019/04/25	12:22:41	No	00:00:04	30.0	HIGH Alarm
2019/04/25	12:22:47	No	00:00:04	19.0	LOW Alarm
2019/05/15	13:27:52	No	00:00:10	30.0	HIGH Alarm
2019/05/15	13:30:16	No	00:00:09	30.0	HIGH Alarm
2019/05/15	13:34:28	No	00:00:10	30.0	HIGH Alarm
2019/05/15	13:43:23	No	00:00:08	30.0	HIGH Alarm
2019/05/15	13:43:58	Yes	00:00:07	30.0	HIGH Alarm
2019/05/15	13:46:23	No	00:00:08	30.0	HIGH Alarm

WatchGas PDM QGM IR Link PC v1.7.1 (Agent Mode)

File Tools Help Product

Tool: READ WRITE LOG  Firm

IR Link: COM3 CLOSE

PDM

Serial Number	SJ0115150	Sensor Type	O2
Firmware Version	1.2.5	Low Alarm	19.5
User ID/Message		High Alarm	23.0
Display	Sensor Reading	Cal Concentration	18.0
Stealth	Off	Cal Time(sec)	90
Self Test(hour)	n/a	Cal Interval(day)	180
		Bump Interval(day)	180

WatchGas Detection

4. Specification

Size	47 x 41 x 22cm (18.50 x 16.14 x 8.66 in.)
Weight (without gas cylinder)	8.2kg
Operating Temperature	5 to + 40°C (41 to + 104°F)
Warranty	Full 2 years
Battery Type	Rechargeable Lithium Ion
Battery Life	1,000 Bump Tests
LEDs	5 red / green / orange LEDs (1 for each unit, 1 for power)
Memory	USB 8GB Standard
Log Capacity	Approximately Up to 5 million tests (8GB, removable USB memory)
Tests Performed	Bump Test and Calibration
Information Stored	Bump/Cal Logs, Individual Monitor Event Logs, Firmware and Unit Configurations
Gases Available*	CO, H ₂ S, O ₂ , NH ₃ , SO ₂ en H ₂
Unit Compatibility	Works with WatchGas PDM
Calibration Gas	Compatible with 36cm cylinders
Charging Adaptor	12V, 3A

*Gasses are available separately from WatchGas or its distributor.

5. Limited Warranty

WatchGas warrants this product to be free of defects in workmanship and materials-under normal use and service for two years from the date of purchase from the manufacturer or from the product's authorized reseller.

The manufacturer is not liable (under this warranty) if its testing and examination disclose that the alleged defect in the product does not exist or was caused by the purchaser's (or any third party's) misuse, neglect, or improper installation, testing, or calibrations. Any unauthorized attempt to repair or modify the product, or any other cause of damage beyond the range of the intended use, including damage by fire, lightening, water damage or other hazard, voids liability of the manufacturer.

In the event that a product should fail to perform up to manufacturer specifications during the applicable warranty period, please contact the product's authorized reseller or WatchGas service center at +31 (0)85 01 87 709 to repair/return information.



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