

# MGT Docking Station

Version II

## User's Manual



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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, lightning, 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 deice only operates when the power LED turns grean.
- ✓ 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.
  - Docking F/W File Name : DK\_FW.bin,
  - PM400 F/W Name : PM400\_FW.bin

## 1. Overview

Bump test and calibration are the key features to ensure the safety of devices and users. The MGT Docking Station version II. MGT docking station version II 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.

### Key Features

- ✓ Zero and Span Calibration, Bump Test Function
- ✓ Indicate the current status of operation by the Power LED and Unit LED color
- ✓ Gas Ventilation system to remove a remained gas
- ✓ Save the log events after calibration and bump test
- ✓ Enable users to adjust the setting points of Docking station and MGT via IR Link or USB

### Advantages

<b>Gas usage controlled</b>	Lowers the cost of bump testing
<b>Manages calibration</b>	Manages calibration and stores the records of log events
<b>All data is stored in a USB stick</b>	Simple to transfer the data
<b>Rechargeable battery or power</b>	Ideal for in-vehicle or multi-site use
<b>Holds up to 4 devices at once</b>	Faster testing of larger fleets

## 2. Specification

<b>Size</b>	52.5 x 43.7 x 21.3cm(20.66" x 17.20" x 8.40")
<b>Weight (Without gas cylinder)</b>	11.0kg
<b>Operating Temperature</b>	41 to +104°F (5 to +40°C)
<b>Warranty</b>	Full 2 years
<b>Battery Type</b>	Rechargeable Lithium Ion
<b>Battery Life</b>	1,000 Bump Tests
<b>LEDs</b>	6 Blue LEDs for each unit(unit x 4) , 3-color LED for power , Switch Back Light LED(Yellow, Green)
<b>Memory</b>	USB 8GB Standard
<b>Log Capacity</b>	Approximately Up to 5 million tests(8GB, removable USB memory)
<b>Tests Performed</b>	Bump Test and Calibration
<b>Information Stored</b>	Bump/Cal Logs, Individual Monitor Event Logs, Firmware and Unit Configurations
<b>Gases Available</b>	LEL, CO, H2S and O2
<b>Unit Compatibility</b>	Works with SP-MGT(N, P)
<b>Calibration Gas</b>	Compatible with 58L & 116L cylinders
<b>Interface</b>	Ethernet RJ-45(TCP/IP), 10Mb/s
<b>Charging Adaptor</b>	DC12.0V, 3A/h

### 3. Button Function

Button	Instruction
Calibration or Bump Test	<ul style="list-style-type: none"> <li>To turn on, press either calibration or bump test button for 1 second. (Power Led: Orange -&gt; Green)</li> </ul>
Calibration + Bump Test	<ul style="list-style-type: none"> <li>To power off, press the calibration and bump test button for three seconds.</li> </ul>
Calibration	<ul style="list-style-type: none"> <li>To activate the function, press the calibration button for three seconds.</li> </ul>
Bump Test	<ul style="list-style-type: none"> <li>To activate the function, press the bump test button for three seconds.</li> </ul>

✓ **Note**

**IR LINK only works when it is placed into the No.1 bay**

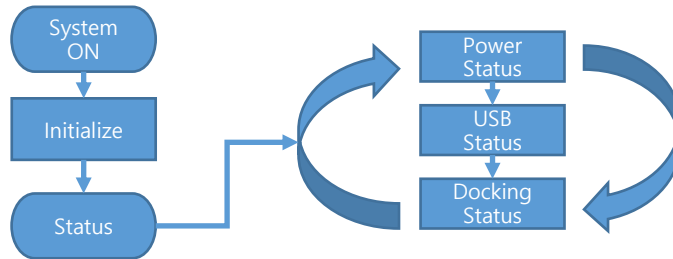
The button only works when the power LED turns green

## 4. LED Color

Status	LED location	Status Color
IDLE (Ready to use)	Power LED Status	Green
	Unit LED Status	-
Recharging	Power LED Status	-
	Unit LED Status	Blue (Cycling)
No USB inserted Full USB Capacity	Power LED Status	Orange (Blinking for 5 sec)
	Unit LED Status	-
Low Battery Power	Power LED Status	Red
	Unit LED Status	-
Test Progress	Power LED Status	-
	Unit LED Status	Blue Cycling
Test Result	Power LED Status	-
	Unit LED Status	Success: All LED on Fail: Third unit LED will blink
FW Upgrading	Power LED Status	-
	Unit LED Status	No.6 Blue Color LED Blinking

- During the recharging period, the unit LED(Blue) will be cycling. The full charge takes about 4 hours and users can use the bump test for 1,000 times. During recharging, users can use the device.
- If USB is not connected and the USB memory is full, the power LED (orange) is blinking
- If the USB is not connected, users can still use the docking station, but log data will not be recorded.
- When the battery is drained, power LED(Red) will be on and the device is not working and it will enter the Idle status.
- During the upgrading firmware, unit 6 LED(Blue) will be turned on and flashing for 2 minutes.

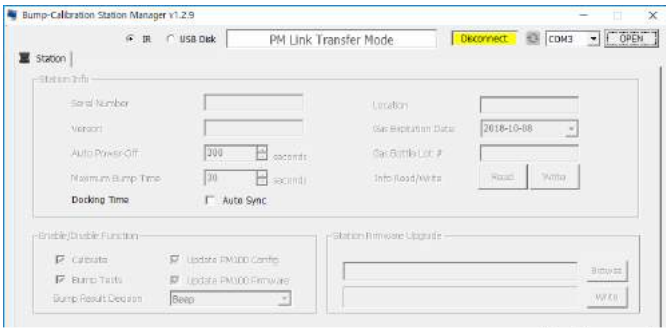
## 5. Main Operation Procedure



- **Docking Station On**  
When the device is on, the power LED will turn from orange to green.
- **Calibration or Bump Test**  
To initiate the calibration or bump test, press the button. And, the power LED will turn orange. The device will decide if the configuration will be loaded on the MGT based on if the configuration check box is marked or not.
- **When the device enters the test procedure, the light will turn green and the unit LED will turn blue as the following procedures.**
  - Unit 1 LED : Check if the device is connected
  - Unit 2 LED : Initiate Air Pump
  - Unit 3 LED : Initiate Bump or Calibration
  - Unit 4 LED : Initiate Air Pump
  - Unit 5 LED : Save Log events
- To cancel the test, press the button one time.
- When the test is completed successfully, the all unit LED will turn blue and when the unit fails, the third LED(blue) will flash.
- To communicate with PC, connect IR link with the no.1 Bay.



# 6. PC Program Configuration



## Configuration

Calibration interval: 0~365 days

Bump interval: 0~365 days

Low / High Alarm Setting  
 - H2S : 0 ~ 100.0  
 - CO : 0 ~ 300  
 - O2 : 0 ~ 30.0  
 - LEL : 0 ~ 100.0

STEL / TWA Alarm Setting  
 - H2S : 0 ~ 100.0  
 - CO : 0 ~ 300

Detector User ID

TWA Method  
 - ACGIH : Accumulation Average  
 - OSHA : Movement Average

TWA  
 - Default : 8 hours average

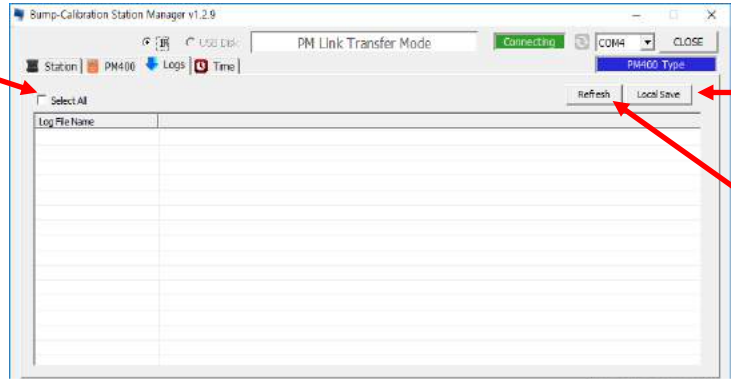
STEL  
 - Default : 15 minutes average

Safe Display : In the safe area, SAFE will displaced.  
 Dock Lock : Lock the bump / calibration  
 Maintenance Notification  
 Latching Alarms : Until the users push the button, the alarm will be activated continuously.  
 Auto Zero : When the device is turned on, the zero calibration will be activated.  
 LeI by volume : 100%LEL Standard  
 Off Lock : Prevent users from turning off the device.

Choose the MGT firmware

Initiate the firmware upload.

# 7. Log Events Download



Select All : All log events stored in the docking station.

Local Save : Save the log events in the PC.

Refresh : Open the lists of log events.

## Docking for PM400 Log Data

Log Time	2017-03-30 10:28																		
Docking Serial Number	DK0003																		
F/W Version	0.0.1																		
H/W Version	1.0.0																		
Place	SenkoOffice																		
Gas Expiration Date	2018.3.28																		
Gas Bottle Lot	123456																		
Str Num	Model	Test Type	Test Result	H2S Alarm(L)	H2S Alarm(H)	H2S Conc. CO Alarm(L)	CO Alarm(H)	CO Conc. O2 Alarm(L)	O2 Alarm(H)	O2 Conc. LEL Alarm(L)	LEL Alarm(H)	LEL Conc. S/N	F/W Version	H/W Version	User ID				
1	WGT	Calibration	SUCCESS	10	30	25	30	60	100.4	19	21	17	10	30	49.8	MGT02DN	0.1.0	2.1.0	Senko
2	WGT	Calibration	SUCCESS	10	30	25	30	60	99.9	19	21	17	10	30	50	MGT02DN	0.1.0	2.1.0	Senko
3	WGT	Calibration	SUCCESS	10	30	25	30	60	99.9	19	21	17	10	30	50.1	MGT02DP	0.1.0	2.1.0	Senko
4	WGT	Calibration	SUCCESS	10	30	24.6	30	60	90.5	19	21	16.6	10	30	50	MGT02DP	0.1.0	2.1.0	Senko

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1	WGT	Bump	SUCCESS	10	30	20.9	30	60	75.5	19	21	17.3	10	30	10.4	MGT02DN	0.1.0	2.1.0	Senko
2	WGT	Bump	FAILURE(BEEP)	10	30	23.1	30	60	86.1	19	21	17.2	10	30	10.2	MGT02DN	0.1.0	2.1.0	Senko
3	WGT	Bump	SUCCESS	10	30	19.0	30	60	77.1	19	21	17.2	10	30	46.2	MGT02DP	0.1.0	2.1.0	Senko
4	WGT	Bump	SUCCESS	10	30	20.1	30	60	74.8	19	21	17	10	30	49.3	MGT02DP	0.1.0	2.1.0	Senko

**Docking for PM400 Log Format**

Log Time : Total hours of log events  
 Docking Serial number : Docking S/N  
 F/W Version : Docking SW FW Version  
 H/W Version : Docking HW FW Version  
 Place : Docking Station Location  
 Gas Expiration Date : Expired Date  
 Gas Bottle Lot : Gas Cylinder Lot Info

## Limited Warranty

SENKO 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 SENKO service center at 82-31-492-0445 to repair/return information.



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