gas clip technologies

MGC Dock

User's Manual

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Gas Clip Technologies Clip Dock

User Operation

Turning the Clip Dock On and Off

The Clip Dock is powered by an internal rechargeable battery that can perform up to 1500 bump tests. Pressing either button will automatically wake up the Clip Dock and perform the E X W W R Q ¶ V D V V R F L D W H G W H V W V The Clip Dock will automatically turn itself off between tests, unless the charger is connected.

Charging

Connect the supplied DC power adapter to the *Charging Port* on the Clip Dock to charge the internal battery. The Unit LEDs will cycle until the battery is fully charged. A complete charge takes approximately 3 hours and lasts for approximately 1500 bump test cycles.

DO NOT charge the instrument in temperatures above or below the specified range of 0°C to 40°C

DO NOT substitute any other battery type than specified and supplied by Gas Clip Technologies.

Calibration Gas Installation

The Clip Dock requires a calibration gas bottle to be installed in order to perform tests on the detectors. To install, remove the *Access Hatch Screws* (x2) and lift the access panel. Thread the bottle into the CG-10 fitting until tight. Once properly connected, the *gas gauge* will indicate the bottle pressure.

By default, the Clip Dock assumes that the bottle contains four gases so that any detector model can be tested. The **GCT Manager** software allows you to specify the gas concentrations. The default concentration is set for a mix of all gas types:

H_2S: 25 ppm CO: 100 ppm O_2: 18% LEL: 50%

Button Usage

Operation of the Clip Dock is determined by the two buttons on the top plate:

Bump Test: Briefly applies gas to ensure that the detectors respond

Calibration: & D O L E U D W H V W K H G H W H F W R U V ¶ D J D L Q V W W K H D S S O L H G J D V D F F X U D F \

Both (hold): Turns off or hibernates the detectors

Place up to four activated detectors into the detector bays. The Clip Dock can test up to four detectors simultaneously. Ensure that the gas bottle matches the gas types required by the inserted detectors. The Clip Dock can test with different detectors at the same time if using a multi-gas blend calibration mix.

To begin the test, press the *Bump Test* and/or the *Calibration* button. A bump test will take approximately 20 seconds; a calibration 90 seconds; hibernation a few seconds. While the test is active, the LEDs will turn ORANGE. When the test has completed, the LEDs will turn GREEN for pass or RED for fail. Wait until the power button shows the overall result (GREEN or RED) before removing the detectors.

Every test will perform the following maintenance operations:

- 8 S J U D G H H D F K G H W H F W R U ¶ V I L U P Z D U H L I U H T X L U H G
- 6 H W W K H G H W H F W R U ¶ V G D W H D Q G W L P H L I V X S S R U W H G
- 7 H V W H D F K G H W H F W R U ¶ V E H H S H U
- & R Q I L J X U H H D F K G H W H F W R U I H Y X H U R S W L R Q V D V

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- 'RZQORDG HDFK GHWHFWRU¶V ORJV
- Bump, Calibrate, or hibernate as requested
- Record the test to the USB memory

Troubleshooting Failures

1. Inspect the detector sensor and beeper cavities and clear any obstructions.
2. Clean the small IR communication window located on the top of the detector.
3. Verify the gas bottle is not empty. / ERWWOHV DUH ³IXOO´ DW 1000 36, 2100 PSI.
4. Try relocating the Clip Dock away from bright light sources, which may interfere with IR communication between the Clip Dock and the detectors.
5. If a monitor has failed 3 after three test attempts, please contact Gas Clip Technologies.

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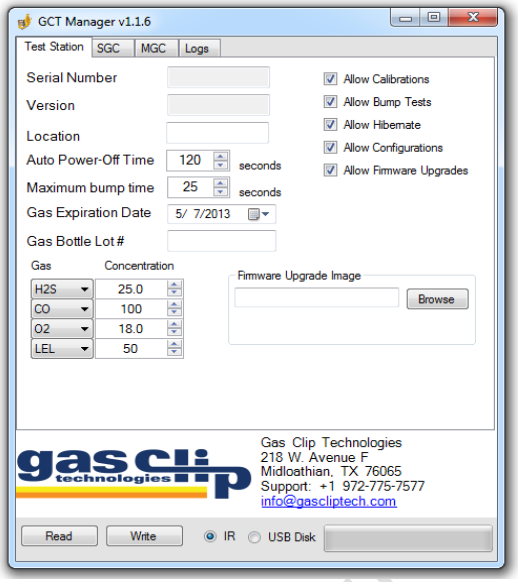
Clip Dock Configuration

The Clip Dock is configured with the **GCT Manager** software. The latest version is available on the GCT website at www.gascliptech.com D O R Q J Z L W K L W V 8 V H U ¶ V 0 D Q X D O



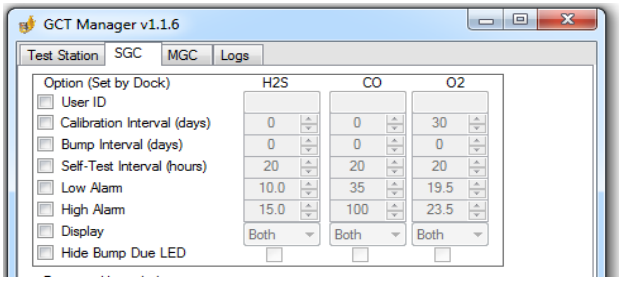
The GCT Manager software can communicate with the Clip Dock through IR or USB as selected by the radio buttons. IR communication is handled through Bay 1 of the Clip Dock and if the IR Link is placed into Bay 1. For IR communication, connect the Clip Dock to a charger and place the GCT IR Link into Bay 1. Direct USB operation with the memory stick connected to the PC offers faster transfers or configuration without a GCT IR Link.

Clip Dock Options

The software program will provide a detailed description of each option if the mouse is hovered of it. The *Location*, *Gas Expiration Date* and *Gas Bottle Lot #* are optional parameters that will be recorded into the log file with each test. The checkboxes can enable or disable various features of the Clip Dock, including: calibrations, bump tests, hibernations, detector configuration and detector firmware upgrades.

Detector Options

Every detector tested by the Clip Dock can optionally be programmed with various configuration settings. By default, the Clip Dock will not reconfigure any detectors. The GCT Manager software allows fine-grained control over which options are programmed into the detectors and what those settings will be.



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Clip Dock Records (Logs)

The Clip Dock records the results of each test to its USB memory. In addition, it will GRZQORDG HDFK GHWHFWRU¶V HYHQW ORJ &OLS 'RFN ORJ ILOHV DUH V Value (CSV) format which can easily be parsed by a spreadsheet program for viewing and manipulation.

Clip Dock Log Format

The first lines of the log file provide a header for the log data. Each test is stored in multiple lines:

Line 1: Overall Clip Dock test results

- Date and Time of test
- Test type (Bump Test, Calibration or Turn Off)
- Clip Dock Serial Number
- Overall pass/fail test result
- Firmware and Hardware versions
- Location (optional user string that can be configured with the GCT Manager)

Line 2: Bay test results for the inserted detector

- Bay Number (1-4)
- Detector Model
- Detector serial number
- Detector pass/fail result
- Detector firmware and hardware versions
- Beeper pass/fail result
- Detector options (varies by detector type)

Line 3: Detector sensor(s) test results

- Sensor Type
- Sensor pass/fail result
- Sensor reading
- Gas bottle details
- Sensor options (varies by detector type)

Logged SGC Options

The SGC Dock logs the following Single Gas Clip (SGC) detector options on Line 2:

- Show Sensor Readings (T/F)
- Bump Flash Disabled (T/F)
- Hide Clock (T/F)
- User ID
- Self-Test Interval

The following SGC Sensor options are logged on Line 3:

- High and Low alarms
- Calibration and Bump Test Intervals
- Calibration and Bump Due (days)

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Logged MGC Options

The MGC Dock logs the following Multi Gas Clip (MGC) detector options on Line 2:

- User Message
- Language
- TWA method
- TWA and STEL intervals
- SAFE mode (T/F)
- Self-Test Lock (T/F)
- Auto-Zero (T/F)
- Maintenance Notification (T/F)
- Dock Lock (T/F)
- Latching Alarms (T/F)

The following MGC Sensor options are logged on Line 3:

- Sensor enabled/disabled
- Low, High, STEL and TWA alarms
- Last calibration and calibration interval
- Last bump test and bump test interval

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Wall-Mounted Clip Dock

The wall-mounted Clip Dock exchanges the portable Pelican© case for an enclosure suitable for permanent, fixed installations. All other features and operations are the same.

The Clip Dock is mounted with four screws (supplied). For installation on drywall, the provided drywall anchors should be used. For installation on brick or metal structures, the user will have to supply suitable mounting hardware. A convenient wall-mounting template is included to help locate the mounting screws.

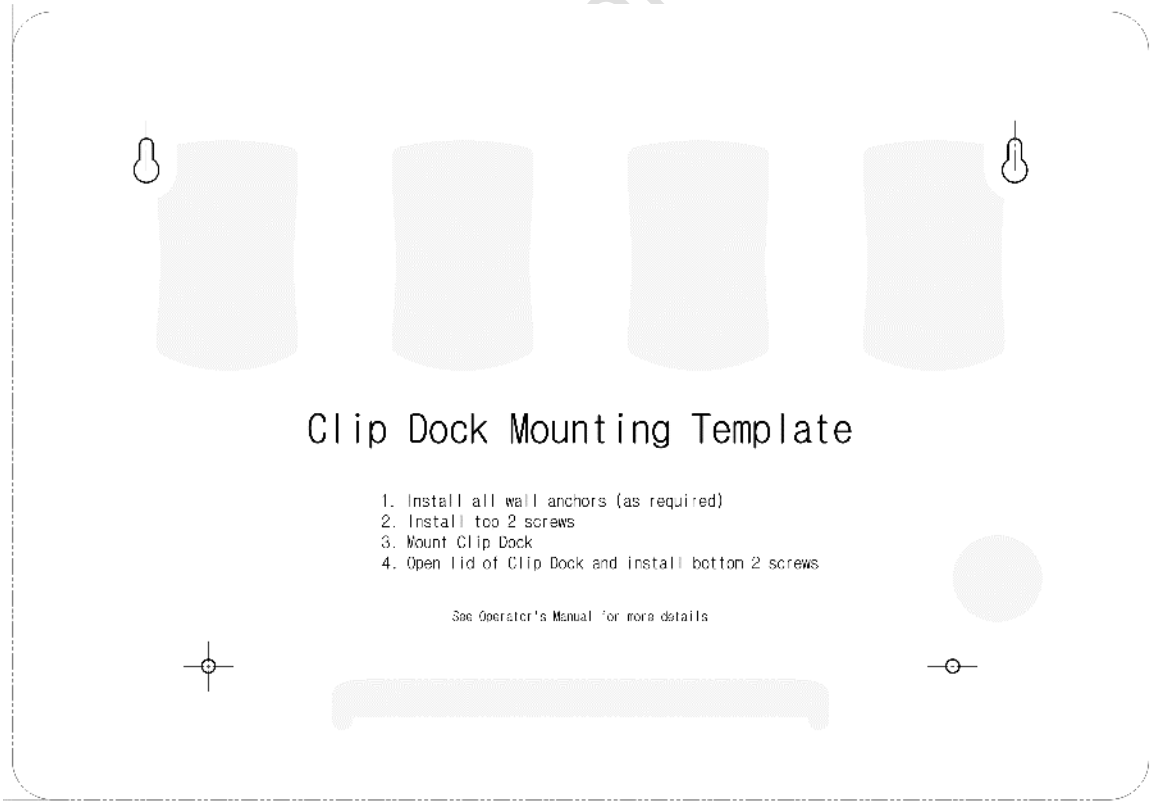
IMPORTANT: *Select a location near a power source that is required for charging of the internal battery.*

Installation Procedure:

In most cases the Clip Dock can be installed with the use of the following tools:

- #2 Philips screw driver
- Level
- Clip Dock Mounting Template

1. Using the provided installation template and a level, mark out the four screw locations



2. Screw the drywall anchors into the marked locations.

3. Screw in the top two screws most of the way. Leave enough space for the Clip Dock case to slide over the screw.

4. Hang the Clip Dock on the top two screws.

5. Open the gas cylinder compartment and screw in the remaining two screws

6. To complete the installation:
   - x Lead the exhaust tube away to a suitably vented location.
   - x Install the gas cylinder or connect the external gas source.
   - x Connect the DC power source to the Clip Dock.
   - x Secure the gas cylinder compartment lid with the access hatch screws.

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