



GCT IR Link Software

Quick Reference Guide

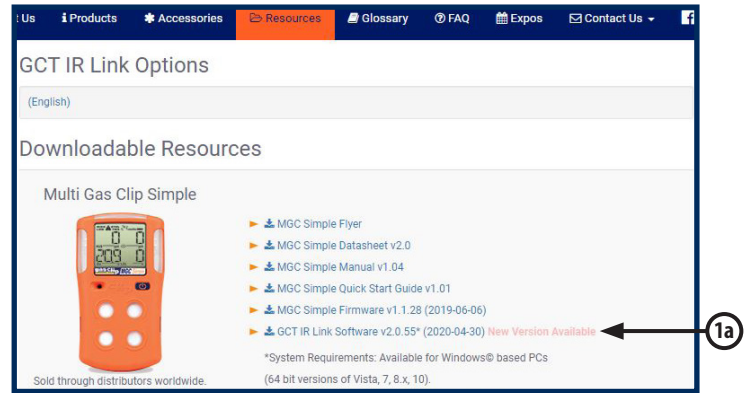
G A S C L I P T E C H . C O M

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DOWNLOADING AND INSTALLING GCT IR LINK SOFTWARE

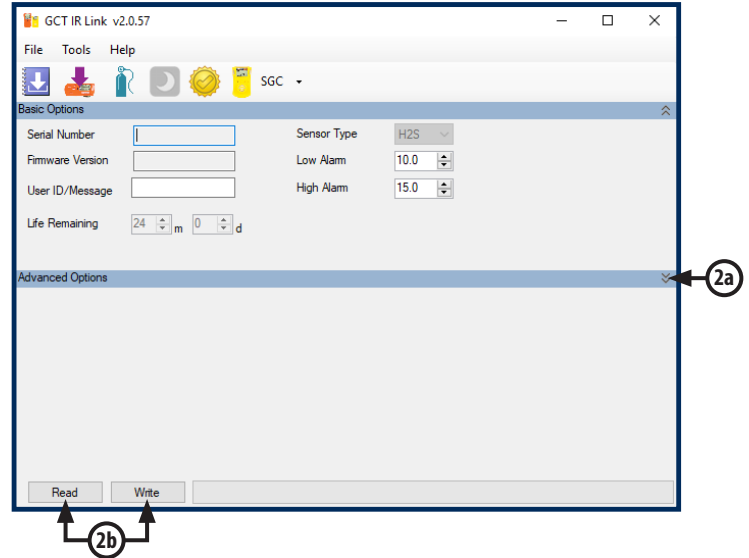
1. You will first need to download and install the most recent version of GCT IR Link Software (v2.0.55 or newer) from the Resources page on the Gas Clip Technologies (GCT) website, www.gascliptech.com [1a]. If you have trouble downloading or installing the software, please contact GCT Service Department.



2. Once installed, open the program by clicking on the GCT IR Link Software icon that appears on your desktop.



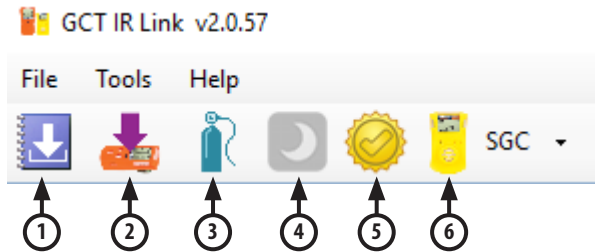
Once the program is open, you will notice a row of icons at the top for quick access to the most commonly used tools and two main sections, Basic Options and Advanced Options. If the Advanced Options are not displayed, you can reveal them by clicking the down arrows [2a] on the right side of the program screen. To hide them you would click the up arrows in the same location. The most important buttons to understand in this program are the "Read" & "Write" buttons [2b]. When clicked, "Read" will pull the information and settings that are currently on the detector and display them in the corresponding settings boxes within the program screen. "Write", on the other hand, will take any new settings or changes that you make and apply them to the detector being communicated with via the GCT IR Link.



To communicate with a detector via the GCT IR Link you will need to place the detector face down in front of the GCT IR Link with the IR communication windows facing each other about 1-2 inches apart (pictured below). Note: your detector will need to be powered on and the IR communications window free from dirt or debris to ensure successful IR communication.



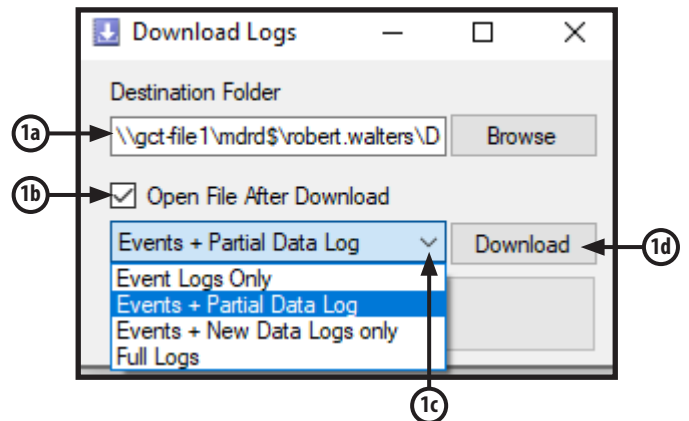
QUICK REFERENCE ICONS



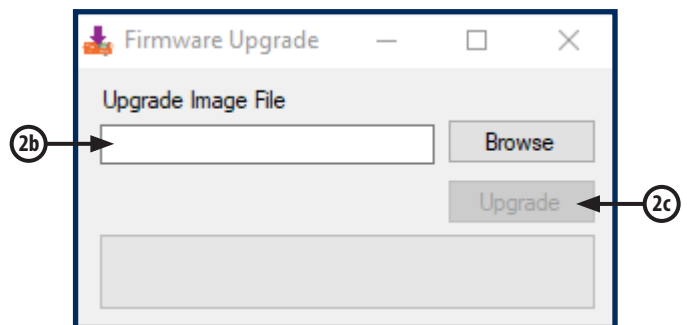
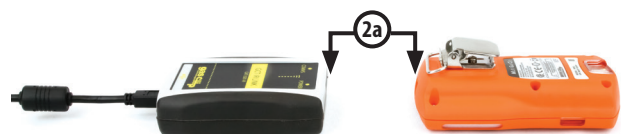
| Item | Description |
|------|---------------------------|
| 1 | Download Logs |
| 2 | Upgrade Firmware |
| 3 | Calibration |
| 4 | Hibernate (SGC Plus Only) |
| 5 | Calibration Certificate |
| 6 | Select Product |



1. Download Logs: Here you can use your GCT IR Link to download the event logs or data logs from your detector. For more information on what data is contained in each type of log, or instructions on how to interpret the logs, please contact GCT Service department. To download logs, select a location to save the logs to [1a]. For easy retrieval, it is recommended to either use your PC's desktop or a dedicated folder as the destination. Check the "Open File After Download" box [1b] if you would like the log to open immediately after download is complete. Next, click the drop-down arrow [1c] and select the log type that you wish to download. Click "Download" [1d] to begin compiling the log.

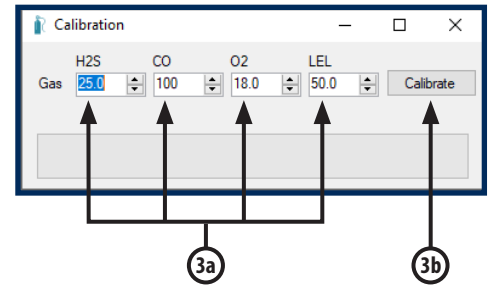


2. Upgrade Firmware: Here you can upgrade the firmware on your detector. To upgrade your firmware, download the most recent version of the firmware for your detector from the Resources page on our website. Once the firmware download is complete, place your detector face down in front of the GCT IR Link with the IR communication windows facing each other [2a]. Next, either drag the downloaded firmware file into the Upgrade Image File box [2b] or click "Browse" to find the downloaded file on your computer to select. To complete the upgrade, click "Upgrade" [2c]. Once the firmware update is complete, the status bar will display "Successful" in green and the detector will power cycle to apply the update. If you have any issues updating the firmware on a detector, please contact GCT Service department.





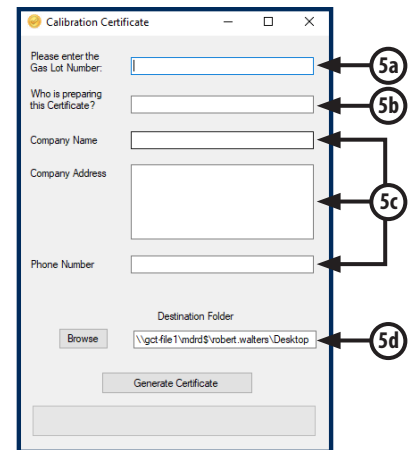
3. Calibration: Here you can calibrate both Multigas and Single Gas detectors. Note: although you can calibrate all detectors through the GCT IR Link Software, a much more user-friendly Manual Calibration mode is built into all Multigas detector menus (see your detector's User's Manual for manual calibration instructions). To perform a calibration through the GCT IR Link software, you will need the following: your detector, the calibration cap that came with the detector, a bottle of calibration gas, a regulator and tubing (hose). First, set the gas concentrations [3a] to match the mixture in the bottle that you are using for the calibration. Connect the regulator to the bottle of gas. Attach the calibration cap to the detector and connect the tubing (hose) from the calibration cap to the regulator. Once all is set up, click "Calibrate" [3b]. The program will prompt you to apply the calibration gas and then notify you of a successful calibration or failure in the status bar. If you have further questions on performing a calibration through the GCT IR Link Software, please contact the GCT Service department.



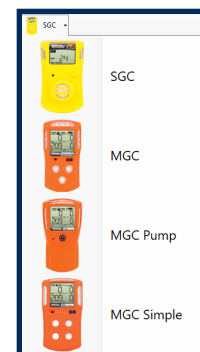
4. Hibernate: Hibernation mode is only available on the SGC Plus family of detectors (SGC-P-H and SGC-P-C). This will power down the detector for storage and no life remaining will be removed during hibernation. Note: Hibernating an SGC-Plus will clear the logs so, if you require a copy of the logs for documentation, please download them before attempting to hibernate.



5. Calibration Certificate: Here you can print a Calibration Certificate for a successful calibration completed within the last 48 hours. To generate the Calibration Certificate, enter the Gas Lot Number [5a] from the gas bottle used to complete the calibration, the name of the individual preparing the certificate [5b], and the company information [5c] to be displayed on the certificate. Once this information has been entered select a destination folder [5d] for the certificate to be saved and click "Generate Certificate".

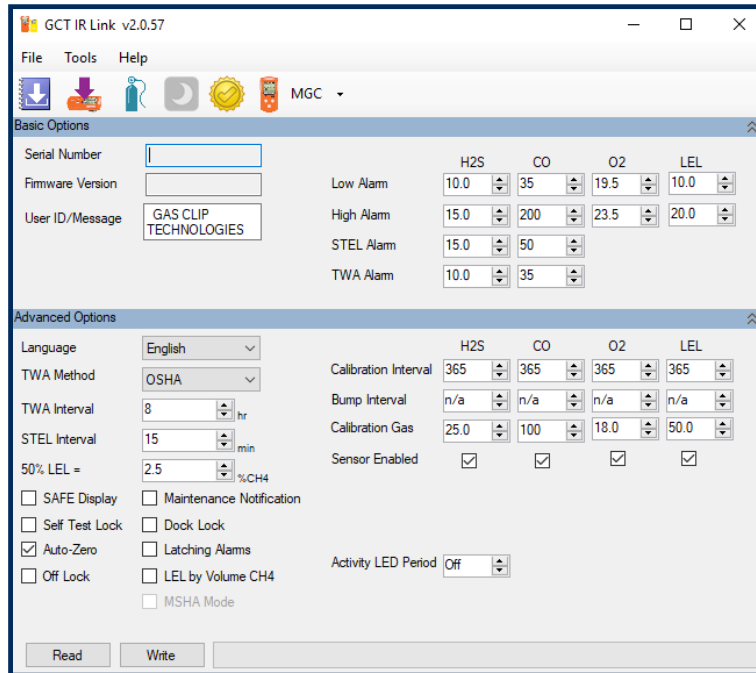


6. Select Product: Here you can select the product that you wish to see the Settings and Options for. When a detector is Read with the GCT IR Link Software it will automatically direct you to the correct product tab.



BASIC AND ADVANCED OPTIONS

Most of the editable settings for Gas Clip Technologies detectors are similar across all Multigas product lines, however there are some Settings and Options that are unique to specific model types. The following section will be an overview of settings that are shared between model types.



The screenshot shows the GCT IR Link v2.0.57 software window. It has a menu bar with File, Tools, and Help. Below the menu bar is a toolbar with icons for file operations and a dropdown menu labeled MGC. The main area is divided into two sections: Basic Options and Advanced Options.

Basic Options:

- Serial Number: A text input field.
- Firmware Version: A text input field.
- User ID/Message: A text input field containing "GAS CLIP TECHNOLOGIES".
- Low Alarm: A table with columns for H2S, CO, O2, and LEL. Values are 10.0, 35, 19.5, and 10.0 respectively.
- High Alarm: A table with columns for H2S, CO, O2, and LEL. Values are 15.0, 200, 23.5, and 20.0 respectively.
- STEL Alarm: A table with columns for H2S and CO. Values are 15.0 and 50 respectively.
- TWA Alarm: A table with columns for H2S and CO. Values are 10.0 and 35 respectively.

Advanced Options:

- Language: A dropdown menu set to English.
- TWA Method: A dropdown menu set to OSHA.
- TWA Interval: A spinner box set to 8 hr.
- STEL Interval: A spinner box set to 15 min.
- 50% LEL =: A spinner box set to 2.5 %CH4.
- Calibration Interval: A table with columns for H2S, CO, O2, and LEL. Values are 365, 365, 365, and 365 respectively.
- Bump Interval: A table with columns for H2S, CO, O2, and LEL. Values are n/a, n/a, n/a, and n/a respectively.
- Calibration Gas: A table with columns for H2S, CO, O2, and LEL. Values are 25.0, 100, 18.0, and 50.0 respectively.
- Sensor Enabled: Checkboxes for H2S, CO, O2, and LEL, all of which are checked.
- Activity LED Period: A dropdown menu set to Off.
- SAFE Display: ☐
- Self Test Lock: ☐
- Off Lock: ☐
- Maintenance Notification: ☐
- Dock Lock: ☐
- Latching Alarms: ☐
- LEL by Volume CH4: ☐
- MSHA Mode: ☐

At the bottom of the window are buttons for Read and Write.

Serial Number: Once the detector has been "Read" it will populate the Serial Number of the detector in this box.

Firmware Version: Once the detector has been "Read" it will populate the current Firmware Version installed on the detector in this box.

User ID/Message: An optional, user-programmable, text message containing up to 46 alpha-numeric characters can be used to show company branding, a detector identifier, or any other pertinent information. Default User ID/Message is "GAS CLIP TECHNOLOGIES". Note: The SGC family of detectors is limited to 6 characters.

Most of the following settings and options are only available on Multigas detectors. Options that are also available on SGC and SGC Plus will be marked with an *

Low Alarm: Used to set the Low Alarm threshold for each gas. *

High Alarm: Used to set the High Alarm threshold for each gas. *

STEL Alarm: Used to set the Short-Term Exposure Limit Alarm threshold for H₂S and CO.

TWA Alarm: Used to set the Time Weighted Average Alarm threshold for H₂S and CO.

Language: The detector can display all its text prompts in any of six languages: English, German, French, Spanish, Italian or Portuguese. Note: "OL", "ERROR" and sensor icons (H₂S, CO, O₂ & LEL) remain the same for all languages.

TWA Method: The algorithm used to calculate the TWA (Time Weighted Average) can be set to either an average over a moving window (OSHA) or as a cumulative average (ACGIH).

TWA Interval: The TWA Interval defines the time frame over which the long-term average is calculated. Default is 8 hours.

STEL Interval: The STEL Interval defines the time frame over which the short-term average is calculated. Default is 15 minutes.

50% LEL =: Used to change the % by volume of CH₄ that is determined to be equal to 50% LEL (typically 2.5% in N. America and 2.2% in EU).

Calibration Interval: The Calibration Interval controls how often the detector notifies the user to calibrate the sensors. The interval can be individually adjusted for each sensor. *

Bump Interval: The Bump Interval controls how often the detector notifies the user to bump test the sensors. The interval can be individually adjusted for each sensor. *

Calibration Gas: When the detector is calibrated, it scales the sensor readings to match the concentrations of the applied gases. The calibration gas concentrations can be adjusted to match the respective levels contained within the gas bottle. Default is 25ppm H₂S, 100ppm CO, 18% O₂ and 50% LEL (2.5% vol CH₄). *

Sensor Enabled: Individual sensors can be disabled. A disabled sensor is completely removed from the detector's display for sensor readings, alarm limits and calibrations. **Caution: A disabled sensor will not measure gas or detect alarm conditions.**

SAFE Display: If Safe Display is enabled, screen will display "SAFE" as long as there are no gas or detector alerts.

Self-Test Lock: If a sensor fails a self-test, the detector shows "Err" on the display and goes into high alarm. By default, the alarm can be silenced by pressing the Power/Menu Button. The Self-Test Lock option prevents the alarm from being silenced.

Auto Zero: This option automatically zeros the sensors every time the detector is activated (this is enabled by default and it is recommended that it remains enabled).

Off Lock: This option prevents the user from deactivating the detector's sensors with the Power/Menu Button.

Maintenance Notification: If Maintenance Notification is enabled, the detector will periodically flash the maintenance LED when a bump test or calibration is due. Otherwise, if the option is disabled, the detector will only show the maintenance text on the display.

Dock Lock: This option restricts bump tests and calibrations to only being able to be performed with one of Gas Clip Technologies' Clip Docks. Manual tests will not be able to be performed.

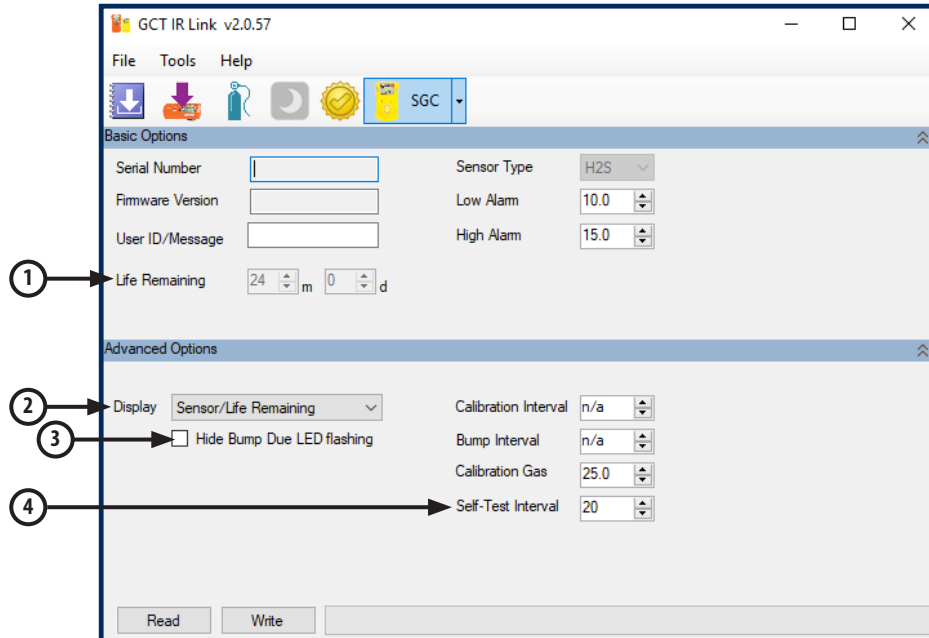
Latching Alarms: Alarms are non-latching by default, therefore, once the gas readings fall back within the set limits after an alarm condition, the detector will cease to alarm and return to normal operation. Latching alarms will hold the detector and its display in its peak alarm condition until the Power/Menu Button is pressed.

LEL by Volume CH₄: Allows the detector to display gas readings as %-by-volume CH₄ rather than % LEL.

Activity LED Period: This option allows the detector to flash a single LED at a specified interval to indicate that the detector is on. The interval between flashes can be set anywhere from 5 seconds to 120 seconds. To disable this function, type "0" in the Activity LED Period box and press ENTER. The box will display "OFF".

This section will cover the settings and options that are unique to specific model types.

SGC & SGC PLUS



Life Remaining [1]: Displays the total life remaining of the detector in months and days.

Display [2]: Lets the user select how the detector display is configured. The display can be set to show Sensor Reading at all times, Life Remaining at all times, or Sensor/Life Remaining. The default, Sensor/Life Remaining, setting will show Life Remaining until there is a reading of the target gas and it will then switch over to the Sensor Reading display, once the reading reaches "0" again it will switch back to Life Remaining.

Hide Bump Due LED flashing [3]: Lets the user select whether to enable, or disable, the Flashing LED notification that a Bump is due (Similar to the Maintenance Notification for Multigas detectors).

Self-Test Interval [4]: Sets the interval for the detector to request a self-test.

MGC PUMP

Pump Test: Requires the pump inlet to be blocked and unblocked on detector start up as well as after a Pump Block alarm has been acknowledged.

MGC SIMPLE

Life Remaining: Displays the total life remaining of the detector in months and days.

Life Display: While the detector is not in alarm, the display screen will show the Life Remaining instead of the Sensor Readings.

*** For the most up to date list of Options and Settings please refer to your product's User's Manual. ***



CONTACT INFORMATION



Gas Clip Technologies, Inc.

305 W FM 1382 Ste 540
Cedar Hill, TX 75104 USA

Toll Free: 1 (877) 525-0808
Phone: +1 (972) 775-7577
Fax: +1 (972) 775-2483
E-mail: info@gascliptech.com
Website: www.gascliptech.com