

# **Quick Start Guide**



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### **Overview**

### Introduction

The all-new Gilian CONNECT software is designed to save you time and help you do your job more efficiently. This PC Application provides a computer interface to help you manage and configure Gilian air sampling pumps, and to manage data collected by the pump.

This Quick-Start Guide will get you familiar with the capabilities of this software in just a few minutes.

### **Benefits and Features**

The Gilian CONNECT software allows you to:

- Configure pump operating parameters
- Easily replicate settings across many pumps
- Create pump runtime programs
- Download and archive sampling data from pumps
- Auto-fill common event details using Event Templates
- Automatically calculate concentration, including STP compensation
- Search and filter sampling history
- Print reports, including customizable formats
- Batch generate reports for multiple events



# **Pump Compatibility**

	GilAir Plus Basic	GilAir Plus Datalogger	GilAir Plus STP
View Serial Number	<b>✓</b>	<b>✓</b>	<b>✓</b>
View Firmware Version	<b>✓</b>	<b>✓</b>	<b>✓</b>
Save pump owner details and notes in the database	<b>✓</b>	<b>✓</b>	<b>✓</b>
Download Runtime Data		<b>/</b>	<b>✓</b>
Generate Sample Event Reports		<b>✓</b>	<b>✓</b>
Export Sample Event details for analysis in Excel		<b>/</b>	<b>✓</b>
Create Pump Programs		<b>✓</b>	<b>✓</b>
Configure Pump Options		<b>/</b>	<b>✓</b>
Copy configuration from one pump to another		<b>/</b>	<b>✓</b>
View run-time graph of Flow rate and back pressure		<b>✓</b>	<b>✓</b>
View run-time graph of ambient pressure and temperature			<b>✓</b>
Automatic STP-compensated concentration and volume			<b>✓</b>



### Installation

# **Minimum Requirements**

Use of this software requires a computer with the following minimum specifications:

Operating System	Microsoft Windows Operating System (XP SP-3, Vista, 7, 8, 8.1)
Installed Software	Microsoft Internet Explorer
Display Resolution	1024x600
USB port	Required for communication with pumps
Internet Connection	Required to enable software updates

### **Installation Procedure**

The installer is designed to start automatically when the installation CD is inserted into the computer's drive. If Windows Autorun is disabled, browse the files on the disk and run GilianConnectInstaller.hta.

NOTE: Please remain logged-in to your regular Windows account.

The application must be installed separately under the user or administrator account of each person who will use the application.

The installer will request administrator credentials if necessary.

NOTE: The application can be installed without administrator-level permissions, however Microsoft .NET 4.0 and the USB driver installers will request an administrator password if they are not already installed.

Microsoft .NET 4.0 is provided on the installation disk and must be installed before Gilian CONNECT can run. Please allow the Microsoft .NET Framework 4.0 installer to run.



The USB driver is required for communicating with pumps. Please allow the driver installer from FTDI to run.

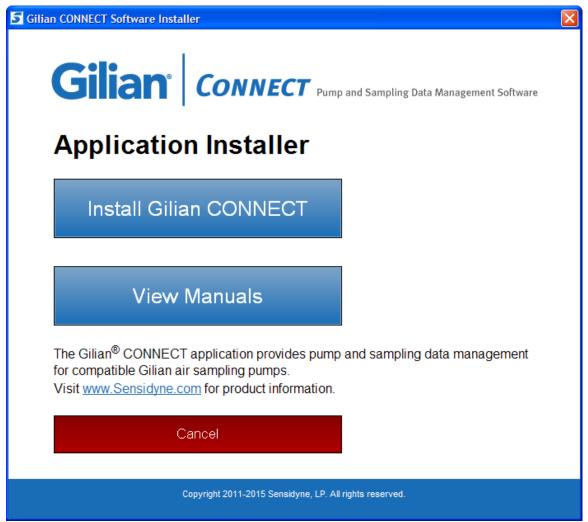


Figure 1 Software Installation Window

- Click "Install Gilian CONNECT" to begin the automated installation process.
  - If the computer has internet access, the latest version of CONNECT will be downloaded from our server.
  - If the computer does not have internet access, CONNECT will be installed directly from the CD.
- Click "View Manuals" to open the folder on the CD containing instruction manuals.
- When the installation has completed, it will automatically close the window.
- The application will automatically start running after installation. Please wait a minute or two for it to complete background tasks and open the application.



# Connecting to a pump

### **Docking Station Power**

Ensure the Dock is powered with the included power adapter and connected to the computer with the USB cable provided.

### **Select Communication Port**

To begin communicating with a pump, select the COM port corresponding to the USB connection. Ensure the desired COM port has a check-mark to indicate it is selected.

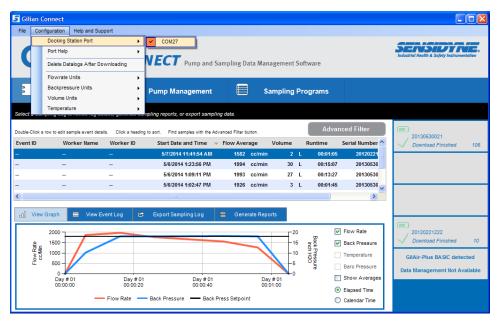


Figure 2 COM Port Selection

- Select your COM Port from the configuration menu at the top of the screen (usually the highest number).
- The port number is not related to the physical connector on your computer.
- The COM Port number is generally consistent for each docking station on each PC, but may be different for the same dock connected to a different PC.
- Disconnect any calibration device from the docking station. Calibration device connections override the pump's ability to communicate with the PC.



### **Automated Pump Registration**

Pumps must be registered into the Gilian CONNECT database on your computer before data can be downloaded. This process is automatic and only needs to be done once, but only one pump can be registered at a time. If you have a multistation dock and a pump does not appear in the list of connected pumps, follow these steps:

- Remove all other pumps
- Allow up to 30 seconds for the pump to be recognized
- When it appears in the pump status display in the app, it is ready
- Other pumps can now be connected to the dock

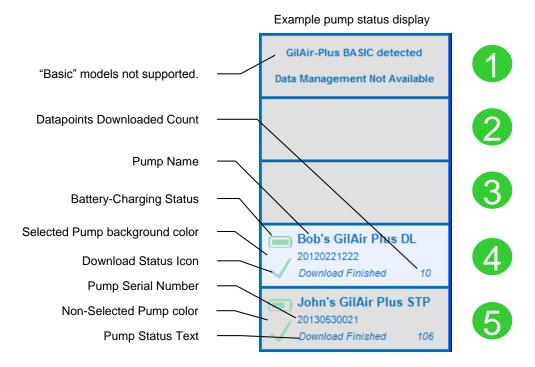


# **Pump Status Display**

When Gilian CONNECT is communicating with a pump, the pump status will be displayed in the list of connected pumps.

The connected-pumps list contains 5 status boxes that correspond to each position in a five-station dock. All five positions are displayed, regardless of the size of docking station actually connected.

To delete a pump's datalog, right-click the pump and select "Delete Datalog" from the pop-up menu.



- Pump Name: You can assign each pump a name under the Pump Management tab. Refer to the Pump Management section of the Users Manual for more information.
- Download Status: Indicates whether pump is currently or finished downloading, receiving or processing a command, or if a communication error has occurred.
- Battery-Charging Status: Even a fully-charged pump will undergo a top-off cycle to ensure battery health.
- "Basic" model pumps do not support Configuration or Data Management by Gilian Connect. Contact Sensidyne to discuss upgrade options.
- Datapoints Downloaded Count is not the number of datalog events.



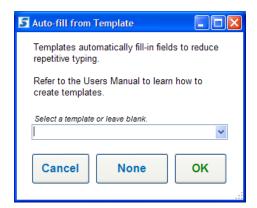
### **Editing Events**

To view and edit details about a sampling event, double-click its row in the Sample History list.

### **Selecting an Event Template**

Event templates are a powerful feature that can save you time by eliminating the need to type the same text over-and-over in similar sampling events.

Refer to **Creating Event Templates**, below, for instructions on how to create templates that can be selected in this step.



If the event has not been previously edited, then Gilian CONNECT will offer to automatically fill-in data fields from a saved template. Otherwise, CONNECT will skip this step.

If you would like to fill the event from a template, select the template from the dropdown, or start typing its name.

If you do not want to use a template, simply click "None" or leave the drop-down box empty and click "OK". Clicking "Cancel" will return you to the main window.

### **Entering Event Details**

The Event Details Editing window is where you can enter information such as Worker Name, Target Sampling Substance, and the quantity of substance sampled.

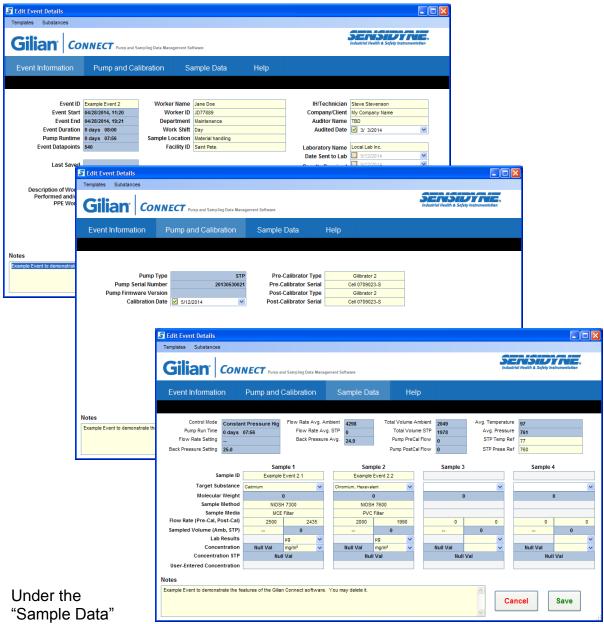
If you frequently run very similar samples, using the Event Templates will save a lot of typing and reduce typing mistakes.

# **Textbox background colors**

As data is entered, the background color of the boxes indicate the status of the boxes. The color codes are explained in the right-most tab, "Help".



### **Event Editing Window tabs**



tab, you may enter information for up to four target substances collected simultaneously by the pump during the same sampling event.

# **Target Substances**

Gilian CONNECT is provided with a list of commonly-sampled substances.
 Select the substance that was being sampled-for from the list. If the substance is not already in the list, right-click the Target Substance box and select "Edit Substances List".



### **Concentration Calculations**

Gilian CONNECT will automatically calculate substance concentrations under these conditions:

- 1. A Target Substance with a valid molecular weight must be selected
  - 1.1. Non-zero weight enables ppm (parts-per-million) and mg/m<sup>3</sup> calculations
  - 1.2. Weight of zero enables counts/m<sup>3</sup>, fibers/m<sup>3</sup> and mg/m<sup>3</sup> calculations
- 2. Lab results (mass or counts) must be entered and the corresponding units-ofmeasure must be selected.
- 3. Units-of-measure for the desired concentration results must be selected.
- 4. The Lab Results and Concentration units-of-measure must correspond.

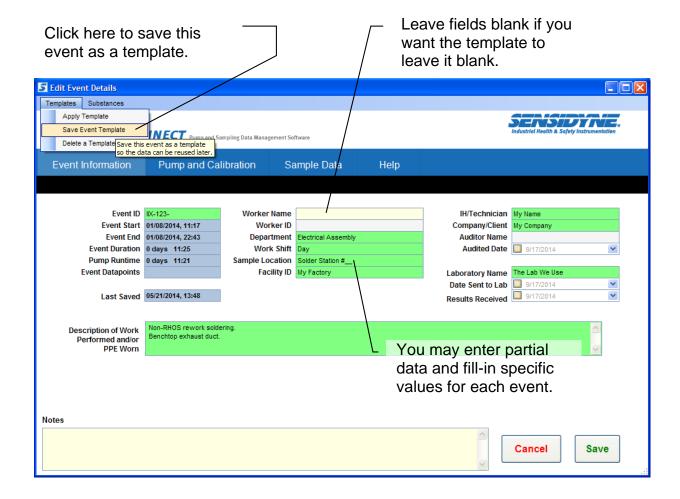


# **Creating Event Templates**

An Event Template can be created by simply opening the event you wish to replicate and then clicking "Save Template" from the Templates toolbar menu. There is no limit to the number of templates you may create.

### **Create an Event Template:**

- 1. Double-click a sampling event to open the Edit Event Details window.
- 2. Enter data into the fields you want the template to fill-in. These fields will be copied into other sampling events when you apply this template to them.
  - a. It is not necessary to save changes to the sampling event you have opened, when saving a template.
  - Some fields cannot be used by templates because the data is supplied by the pump, or because the field would not reasonably be replicated on multiple events (like "Lab Results").





### Save the Template

Create a new template by typing a new name.

Overwrite an existing template by selecting a name from the drop-down list.



- > TIP: Use Template Names that can be found by typing a few letters:
  - Poor: "Ammonia Sample Fred Jones 1"
  - o Good: "NH3FJ1 Ammonia Sample Fred Jones 1"
    - can be selected by typing "NH3FJ1"

### **Using Templates**

If the sampling event has not yet been saved, CONNECT will offer to use a template when you open the event.

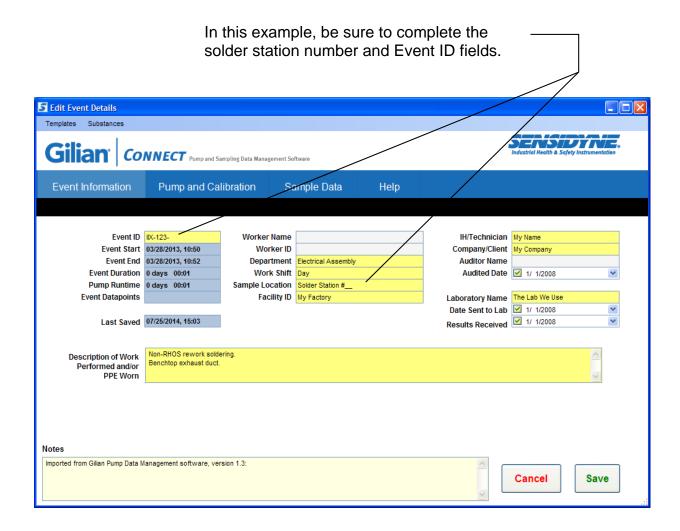
If the sampling event has already been saved, or is already opened in the Edit Event Details window, you can use a template by selecting "Apply Template" from the "Templates" toolbar menu.

Select a template from the drop-down list or begin typing the template name to find it in the list.



# **Verify Template-Filled Data**

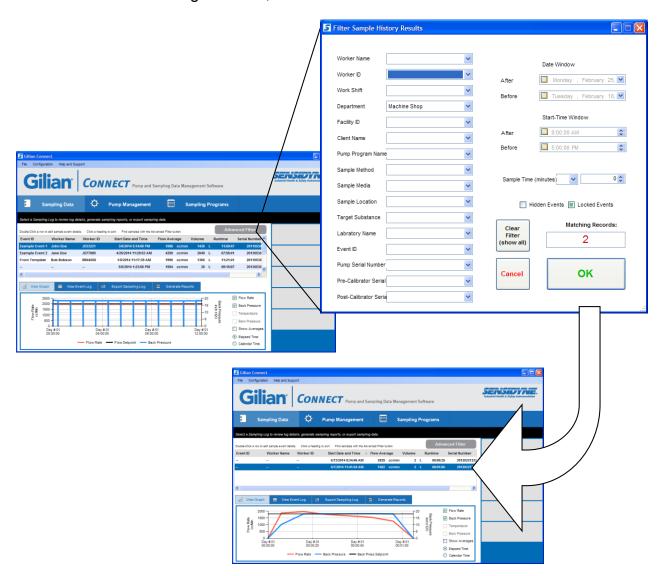
Data fields that were filled-in by the template will have a bright-yellow background. Be sure to verify that the values are correct for the specific event.





### **Finding Sample Events**

Gilian CONNECT provides a powerful search tool to find a specific event, or a group of related events. To get started, click on the "Advanced Filter" button.

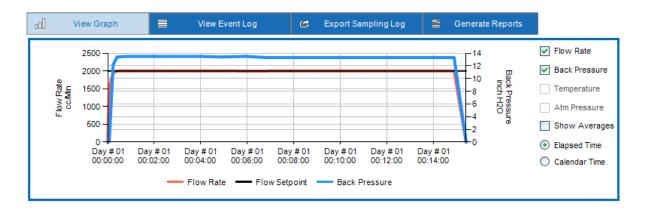


The Filter Window contains many drop-down boxes filled with values that exist in the data set. When you select a value, the number of sampling events that match your filter is updated.

- Select from the drop-down list
- Or click in the box and begin typing. The box will suggest matching values.



### **Runtime Graph**

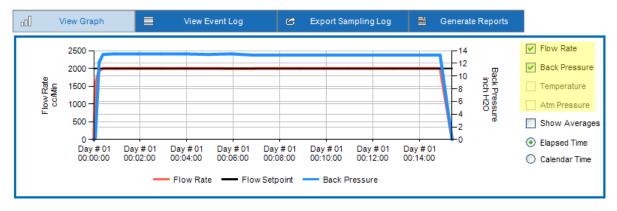


Details of the pumps operation during a sampling event is graphed for analysis at-a-glance. Select the "View Graph" tab in the main window.

### Selecting graphed data

**Only two** types of data may be displayed simultaneously. If two are already selected, de-select one or both to enable the other options. The data selected first is displayed on the left vertical axis, and the second is displayed on the right.

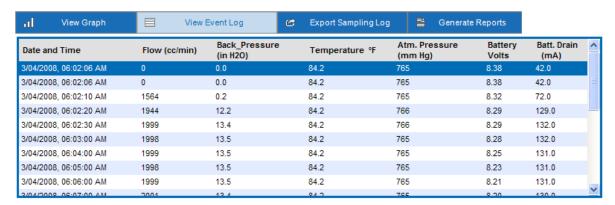
Temperature and Atmospheric Pressure data are only available for events recorded by STP pumps.



Select one or two types of data to display on the graph. If two are already selected, un-check one to enable the others.



### **View Event Log**



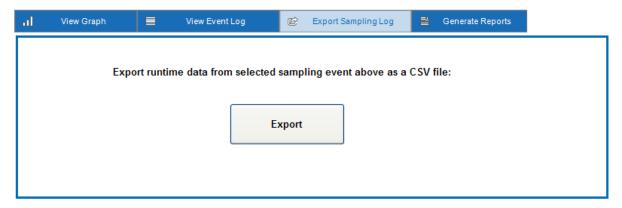
Every data point recorded by the pump during the sampling event can be viewed in the Event Log. This data may be exported in a CSV file, as explained below.

Refer to the Gilian CONNECT Users Manual for guidance on interpreting the data.

Temperature and Atmospheric Pressure data are only available for events recorded by STP pumps.



# **Exporting Data to Excel**

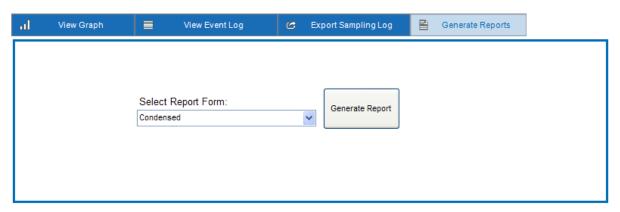


Data Points from the sampling event can be exported to a CSV file (Comma-Separated Values) to facilitate importing the data into Excel, or for viewing event details not displayed in Gilian CONNECT.

To view the data in Excel, **do not** double-click the .csv file. Instead, open Excel, then select "Open File" to import the file. Select "Tab" as the delimiter character.



### **Generating Reports**



Gilian CONNECT has powerful report generation capabilities. Reports are created in PDF format.

### **Select Report Form**

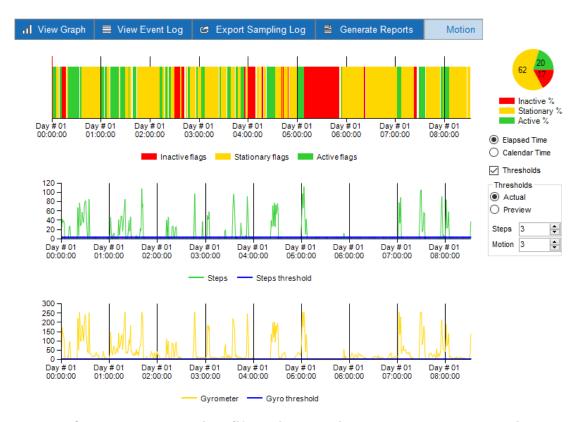
Several Report Forms are supplied with Gilian CONNECT. Select the desired report form from the dropdown list. Contact Sensidyne to inquire about having a custom report form created for you.

### **Batch Generation**

Reports can be generated simultaneously for multiple events. Simply select multiple events in the Sampling History list, then click the button to create reports.



### **Motion Graphs**



Details of the pump's motion (if equipped with a Bluetooth and Motion Module) during a sampling event is graphed for analysis at-a-glance. Select the "Motion" tab in the main window.

# **Color-coded Bar Graph and Pie Chart**

The bar graph shows the type of motion that the pump recorded at the time. The proportions of each of the 3 types of recorded motion are displayed in the pie chart and are the same numbers that are reported on the pump's event review screen. The user motion type is broken down into **ACTIVE** motion (walking), **PASSIVE** motion (wearing, but not walking), and **INACTIVE** motion (not wearing).

# **Adjusting Thresholds**

The thresholds used to calculate the motion types can be seen by ticking the "Thresholds" checkbox. Two additional line graphs are then displayed with the raw data and the threshold controls are shown. By changing the "Thresholds" type to "Preview", users may adjust thresholds using the numeric controls and view a preview of the data using the selected threshold setting. Data in the database and the pump settings will not be affected by changing the preview thresholds.



# **Interpreting Thresholds**

Default threshold settings provide distinction between a pump running on a desk and a pump worn by a stationary user. Threshold settings can be modified to differentiate between a resting and active user or to prevent unwanted change from **INACTIVE** to **STATIONARY** when a pump is placed on a moving surface (for example a car seat) or to ignore small movements within a work area, only changing state when the user is walking from one work area to another. For information on how the thresholds affect the motion types, please see the pump's user manual.



# **Pump Configuration Management**

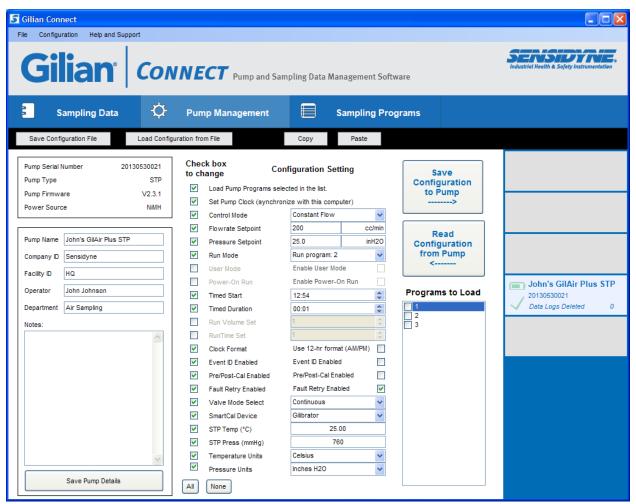
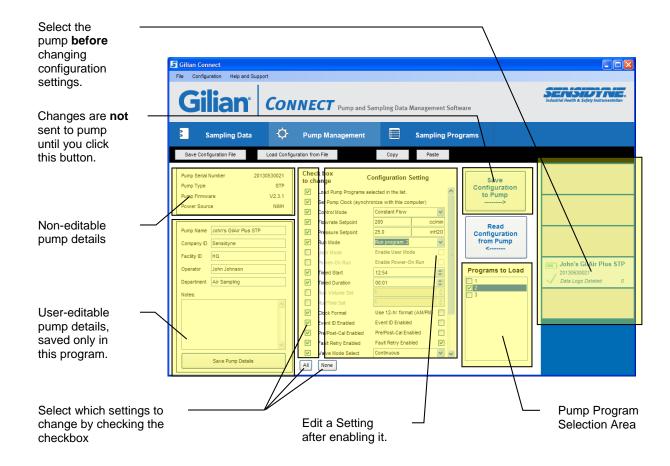


Figure 3 Pump Management View





# **Configure a Pump**

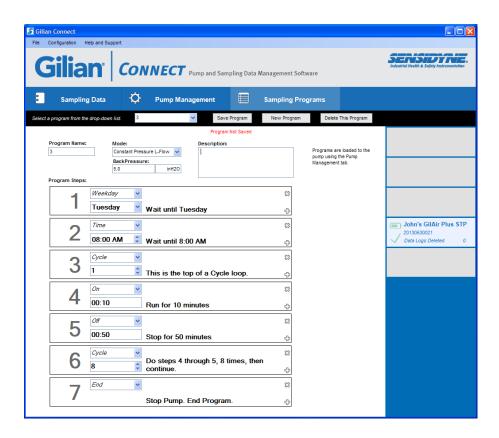
- 1. Select a pump on the right side of display by clicking the status box.
- 2. Enable the configuration setting you would like to change by clicking the corresponding check box.
- 3. Edit the value for the configuration setting.
- 4. Click the button "Save Configuration to Pump" to update the selected settings in the pump's memory.

**NOTE:** the button "Save Configuration to Pump" is disabled unless a valid pump is selected, and at least one configuration setting is enabled.



# **Pump Program Management**

# **Step Sequence**





### **Figure 4 Pump Program Creation**

- Add a step by clicking the "plus" icon in the lower right corner of the program step. This will insert a copy of the current step.
- Delete a step by clicking the "X" icon in the upper right corner of the program step.
- To load a program onto a pump
  - 1. Save the program with a unique name.
  - 2. Under the Pump Management tab, enable "Load Pump Programs..."
  - 3. Select the program from the "Programs to Load" list
  - 4. Click the "Save Config to Selected Pump" button.

**NOTE**: Remember to set the pump's RunMode to [program name] and press "Run" on the pump to start running the program. Refer to the pump's operating manual for more detailed instructions.

**NOTE**: Program steps do not turn the pump on or off unless they say-so. "Wait" steps simply delay until a point in time, then continue to the next step.



# **Troubleshooting**

Problem	Cause	Solution
I installed the program but now I can't find it.	The program is only available under the Windows user account in which it was installed.	Install the program under your regular user account.
	Windows 8	Go to the "Modern" view (AKA Tiles View) and start typing "Gilian CONNECT".
	Windows 7 or previous	Go to the Start Menu and look in the folder named "Sensidyne, LP"
None of the available COM ports seem to work, or no COM ports are available.	If the docking station USB was connected while the USB driver was being installed, the driver installation could not finish. This occurs even if the dock was not powered at the time.	Unplug the docking station USB cable and wait a few seconds. Reconnect docking station.
The sample history list is empty.	Perhaps you have deleted or hidden all events.	Click the "Advanced Filter" button. This will clear the filter and allow all downloaded events to be shown.
Some text looks blocky or pixilated	Windows XP uses a feature called "ClearType" to smooth the appearance of fonts, but it is not enabled by default.	Ask your system administrator or search the internet for instructions on how to enable ClearType on your computer.



Problem	Cause	Solution
	Calibration device connected to dock	Calibration devices can communicate directly with the pump through the docking station, however this overrides the ability of the pump to communicate to the PC. Disconnect the calibration device cable from the dock.
CONNECT doesn't see my pumps	Using new pumps or pumps that have not previously been used on this PC	Refer to the section in this guide entitled "Automated Pump Registration", page 7.
	Some pumps are downloading data	CONNECT does not detect new pump connections while data is being downloaded. When the datalog download is complete, the other pumps will be detected.
Cannot connect to external database	Database permissions not configured properly	Ensure Microsoft SQL Server is configured for mixed-mode authentication. Restart the database Windows service, or restart the PC. Ensure your Windows account has administrator permission on the database server.

# **Support**

For further assistance, please contact SoftwareSupport@Sensidyne.com



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