

## EMIT SIM Software Installation and User Manual



Made in the  
United States of America



### Description

EMIT SIM (Smart Ionization and Monitoring) is designed to monitor and record the activities of the EMIT line of Smart Products.

This list of products includes:

- Zero Volt Ionizer (Bench Top and Overhead)
- Zero Volt Monitor (Dual Operator and Workstation)
- Zero Volt Monitor Solo (Single Operator and Workstation)
- Dual Programmable Monitor
- Ultra Low Voltage Monitor

The software saves results utilizing two Access databases. One database contains the setup and calibration information and the second contains the detailed results of the monitoring process.

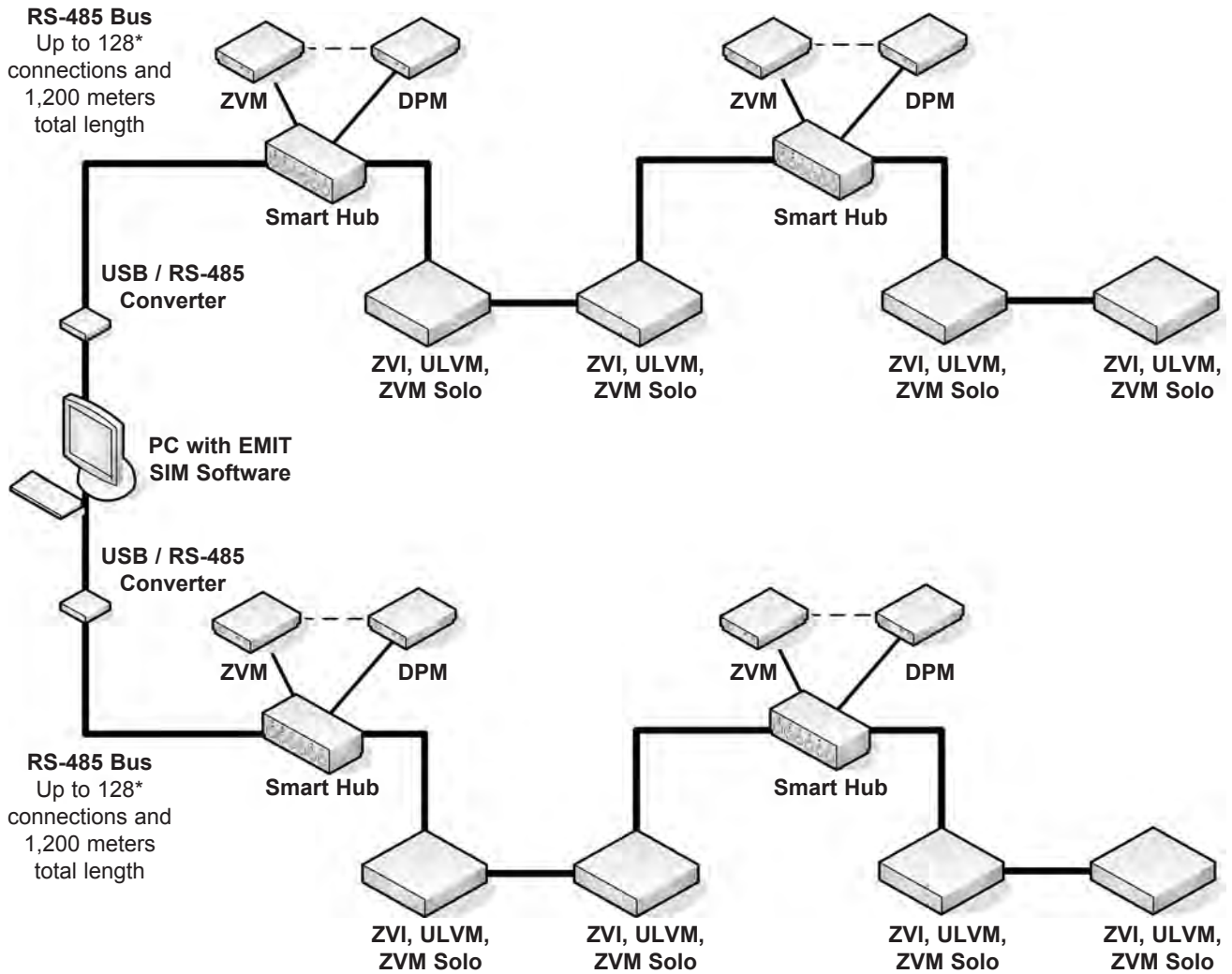
“Compliance verification records shall be established and maintained to provide evidence of conformity to the technical requirements.” (ANSI/ESD S20.20-2007 section 7.3)

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# System Overview

This diagram illustrates how all EMIT Smart Products connect to EMIT SIM.



\*The Smart Hub has a load value of 4. All other devices have a load value of 1.

## System Requirements

Windows XP, Windows Vista (32-bit or 64-bit), Windows 7 (32-bit or 64-bit)  
 User profile with full administrative rights  
 1GB available disk space  
 500MB RAM  
 2 available USB ports  
 Minimum display resolution (1024 x 768)  
 1 or more EMIT Smart Products

## Items and Accessories

Item	Description
50152	EMIT SIM Software, 50 Device Limit, Includes 1 Year Service
50153	EMIT SIM Service Agreement, 1 Year
50154	EMIT SIM Expansion License, 50 Devices
50155	USB / RS-485 Adapter
50156	RJ11 / RJ11 Cable Inverter
50157	RJ11 / RJ45 Cable Inverter

## Cabling Guidelines

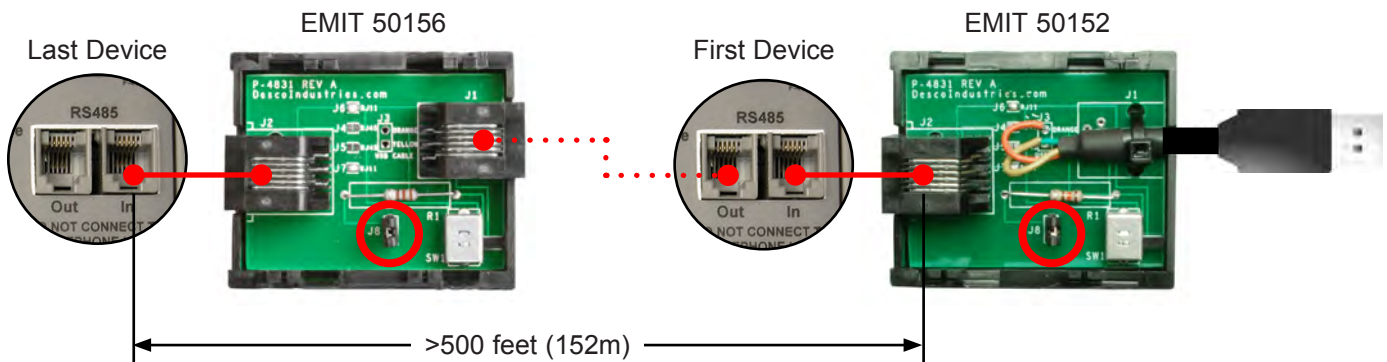
### Introduction

EMIT Smart Products utilize RS-485 communications to work with EMIT SIM. Cables must be made to connect your EMIT Smart Products to one another and your PC. EMIT does not provide this cable. The following information will guide you through the recommended cable specifications and connections needed to setup your EMIT SIM system.

### Specifications

While the RS-485 specification does not specify cabling characteristics, we follow the recommendations listed in the RS-422 specification. The RS-422 specification states that 24AWG twisted pair cable with a shunt capacitance of 16 pF per foot and 100 ohm characteristic impedance is required. We recommend category 5e (CAT5E) either STP (shielded) or UTP (unshielded). Shielded is preferred in cases where electrical noise might be present. Category 6 (CAT6) cable can also be used for this application.

The total cable length for one daisy-chain system shall not exceed 4,000 feet (1,219m). For cable lengths exceeding 500 feet (152m) in total length, the first and last devices on the line should be terminated using a 100 to 120 ohm resistor across the wire pair. The EMIT 50152, 50156 and 50157 adapters feature an embedded 120 ohm resistor. Open the enclosures for the 50152 adapter and one inverter and shunt their jumpers to apply the resistors to the cable line. Apply the inverter before the last device on the line (see below).

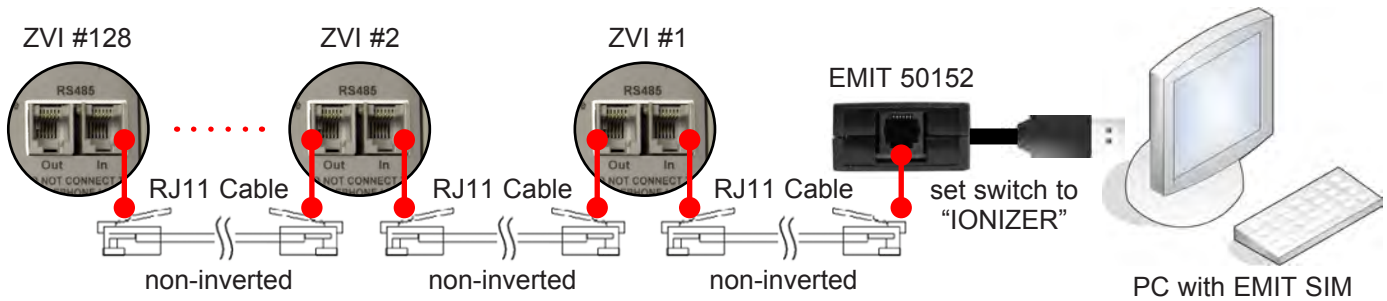


**NOTE:** EMIT recommends cabling like devices to one another (i.e. ZVM Solo to ZVM Solo, Zero Volt Ionizer to Zero Volt Ionizer, etc.) when possible. This results in a simpler setup and eliminates the need for any inverters. Contact EMIT technical support should your installation require daisy-chaining two different devices to one another.

## Cabling the Bench Top Zero Volt Ionizer

Build non-inverted cables with RJ11 terminations to connect your Bench Top Zero Volt Ionizers to EMIT SIM. Set the switch on the EMIT 50152 USB / RS-485 Adapter to "IONIZER." Up to 128 Bench Top Zero Volt Ionizers can be connected in series.

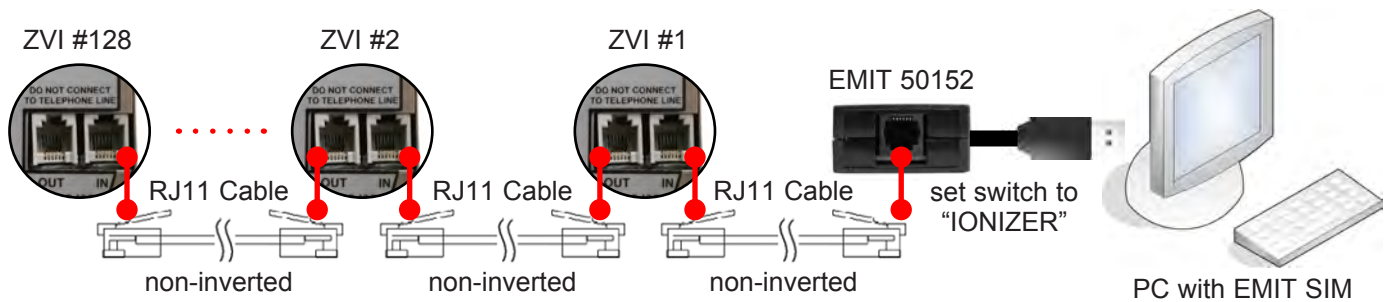
Refer to [TB-6533](#) for instructions on installing the Bench Top Zero Volt Ionizer to your workstation.



## Cabling the Overhead Zero Volt Ionizer

Build non-inverted cables with RJ11 terminations to connect your Overhead Zero Volt Ionizers to EMIT SIM. Set the switch on the EMIT 50152 USB / RS-485 Adapter to "IONIZER." Up to 128 Overhead Zero Volt Ionizers can be connected in series.

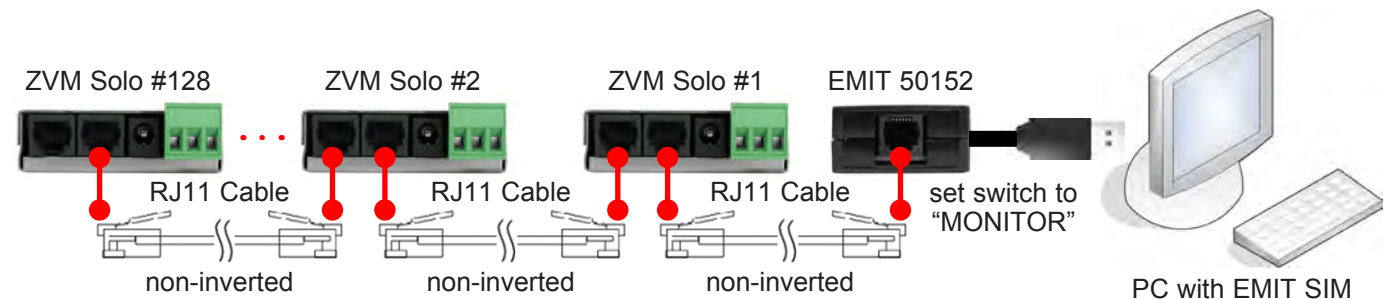
Refer to [TB-6534](#) for instructions on installing the Overhead Zero Volt Ionizer to your workstation.



## Cabling the Zero Volt Monitor Solo

Build non-inverted cables with RJ11 terminations to connect your ZVM Solos to EMIT SIM. Set the switch on the EMIT 50152 USB / RS-485 Adapter to "MONITOR." Up to 128 ZVM Solos can be connected in series.

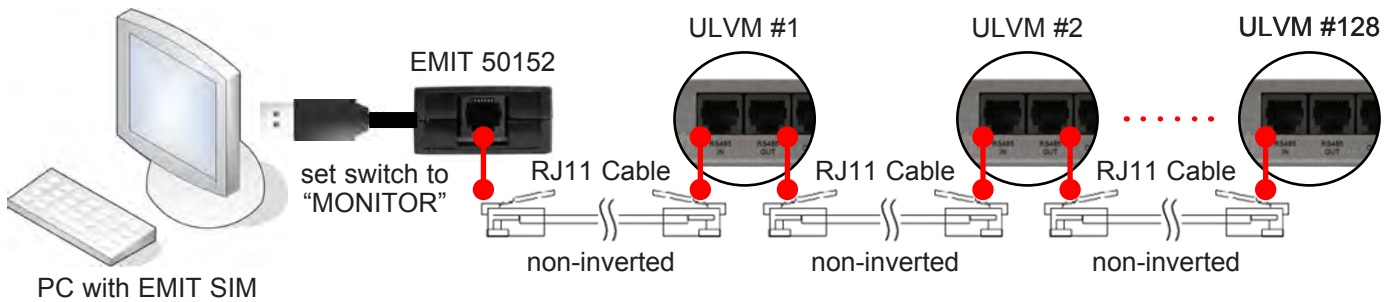
Refer to [TB-6576](#) for instructions on installing the ZVM Solo to your workstation.



## Cabling the Ultra Low Voltage Monitor

Build non-inverted cable with RJ11 terminations to connect your ULVMs to EMIT SIM. Set the switch on the EMIT 50152 USB / RS-485 Adapter to "MONITOR." Up to 128 ULVMs can be connected in series.

Refer to [TB-6556](#) for instructions on installing the ULVM to your workstation.



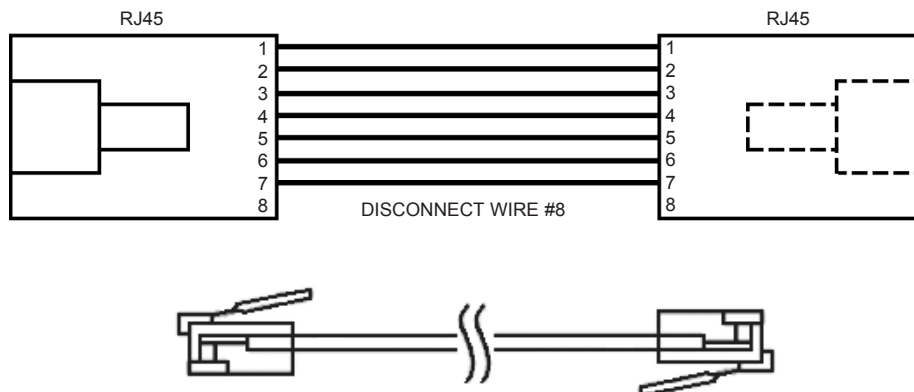
## Cabling the Zero Volt Monitor and Dual Programmable Monitor

The EMIT 50476 Smart Hub is required to monitor the Zero Volt Monitor (ZVM) and Dual Programmable Monitor (DPM). The Smart Hub stores data from these monitors and transmits it via RS-485 when polled by EMIT SIM. A combination of 16 Zero Volt Monitors and Dual Programmable Monitors can be connected per Smart Hub device, and up to 32 Smart Hubs can be connected in series. Each Smart Hub on a single RS-485 loop must have a unique address. The address for the Smart Hub is set by turning the two 10-position rotary switches located on the bottom of the unit. The address can be set to any value from 00 to 99. The address of the Smart Hub can be seen in the display window on the front of the Hub. Once the address switches are set, the Smart Hub must be powered off and back on for the new address to take effect.

The Smart Hub, Zero Volt Monitor and Dual Programmable Monitor require inverted cable with RJ45 terminations to work with EMIT SIM. See the installation diagram on the following page for more information.

**NOTE:** Be sure to disconnect wire #8 when building the cable between the Smart Hub and Dual Programmable Monitor. Follow the diagram below for proper cable configuration.

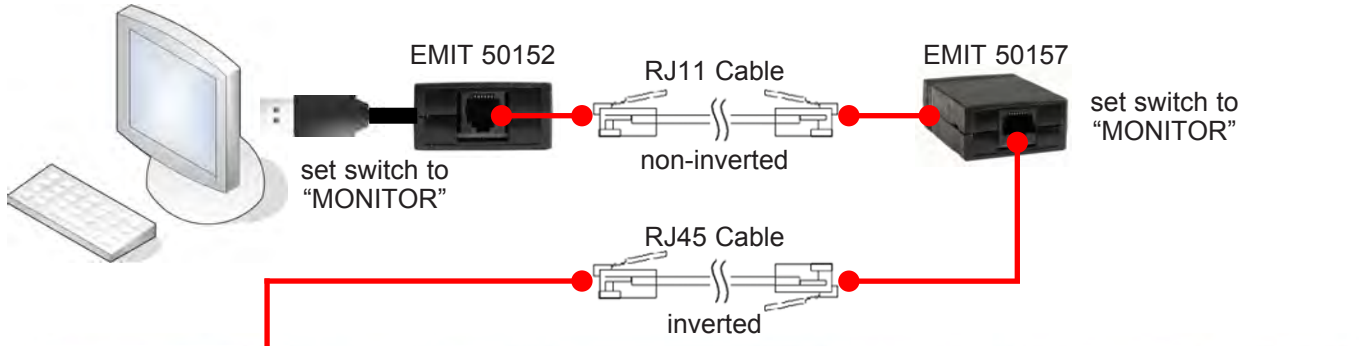
Dual Programmable Monitor Data Output Cable



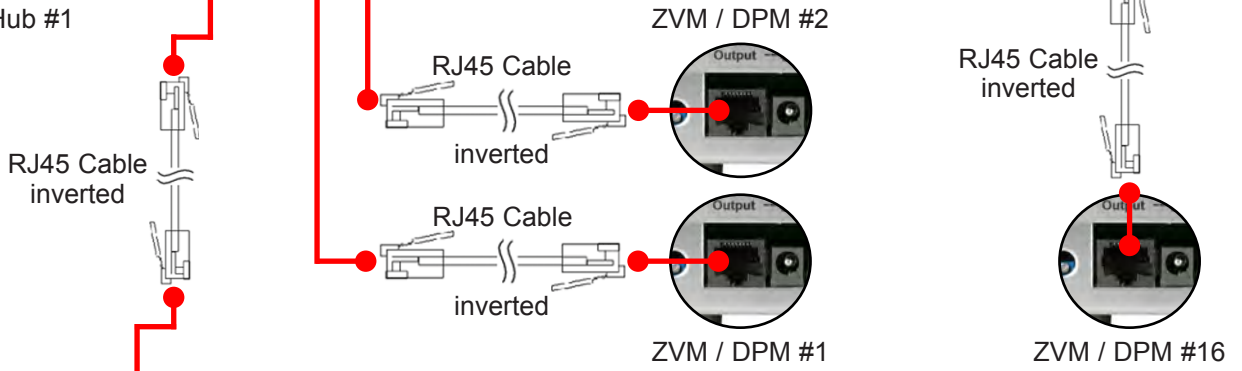
Refer to [TB-6514](#) for instructions on installing the Dual Programmable Monitor to your workstation.

Refer to [TB-6515](#) for instructions on installing the Zero Volt Monitor to your workstation.

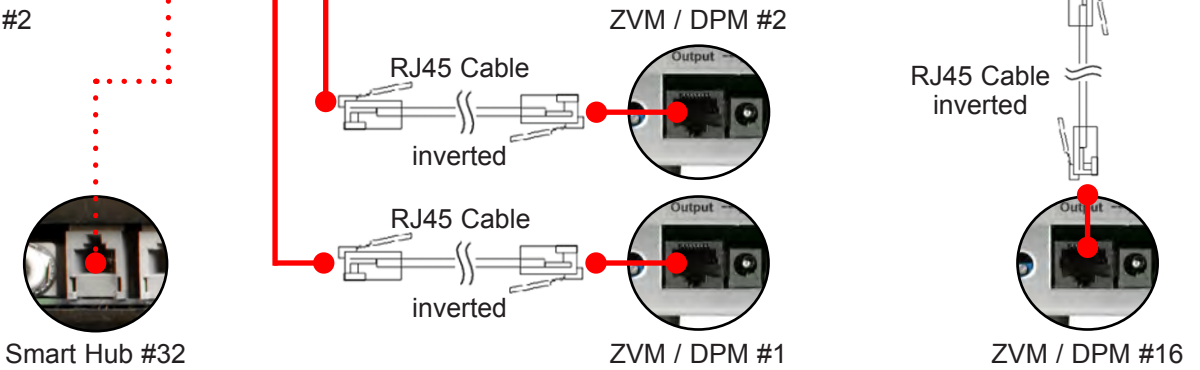
PC with EMIT SIM



Smart Hub #1



Smart Hub #2

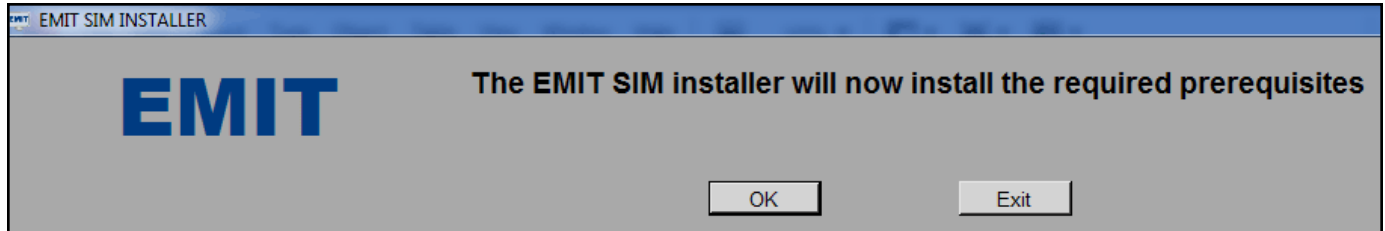


## Software Installation

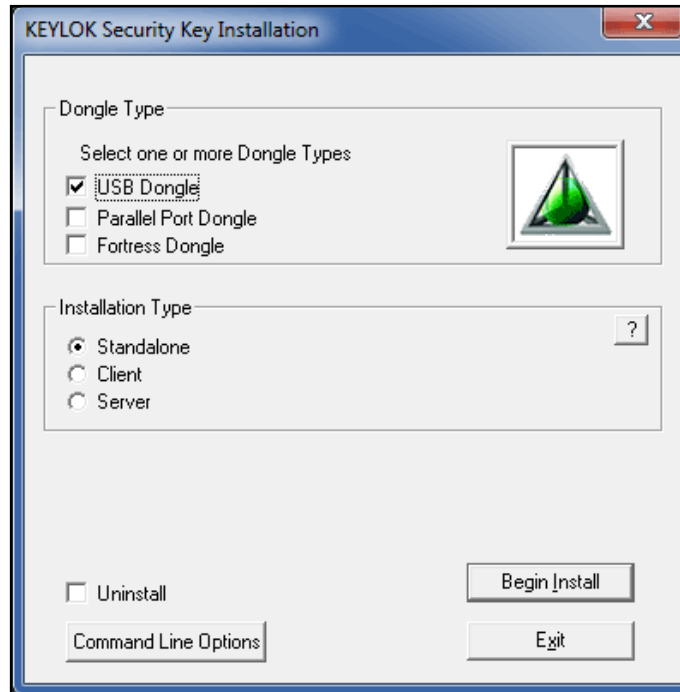
Before installing EMIT SIM, verify that your Windows profile has full administrative rights. EMIT SIM requires full read / write privileges in order to successfully install and operate.

Insert the EMIT SIM installation CD into your CD-ROM drive, then open the CD-ROM folder in Windows. Double-click the installation file that matches your machine's configuration: 32-bit or 64-bit.

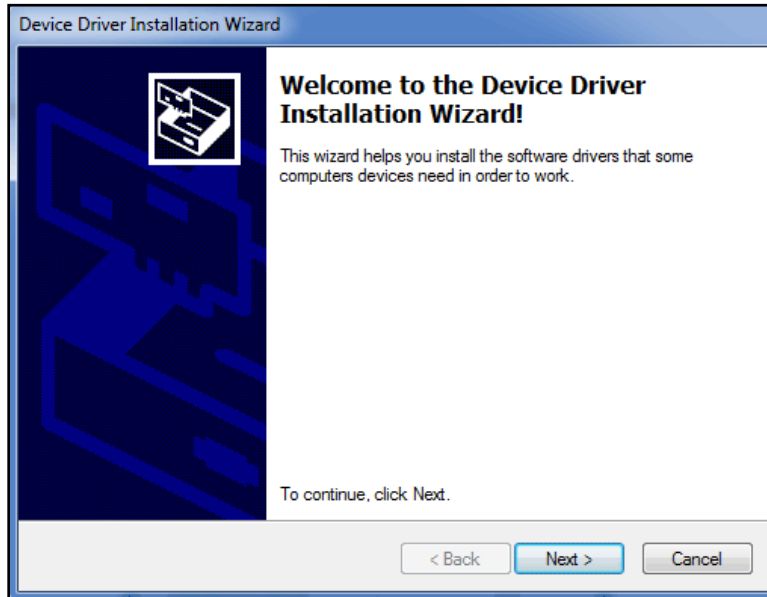
The setup process will automatically unzip the required files. The following screen will appear when the prerequisite installer starts. Click the 'OK' button.



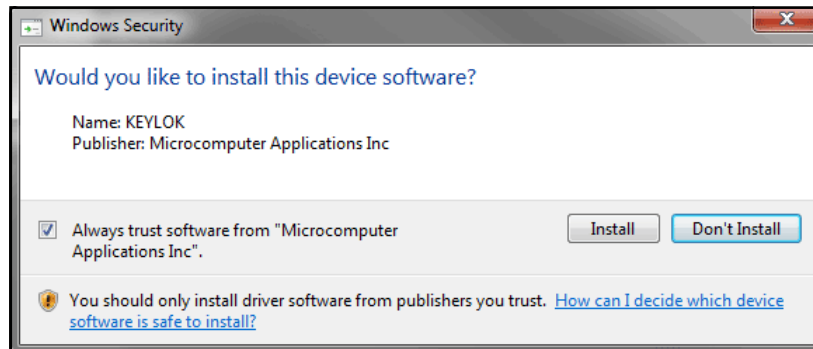
The KEYLOK Security Key Installation window will open. Check the "USB Dongle" box, select "Standalone", then click the "Begin Install" button.



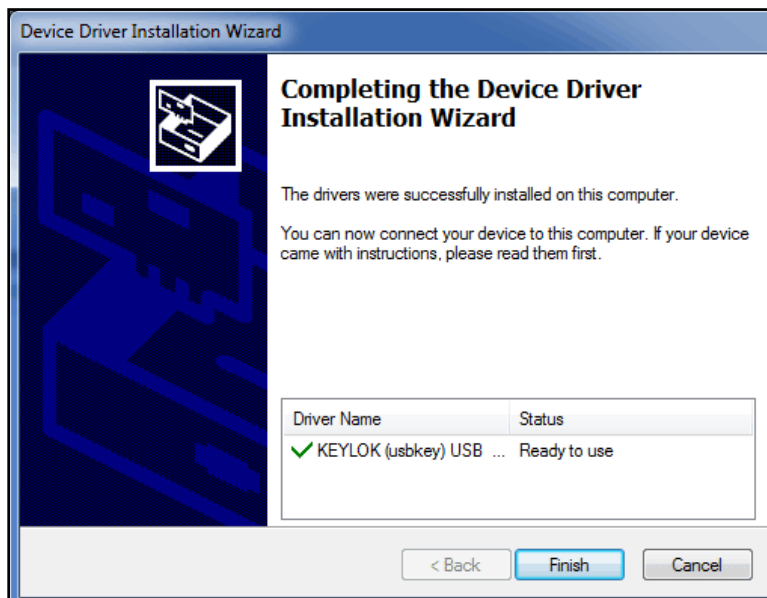
The Device Driver Installation Wizard will open. Click the "Next" button.



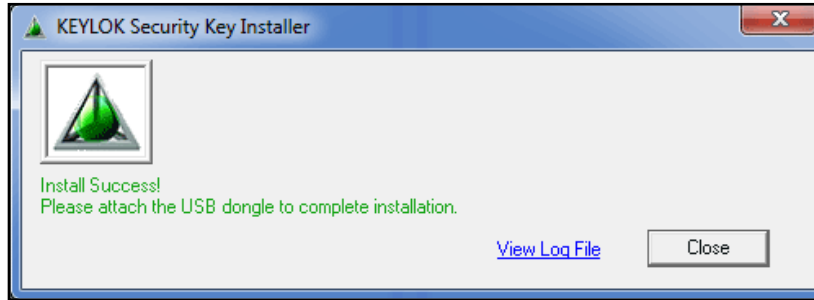
Click the "Install" button.



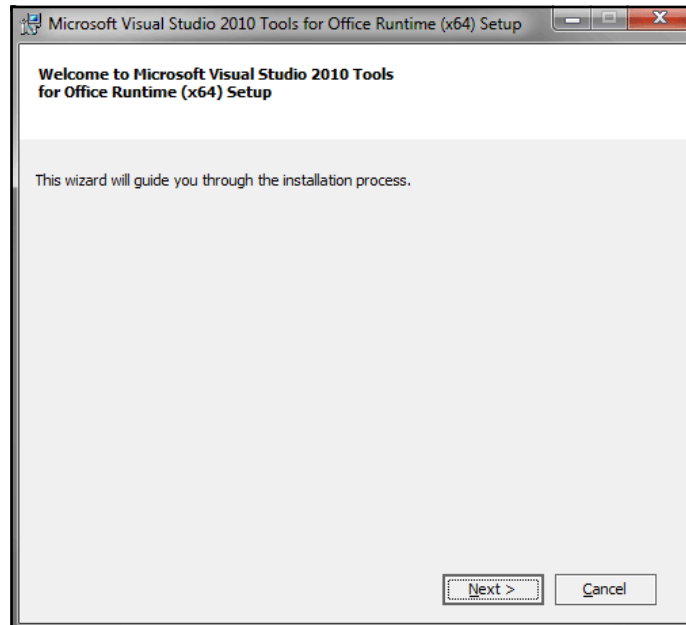
Click the "Finish" button.



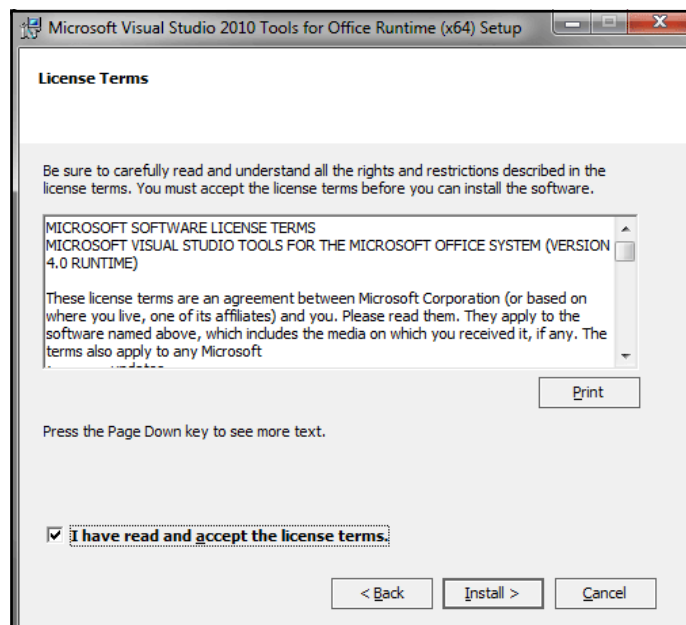
Insert the EMIT SIM license dongle into an available USB port, and allow Windows to confirm the installation of the driver. Click the “Close” button.



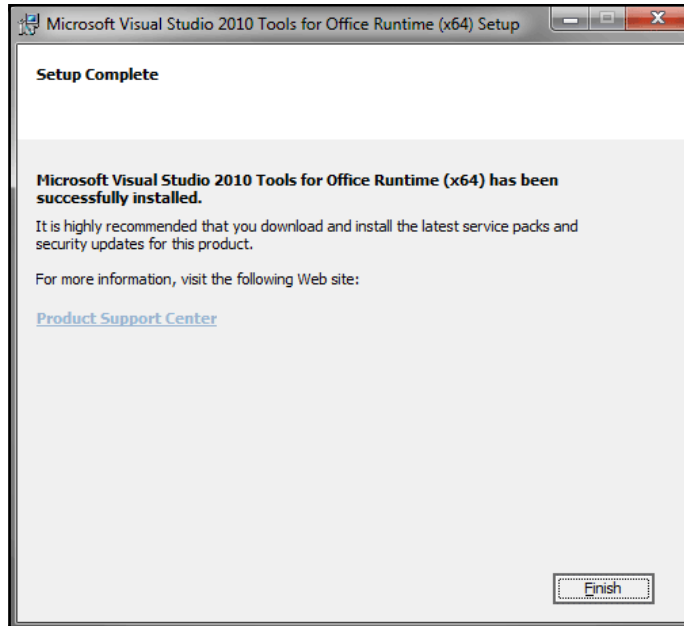
Click the “Next” button.



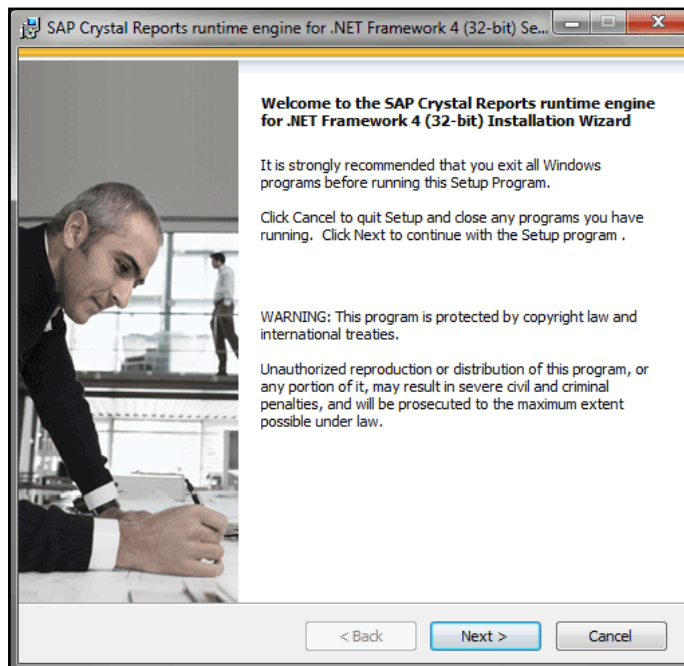
Check the box labeled, “I have read and accept the license terms” then click the “Install” button.



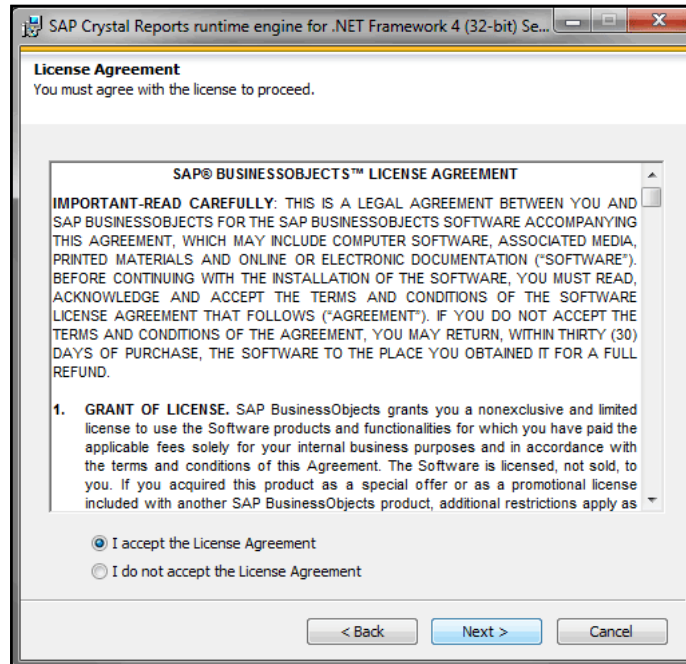
Click the "Finish" button.



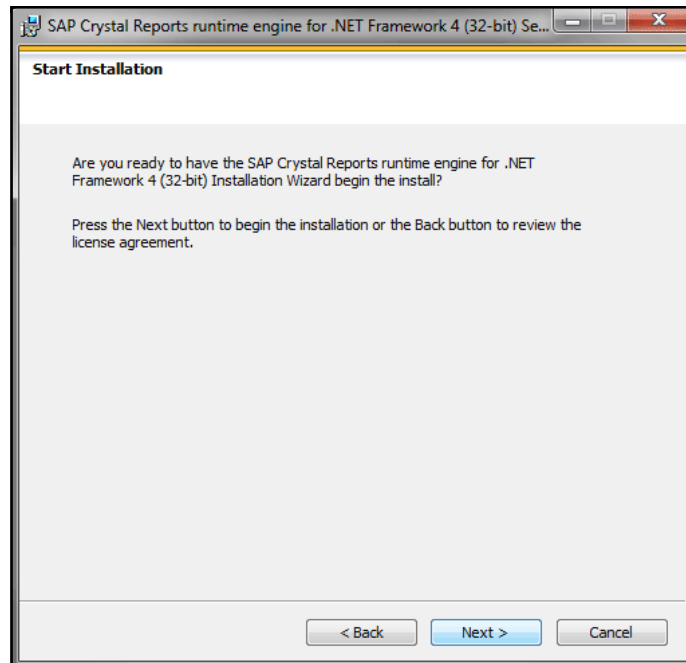
Click the "Next" button.



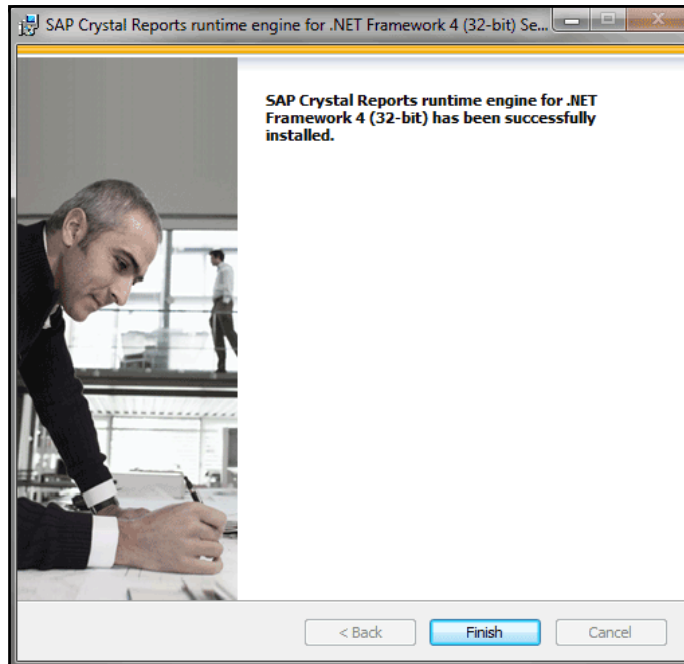
Mark the "I accept the License Agreement" bubble then click the "Next" button.



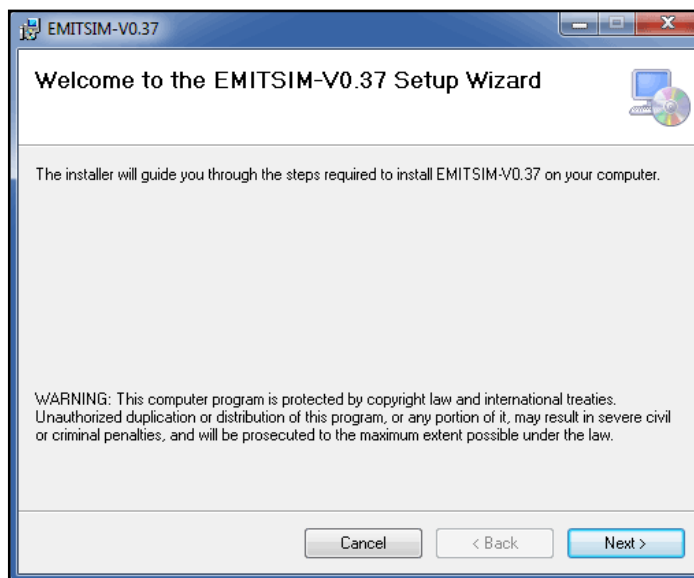
Click the "Next" button.



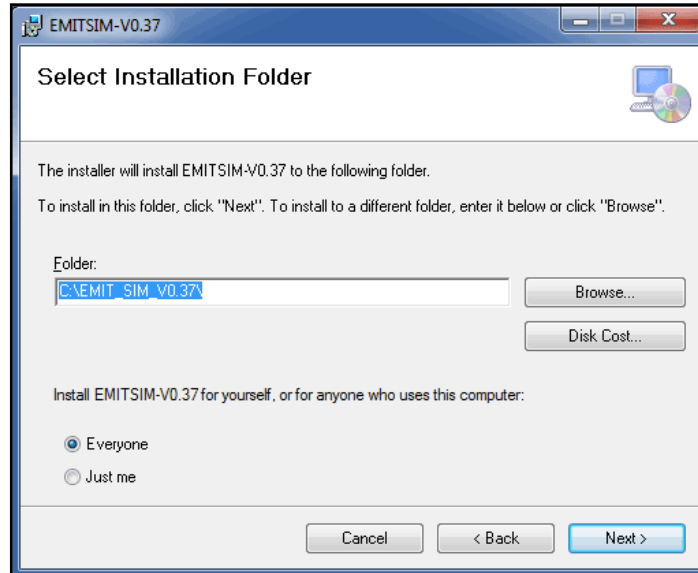
Click the "Finish" button.



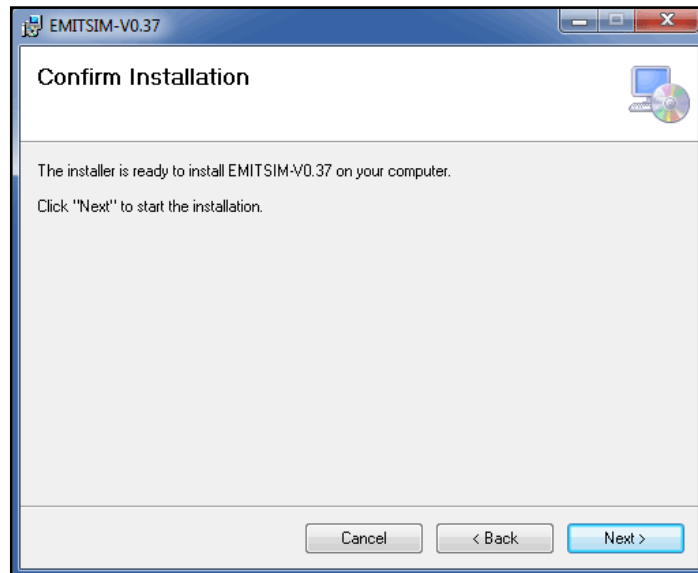
The EMIT SIM Installation Wizard will open. Click the "Next" button.



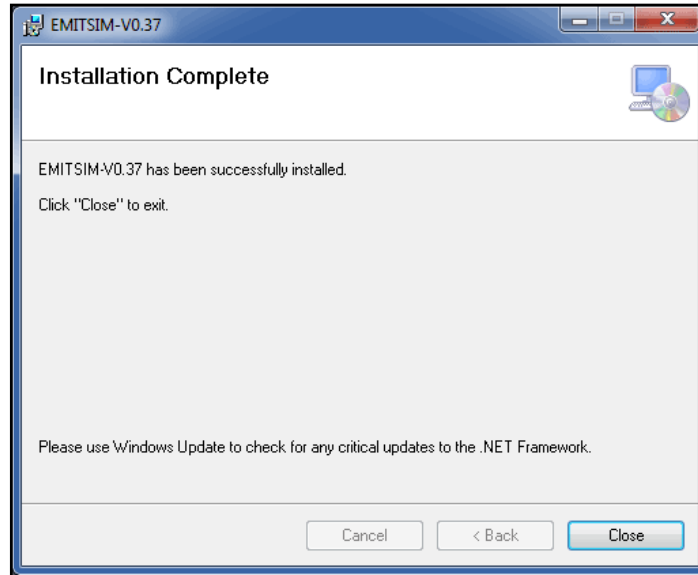
Select the installation folder then click the “Next” button.



Click the “Next” button.



Click the "Close" button to complete the installation process.



## Setup

### Introduction

Prior to starting the polling process, devices to be monitored must be defined and configured so the software knows where they are and their respective addresses. Devices to be monitored by EMIT SIM must have unique addresses to prevent two devices from responding to the same polling request. Depending on the type of devices in your factory, the following procedures should be followed for setting them up.

### Zero Volt Ionizer

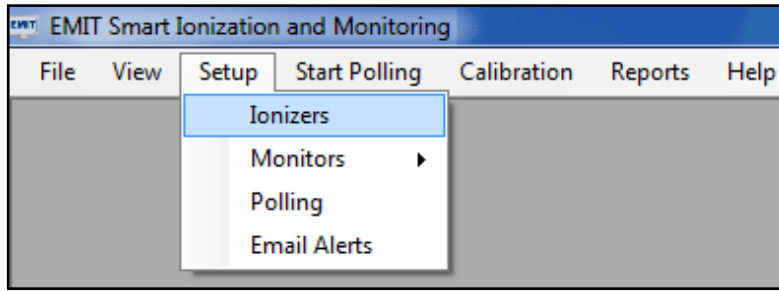
The following EMIT ionizers are compatible with EMIT SIM:

Item	Description
50663	Bench Top Zero Volt Ionizer, Stainless Steel, 120V
50670	Bench Top Zero Volt Ionizer, Stainless Steel, 220V
50690	Bench Top Zero Volt Ionizer, Powder Coat, 120V
50664	Overhead Zero Volt Ionizer, 2 Fan, 120V
50665	Overhead Zero Volt Ionizer, 3 Fan, 120V
50671	Overhead Zero Volt Ionizer, 2 Fan, 220V
50672	Overhead Zero Volt Ionizer, 3 Fan, 220V

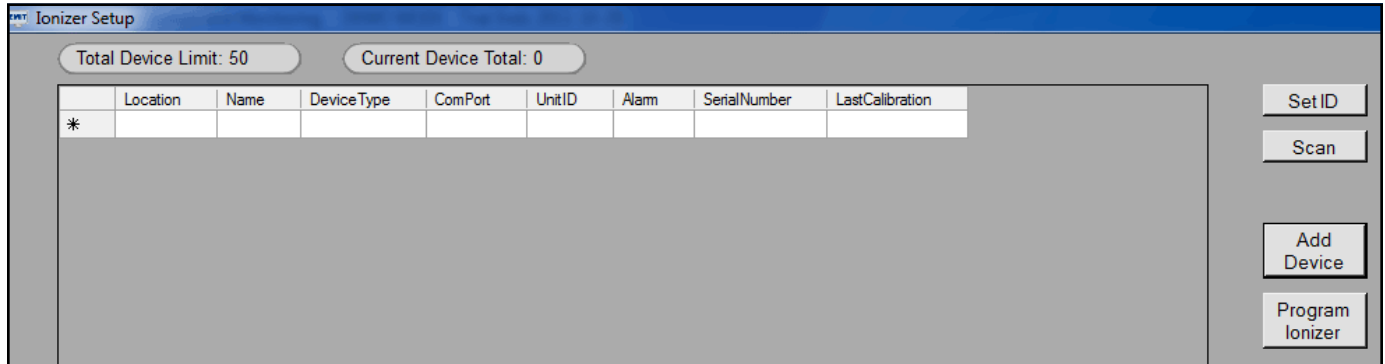
All ionizers must have a unique address that will be used by the software for monitoring. These addresses must be programmed at the customer site to insure they are unique before they can be configured. Ionizers address can be programmed using the EMIT SIM software. Overhead ionizer address can also be programmed through the front panel switches (if enabled). To program the ionizers using EMIT SIM use the following procedure.

Programming of the Ionizer can only be done when 1 ionizer is connected to the RS-485 connection. Multiple devices connected during programming will result in indeterminate results.

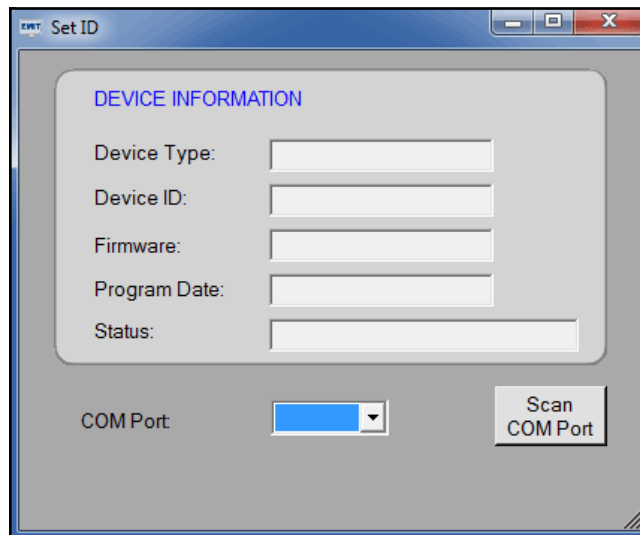
To program an ionizer, select Setup > Ionizers from the Main Menu.



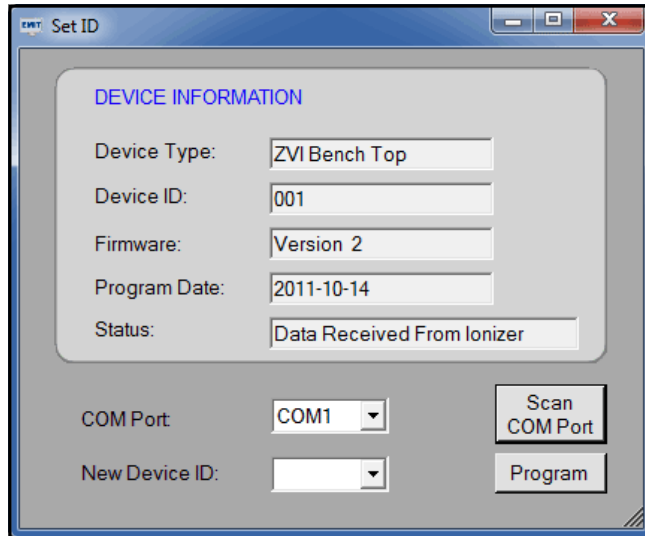
The following screen will appear:



Click the Set ID button from this menu, and the following screen will appear after the system reminds you only 1 device should be connected for setting the ID.



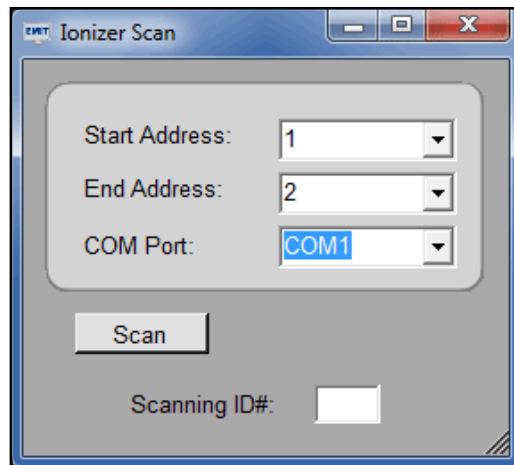
Select the COM Port you are using from the drop down menu and click Scan COM Port. The attached Ionizer will respond and the Device Information section of the screen will be filled with the current data for this ionizer as in the following screenshot. The software will indicate if no ionizer is found on the selected COM Port.



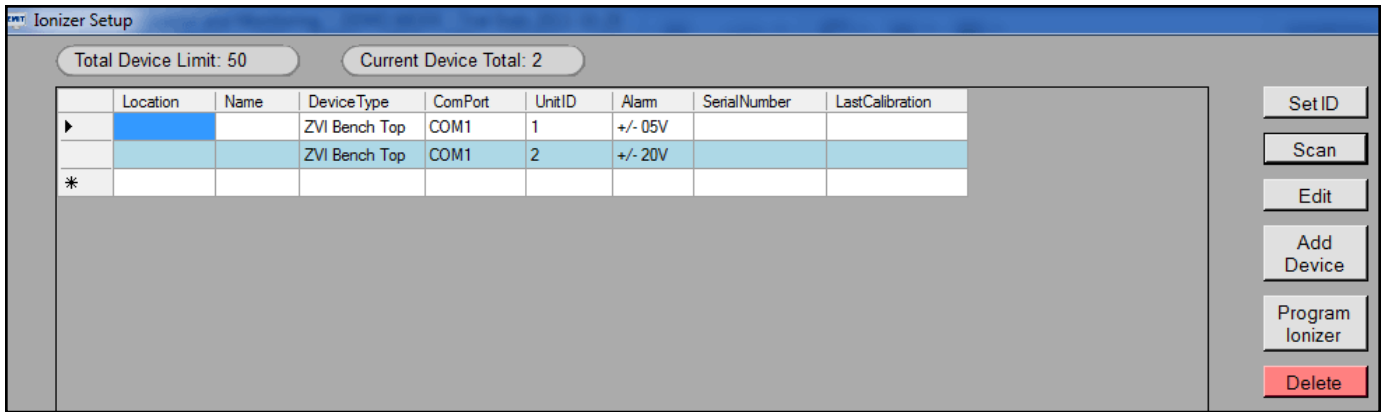
If the device does not respond, check that the unit is powered on and that the cable connection to the ionizer is correct. Once the ionizer has responded, set the New Device ID from the drop down menu, and click Program. The new ID will be programmed into the ionizer and the Status field will indicate “Programming Successful”. After programming, the device will automatically be read again, and the updated information will be displayed in the “Device Information” window. The ionizer is now programmed to the ID that will be used for monitoring the device. Label the unit with the programmed ID number to avoid getting it mixed with other units.

At this point, the ionizer is ready to connect to an RS-485 loop for monitoring. Additional programming of the ionizer to set other features can be done after the units have been installed if it is required.

Once all of the ionizers have been setup with unique ID’s, deployed and connected to the RS-485 loop, they can be identified by using the “Scan” function. From the Ionizer Setup screen, click the “Scan” button and the following screen will appear:

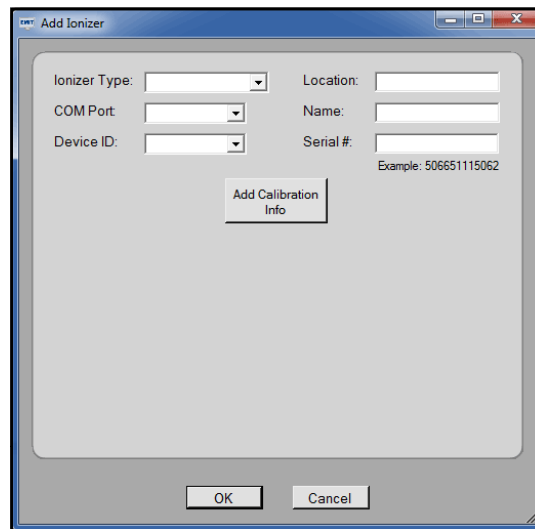


Select the COM port that your devices are connected to and the range you wish to scan and click “Scan”. The software will poll all of the ID’s in the range you selected and save responses from them. When the scan is completed, it will return to the previous screen and the ionizers that were found will be in the matrix at the top of the page as seen in the example below. If you wish to scan all address on all COM ports, simply click Scan without setting any of the fields. Scanning all addresses takes approximately 2 minutes per COM port.



Location and Name can now be edited by selecting a device and clicking the "Edit" button. To set the serial number and calibration information, go to the "Calibration / Log" sub menu from the main menu.

An alternate way to add ionizers to the polling list is to use the "Add Device" button. This button will bring up the following screen.



This screen will allow the user to enter all of the associated information for the ionizer, including the calibration information. When all of the data has been entered, the program will try to access the device. If it responds, it will be added to the setup table. If it does not respond, it will warn you that it did not respond, but will allow the device to be added anyway. When the device is added, if a duplicate device is found, the software will warn that there is a duplicate and ask if you want to remove the duplicate.

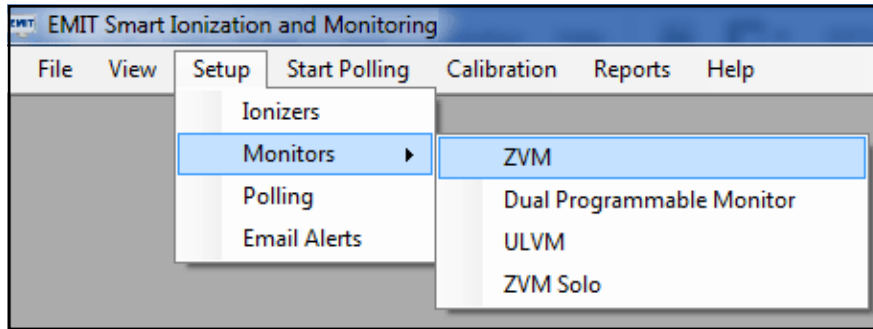
## Zero Volt Monitor and Dual Programmable Monitor

The following EMIT monitors are compatible with EMIT SIM:

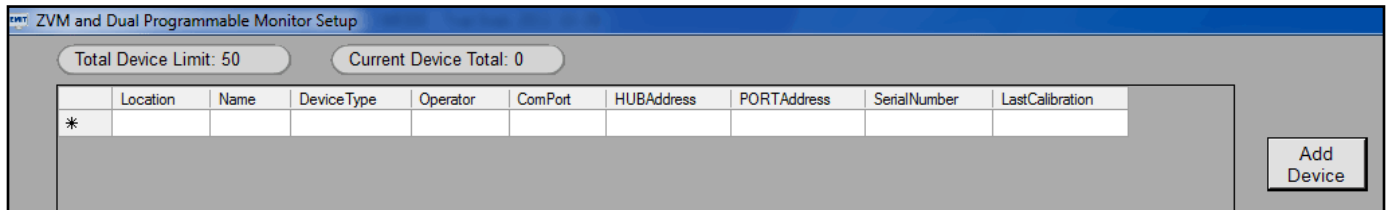
Item	Description
50528	Zero Volt Monitor, 19690 Wrist Straps, N. America
50537	Zero Volt Monitor, 19690 Wrist Straps, No Power Adapter
50538	Zero Volt Monitor, 09163 Wrist Straps, N. America
50515	Dual Programmable Monitor, No Power Adapter
50522	Dual Programmable Monitor, N. America

NOTE: The EMIT 50476 Smart Hub is required to monitor these devices. A combination of 16 Zero Volt Monitors and Dual Programmable Monitors can be connected per Smart Hub device. Each Smart Hub on an RS-485 loop must have a unique address. The address for the Smart Hub is set by turning the 2-10 position rotary switches located on the bottom of the unit. The address can be set to any value from 00 to 99. The address of the Smart Hub can be seen in the display window on the front of the Hub. Once the address switches are set, the Smart Hub must be powered off and back on for the new address to take effect.

The Zero Volt and Dual Programmable Monitors connected to the Smart Hub will need to be setup in the Setup > Monitor screen to allow for monitoring. From the home screen, select Setup > Monitors, and select the monitor type you wish to setup as shown below.



The Zero Volt Monitor and Dual Programmable Monitor Setup Screen will appear as below.



Click the "Add Device" button. The following window will appear.

The 'Add Monitor' dialog box contains the following fields and controls:

- Monitor Type: [Dropdown menu]
- COM Port: [Dropdown menu]
- HUB Address: [Dropdown menu]
- PORT Address: [Dropdown menu]
- Location: [Text input field]
- OP 1 Name: [Text input field]
- OP 2 Name: [Text input field]
- Serial #: [Text input field]
- Example: 505281115062
- Add Calibration Info: [Button]
- OK: [Button]
- Cancel: [Button]

Using this window, select the Monitor Type, COM Port, HUB Address and Port Address from the drop down menus and enter Operator Names and Locations. The HUB Address is the 2 digit address displayed on the front of the Smart Hub and the Port Address is the physical port number on the back of the Smart Hub that the monitor is plugged into. The Serial Number and the Calibration Information are optional and can be entered at this time or later through the Calibration > Log menu.

Once all of this information has been entered, click "OK". The software will attempt to connect to the device. If the monitor is found, it will add it and return to the setup table. If it cannot find the monitor, it will ask if you want to add it anyway. If a duplicate is found, the software will ask if you want to delete the duplicate.

Continue this process for each ZVM or Dual Programmable Monitor connected for monitoring.

Once the devices have all been entered, the Location and Name information can be edited by highlighting the device from the setup window and clicking the "Edit" button.

The "Edit Monitor" window seen below allows the user to change the Name and Location of each device. HUB and Port information cannot be edited. A device with an incorrect HUB or Port number must be deleted and re-added to the system. Use the "Delete" and "Add Device" buttons to update this information.

The 'Edit Monitor' dialog box contains the following fields and controls:

- Monitor Type: [Text input field] ZVM
- COM Port: [Text input field] COM1
- HUB Address: [Text input field] 0
- PORT Address: [Text input field] 1
- Location: [Text input field] Test Lab
- Operator Name: [Text input field] David Heam
- OK: [Button]
- Cancel: [Button]

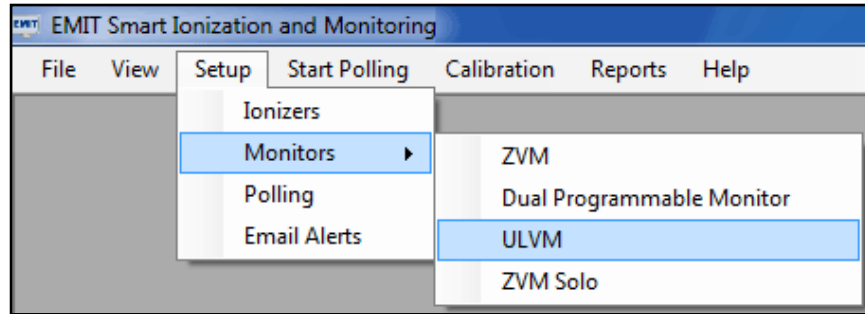
## Ultra Low Voltage Monitor

The following EMIT monitor is compatible with EMIT SIM:

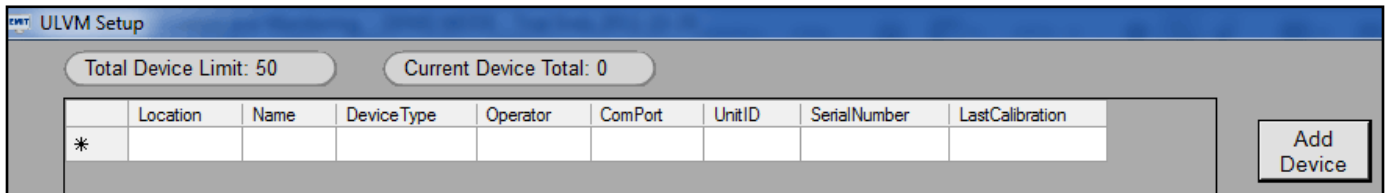
Item	Description
50580	Ultra Low Voltage Monitor, N. America

The Ultra Low Voltage Monitor (ULVM) connects directly to the RS-485 bus. All ULVM units have a unique serial number programmed into its memory. This serial number can be found on the silver label placed at the bottom of the unit.

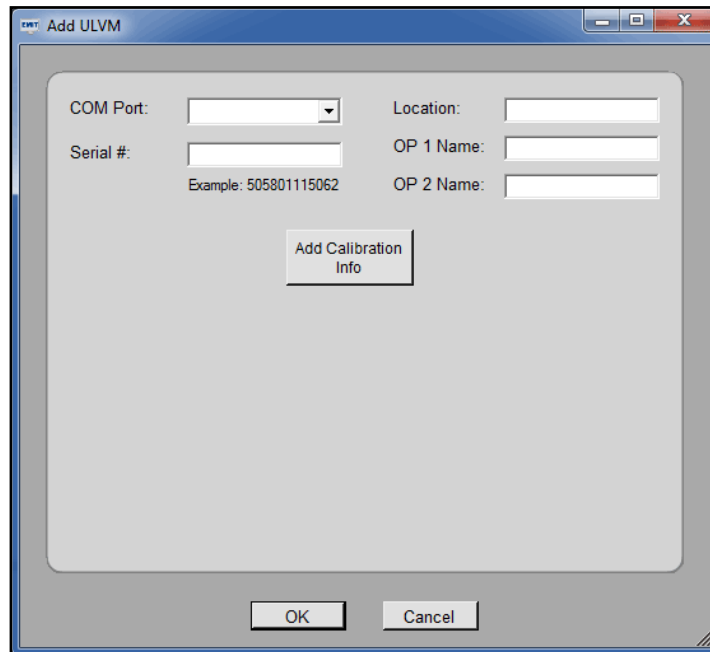
From the home screen, select Setup > Monitors > ULVM as shown below.



The ULVM Setup Screen will appear as below.



Click the "Add Device" button. The following window will appear.



Using this window, select the COM Port from the drop down menu and enter the Operator Names, Location and Serial Number. The serial number field must be populated since this is the identifier used to poll the device. Enter the 12 digit serial number found on the serial label located on the bottom of the monitor.

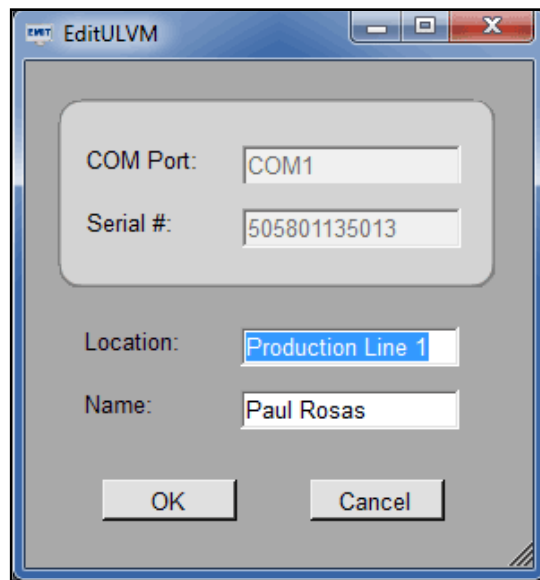
The Calibration Information is optional and can be entered at this time or later through the Calibration > Log menu.

Once all of this information has been entered, click “OK”. The software will attempt to connect to the device. If the monitor is found, it will add it and return to the setup table. If it cannot find the monitor, it will ask if you want to add it anyway. If a duplicate is found, the software will ask if you want to delete the duplicate.

Continue this process for each ULVM connected for monitoring.

Once the devices have all been entered, the Location and Name information can be edited by highlighting the device from the setup window and clicking the “Edit” button.

The “Edit ULVM” window seen below allows the user to change the Name and Location of each device. COM Port and Serial Number information cannot be edited. A device with an incorrect COM Port or Serial Number must be deleted and re-added to the system. Use the “Delete” and “Add Device” buttons to update this information.



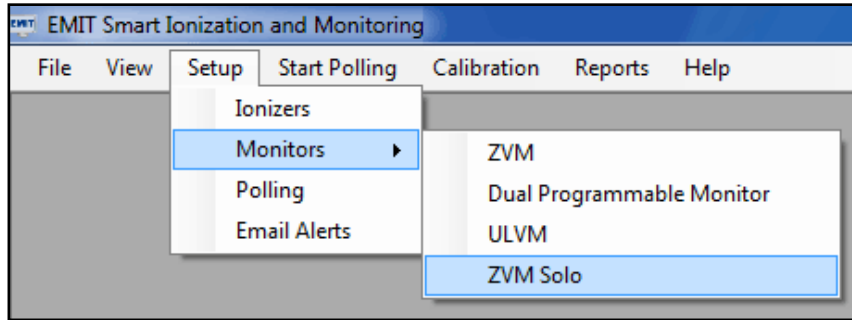
### Zero Volt Monitor Solo

The following EMIT monitors are compatible with EMIT SIM:

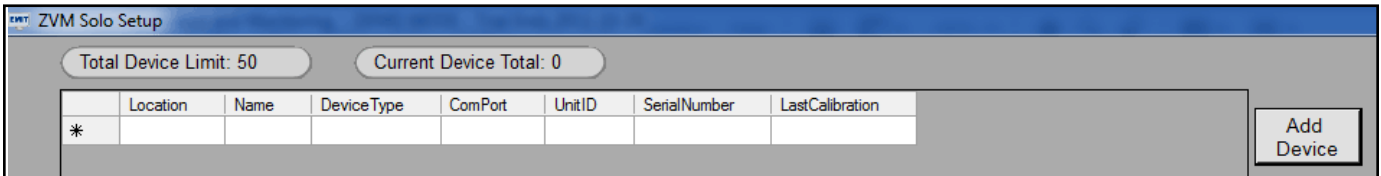
Item	Description
50576	Zero Volt Monitor Solo, N. America
50577	Zero Volt Monitor Solo, No Power Adapter

The Zero Volt Monitor Solo (ZVM Solo) connects directly to the RS-485 bus. All ZVM Solo units have a unique serial number programmed into its memory. This serial number can be found on the silver label placed at the bottom of the unit.

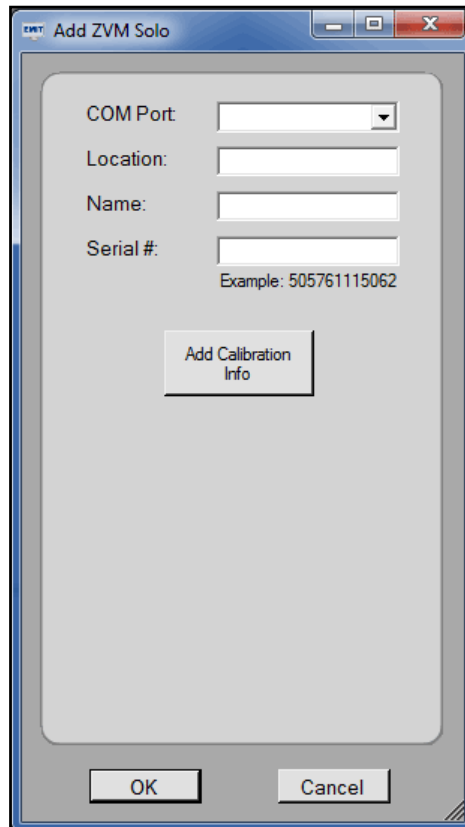
From the home screen, select Setup > Monitors > ZVM Solo as shown below.



The ZVM Solo Setup Screen will appear as below.



Click the "Add Device" button. The following window will appear.



Using this window, select the COM Port from the drop down menu and enter the Operator Name, Location and Serial Number. The serial number field must be populated since this is the identifier used to poll the device. Enter the 12 digit serial number found on the serial label located on the bottom of the monitor.

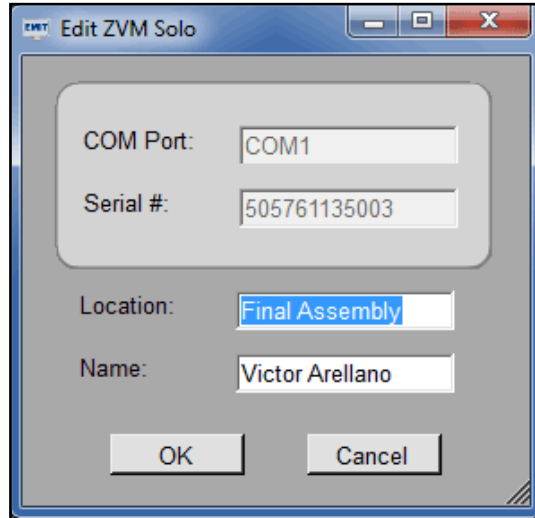
The Calibration Information is optional and can be entered at this time or later through the Calibration > Log menu.

Once all of this information has been entered, click "OK". The software will attempt to connect to the device. If the monitor is found, it will add it and return to the setup table. If it cannot find the monitor, it will ask if you want to add it anyway. If a duplicate is found, the software will ask if you want to delete the duplicate.

Continue this process for each ZVM Solo connected for monitoring.

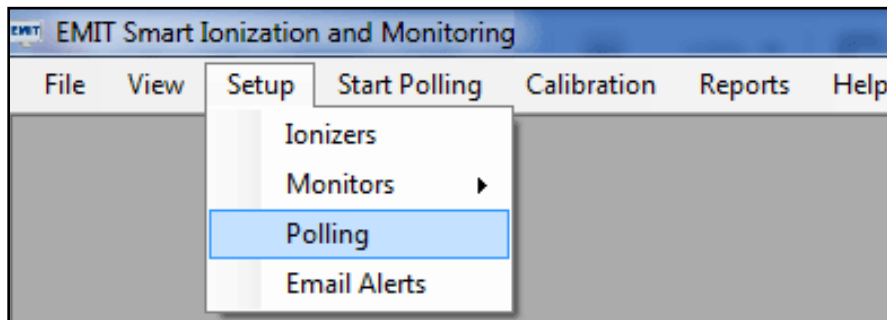
Once the devices have all been entered, the Location and Name information can be edited by highlighting the device from the setup window and clicking the “Edit” button.

The “Edit ZVM Solo” window seen below allows the user to change the Name and Location of each device. COM Port and Serial Number information cannot be edited. A device with an incorrect COM Port or Serial Number must be deleted and re-added to the system. Use the “Delete” and “Add Device” buttons to update this information.

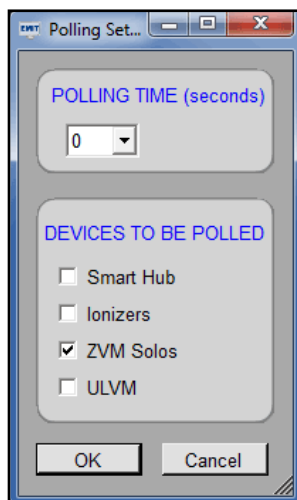


### Polling Setup

Once all of the ionizers and monitors are setup for monitoring, the polling information can be setup by selecting the Setup > Polling option from the main menu.



The following window will appear:

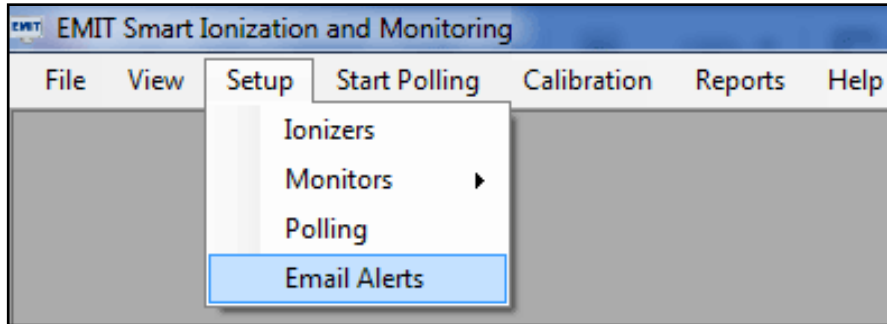


On this menu, select the types of devices you have configured and wish to poll, and from the drop down menu select a polling time. This is a "Wait Time" between polling cycles and can be set to any number desired from 0 to 900 seconds (15 minutes). If you prefer, you can enter your own number (in seconds) into this field rather than select one from the drop down menu. Once this information has been entered, click "OK" and you will return to the main menu.

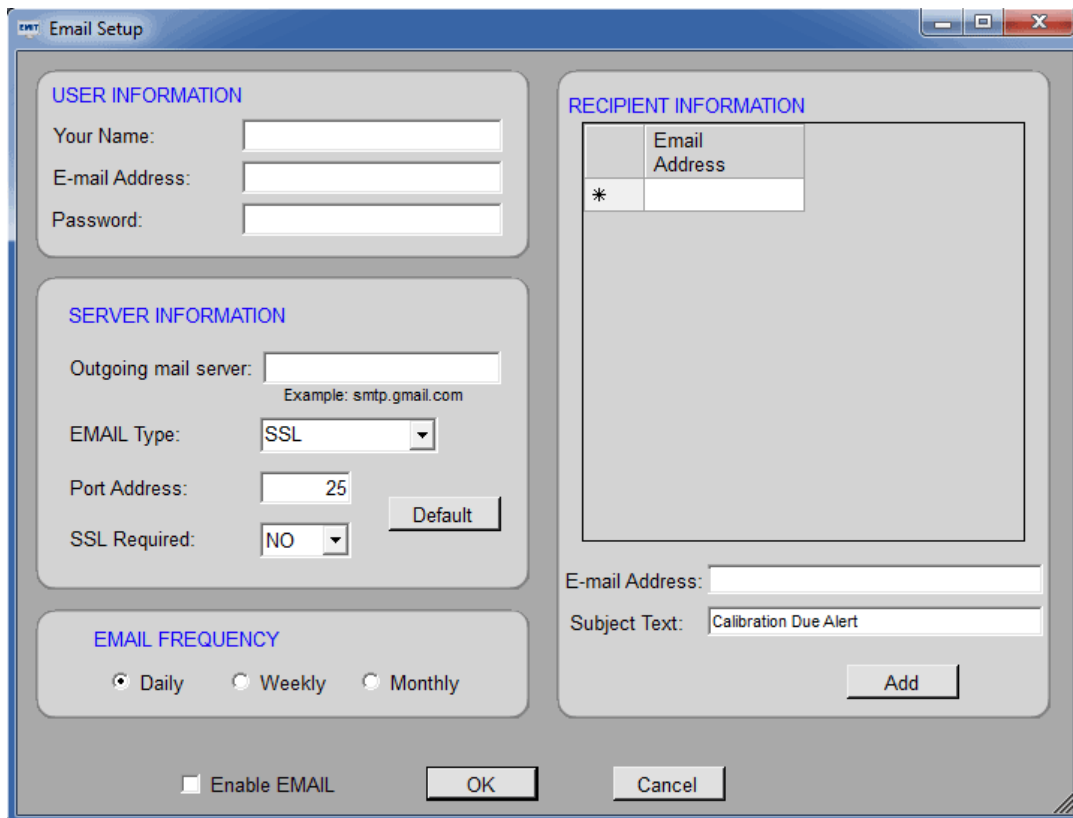
### E-mail Alert Setup

EMIT SIM contains an Email Alert feature tied into its calibration tracking module. When a device becomes due for calibration, EMIT SIM will send out an email alert to a list of people entered into this module.

To setup EMIT SIM for Email Alerts, select Setup > Email Alerts.



The Email Setup Setup Screen will appear as below.



Enter the information into the "User Information" and "Server Information" blocks on the left-side of the window. Then enter the "Recipient Information" by entering the E-mail address(s) where you want the notice to be sent and click "Add". The E-mail address will be added to the list. To change the subject line, simply type over the "Subject Text" field. To delete an E-mail address, simply select it by clicking in the left most box next to the email address and click on "Delete".

Once all information is populated, check the "Enable EMAIL" box to turn on email alerts and click "OK".

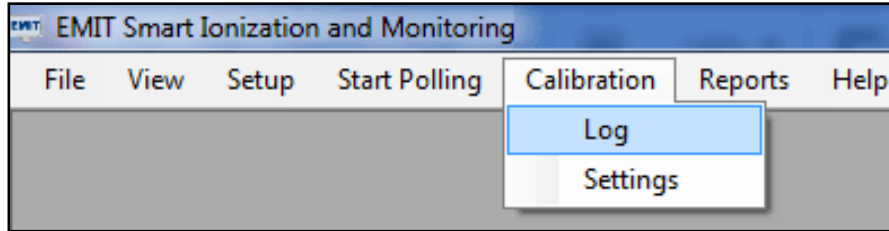
# Calibration Menu

## Introduction

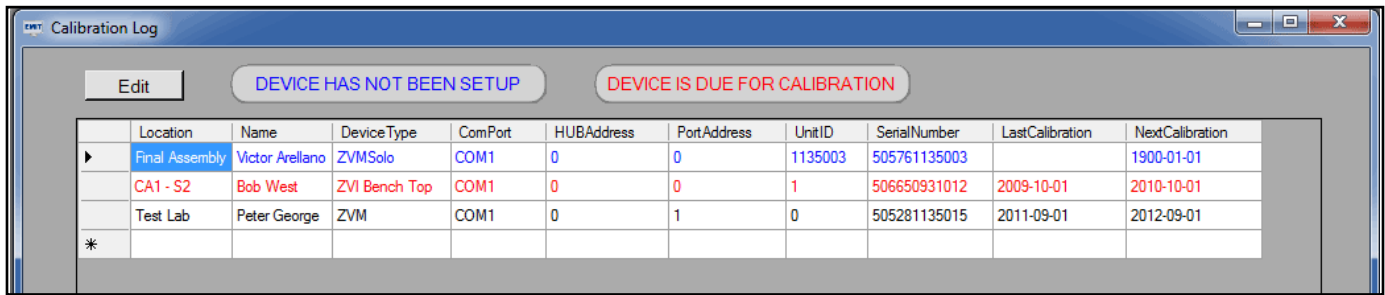
EMIT SIM has a built in function designed to track the calibration status of all devices by serial number and alert the user when a device is due for calibration.

## Calibration Log

From the home screen, select Calibration > Log as shown below.



The Calibration Log will open. This window will show a calibration snapshot of all of the devices you have configured, whether you have setup calibration for them or not. Below is an example of a Calibration Log populated with 3 devices.



The Calibration Log uses a color code to signify the status of each device.

Color	Description
Blue	Device has not been configured for calibration tracking
Red	Device is due for calibration
Black	Device is not due for calibration

To update a calibration record, highlight the device then click "Edit." The Edit Calibration Information window will appear.

EMIT Edit Calibration Information

**DEVICE INFORMATION**

Device Type:  Com Port:

Location:  Device ID:

Name:

Calibration Due Date:

Serial #:   
Example: 505801115062

Calibration Date:

Comments:   
Add comment to be included with calibration history

View History OK Cancel

October, 2011

Sun	Mon	Tue	Wed	Thu	Fri	Sat
25	26	27	28	29	30	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	1	2	3	4	5

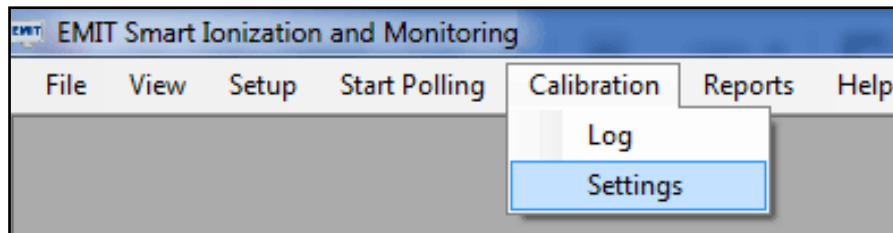
Today: 2011-10-25

Use this window to configure the calibration data for devices that have not been setup or resetting the calibration dates for devices that have been re-calibrated. When a calibration edit is made, a comment can be added to the database by typing it into the "Comments" field. This might be helpful to track calibration activity. The Edit Calibration Information window also allows the user to access the Calibration History by clicking on the "View History" button. This function displays all of the calibration history for the device selected.

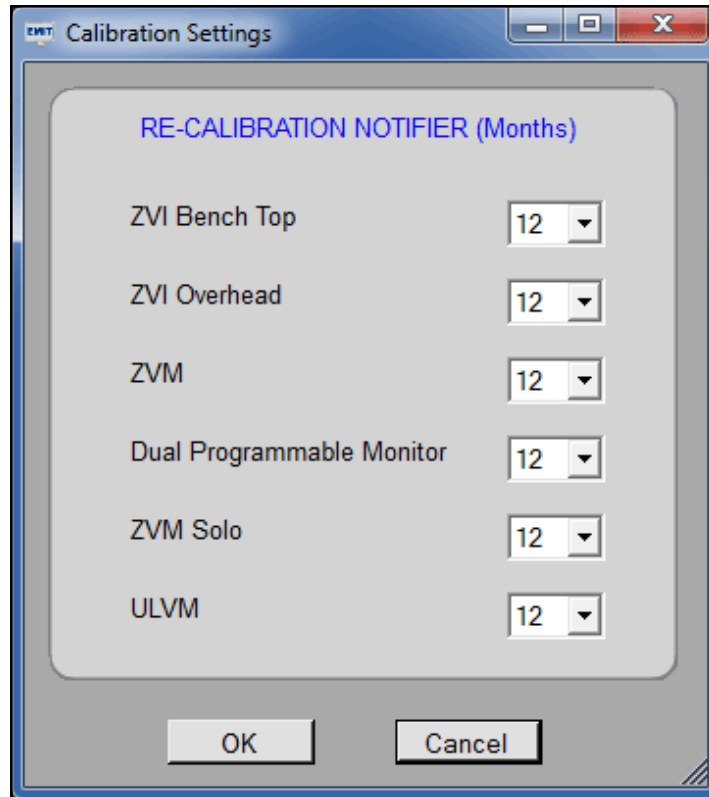
### Calibration Settings

Calibration management in EMIT SIM allows for each device type to have a different re-calibration period. For example, you may choose to re-calibrate ionizers every 6 months but monitors every 12 months. This feature is managed using the Calibration Settings menu.

From the home screen, select Calibration > Settings as shown below.



The Calibration Settings window will appear as below.



EMIT recommends annual re-calibration for all of its devices. This is default value in EMIT SIM (12 months). To change the re-calibration period for a device type, simply select the number of months from the drop down menu and click "OK".

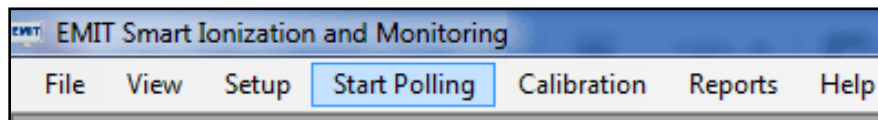
## Polling

### Introduction

Use the EMIT SIM Polling Screen to begin monitoring and recording the activity of all setup devices. This screen must remain open in order to poll your devices. Polling continues when the screen is minimized, as well. Closing this screen pauses all polling activity. The following section will describe all of the functions embedded within the Polling Screen.

### Using the Poll Screen

From the home screen, select Start Polling as shown below.



The software will read through the devices you have configured, organize them in the polling database and start polling after the selected "Polling Time" has expired.

The main Polling Screen will appear as below.

The screenshot shows a software window titled "Current Status" with a "FAULT ACTIVITY" section. The table below is empty, indicating no faults are currently present.

	Location	Name	DeviceType	UnitID	Operator	Condition	DateStamp	TimeStamp	Duration
*									

On the right side, there is a "MONITORED DEVICES" panel with buttons for: Ionizers, ZVM, Dual Programmable Monitor, ZVM Solo, ULVM, Faults, and No Devices Due for Calibration. A note states: "Buttons Respond at End of Polling Cycle".

At the bottom, there are controls for: Fault Period (Current), Number of Monitored Devices (1), Approximate Cycle Time (seconds) (1), and Current Activity (empty). A progress bar is shown below the cycle time.

The EMIT logo and "DescoEMIT.com" are visible in the bottom right corner.

The default configuration, shown above, shows the current failing devices in the table. If no faults are found, the table will be empty, as seen above. If a fault occurs at a device, the incident will appear at the top of the table in red font. It will remain on the table until the fault is corrected.

At the bottom of the screen, the Number of Devices Monitored, Approximate Cycle Time, Current Activity and Fault Period are shown. Use the Fault Period drop-down menu to select the fault data that you would like to display.

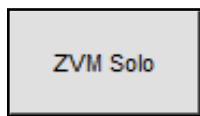
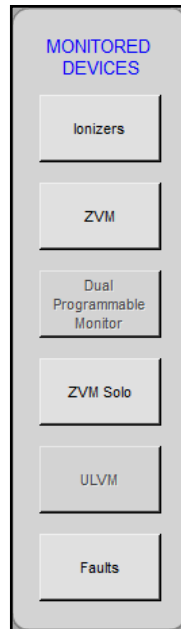
This screenshot shows the same interface as above but with updated values:

- Fault Period: Current
- Number of Monitored Devices: 3
- Approximate Cycle Time (seconds): 6
- Current Activity: Polling Smart Hubs

The progress bar now shows 6 out of 6 segments filled with blue.

Located on the right-hand margin is a set of buttons for each device type that can be monitored by EMIT SIM. A grayed-out and disabled button indicates that either the device type was not configured in the Device Setup menu or was not selected in the Polling Setup menu. If the button is not grayed-out, it may be clicked to view the current activity of the selected device.

Clicking these buttons show both PASS and FAIL activity for the selected device type.



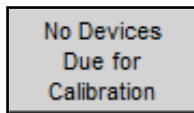
EMIT Current Status							
ZVM Solo Status							
	Location	Name	Operator	Supervisor	MAT	TOOL	Charge
▶	Assembly	Victor Arellano	FAIL HIGH	NOT CONNECTED	PASS	PASS	PASS
	Assembly	Matt Bode	PASS	NOT CONNECTED	PASS	PASS	PASS
	MA1	Rob DaRosa	PASS	PASS	PASS	PASS	PASS
*							

To get back to the original screen, simply click on the “Faults” button.

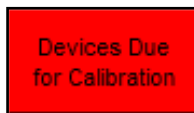


NOTE: All buttons in the Polling Screen respond at the end of the polling cycle only. There may be a delay between the time when the button is pressed and when the function is executed. The button only needs to be clicked once. The click event is stored and will be acted upon at the end of the cycle.

Below the Monitored Devices buttons is an additional button that indicates if a device is due for calibration. If the button is GRAY, there are no devices due for calibration.



If this button is RED, at least once device is due for calibration.



By clicking on this button, the program will halt polling and open the Calibration Log window to view the calibration status for every device.

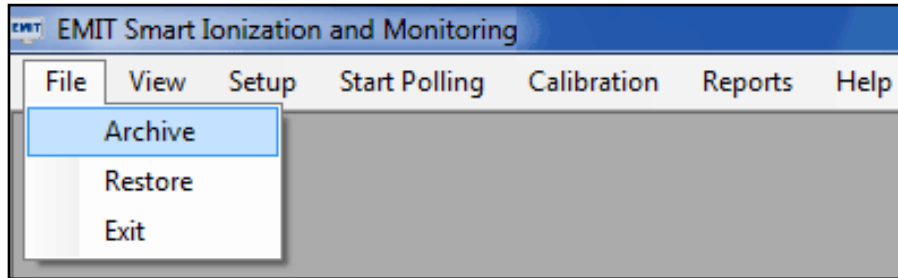
# Archive and Restore

## Introduction

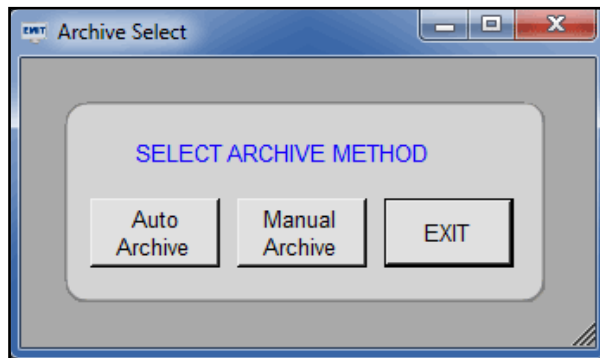
EMIT SIM has built in provisions for archiving and restoring data. The database that contains all of the polling data can become quite large over time and should be archived regularly. The archive process pulls records from the database file and writes them into a text file. The records are then deleted from the database file, and the database is compacted. Archiving the database keeps the size of the active file down and assures that maximum performance can be attained.

## Auto Archive

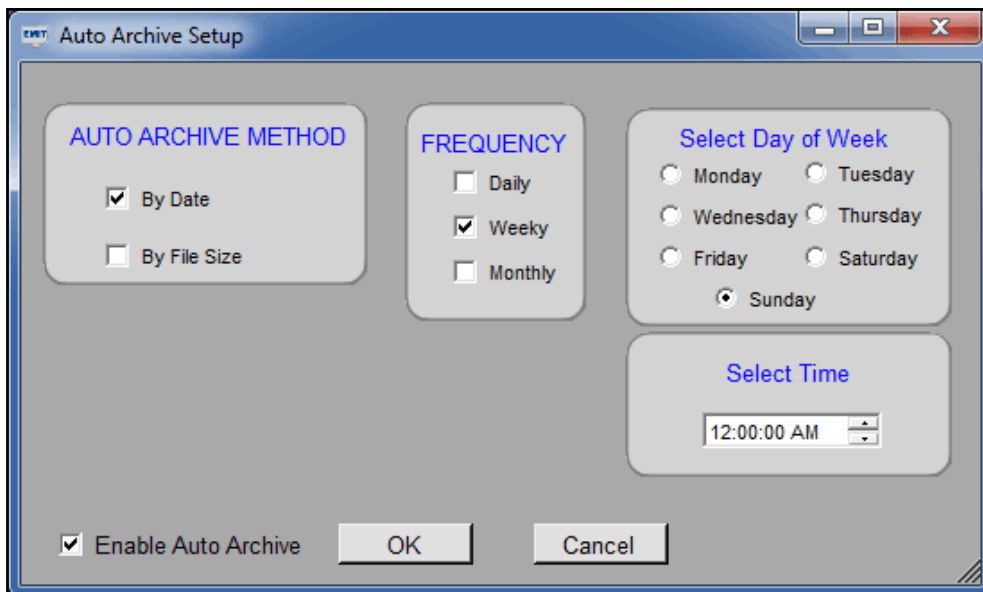
From the home screen, select File > Archive as shown below.



The Archive Select window will appear.



Click the "Auto Archive" button to open the Auto Archive Setup window.

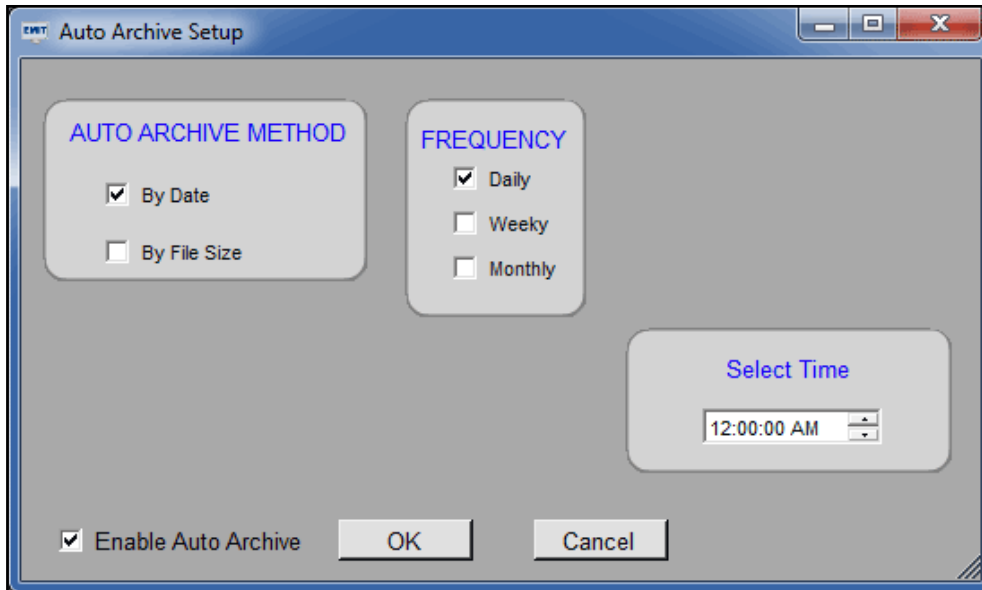


EMIT SIM can be set to automatically archive your database by either a scheduled date or file size.

**BY DATE:**

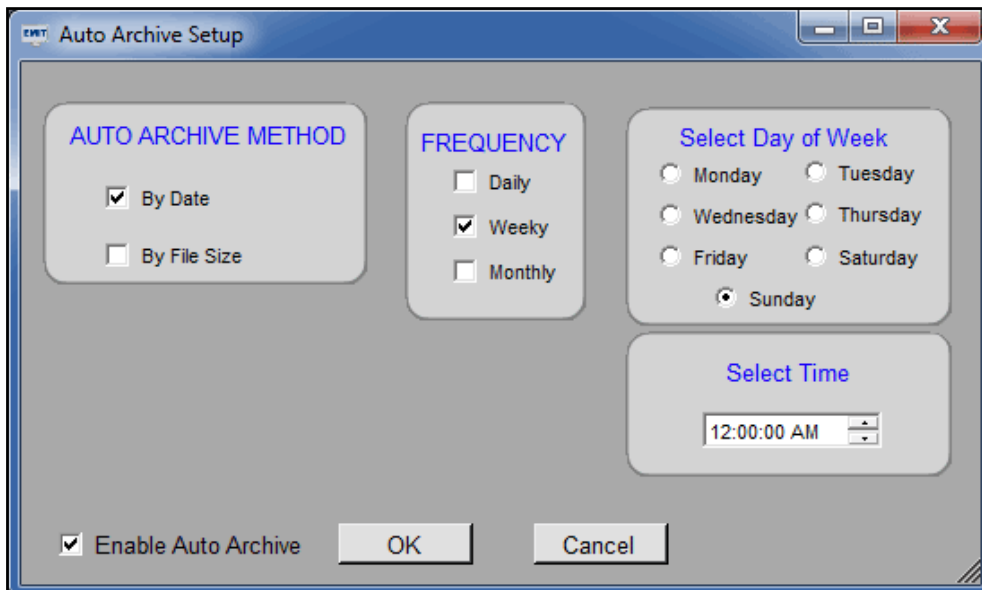
**DAILY**

To schedule a daily auto archive, simply select a time to do the archive and check the “Enable Auto Archive” box. Click the OK button to confirm the settings. The archived file will be saved in the current active directory, and the file name will be automatically generated in the format: AutoArchiveYYYYMMDDHHMMSS.txt.



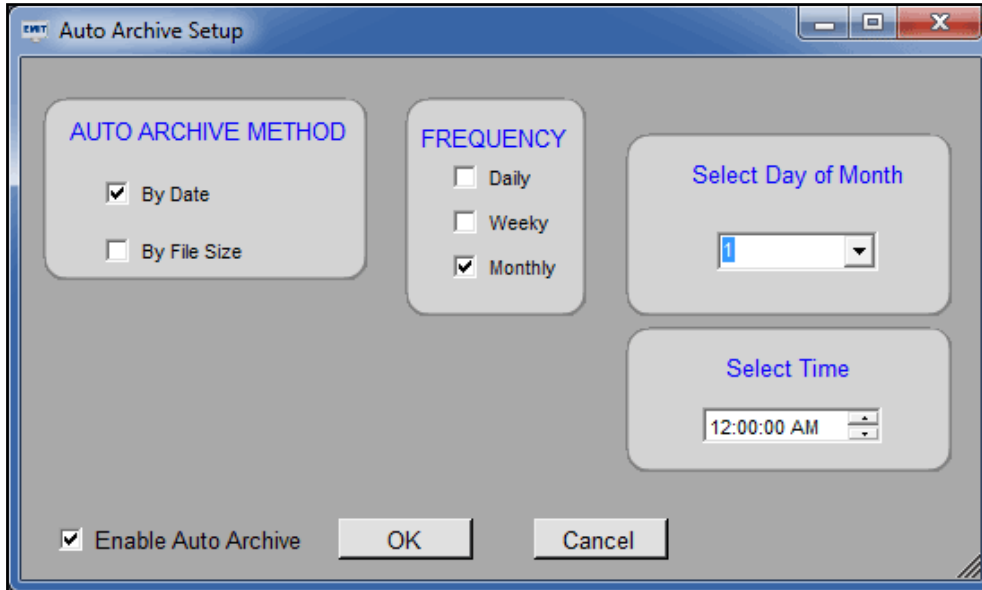
**WEEKLY**

To schedule a weekly auto archive, simply select the day of the week and time and check the “Enable Auto Archive” box. Click the OK button to confirm the settings. The archived file will be saved in the current active directory, and the file name will be automatically generated in the format: AutoArchiveYYYYMMDDHHMMSS.txt.



## MONTHLY

To schedule a monthly auto archive, simply select the day of the month and time and check the “Enable Auto Archive” box. Click the OK button to confirm the settings. The archived file will be saved in the current active directory, and the file name will be automatically generated in the format: AutoArchiveYYYYMMDDHHMMSS.txt.

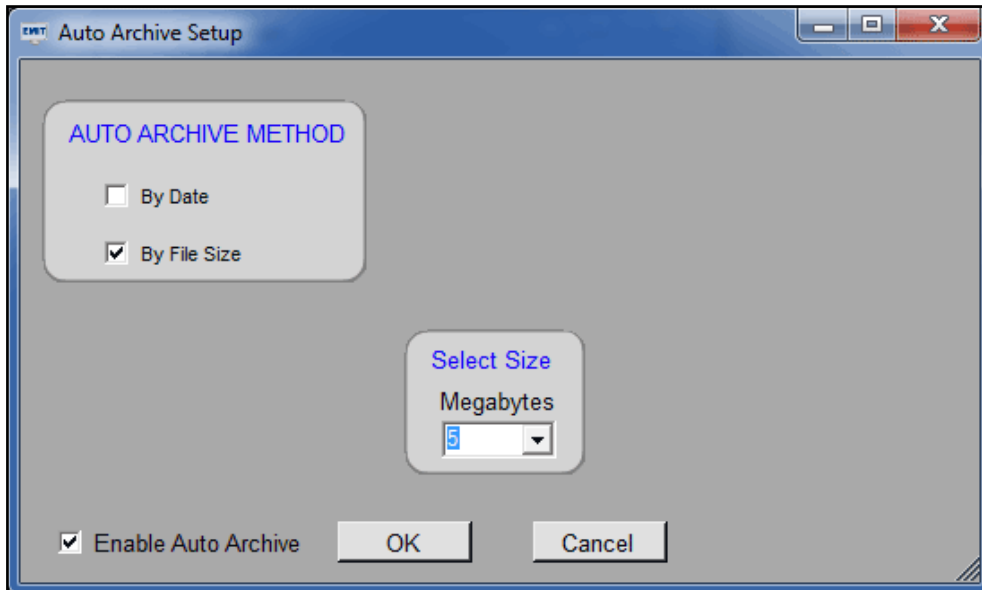


The screenshot shows the 'Auto Archive Setup' dialog box with the following settings:

- AUTO ARCHIVE METHOD:**  By Date,  By File Size
- FREQUENCY:**  Daily,  Weekly,  Monthly
- Select Day of Month:** 1
- Select Time:** 12:00:00 AM
- Enable Auto Archive:**
- Buttons:** OK, Cancel

## BY FILE SIZE:

To set an auto archive by file size, simply use the drop down arrow to select the number of Megabytes that the database file must reach before an archive occurs. Check the “Enable Auto Archive” box. Click the OK button to confirm the settings. The archived file will be saved in the current active directory, and the file name will be automatically generated in the format: AutoArchiveYYYYMMDDHHMMSS.txt.



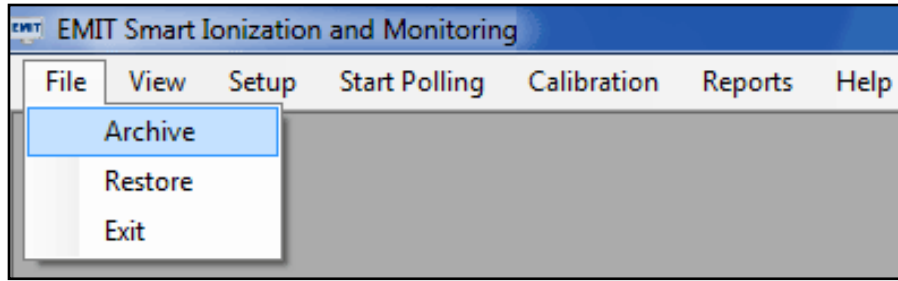
The screenshot shows the 'Auto Archive Setup' dialog box with the following settings:

- AUTO ARCHIVE METHOD:**  By Date,  By File Size
- Select Size:** Megabytes, 5
- Enable Auto Archive:**
- Buttons:** OK, Cancel

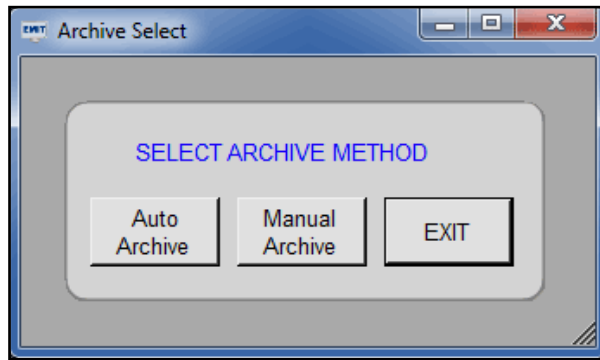
## Manual Archive

Performing manual archives allows the user to select what data should be archived at their leisure.

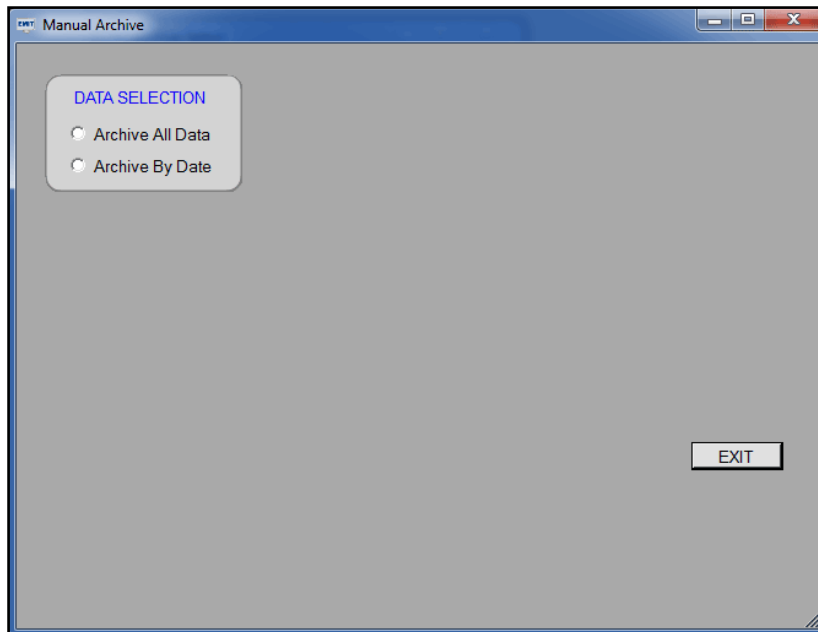
From the home screen, select File > Archive as shown below.



The Archive Select window will appear.

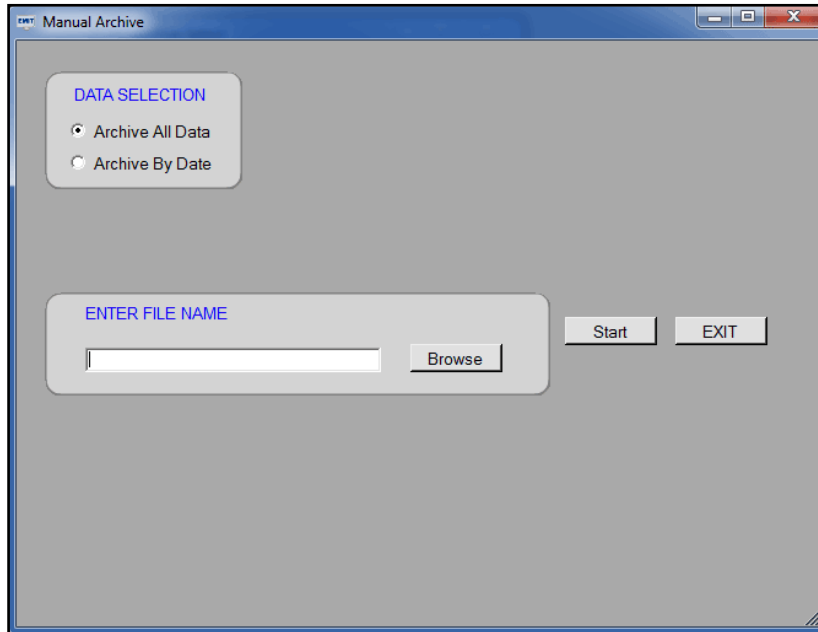


Click the "Manual Archive" button to open the Manual Archive Setup window.



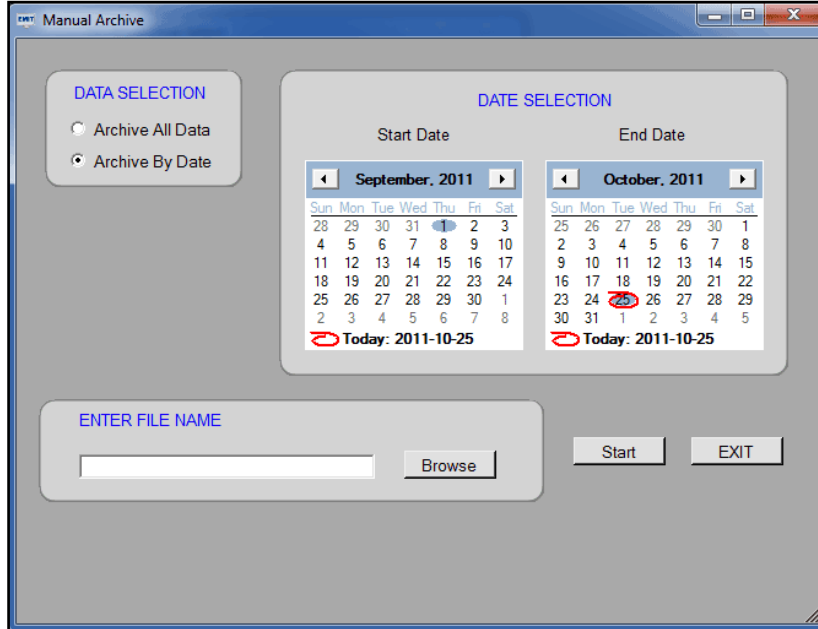
### ARCHIVE ALL DATA

To archive all data, simply enter a name and select a location for the archived file. Click the “Start” button to begin the process. EMIT SIM will prompt when the process has been completed.



### ARCHIVE BY DATE

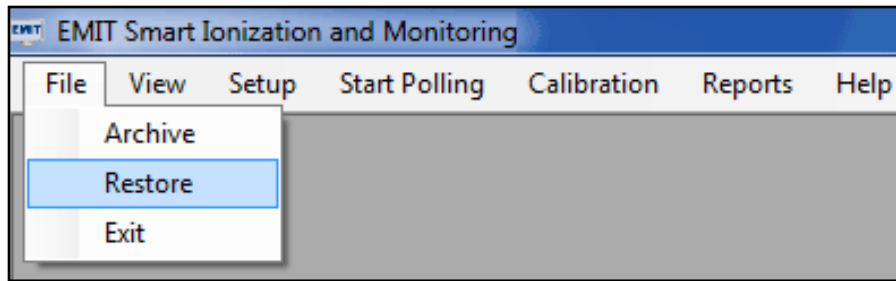
To archive by date, simply select the Start and End Dates for which you would like to archive. Enter a name and select a location for the archived file. Click the “Start” button to begin the process. EMIT SIM will prompt when the process has been completed.



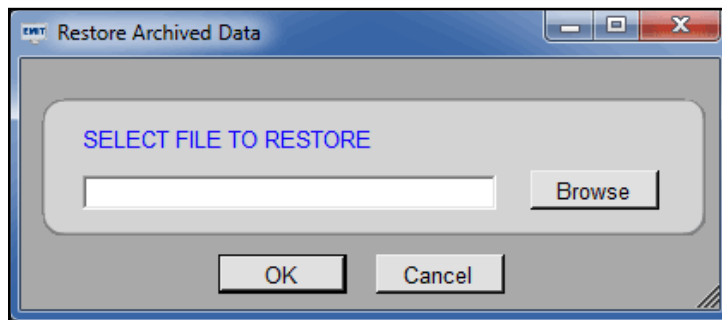
## Restore

Use the restore function to bring any archived data back into the active database.

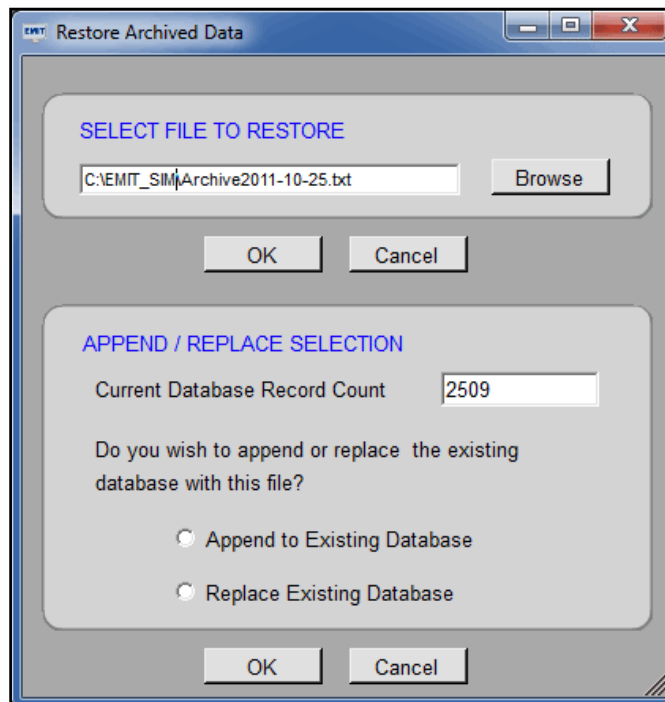
From the home screen, select File > Restore as shown below.



The Restore Archived Data window will appear.



Type in the file path and name or use the "Browse" button to locate the archive file to be restored. Click the "OK" button and the following window will open.



You will be notified of the number of records in the active database and will be asked to decide if the restored data should be appended to or be used to replace the active database. Select one of the two options and click the "OK" button to begin the restore process.

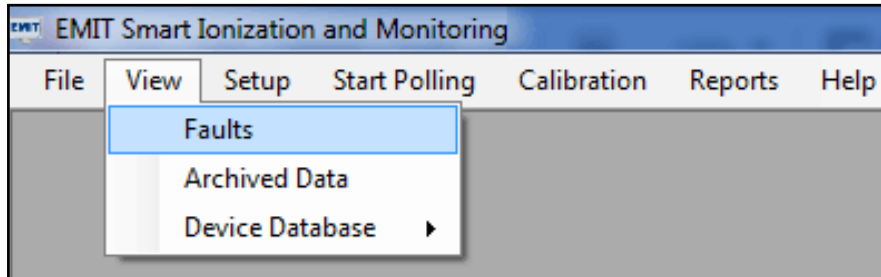
# View Menu

## Introduction

The View Menu provides multiple ways to view polled and archived data from your monitored devices. Follow the procedures below to view your fault, archived and device-specific data.

## Faults

From the home screen, select View > Faults as shown below.



The Fault View window will open displaying all of the failures in the active database.

The screenshot shows the "FaultView" window with a table of fault data. The table has the following columns: Device Type, Operator, Name, Location, Condition, Time Stamp, Date Stamp, Duration, HUBAddress, PortAddress, and UnitID. The data is sorted by Date Stamp in descending order. At the bottom of the window, there are three buttons: "Show All", "Show Today", and "EXIT".

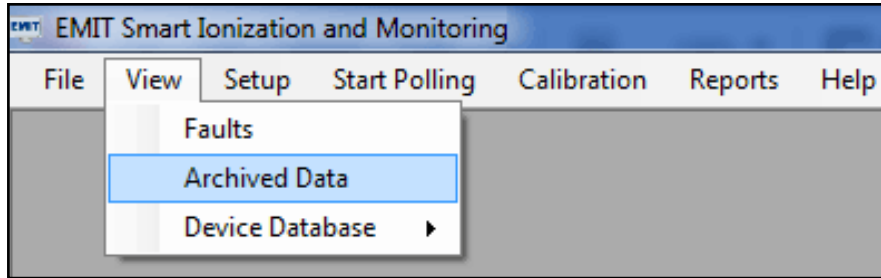
Device Type	Operator	Name	Location	Condition	Time Stamp	Date Stamp	Duration	HUBAddress	PortAddress	UnitID
ZVI Bench Top	0	Todd Brake	Lab	Not Responding - Fail	11:52 AM	2011-10-25	00:38:33	0	0	1
ZVM	2	Paul Butler	Test Lab	Not Responding - Fail	11:52 AM	2011-10-25	00:38:35	0	1	0
ZVM	1	Peter George	Test Lab	Not Responding - Fail	11:52 AM	2011-10-25	00:38:35	0	1	0
ZVI Bench Top	0	Todd Brake	Lab	Not Responding - Fail	11:36 AM	2011-10-25	00:00:00	0	0	1
ZVM	2	Paul Butler	Test Lab	Not Responding - Fail	11:36 AM	2011-10-25	00:00:00	0	1	0
ZVM	1	Peter George	Test Lab	Not Responding - Fail	11:36 AM	2011-10-25	00:00:00	0	1	0
ZVMSolo	1	Victor Arellano	Test Lab	Operator Fail High	10:48 AM	2011-10-25	00:00:01	0	0	1135013
ZVMSolo	1	Victor Arellano	Test Lab	Operator Fail High	10:48 AM	2011-10-25	00:00:00	0	0	1135013
ZVMSolo	1	Victor Arellano	Test Lab	Operator Fail High	10:37 AM	2011-10-25	00:00:00	0	0	1135013
ZVMSolo	1	Victor Arellano	Final Assembly	Not Responding - Fail	9:26 AM	2011-10-25	00:00:09	0	0	1135003
ZVMSolo	1	Victor Arellano	Final Assembly	Not Responding - Fail	9:19 AM	2011-10-25	00:00:03	0	0	1135003
ZVMSolo	1	Victor Arellano	Final Assembly	Not Responding - Fail	3:17 PM	2011-10-24	00:00:01	0	0	1135003
ZVMSolo	1	Victor Arellano	Desk	Not Responding - Fail	1:49 PM	2011-10-20	00:00:25	0	0	1135003
ZVMSolo	1	Victor Arellano	Desk	Operator Fail High	1:49 PM	2011-10-20	00:00:00	0	0	1135003
ZVMSolo	1	Victor Arellano	Desk	Operator Fail High	1:48 PM	2011-10-20	00:00:00	0	0	1135003
ZVMSolo	1	Victor Arellano	Desk	Operator Fail High	1:48 PM	2011-10-20	00:00:00	0	0	1135003
ZVMSolo	1	Victor Arellano	Desk	Operator Fail High	1:48 PM	2011-10-20	00:00:00	0	0	1135003
ZVMSolo	1	Victor Arellano	Desk	Operator Fail High	1:48 PM	2011-10-20	00:00:00	0	0	1135003
ZVMSolo	1	Victor Arellano	Desk	Operator Fail High	1:48 PM	2011-10-20	00:00:00	0	0	1135003
ZVMSolo	1	Victor Arellano	Desk	Operator Fail High	1:48 PM	2011-10-20	00:00:00	0	0	1135003
ZVMSolo	1	Victor Arellano	Desk	Operator Fail High	1:48 PM	2011-10-20	00:00:00	0	0	1135003
ZVMSolo	1	Victor Arellano	Desk	Operator Fail High	1:48 PM	2011-10-20	00:00:00	0	0	1135003
ZVMSolo	1	Victor Arellano	Desk	Not Responding - Fail	4:54 PM	2011-10-17	00:00:02	0	0	1135013
ZVMSolo	1	Victor Arellano	Desk	Not Responding - Fail	4:08 PM	2011-10-17	00:00:06	0	0	1135013
ZVMSolo	1	Victor Arellano	Desk	Not Responding - Fail	4:08 PM	2011-10-17	00:00:11	0	0	1135013
ZVMSolo	1	Victor Arellano	Desk	Not Responding - Fail	4:07 PM	2011-10-17	00:00:49	0	0	1135013
ZVMSolo	1	Victor Arellano	Desk	Not Responding - Fail	4:06 PM	2011-10-17	00:00:01	0	0	1135013
ZVI Bench Top	0	Victor Arellano	Desk	Balance Error - Fail	10:38 AM	2011-10-17	00:00:00	0	0	1
ZVI Bench Top	0	Victor Arellano	Desk	Balance Error - Fail	10:38 AM	2011-10-17	00:00:02	0	0	1
ZVMSolo	1	yigy	huhi	Operator Fail High	3:22 PM	2011-09-30	00:00:00	0	0	1135006
ZVMSolo	1	yigy	huhi	Operator Fail High	3:22 PM	2011-09-30	00:00:00	0	0	1135006
ZVMSolo	2	yigy	huhi	MAT Fail	3:22 PM	2011-09-30	00:00:02	0	0	1135006
ZVMSolo	1	Victor Arellano	R&D	Operator Fail High	3:18 PM	2011-09-30	00:00:00	0	0	1135006

Use the "Show All" and "Show Today" buttons to filter the displayed fault data. You may also click on the column headers for data sorting.

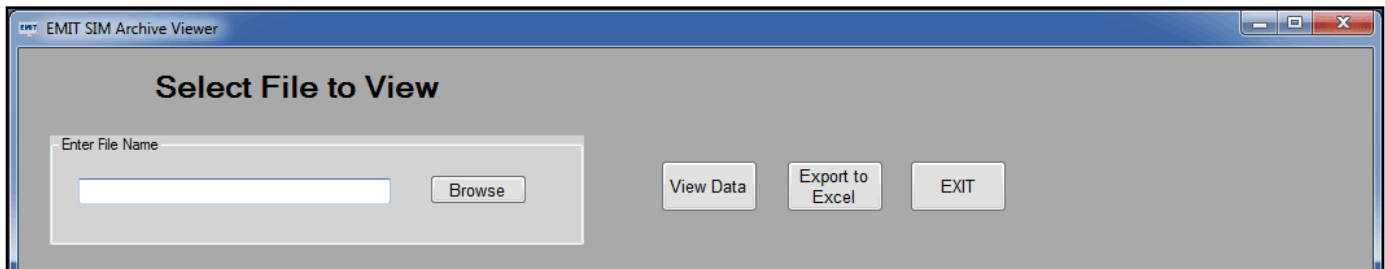
## View Archived Data

Use this feature to view archived files without having to import them back into your active database. This feature is helpful when a quick search for a device's activity history is needed.

From the home screen, select View > Archived Data as shown below.



The Archive Viewer window will open.

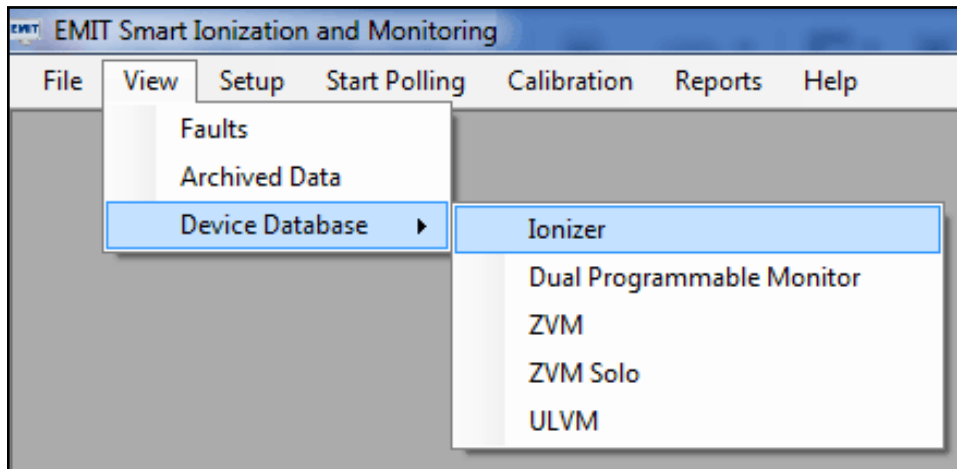


Use the "Browse" button to locate your archived file. You may then use the "View Data" button to launch a quick view of the file's contents or "Export to Excel" button to format the archived contents into a Microsoft Excel spreadsheet.

## View Device Database

Use this feature to view the monitored activity of a specific device group.

From the home screen, select View > Device Database > then the device group that you prefer to view.



The device database viewer will open.

DeviceType	Name	Location	ComPort	UnitID	Condition	Time Stamp	Date Stamp	Duration
ZVMSolo	Victor Arellano	Test Lab	COM1	1135013	Operator Passed	10:37 AM	2011-10-25	00:00:18
ZVMSolo	Victor Arellano	Test Lab	COM1	1135013	Operator Fail High	10:37 AM	2011-10-25	00:00:00
ZVMSolo	Victor Arellano	Test Lab	COM1	1135013	Operator Passed	10:37 AM	2011-10-25	00:00:05
ZVMSolo	Victor Arellano	Test Lab	COM1	1135013	Charge Pass	10:37 AM	2011-10-25	00:00:55
ZVMSolo	Victor Arellano	Test Lab	COM1	1135013	TOOL Pass	10:37 AM	2011-10-25	00:00:55
ZVMSolo	Victor Arellano	Test Lab	COM1	1135013	MAT Pass	10:37 AM	2011-10-25	00:00:55
ZVMSolo	Supervisor	Test Lab	COM1	1135013	Supervisor Not Connected	10:37 AM	2011-10-25	00:00:55
ZVMSolo	Victor Arellano	Test Lab	COM1	1135013	Operator Parked	10:37 AM	2011-10-25	00:00:27
ZVMSolo	Victor Arellano	Test Lab	COM1	1135013	Charge Pass	9:37 AM	2011-10-25	00:00:09
ZVMSolo	Victor Arellano	Test Lab	COM1	1135013	Operator Parked	9:37 AM	2011-10-25	00:00:09
ZVMSolo	Supervisor	Test Lab	COM1	1135013	Supervisor Not Connected	9:37 AM	2011-10-25	00:00:09
ZVMSolo	Victor Arellano	Test Lab	COM1	1135013	MAT Pass	9:37 AM	2011-10-25	00:00:09
ZVMSolo	Victor Arellano	Test Lab	COM1	1135013	TOOL Pass	9:37 AM	2011-10-25	00:00:09
ZVMSolo	Victor Arellano	Test Lab	COM1	1135013	Charge Pass	9:29 AM	2011-10-25	00:00:08
ZVMSolo	Victor Arellano	Test Lab	COM1	1135013	TOOL Pass	9:29 AM	2011-10-25	00:00:08
ZVMSolo	Victor Arellano	Test Lab	COM1	1135013	MAT Pass	9:29 AM	2011-10-25	00:00:08
ZVMSolo	Supervisor	Test Lab	COM1	1135013	Supervisor Not Connected	9:29 AM	2011-10-25	00:00:08
ZVMSolo	Victor Arellano	Test Lab	COM1	1135013	Operator Parked	9:29 AM	2011-10-25	00:00:08
ZVMSolo	Victor Arellano	Final Assem...	COM1	1135003	Not Responding - Fail	9:26 AM	2011-10-25	00:00:09
ZVMSolo	Victor Arellano	Final Assem...	COM1	1135003	Not Responding - Fail	9:19 AM	2011-10-25	00:00:03
ZVMSolo	Victor Arellano	Final Assem...	COM1	1135003	Not Responding - Fail	3:17 PM	2011-10-24	00:00:01
ZVMSolo	ERIC WILLI...	DESK	COM1	1135002	TOOL Pass	1:51 PM	2011-10-20	00:00:05
ZVMSolo	ERIC WILLI...	DESK	COM1	1135002	MAT Pass	1:51 PM	2011-10-20	00:00:05
ZVMSolo	Supervisor	DESK	COM1	1135002	Supervisor Not Connected	1:51 PM	2011-10-20	00:00:05
ZVMSolo	ERIC WILLI...	DESK	COM1	1135002	Operator Not Connected	1:51 PM	2011-10-20	00:00:05
ZVMSolo	ERIC WILLI...	DESK	COM1	1135002	Charge Pass	1:51 PM	2011-10-20	00:00:05
ZVMSolo	Victor Arellano	Desk	COM1	1135003	Not Responding - Fail	1:49 PM	2011-10-20	00:00:25
ZVMSolo	Victor Arellano	Desk	COM1	1135003	Operator Not Connected	1:49 PM	2011-10-20	00:00:04
ZVMSolo	Victor Arellano	Desk	COM1	1135003	Operator Passed	1:49 PM	2011-10-20	00:00:00
ZVMSolo	Victor Arellano	Desk	COM1	1135003	Operator Parked	1:49 PM	2011-10-20	00:00:02
ZVMSolo	Victor Arellano	Desk	COM1	1135003	Operator Fail High	1:49 PM	2011-10-20	00:00:00

Show All   Show Passing   Show Faults   EXIT

When a specific device type is selected for viewing, the faults appear in red and the non-faults are in black. Use the buttons located at the bottom of the screen to filter your data between Show All, Show Passing, and Show Faults.

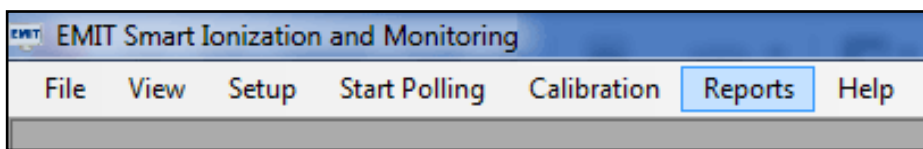
## Reports

### Introduction

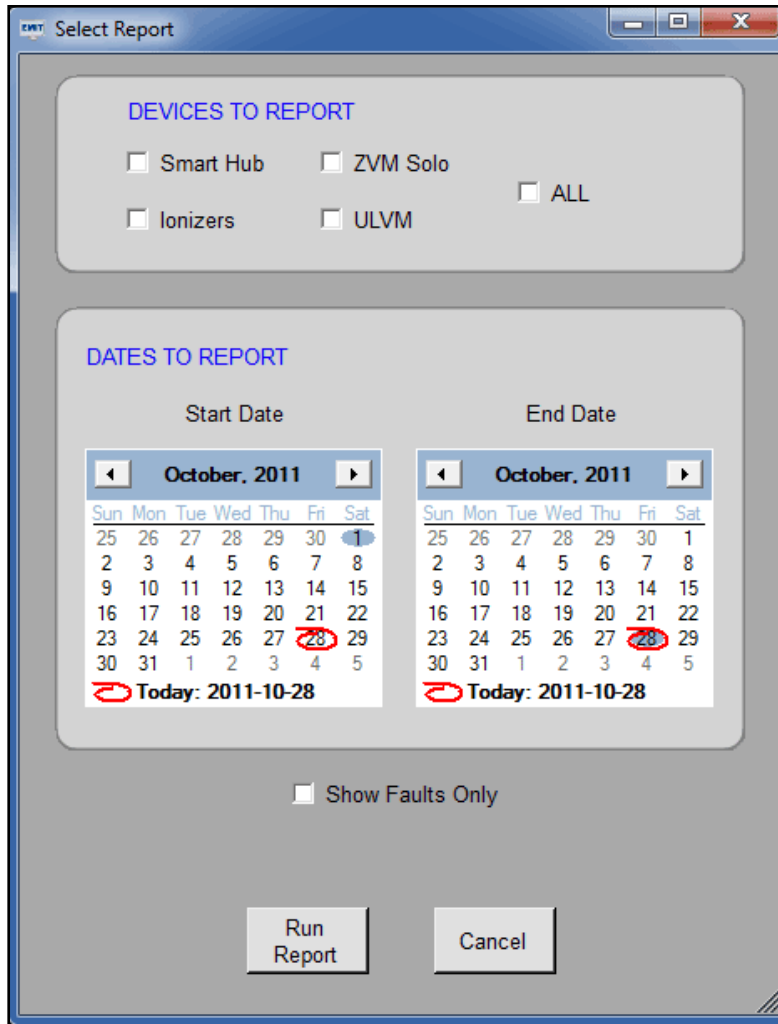
EMIT SIM uses SAP Crystal Reports for generating printable reports and exporting data. All reports may be exported in Crystal Report, PDF, Excel, Word, Character Separated Value and XML formats.

### Generating a Report

From the home screen, select Reports as shown below.

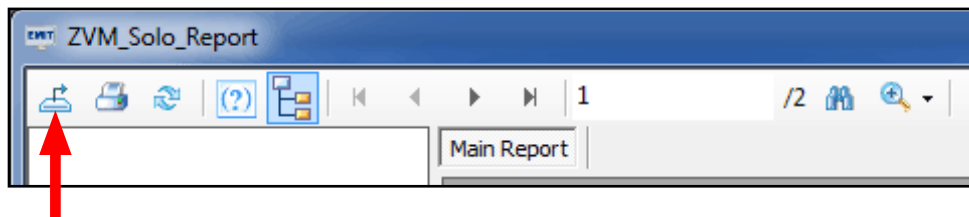


The Select Report window will open.



Use this window to select the device types you want to generate a report on and its date range. You may also use the “Show Faults Only” option to filter the report’s data. Click the “Run Report” button to generate the report.

Once the report is generated, the data can be printed or exported in several formats including: Crystal Report format, pdf format, .csv format, .xls format, Microsoft Word format and .xml format. Use the following button inside the Crystal Report Viewer to set your export format.



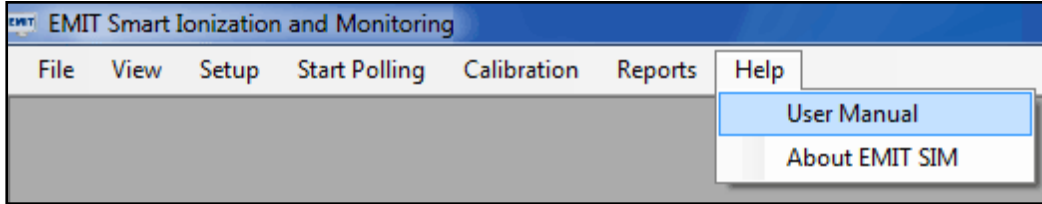
# Help Menu

## Introduction

Use the Help Menu within EMIT SIM to download the User Manual and look-up your licensing information.

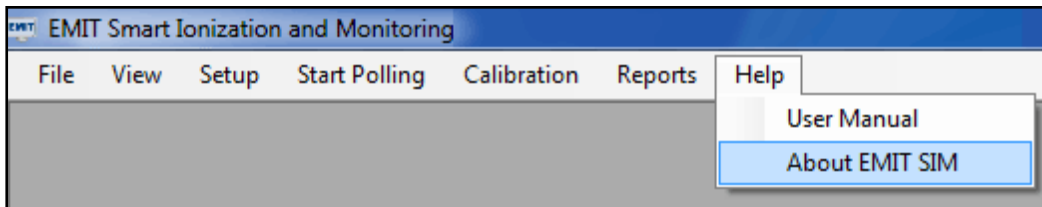
## User Manual

From the home screen, select Help > User Manual as shown below. EMIT SIM will open the PDF download for the User Manual.

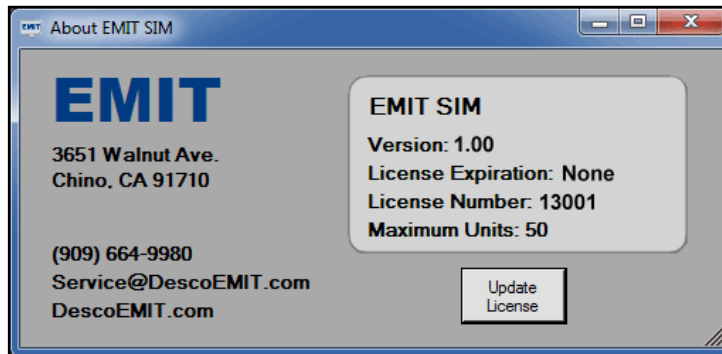


## About EMIT SIM / Update License

From the home screen, select Help > About EMIT SIM as shown below.



The About EMIT SIM window will open.



Use this window to identify information on the version that you are running, the license expiration date, license number and maximum number of devices allowed to be monitored.

Click on the "Update License" button to open the Update License window.



Contact EMIT Customer Service to purchase an expansion license key. An expansion license will allow you to increase the maximum device limit in EMIT SIM. To update your license, simply enter the provided key in the "License Key" field and click OK.

## Limited Warranty

### Limited Warranty

EMIT expressly warrants that for a period of one (1) year from the date of purchase EMIT SIM Software will be free of defects in material (parts) and workmanship (labor). Within the warranty period, a credit for purchase of replacement EMIT products, or, at EMIT's option, the product will be repaired or replaced free of charge. If product credit is issued, the amount will be calculated by multiplying the unused portion of the expected five year life times the original unit purchase price. Call our Customer Service Department at 909-664-9980 (Chino, CA) for a Return Material Authorization (RMA) and proper shipping instructions and address. Please include a copy of your original packing slip, invoice, or other proof of date of purchase. Any unit under warranty should be shipped prepaid to the EMIT factory. Warranty replacements will take approximately two weeks.

If your unit is out of warranty, call our Customer Service Department at 909-664-9980 (Chino, CA) for a Return Material Authorization (RMA) and proper shipping instructions and address. EMIT will quote repair charges necessary to bring your unit up to factory standards.

### Warranty Exclusions

THE FOREGOING EXPRESS WARRANTY IS MADE IN LIEU OF ALL OTHER PRODUCT WARRANTIES, EXPRESSED AND IMPLIED, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WHICH ARE SPECIFICALLY DISCLAIMED. The express warranty will not apply to defects or damage due to accidents, neglect, misuse, alterations, operator error, or failure to properly maintain, clean or repair products.

### Limit of Liability

In no event will EMIT or any seller be responsible or liable for any injury, loss or damage, direct or consequential, arising out of the use of or the inability to use the product. Before using, users shall determine the suitability of the product for their intended use, and users assume all risk and liability whatsoever in connection therewith.