

WolfSense 2014 Application Software



ID: Air-UM-04.01.15

User Manual

For use with the following **Oosafe®** products:

OOANA-W01
Analyser with WolfSense Software

OOATV-01
Air Speed/ Temperature / Volume Air Flow Probe for IVF

OOVOC-L01, OOVOC-L03, OOVOC-L06
VOC-Log for IVF

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DISCLAIMER:

Determining the suitability for use of any equipment described in this manual remains SOLELY THE RESPONSIBILITY OF THE END USER.

! PRODUCT WARNING:

Oosafe® Analyser with WolfSense Software, Oosafe® Air Speed/ Temperature / Volume Air Flow Probe for IVF and Oosafe® VOC-Log for IVF are NOT suitable for use in flammable or potentially explosive environments. They are NOT certified intrinsically safe. They are also NOT intended for use in confined spaces where operator safety might be at risk due to exposure levels, such as reduced oxygen, during the course of the instrument survey.

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Introduction

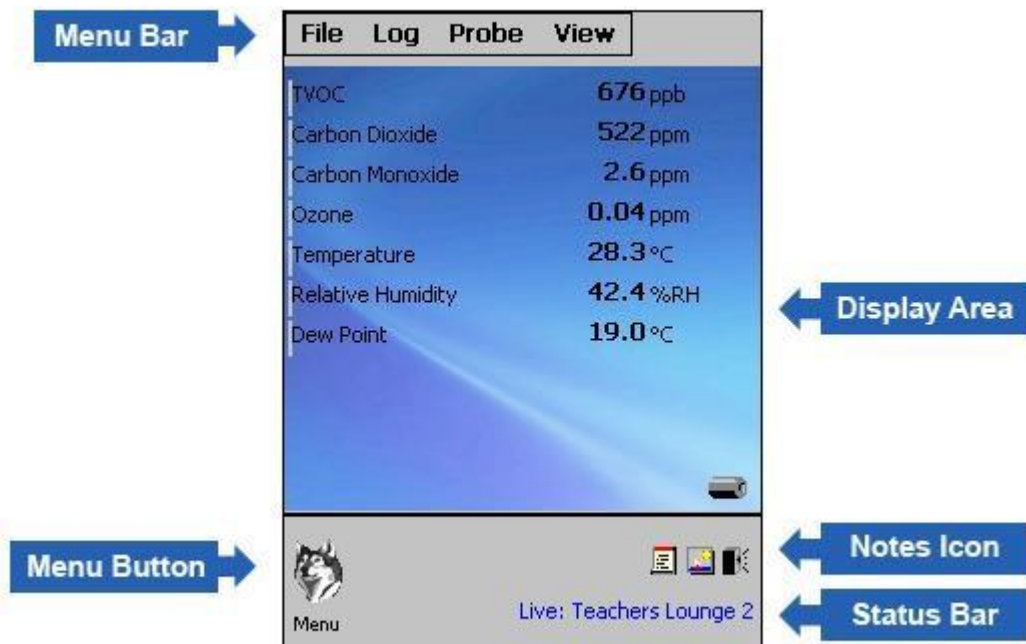
SparMED Oosafe® Air Quality Control Solutions provide fully integrated systems for measuring a range of key parameters for Industrial Hygiene, HVAC, Facility Management, Environmental Contracting, Indoor Air Quality and other applications. An Oosafe® Analyzer, Windows Netbook/Tablet or Windows Mobile PocketPC running Oosafe® application software takes readings of air quality, toxic gas, airspeed, moisture, temperature or other parameters from a probe connected through the serial or USB port. The Oosafe® Analyzer also includes K thermocouple temperature sockets. The Oosafe® Analyzer and other Oosafe® Air Quality Control instruments also offer the option for built-in auto-ranging and auto-zeroing differential pressure or for barometric pressure sensors. Particulate meters may also be interfaced via a serial port (Oosafe® Analyzer) or CF serial slot (Mobile PCs). You may choose to view live readings as they happen and/or log the readings for future use. Later, when the Oosafe® Analyzer, or MobilePC is connected to a desktop PC via the sync cable, any logged readings and associated notes are transferred to the desktop PC for printing, graphing or exporting from WolfSense PC data analysis software. WolfSense PC also assists in the creation of reports, incorporating the data and notes that have been collected.

Navigating in WolfSense 2014

NOTE: WolfSense 2014 works on a variety of mobile computer platforms and accordingly this manual will show screens from different operating systems. Most screens shown in this guide are taken from the Oosafe® Analyzer Platform, however some screens are taken from the Netbook/Tablet and WinMobile PocketPC platforms. Functions are identical for Oosafe® Analyzer, WinMobile PocketPC, Netbook and WolfPack platforms with minor differences, for example the menu bar is at the top in the Oosafe® Analyzer and Lap applications while it is at the bottom in WinMobile. Special notes are given where the platforms are different.

WolfSense software is divided into a series of **Screens**, each screen providing a particular function such as showing live readings, graphing data, starting a trend log, choosing a location, averaging, etc.

The software will always start on the **Live Screen** which displays current readings from the attached probe(s).



Each Screen consists of:

Menu Bar - use for access to drop down menus. Note: Position of Menu Bar varies between versions.

Menu Button – Click the WolfHead menu icon to open an **Icon Menu** of WolfSense functions and screens. If you do not select a menu item the Icon Menu automatically closes after a few seconds.



Note: On LAP version, there is no menu button as the Menu Bar is always exposed to display all functions.

Display Area – The contents of each screen is shown in the display area. On the Live Tab, readings are shown.

Status-Bar – The Status Bar shows error messages and logger status.

Notes Icons – Displays Notes associated with the currently selected location file.

Navigation

From any screen, you can return to the Live Reading screen by clicking/tapping on the LIVE icon or by selecting LIVE READINGS from the VIEW Menu.

Depending on the selected Screen, certain menu items will be pinned (always visible). For example, on the Location Screen, the Start Log icon is pinned and when the logger is running the Stop Log icon is pinned. Whenever you are not on the Live Screen, the Live icon will be pinned to the menu.

Certain icons like the Menu and Live will always be displayed as the first item in the list. The remaining icons will reposition themselves according to how often they are used.

As an alternative to navigating with the Menu Bar icons, you may also select functions from the drop down text menus.

Power / Battery Status Indication

The System Battery Status is shown in the lower right corner of the Live Readings Screen



Indicates fully charged battery.



Indicates battery level is OK.




Indicates battery level is low/critical.



Indicates System is powered by AC and charging.

Tapping on the icon will give additional information on the system battery as well as the status of the probe batteries.

 Indicates Probe(s) are being powered by the Oosafe® Analyzer (battery or AC power)

 Indicated Probe(s) are being powered by the USB bus (Lap/SoMo Only)

When the System Battery reaches a critical level, the software will alert you with a countdown screen. If the countdown is ignored the unit will stop logging and power down.

Live Readings

Readings from the attached probe or probes are displayed on the Live screen. If multiple probes are attached, each probe's readings are displayed with different colored bar to the left of the parameter name. If all the readings will not fit on the screen, the << Back, Next >> and Auto-Scroll links are given. Next and Back will manually move through the reading screens while Auto-Scroll will automatically cycle through the screens.



Clicking or tapping on a reading will display a pop up reading for the parameter. At the top of the menu, the first two lines display the Probe Name, Probe ID number and Parameter selected. Additional status information may also be displayed below the parameter name (see next page for more info).

Next, a list of unit symbols available for the parameter is displayed next; you may select a unit from this list to change units (but not while the unit is logging.)

Select *Disable* to remove the reading from the display and the log file. To re-enable readings choose **Select Parameters (Probe Menu)**.

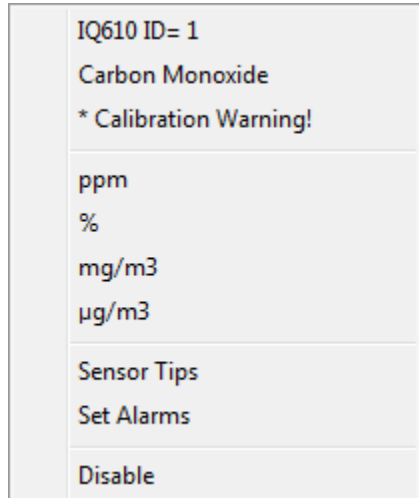
Select *Sensor Tips* to display information about Measurement Tips, Typical Background Levels and Government and Industry Guidelines for the selected parameter.

In addition to the colored bar to the left of the readings, the Parameters and Units themselves may be colored to indicate conditions. Depending on the background colors and theme you have selected, the colors will vary slightly.

Parameter Colors:

Black/White	Readings stabilized and ready for logging.
Gray	Parameter is stabilizing. Normally this takes under a minute. The exception is the PID (VOC) sensor which takes 20 minutes.
Red/Orange/Yellow	<p>Indicates one of the following conditions:</p> <p>Calibration errors are detected on the parameter. Accompanied by an asterisk (*) and a Check Calibration message in the Status Bar.</p> <p>If you have set a high or low alarm or warning, the readings will change color and the alarm icon will appear in the lower-right of the alarm screen. 🚨</p> <p>The probe battery is low and readings may be unreliable.</p>

To determine the status of a colored reading, tap or right-click on the parameter to bring up the Pop-Up Menu for the parameter.



The top lines will show the probe model, ID and the selected parameter name. The next line will show the status.

Possible Status indicators include:

- x Calibration Warning
- x Bypass Stabilization
- x Low Battery or Critical Battery
- x View Alarms

Click on the message to see more details.

Important Note on Calibration Warnings:

Calibration warnings can indicate the following:

- 1) The probe is in need of Factory Calibration. Check Probe / Advanced Calibration / Show Calibration Reminders to see if the probe is beyond Factory Calibration.
- 2) A User Calibration performed on the probe has brought the calibrated readings outside of the range of measurements.
- 3) The sensor is damaged or is in need of replacement.

See the section on User Calibration for additional information.

Creating Sites and Locations

Access the Locations Screen by selecting the Location Icon from the Icon Menu



or by choosing Locations on the Log Menu.



Logged readings are stored in individual data files called **Location** (.loc) files. Calibration data, text, audio, photos, videos, events, drawings and template reports are also stored and organized as attachments to these location files.

Location files are further organized into Site Folders or **Sites** which correspond to the Windows folder system.

Each Site folder may contain multiple sub-sites and multiple location files to further organize the data. For example, a site folder called "School" may have one sub-site for the "Ground Floor" containing locations for the "Principals Office" and "Library" and another sub-site called "3rd Floor" containing a location for the "Teachers Lounge".

In the above example, here's how the sites and locations would be represented in the Windows File System:

The root site in the WolfSense file system is:

My Documents\WolfSense

so the three location files would have these file names:

My Documents\WolfSense\School\Ground Floor\Principals Office.loc

My Documents\WolfSense\School\Ground Floor\Library.loc

My Documents\WolfSense\School\3rd Floor\Teachers Lounge.loc

To create a new site or location, click on the 'New Site' or 'New Loc' links. The Site or Location will be created within the site you have selected (unless you check the Top-Level Site checkmark).



Logged data is stored only in a location file. Sites are used solely for organizational purposes.

Newly created location files are automatically selected. The next time a log begins readings will collect in the location file you just selected. This location file collects readings until you select a different location file for logging.

The '**Outdoor**' links creates a new location suitable for storing outdoor air data relative to the currently selected Site and Location. For example, if you select the 3rd Floor Site and click Outdoor, a location is created and selected entitled 'Outdoor Air 3rd Floor'.

To rename a previously created site or location, click on the site or location and then click '**Rename**'.

To delete a site or location, click on the site or location and then click the '**Del**' button. This gives two options, either to completely **delete** the location, or to **clear** it of all information but leave the location itself. When deleting a site, all information and locations contained within the site will also be deleted.

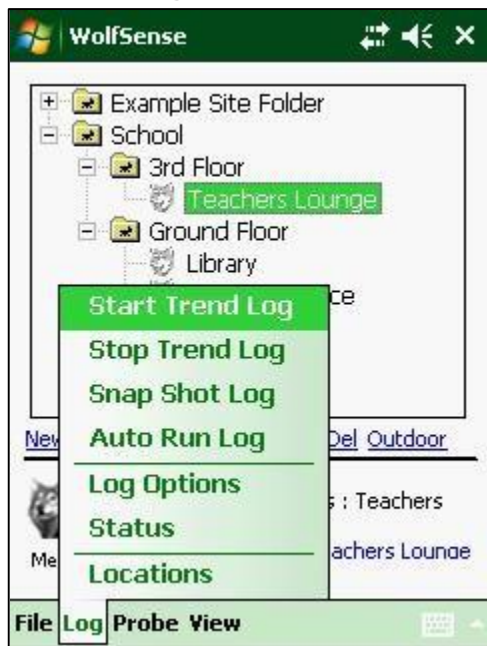
A  next to a location means that the location is empty, while a  means that there is information present.

Logging Data

There are three ways to log data into a location file:

- x A Trend Log - at pre-set intervals initiated manually and until stopped by user.
- x Snapshot Log – manually initiated single point readings
- x Auto Run - at pre-set intervals between pre-programmed start and stop times.

Trend Log

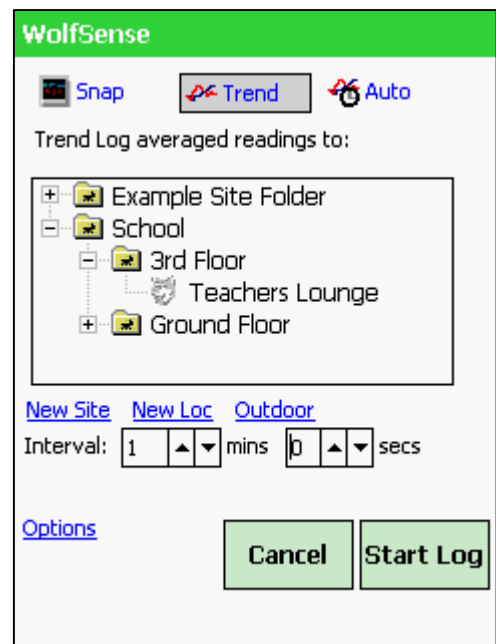


A Trend Log can be set up in the following ways:

- x Tapping/Clicking the log icon on the Icon Menu.
- x Selecting **Start Trend Log (Log Menu)**.



The Log Window then pops up and prompts you to select a location and interval settings. Once the correct settings have been chosen, click **'Start Log'** and the log will begin.



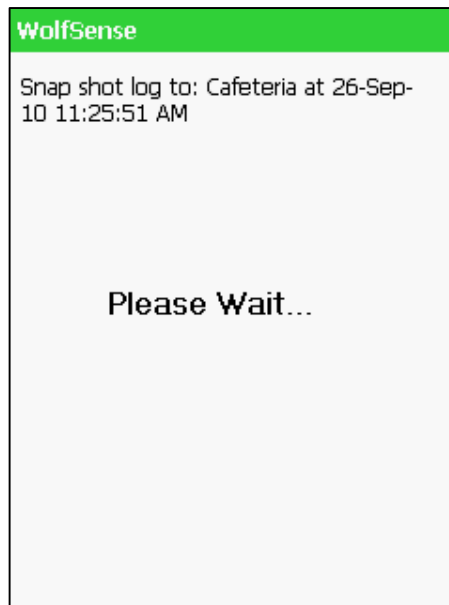
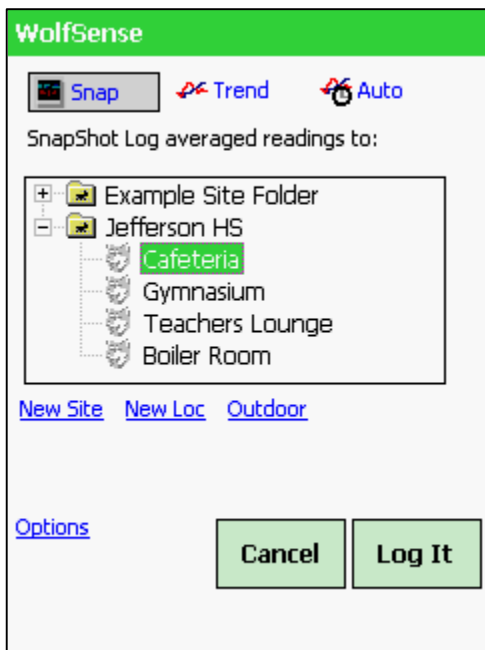
Snap Shot Log Readings

The Snapshot Log lets you manually log one or more sets of values. Snap Shot log is an efficient way to store sets of readings as you perform a walk-through survey. You can also temporarily interrupt a Trend or Auto Start/Stop Log to store readings using the same probes to another location such as the outdoor air conditions (to an "Outdoor" log file).

To initiate SnapShot log, select the **Log Menu**, and **Snap Shot Log**

Alternatively, if you have enabled advanced Snap Shot Log options under Log Options (See next section), you can initiate the log from the menu or by pressing the Action Button (or Space Bar on Laptop/ Netbook PC's) from the readings screen.

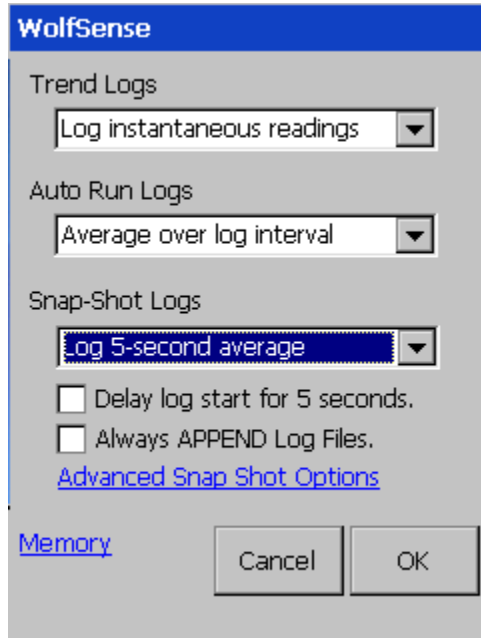
When you first initiate the snap shot log, the following screen is shown which allows you to change Locations, create a new Site and Location or change the Log Options. When you have made your selections, press **LOG IT** and the readings will be stored. Note if averaging is enabled, the readings will be averaged first.



A screen will flash up momentarily to confirm the snap shot log.

Log Options

Log Options may be accessed by using the **Log Options** menu item from the **Log** menu or by using the [Options](#) link from the Start Log screen.



For Trend Logs and Auto-Run Logs, you have the option of storing instantaneous (un-averaged) readings or readings that have been averaged over the log interval. For example, if you have set your Trend Log interval for 1-minute, readings are averaged in a sliding buffer for 1 minute up until a sample is stored. In instantaneous readings mode, the current readings are stored un-averaged.

For [Snap Shot Logs](#), there are additional options:

Averaging – You can select to SnapShot log the Instantaneous reading or a 5,10 or 15 second average.

Delay – you can delay the start of a log for 5 seconds. This is useful if you need to initiate the log and then move the probe into position. (for example, if you are measuring air speed at a duct opening.)

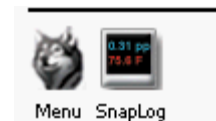
Always Append – By default, if you log additional points to a location file, the system will prompt to overwrite or append. By checking this option, the system will assume you always intend to append.

Quick Log Mode – Quick Log mode logs instantaneous readings with little or no user-interface feedback and is useful when performing repetitive logging operations.

Advanced Snap Shot Options

For Snap Shot logs you may enable a hardware button to initiate a **Snap Shot Log** from the **Live Readings Screen**. On Oosafe® Analyzer and WolfPack's, the AUX button can be used (not enabled on all models). On the WinMobile/PocketPC platform, the center button in the joystick may be used. On LapTop's and Notebooks, you can select the Enter key or Spacebar.

You may also add a Snap Shot log icon to the Menu Bar by checking *Include Snap-Shot Log Icon* under Advanced Snap Shot log options.



Enhanced Snap Shot Log Mode

By enabling the Enhanced Mode, the system will display an alternate window when taking Snap Shot Logs allowing you to Auto-Increment Location Names, create Date/Time Stamp names or quickly type an alternate name in. Enhanced Log Mode used in conjunction with Quick Log Mode will allow for more efficient surveys.

Memory – use the Memory link to enable/disable additional memory storage cards.

Auto-Run

AutoStartStop

Enter start time of Log:
19-Aug-09 09:53

Frequency: Use current setting

Duration: Log until cancelled

Data will be logged to 'Outside' every 5 seconds. Use the Locations menu and Log Options to change.
Current Time: 19-Aug-09 09:53:41

Cancel OK

The Auto-Run feature will automatically start a trend log at a specified date and time.


The Auto-Run feature can be accessed from the **'Log'** menu:

Choose a start time, interval (frequency) and duration settings.

Click OK and the Auto-Run will commence at the specified time.

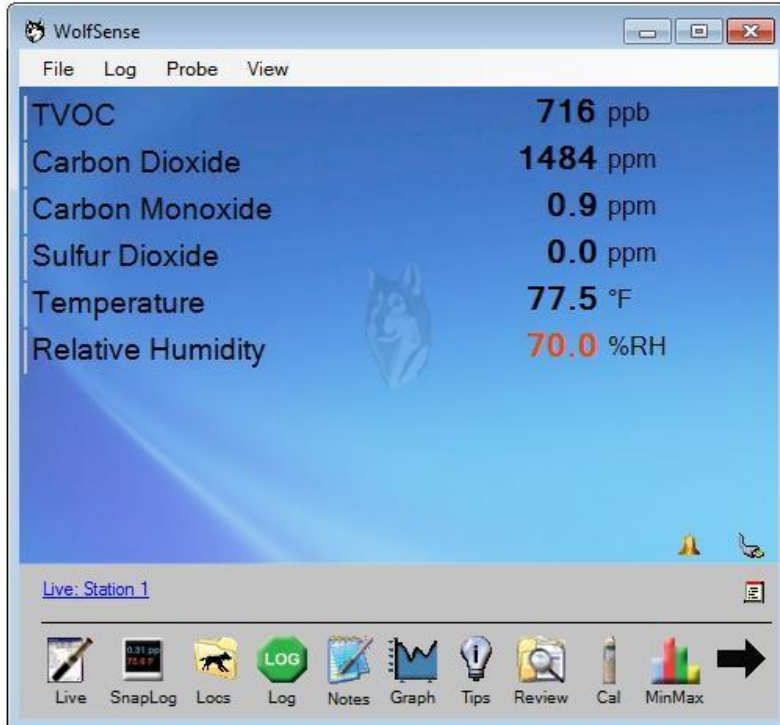
To check the Auto-Run command is in place, go to **'Log, Status'** and see if there are any pending Auto Run commands.

To cancel an Auto-Run command, click on **'Log, Auto Run'** and click **'Cancel Pending Log'**.


To stop both Trend and Auto-Run logs click on the  button or click **'Log, Stop Trend Log'**.


Using Alarms

Alarms and Warnings may be defined for each parameter and will alert you when a value goes above or below a set point. The values may be the instantaneous readings, a 15-minute STEL average or an 8-Hour Time Weighted Average (TWA).




IMPORTANT: The alarm feature in WolfSense 2014 is meant to be informational only, for interpretation by an educated professional. It is not intended to be relied upon for use as a personal safety monitor.

When any alarm is active (defined) on the system, the yellow alarm icon will be displayed in the lower-right corner of the LIVE screen:  Clicking on this icon will display a report of current alarm states.

When any alarm is tripped, the parameter will change colors and alarm icon will start to “ring” by moving back and forth and displaying an exclamation point:  Additionally, if sounds have been enabled and the speaker volume is turned up, an audible alarm will be given.

Alarms are set for a specific parameter, not a specific probe. Once an alarm is set for a parameter, it will be active for any probe hooked up to the system that measures that parameter.

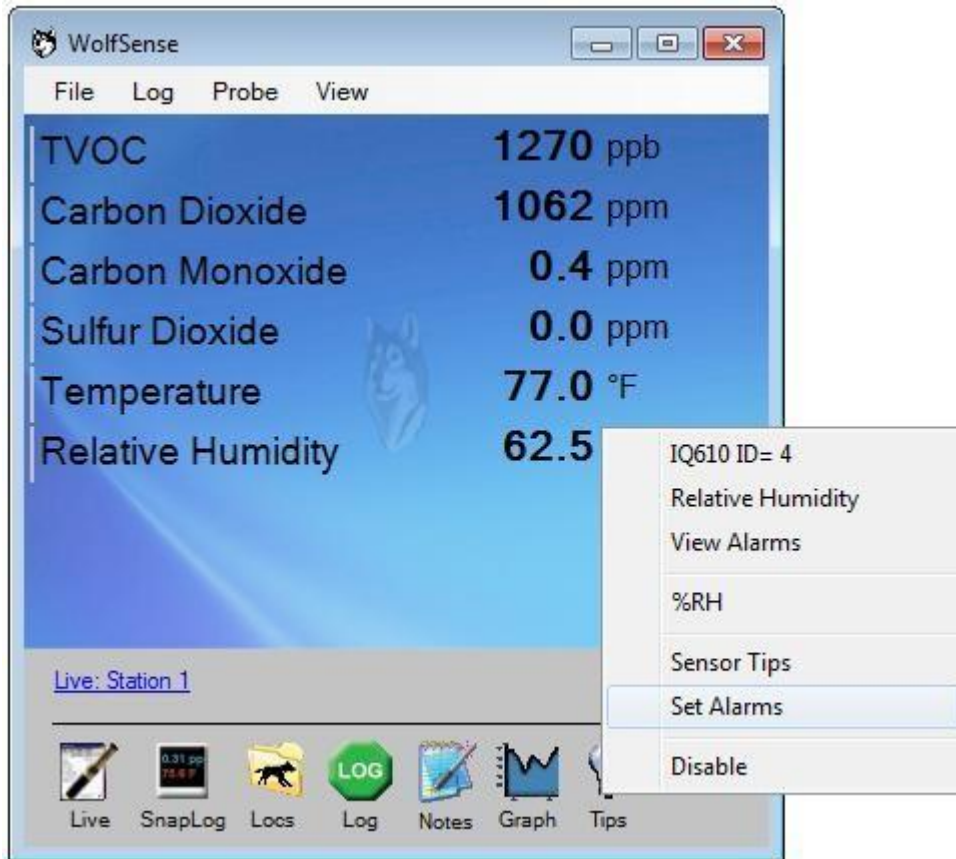
STABILIZATION NOTE: Alarms will not start to give warnings for a parameter until ALL readings on a probe have stabilized. Of particular note is the longer stabilization time for the PID sensor. While the alarm system is inactive waiting for stabilization, the inactive alarm icon is display: 

Alarm Averaging:

15-minute STEL and 8-hr TWA Alarms utilize zero-weighted averages. The averages do not start accumulating until all parameters on a probe have stabilized. If you change units for any parameter, all alarm averages are reset. For low warnings and low alarms utilizing 15-Min STEL and 8-hr TWA, the entire average buffer needs to be filled before an alarm is tripped. This means if you have an 8-hr TWA

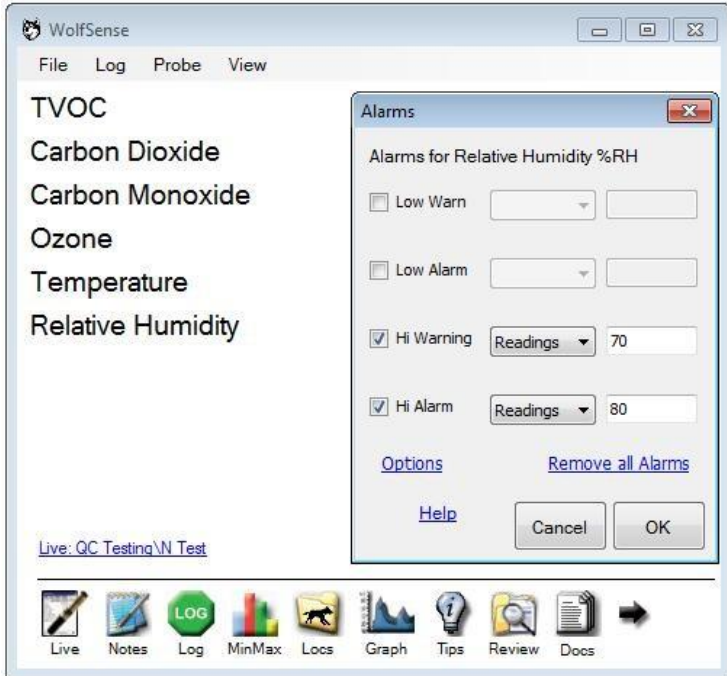
low alarm set for O2, the alarm is not analyzed for a minimum of 8 hours while the full 8-hr average is computed. This is only the case for LOW Warnings and Alarms because of zero-weighting.

Setting Alarms



To set an alarm for a parameter, Tap (or right-click) on the parameter name to display the Reading Menu. Select SET ALARMS.

NOTE: If you are using multiple probes, it does not matter which probe you use to set the parameter. Once an alarm is set for a parameter, it is valid across all probes that contain that parameter.



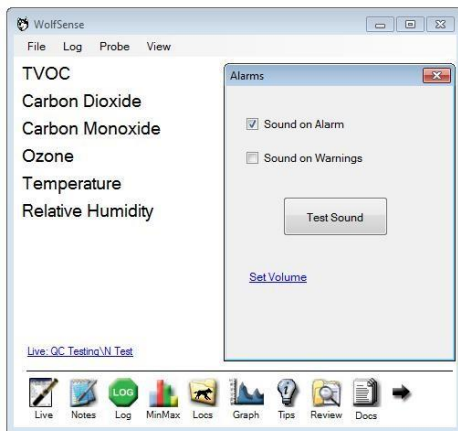
LOW and HI Warnings may be set for each parameter. Select the CHECK box in front of the alarm type to activate the alarm. Choose the reading type drop down to select if the alarm or warning is to be determined based on the instantaneous reading, the 15-minute STEL average or the 8-Hr TWA. NOTE: When using STEL/TWA for hi warnings and alarms, the averages are zero-weighted. If at any point the reading of the weighted average goes above the set point, the alarm/warning is tripped. With low warnings and alarms, the averages are also zero-weighted and therefore the averaged value is not used until the full average is calculated (15 mins or 8-hours). The current zero-weighted alarm value is shown in the alarm report.

To disable an alarm, uncheck the box in front of the alarm.

The REMOVE ALL ALARMS link will erase every alarm for every parameter.

Options

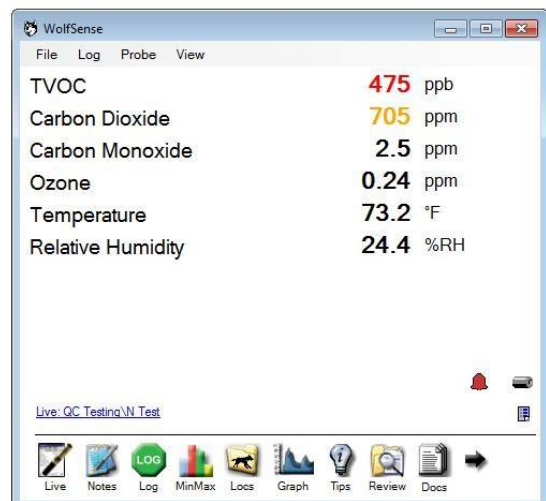
Use the options link to set sound alert options for alarms.



The system can give audio alarms on both warnings and alarms. Please make sure to test the sound and set your system volume.

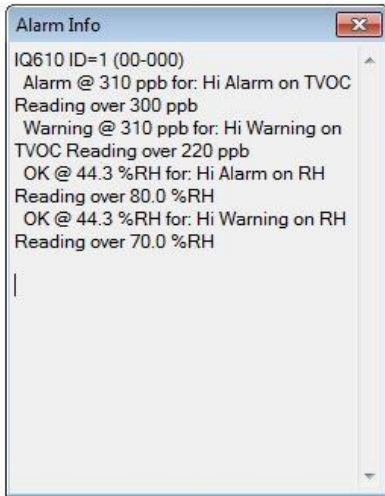
Alarm Info

When any alarm is active (defined) on the system, the alarm icon will be displayed: 🛎️. When any alarm is tripped, the alarm alert icon will be displayed: 🚨 and the readings will be shown in colors (typically Orange for Warning and Red for Alarms).



Alarm Report

Clicking/Tapping on the alarm icon 📌 will display the Alarm Report which displays the status of all alarms (Set, Warning, Alarmed).



The Alarm Report shows a list of parameters with alarm set points for each probe and the status: (OK, Warning, Alarm).

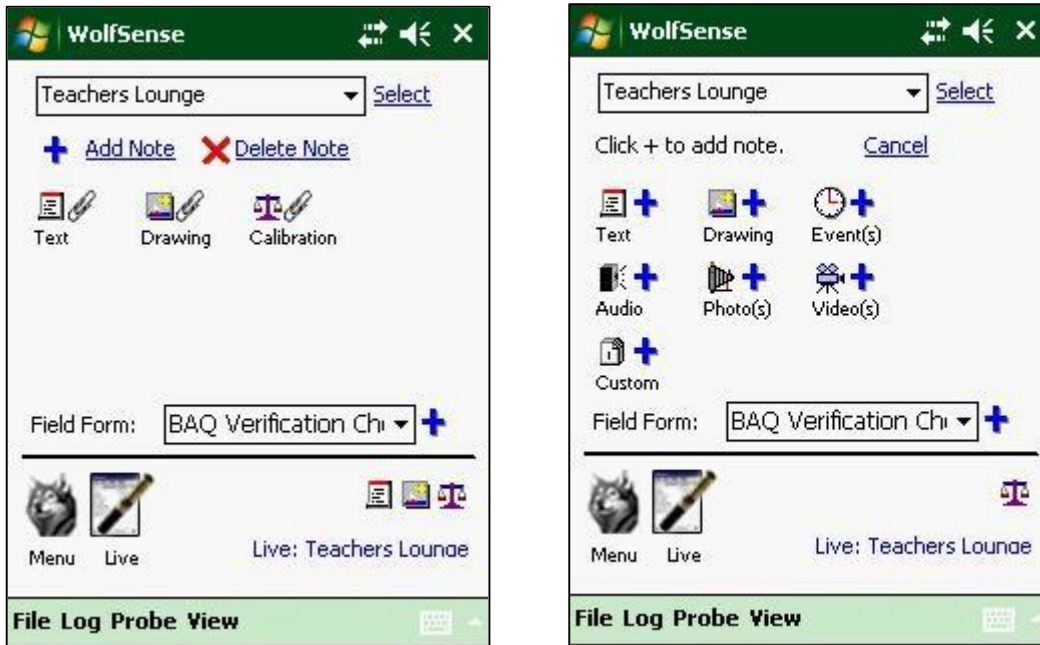
If instantaneous readings are selected, the report will show the status, current reading, set point and alarm type (hi/low).

For averaged readings, the reading displayed is the current zero-weighted average value.

The Alarm Report will auto-refresh every few seconds.

Creating Notes

Notes may be attached to logged data for documentation and productivity purposes.



To access the note system, click on the Note icon from the Menu Bar or select **Notes** from the **File Menu**.

Notes will automatically be displayed for the selected location at the bottom of the screen near the status bar.

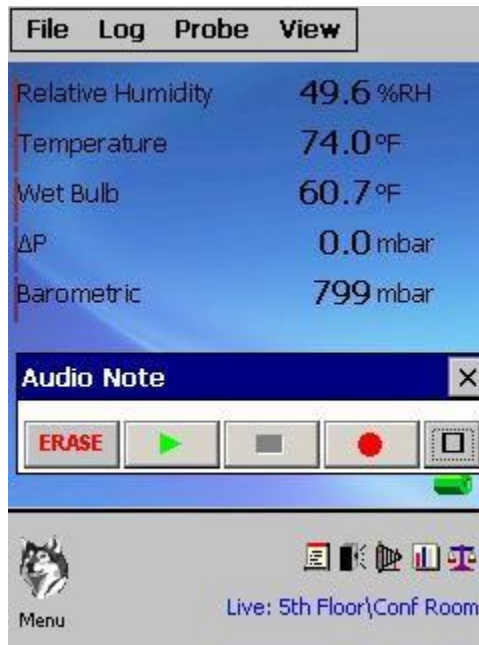
To add a note, select the Add Note link or the blue 'Plus Sign'. The screen will switch to the add mode and display the different types of notes you can add.

To delete a note, click the Delete Link and then select the note you wish to delete.

Audio Notes



Full Screen Mode



Toolbar Mode

Use the Audio Notes editor to capture audio using the Oosafe® Analyzer, WinMobile or WolfPack's built in microphone.

The Audio Notes recorder can be used in Toolbar mode or full-screen mode. In Toolbar mode, the control can be present on the screen while performing other operations like initiating the logger or reviewing readings. To toggle between toolbar mode and full-screen mode, use the ToolBar button and



maximize button. Reposition the tool-bar audio recorder by tapping/clicking in the caption bar (where the Audio Note title appears) and drag it to a new portion of the screen.

In either mode,

The RECORD button will initiate a record. If a recording already exists, pressing RECORD will append the audio file.

STOP will stop either playback or recording.

Use PLAY to review the audio note.

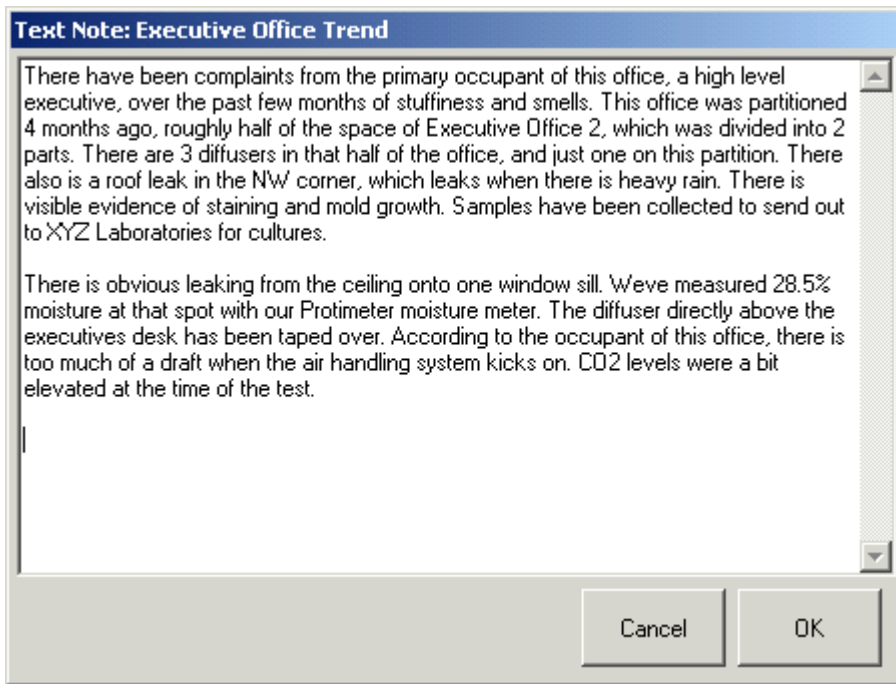
ERASE will delete the entire audio note.

A rough estimation of the amount of recording capacity you have remaining is displayed in full-screen mode.

Click the X in the upper-right corner of the control to close the recorder.

Text Notes

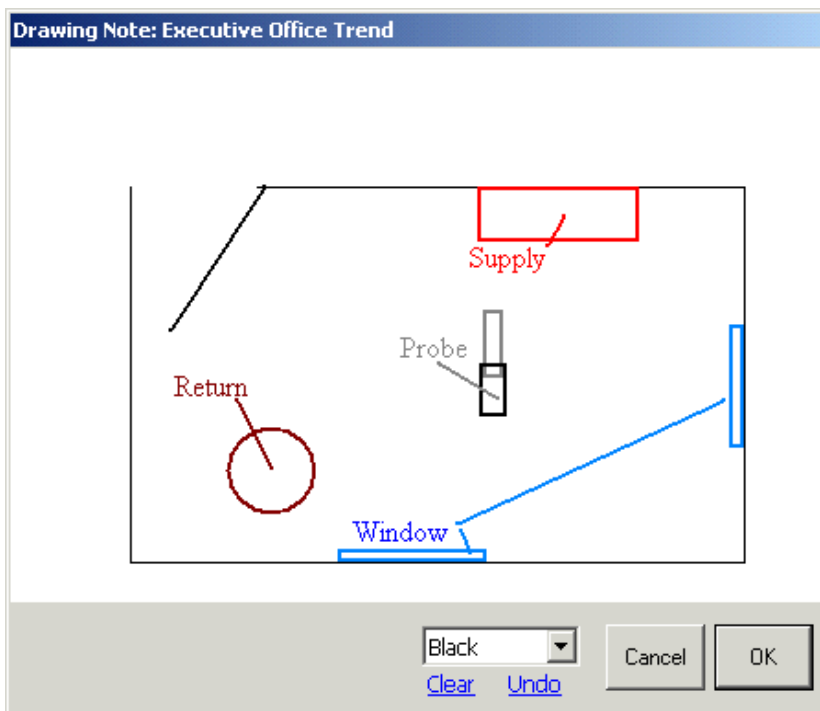
To add text, click on the page and type. To start new lines of text press **'Enter'** and use the arrow keys to move through the text.



To exit without saving the note, click **'Cancel'**.

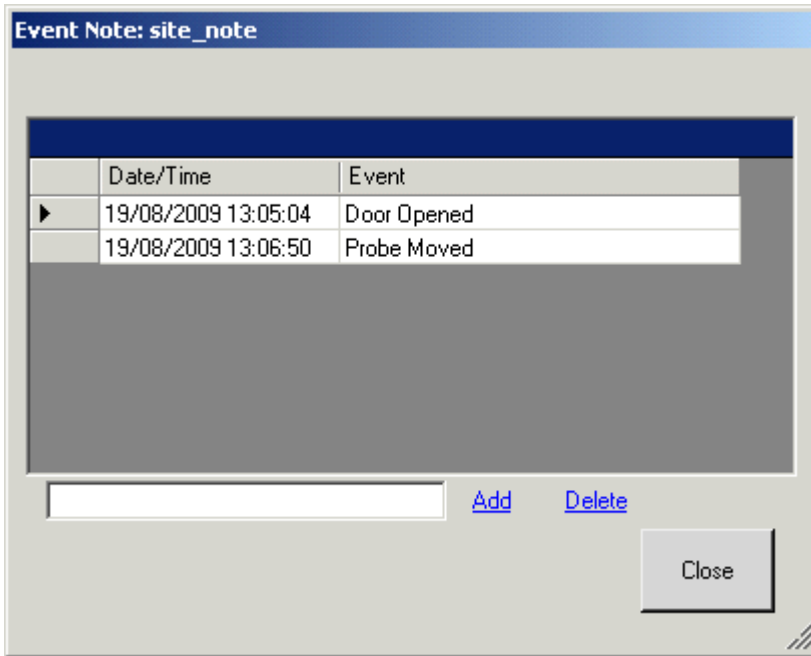
To exit and save the note, click **'OK'**.

Drawing Notes



Drawing Notes allow you to attach visual information such as location plans and sketches.

Event Notes



Event Notes allow you to enter text information with a time tag attached.

To add an event, type a short description into the field and click '**Add**'. It automatically records the time and date.


To remove an event afterwards, click on the event and then click '**Delete**'.

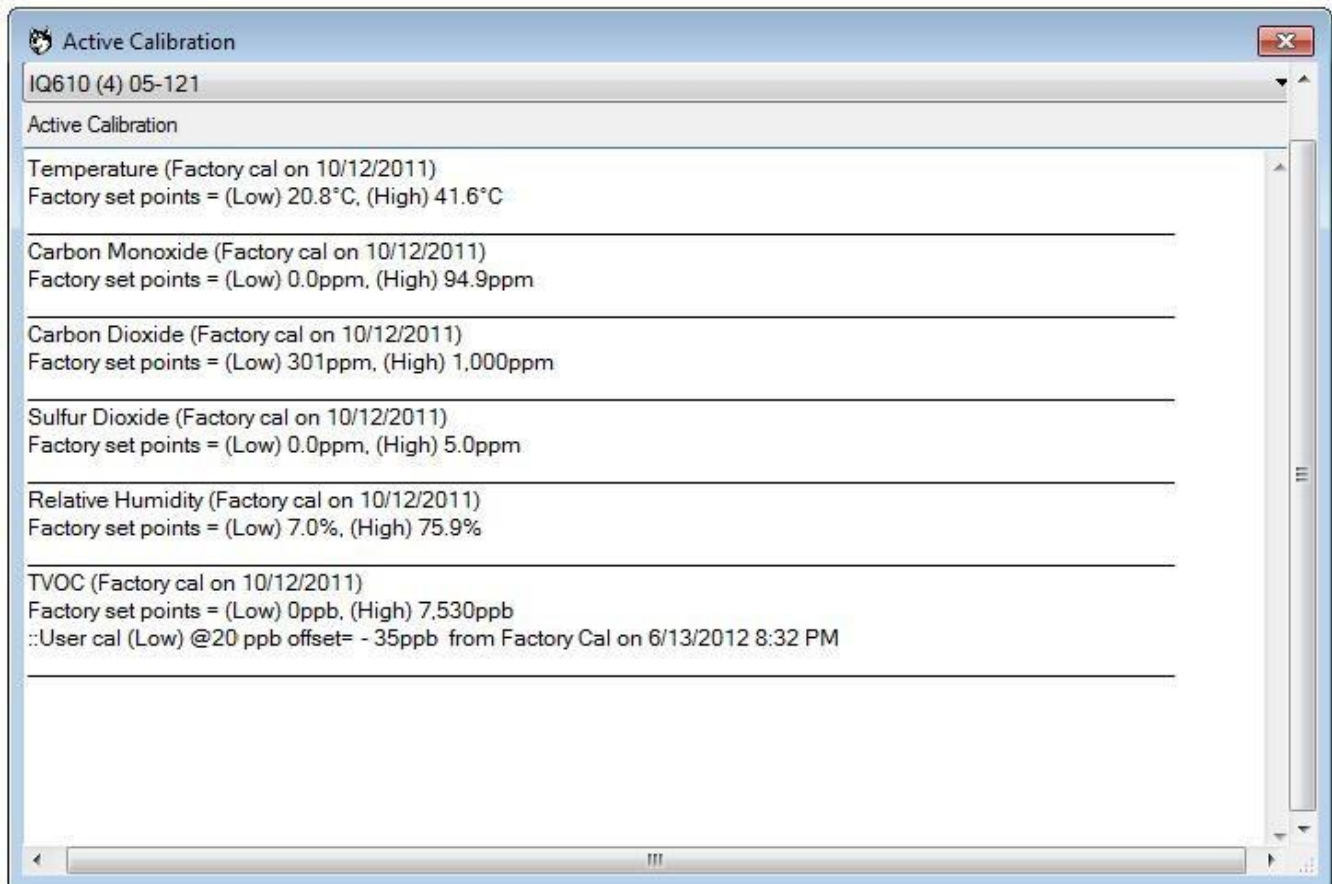
To save the events, just click '**Close**'.


Hint: When you later generate trend graphs of your data, using WolfSense PC desktop download and analysis software, you can select to have "Event Notes" auto-display as a graphic vertical bar (at the time that they occurred) within the trend graph.

Calibration Data

Calibration data includes date, time, last factory calibration, last user calibration and set points for every parameter in each probe. The calibration information is stored in the probe's non-volatile memory. When initiating a log (Trend, Snapshot, AutoRun), a snapshot of the current calibration information is stored with the readings in the location file.

To access the current active calibration data, select Probe Menu / Advanced Calibration / Display Active Cal. To access the calibration information associated with a logged data file, click on the Calibration Icon  from the Notes Screen or Notes Bar.



Calibration info can also be accessed using WolfSense PC by transferring the location data and then clicking on the calibration icon in the bottom left hand corner. 

Reviewing Data

Select Open from the File Menu or select the Review button from the Icon Menu to review logged readings.

If the logger is currently logging to the location you are reviewing, click the REFRESH link to update the display. When reviewing data while logging, only the most recent 100 rows of logged data are displayed.



The screenshot shows the WolfSense software interface. At the top, there is a green title bar with the Windows logo, the text "WolfSense", and window control icons. Below the title bar, the text "Teachers Lounge 2" and a "Refresh" button are visible. The main area contains a table with two columns: "Date/Time" and "TVOC ppb". The table has a scroll bar on the right and a status bar at the bottom. Below the table, there are icons for "Menu" (a wolf head) and "Live" (a pencil), along with a "Stats" icon (a bar chart) and the text "Live: Teachers Lounge 2". At the bottom, there is a green bar with the text "File Log Probe View" and a keyboard icon.

Date/Time	TVOC ppb
8/19/10 2:25:18 PM	724
8/19/10 2:26:18 PM	720
8/19/10 2:27:18 PM	716
8/19/10 2:28:18 PM	715
8/19/10 2:29:18 PM	716
8/19/10 2:30:18 PM	711
8/19/10 2:31:18 PM	710

Clicking on the **Stats** (Min/Max/Avg) icon  brings up a list of the min, max and average values.

Probe Calibration

The probe may be calibrated in one of two ways:

- x at the Factory, according to SparMED standards
- x by the User (described in the next section).

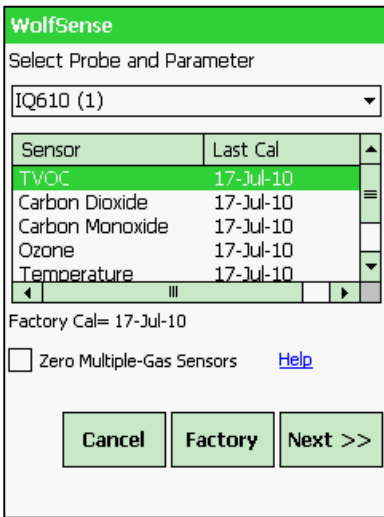
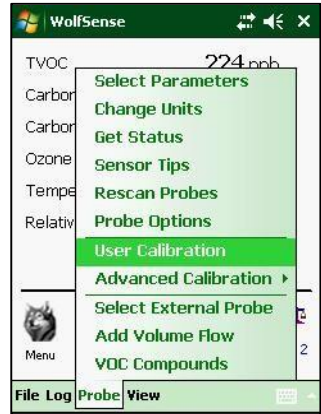
With the appropriate calibration kit / equipment a user calibration can be performed on most gas sensors. Standard calibration kits include a regulator, calibration hood with tubing & reference gas to calibrate VOC's, CO₂, CO and other gases. Additional reference gases for H₂S, NH₃, etc can be purchased. A calibration kit can also be purchased for user %RH calibration; check with your local sales rep for additional info. Contact your SparMED sales representative or local distributor for availability of additional reference gases, or for questions regarding user calibration of Temperature, Barometric Pressure or Particulate sensors.

SparMED recommends annual Factory (or Authorized Cal Lab) calibration of all sensors. Each Electrochemical gas sensor is different so reference sensor tips in the WolfSense software for additional calibration recommendations. PID (VOC) sensors *require* the user to perform more frequent calibrations. A User calibration of the PID sensor should be performed each week that it is in use, or even better, before every use. For most other gas sensors, performing interim User calibrations can improve accuracy and reliability. Specific applications, protocols or S.O.P.s may require more frequent User (or Factory) calibrations.

User Gas Sensor Calibration

Important: For optimum results; before attempting calibration, the probe should be powered on for a minimum of 5 minutes, to fully stabilize prior to calibration. However, if a PID (VOCs) sensor is being calibrated, a longer stabilization period (20 minutes minimum) is recommended. If the PID sensor has been subjected to a “dirty” environment, powering overnight prior to calibration can be useful to “burn off” pollutants that have accumulated on the sensor. Proper sensor stabilization is imperative for successful User calibrations.

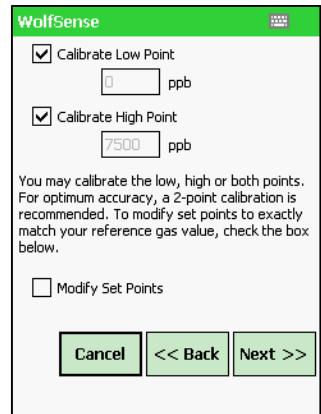
Access the Calibration Wizard by tapping User Calibration from the Probe Menu.



Select the parameter you wish to calibrate from the list of available sensors.

Click NEXT to continue.

You can choose to calibrate the high point, the low point or both points. For the most accurate calibration, SparMED always recommends that you calibrate both points.

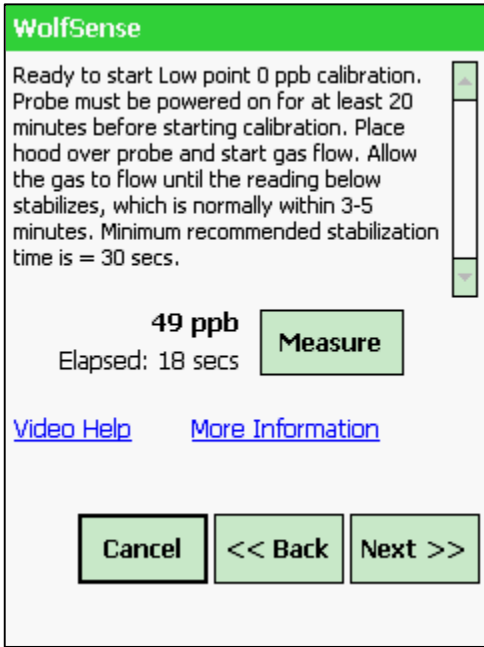


The default low and high gas concentration values for the selected gas are displayed. If your reference gasses are of a different concentration check the Modify checkbox. Refer to your Calibration Reference Gas labels for the proper values. Then enter the new values into the Low and High Point fields and press NEXT

Note: For VOC calibration, the zero reference gas recommended is Hydrocarbon-Free, 0.0 ppm gas. The high-point reference gas (for the low range ppb sensor), should be Isobutylene between 5.0 ppm and 10.0 ppm

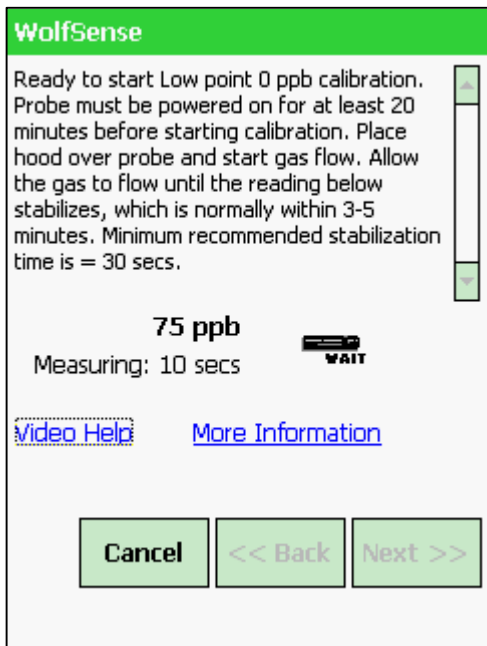
See chart on following pages for more details.





Screw the 0.3 LPM flow rate regulator snugly onto the tank. Place the Calibration Hood over the probe. To turn on the regulator, turn the dial counter-clockwise to open/ clockwise to close. (On older regulators, push the dial in and turn a quarter turn.) To check gas is flowing, put calibration hood to ear and listen for a slight hiss (although this is not recommended for Cl₂, HCl or other reactive reference gases).

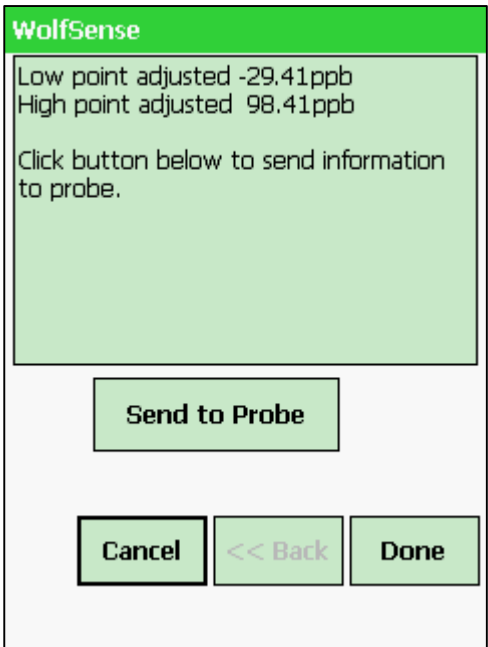
The readings will update on the display. After a couple of minutes the readings should stabilize and not fluctuate. When the readings are stabilized, press the MEASURE button.



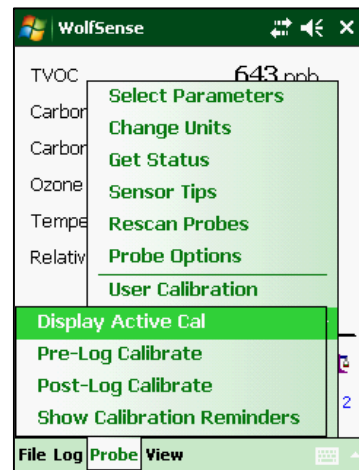
The Calibration Wizard will measure the points and display a message on successful calibration.

Repeat the procedure for the High Point calibration.

When the calibration is complete, a report will be displayed showing the adjustments made to the readings. Tap the SEND TO PROBE button to send the readings to the probe.



After the calibration is complete, you can view the current settings by selecting Probe Menu / Advanced Calibration / Display Active Cal



Restoring Factory Default Settings may be necessary if the User Calibration does not appear to be reading as expected. To restore factory settings, Select Probe menu, User Calibration, select the parameter to reset and press the FACTORY button. If you do not select a specific parameter all sensors will be reset to factory defaults.

Typical Calibration Set Points and Gas Ranges

In order to properly calibrate your probe, SparMED recommends that the following gas and concentrations be used:

Gas	Range	Typical Set Point
CO	Low	0.5 ppm
CO	High	95 ppm
CO ₂	Low	375 ppm
CO ₂	High	1250 ppm
VOC	Low	0 HC Air*
VOC	High PPB range	7500 ppb or 10,000 ppb
VOC	High PPM range	3500 ppm or 5000 ppm

* NOTE: Zero Hydrocarbon Air cylinders may contain a mixture of CO and CO₂ (typically specified on the label), and may be used for the low cal of those gases with reduced accuracy. For optimum accuracy, it is recommended that reference gases closer to the CO LOW and CO₂ LOW calibration values referenced above be utilized to calibrate the CO & CO₂ sensors.

Exiting the Software

On WinMobile/PocketPC and Lap versions, select **Exit** from the **File** Menu to shut down the software. On Lap, you may also use the X in the top right corner of the application to shut WolfSense down. Note that on WinMobile/PocketPC, use the X in the top right corner simply hides the application and allows it to continue functioning in the background.

On Oosafe® Analyzer and WolfSense platforms there is no reason to shut down the software. Simply place the unit in Stand By or Power Down mode. However, if you are instructed to shut down the software to upgrade the software, choose **Exit** from the **File** Menu.

Video Help

Take advantage of this highly useful feature! On-board help videos are available demonstrating how to change probe batteries, calibrate a probe, reset an Oosafe® Analyzer or Mobile PC, utilize certain accessories, as well as other educational video help briefs, Please access them from the menu under File/Help/Video Help

You may alternatively find them on-line at:

<http://videos.graywolfsensing.com/>

Downloading Data from your Gray Wolf Data Logger

Logged data (locations) and notes collected in-situ are stored in non-volatile memory on your Oosafe® instrument. There are two methods to retrieve the data from your device.

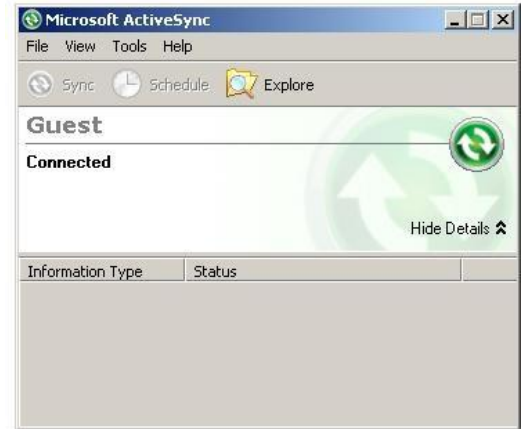
Method1: Using the USB Cable to Sync to a PC

This method is applicable to all version of WolfSense software on all devices.

Using the USB cable supplied with your equipment, you can connect your Oosafe® Analyzer/ WolfPack/SoMo to your Windows 2000, XP, Vista or 7 PC.

For **Windows 2000 and XP Systems**, Microsoft Active Sync version 4.5 must be installed on your PC. Active Sync is a free product from Microsoft. It can be downloaded from the Drivers section of:

<http://support.graywolsensing.com/>



For **Windows Vista and Windows 7 and Windows 8**, the built-in Mobile Device Center is used to connect your Oosafe® instrument to your PC. If your Oosafe® instrument is not automatically detected, you may need to install the Mobile Device Center update which is available from the drivers section of:

<http://support.graywolsensing.com/>

Once the connection is made between your PC and Oosafe® Instrument, ActiveSync or Mobile Device Center will open on your desktop. (It is not required to set up a partnership or “set up your device” in order to download data).



WolfSense PC

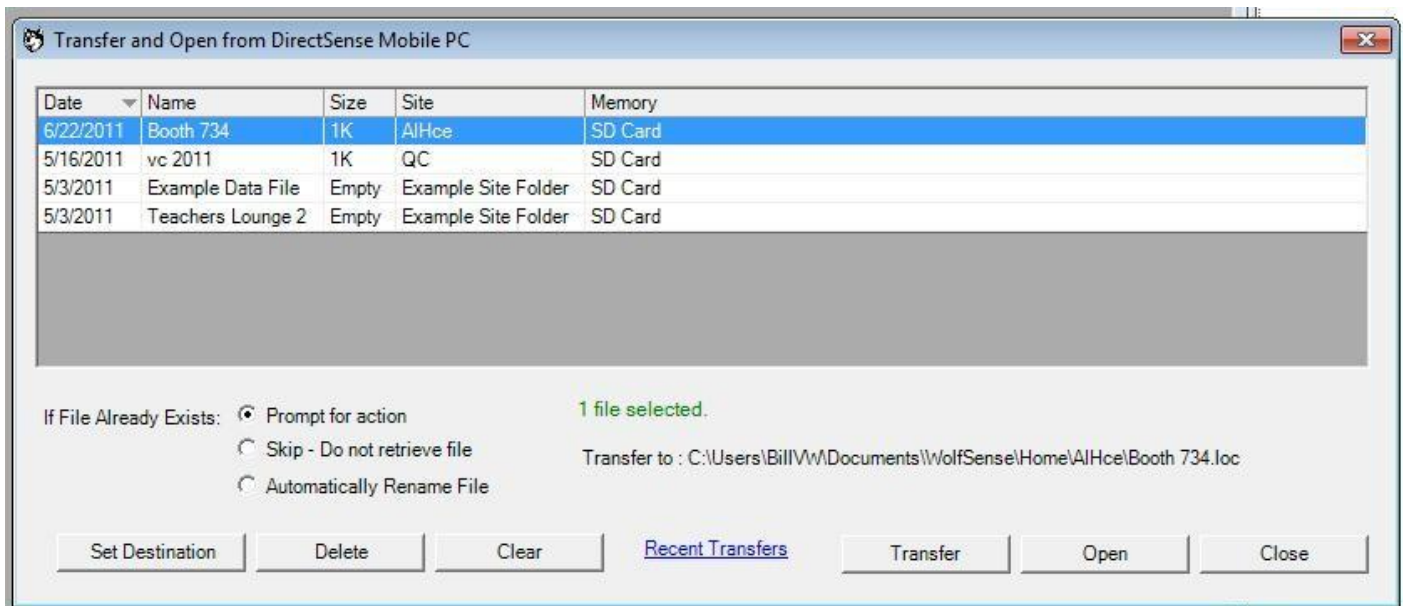
WolfSense PC is installed on your Desktop Computer and facilitates Analysis, Graphing and Reporting of your logged data. WolfSense PC is provided on the USB Key sent with your unit or alternatively may be downloaded from <http://updates.graywolfsensing.com/>

Contact SparMED if prompted for a password.



To download your logged data, open WolfSense PC and use the TRANSFER button to retrieve the readings and notes from your instrument.

Click the Location file you wish to TRANSFER and click OPEN. You may select multiple files by holding CTRL while clicking files.



ActiveSync/Mobile Device Center Troubleshooting

- x If using ActiveSync (Windows XP), make sure you have the latest version (4.5)
- x Disconnect the Oosafe® Analyzer/ WolfPack/ DirectSense from the PC and perform a soft-reset. Reconnect.
- x Try connecting the unit into a different USB port on your PC.
- x Connect the unit to a different PC with ActiveSync/Mobile Device Center installed.
- x Replace the USB cable. Oosafe® Analyzer/ WolfPack units use standard USB Cables available in consumer electronic stores. For DirectSense Mobile PC's you would need a cable replacement from GrayWolf.

Method2: Using a USB Key or SD Memory Card to retrieve data from your GrayWolf Datalogger.

This method is applicable to devices running WolfSense 2011.11 or later.

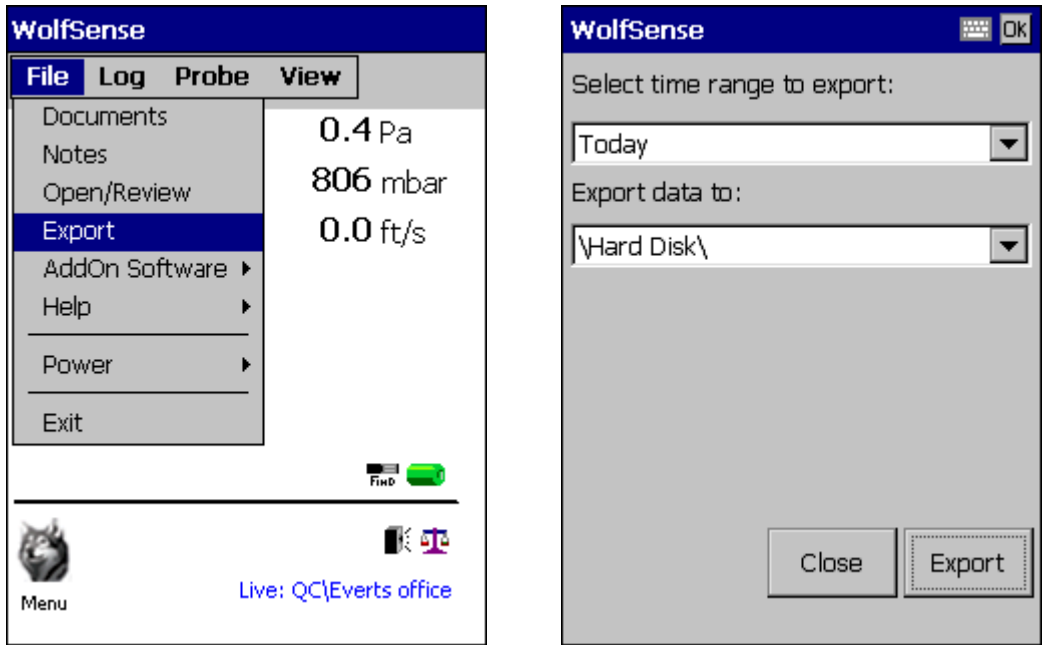
For Oosafe® Analyzer and WolfPack

Connect the optional AD-L7F-USB Cable to the top LEMO plug on the Oosafe® Analyser (or to the side port of a WolfPack outfitted with this option.) Place a SparMED USB Key (up to 2GB) into the end of the AD-L7F-USB Cable.



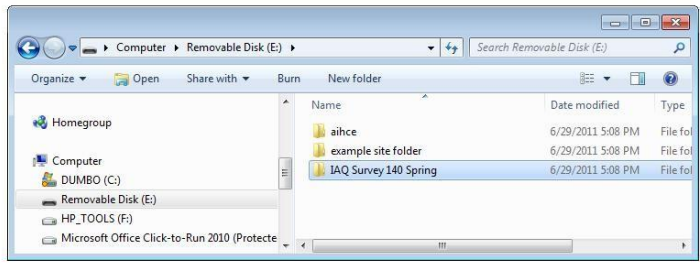
NOTE: It is possible to use your own USB Key but not all USB Keys will work with the Oosafe® Analyzer/WolfPack. To ensure the USB key will work please order it from SparMED.

Once the USB Key is connected, access WolfSense 2014 software on the Oosafe® Analyzer/WolfPack. Select the FILE menu and EXPORT.



When the EXPORT dialog appears select the time range to Export. Choices are TODAY, THIS WEEK, THIS MONTH, THIS YEAR and ALL. The selected range of data will be exported to the USB Key organized in folders corresponding to the Site Folders you set up on the instrument. All Notes and Calibration Info are also exported.

Once the data is exported onto the USB Key, remove the key from your Oosafe® Analyzer/WolfPack and insert the key into one of the USB slots on your PC.



Copy the files from the USB key to a folder

on your PC using Windows Explorer.



Then use the OPEN toolbar button (or File / Open) in WolfSense PC to view the files.

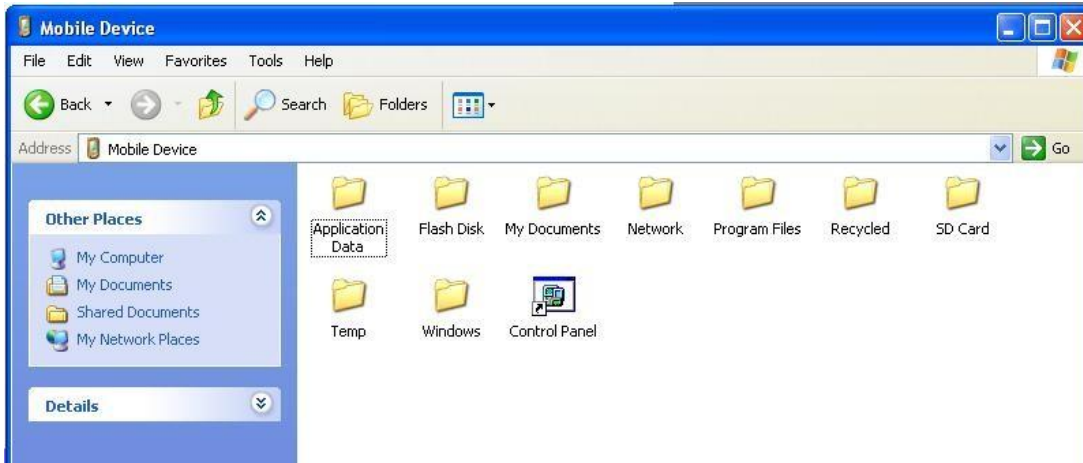
In addition, a CSV file of the logged readings with timestamps is exported. You can open this CSV file on Mac, Linux and other systems or open the readings directly into Excel.

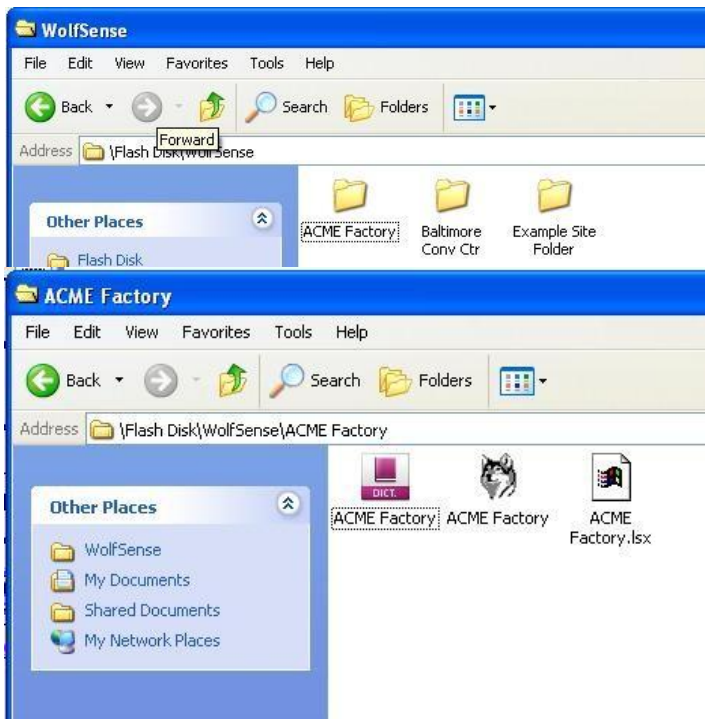
Method 3: Manually Transfer Files using Windows Explorer

Connect the Advanced Sense/WolfPack or DirectSense logger to your PC using the USB cable as described in Method 1 above.

After establishing connection via ActiveSync or Windows Mobile Device Center, open **Windows Explorer** on your PC. (Start Menu / My Computer or hold Windows key down and type E). Listed under MY COMPUTER, below the hard drives and CD-ROM's attached to your system, you will see an icon for MOBILE DEVICE or OOSAFE® ANALYZER. Double-Click the icon to open the files on your GrayWolf Data logger.

Double-click the FLASH DISK folder. Then double-click WOLFSENSE.





Under WolfSense you will find SITE and LOCATION files organized into FOLDERS. Drag the SITE FOLDERS containing the files to your computer's MY DOCUMENTS folder. Alternatively, you can drag the entire WOLFSENSE folder to your PC to sync everything. NOTE: if you only drag individual files you may lose some information. Be sure to grab entire folders or all files in a folder.

Once the files are on your PC, double-click the files with the WOLF icon to open them in WolfSense PC. Or you may use the OPEN menu item in WolfSense PC.

Addendums

Electrochemical Probe Addendum

In order for probes with electrochemical sensors installed to operate properly it is important that the batteries be left in the probe. The device may contain sensors that require a bias voltage, provided by the two D-Cells. If the batteries are removed the probe will require additional time (up to 10 minutes) for the readings to stabilize. If the batteries are removed for a long period of time (>1 day) the sensors may take longer than 24 hours to stabilize.

PID Probe Addendum

In order for probes with a PID sensor installed to operate properly it is important that a user calibration of the PID sensor be performed each week that it is in use, or even better, before every use. Frequent calibration of the PID sensor will maximize the accuracy of the VOC reading. If the probe has not been used for some time, it is best to “burn-in” the PID sensor by connecting the probe to your system and starting up the WolfSense software for up to 20 minutes before calibrating. A longer burn-in may be considered if the PID sensor has been subjected to contamination. A detailed description of how to perform a user calibration can be found in the preceding section.

Using Thermocouple Probes with Oosafe® Analyser and WolfPack

If you are using a thermocouple probe while you have connected a USB cable between your WolfPack or Oosafe® Analyser unit and your Desktop PC or Notebook PC, electrical interference may influence the readings. Use a USB cable with a suppressor to minimize interference. (USB cables with suppressors will have a protrusion containing a magnet between the two ends of the cable.)

If you need any additional help, or technical support with any SparMED product, you can email: info@sparmed.dk

Warranty

SparMED ApS will warranty parts and labor for any manufactured defects in its products for 12 months. The warranty does not cover abuse (e.g., products crushed, dropped, electrically shocked, heat-stressed or water-saturated), hazard, accident, transportation or causes beyond ordinary use. All service, including repair, maintenance and sensor replacements, must be performed by SparMED. Defects on finished goods manufactured by others, such as computer systems, are excluded and are covered by the original manufacturer's warranty (usually one year).

Limitation of Warranty and Liability for SparMED Products

- (a) Except as otherwise agreed in writing, SparMED warrants, under normal conditions of operation, each product sold (except for finished products not of its manufacture) against defects of material and workmanship, provided that such product has been properly utilized. This warranty applies to the original purchaser only and shall commence to run from the date of shipment and shall continue for a period of twelve (12) months. In any event, SparMED's liability for any such defects of material and workmanship shall not exceed the cost of replacement of defective parts upon timely notification of such defect in writing delivered to SparMED. SparMED shall not be liable for damage or destruction caused during delivery or caused other than by employees of SparMED.
- (b) SparMED shall, at its option, repair such defects or replace the parts or products found defective. All defective parts are to be returned immediately, freight prepaid, to SparMED. SparMED will make no allowance for repairs or alterations made by the purchaser unless made with the advance written consent of SparMED. SparMED assumes no liability for costs of disassembly of defective parts and equipment. Shipment by purchaser of all repairs and replacements under this warranty are F.O.B. SparMED's factory, North American service facility or authorized service representative, and method of shipment will be determined by SparMED. The purchaser will pay shipping costs and insurance in both directions of products, parts, or components shipped for warranty service hereunder. The purchaser will be responsible for risk of loss in both directions. Replaced parts or components will become the property of SparMED. Replacement parts or components may contain recycled, refurbished, or remanufactured parts equivalent to new parts and shall be warranted for the remainder of the original warranty period for the products.
- (c) Products that are not covered by warranty, such as products that have been subjected to physical misuse or are beyond the warranty period, will have an estimate submitted before the repair work commences. All out-of-warranty repairs carry a 90-day warranty from the date of return shipment.
- (d) SparMED shall not be liable for delays, deprivation of use, or any other damages, direct or indirect, which may result to the purchaser because of defects in the product or because of the purchaser's inability to operate it or use it to his satisfaction. SparMED will not be liable to anyone for special or consequential damages of any kind. SparMED neither assumes nor authorizes any person to assume for it any other obligation or liability with respect to SparMED products. SparMED does not warranty that the equipment is fit for any particular purpose unless notice of the purpose is specifically submitted to SparMED in writing and is specifically confirmed by an officer of SparMED to you.
- (e) Finished goods manufactured by others, including computers, batteries, carrying cases and bar coding wands are not warranted by SparMED, but are covered by the original manufacturer's warranty.

EXCEPT FOR THE FOREGOING EXPRESS WARRANTY, THERE ARE NO WARRANTIES, REPRESENTATIONS, OR GUARANTEES, EXPRESS OR IMPLIED, EXCEPT AS ARE EXPRESSLY SET FORTH HEREIN. THE FOREGOING WARRANTY IS THE ONLY WARRANTY MADE BY SPARMED. ANY IMPLIED

WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS PRODUCT IS LIMITED IN DURATION TO THE ONE-YEAR DURATION OF THIS WRITTEN WARRANTY AND IS STRICTLY LIMITED TO THE RETURN AND REPAIR OR REPLACEMENT OF THE EQUIPMENT. IN NO EVENT SHALL ANY CLAIM EXCEED THE PURCHASE PRICE OF THE EQUIPMENT PAID BY THE PURCHASER. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS OR FOR THE EXCLUSION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.



SparMED Technical Support

For Drivers, Updates, TechNotes visit:

<http://support.graywolfsensing.com/>

For Software Contact:

e-mail: info@sparmed.dk

Phone: + 45 39 40 25 03

Web: <http://www.sparmed.dk>

For Videos on Changing Probe Batteries, Probe Calibration, etc visit:

<http://videos.graywolfsensing.com/>