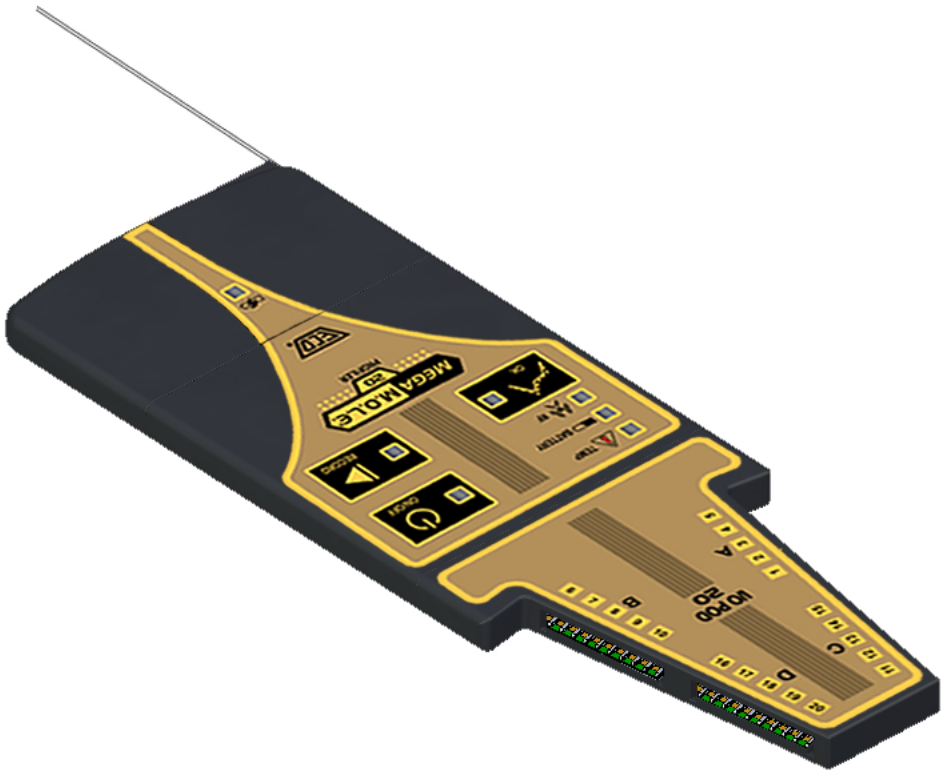

*MEGA*M.O.L.E.® 20 Wireless RF Option

Users Guide

A47-6342-07 Rev 4.3.7

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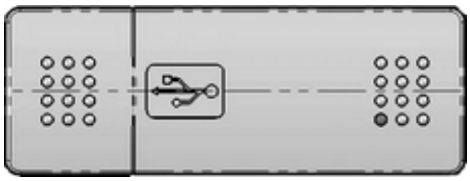
1.0 Equipment

The wireless RF option for the MEGAM.O.L.E.® 20 Profiler produces real time profiles for immediate data collection. The Transmitter is an built-in component that when used with the antenna sends data to the RF transceiver which connects to a USB Port on the computer.

Wireless RF Transceiver:

This is not a memory "thumb drive" but a full featured RF transmitter and receiver (Transceiver) used to create the wireless RF link to the MEGAM.O.L.E.® 20.

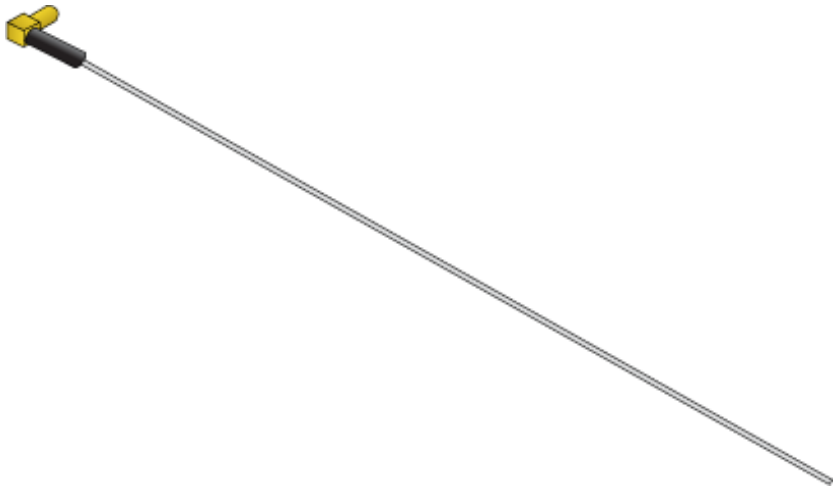


Front Side

Back Side

Wireless RF Antenna:

This is the high temp Teflon antenna tuned to 2.45gHz.



2.0 Setup & Operation

The Setup topic offers a brief description of the system hardware configuration.

2.1 M.O.L.E. Profiler Communications Setup

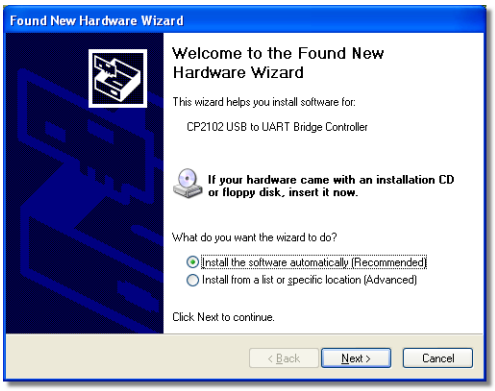
To connect the M.O.L.E. Profiler:

The software must be installed prior to communications setup. (Refer to ***Software Installation*** in the MAP Help system for more information).

1) Insert the USB computer interface cable into a computer USB port and the other end into the battery Data Port.

The first time a M.O.L.E. Profiler is connected to a computer two drivers will be installed. One is a device driver for the M.O.L.E. Profiler and the other is for USB communication.

2) During installation of the device driver, when prompted to select the location of the device driver, select "***Install the software automatically***". Follow the remaining wizard instructions closely.

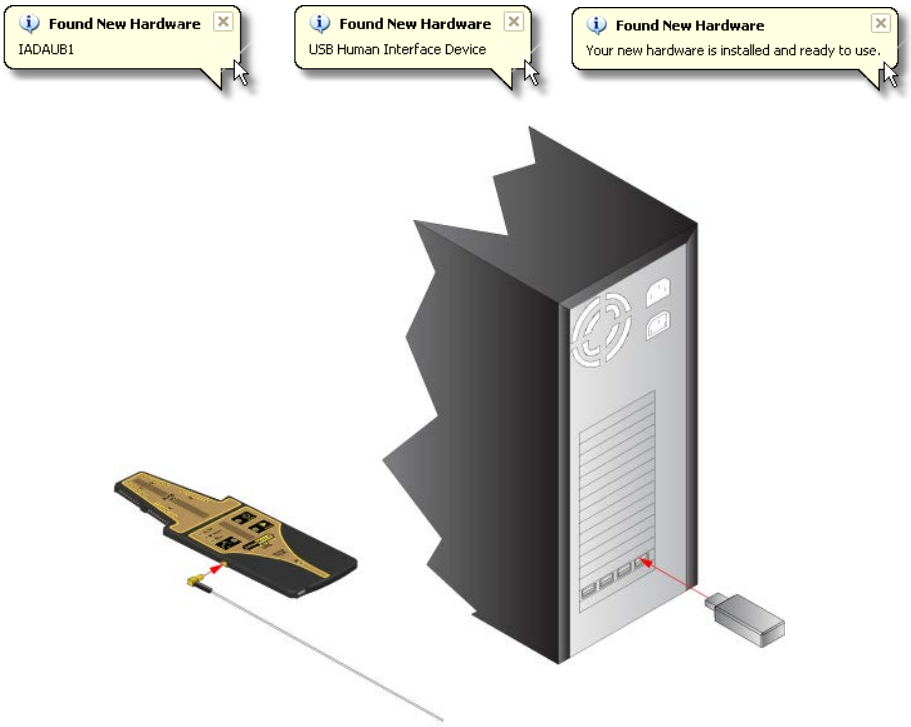


3) During installation of the USB driver a message box appears, select the ***Continue Anyway*** command button and the driver will be successfully installed.

2.2 Wireless Setup & Operation

1) Insert the Wirless RF Transceiver into an available USB Port and the Antenna to the M.O.L.E. Profiler. The first time the Transceiver is connected to a computer, the drivers will automatically be installed. The operating system displays the installation status on the taskbar.

The M.O.L.E. Profiler is designed to work with the included antenna **ECD P/N: E47-6342-11** only. Never make any changes or modifications to the Wireless RF components. Such changes are not expressly approved by ECD and could void the user's authority to operate the equipment.



The Transceiver can either be connected directly to a computer USB Port or a USB extension cable. Using an USB extension cable can be a simple way to get the Transceiver to a better reception area without moving the PC. No matter which method is used, keep wires and other metal objects away from the Transceiver.

Good

Poor

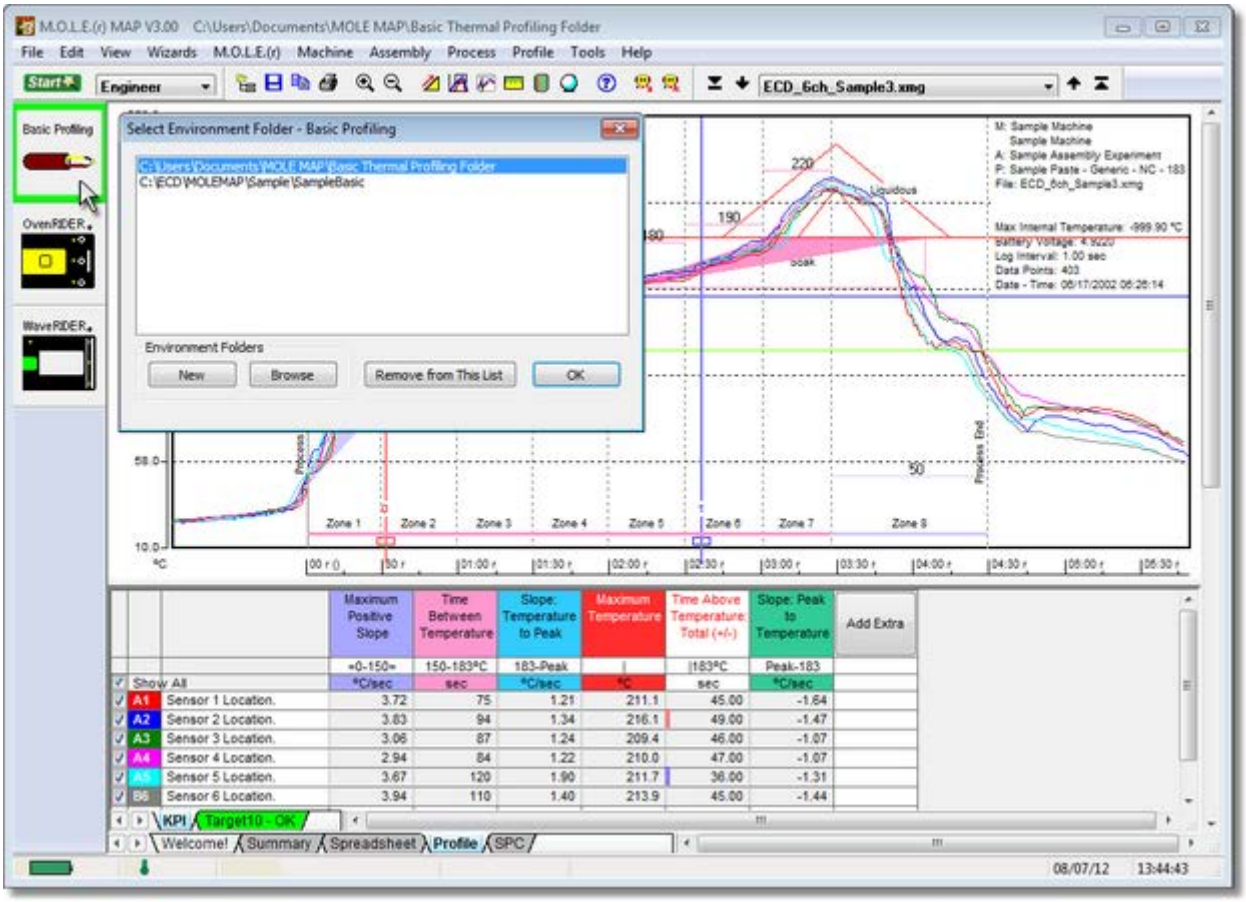
2) After the Transceiver is connected to a computer, it needs to be detected by the software to properly communicate.

3) Start the M.O.L.E.® MAP software program.

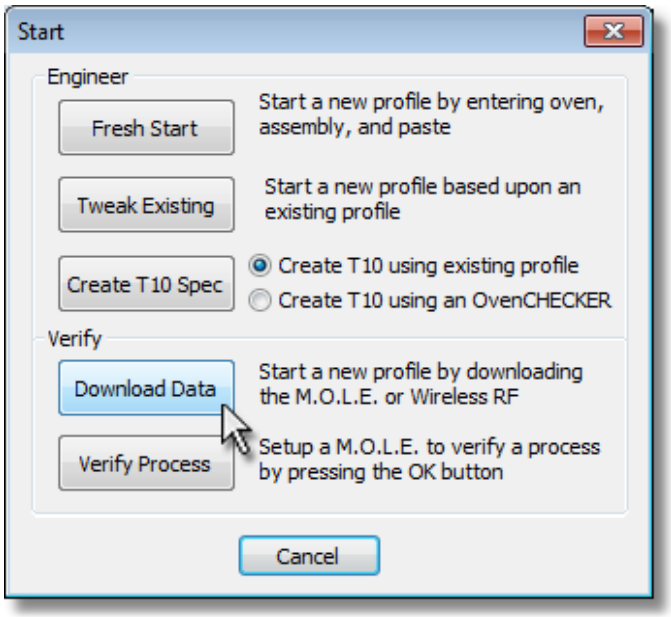
Confirm the M.O.L.E. Profiler power is on. If it is not This can be done by pressing the On/Off button or by connecting it to the PC USB Port.

4) Set an Environment. Either open an existing Environment Folder or create a new one.

If the desired Environment is not displayed on the ***Environment Sidebar***, the user can use either the ***Open Environment Toolbar button*** or select the ***Open Environment Folder*** command from the ***File Menu***.



5) Select the ***New (Start)*** button on the toolbar. The Start dialog box appears with the five workflow wizard options.



6) On the ***Start*** dialog box, click the ***Download Data*** command button and the workflow wizard appears.

When navigating through the wizard, the step list on the left uses a color key to inform the user of the current step, steps that have been completed and remaining steps.

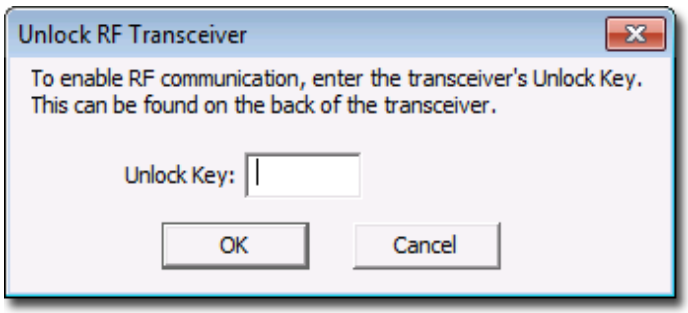
Current Completed Remaining

7) Select the desired instrument from the dialog box. If a M.O.L.E. Profiler has already been selected during a different process, the software automatically selects the M.O.L.E. Profiler connected to the COM Port previously used.

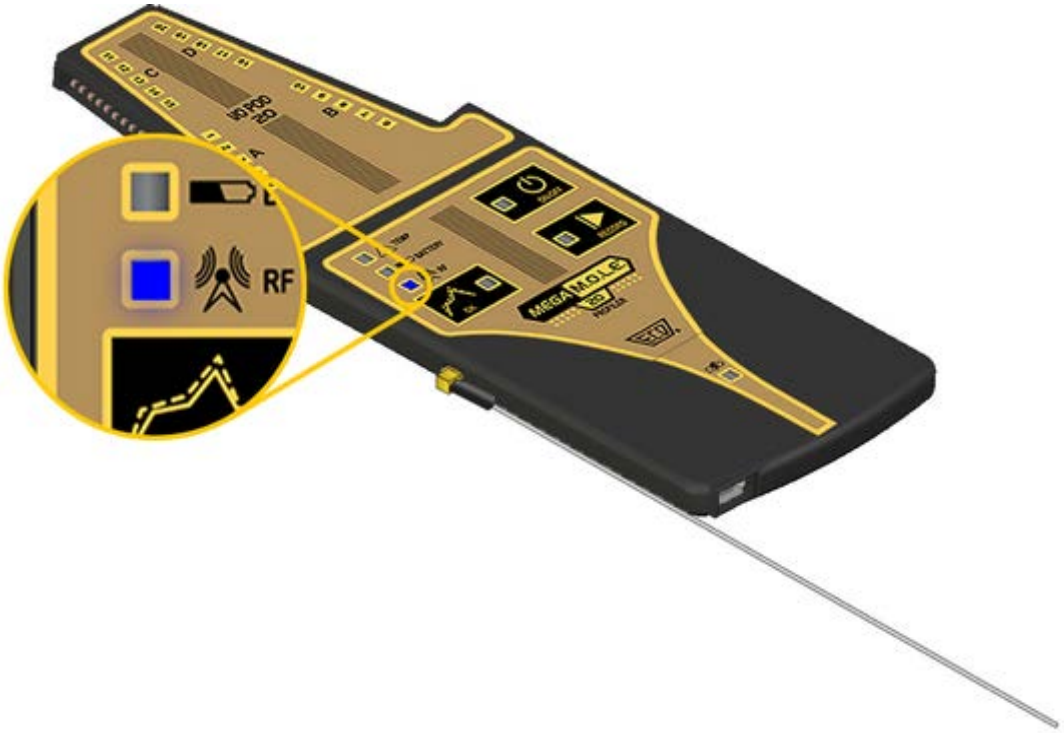
If the software does not detect a M.O.L.E. Profiler, connect it to the computer and click the ***Scan for Instruments*** command button to search again. M.O.L.E.® MAP software allows multiple instruments to be connected to a computer at one time. Selecting the ***Scan for Instruments*** command button will detect all instruments and display them in the dialog box. If no instrument is detected the software displays all of the Demonstration thermal profilers to select from.

When the software detects the Wireless RF Transceiver for the first time, the user will be prompted to enter the 5 digit Unlock Key located on the product ID label.

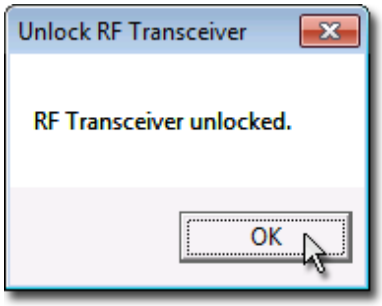
8) Enter the Unlock Key in the field and select the ***OK*** command button.



9) If the unlock key is successfully entered, the software informs the user with a message box and the Blue RF indicator on the M.O.L.E. Profiler flashes.

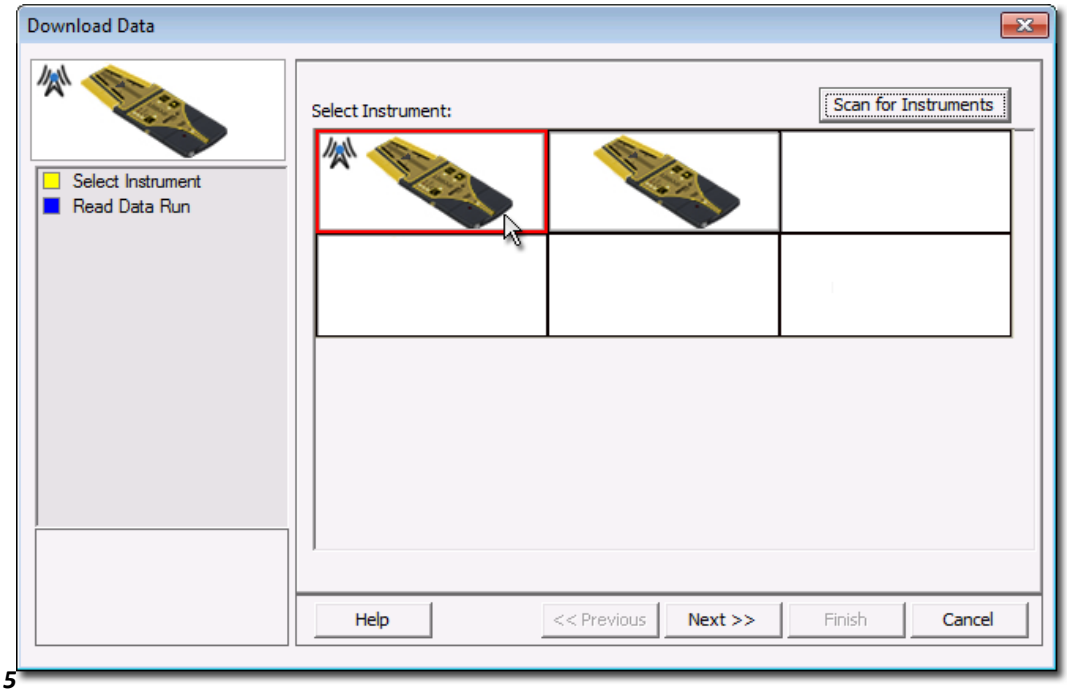


10) Select the ***OK*** command button to continue.



If the software does not detect a M.O.L.E. Profiler, using the communication cable connect it to the computer and click the ***Scan for Instruments*** command button to search again. M.O.L.E.® MAP software allows multiple instruments to be connected to a computer at one time. Selecting the ***Scan for Instruments*** command button will detect all instruments and display them in the dialog box. If no instrument is detected the software displays all of the Demonstration thermal profilers to select from.

11) Select the MEGAM.O.L.E.® 20 profiler from the dialog box and then click the ***Next*** command button to continue.



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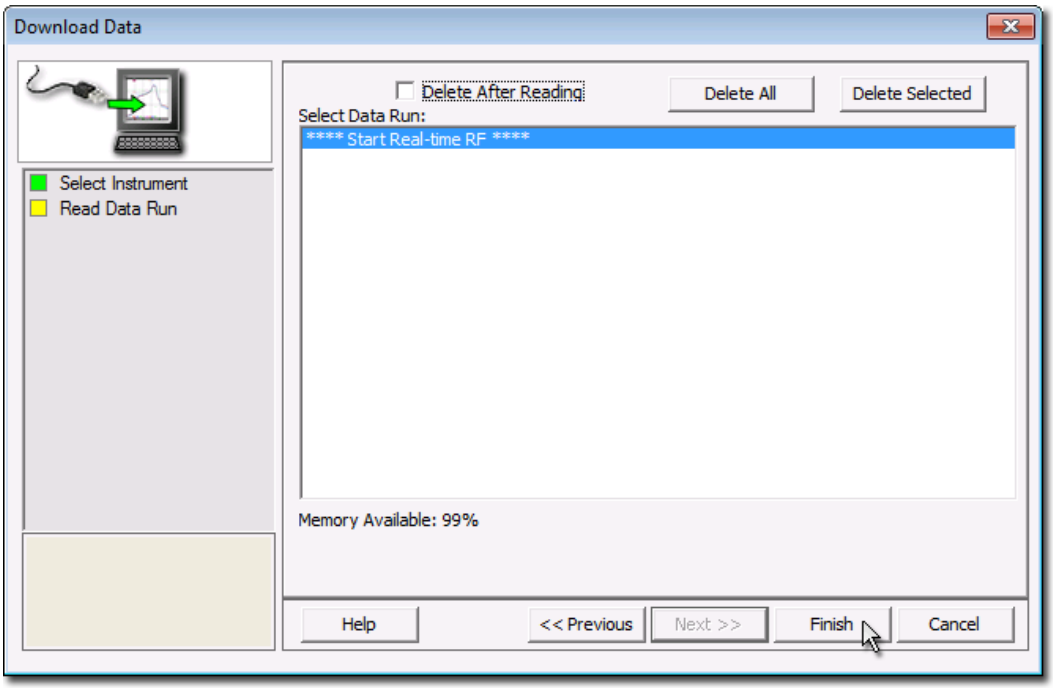
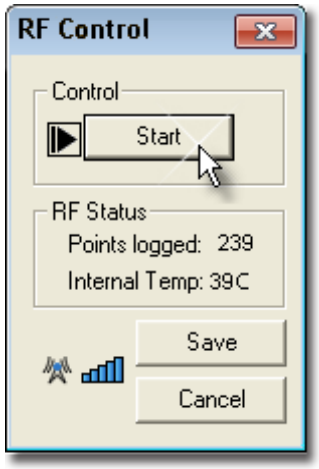
12) Click the ***Finish*** command button to continue receiving RF data, or ***Cancel*** to quit the command.



13) Once the RF Control dialog is displayed, it includes the following command buttons and information:



Start/Stop:

- Starts logging real-time data and is displayed on the Data Graph.
- Once the ***Start*** command button is selected it automatically changes to a ***Stop*** command button which Stops the M.O.L.E. Profiler logging real-time data.

RF Status:

- Points logged: Indicates number of data points received.
- Internal Temp: Indicates the current internal temperature of the M.O.L.E. Profiler.
- RF Status: Signal strength indicator with 5 bars indicating relative strength of the RF signal.

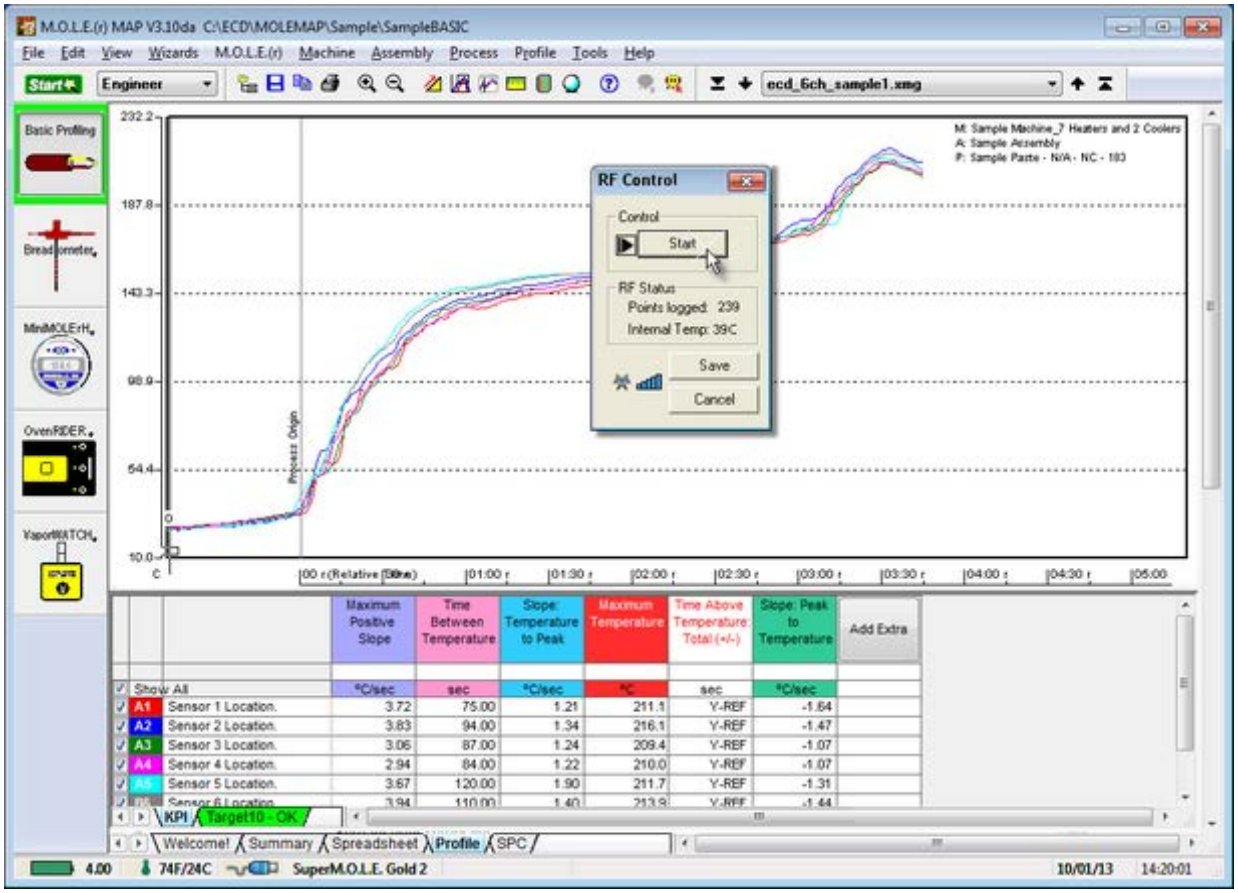
Save:

- Stops the M.O.L.E. Profiler logging real-time data and allows the user to save that data. If there is not enough data recorded, the software displays a "Not enough data to profile" message, and it will cancel the data run.

When real-time data is logging using the MEGAM.O.L.E.® 20 Profiler, some of the transmitted data may not get logged on the Data Graph. While transmitting the real-time data the M.O.L.E. Profiler also records the data run. The software prompts the user to either decide to connect the M.O.L.E. Profiler to the computer and replace the real-time data with the data run stored in the M.O.L.E. Profiler, or retain the real-time data and have the software substitute the gaps with a straight line between missing points.

Cancel:

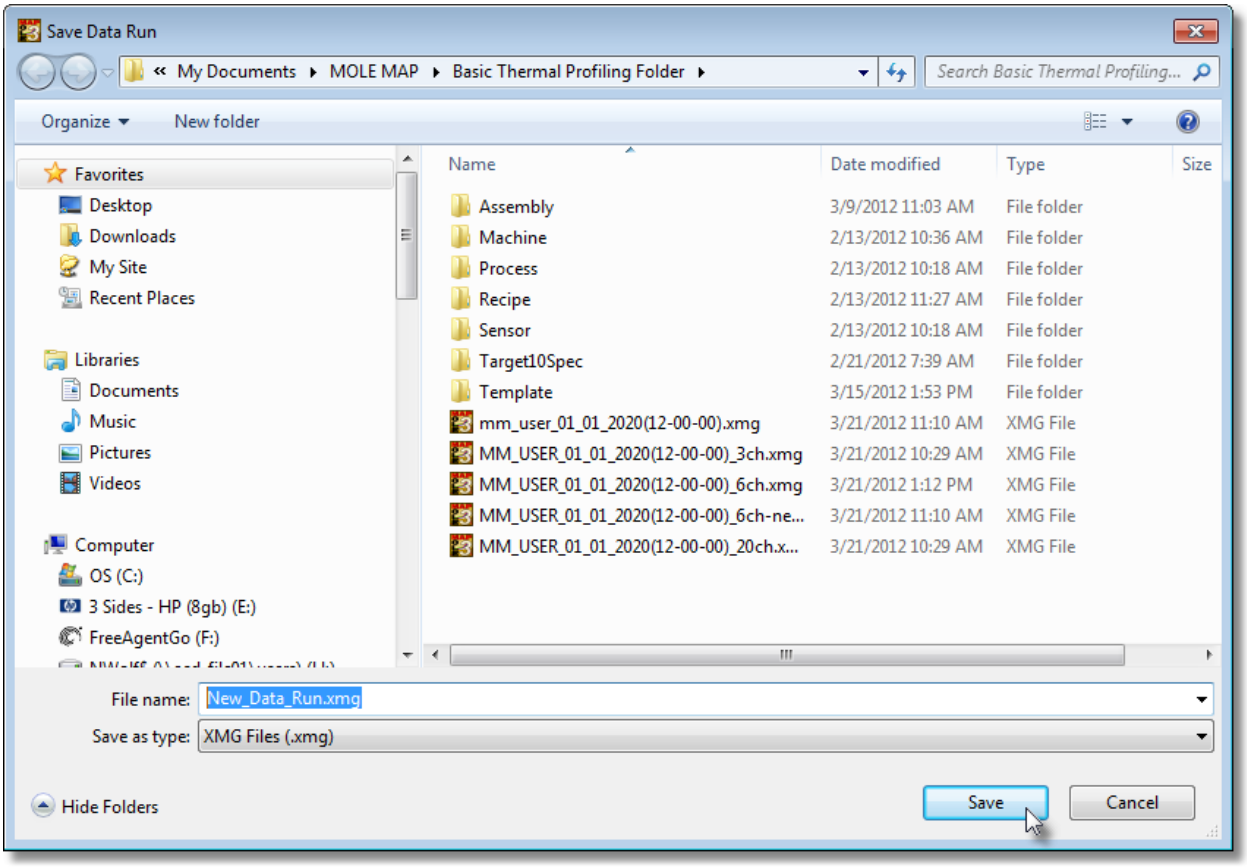
- Stops the M.O.L.E. Profiler logging real-time data discarding any recorded real-time RF data.



When real-time data logging has stopped, the software automatically processes the data. Depending on how long the data run is, it may take a few moments to complete.

14) Click the ***Save*** command to save the data run. The software prompts the user to specify a file name (*.XMG).

If a data run (***.XMG**) is saved in a different Environment Folder other than the currently selected, the software automatically activates the new Environment Folder. This process does not delete any data run files in the previously set Environment Folder and can be quickly accessed using the ***Recent Environment Folders*** on the ***File*** menu.



15) When finished, click the ***Save*** command button to complete the process.

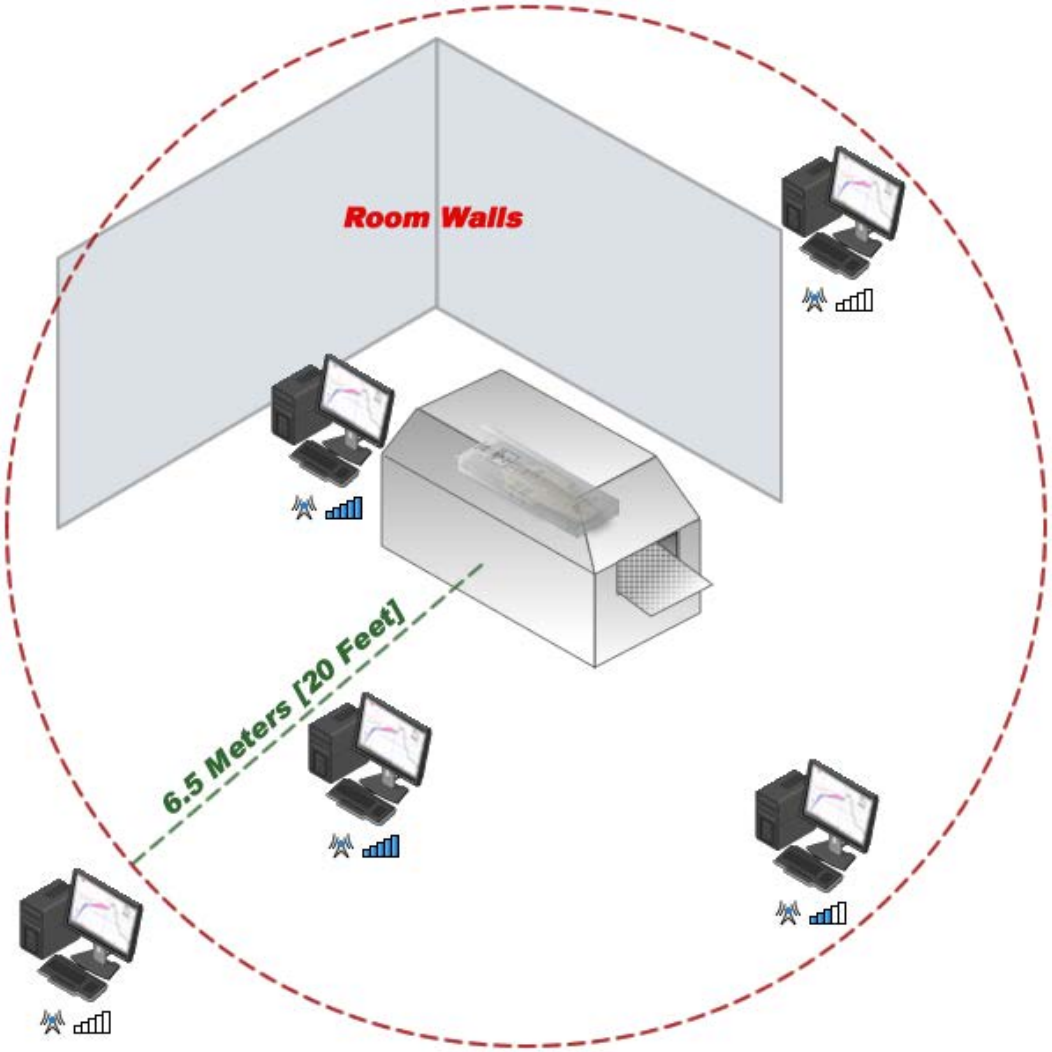
Wireless RF communication tips (MEGAM.O.L.E.® 20):

RF signals come and go as either the M.O.L.E. Profiler moves through the oven or the Transceiver is moved around like FM radio static as you drive in your car. Moving a few inches in any direction can turn a low signal strength to high signal strength. This gets worse as the Transceiver gets further from the M.O.L.E. Profiler, to a point where no position works.

When setting up the Wireless RF system, the transceiver should be placed as close to the machine as practical. A standard USB extension cable can be used to move the Transceiver closer to the machine or up and away from metal or other interference objects.

Typically if the Transceiver is 3 meters [10 feet] away from the M.O.L.E. Profiler in a machine any location in the room, reception should be fine. Reception is also often a bit better when the Transceiver is perpendicular to the direction of travel through the machine. Metal objects such as carts, walls, or other equipment in the room will impede transmission.

The transmitting Antenna and its proximity to metal can have a big affect. Care should be taken to make sure the Antenna is not laying on metal parts in the machine or barrier box. Keeping the Antenna straight is best.



Wireless RF Range

3.0 Service and Troubleshooting

3.1 How to Get Additional Help

If you have problems, let us help you. We offer many ways to service your problems. You can call our Service/Test technicians, visit our web site to view our FAQ section (Frequently asked Questions) or send us e-mail explaining your problem in detail.

When calling our Service/Test technicians or sending us e-mail, please include the following information:

- Product Description (i.e. SuperM.O.L.E. Gold)
- Product Serial Number
- Software Version

Here is how to contact ECD:

Telephone: +(1) 800.323.4548
+(1) 503.659.6100
FAX: +(1) 503.659.4422
Email: support@ecd.com
Internet: http://www.ecd.com