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This Quick Reference Guide is designed to help the user to familiarize themselves with the equipment, perform basic hardware setup/communications and operation. For detailed information on both Hardware & Software components, please refer to the Help system accessible in the M.O.L.E.™ MAP Software.

To access the help system start the software and use any of the methods listed:

- Select the **Help Button** on the **Toolbar**.
- Pressing the shortcut key **[F1]**
- On the **Help menu**, click **MAP Help**.
**Air thermocouple:**
Detects oven entrance, transit and ambient temperatures around test product

**Depth Stop:**
This allows for consistent insertion depth of the probe into the test product.

**Insertion Probe:**
Five internal Thermocouples find the slowest to heat spot in the test product.

**Probe Tip:**
Sharp tip for easy insertion into test product

**Grip Bar:**
This is where the user grasps when removing from the test product

**Connector Organizer:**
This is the interface from the Probe to the M.O.L.E.™ Profiler.
1. Insert the USB computer interface cable into a computer USB Port and the other end into the Data/Charging Port.

A completely discharged Power Pack takes about 8 hours to be fully charged. For quick charges, it can be charged for 15 minutes allowing one 10 minute data run to be performed.
1. Insert the Flash Drive in a USB Port and the AutoPlay menu appears.

2. Select *Open folder to view files* button on the *AutoPlay* menu to launch Windows® Explorer.

3. Select *setup.exe* to launch the installation.

4. Complete the installation by closely following the wizard steps.
A Software Unlock Key must be obtained from [www.ecd.com](http://www.ecd.com) or using the contact information supplied on the dialog box.

1. On the **Help** menu, click **Authorize** and the Authorization dialog box appears.

2. Select **Web Authorize** and enter the required information on the M.O.L.E.™ MAP Software Authorization form.

3. Retrieve the 16-digit Software Unlock Key from the confirmation email and enter it into the dialog box. Next select **Start MAP** to complete the process.
1. Plug the USB cable into a computer COM Port and the other end into the M.O.L.E.™ Profiler Data Port. The Auto-Play panel appears in the lower right corner of the desktop. This panel displays the four most common MAP commands.

2. Select **Start M.O.L.E.™ MAP**
3. On the M.O.L.E.™ menu, click the **Select Instrument** command.

4. Select the desired instrument from the dialog box. If there are none displayed, click the **Scan for Instruments** command button to detect all available instruments.

5. Click the **OK** command button to accept.

Once a M.O.L.E.™ Profiler has been selected, the software automatically selects that M.O.L.E.™ Profiler if it used again on the same COM port.
This operation procedure guides you through a typical process on how to set a M.O.L.E.™ Thermal Profiler up for performing a data run with the BreadOMETER™. For additional detail, consult the Help System in the software.

The M.O.L.E.™ Thermal Profiler depends on the MAP (Machine-Assembly-Process) software to control how it collects and interprets data. Several kinds of data runs may need to be performed to achieve desired information, or the same data run may be performed repeatedly over time to monitor one process. Either way, each data run must be set up at least once.

The MAP software includes wizards that help you get started quickly, even if you are a beginner or infrequent user.
STEP 1: SETUP INSTRUMENT

1. Open the M.O.L.E.™ MAP software.
2. Connect the M.O.L.E.™ Thermal Profiler to the computer.
3. Make sure the M.O.L.E.™ Power Pack battery is fully charged. When a M.O.L.E.™ Thermal Profiler is selected, the software status bar displays the current battery voltage.
4. Set an Environment. Either open an existing Environment Folder or create a new one.
When navigating through the wizard, the step list on the left of the dialog box uses a color key to inform the user of the progression through the wizard.

- Current
- Completed
- Remaining

5. On the *M.O.L.E.™ menu*, select *Setup Instrument* and the workflow wizard appears.

6. Set the *Instrument Name*. 
For settings such as *Start Parameters* and *Stop Parameters*, select the **More>>** command button.

7. Select the **Sensor Platform** button.

8. Select the desired sensors then the **OK** command button to proceed.

9. Confirm the settings and then, select the **Next** command button to send the data listed in the dialog box to the instrument.
10. Confirm the assembly information such as the test *Product Description, size, sensor locations* and a *image*.

11. Click the *Next* command button.
12. Verify the instrument status. This dialog box displays the health of the M.O.L.E.™ Profiler such as battery charge, internal temperature, thermocouple temperatures.

If everything is OK, the dialog box displays a **GREEN** sign. If there are any items that may prevent the user from collecting good data, they are highlighted and a **RED** sign is displayed.

13. Select the **Finish** command button to complete the Setup Instrument wizard.
Never permit the M.O.L.E.™ Thermal Profiler to exceed the absolute maximum warranted internal temperature, as permanent damage may result. The warranty will not cover damage caused by exceeding the maximum specified internal temperature.

1. Connect the M.O.L.E.™ Profiler to the BreadOMETER™.

2. Place the M.O.L.E.™ Profiler in the appropriate Thermal Barrier and press the “ON” button then the “Record” button.

3. Close the Thermal Barrier making sure the sensor-wire harness does not get pinched.
4. Insert the BreadOMETER™ into the test product.

When inserting the BreadOMETER™ into the test product, make sure the Depth Stop does not sink below the top surface as it may cause damage to the BreadOMETER™ when removing it.

5. Pass the thermally protected M.O.L.E.™ Profiler, and test product through the process.

When retrieving the M.O.L.E.™ Profiler, BreadOMETER™ and test product use caution as it may be warm.
6. As the M.O.L.E.™, BreadOMETER™ and test product emerge from the process, remove BreadOMETER™ from the test product and lay the Thermal Barrier on a table or flat surface.

7. Open the Thermal Barrier and if the Record button is still flashing this means the M.O.L.E.™ Profiler is still logging and it should be stopped.

8. Remove the M.O.L.E.™ Profiler from the Thermal Barrier and wait a few minutes for the M.O.L.E.™ Profiler to cool. Handle it carefully, as the case may still be warm.

9. Disconnect M.O.L.E.™ Profiler from the BreadOMETER™ and place it near the PC that has the MAP installed.

If BreadOMETER™ is removed before the M.O.L.E.™ Profiler has stopped collecting data, it may cause the data to become distorted.
STEP 3: DOWNLOAD DATA

1. Connect the M.O.L.E.™ Thermal Profiler to a computer and the AutoPlay panel appears in the lower right corner of the desktop.

2. Select the *Read Instrument* command and the workflow wizard appears.
3. Select the desired data run from the M.O.L.E.™ memory list and then click the *Finish* command button to complete the wizard and read the data run from the M.O.L.E.™ Profiler.

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 or Welcome Worksheet.
4. When the data run has been downloaded, the software will prompt the user to name and save the data run file (*.XMG).

To prevent data loss, it is recommended that data run files (*.XMG) are not saved in the M.O.L.E. MAP Sample Environments. Your Environment Folders should be in locations such as *Documents* folder on your local drive.

5. The information is automatically saved in the data run file (*.XMG) and the experiment data can now be analyzed with the software tools.
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