

E-TES SD DATA CHARTING

The E-TES SD has the ability to measure and store data regarding the operating status of the unit and the environmental conditions during the drying process. The E-TES SD will hold up to one month of continuous operational data. The Charter data is sorted by the serial number of each unit and each job is given a file number so one USB Flash Drive can be used for multiple E-TES SD units.

Optional E-TES Charter Software with the E-TES SD data logging activation key, Item # ST001, is required to download, read and graph the data log information. The Charter software and E-TES SD activation code must be purchased online at tesdryingsystem.com.

The E-TES Charter software will allow you to compile reports for insurance adjusters or homeowners to support your drying procedures and billing. On the E-TES Charter preview screen you can modify the graph by clicking on the keys at the bottom of the screen to add or delete different data you want displayed on your graph.

The job can be named and data is exported to Excel to create job files, graphs and reports.



ACTIVATION KEY ENTERED AND DATA
RETRIEVED USING A REMOVABLE USB
MEMORY DEVICE

If your USB Flash Drive is protected by a password, you will need to temporarily disable the password to connect it to the E-TES SD. This goes for installing the activation key, installing updates, and downloading the job data.

From our tests it was not necessary to delete other files from the Flash Drive or disable the Flash Drive's auto-run programs, such as the SanDisk U3 Launchpad to work with the E-TES SD.

E-TES CHARTER SOFTWARE – ST001

Purchase and download the charter software and the activation key for the E-TES SD from tesdryingsystem.com website. Copy the software & key onto a USB Flash Drive. The activation key is serial number specific and will only work for one specific E-TES SD unit.

Simply insert the USB Flash Drive with the software & code into the USB port on the E-TES SD. Turn the E-TES SD unit ON and the key will automatically unlock the data logging feature.

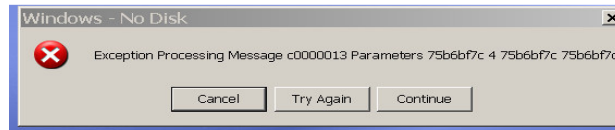
To Install Charter Software on your Computer:

- 1. Insert Flash Drive into USB port on your computer.**
- 2. Open Folder – 8.13ETESInstaller.zip**
- 3. Open Folder – ETES Installer**
- 4. Double Left Click on setup.exe**
- 5. Follow the instructions to Install the E-TES Charter Software**
 - a. Click NEXT**
 - b. Assign Program location or use selected location & Click NEXT**
 - c. Click NEXT**
 - d. Installation is completed – Click CLOSE**

Use a USB Flash Drive to retrieve Job Data from E-TES SD unit. Insert a USB Flash Drive into the USB port on the E-TES SD front panel; turn the power switch ON to log data from the E-TES SD unit. When card stops flashing, and **UPDATING USB – DO NOT REMOVE** screen is no longer showing on the E-TES SD display, remove the Flash Drive, turn switch off. Flash Drive can then be connected to the USB port on your computer to download the data.

Download Job Data to your computer by placing USB Flash Drive into USB port on your computer.

Click on **SHORTCUT TO ETES CHARTER** Icon to open the E-TES Charter. (In some cases an Error Message will pop up on your screen. Just click Continue and the Charter will open. Be patient it will take some time to open.)



Your job data can be read off of the USB flash card, or copied to the ETESDATA subfolder on the hard drive for future use. When you open the E-TES Charter, the Job Data will appear on the left side of the preview screen. The job files are sorted by E-TES SD serial number. Serial numbers starting with “1” are 120 volt units. Serial numbers starting with “2” are 240 volt units. The job files can be displayed by File Name or Date. Click on job file to open preview screen showing data from that job (Be patient it will take a long time to open large amounts of data.).

You can click on the “File Name” or “Date” indicator at the bottom of the page to choose how the files are displayed. When changing from File Name to Date or the other way, an error message may be displayed on your computer. Just click continue and the Charter will re-open and display as you selected. Chart #1 below shows the job files displayed by File Name. The file names such as B0911064 consist of the year, month and day the job was started and a number to differentiate various jobs started on the same day. Chart #2 on the next page shows the job files displayed by Date.

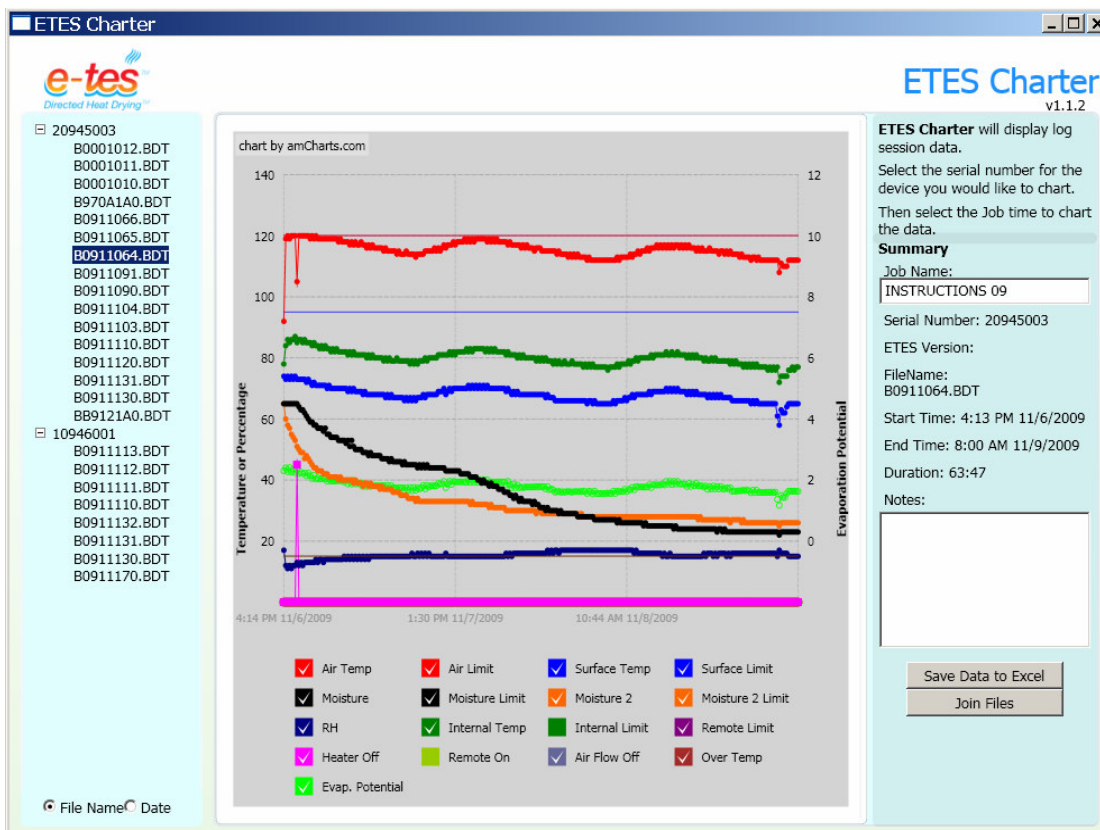


CHART #1

Job files listed by File Name

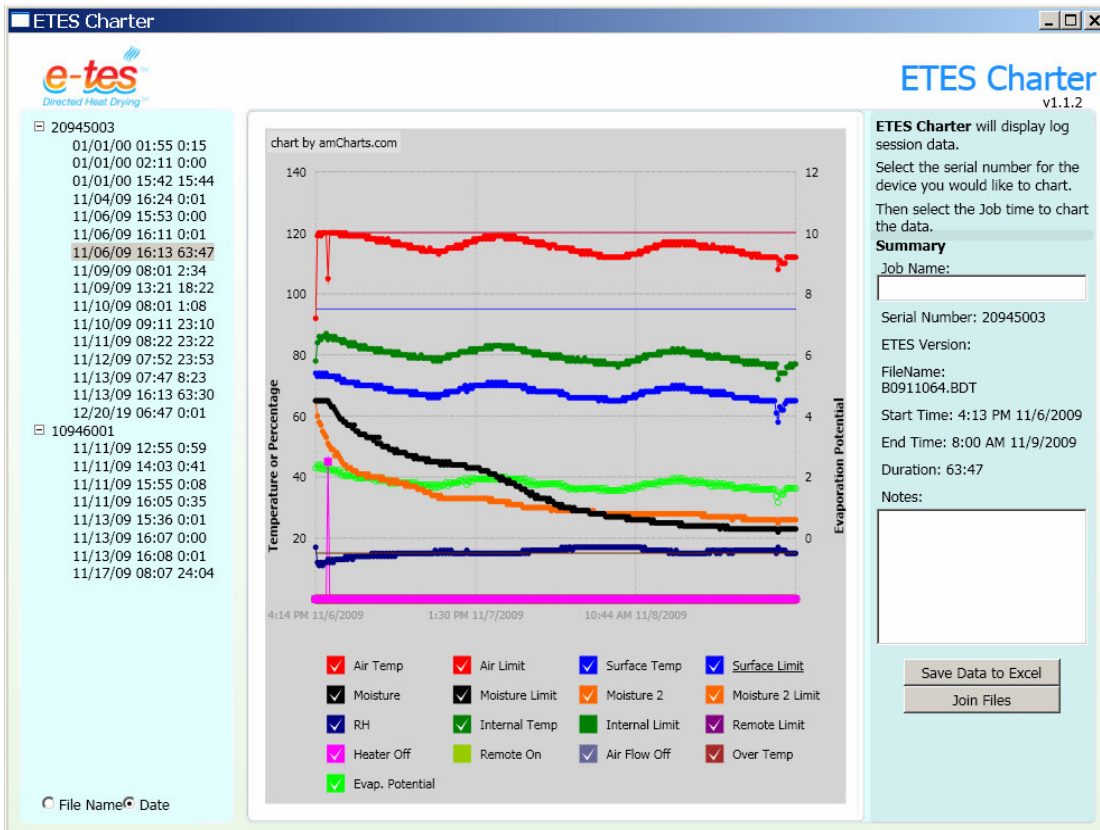


CHART #2

Job files listed by Start Date

Along with the date on which the job was started, the preview chart also displays the start time and duration of that job.

Move your cursor across the preview chart to see the flags displaying the values for each data point as shown in Chart #3. (The job displayed in this example was performed for system testing purposes and data is not typical of limits and drying conditions normally found in a Directed Heat Drying job.)

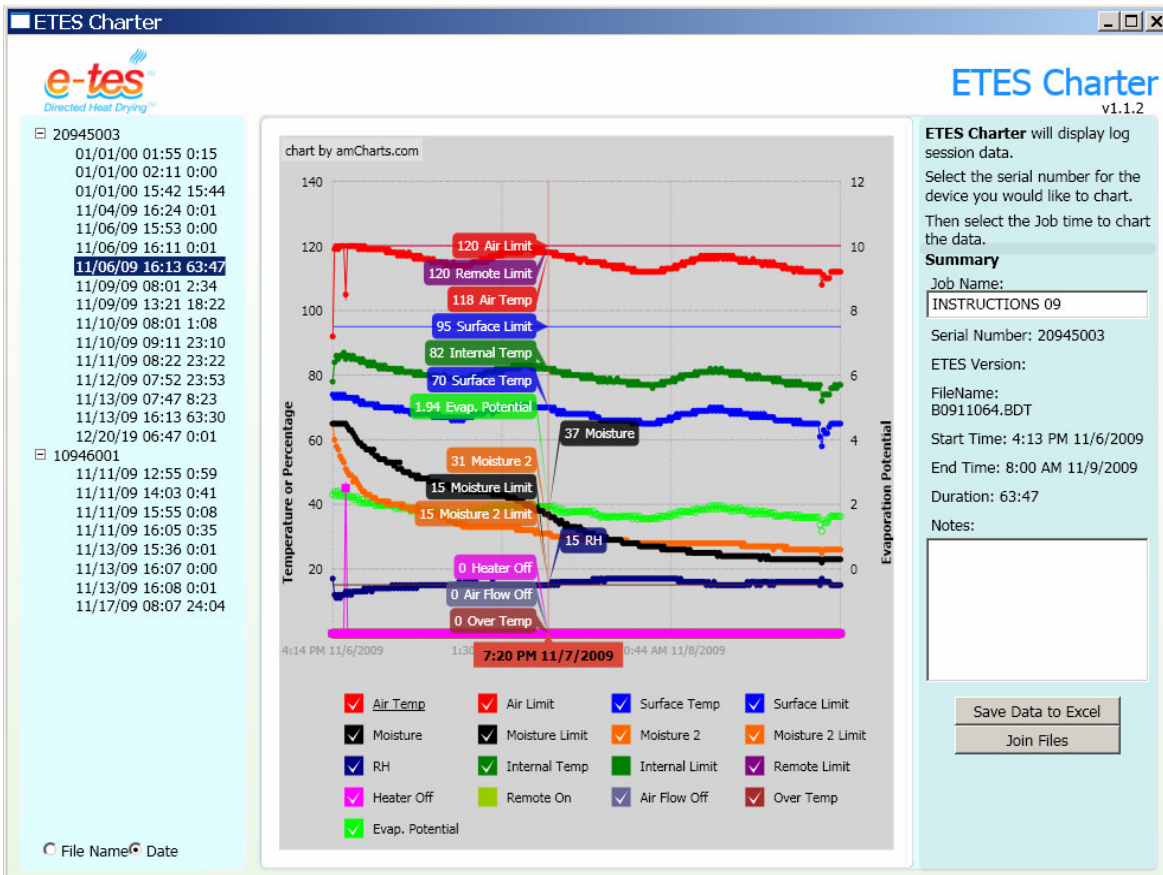


CHART #3

The colored squares in the key at the bottom of the preview screen show the data item represented by that color in the graph.

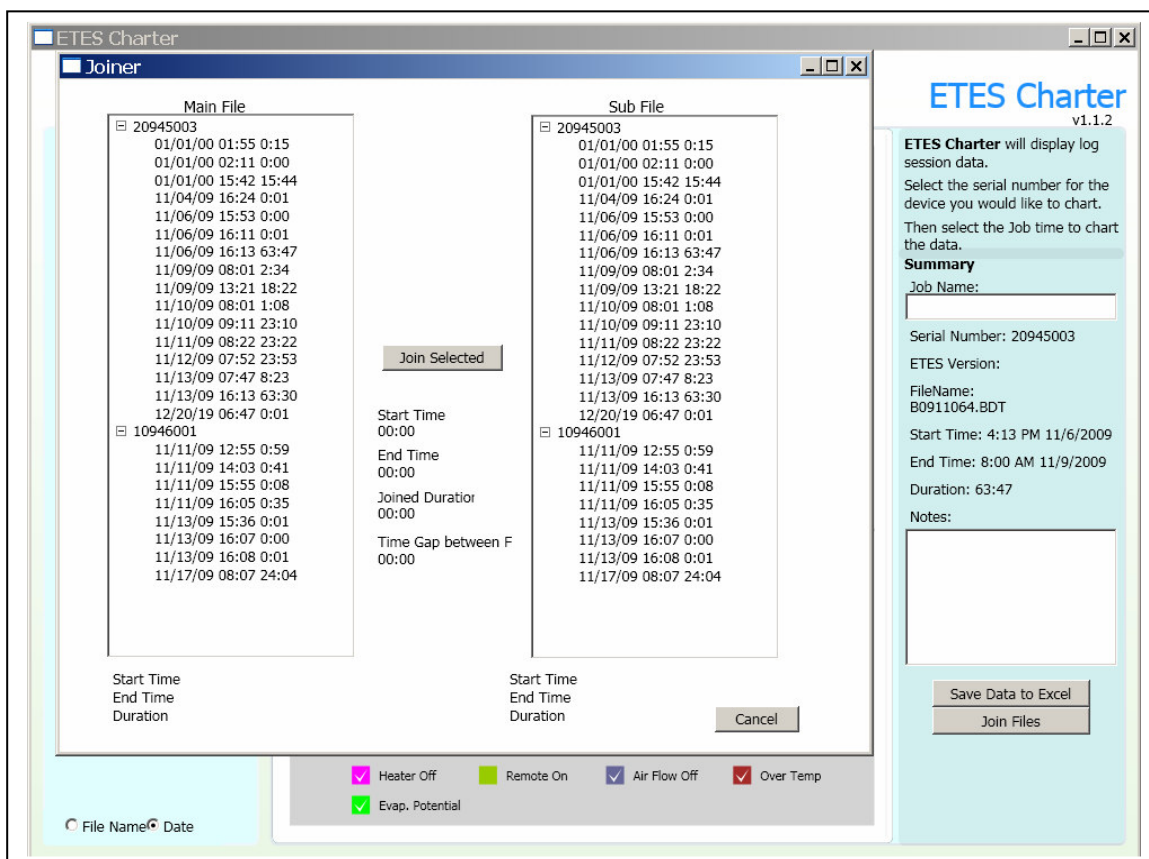
You can click on the colored squares in the key at the bottom of the screen to add or delete different data items to customize your graph. The graphs shown above are displaying AIR TEMP, AIR LIMIT, SURFACE TEMP, SURFACE LIMIT, MOISTURE, MOISTURE LIMIT, MOISTURE 2, MOISTURE 2 LIMIT, RH, INTERNAL TEMP, REMOTE LIMIT, HEATER OFF, AIR FLOW OFF, OVERTEMP & EVAPORATION POTENTIAL. These are represented by the colored squares with the check marks. All items are measured and logged, but only displayed if the colored square for that data is checked.

Data items which can be displayed, but are not shown in these graphs are INTERNAL LIMIT & REMOTE ON. . These are represented by the colored squares without check marks.

Simply click on the colored squares to add or remove check marks thus adding the data item to or removing the data item from the graph. The items selected in the preview will also be the items displayed in the Excel graph when the job file data is exported to Excel.

Each time power to an E-TES SD is turned OFF and ON, a new job file is created. A single restoration job may be represented by multiple job files. Job files can be joined to create a single report.

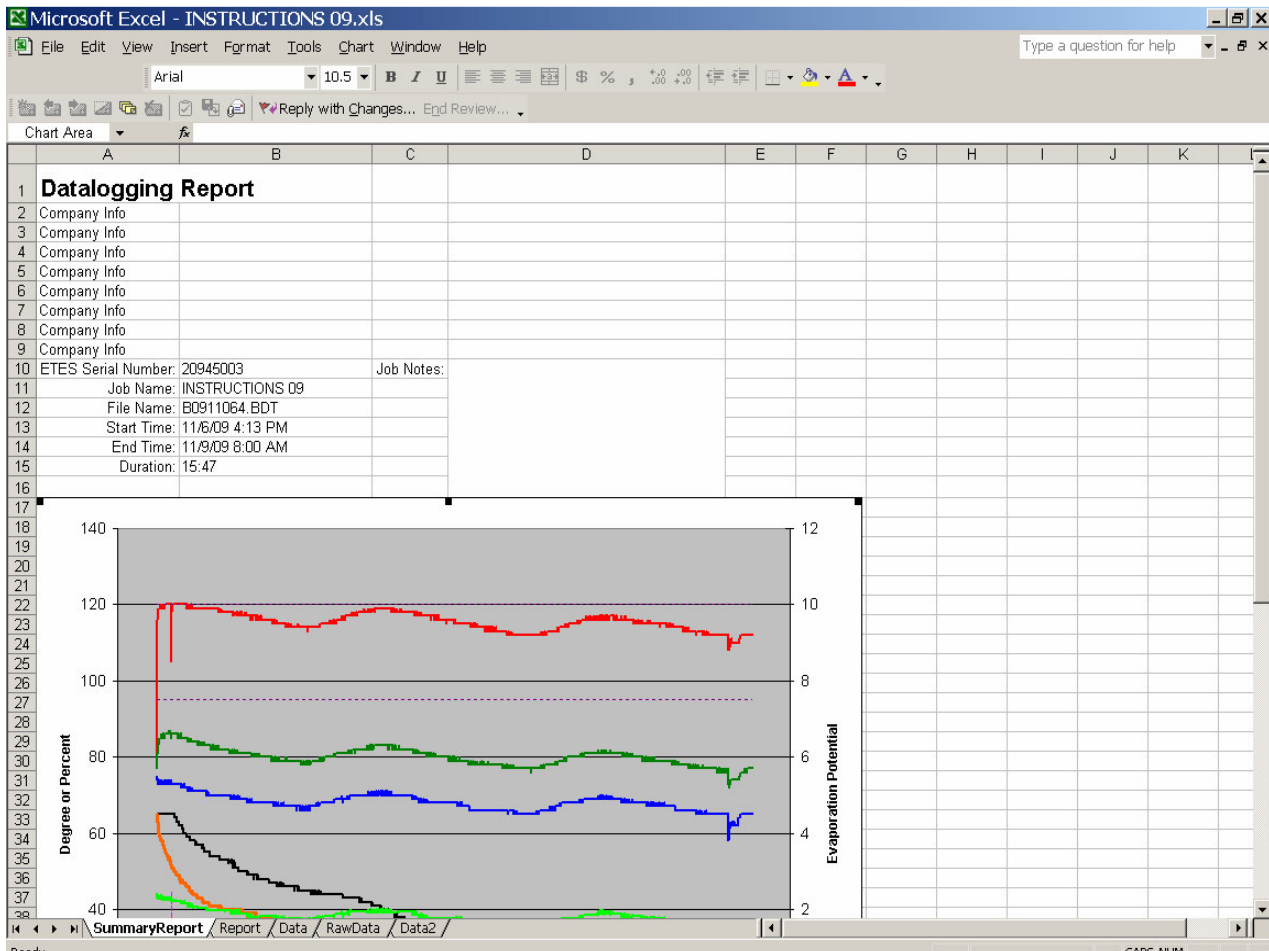
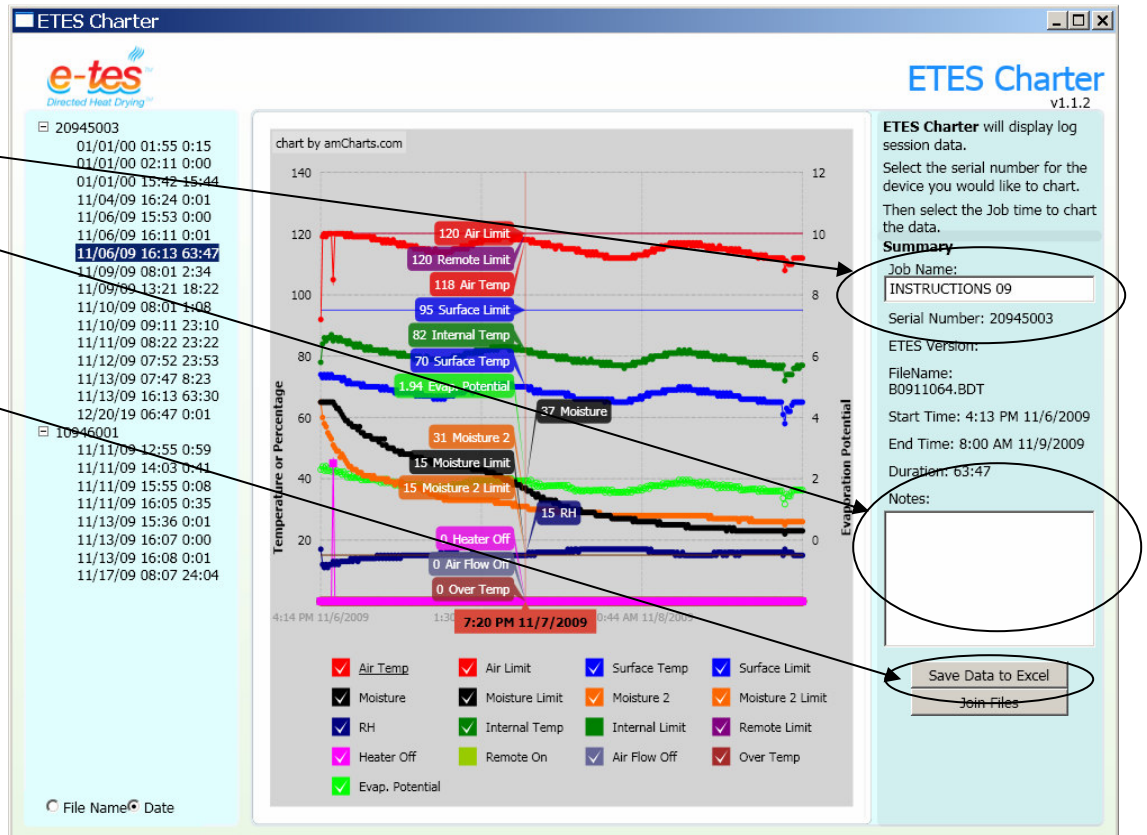
To join two job files together to form a new single job file, simple click on the **Join Files** button on the right side of the screen. When the **Joiner** screen opens (See below), click on the job file with the earlier start date & time in the **Main File** column to highlight that job. Next, click on the job file with the later start date & time in the **Sub File** column to highlight that job. Once you have selected one file from each column, click the **Join Selected** button in the middle of the screen to join the two files. Joined Files will be combined into a new single job file when you return to the preview screen. Repeat the procedure as needed to add additional files to the new file to create your job file.



To save your job file to Excel for reports & graphs, **Enter Job Name** & **Enter Notes** (If desired)

Then click - **Save Data to Excel** (Again be patient it may take a long time to transfer large amounts of data.)

Do not change Excel worksheet tabs until data loading has been completed.



Excel Job File Summary Report Screen

Microsoft Excel - INSTRUCTIONS 09.xls

File Edit View Insert Format Tools Data Window Help

Type a question for help

Arial 10 B I U

Reply with Changes... Egd Review...

A1 Time Stamp

| | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q |
|----|-----------------|----------|-----------|--------------|---------------|----------|----------------|------------|------------------|----|---------------|------------------|--------------|------------|--------------|-------------|-----------|
| | Time Stamp | Air Temp | Air Limit | Surface Temp | Surface Limit | Moisture | Moisture Limit | Moisture 2 | Moisture 2 Limit | RH | Internal Temp | x-Internal Limit | Remote Limit | Heater Off | Air Flow Off | x-Remote On | Over Temp |
| 1 | 11/6/09 4:13 PM | 78 | 120 | 75 | 95 | 65 | 15 | 65 | 15 | 17 | 77 | | 120 | 0 | 0 | | 0 |
| 2 | 11/6/09 4:14 PM | 92 | 120 | 74 | 95 | 65 | 15 | 65 | 15 | 17 | 78 | | 120 | 0 | 0 | | 0 |
| 3 | 11/6/09 4:15 PM | 103 | 120 | 74 | 95 | 65 | 15 | 65 | 15 | 16 | 79 | | 120 | 0 | 0 | | 0 |
| 4 | 11/6/09 4:16 PM | 110 | 120 | 74 | 95 | 65 | 15 | 64 | 15 | 16 | 80 | | 120 | 0 | 0 | | 0 |
| 5 | 11/6/09 4:17 PM | 114 | 120 | 74 | 95 | 65 | 15 | 64 | 15 | 15 | 80 | | 120 | 0 | 0 | | 0 |
| 6 | 11/6/09 4:18 PM | 116 | 120 | 74 | 95 | 65 | 15 | 63 | 15 | 14 | 81 | | 120 | 0 | 0 | | 0 |
| 7 | 11/6/09 4:19 PM | 118 | 120 | 74 | 95 | 65 | 15 | 63 | 15 | 13 | 81 | | 120 | 0 | 0 | | 0 |
| 8 | 11/6/09 4:20 PM | 118 | 120 | 74 | 95 | 65 | 15 | 63 | 15 | 13 | 82 | | 120 | 0 | 0 | | 0 |
| 9 | 11/6/09 4:21 PM | 119 | 120 | 73 | 95 | 65 | 15 | 62 | 15 | 13 | 82 | | 120 | 0 | 0 | | 0 |
| 10 | 11/6/09 4:22 PM | 119 | 120 | 73 | 95 | 65 | 15 | 62 | 15 | 12 | 83 | | 120 | 0 | 0 | | 0 |
| 11 | 11/6/09 4:23 PM | 119 | 120 | 73 | 95 | 65 | 15 | 62 | 15 | 12 | 83 | | 120 | 0 | 0 | | 0 |
| 12 | 11/6/09 4:24 PM | 119 | 120 | 73 | 95 | 65 | 15 | 61 | 15 | 12 | 83 | | 120 | 0 | 0 | | 0 |
| 13 | 11/6/09 4:25 PM | 119 | 120 | 74 | 95 | 65 | 15 | 60 | 15 | 12 | 83 | | 120 | 0 | 0 | | 0 |
| 14 | 11/6/09 4:26 PM | 119 | 120 | 73 | 95 | 65 | 15 | 60 | 15 | 12 | 84 | | 120 | 0 | 0 | | 0 |
| 15 | 11/6/09 4:27 PM | 119 | 120 | 73 | 95 | 65 | 15 | 60 | 15 | 12 | 84 | | 120 | 0 | 0 | | 0 |
| 16 | 11/6/09 4:28 PM | 119 | 120 | 74 | 95 | 65 | 15 | 60 | 15 | 12 | 84 | | 120 | 0 | 0 | | 0 |
| 17 | 11/6/09 4:29 PM | 119 | 120 | 73 | 95 | 65 | 15 | 60 | 15 | 12 | 84 | | 120 | 0 | 0 | | 0 |
| 18 | 11/6/09 4:30 PM | 119 | 120 | 74 | 95 | 65 | 15 | 59 | 15 | 12 | 84 | | 120 | 0 | 0 | | 0 |
| 19 | 11/6/09 4:31 PM | 119 | 120 | 74 | 95 | 65 | 15 | 59 | 15 | 12 | 85 | | 120 | 0 | 0 | | 0 |
| 20 | 11/6/09 4:32 PM | 119 | 120 | 73 | 95 | 65 | 15 | 59 | 15 | 12 | 85 | | 120 | 0 | 0 | | 0 |
| 21 | 11/6/09 4:33 PM | 119 | 120 | 74 | 95 | 65 | 15 | 59 | 15 | 12 | 85 | | 120 | 0 | 0 | | 0 |
| 22 | 11/6/09 4:34 PM | 120 | 120 | 74 | 95 | 65 | 15 | 59 | 15 | 12 | 85 | | 120 | 0 | 0 | | 0 |
| 23 | 11/6/09 4:35 PM | 119 | 120 | 74 | 95 | 65 | 15 | 59 | 15 | 12 | 85 | | 120 | 0 | 0 | | 0 |
| 24 | 11/6/09 4:36 PM | 119 | 120 | 73 | 95 | 65 | 15 | 59 | 15 | 12 | 85 | | 120 | 0 | 0 | | 0 |
| 25 | 11/6/09 4:37 PM | 119 | 120 | 73 | 95 | 65 | 15 | 59 | 15 | 11 | 85 | | 120 | 0 | 0 | | 0 |
| 26 | 11/6/09 4:38 PM | 119 | 120 | 73 | 95 | 65 | 15 | 58 | 15 | 11 | 85 | | 120 | 0 | 0 | | 0 |
| 27 | 11/6/09 4:39 PM | 119 | 120 | 73 | 95 | 65 | 15 | 58 | 15 | 11 | 85 | | 120 | 0 | 0 | | 0 |
| 28 | 11/6/09 4:40 PM | 120 | 120 | 73 | 95 | 65 | 15 | 58 | 15 | 11 | 86 | | 120 | 0 | 0 | | 0 |
| 29 | 11/6/09 4:41 PM | 120 | 120 | 73 | 95 | 65 | 15 | 58 | 15 | 11 | 86 | | 120 | 0 | 0 | | 0 |
| 30 | 11/6/09 4:42 PM | 120 | 120 | 73 | 95 | 65 | 15 | 58 | 15 | 11 | 86 | | 120 | 0 | 0 | | 0 |
| 31 | 11/6/09 4:43 PM | 119 | 120 | 73 | 95 | 65 | 15 | 58 | 15 | 11 | 86 | | 120 | 0 | 0 | | 0 |
| 32 | 11/6/09 4:44 PM | 119 | 120 | 74 | 95 | 65 | 15 | 58 | 15 | 11 | 85 | | 120 | 0 | 0 | | 0 |
| 33 | 11/6/09 4:45 PM | 120 | 120 | 74 | 95 | 65 | 15 | 58 | 15 | 11 | 86 | | 120 | 0 | 0 | | 0 |
| 34 | 11/6/09 4:46 PM | 120 | 120 | 74 | 95 | 65 | 15 | 58 | 15 | 11 | 86 | | 120 | 0 | 0 | | 0 |
| 35 | 11/6/09 4:47 PM | 119 | 120 | 73 | 95 | 65 | 15 | 58 | 15 | 12 | 86 | | 120 | 0 | 0 | | 0 |
| 36 | 11/6/09 4:48 PM | 120 | 120 | 73 | 95 | 65 | 15 | 58 | 15 | 11 | 86 | | 120 | 0 | 0 | | 0 |
| 37 | | | | | | | | | | | | | | | | | |

SummaryReport / Report / Data / RawData / Data2 /

Ready NUM

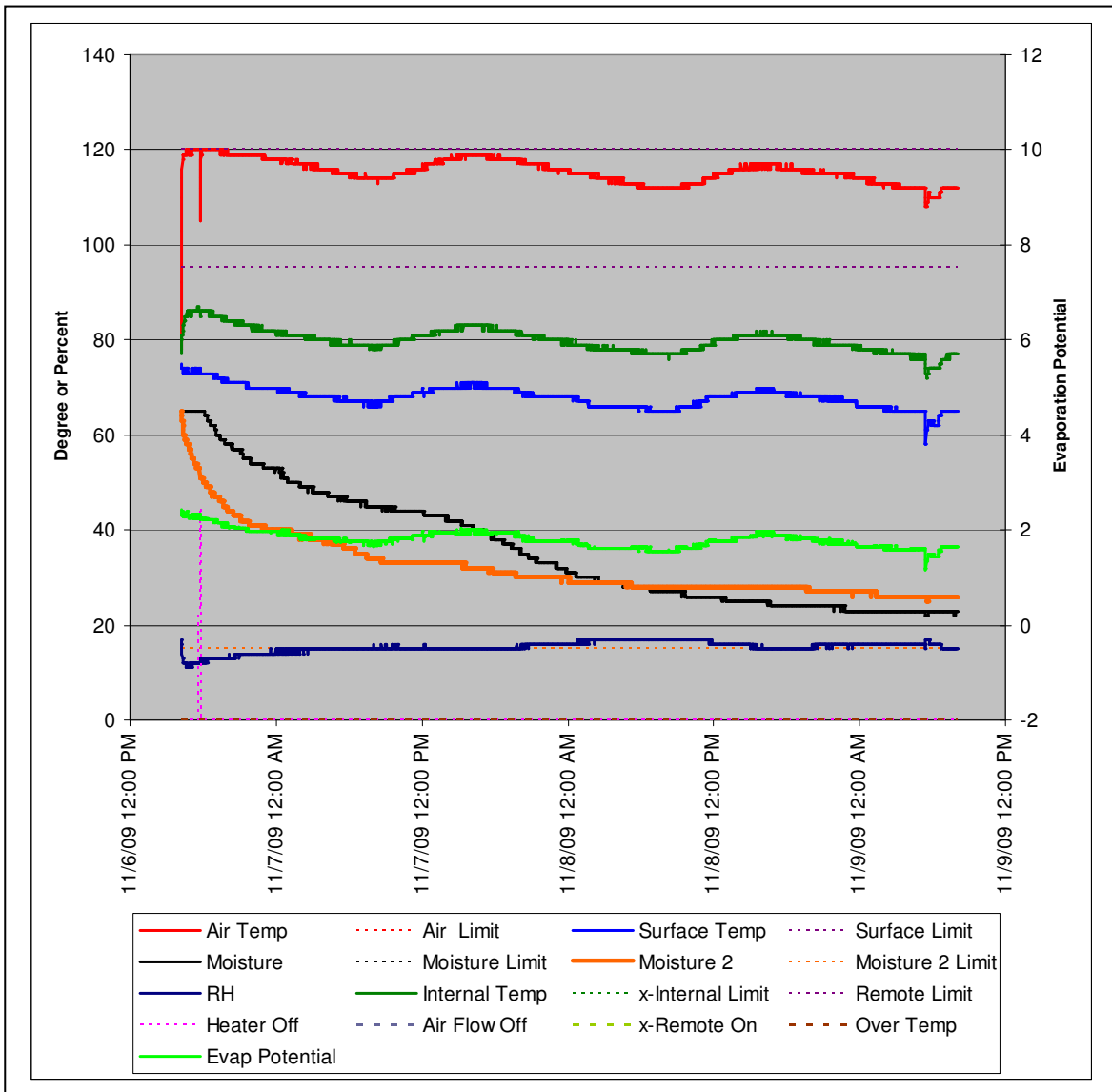
Excel Job File Data Screen

The excel job files are saved in the Report sub-folder of your ETESData folder.

In this example of an Excel graph, you can see that the AIR TEMPERATURE LIMIT and REMOTE LIMIT were set at 120°F, the SURFACE TEMPERATURE LIMIT was set at 95°F, and the MOISTURE 1 LIMIT and MOISTURE 2 LIMIT were both set at 15%. The RH or Relative humidity stayed around 15%. The INTERNAL TEMPERATURE stayed around 80°F. The INTERNAL TEMPERATURE LIMIT of 150°F is not adjustable. The E-TES unit never had an OVERTEMP condition.

The SURFACE TEMPERATURE was staying about 12°F less than the INTERNAL TEMPERATURE which stayed about 42°F below the AIR TEMPERATURE and they maintained the same differential as the room temperature changed. Only for two short periods at the beginning of the job did any temperature reading exceed its limit, when the AIR TEMPERATURE exceeded 120°F and shut the heater off. The AIR TEMPERATURE dropped, the heater turned back on and the AIR TEMPERATURE went back up.

The moisture content of the wood started around 60%. The MOISTURE 1 VALUE and MOISTURE 2 VALUE both dropped during the job but never went below the 15% limit, so the heater never shut off.



You can modify the graph to chart the readings which you decide are the most relevant to each job. Go back to the preview screen and click on colored squares to add or remove the corresponding line from the graph. For this chart: the following changes were made in the graph:

- The REMOTE ON & the INTERNAL LIMIT were not charted.