


ColorTrack™



User Reference Guide

For Windows® 



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Fresh Roast Systems ColorTrack Professional User Reference Guide

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Getting Started

Included in Your Package



Enclosure Unit

Remove the enclosure unit from your product box and carefully place it on a flat and level surface. Press the door release at the bottom of the control panel and remove the contents from the enclosure. Below is a list of all of the contents that should be included. Make sure you have received all of the listed components before continuing. Make sure none of the components have been damaged or are missing.



Laser Reflectometer

Inside the enclosure you will find a large box that contains the laser reflectometer. Open the box and carefully remove the laser from the protective foam. Do not discard the laser packaging materials as they may be utilized in the future for replacement, upgrades, and/or exchanges/returns.



Once you have removed the laser, install it in the enclosure by sliding the white insert at the top of the laser into the bracket in the top of the enclosure. It should slide easily into place. Push the laser almost all the way into the bracket until roughly only an 1/8" of the white insert remains outside the bracket. This distance is approximate and does not have to be exact. Once the laser has been installed, insert the cord inside the enclosure into the plug on the laser unit. The plug will only fit in one position. Once it slides into the plug you can then tighten the connection by screwing it into the laser unit.



Turntable Platter and Roller Ring

Also included in the contents of the enclosure you will find the black ABS turntable platter and the roller ring. Next, make sure the inside of the enclosure is clean and free of any debris or packaging material and place the roller ring in the bottom channel of the enclosure. Once the ring is installed, place the turntable platter on the spindle on top of the roller ring and turn it slightly until it falls into place.

Sample Dishes

Included in your package you will find two sample dishes. You are supplied with one anodized aluminum dish and one ABS plastic dish. They are dimensionally identical and should fit precisely into the platter. For information on obtaining additional dishes of either type please see the "Accessories and Replacement Parts" section at the end of this reference guide.



QuickStart

Setting up The Device

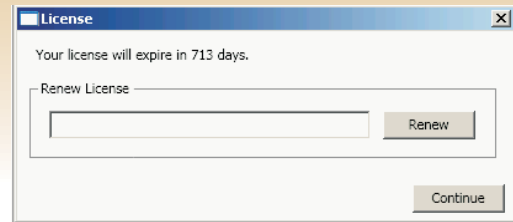
Installing the Hardware

Setting up the ColorTrack device is simple, just connect the ColorTrack device to a power source, and then plug the USB cord that comes out from underneath the device into your computer. The device is now ready to begin scanning.

Installing the ColorTrack Program

If you purchased a ColorTrack system without a computer controller you will need to install the ColorTrack program onto your own computer. To do so, place the installation disk into your disk drive and then follow the instructions as they appear on-screen.

After you've installed the program, connect to the internet and run the ColorTrack program which you will find in your *Start Menu*. You should be confronted by a prompt screen asking for a license key, enter the license key provided to you when you purchased your ColorTrack system, or call 650-325-1795 to purchase a license. After you've entered the license key the ColorTrack program and all of its features will be immediately updated automatically and available to you to begin using.



Installing the ColorTrack Program From the Internet

If you do not have an installation disk or you prefer to install the latest ColorTrack version from the internet you may do so by first connecting to the internet with your target computer and then going to the Fresh Roast Systems website. There are two steps to this process. First, begin the process by typing the following address into your internet browser:

<http://www.freshroastsystems.com/LaserColorAnalyzerFTP/NIDAQ890RT5.zip>

You will be prompted to save the file to your host computer. Do so and then extract it and run the .exe file after it is extracted. Proceed to the second step. Type in the following address into your internet browser:

<http://www.freshroastsystems.com/ColorTrackBenchFTP/WPFToolkit.msi>

Click "Run" when prompted.

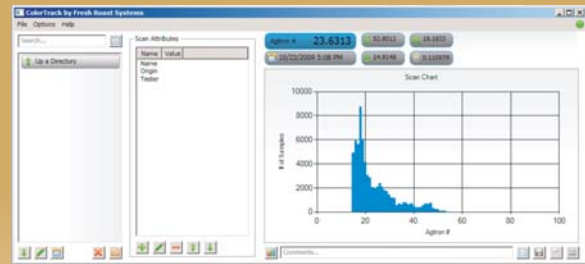
The last step is to go to the following address:

<http://www.freshroastsystems.com/ColorTrackBenchFTP/publish.htm>

Click "Install". That should complete the software installation process and you should be ready to run the program and begin scanning.

Running a Scan

With the USB cord securely connected, and ColorTrack device connected to a power source, all that you need to do to begin a scan is open up the ColorTrack program on your computer, place a coffee sample in one of the sample dishes, place the dish securely on the spin table inside of the device, select the amount of time to scan for, and hit start. The ColorTrack program will automatically begin reading from the device, and once the scan is finished, it will display the results of the scan immediately on your screen.



Basic Operation

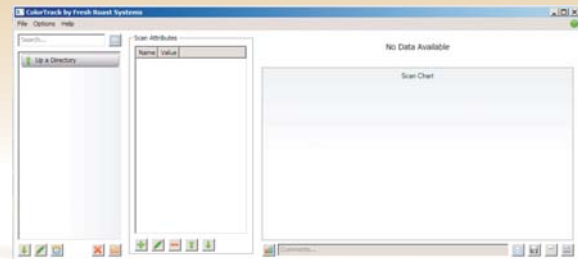
Scanning Samples

Sample Preparation

The ColorTrack system does not require complex sample preparation but for best results, consistent preparation methods should be observed and employed. It is highly recommended that samples be prepared carefully to avoid contamination or inconsistencies that may skew results. When preparing your samples, try and prepare a full dish with as level a sample as possible. Most importantly is to prepare samples in such a way as to insure that the bottom of the dish is not viewed or scanned by the laser as this will affect results.

Basic Scanning

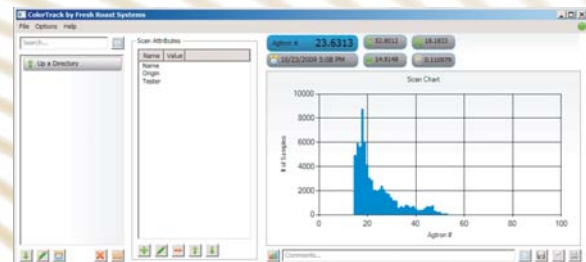
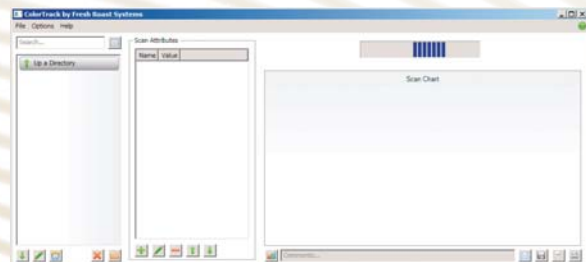
To begin scanning sample you must make sure the enclosure unit is plugged in and powered ON and that the USB connection is connected to your computer. When this is done, start the ColorTrack software on your computer. You will see a blank ColorTrack scan screen appear and you are ready to start. Prepare a sample in one of the sample dishes and carefully place the sample dish in the platter. It should fit perfectly into place. Once the dish is inside the enclosure on the platter, rotate it by hand in the platter recess to insure that it is seated in the platter properly and evenly. Close the door of the enclosure unit and you are ready to start a scan.



There are a number of ways to conduct scans. You can set the timer to an exact scan time which will start and stop automatically or you can simply put up to thirty minutes on the timer and start and stop the scanning process manually using the manual controls or by opening the enclosure door which will automatically stop the scanning process.

Using the Timer

Once you have connected your computer via USB to the device and activated the software, use the timer to set a specific scan time by pressing the round timer knob. It will pop out and allow you to turn it to any desired scan time. Clockwise to increase time and counter clockwise to decrease time. Place your sample in the platter, close the enclosure door securely and set the scan time by turning the dial to the scan time you want, e.g., 20 seconds. Once you have set the scan time simply press the start button on the bottom of the control panel and the scan will start indicated on your computer by a blue progress bar at the top of the graph window. At the end of the selected scan period the device will signal three beeps indicating completion of the scan and the results will be displayed on your computer screen along with a graph of the results.



Manual Timing

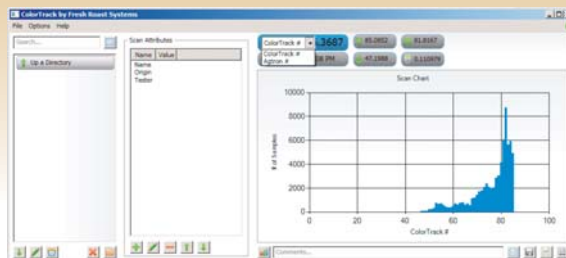
You may also manually control your scans by using either the control panel buttons on the device or by opening the enclosure door which will automatically stop the scanning process and display results. Place your sample in the enclosure and close the door firmly. Set your scan time using the timing knob e.g., 30 minutes. Press the Start button on the control panel and allow the device to scan for the desired scan time, e.g., 20 seconds. After twenty seconds, open the enclosure door OR press the Stop button on the control panel. In both cases the scan will stop and the results will be displayed along with the associated graph on your computer screen. This method of scanning requires slightly more attention but may be convenient for conducting many scans in a single session as it does not require setting the time for each scan.

Scan Results

The results screen of each scan contains both data and graphical information about your sample. You have a number of options as to what you may do with this data and how it is displayed. As a default, scans are displayed in ColorTrack units.

Changing the Scale

By default the scale will be ColorTrack #, however if you'd like to use, for example, the *Agtron* scale, you'd have to change the current scale. To do this, double click the text in the blue button located directly above the Scan Chart and to the left. A dropdown list will appear allowing you to select a new scale. Once you click on the results button a list will be displayed of the available units of measure and you may select the desired scale. Once selected that will remain the default until manually changed in the same manner. The device will set the default scale to whatever the last selected measure of units was but you may toggle the results at any time.



There are a number of other values displayed in the results window and pointing your mouse at them will give a definition of their value. There are displays for the minimum and maximum colors recorded as well as the standard deviation for the entire scan.

Saving a Scan

If you want to save a scan in CTF format, just click the *Save button* (). Please remember that CTF files can only be read by the ColorTrack program, so if you email a colleague a CTF file, unless they also have the ColorTrack program on that computer, they will not be able to see the scan information. If you'd like to save a scan in a format that anyone can use, you can export the scan as a PDF.

Using the Scan File List

Opening a Scan File

To open a scan file from the list, double click it.

Changing the Scan File Color

The scan files can be color coded to make organization easier. To select a color for a scan, right click the scan in the file list and from the *Set Scan Color* submenu, select the color you'd like.

Sorting the Scan File List

To select a sorting method for the list, use the three buttons located directly under the list and to the left.

You can organize them alphabetically, by the scan color, or by the time at which the scans were run.

Deleting and Adding Folders

To add or delete a folder or scan, use the two buttons located directly under the list and to the right.

Searching the Scan File List

To search for a scan file, use the *search textbox* located at the top of the list.

Dedicated Explorer

To use the Dedicated Explorer, click the *Dedicated Explorer button* () located directly above the list and to the right. The Dedicated Explorer is a large version of the scan file list that you may find more convenient and/or easier to use.



Comparing Two Scans

If you'd like to compare two scans with each other, double click one of the scans to have it displayed, and then right click the scan you'd like to compare the current one with and select *Compare with Current Scan*.

Outputting Scan

Exporting as a PDF

If you want to save a scan in PDF format so that others can view the scan, just click the *Export to PDF button* ().

Emailing a Scan

If you'd like to export a scan as a PDF and then immediately send the scan to someone in an email, you can use the *Email button* () to make the job easier. You will be asked to first select a place to export the scan to as a PDF file, and then your default email client will be opened up with the newly exported scan attached (providing that your email client allows for it).

Print a Scan

If you'd like to print a scan, click the *Print button* () located directly underneath the Scan Chart and to the right.

Using the Scan Chart

Tooltips

When you hover your mouse over one of the bars in the chart, a tooltip will appear showing the ColorTrack # of the bar. This can be useful if there are many bars clustered together and you are having trouble figuring out which bar goes to which number.

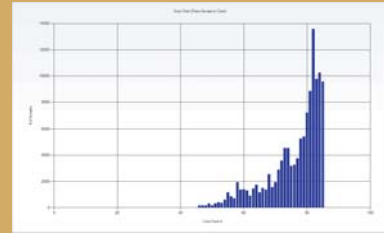
Zooming

If you'd like to zoom up on a particular area on the chart, you can click and drag your mouse horizontally along the chart and once you release your mouse you will be presented with a close up of the area. Try it out, it's very intuitive. To zoom back out, click the button on the bottom left of the chart, it will be at the left end of the scrollbar (which only appears when you zoom in). You can also use the scrollbar to move

along the chart while zoomed.

Full Screen

If you'd like to view the chart in full screen mode, directly under the chart and to the left (or to the right if you are comparing two scans) is the *Full Screen button* (), click it to enter full screen mode. To get out of full screen mode, hit the Escape on your keyboard.

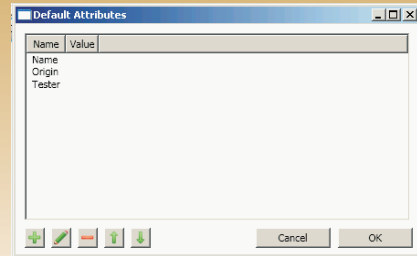


Full screen mode

Editing a Scan

Attributes

The frame labeled Scan Attributes located in the center of the ColorTrack program houses user-set attributes. You may add any attribute that you feel helps to describe the scan. For example, you might add an Origin attribute, and you might give it a value of Columbia. To add, edit, or reorganize any of the attributes, use the buttons at the bottom of the attribute list. To see the button's label, hover your mouse over the button and a tooltip will quickly appear giving a description of what the button does.



If you'd like to set which attributes are automatically added to every new scan, you can go to menu *Options->Set Default Attributes*. You will be presented with a list of attributes structured the same way as the one on the main screen, simply add, edit, and organize the attributes in this list.

Scan Comment

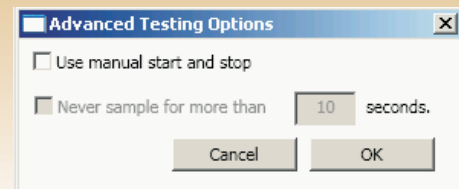
If you'd like to jot down a quick note about the scan, or you'd like to note something about the scan that wouldn't make sense in the attribute list, you can write in the Comments textbox which is located directly underneath the Scan Chart.

Advanced Testing Options and Settings

Scanning Options

Manual Start and Stop

To toggle the manual start and stop feature, go to menu *Options->Advanced Scan Options* and then check the appropriate check box. After clicking *OK*, you will notice that at the top left of the main window, on the very right of the menu bar, a new button has appeared that is labeled *Toggle Scan*. To use this button, start a scan on the device as you normally would, and then click the *Toggle Scan* button. The ColorTrack program will not start receiving data from the ColorTrack device until you click the button, and will not stop until you click the button again, or the device stops scanning.



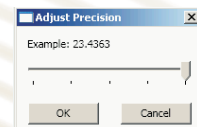
Max Scan Time

If you want the ColorTrack program to automatically stop scanning after a certain amount of time has passed, go to menu *Options->Advanced Scan Options*, and then check the appropriate check box and fill in the amount of time you'd like to set as the max time. Note that this feature is only available when you have Manual Start and Stop enabled.

Scaling and Precision

Precision

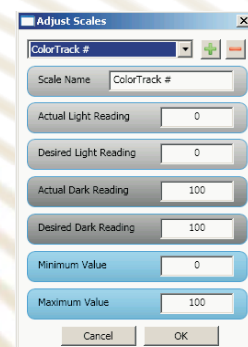
The precision is the amount of numbers after the decimal are to be displayed. You can set the precision by going to menu *Options->Adjust Precision*.



Adjusting the Scales

Note: This feature is recommended to be used by advanced users only. If you'd like to adjust the way any of the scales work, or if you'd like to add a new scale, go to menu *Options->Adjust Scales*. You will be presented with a number of fields: Scale Name, Actual Light Reading, Desired Light Reading, Actual Dark Reading, Desired Dark Reading, Maximum Value, and Minimum Value. These fields go into a formula that results in the converted value. Below is the formula for the conversion.

The formula is similar to the Fahrenheit to Celsius conversion. You may notice that maximum value and minimum value are not used in the formula. This is because the maximum and minimum values are only used to find the range of the chart's x axis.



Accessories and Replacement Parts

Anodized Aluminum Sample Dish (Black) \$39.95

ABS Sample Dish (Black) \$19.95

ABS Sample Dish (White) \$24.95

Sample Dish 2-PACK \$54.95

Includes one ABS and one aluminum dish. (Available in black only.)

ABS Replacement Turntable \$69.95

Glass Laser/Lens Protector \$39.95

Ambient Light Filter \$399.95

Requires laser unit replacement if not ordered with original equipment.

**Prices do not include shipping & handling.*

Notes

ColorTrack™



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