

# DATACOLOR 20D QUICK START INSTRUCTIONS

Thank you for purchasing the DATACOLOR 20D series portable spectrophotometer. This guide has been provided to quickly familiarize yourself with the DATACOLOR 20D instrument. Please refer to the Datacolor 20D User Guide, included on the flash drive provided with the instrument, for additional details about the features and operation of the instrument.

## INTRODUCTION

The DATACOLOR 20D Portable Spectrophotometer has been designed to work with PAINT v 2.x software for retail paint color matching applications.

### Datacolor 20D Stand-Alone Features

The instrument can be used as a stand-alone device (without connection to Datacolor PAINT v 2.x software) to measure samples in other parts of the store or at a customer site. In this configuration, you can calibrate the instrument, make and store sample measurements, and display the CIE L\*a\*b\* coordinates, gloss and LRV values (if enabled) for the measurements. The data collected can then be transferred to the PC with PAINT v 2.x software for custom matching of the paint color.

### Datacolor 20D and Datacolor PAINT

The instrument can be connected to the Datacolor PAINT program to be used as the measuring instrument. In this configuration, Datacolor PAINT controls the operation of the instrument. You can also transfer sample measurements stored on the Datacolor 20D to the Datacolor PAINT database on the computer to be matched. *See Measuring Samples with the Datacolor 20D connected to PAINT and Retrieving Samples from the Datacolor 20D in this guide for instructions.*

Datacolor 20D can be connected to Datacolor PAINT software using either a conventional USB cable or through a Bluetooth® connection. This guide provides instructions to connect the Datacolor 20D to Datacolor PAINT using a USB cable.

**NOTE**

The complete Datacolor 20D User Guide includes detailed instructions to enable the Bluetooth connection. The user guide is included on the USB flash drive provided with the instrument. It is also available on our website, [www.datacolor.com](http://www.datacolor.com).

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## Before you Begin

Locate all cables and accessories shipped with the instrument including:

- Instrument, power supply, power cable, USB communications cables, and wrist strap.
- Black trap, white calibration tile, green calibration tile and flash drive containing the user guide.



## CONTROLS AND INDICATORS



Navigation Buttons



Measure Button

## CONNECTORS AND SWITCHES

A panel on the back of unit includes connections for a power adapter and a USB cable. It also includes a power switch for the unit.



## CHARGING THE INSTRUMENT

A power supply is provided to charge the instrument. It takes a maximum of 8 hours to fully charge the unit. The charge lasts approximately 2,000 measurements.



### IMPORTANT

The instrument does NOT charge through the USB connection. You must use the AC adapter to charge the instrument.

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## CONNECTING THE POWER SUPPLY



### NOTE

Use the appropriate power cord based on the geographical region, to enable proper connection.

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1. Connect the power cord to the power supply.



2. Connect the AC adapter to the power supply connector on the back of the Datacolor 20D.
3. Plug the power cord into the outlet.

## POWERING THE INSTRUMENT

To start the instrument:

- Press the rocker switch on the back of the instrument from the “0” position to the “|” position. The instrument will power up and the main screen will display.



### NOTE

If the instrument calibration has expired, the program will automatically prompt you to calibrate the instrument.

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## DATACOLOR 20D AND DATACOLOR PAINT

To use Datacolor 20D with DATACOLOR PAINT you must connect the instrument to the computer.

### Instrument Communications

When using the Datacolor 20D with Datacolor PAINT, the instrument can communicate with the computer using either a USB cable or a Bluetooth® connection. A USB cable is provided with the instrument. Below are instructions to install a USB cable for communication between the instrument and Datacolor PAINT.



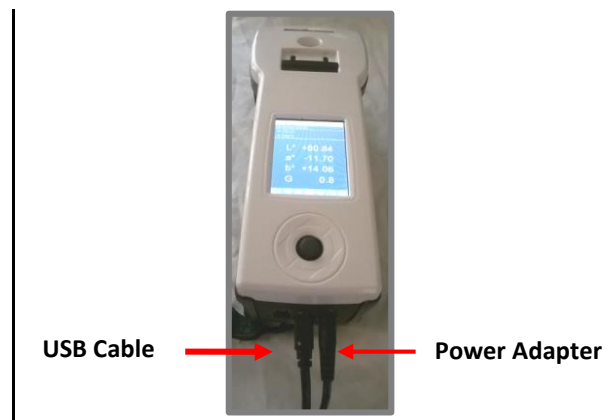
**NOTE**

Datacolor 20D User Guide provides detailed instructions for enabling a Bluetooth connection between the instrument and computer.



USB Cable

- (1) Insert the mini-USB connector into the instrument.
- (2) Insert the USB connector into a USB port on the computer.



### Datacolor PAINT Installation

Install Datacolor PAINT. The installation procedure will launch automatically when it is inserted into the CD drive. Follow the prompts on the screen to complete the installation.

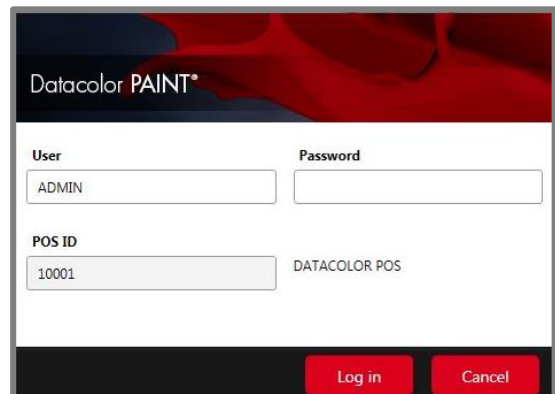
### Launching Datacolor PAINT

- 1. Power up the instrument.
- 2. Connect the instrument to the PC USB. (Refer to the User Guide for BT connection).
- 3. Launch **Datacolor PAINT v 2.x**. The program will prompt you for a user and password. The default user and password is *admin*.
- 4. Click **Log in**. The Datacolor PAINT v 2.x main window will display.

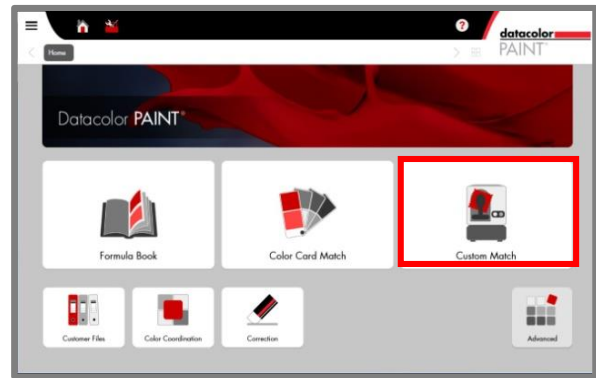


**NOTE**

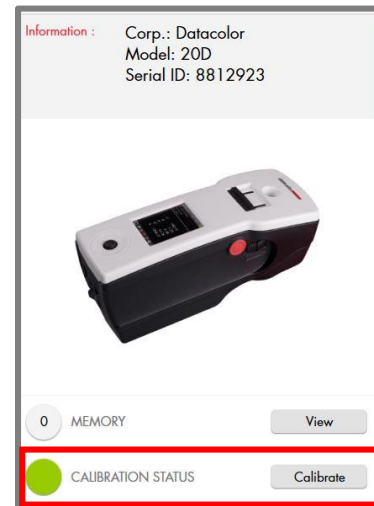
See Datacolor PAINT v 2.x User Guide for detailed instructions to install and configure Datacolor PAINT v 2.x.



5. Select **Custom Match**.

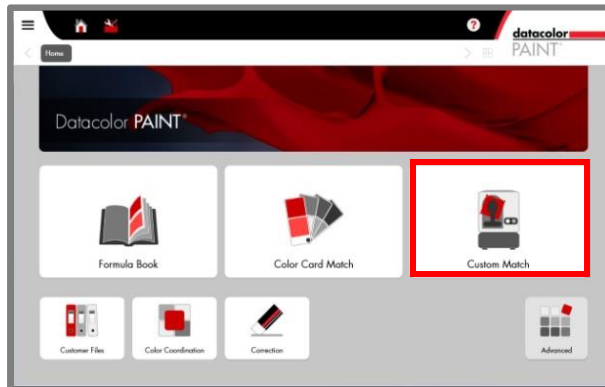


6. For first time usage, you will see the software search and then connect to the instrument.
7. Check the *Calibration Status*.
8. If it is red (expired), you must calibrate the instrument. Click **Calibrate**.
9. The system will prompt you for the black trap, white tile, and green tile measurements. When the calibration is completed, you can work with all the features in Datacolor PAINT v 2.x.

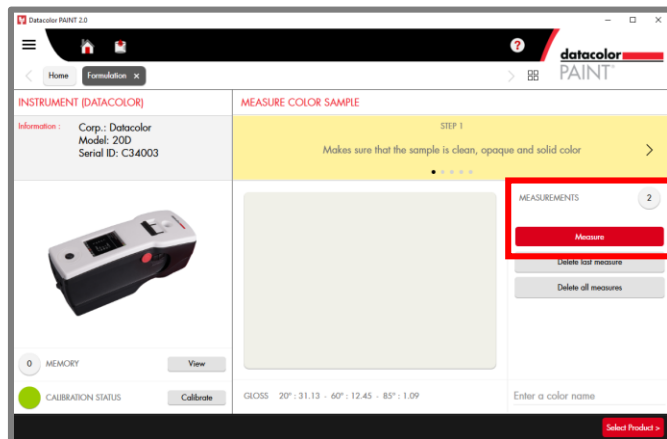


## Measuring Samples with Datacolor 20D connected to Paint

1. From the PAINT main window, select **Custom Match**



2. Position the instrument on your sample and press the Measure button.



*For some samples with texture (i.e. textiles, stucco, etc.) the user may need to measure different areas of the sample to obtain an average measurement.*

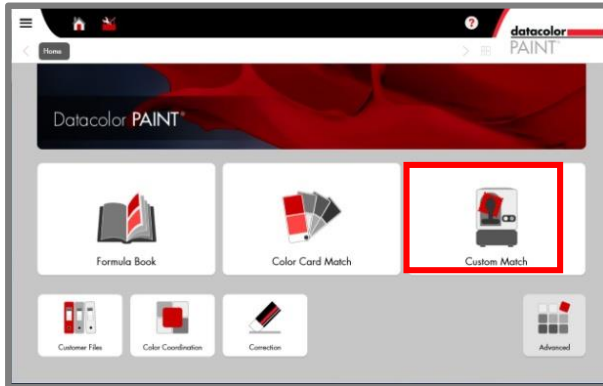
3. After the first measurement, reposition the instrument on your sample and press the **Measure** button again. The counter on the top of the Measure button shows the number of measurements taken.
4. The user can **Delete the last measurement** or **Delete All Measurements** and start again.
5. Enter a name for the Color you just measured.
6. **Click Select Product**, and make the appropriate selections for the product and formula.

*See Datacolor PAINT v 2.x User Guide in the software help section for a detailed explanation of the program features or the PAINT v 2.x Training Videos.*

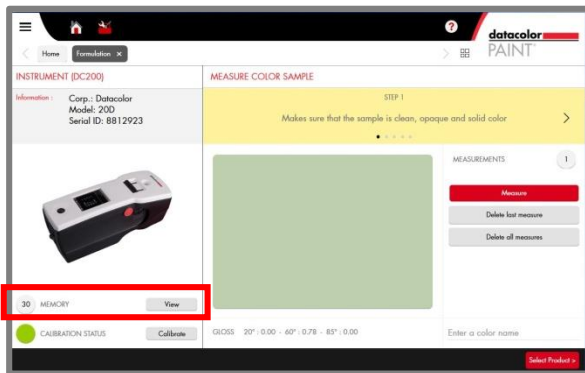
## Retrieving Samples from Datacolor 20D

You can retrieve any/all of the samples stored on the Datacolor 20D to be matched using Datacolor PAINT. To view and retrieve the samples on the unit:

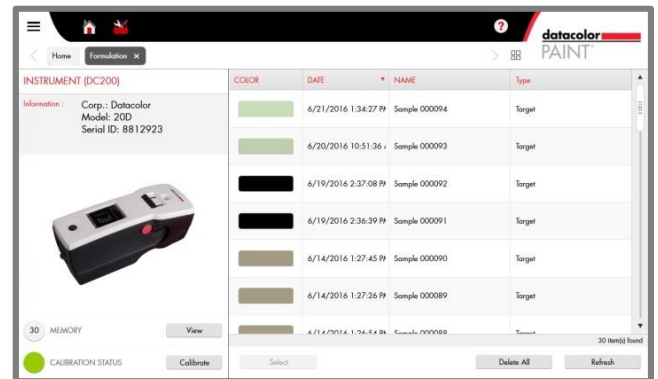
1. From the PAINT main window, select **Custom Match**.



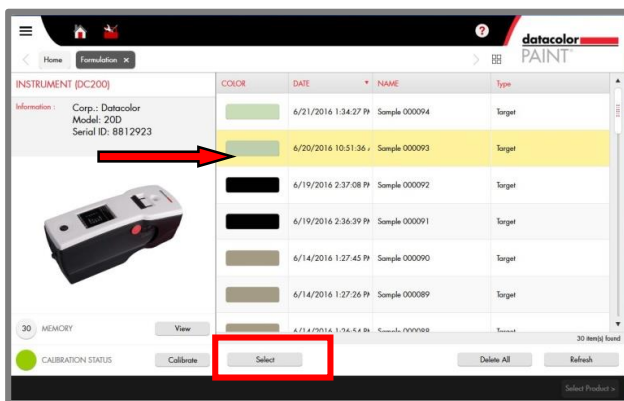
2. Locate the *Memory* field and click **View**.



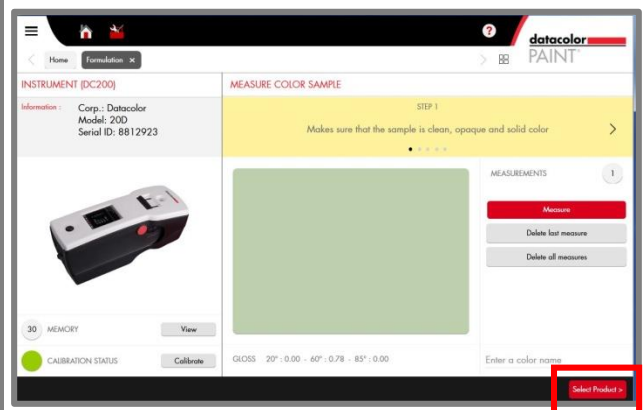
3. The samples stored on the unit are displayed.



4. Highlight the sample to be retrieved and click **Select**.



5. The selected sample displays in the *Custom Match* window.



6. Click **Select Product**, and make the appropriate selections for the product and formula.

See also *Datacolor PAINT User Guide* for details on the *Custom Match* feature.

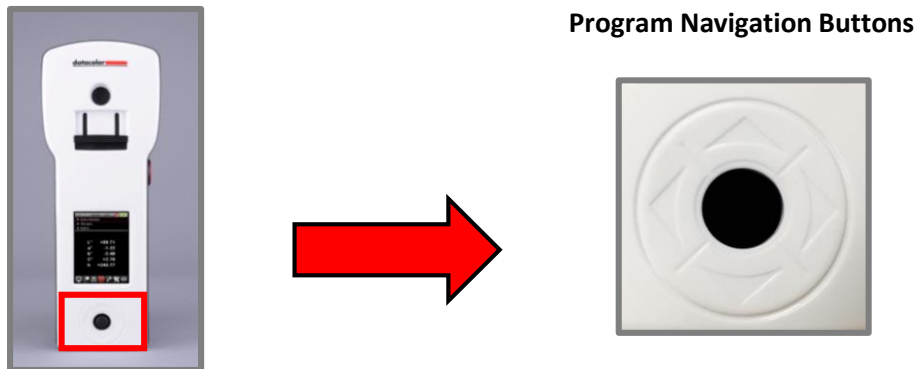
## WHEN NOT CONNECTED TO THE PC

You can perform the following functions:

- Instrument calibration and sample measurement.
- Edit the *Settings* and *Options* pages.

### Stand-Alone Software Navigation

Navigate the software display using the navigation buttons on the instrument.



### Navigation Buttons

- Use the left/right and up/down buttons to move through the fields on the screen and the buttons on the Live Bar.
- Use the black button to make a selection on the display screen.



#### NOTE

See *Datacolor 20D User Guide* for detailed instructions to navigate the stand-alone software.

### Instrument Calibration

The instrument must be calibrated on a regular basis. The procedure includes measuring the black trap and white tile. If the calibration has expired, the instrument display will automatically prompt you to recalibrate the instrument. The calibration is automatically performed for both specular included (SCI) and specular excluded (SCE) conditions.



Measure Button

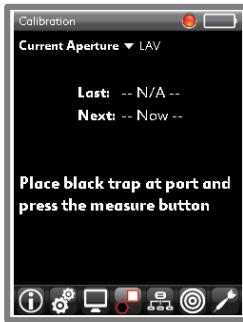


Instrument Port



## Calibration Procedure

When the instrument calibration has expired, the calibration screen is automatically displayed. The calibration icon on the title bar is red.



**Current Aperture.** For Datacolor 20D, it is always Small Area View (SAV).

**Last.** Date of time of previous calibration.

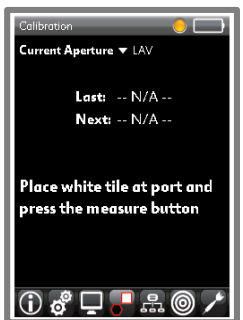
**Next.** Date and time of next calibration.

### Black Trap Prompt

(1) Place the *open end* of the black trap at the instrument port on the bottom of the unit. The port opening should be completely covered.

(2) Press the measurement button on the instrument. **DO NOT REMOVE** the trap until the instrument beeps.

When the measurement is finished, you will be prompted for the white tile.

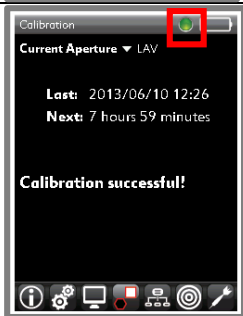


### White Tile Prompt

The program will prompt for the white tile to be measured.

(1) Place white tile at the instrument port. The port opening should be completely covered.

(2) Press the measurement button on the instrument. **DO NOT REMOVE** the tile until the instrument beeps.

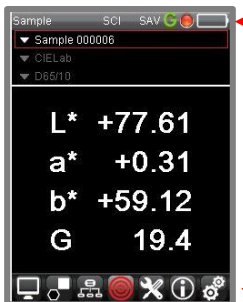


The program will notify you that the calibration is successful. The calibration icon in the *Title Bar* turns to green indicating that the instrument is calibrated.

The last calibration date/time will update. The next calibration date/ is based on a calibration interval found on the *Settings* page.

## Software Display

You can measure samples to obtain L\*a\*b\* coordinates. Below is an example of the output display:



**Title Bar.** Indicates calibration status and instrument conditions. ( details below)

**Sample.** Identifies the name of the sample data displayed.

**CIE Lab.** Identifies the coordinate system displayed. *Does not change.*









**D65/10.** Identifies the Illuminant/Observer condition. The Illuminant Observer choices include D65/10, A/10 and F2/10 and F11/10. *See Datacolor 20D User Guide for instructions to change this selection.*

**Live Bar.** Provides access to program options and maintenance features. *See Datacolor 20D User Guide for instructions navigate the Live Bar.*

## Title Bar Icons

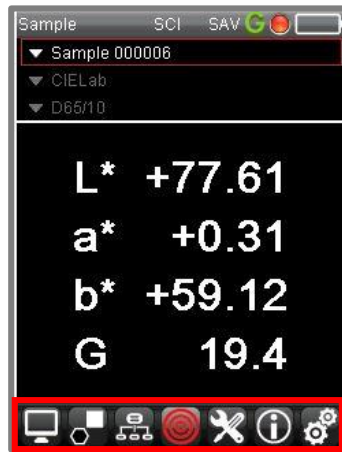
The title bar icons identify the current instrument configuration.



 	<p><b>Specular Mode.</b> Indicates whether the measurements are made Specular Included (SCI) or Specular Excluded (SCE).</p>
	<p><b>Aperture Size</b> This is always SAV.</p>
	<p><b>Gloss Option</b> <b>Gloss Enabled.</b> When enabled, two (2) measurements, SCI and SCE, are made of each sample and a gloss value is displayed.</p>
	<p><b>Gloss Disabled</b> When disabled, a single measurement in either SCI or SCE mode is made. No gloss value is displayed.</p>
	<p><b>Calibration Status</b> <b>Calibration Expired (red).</b> User will be prompted to recalibrate.</p>
	<p><b>Calibration Valid (green).</b> User can make measurements without recalibrating the instrument.</p>
	<p><b>Battery Life</b> <b>Empty.</b> Battery needs to be recharged. <b>1-4 (green) bars.</b> As the battery discharges, the icon changes from 4 bars to 0 bars.</p>

## Live Bar Options

A Live Bar at the bottom of the screen provides access to a variety of options in the stand-alone software. See *Datacolor 20D User Guide* for a detailed explanation of the Live Bar options.



← Live Bar

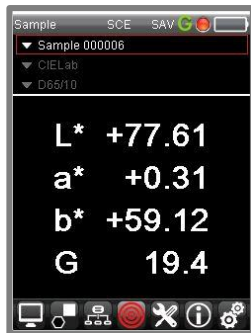
When an option is activated on the *Live Bar*, it turns red. In the example on the right, the *Sample Mode* is active.



## Measuring a Sample



To display the L\*a\*b\* coordinates for a sample, select the *Sample Mode* icon from the *Live Bar*.



The screen will display the data for the current sample.

To measure a new sample:

- (1) Position the sample over the sample port.
- (2) Press the **Measure** button on the side of the instrument. DO NOT MOVE the sample until the instrument beeps.

After the measurement is taken, the program will display a new sample name and L\*a\*b\* coordinates.