Datacolor ColorReaderPRO

Model DC10-1

User Guide

Datacolor ColorReaderPRO™ User Guide

Rev F, October 2020

Contact Us

Please contact our service department by telephone or email for questions or problems.

http://goto.datacolor.com/colorreadersupport

In urgent cases you can contact us by phone:	Europe: 00800 700 800 70 USA: 800-438-2585

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Datacolor ColorReaderPRO

Introduction

Datacolor ColorReaderPRO Model DC10-1 is a powerful, easy-to-use measurement and color lookup tool developed for color professionals including painters, facility managers, architects, and designers.

You can use Datacolor ColorReaderPRO to quickly and accurately measure samples selected by a customer, and find the closest color matches in a fan deck collection stored on the unit or the mobile application. Your customer then makes final color selections *on the spot*.

Bluetooth connectivity greatly expands the flexibility of Datacolor ColorReaderPRO. You can install the Datacolor ColorReaderPRO mobile application on portable devices including cell phones and tablets. Using this mobile application, you can easily store, recall, and examine project color information while working with a client in real time. Using the *Sync* option, you can add or update fan deck collections or other proprietary color systems in the mobile application.

You can also use Datacolor ColorReaderPRO as a stand-alone tool. When you measure a color in stand-alone mode, the OLED screen displays the top 3 color numbers of the closest matches within the fan decks synced with the device.

About this Guide

This guide covers the following:

- Datacolor ColorReaderPRO device set up and operation

- Features and operation of the Datacolor ColorReader mobile application

Manufactured:

At Datacolor location DS001

Datacolor Suzhou

288 Shengpu Road

Suzhou, Jiangsu

P.R. China 215021

Datacolor ColorReaderPRO General Information

Power Source

Datacolor ColorReaderPRO Model DC10-1 has a rechargeable lithium battery. The battery is charged using the micro USB cable included in the package.

Operation

This product is to be used only as specified by the manufacturer, and according to the instructions for operation and maintenance provided herein.

Wireless Communication Capability

Datacolor ColorReaderPRO is Bluetooth®-capable (4.0 or higher)

Optical Configuration

45°/0° type

Colorimetric Data

1976 CIE L*a*b* coordinates; Illuminant D65; 10° Standard Observer

Replacement Parts

White calibration slide

Device Markings

Several markings on the outside diameter of the unit includes the following information:

- Instrument Model
- Ratings
- Compliance and certification information

Serial Number

The serial number is programmed into Datacolor ColorReaderPRO. It is displayed on the side panel display during product startup, bottom of the box, and in the mobile application under the device tab.

Instrument Maintenance

There are no user-serviceable parts for this equipment.

Safety Warnings

Caution

If any of the following conditions exist, disconnect the USB cable:

- The USB cable is damaged.
- The device is exposed to water or other excess moisture.
- The device is dropped or damaged.
- The device needs service.

The protection of the device may be impaired if used in a manner not specified by the manufacturer.

To insure operational safety:

- Keep the device away from sources of liquids such as sinks, tubs, showers, etc.

- Protect the device from excess moisture.

- Follow all instructions and warnings provided with the unit.

- Read all instructions carefully before connecting the device to charge.

Mobile Application Requirements

The requirements to run Datacolor ColorReaderPRO mobile application include:

Device	Operating System
iPhone®	IOS® v. 9.3 or higher
iPad®	IOS v. 9.3 or higher
iPod Touch®	IOS v. 9.3 or higher
Android©	6.0 or higher
Bluetooth®	v. 4.0 or higher

Getting Started

What's in the Box?

The product includes the measuring device with calibration slide, micro-USB charging cable, and a carrying case that houses the accessories.
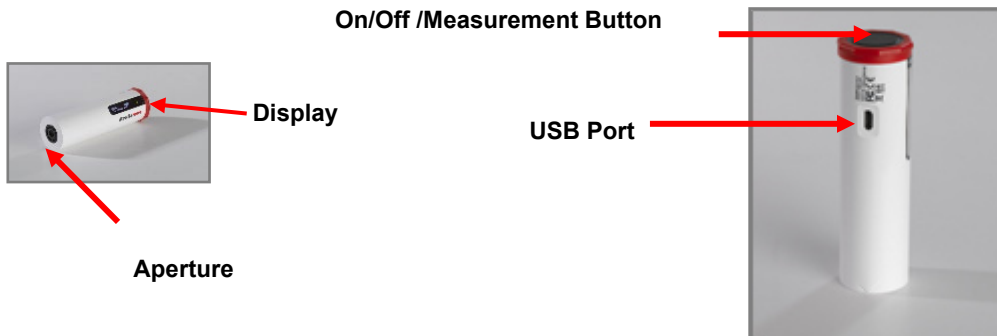
Accessories

USB charging cable

Calibration Slide
(located in sleeve
inside the case)

Instrument Controls and Indicators

This section identifies all controls and indicators on the device.

On/Off /Measurement Button

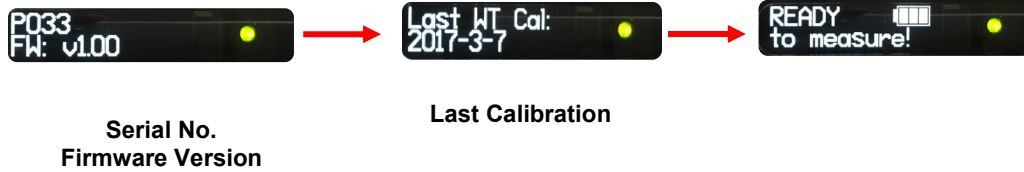Display

USB Port

Aperture

On/Off and Measurement Button

- Press the button to activate the device.
- Press the button to measure a color.
- To turn off the device, press and hold the button until the display goes blank.

Display

At start-up, the screen briefly displays the serial number, the firmware revision number, and date of the most recent calibration. If the calibration has not elapsed, it will report that it is ready to measure.

**Serial No.**
Firmware Version

Last Calibration

Following a measurement, you will see the names of the 3 closest colors in the fan deck data base displayed, one-by-one. They include the collection name and color number.

Battery Information and LED Indicator

Datacolor ColorReaderPRO is equipped with a rechargeable lithium battery. A micro-USB cable is provided to charge the unit. When fully charged, the charge is good for 500 measurements.

A battery icon displays the remaining battery life. A lightning bolt appears next to the battery icon when the device is connected with the USB cable to a power source.
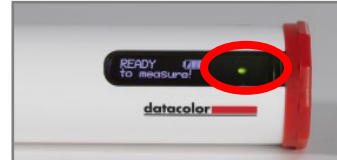
An LED indicator displays the current state of the device. *See Status LED for details.*

Cable Connections and Instrument Charging

Datacolor ColorReaderPRO has a micro USB port and a micro USB cable for charging

To charge:

- Plug the small end of the USB cable into the device.

- Plug the other end into a USB port on a computer or adapter.

Status LED

An LED indicator identifies the current state of the unit. Below is a list of possible instrument states:

LED Color	Instrument State
Off	• Device is not powered and is not charging
Green	**Solid** • Device is **On** and battery life is *greater than 10%* • Device is charging (refer to battery icon for charge level when unplugged).
Amber	**Slow blink** • Device is not being charged and battery life is *less than 10%*

Sleep Mode

Datacolor ColorReaderPRO will go to sleep when it is inactive for more than 5 minutes.

When the device is in sleep mode and you try to access it through the mobile application, it will ask you to wake the unit.

- Press the button on the top of the device.

Mobile Application

Getting Started

To install the Datacolor ColorReader mobile application:

- Install the ColorReader mobile application from the Apple App Store or Google Play Store.

- Plug in your device to charge, then Wake the unit by pressing the on/off button at the top.

- Launch mobile application.

    o Do not manually pair ColorReader through your device's Bluetooth settings menu, the application will do this.

- Register. You *must* register the product to use it.
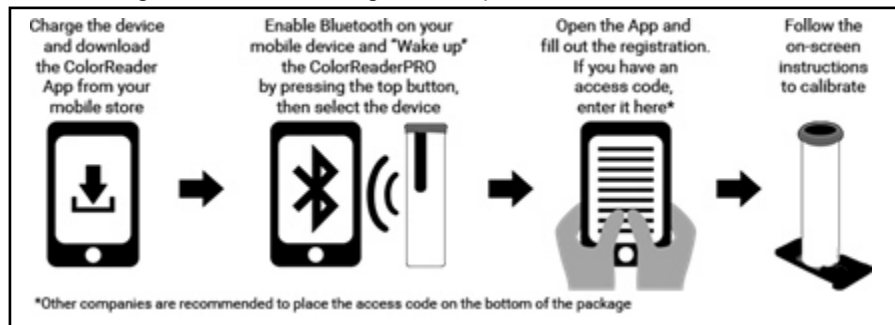
Application Installation Information

Please visit **http://www.datacolor.com/getcolorreader** for more installation information.

Device Registration

When you connect your charged Datacolor ColorReaderPRO to the mobile application for the first time, the software guides you through a registration process. You must register the Datacolor ColorReaderPRO to use it.

1. Launch the Datacolor ColorReader mobile application.

The program will prompt you to identify your device.

2. Tap on the device you are using. The program will display a registration screen.

3. Enter your access code or skip if you do not have one. If you do not have an access code, you will need to select the region that applies to you to access your color collections. You can add or change your access code later through the *Device* tab.

or
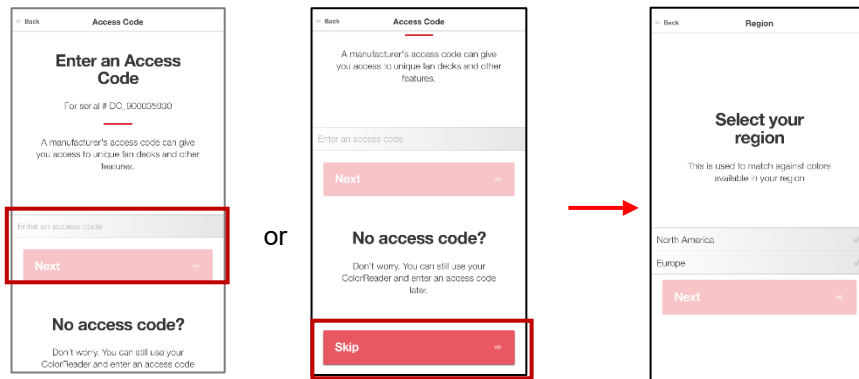
4. Enter your contact information and user type, scroll to the bottom of the screen to choose whether you would like to subscribe for updates and share data, and click to agree to the *Terms and Conditions* and *Privacy Policy*. Tap **Register**.
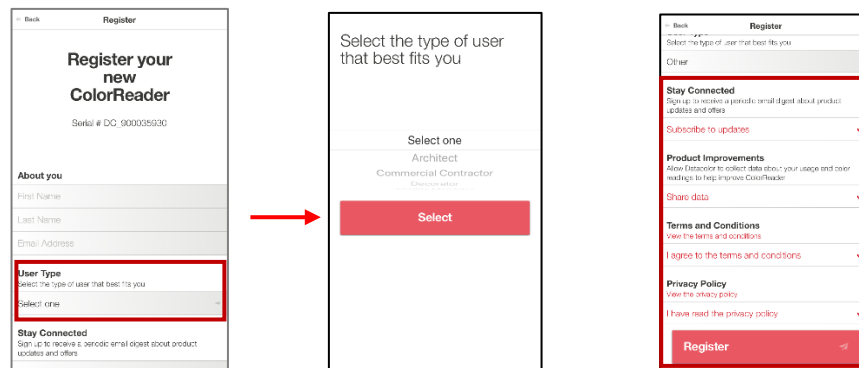
Main Screen

Below is the Datacolor ColorReaderPRO main screen. You can access the application features from the icons at the bottom of the screen.

Device

History

Colors

Palettes

Calibration

Calibrate the device every 8 hours to account for any changes in the device over time. This ensures that the measurements remain consistent over time. The Datacolor ColorReader mobile application will remind you when calibration is required. Use the mobile application to calibrate the unit.

1. After connecting, tap **Device** in bottom left corner

   Select the calibration tab at the top

2. Place the ColorReaderPRO on the calibration tile.
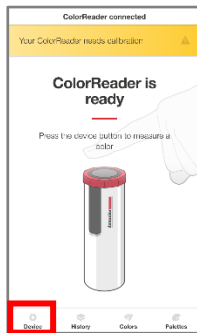
3. Tap **Calibrate**.
4. The application will report that the device is calibrated. Tap **Done** in the top left corner to return to the main screen.

Sample Measurement

1. Place the instrument aperture over the sample to be measured.

📝 **NOTE**

Make sure the aperture is flat to the surface and the color completely fills the aperture opening.

2. Press the button at the top of the instrument. The display screen and/or mobile application screen immediately displays the results.

Search Results

When you measure a sample, Datacolor ColorReader mobile application finds the closest matches stored in its fan deck database. It automatically displays the 3 closest matches on the portable device.

Color of Measured Sample →

→ Three closest fan deck colors

1. Tap one of the matches. The screen displays details about the selected color and manufacturer.

Company & Fan Deck Name →
Color Name →
Color Number →
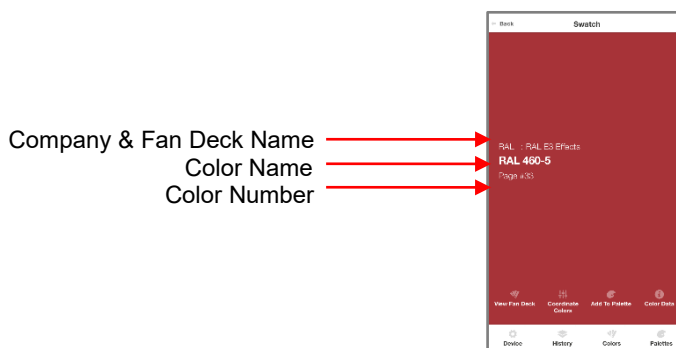
See *View Fan Deck* for details to view the color identified in a visual atlas.

See *Coordinate Colors* for details to view suggested color schemes.

See *Add to Palette* for details to select a color and assign it to a palette.

See *Color Data* for details to view CIE L*a*b*, LCH, RGB, CMYK, HEX, and LRV values for the selected fan deck color.

See *Color Lookup* for the search results displayed when working in stand-alone mode.

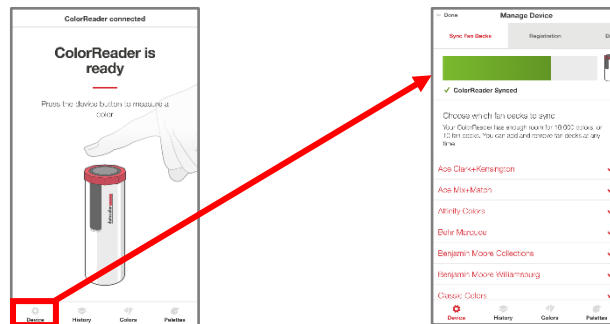## History, Colors, and Palettes options

See [History](#) for additional information.

See [Colors](#) for additional information.
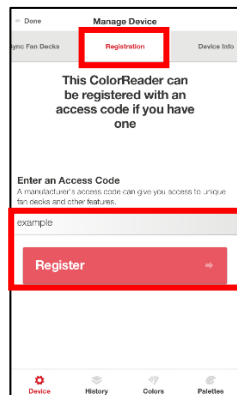
See [Palettes](#) for additional information.

Device

This option gives you access to *Sync Fan Decks*, *Registration, Device Info, Calibration,* and *Support* options.

Registration

Use this option if you are given an access code after you have registered your device.

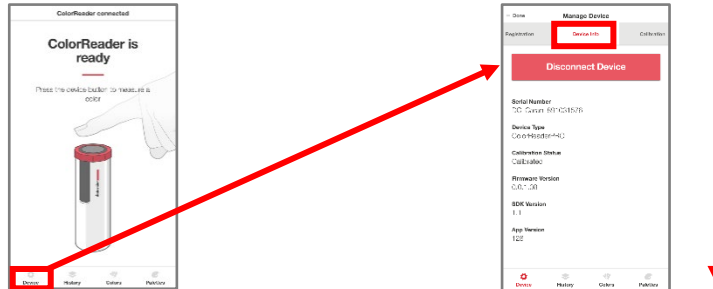1. Tap **Device, Registration**. Enter the access code you were provided.

2. Tap **Register**.

Device Info

Use this option to disconnect Datacolor ColorReaderPRO from the mobile application, and to confirm technical information about the unit.

1. Tap **Device**, **Device Info**. Scroll down to view all of the information.

Disconnect Device

To disconnect:

- Tap **Device**, **Device Info**, **Disconnect Device**.

Calibration

Use this option to see the current calibration status and to run the white slide calibration. See [Calibration](#) for instructions.

Support

Use this option to be sent directly to our Datacolor ColorReaderPRO online support site where you can submit a ticket or call our representatives for any issues you may be experiencing.

1. Tap **Device**, then **Support**. Click **Contact Customer Support** to open the support site in a internet browser window.
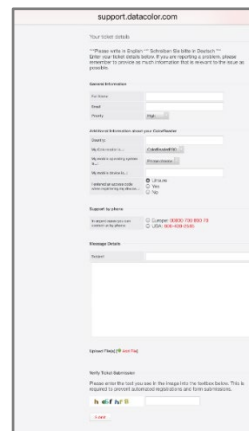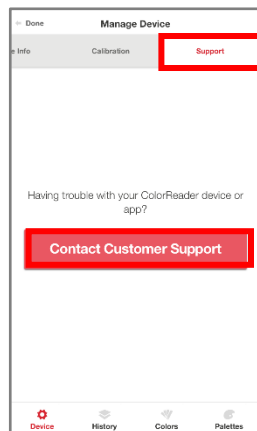
Sync Fan Decks

Datacolor ColorReaderPRO device can hold up to 10,000 fan deck colors. (The mobile app holds unlimited colors.) You use the *Sync Fan Decks* option to add or update the fan deck collections on your unit.

When you register your Datacolor ColorReaderPRO, it identifies all of the fan decks stored in the cloud that you can use. After the registration is completed, go to the *Sync* option to view the fan decks available and those that are available for you to download.
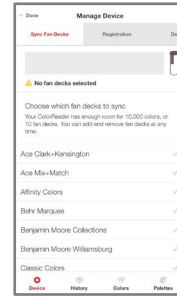
- Fan deck names in red identify the fan decks currently installed on your unit.

- Fan deck names in gray identify the fan decks available in the cloud that you can add to your device.

NOTE

If you purchased Datacolor ColorReaderPRO from a paint manufacturer or other 3rd party supplier, they may download fan deck data to your unit *before* sending it to you. If you find fan deck data installed on your unit immediately after registration, use the *Sync* option to add fan decks that you want to use. You can also use the *Sync* option at any time to update your fan deck data.

Add and Update Fan Decks on the Device

Use the *Sync Fan Decks* option to add or update fan deck data.

1. Tap **Device**, **Sync Fan Decks**. You can scroll though all of the fan decks available.

2. Tap in a fan deck name, to include/exclude it during the sync. Fan decks in red are included. Fan decks in gray are excluded.

NOTE

You can download a maximum of 10,000 colors to the device (approximately 4 fan decks).

Do not interrupt sync! Closing the application or opening a notification will require you to start over.

3. Tap **Sync Fan Decks** to start the sync.

⚠ **IMPORTANT**

Each time you sync the device, it erases all the fan decks from the Datacolor ColorReaderPRO device. When you sync the device again, the procedure downloads all of the fan decks *selected for the current sync*. In order to maintain your existing database, **you must re-select each fan deck you have previously downloaded.**

Delete Fan Decks

You cannot delete a fan deck from the device. However, when you sync the mobile application, all fan decks are erased and only the fan decks selected will be added.

✑ **NOTE**

You can deactivate a fan deck and/or add new fan decks for use at any time.
If you want to update all fan decks you have been using during the sync, you must activate each of them before starting the process.

Manage Project Colors

Datacolor ColorReader mobile application includes three data management options: History, Colors and Palettes.

- **History.** Displays the colors measured using Datacolor ColorReaderPRO

- **Colors.** Displays the fan decks included in the database

- **Palettes.** Displays the colors selected for each project you are running
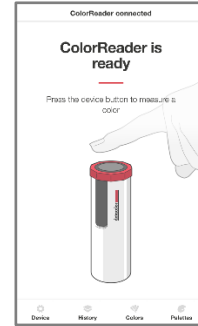
History Management

Use the **History** option to display the color, color coordinates, and fan deck suggestions for each of the colors you measure.

1. Tap **History** to see a list of all measured samples.

2. Tap one of the **color readings** to view the CIE L*a*b*, LCH, RGB, CMYK, HEX, and LRV values for the color.

3. Tap **Get Match** to view the 3 closest matches in the fan deck database. Tap the closest match you want to further evaluate.
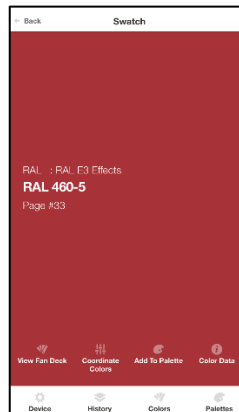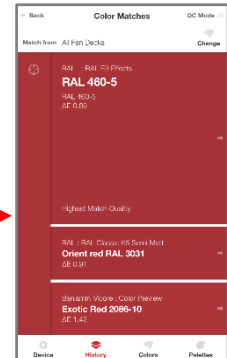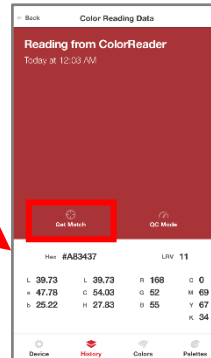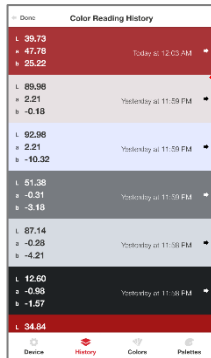
View Fan Deck

This option displays a visual atlas of the colors in the fan deck. It displays the portion of the atlas that contains the color you have selected. See *Colors* for more information.
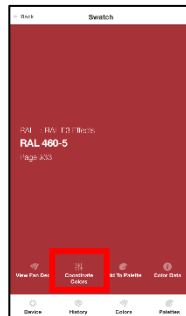
1. Tap **History,** select a color, and **Get Match**; or measure a color.

2. Tap one of the color suggestions.

3. Tap **View Fan Deck**.
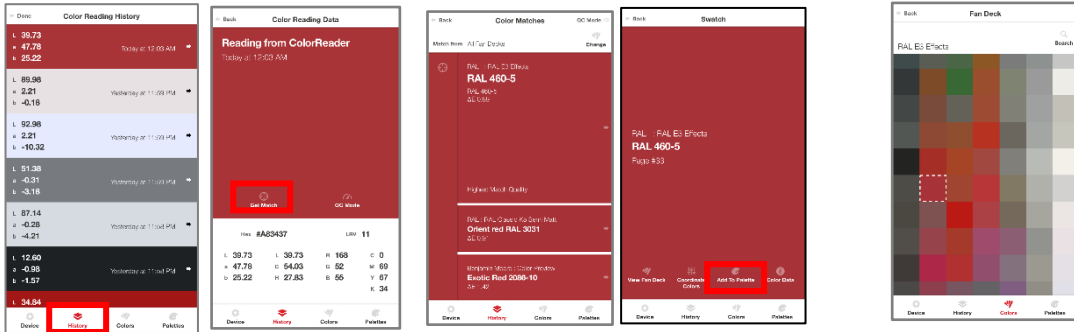
Coordinate Colors

Use this option to view suggested color schemes for your swatch.

1. Tap **History**, select the color you want to coordinate, select the closest match you want to use, and tap **Coordinate Colors**.

2. You have the option to view suggested color schemes for *Complimentary*, *Triad*, *Analogous*, and *Monochromatic*. You can learn more about these types of color schemes by selecting *About Color Schemes* in the bottom right corner.
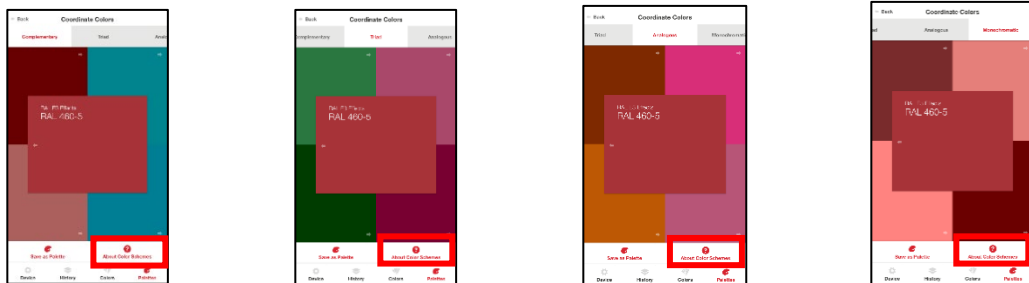
3. You can view a particular color suggested by tapping it to see the color information, other suggested close matches, or change the fan deck(s) to search close matches from. *See Fan Deck Search Selection for instructions.*

4. Once you have decided on your coordinated colors, you can tap **Save as Palette**. *See Palette Management for instructions.*

Add to Palette

Use this option to store one of the color choices in a palette. *See Add to Palette for instructions.*

Color Data

This option allows you to view the CIE L*a*b*, LCH, RGB, CMYK, HEX, and LRV values for the color and any notes the manufacturer may have added.
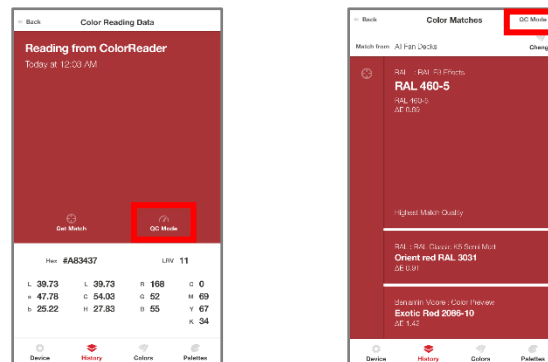

NOTE
The L*a*b* values are valid for D65/10° Illuminant/Observer

QC Mode

This option allows you to set a standard to compare readings and determine a pass or fail match.

1. Tap a previous Reading, or take a new Reading to set as your standard, then tap **QC Mode**.

2. You can now take readings and see if the new measurements are within an acceptable deltaE specified by the manufacturer (1 deltaE is recommended) of the original measurement that was set as your standard with easy to read *Pass/Fail* indicators.
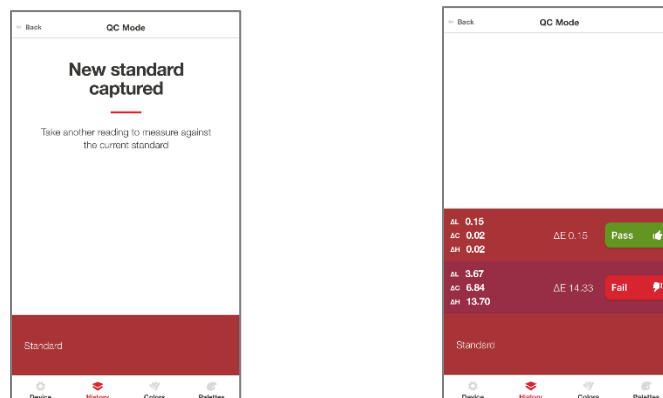
Colors Management

Colors Management lets you view color trends, search colors in the collections you have access to, and activate/deactivate fan decks included in your color search.

- **ColorReader Trends.** The *ColorReader Trends* option allows you to view the trending measured colors of each month based on all users globally.

- **Color Collections.** The *Color Collections* option displays the fan deck colors in a visual color atlas with an added search function.

- **Fan Deck Selection.** You can enable/disable fan decks stored in the database to be used for color searches on the mobile application.

ColorReader Trends

This option displays the trending measured colors of each month. Click on any of the color boxes and get the top 3 closest paint color matches from your accessed collections.
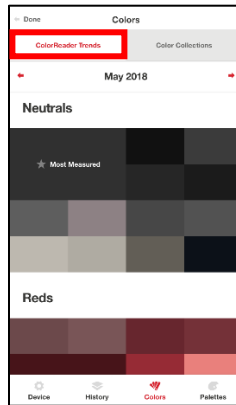
Color Collections

This option displays a visual atlas of the fan deck colors with an added search function.

1. Tap on **Colors** at the bottom of the screen, then the **Color** Collections tab at the top, and select one of the fan decks.

2. Tap on one of the colors on the screen or click **Search** in the top right corner and select a color.
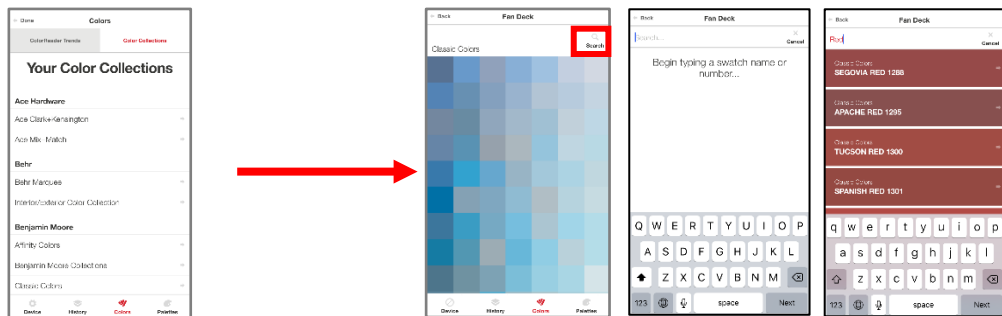
You will see the details of the color you selected. You can add this color to a palette.
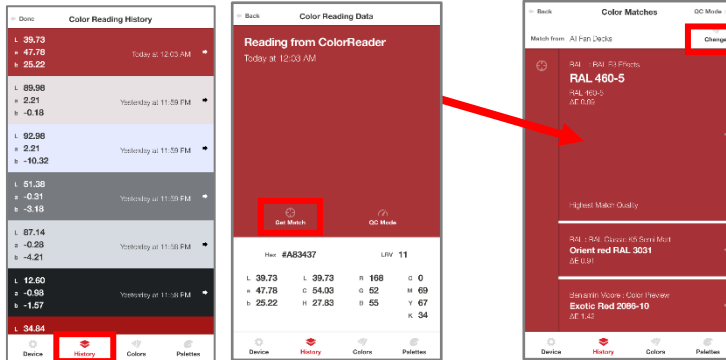
See Add to Palette for instructions.

Fan Deck Search Selection

You can activate/deactivate individual fan decks used for color searches on the mobile application. To add or change the selection:

1. Tap **History,** select a color, and **Get Match**; or measure a color.
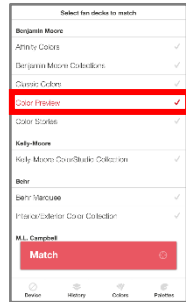
2. Tap **Change**.

3. You will see a list of all the fan decks on the device.

4. Tap on an individual fan deck to activate or deactivate for the search. Tap **Match**.
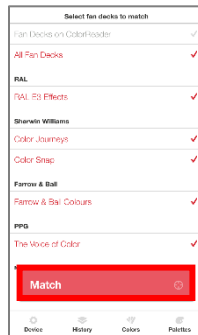
- Red: Activated
- Gray: Deactivated

5. When you change the fan deck selection, the color suggestions change. The results on the left below are from the *Color Preview* deck. When the *Color Preview* selection was disabled, and *Color Journeys* was activated, the results were immediately updated:
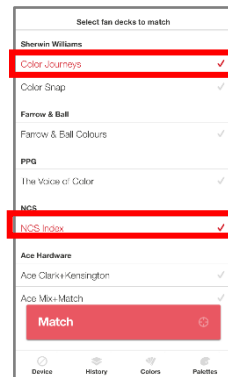
<table>
<tr><td align="center">*Color Preview* **Matches**</td><td align="center">*Color Journeys* **Matches**</td></tr>
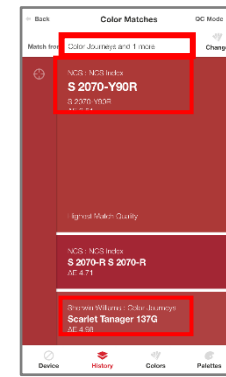<tr><td></td><td></td></tr>
<tr><td></td><td></td></tr>
</table>
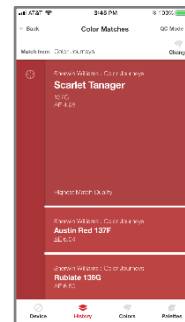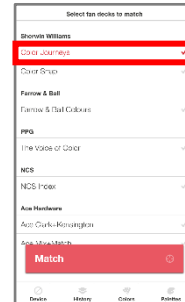
6. You can select multiple fan decks for the search.

7. The application will find the best matches from *all fan decks selected.*

Palette Management

Using the Datacolor ColorReader mobile application, you measure samples and find the closest color matches in your database. When you make a final color selection, you can store it in a palette. Palettes are collections of the colors you select *for a specific project*. For example, all of the paint colors selected for a particular customer or a particular room would be included in a single palette.

The mobile application includes options to create palettes, edit and delete information for individual colors in a palette, and share palettes.

Tap on the *Palettes* option at the bottom of the screen to access all of the palette management options.

First-Time Use
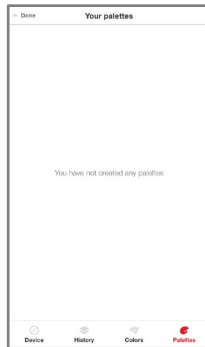
When you receive your Datacolor ColorReaderPRO and tap **Palettes**, it will not include any palettes.

Create Palette

To create a palette, you must measure or select a color from one of the closest matches of your *History* list.

📝 **NOTE**

You can create a new palette only when you are adding a color to a palette.
You can add, edit, or delete palette information at any time. *See also [Edit Palette Colors](#) options.*

1. Tap **History,** select a color, and **Get Match**; or measure a color.

2. Tap one of the color suggestions.

3. Tap **New Palette**.
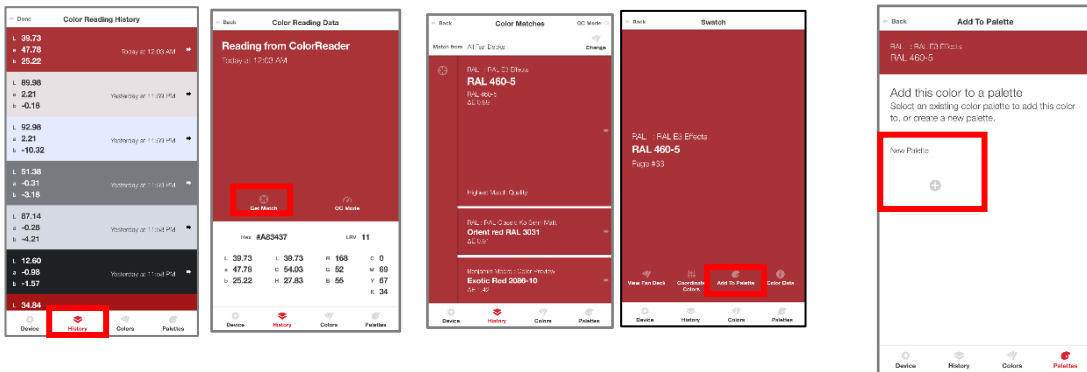
4. Tap in the *default palette name* field (Palette #1) to display a keyboard. Replace the default palette name with one of your choice.

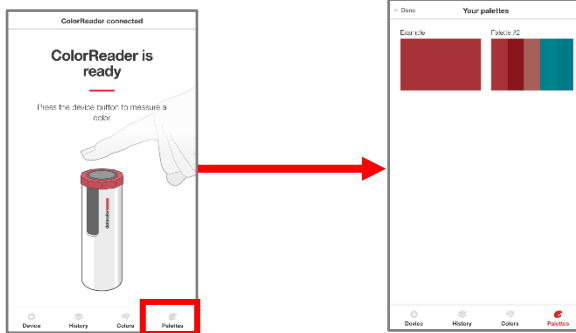5. Tap in the *default color label* field and enter a label as needed.

6. Tap **Back**.
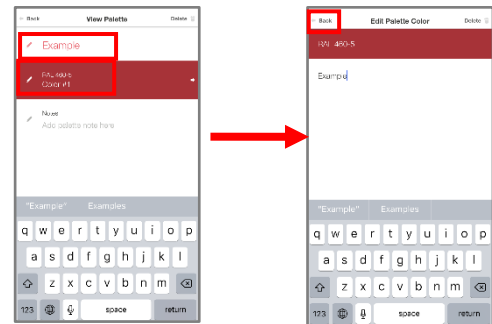
The color you added displays in the palette on the *Palettes List*.

View Palettes

You can view the individual colors in a palette at any time.
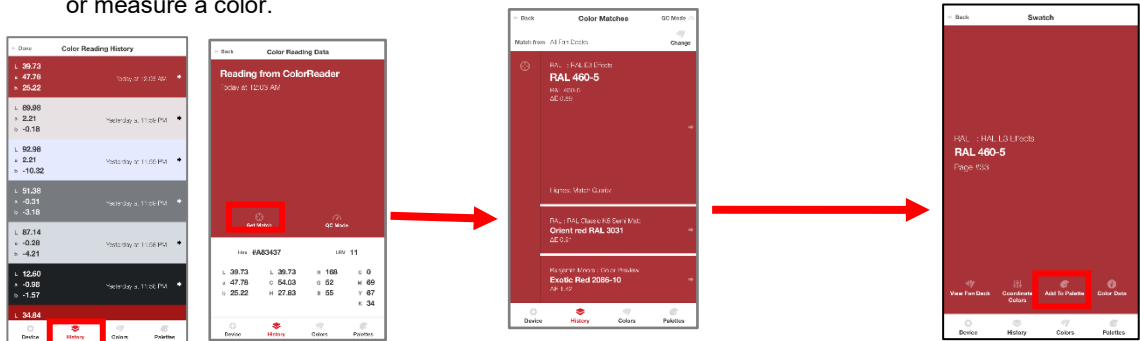
1. Tap **Palettes** at the bottom of the screen to view the palettes in your system.

2. Tap one of the palettes to see the contents:

Add To Palette

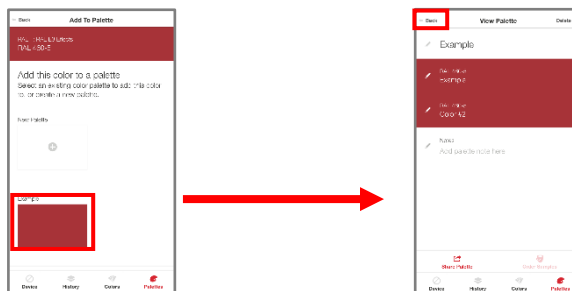To add colors to an existing palette:

1. Tap **History,** select a color, and **Get Match**; or measure a color.

2. You will see three color choices. Tap one to display the details.

**3.** Tap **Add to Palette.**

4. Tap to select one of the palettes.

5. *View Palette* displays. Tap **Back**.

You can add a label to the color as an additional reference. See [Edit Palette Colors](#) for instructions.

NOTE

The are no sub-folders within a particular palette. For example, if the project includes painting several rooms in a house, you may want to create a palette for each room if you are working with a large number of colors, or with similar color schemes in different rooms.
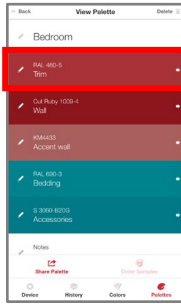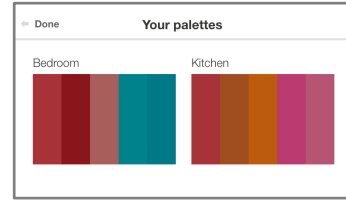
You can also use the color label to provide more detail about each color in a palette. For example, you can assign a label such as "trim" to quickly identify the application for each color selected.

Edit Palette Colors

When you store a color, it is assigned a color label in the palette. You can customize this color label with information to help you manage the palette.

1. Tap on **Palettes**, select a palette and select the *pencil icon* next to the individual color to be edited.
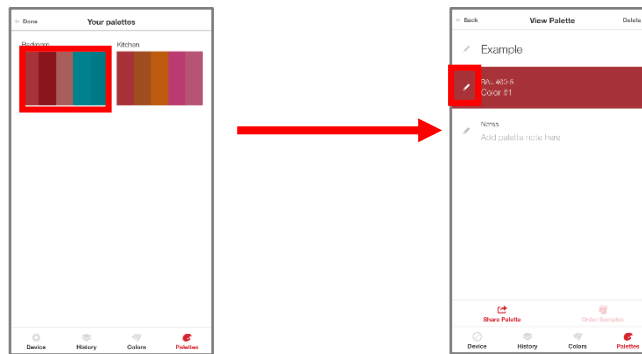
2. Tap in the *color label* field to display the keyboard. Enter the label. Click **Back.**

Delete Palette Colors

You can delete individual palette colors at any time.

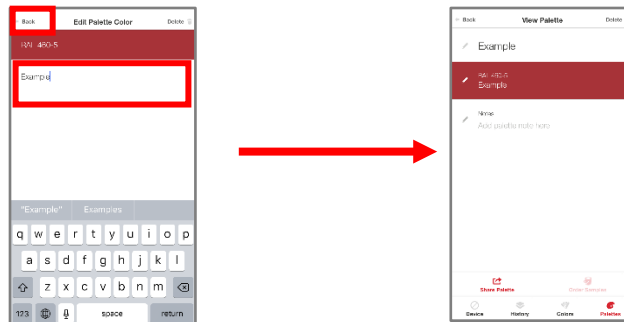1. Tap the *pencil icon* to the left of the color you wish to delete.

2. Press **Delete** in the top right corner of the screen and confirm.
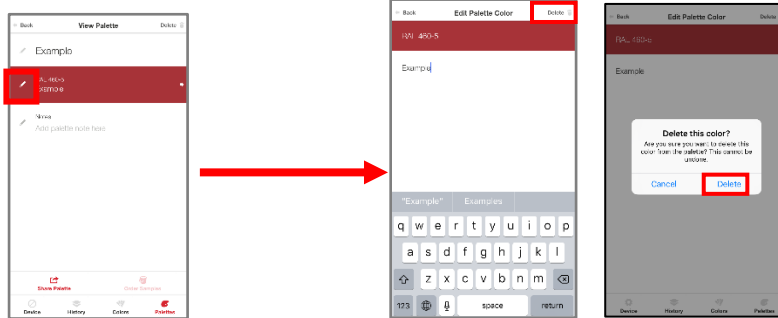
Share Palette Colors

You can share your color palettes quickly and easily to anyone through any messaging platform you have available on your mobile device.

1. Tap on **Palettes**, then select the palette you want to share.

2. Tap **Share Palette** option in the bottom left corner of the screen.
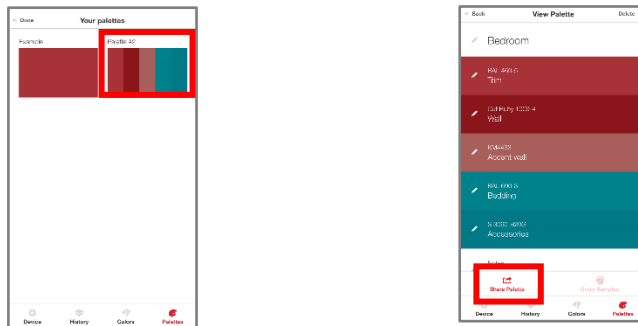
3. Choose the application you would like to use to share. A link will be created and added to the message section of your chosen platform.
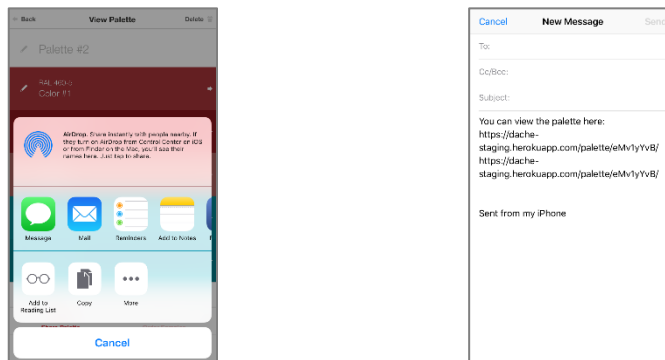
Stand-Alone Functions

Datacolor ColorReaderPRO includes stand-alone software that enables the user to perform the following functions:

- Device information
- Standalone calibration
- Sample readings
- Color Lookup

Device Information

See [Display](#) for information.

Standalone Calibration

Calibrate the device every 8 hours to account for any changes in the device over time. This ensures that the measurements remain consistent over time.

1. To calibrate in standalone mode, click the top button of the device 3 times. The OLED display will read "White Tile Calibration".
2. Place the ColorReaderPRO on the calibration tile.
3. Click the top button of the device again.
4. The OLED screen will read "Calibration Successful!". You may now take sample readings.

🖎 NOTE

If the OLED screen read "Verify White Tile", the calibration has drifted, but is within an acceptable tolerance to take readings.

If the OLED screen reads "Calibration FAILED", make sure the calibration tile is clean and the ColorReaderPRO aperture is flush and aligned to the white tile. Repeat the calibration process until calibration is successful.


Sample Readings

When you measure a color and there is no fan deck database installed on the unit, Datacolor ColorReaderPRO displays CIE L*a*b* values for the sample.

Once you sync a fan deck to your device, you will not see CIE L*a*b* values. If you would like to go back to seeing only CIE L*a*b* values on the device, follow the steps below:

1. Tap **Device**, **Sync Fan Decks** in the mobile application
2. Select random fan decks to sync
3. Once it starts to sync, close the mobile application to disrupt the process
4. Take a measurement with the Datacolor ColorReaderPRO and you should see the CIE L*a*b* values display on the device screen
    a. This happens because fan decks never completed the sync process

To sync fan decks again, see Sync Fan Decks for instructions.
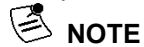
📝 **NOTE**
The CIE L*a*b* values are calculated for D65/10° Illuminant/Observer.

Color Lookup

When you are not connected to the mobile application and you measure a color, Datacolor ColorReaderPRO will display the 3 closest matches it finds on the device display. It displays the fan deck name on the first line and color number on the second line.
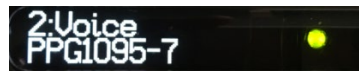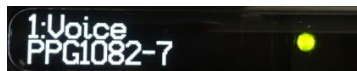
📝 **NOTE**
When using in stand-alone mode, results are not saved in mobile application.

Appendix

Instrument Specifications

Measuring Geometry	Proprietary
Warm-Up Time	None
Measurement Time	<3 second
Interface	Bluetooth LE
Aperture Size	6 mm
Number of Sensors	1
Battery	Rechargeable lithium, 500 measurements per charge
Power Requirements	5V DC, 200 mA, charged via mini USB connector plugged into personal computer
Dimensions	Width: 30.2 mm Length: 108.7 mm Weight: 0.13 lbs / 2.1 oz
Environmental Requirements	Operating Temperature: +5º- +40º C Relative Humidity (Non-condensing): 85% Maximum Altitude: 2,000 meters
Agency Compliance	SGS, CSA, C-Tick, CE

Compliance Statements

FCC Compliance Statement

WARNING

Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with these instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning equipment off and on, the user is encouraged to try and correct the interferences by one or more of the following measures:

- Re-orient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Pursuant to Part 15.21 of the FCC rules, any changes or modifications to this equipment not expressly approved by Datacolor may cause harmful interference and void the FCC authorization to operate this equipment.

See also the following Federal Communications Commission publication, available from the U.S. Government Printing Office, Washington, D.C., 20402:

How to Identify and Resolve Radio/TV Interference Problems

Stock No: 004-000-00345-4.

Japan Radio Law Compliance Statement

Certification has been granted to this product for compliance with the technical standards specified in Article 38 Clause 24 Paragraph 1 of the Japan Radio Law.

Anatel Homologation Compliance Statement

00248-18-10688

DC10-1 (ColorReaderPRO) Contains ANATEL approved module # 00248-18-10688

Specifications are subject to change without notice