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# Cube

## User Guide

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## What is the Cube?

The Cube is a portable colour measurement tool. It enables the user to quickly measure the color of virtually any surface. The Cube interfaces with smart-phones through Bluetooth Low Energy technology, a feature now widely available in phones. A Cube smart-phone application reads the sent color data and displays the color data on the screen. The application also provides a number of other features, including:

- Matching to paint brands
- Matching to custom color universes
- Identification of complementary colors
- Identification of similar shades
- Storing of color data for download or sharing
- The ability to re-calibrate the Cube on-demand (for specific, high accuracy applications)

## Using the Cube

Using the Cube is simple – all that is required is a Cube (for storing samples in offline mode) or a Cube paired with a phone (for taking samples in real time)

### To turn it on:

1. Touch the top of the Cube to turn it on – a blinking white LED will indicate that the Cube is powering on.
2. After three seconds, the white LED will turn solid. The Cube is now ready.

### To take a sample:

1. Place the Cube firmly on the sample surface.
2. Touch the top of the Cube again to take a sample. The white LED will blink, indicating that a sample is in progress.
3. Once the sampling is complete (about 2 seconds), the white LED will blink rapidly for a second to indicate that a sample was successfully taken.
4. If the red LED flashes upon touching the Cube, the Cube's internal storage is full and now needs to be paired with a phone to download the stored samples before further samples can be taken.

### To pair with a phone:

1. Ensure that the phone's Bluetooth is turned on
2. Download and install the SwatchMate Cube app (available at the Apple Store and on Google Play)
3. Start the SwatchMate Cube app
4. Turn on the Cube
5. Pairing will be automatic. When the phone is paired, a Bluetooth symbol will appear in the status bar, indicating successful connection.

### To explore samples:

1. Upon taking a sample, the SwatchMate Cube app will record the captured color and display details of the most recently captured color.
2. Navigate the app using the various buttons provided within

## Technical Specifications

### Appearance:

- Arctic White or Black-on-Black
- Status Indicator LED
- Dimension: 55mm (H) x 50mm (W) x 50mm (L)

### Connectivity:

- Wireless – Bluetooth Low Energy compatible (iPhone 4s or higher, and various Android based phones)
- Compatible with iOS 7+, Android 4.3+ with BLE
- Range – approx. 10m

### Functionality:

- One-button operation
- Ability to store samples without Bluetooth pairing
- Associated software to display closest match to a range of colour databases
- Integrated with popular image editing software to import sampled colour in real time

### Sampling attributes:

- Sampling time – approx. 2 seconds
- Sampling accuracy – median  $\Delta E < 1.0$
- Sampling consistency – median  $\Delta E < 1.0$  with samples 3 seconds apart
- Sample output –  $L^*a^*b^*$  or converted to sRGB (for display)
- Sample output independent of surface sheen

## Safety, Handling, & Support

### Important safety information

**WARNING:** Failure to follow these safety instructions could result in fire, electric shock, or other injuries, or damage to Cube or other property. Read all the safety information below before using Cube.

**Handling** Handle Cube with care. It is made of metal and plastic and has sensitive electronic components inside. Cube can be damaged if dropped, burned, punctured, or crushed, or if it comes in contact with liquid. Don't use a damaged Cube, such as one with a cracked screen, as it may cause injury. If you're concerned about scratching the surface of Cube, consider using a case or cover.

**Repairing** Don't open Cube and don't attempt to repair Cube by yourself. Disassembling Cube may damage it or may cause injury to you. If Cube is damaged, malfunctions, or comes in contact with liquid, contact SwatchMate.

**Battery** Don't attempt to replace the Cube battery yourself—you may damage the battery, which could cause overheating and injury. The lithium-ion battery in Cube should be replaced only by SwatchMate, and must be recycled or disposed of separately from household waste. Don't incinerate the battery.

**Charging** Charge Cube with the included cable connected to a computer or to power adapters that are compatible with USB 2.0 or later. Using damaged cables or chargers, or charging when moisture is present, can cause electric shock.

### FCC compliance statement

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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.

Note: 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 in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the 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 the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.
- Connect the equipment to 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.

**Important:** Changes or modifications to this product not authorised by SwatchMate could void the electromagnetic compatibility (EMC) and wireless compliance and negate your authority to operate the product. This product has demonstrated EMC compliance under conditions that included the use of compliant peripheral devices and shielded cables between system components. It is important that you use compliant peripheral devices and shielded cables between system components to reduce the possibility of causing interference to radios, televisions, and other electronic devices.

### Technical Assistance

If any technical assistance is required, please contact SwatchMate at:  
[info@swatchmate.com](mailto:info@swatchmate.com)