

BabelColor Color Translator & Analyzer (CT&A)  
Version 5.4.5 (for Mac OS)

Thank-you for your interest in this BabelColor product!

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1- UNINSTALL ANY PREVIOUS VERSION

IMPORTANT: If you have made any modification to your Color Decks database, you may want to keep a copy of the "ColorDecks.bbd" or "ColorDecks\_R2.bbd" file before deleting the BabelColor CT&A application folder. However, if this file is from a CT&A version prior to 3.1, i.e. "ColorDecks.bbd", it will only be useful if you re-install your older version of CT&A. See Section-6 and Section-7 for more information on the changes that were done to the Color Decks database file.

IMPORTANT: We DO NOT recommend keeping different versions of the program on the same computer. Older versions should be uninstalled before running more recent versions. In particular, do not install the 32 bit and 64 bit versions at the same time.

To uninstall an old version, drag the "BabelColor CT&A" application folder to the "Trash" can. This folder should be located in the Mac "Applications" folder, located at the root level of your System hard disk.

A shortcut to the "Applications" folder can normally be found in any folder "Sidebar" (unless the user has removed it) or in the "Dock". If required, you can enable the folder sidebar by selecting the Finder's "View/Show Toolbar" and "View/Show Sidebar" menus.

The exact "BabelColor CT&A" application folder name depends on the version installed: "BabelColor CT&A", "BabelColor CT&A (Universal)", or "BabelColor CT&A (Intel)".

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## 2- PROGRAM INSTALL

**ESSENTIAL:** For proper operation make sure that you "Allow apps downloaded from: App Store and identified developer" in the Security & Privacy control panel.

**IMPORTANT:** Do not install the 32 bit and 64 bit versions at the same time. Please read Section 1 if you need to uninstall the program.

**IMPORTANT:** This version of the Readme file is specifically dedicated to CT&A V5.0 or NEWER packaged in a "disk image", a file with a \*.dmg extension. The program and disk image are digitally signed by an "identified developer".

If you are installing a version of CT&A (V5.0 or OLDER) packaged in a ZIP file, please read these sections:

9- Mac OS COMPATIBILITY - PERMISSION TO OPEN CT&A

10- macOS Sierra SECURITY AND PRIVACY CONTROL PANEL SETTINGS

The disk image name is "CTA\_Mac\_Vxxx-32" or "CTA\_Mac\_Vxxx-64", where "Vxxx" is the program version and "-32" or "-64" identify the 32 bit and 64 bit versions. The downloaded file can usually be found in the Mac "Download" folder unless you specifically saved it elsewhere.

Open the disk image with a double-click. All program files are contained in a single folder named "BabelColor CT&A".

Drag the "BabelColor CT&A" folder from the disk image to the Mac "Applications" folder, located at the root level of your System hard disk.

**IMPORTANT:** DO NOT PLACE THE "BabelColor CT&A" FOLDER OUTSIDE OF THE MAC "APPLICATIONS" FOLDER! If you place the folder elsewhere, this will be detected by the Mac Gatekeeper and the program may not work properly.

You can now close/eject the disk image. We strongly recommend keeping the disk image in order to reinstall the program at a later time. You should also do an external backup of the disk image in case of a computer failure.

Note: A shortcut to the "Applications" folder can normally be found in any folder "Sidebar" (unless the user has removed it) or in the "Dock". If required, you can enable the folder sidebar by selecting the Finder's "View/Show Toolbar" and "View/Show Sidebar" menus.

To start the program, double-click on the CT&A application icon (which is, in fact, the "BabelColor" logo). For faster access, you can drag the "CT&A" icon to the "Dock"; this will create an alias that will provide a one-click access to the CT&A application.

If you receive the following message the first time you launch CT&A:  
"(EM-19) CT&A cannot open the ColorDecks database..."  
please read Section 11 of this document.

You can add an alias of the CT&A application to the folder sidebar by dragging the application icon to it. You can also select (one-click) the application icon and select the "File/Add to Sidebar" menu in the Finder.

The folders and files in the "BabelColor CT&A" application folder are:

**FOLDERS:**

- i1d3 Support files : A folder which contains the calibration matrix files for the i1Display Pro. This folder and the files it contains should not be moved or modified.
- Illuminants : A folder with files containing the spectrum of standard Illuminants in 5 nm and 10 nm bandwidths
- UV-filters : A folder with files containing the transmission spectrum of UV filters used with the Whiteness tools (Spectral Tools)

**FILES:**

- CT&A : The main program
- CT&A\_Help.pdf : The help file in PDF format
- CT&A\_Readme.txt : This file
- ColorDecks\_R2.bbd : The color chips database

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### 3- PROGRAM ACTIVATION AND DEACTIVATION

CT&A version 5.x has a different license management system than the ones used in versions 1.x, 2.x, 3.x, and 4.x. The "Name" and "Key" of these older versions will not work in this version. Please consult the BabelColor Web site (address shown below) for upgrade information.

The license management system is based on a single "Product Key" which is used to ACTIVATE the program on a specific computer. This key is valid for either the Mac or the Windows versions of the program.

**IMPORTANT:** Program ACTIVATION and DEACTIVATION require a live Internet connection. In the activation process, the program generates a "fingerprint" to uniquely and anonymously identify your computer. The "Product Key" and the "fingerprint" are sent to an activation server, which sends back an activation certificate. An Internet connection is not required for program operation afterwards. A dialog will ask you to agree with this process each time you activate.

You can activate and deactivate using an Internet connection as often as you wish; this is a fast and free process. This is useful if you want to use the program on more than one computer (one computer at a time!).

**IMPORTANT:** If an Internet connection is not available, because of your Company internal regulations for example, it is possible to perform an OFFLINE activation. However, please note that a service fee, paid in advance, is required to complete each OFFLINE activation. The service fee can be paid online from the BabelColor Web site. You should allow a few working days to complete the offline activation process since a few e-mails will need to be exchanged between you and BabelColor.

To transfer an activated "Product Key" to another computer, the key must first be deactivated; only then can you activate a second computer using the SAME "Product Key". When deactivating, you can decide to erase or not the key. If the key is not erased, you do not need to re-enter it the next time you reactivate this computer. Of course, if you installed the program on a customer computer, you should also erase the key when you deactivate it. Please note that it is not possible to deactivate a computer remotely, so plan the transfer carefully.

Once a program is activated, it is not possible to see the "Product Key" completely, in the "About CT&A..." dialog for instance, or in the activation dialog when reactivating, because the last characters are hidden to prevent theft. It is thus important to keep a record of the whole "Product Key" in a secure place; for this reason, we strongly recommend saving a copy of the e-mail received when you purchased the program. Also, do not share your key as it will not be replaced if someone else uses it without your consent.

When you start a non-activated copy of the program, an ACTIVATION dialog is shown. You need to click on one of the four buttons:

- a- "Activate": If you purchased the program, you should have received a "Product Key" by e-mail. To activate the program, you must enter the key in the dialog and then click on this button. If the program was previously activated and deactivated, a partial view of the "Product Key" may be seen in the data field. You can decide to try activation with this key or use another key.
- b- "Buy": Clicking on this button will direct you to the purchase page of the BabelColor Web site.
- c- "Trial mode": Clicking on this button will start the program in a mode where many program features are disabled.
- d- "Cancel": Clicking on this button will close the dialog without starting the program.

When the program is running, and depending on if the program is activated or not, you can open the ACTIVATION or DEACTIVATION dialog with the "Activate" or "Deactivate" menu item located in the "Help" menu.

Please contact BabelColor if you have not received your "Product Key" by e-mail within one day of your purchase.

Contact information:

Web site : [www.babelcolor.com](http://www.babelcolor.com)

Support : [info@babelcolor.com](mailto:info@babelcolor.com)

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#### 4- INSTALLING THE INSTRUMENTS DRIVERS

In the Mac OS, all the files required to operate the instruments are included within the CT&A application. There is no further installation required by the user.

Please consult Section-8, "COMPATIBILITY WITH X-Rite i1Profiler and other X-Rite software," for additional information.

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## 5- OPENING THE HELP FILE

The Help file can be opened from the CT&A application via the "Help" menu., by clicking on the help icon in the toolbar, or by clicking on the "Help" button located in the bottom of most tool windows. It can also be opened by double-clicking on the " CT&A\_Help.pdf" file located in the "BabelColor CT&A" application folder.

The Help can be opened with "Preview", "Acrobat Reader", and any application that can read pdf documents.

Preview is installed with the Mac OS.

The free Acrobat Reader application, from Adobe, is available at the following Web site:

<http://www.adobe.com/products/reader/>

NOTE: Acrobat Reader is now available in two distribution modes, called "tracks": "Continuous track" and "Classic track". The Continuous track, offered by default, is a "cloud" version that gets updated as required, without user control. The Classic track is similar to the older program version that gets updated at fixed intervals. If you prefer the older version, you can locate the download file by searching for "Adobe Reader Mac download" with your favorite search engine.

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## 6- CHANGE OF COLOR DECKS DATABASE FORMAT IN VERSION 2.7

NOTE: The content of this section is applicable only if you are currently using a version of CT&A older than 2.7.0.

The database format used to save the color chips collections (also called Color Decks, and saved in the ColorDecks.bbd file) has been changed in Version 2.7.0. The new format is not compatible with the format used in previous CT&A versions.

If you have used PatchTool(TM) (another BabelColor application) to add or remove a Color Deck from the database, this modified database will also be incompatible.

Any modified ColorDecks.bbd file will therefore need to be regenerated starting from the ColorDecks\_R2.bbd file. As before, this is done using PatchTool's "BabelColor CT&A Export" tool (PatchTool Version 1.1.1 or more recent required, Version 4.x or more recent recommended). PatchTool can be freely downloaded from the BabelColor Web site. Purchasing PatchTool is NOT required to export a data file to a CT&A Color Deck.

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## 7- CHANGE OF COLOR DECKS DATABASE NAME IN VERSION 3.1

NOTE: The content of this section is applicable only if you are currently using a version of CT&A older than 3.1.0.

The name of the database used to save the color chips collections, also called Color Decks, has been changed in Version 3.1.0. The previous database file name was "ColorDecks.bbd" file; the new database file name is "ColorDecks\_R2.bbd". The new database contains more accurate Munsell reference data; this data is used both for the Munsell Deck and to obtain conversions to the Munsell color space.

If you have used PatchTool(TM) (another BabelColor application) to add or remove a Color Deck from the database, then you should regenerate your custom database starting from the ColorDecks\_R2.bbd file. As before, this is done using PatchTool's "BabelColor CT&A Export" tool (PatchTool Version 1.1.1 or more recent required, Version 4.x or more recent recommended). PatchTool can be freely downloaded from the BabelColor Web site. Purchasing PatchTool is NOT required to export a data file to a CT&A Color Deck.

**WARNING: DO NOT CHANGE THE OLD DATABASE NAME TO THE NEW NAME!**  
If you do so, the Munsell Deck, as well as conversions to the Munsell space, will be less precise.

NOTE: If you have made any modification to your older Color Decks database, you may want to keep a copy of the "ColorDecks.bbd" file before deleting the CT&A application folder. However, this file will only be useful if you re-install your older version of CT&A.

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## 8- COMPATIBILITY WITH X-Rite i1Profiler and other X-Rite software

If you installed software from X-Rite, such as i1 Profiler, which comprises the "X-Rite Device Services" program, you may receive a message to the effect that the i1Pro or i1Pro 2 is not connected when you click on the "Info" button located beside the "Instrument" selection menu in the toolbar window. Assuming that your instrument is indeed connected, first check if the i1Profiler program from X-Rite is opened, and, if opened, close it, since CT&A cannot be used at the same time.

Early versions of i1Profiler provide a control panel named "X-Rite Device Services", which is used to assign/unassign instruments to X-Rite software. The latest version of i1Profiler still include "X-Rite Device Services" but do not include a control panel, and instrument assignment is performed dynamically when opening an X-Rite program.

If using an early version of i1Profiler, open the "X-Rite Device Services" control panel, located in the System Preferences, and DESELECT the i1 (Eye-One) in the panel; this will make the instrument available for CT&A. Please note that changes in the X-Rite control panel can be done while CT&A is opened. You should then be able to connect the instrument by selecting "Try to connect again" in the "Instrument" menu. The early versions of i1Profiler may also open one or more dialogs asking if you want CT&A to take ownership of the i1 peripherals; please answer "Yes" to the question(s).

"X-Rite Device Services" is dedicated to X-Rite programs and is not under CT&A's control; any problem related to its use should be directed to X-Rite.

If the above fails, disconnect and reconnect the instrument, then select "Try to connect again" in the "Instrument" menu. Please note that CT&A should be used with only one Eye-One (Display, Display 2, i1Pro, or i1Pro 2) connected at a time.

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## 9- MAC OS COMPATIBILITY - PERMISSION TO OPEN CT&A (V5.0 or OLDER)

Note: This section is applicable to versions of CT&A (V5.0 or OLDER) packaged in a ZIP file. If you are using macOS Sierra (10.12), please also read this section:

### 10- macOS Sierra SECURITY AND PRIVACY CONTROL PANEL SETTINGS

You may receive this message the first time you launch CT&A after downloading it:

"CT&A" can't be opened because it is  
from an unidentified developer.

Such a message appears for programs not downloaded from the Apple App Store, or for programs created by developers which did not pay to be "identified" by Apple (which was the case for CT&A packaged in a ZIP file).

Here are two methods to open the program; Method-1 will grant permission to a single application while Method-2 will grant permission to ALL applications (until reversed). Both methods are described below and illustrated on this Web page:

[http://www.babelcolor.com/os\\_x\\_compatibility.htm](http://www.babelcolor.com/os_x_compatibility.htm)

Method-1 (Single application permission):

- a- Press the "ctrl" key and click on the CT&A icon  
OR  
do a right-click on the CT&A icon.
- b- Select "Open" in the popup menu. You will get a message asking if you are sure you want to open the application. Check that the file was downloaded from "www.babelcolor.com" and click on the "Open" button.

Afterwards, when you open CT&A, you will not be asked for another authorization until you download and reinstall the program.

Method-2 (Change of System Preferences):

- a- Go in the "Security & Privacy" settings of your "System Preferences".
- b- Select the radio button corresponding to  
"Allow apps downloaded from: Anywhere."  
You may need to first unlock the dialog by entering your account password. You should leave this dialog open for the next step.
- c- Start CT&A. You will get a message asking if you are sure you want to open the application. Click on the "Open" button.
- d- Once the program is launched, you can change the security setting back to where it was and close the security dialog. You will not be asked for another authorization until you download and reinstall the program.

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## 10- macOS Sierra SECURITY AND PRIVACY CONTROL PANEL SETTINGS (V5.0 or OLDER)

Note: This section is applicable to versions of CT&A (V5.0 or OLDER) packaged in a ZIP file. It does not apply to versions of CT&A (V5.0 or NEWER) packaged in a disk image (\*.dmg) file.

If you are using macOS Sierra (10.12), the Gatekeeper settings (Security & Privacy control panel) may need to be changed with the "Terminal" BEFORE download!

Before Sierra (macOS 10.12), it was possible to allow applications downloaded from "unidentified developers" simply by selecting the "Anywhere" radio button in the Security & Privacy control panel. This button no longer appears by default when Sierra is installed but it is possible to make it visible again with a "Terminal" command. A solution is shown below but lets first see why this is a problem.

The problem:

In Sierra, even if you allow an application from an unidentified developer to be opened (as presented in METHOD-1 of section 9 above), Sierra will still not trust the application and will separate the main app from the other files in the application folder, placing it at a random location.

For the user, the main app still appears to be located in the application folder, but if that app is programmed to use files located in the application folder, it will not find them. The consequences will vary depending on each software; errors or crash will result in many cases.

- For CT&A, you will see a fatal error on program launch:  
"(EM-19) CT&A cannot open the ColorDecks database..."

- For PatchTool, the program will start. However, it will not find its Help manual, the sample files in the "File/Open Sample Files" menu, the default CMYK profiles, and the display calibration files for the i1Display Pro.

Note: This problem will not happen if the program was downloaded before upgrading to Sierra. You can also copy the program from another local computer (i.e. not via Internet) on which the application is working.

The solution:

1. Make the "Anywhere" button appear by disabling Gatekeeper.
  - Open the "Terminal" (located in the "Utilities" folder of the Mac "Application" folder).
  - In the Terminal, type:  
`sudo spctl --master-disable`  
followed by the Enter key. You will then need to enter your account password to complete the command.
  - You can check that the "Anywhere" button appears and is selected in the Security & Privacy control panel.
  
2. Download CT&A and install it by placing the "BabelColor CT&A" folder at its desired location (usually in the Mac Applications folder).  
IMPORTANT: Download should always be done AFTER disabling Gatekeeper. Open CT&A with a double-click and check if the program starts correctly.
  
3. Change the the Security & Privacy setting OR "re-enable" Gatekeeper.
  - You can decide to keep the "Anywhere" button visible and still select a more secure setting. You will need to enter your account password in order to change the control panel setting.
  - You can also return to the default Gatekeeper appearance, with the "Anywhere" button invisible and not selected, by going again in the "Terminal" and typing:  
`sudo spctl --master-enable`  
followed by the Enter key. You can check that the "Anywhere" button is no longer visible in the Security & Privacy control panel (you may need to first close the System Preferences and re-open them to see the change).

If the solution fails:

We have seen cases where doing the above did not prevent CT&A from crashing at startup, with the "(EM-19)..." error message being shown. In other words, the app still ends up in quarantine even if the user authorizes it.

Here is a workaround:

- a. After doing Step-2 above, where you place the "BabelColor CT&A" folder at its desired location:
  - Get the downloaded ZIP archive out of the Trash and place it on your Desktop.
  - Re-expand the archive on your Desktop.
  - From the CT&A folder on your Desktop, COPY ONLY the CT&A app and PASTE it to the previously installed CT&A application folder (usually in the Mac Applications folder).
  - Open CT&A from where you just pasted it with a double-click.
- b. You can trash the expanded CT&A folder on your Desktop but we strongly recommend keeping the ZIP archive in order to reinstall the program at a later time. You should also do an external backup of the archive in case of a computer failure.

Note: If you decide to keep the "Anywhere" button visible, you should be aware that macOS Sierra will nonetheless automatically change the setting to "App Store and identified developer" after 30 days.

Here are links to Web pages which discuss this issue as well as other Sierra related changes:

<https://www.tekrevue.com/tip/gatekeeper-macos-sierra/>

<http://arstechnica.com/apple/2016/09/macos-10-12-sierra-the-ars-technica-review/6/#h1>

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## 11- ERROR ON LAUNCH: "(EM-19) CT&A cannot open the ColorDecks database..."

This error message may appear if the program was downloaded and installed BEFORE the "Security & Privacy control panel" was set to:  
"Allow apps downloaded from: App Store and identified developer"

In this case, you should:

0. Make sure the "Security & Privacy control panel" is properly set.
1. Delete (or zip and remove) ALL CT&A app folders.
2. Delete the CT&A install file (i.e. the disk image) of the version you just installed.
3. Flush the trash can.
4. Download again the CT&A disk image install file.
5. Reinstall as described in Section 2 of this document.

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## 12- COMPATIBILITY WITH SOFTWARE WHICH CONNECT TO THE SAME INSTRUMENTS

It is not recommended to run, at the same time, two programs which connect to the same instrument! For example, this means that you should not make i1Pro measurements with CT&A while running X-Rite's i1Profiler, or vice-versa.

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## 13- TRADEMARKS

BabelColor is a registered trademark, and CT&A and PatchTool are trademarks of Danny Pascale and The BabelColor Company.

Eye-One is a brand of colorimeters (Eye-One Display, Display 2, i1Display Pro) and spectrophotometers (i1Pro, i1Pro 2, Eye-One Monitor) sold by X-Rite.

Eye-One is a trademark of the GretagMacbeth Company (owned by X-Rite).

X-Rite is a registered trademark of X-Rite Incorporated.