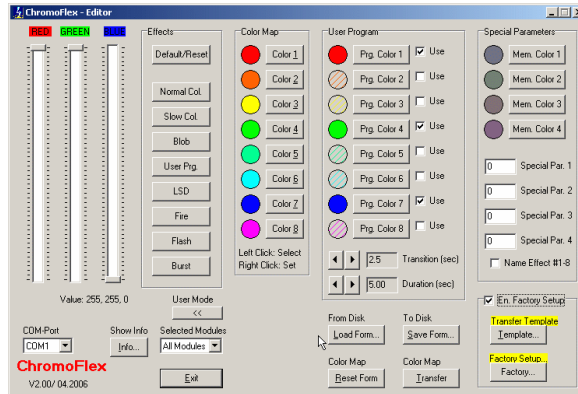


# CHROMOFLEX - Editor



## Overview

This manual describes the Chromoflex Editor, a software for PC for editing and control of one or more Chromoflex modules. It is intended as an addendum to the Chromoflex hardware manual. Using the Chromoflex Editor (subsequently named „CFE“) is normally only required for special effects.



## System requirements

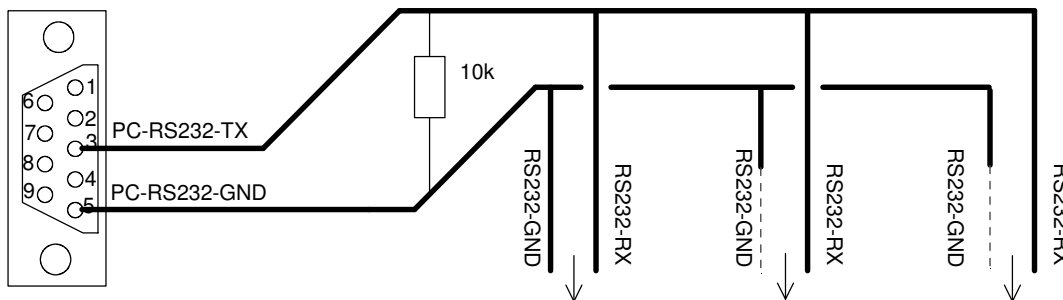
The CFE will run on almost any PC with W98 up to XP. A serial COM port is required (RS232). Often „true“ COM ports are included no more on new PCs, only USB. But the CFE should work with any standard USB/RS232 converters, which provide a „virtual“ COM port.

## Installation / Uninstallation

The CFE was designed that the included uninstaller will remove the software completely from the PC (there are no hidden changes or left keys in the registry). Only files, which were generated during the usage of the software will remain. They can be removed later manually. The uninstaller will report all occurrences and paths of these files.

## Communication and Cable

To connect the CFE to Chromoflex a special cable is require. It can either be bought by us or build by your own. Only two wires are required. Communication direction is „unidirectional“, meaning that the PC only can send data/commands, but it will not be able to receive any reply from Chromoflex modules (because if anything is working, that will be visible though the connected LEDs ).



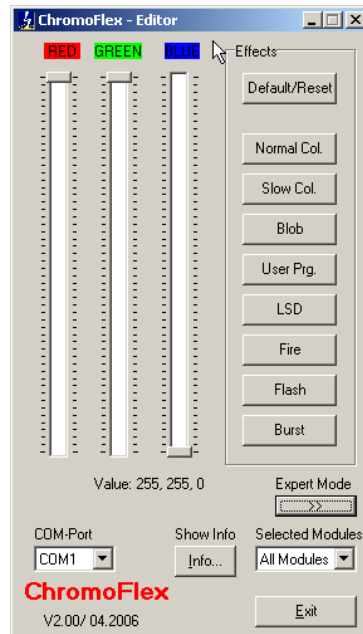
SUB-D9 connector "female" seen from backside  
The pin numbers are normally printed on the socket (very small)

to the ChromoFlex -Modules

Important: for correct data transmission within one or more connected modules it is essentially to add one resistor with a value of around 10k Ohms (Low cost) between RS232-TX and RS232-GND (normally this resistor will be included in cable sets sold by us). For short lines (<5 meters) any type of cable can be used, for longer lines we recommend using shielded cable (low cost type). Connect the shield to RS232-GND.

## User Interface

After starting the CFE will appear in its reduced layout:



Now (if there is a connection to any Chromoflex modules) it should be able to set the colours on the connected modules with the 3 sliders. Any effects on the Chromoflex modules will be stopped until the CFE is closed or on of the „Effects“ buttons in the CFE is pressed.

The red control LED on the connected Chromoflex modules will flicker during data transmission. The transmission is based on a error protected protocol. Only correct data are accepted, erroneous data is rejected.

A note about the COM port: „physical“ COM ports normally start with COM1, whereas „virtual“ COM ports of USB/RS232-converters start with COM3 or higher.

## Addressing and Groups

Normally all connected Chromoflex modules will receive the data and commands. But it is also possible to select only special groups of modules and even single modules. Each module can be accessed in three ways:

- All: Also known as „Broadcast“: Each module will receive the command.
- Group: The group of a module (1-7) can be set with the DIP switches on the module (see hardware manual). Technically up to 255 groups are possible within a network.
- Individual: Each module contains an unique serial number. This is a number between 010000<sub>(16)</sub> and FFFFFE<sub>(16)</sub> (in hexadecimal format). Theoretically up to 16 Millions of modules can be addressed individually within a network! The serial number is fixed by production, but can be changed with the CFE too.

Note: practically networks of up to 30 modules are no problem, we have also successfully tested up to 100 modules within one network.

With the CFE only broadcast commands or one of the 7 groups are possible. But it is also possible to send commands to Chromoflex modules with own hardware (like SPS, own PC software or industrial (embedded) controls). Any requests for using Chromoflex modules for (professional) applications are welcome! The used protocol is very easy to use (but nevertheless very robust).

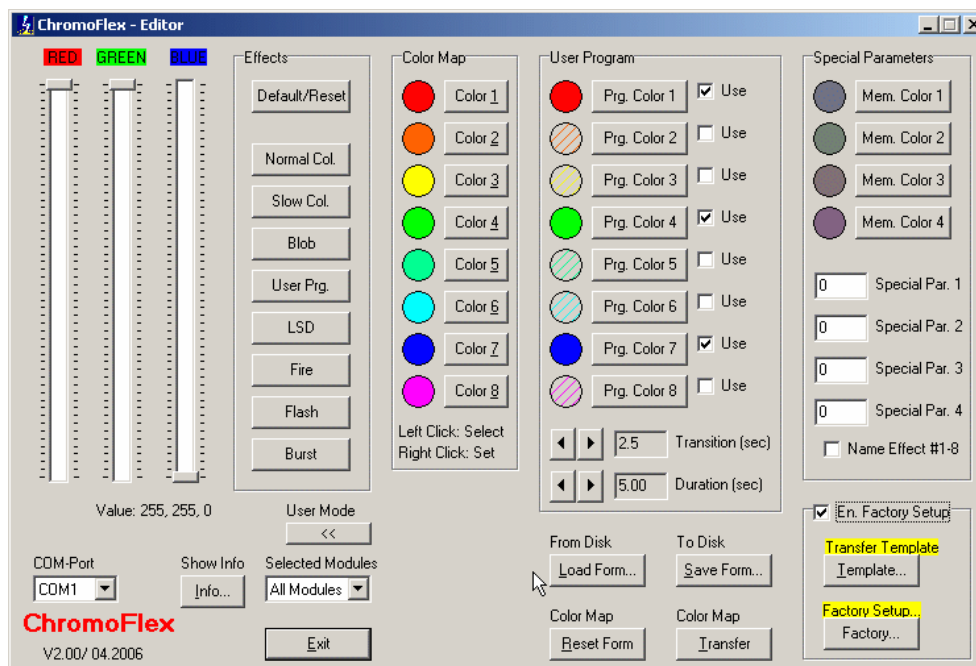
## Effects

The Chromoflex modules are equipped with 8 default effects, which already have been described in the hardware manual.

It is important to know, that these effects can be replaced by other effects (not only the „User Program“). This will be described in the following paragraphs:

## Expert Mode

If selecting the „Expert mode“ the CFE window will show extended functionality:



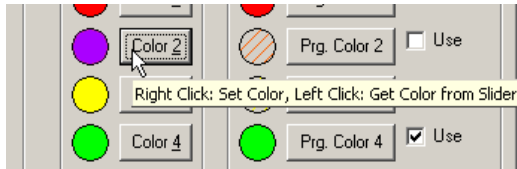
Note: The two buttons with yellow caption are not visible by default

## Selecting Colours

It is important to know how the colours can be selected. Selecting colours with the 3 sliders is intuitive. Alternatively any of the colours in the frames „Color Map“ and „User Program“ can be selected with the **left** mouse button. The current colour can be assigned to any of these buttons by pressing the **right** mouse button over the location on the screen.



Note: **Left mouse button** transfers the colour to the sliders,



**right mouse button** assigns the current colour (of the 3 sliders) to the button.

In total 8+8 colour (plus 4 special extra colours) are available.

## Colour tables („warm“ and „cold“ colours)

One of the main features of the Chromoflex are the both editable color tables („maps“) (also named as „Color Map“ and „User Program“). The „Color Map“ is the table that is used for some of the effects. For the factory default effects this are:

- Effect 1: Standard Colour Change
- Effect 2: Slow (soft) Colour change all 30-180 Seconds)
- Effect 3: Random colours „Blob“
- Effect 5: Random changed colours „LSD“
- Effect 8: Random colour flashes („Burst“)

The advantage if using tables is, that these tables can be modified easily! If, for example for a special application only „cold“ colours are required, simple remove all „warm“ colours (orange, red, yellow) from the appropriate table or replace them by other „cold“ colours.

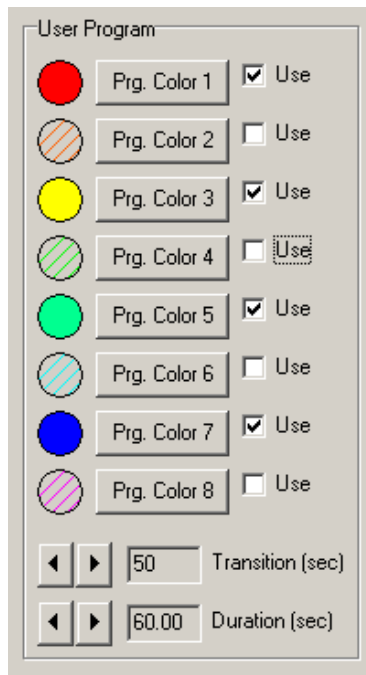
To transfer the changed colours click on „Transfer Color Map“. This will need about 10 seconds. Because (as already mentioned) the transfer direction is unidirectional, the CFE can not determine the success. But normally, since the used protocol is very reliable, it should work without problems.

After the transfer is finished, the selected Chromoflex modules will restart with their default program, using the changed colours.

## User Program

For highest flexibility the Chromoflex modules contain an additional colour table „User Program“. This table is exclusively reserved for the the „User Program“ effect (Nr. 4 by default).

For the „User Program“ the number of used colours can be selected between 1 and 8. If a colour is used, the check mark in the right must be set. Editing the colours of the „User Program“ can be done with the **left and right mouse button**, as shown before.



The example from above uses 4 colours (red, yellow, green and blue).

For the „User Program“ the transition speed („Transition“) from one colour to the next and the duration („Duration“) of each colour can be selected.

„Duration“ is the complete time for one step (= colour). Here we have 60 seconds. This means, that the complete cycle will need exactly 240 seconds (= 60 seconds \* 4 colours).

The „Transition“ time determines the speed of a (full) colour change. Here we have 50 seconds. This means, only after 50 seconds the next colour will be „pure“ for 10 seconds (the difference 60 - 50) until the next change starts.

Hence it is obvious, that the „Transition“ time should be selected with a smaller value than the „Duration“.

Note: New colour tables always must be transferred to the module before they become active. If not set as default, the „User Program“ must be explicitly selected in the CFE.

## Load, Save and „Color Map“ Reset

Of course the current settings of the CFE can be saved to or loaded from hard disk. With „Color Map Reset“ the default settings are recalled.

## Own Effects and Templates

All effects - independently of the colour maps - are contained in „Templates“. A „Template“ is a collection of effects. It can be seen as some kind of program that runs on the Chromoflex.

It is something similar to a programming language. Many different effects are available. For instance for a customer specific solution we created some effects that react to sensors connected to a Chromoflex instead of the (external) keys.

## Special Parameters

None of the factory default effects uses these extra parameters. They are reserved for own or customer specific effects. The individual function is depending on the using effect.

## Composer

CF-Composer is an additional software that can compose effects for own templates. These templates then can replace the existing templates.

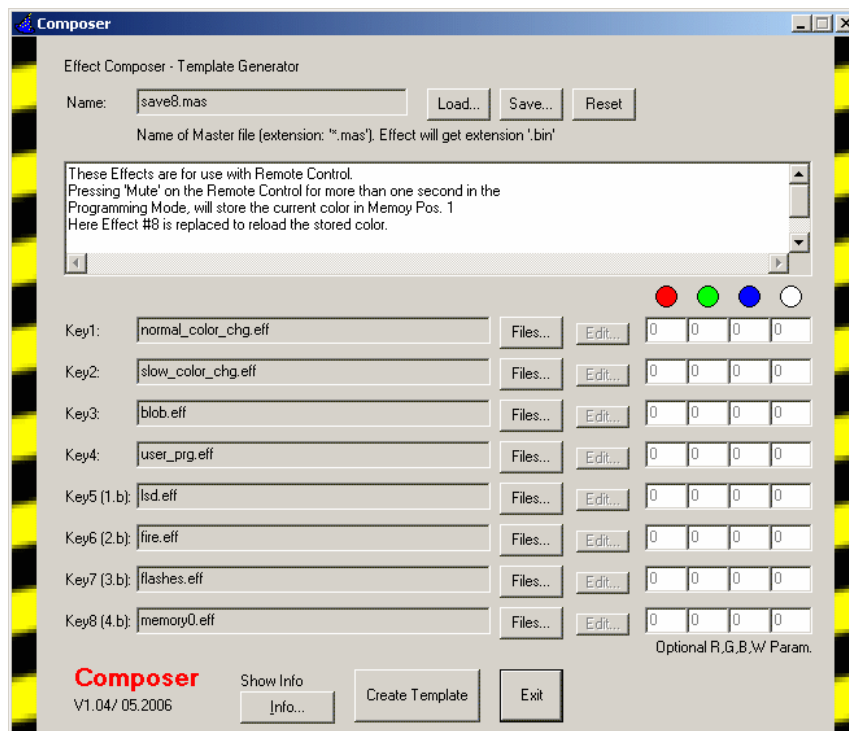
Please note: The CF-Composer is a powerful tool which enables qualified personnel to solve many lighting tasks in a very elegant way. This is only a short description, which should be sufficient for normal use. Please understand, that we can not give any technical support and advisory service for **free** about this tool.

Several additional effects are supplied with the CF-Composer.

One example: Normally the Chromoflex will not store any current settings. Here we will replace the default effect „Bursts“ by an effect, that recalls a saved colour from the non-volatile memory of the ChromoFlex: In the programming mode (selectable by pressing the „Mute“ button on the infrared remote control, the current colour is saved, if the „Mute“ button is pressed for another 2 seconds.

The new template is based on the default templates, but „BURSTS.EFF“ is replaced by „MEMORY0.EFF“ (supplied with the CF-Composer) („MEMORY0.EFF“ will store the colour in „Mem. Color 1“ of the „Special Parameters“).

Proceedings to generate the new Template: Open project „SAVE8.MAS“ in the CD-Composer:



As shown, the factory default effect „BURSTS.EFF“ on Key 8 is replaced by „MEMORY0.EFF“. If now Effect #8 is selected as default effect after power up, the Chromoflex will simply start with the stored colour.

To create the Template, click on „Create Template“. This will generate a File „SAVE8.BIN“. Now „SAVE8.BIN“ can be transferred to any connected Chromoflex modules with the „Transfer Template“ button in the CFE.

Note: Templates have the file extension „\*.BIN“.

Another often used Effect is described in „COLOR\_RGB.MAS“. This Template was designed for a user who wanted to use „EIB“-switches (a building control system) for remotely control of Chromoflex modules.

## Colour waves

A nice looking effect is „Colour waves“. It can be realised by starting the same „User Program“ on several modules, but with a slightly delay on each:



The Project „USER\_WAVE.MAS“ realises this, by using the „Special Par. 1“ as an additional delay timer with a delay of 10 msec per count (you'll need 3 modules for best performance of this effect).

## Free selectable Colours

The CF-composer is shipped with an effect „OWN\_RGB.EFF“. If selected, the used colour can be entered manually as RGB values (optionally also RGB + W) on the right side of the appropriate line.

## Factory - Transfer new Templates and Factory Reset / Test

Click on the „En. Factory Setup“ checkbox in the CFE to enable template transfer etc..

Please regard, that transferring a template may take up to 2 minutes.

The button „Factory“ displays another dialog, which allows to reset the module to factory default, run a short test sequence or change the serial number of the modules. The serial number is required for random effects! Modules with same serial number will show the same „randomness“...

## Contact / Internet

Download of the latest software and documentation:

[www.chromoflex.com](http://www.chromoflex.com)      [www.barthelme.de](http://www.barthelme.de)

Please use only e-mail for technical requests!