



Control System „Scarlett“

Introduction

Thank you for your interest in our Scarlett Control System. In the following pages the operation of this system will be described first and then the hardware components.

Please contact us if a function you require is missing. Not all of the available components and special functions are listed here. Special programming or hardware adjustments are also possible for smaller quantities of units.

Safety Information

Assembly and installation of electrical devices should only be handled by trained electricians.

Observe the accident prevention regulations during assembly.

Shut off the power supply voltage before working with this device.

This device should be used only within the specified operating voltage range. The use of other voltages terminates the guarantee and will eventually destroy the device.

Please observe the assembly instructions found on page 26.

Company Details

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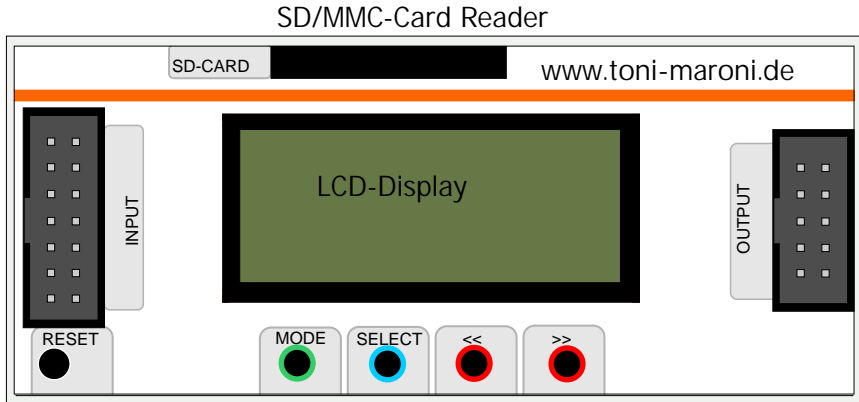
Controls

On the front side of the Scarlett Control System are the following elements:

- SD/MMC card slot for animations and updates
- LCD Display with 2x12 characters
- 4 buttons for menu navigation
- 1 recessed Reset button
- A connector on the left for input extensions
- A connector on the right for output extensions

Language selection

Press and hold the Mode key to change language with the arrow keys



Reset Button

● Change Mode

● Next setting

● Change setting

Manual Mode

In manual mode a color can be adjusted statically.

This mode is very helpful for testing the attached light sources.

The adjusted color will be displayed by a RGB LED on the right side next to the LCD display.

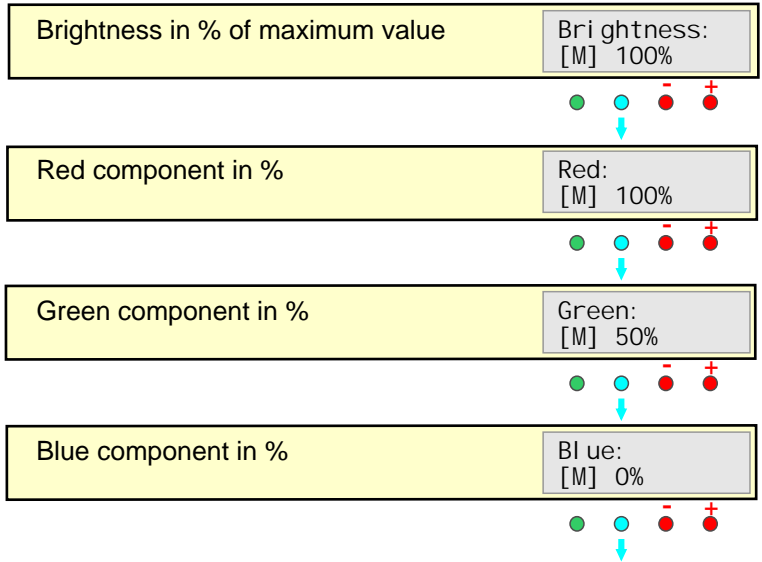
Common mixed colors:

Yellow : 100% Red + 100% Green

Cyan : 100% Green + 100% Blue

Magenta : 100% Red + 100% Blue

White : 100% Red + 100% Green + 100% Blue



The changes will take place after 5 seconds without a keystroke.

- Change Mode
- Next setting
- Change setting

Animation Mode

This mode allows the playback of animations from a memory card.

The animation files must be present in the main folder of the SD card.

The filename should be no longer than 8 characters and the file extension should be ".DMX".

Only the first 6 characters of longer file names will correctly be displayed.

The SD card must be formatted to FAT16 (referred to as FAT in Windows) and must not be larger than 2GB. The memory card included with delivery meets these specifications.

The playback rate of the animation can be adjusted as a percentage of the original speed using the executing speed. For example, 200% would mean that the animation runs at double speed.

The executing speed applies to all files. If another file is chosen, the speed does not change.

On page 10 the creation of animations will be discussed.

Brightness in % of maximum value

Brightness:
[A] 100%



Selection of animation file

File:
[A] DEMO1



Executing speed in %

Speed:
[A] 100%



The changes will take place after 5 seconds without a keystroke.

- Change Mode
- Next setting
- Change setting

Software

There are numerous editors to use in creating animations.

RGB Editor

This editor is especially suitable for the creation of colored (RGB) animations, such as the picture to the right.

Line Editor

This editor is primarily used for mono-colored animations. The brightness curve in the form of a line graph will be displayed per channel.

Table Editor

As the name indicates, the brightness levels are entered here in the form of a table.

The editors, together with instructions, can be downloaded for free at www.toni-maroni.de/software/ without registration.

The memory card included with delivery also contains these editors.

The screenshot displays the RGB-Editor Version 1.06 interface. The main workspace is a 12x12 grid of colored squares, each representing a color in a palette. The colors transition from red on the left to blue on the right, with various intermediate colors in between. Below the grid is a color bar with a slider and a small color palette. The right side of the interface contains several control panels:

- Datei:** Buttons for "Laden" and "Speichern".
- Anzahl Ausgänge:** A numeric input field set to "12".
- Anzahl Schritte:** A numeric input field set to "12".
- Letzte Zelle Kopieren:** Navigation buttons: "<<< == >>>".
- Schrittlänge (1/10 Sek):** A numeric input field set to "10".
- Modus:** Radio buttons for "100% Fade" (selected), "100% Hold", and "50% Fade / 50% Hold".
- Bitmap Import/Export:** Buttons for "Laden" and "Speichern".
- Lauflicht aus erster Zelle:** Navigation buttons: "<<<<<< >>>>>>".
- Erste Zelle Dehnen:** Navigation buttons: "<< >>".
- Spiegeln:** Radio buttons for "Horizontal" and "Vertikal".
- Edieren:** Buttons for "Cl" and "Aufhellen".
- Reigenbogen:** A button.
- Undo Redo:** Buttons for "Undo" and "Redo".
- Vorschau 100%:** A preview area.

The status bar at the bottom shows: "RGB-Kanal: 9 DMQ(Rot): 25", "Schritt: 12", "Mauertasten: [Links] Farbe setzen [Mitte] UNDO [Rechts] Farbe aufnehmen und Bereich markieren", and the website "www.forzi.marconi.de".

Color Gradient Mode

This mode can be used to obtain a color circulation, without creating a full animation. The color sequence is set and cannot be changed.

The speed of the color gradient can be set with the "Duration" setting.

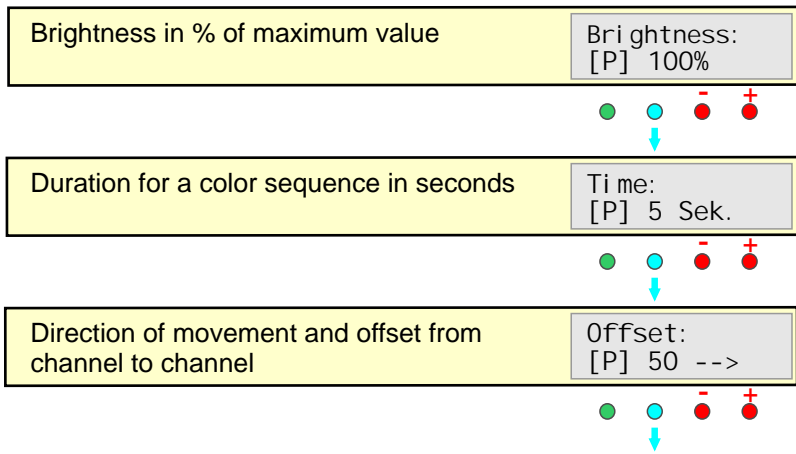
The "Offset" setting has only one function, when more than one RGB group is connected to the control system.

Offset > 0 Color gradient moves from a smaller channel number to a larger one.

Offset = 0 All groups change their color at the same time.

Offset < 0 Color gradient moves from larger channels to smaller ones.





The changes will take place after 5 seconds without a keystroke.

- Change Mode
- Next setting
- Change setting

Scarlett 0-10V

The 0-10V interface delivers a controls voltage of 0V(off) up to 10V(100% on).



Please note that a 1-10V interface behaves differently than the 0-10V interface used here. In most cases an individual 1-10V device can operate in this control system without a problem.

Please check this before inserting the components.

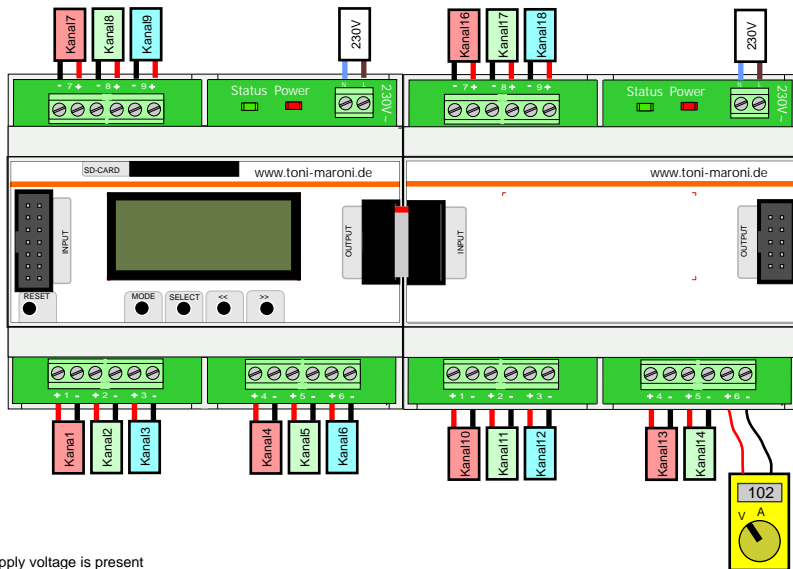
Furthermore, please note that devices with 1-10V interfaces can only be dimmed down to 10%.



Checklist for malfunctions

1. Check the supply voltage. Is the “Power” LED glowing?
 2. Remove the control cable and measure the control voltage with a multimeter.
 3. Swap the outputs on the control system.
- Does the problem remain on the same output?

Article Number	Device	Outputs	per channel	IP	TE	Self-consumption
51201015-000	Scarlett 0-10V	9	20mA	20	6	230V / 1W
51201027-000	0-10V Extension	9	20mA	20	6	230V / 1W



Scarlett PWM

When using a PWM (Pulse Width Modulation), the brightness of the attached light source is reduced due to brief breaks of the negative lead.



Not every light source or power supply is suitable for PWM dimming. Make sure to check before using our control system.



The negative lead of all control systems and power supplies are connected. It is thus not permissible to operate multiple outputs simultaneously to increase the output current.



Checklist for malfunctions

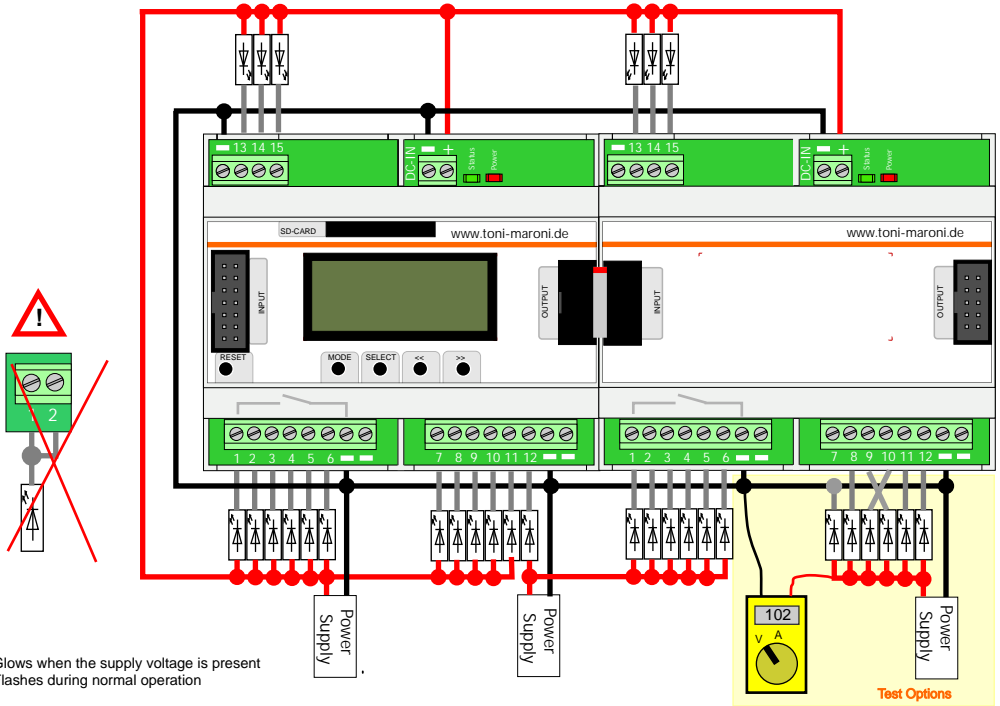
1 Check the supply voltage

- Does the power supply have the correct voltage for the light source?
- Perhaps the power supply had its polarity reversed, in which case the LED will not be glowing.

2. Connect the light source directly into the supply voltage

- Are the light source is now glowing?

Article Number	Device	Outputs	per channel	IP	TE	Self-consumption
51201016-000	Scarlett PWM	15	3A	20	6	12-24V / 1W
51201026-000	PWM Erweiterung	15	3A	20	6	12-24V / 1W



Scarlett DMX/LED

The Scarlett control system transmits either DMX or LED protocol, depending on the configuration of the coding switches.

DMX : up to 504 channels individually steerable, cable lengths up to 100 m (328 ft)

LED : up to 256 channels individually steerable , cable lengths up to 10 m (32.8 ft)



We recommend CAT7 cable for data cables.



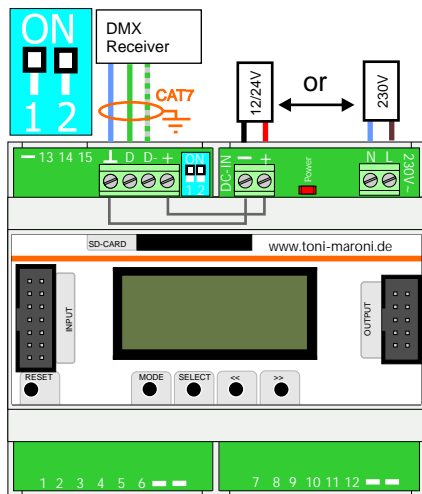
Please only change the configuration of the coding switches when the power supply is turned off.



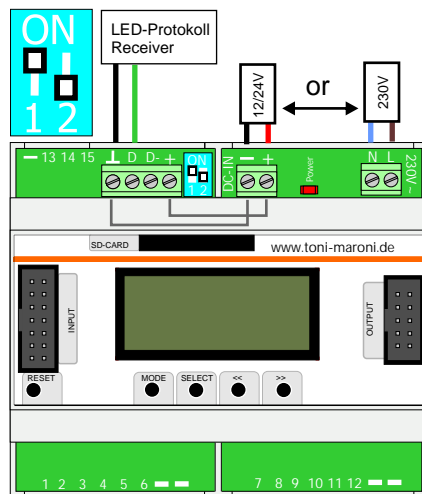
Checklist for malfunctions

1. Check the supply voltage, is the “Power” LED glowing?
2. Is the coding switch correctly adjusted?
3. Were the data cables possibly swapped?

Article Number	Device	Outputs	IP	TE	Self-consumption
51201018-000	Scarlett DMX/LED	1	20	6	230V / 1W 12-24V / 1W



Output DMX



Output LED Protokoll

Button Input Module for 5/16 Buttons

5 or 16 animations can be called up specifically via the Button Input Module.

Each button is assigned a specific filename (BUTTON1.DMX, BUTTON2.DMX..).



Please note that the inputs in the standard version are designed for isolated contact against ground.



Checklist for malfunctions

1. Can the animations be chosen manually?
2. Is the spelling of the file name correct?
3. Are 3.3V between ground and the open inputs?

Article Number	Device	IP	TE
51201028-000	5 Channel Button Input Module	20	1
51201029-000	16 Channel Button Input Module	20	3

File Names
TASTE1.DMX
TASTE2.DMX
etc.



Infrared (IR) Remote Control

Up to 9 animations can be retrieved with the IR remote control.



Please note, that the Infrared Remote Control requires visual contact with the receiver.



The data cable between the IR Receiver and the control system may be extended up to a maximum of 10m (32.8 ft).



Checklist for malfunctions

1. Check the battery in the remote control (Cr2025).
2. Can the programs be accessed on the control system directly? Check the file names.
3. Does the remote control have visual contact with the receiver?
4. Are 5V between - and + ?

Article Number	Device	IP	TE	Self-consumption
51201030-000	Scarlett IR	20	1	12/24V / 1W

On / Off*

* When the remote control is turned off, the settings for manual mode are overwritten.



Choose Animation:

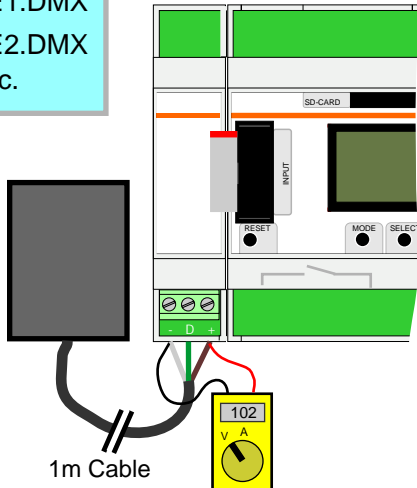
1 = TASTE1.dmx
...
9 = TASTE9.dmx

Change Speed:

P1 = Slower
P2 = Faster

Change Total Brightness

File Names
TASTE1.DMX
TASTE2.DMX
etc.



Radio Remote Control

Up to 4 animations can be retrieved with the radio remote control



Please make sure that there is no metal between the radio remote control and the receiver, as that can disrupt the signal.



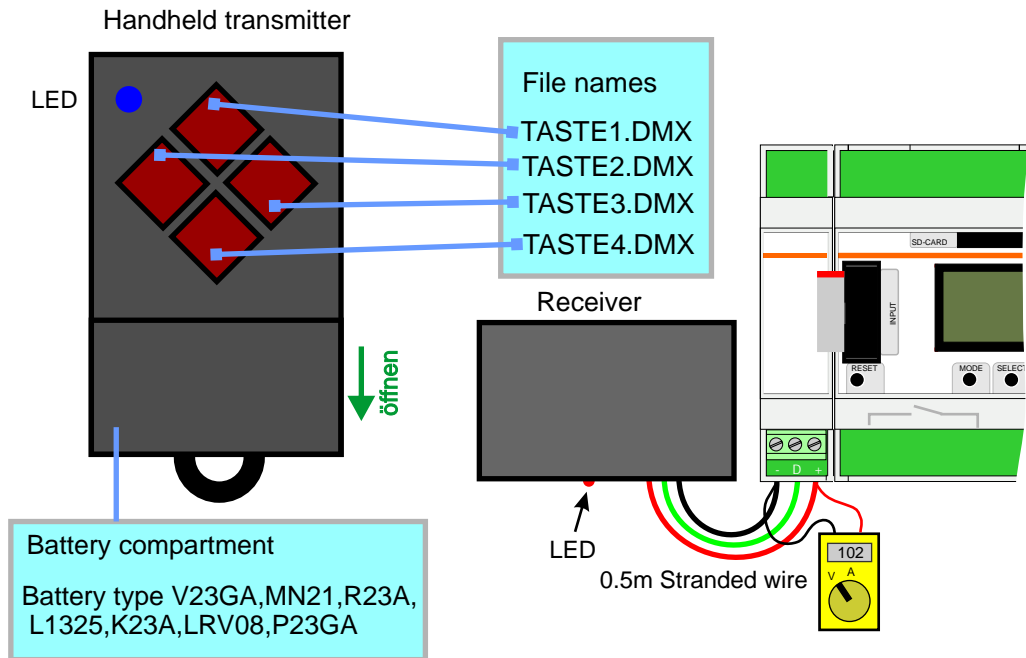
If the blue LED on the handheld transmitter is not glowing during operation, the **battery** needs to be replaced.



Checklist for malfunctions

1. Check the batteries in the remote control
2. Can the programs be accessed on the control system directly? Check the file names.
3. Is the receiver inside the range of the remote control? Radio signals can be disrupted passing through metallic obstacles.
4. Are 5V between - and + ?

Article Number	Device	IP	TE	Self-consumption
51201031-000	Scarlett Radio Remote Control	20	1	12/24V / 1W

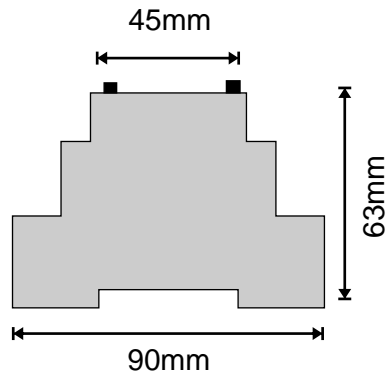
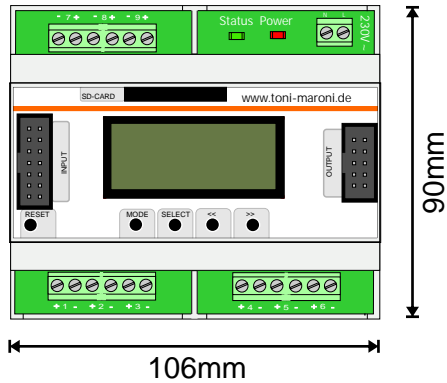


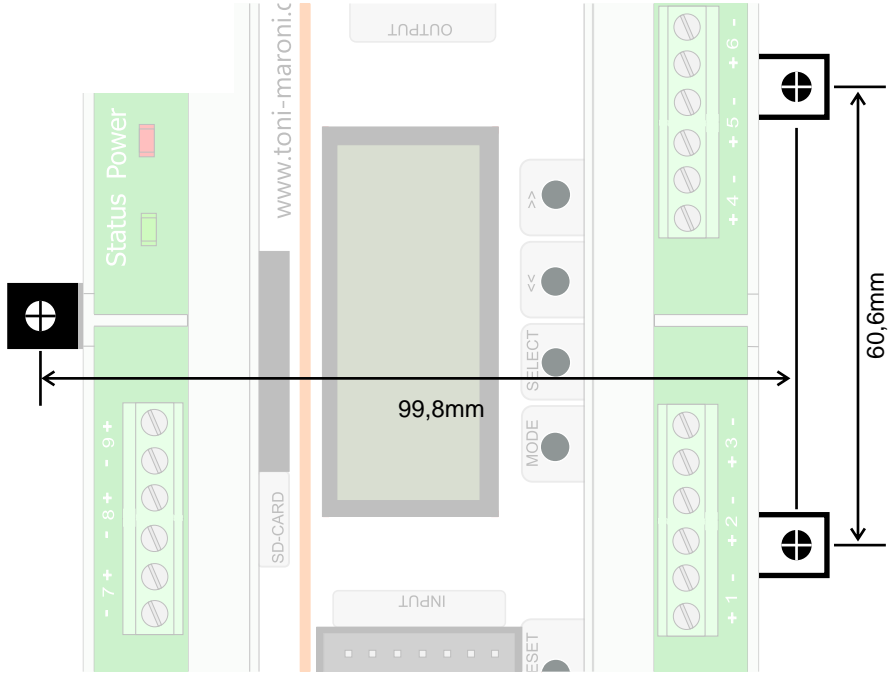
Assembly Instructions

The housing of the control system is designed for top-hat rail assembly. Alternatively, the straps on the underside of the housing can be pressed outward for a screw assembly.

If operated with 230V, it is mandatory that the control system be built into a housing. The same goes if used in moist rooms or outdoors.

The installation and assembly of electrical devices should be undertaken by trained electricians.





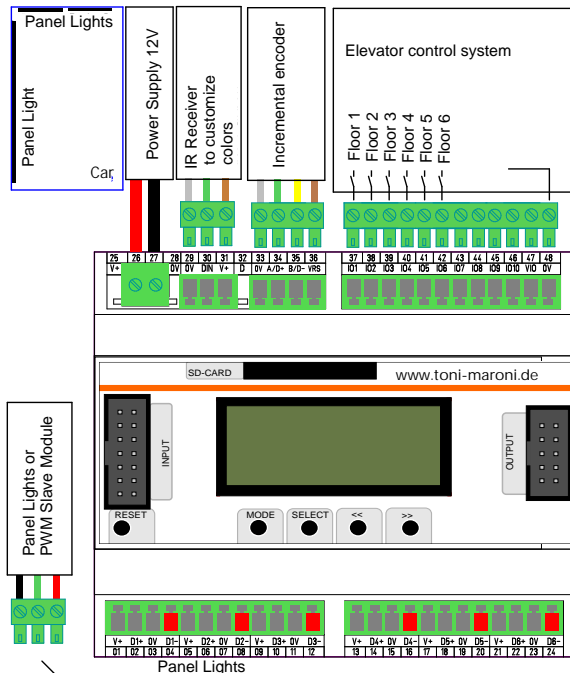
Special Construction

On the right is an example of a modified Scarlett control system built to control animated RGB surface lights in an elevator car.

An application-specific support plate was used for the connections. The actual control system in the upper section of the housing remained unchanged.

The accompanying connection plan solely demonstrates the adaptation possibilities and is not the standard device.

Please contact us, if you have any questions in regards to this.





Light-dependent control system with
clock, 4x 0-10V Outputs,
Article Number 51201131-000



Control system Coleen with clock
LED – DMX-Output
Article Number: 60120015-000

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dynamische Lichtsysteme

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