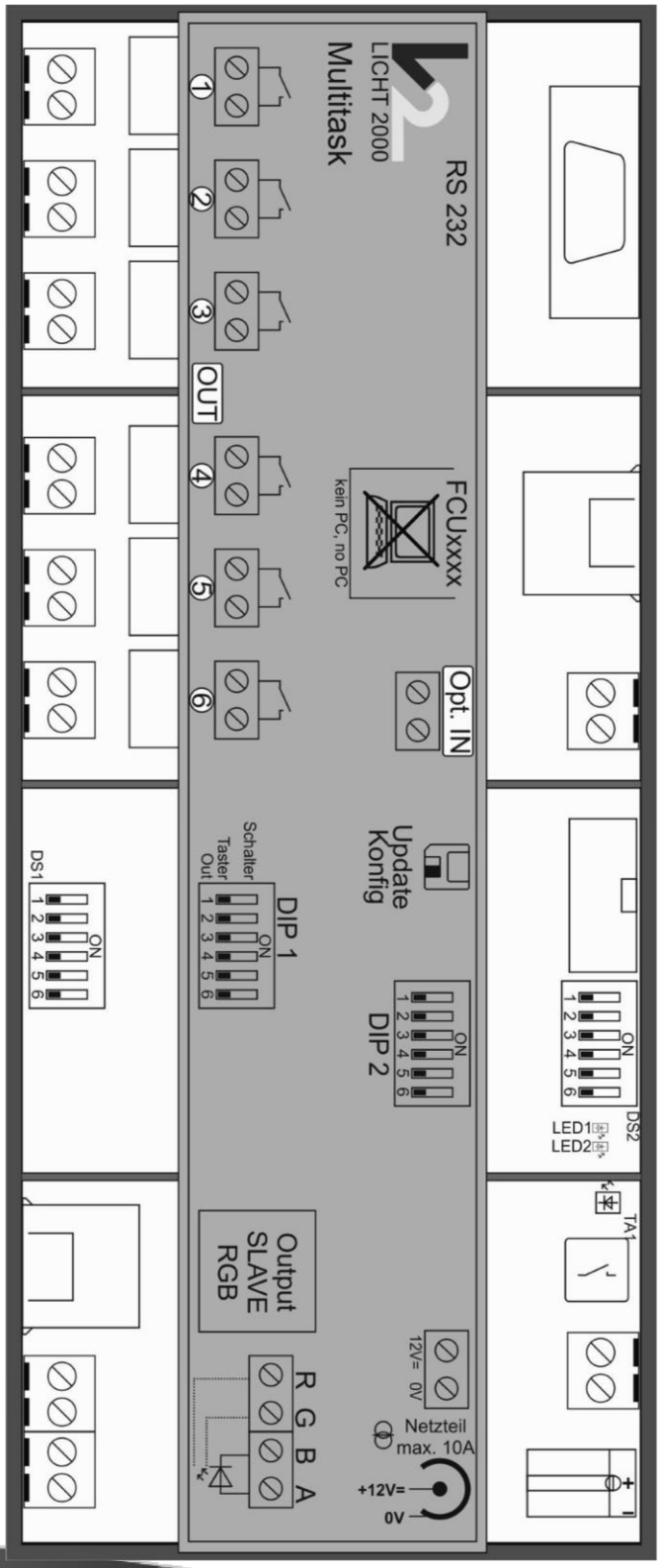
Assembly instruction and operating instruction
Multi-Task-controller



Inhaltsverzeichnis

1. Safety 2
2. Assembly instruction and wiring diagram 3
   2.1. Power adapter! 4
   2.2. Connection from the LED's 4
   2.3. Slaves 4
   2.4. Special function relay 4
   2.5. Traine remote control 4
   2.6. Dipschalter DS2 4
   2.7. Option entry Opt.IN (not in evry version) 5
   2.8. Update und Konfig - plug 5
   2.9. Interfaces 5
      2.9.1. FCUxxxx 5
      2.9.2. RS232 5
   2.10. Technische Daten 5
3. Bedienungsanleitung ..... **Fehler! Textmarke nicht definiert.**
   3.1. Die Tasten der Fernbedienung ..... **Fehler! Textmarke nicht definiert.**
      3.1.1. ON/OFF ..... **Fehler! Textmarke nicht definiert.**
      3.1.2. Farbtasten ..... **Fehler! Textmarke nicht definiert.**
      3.1.3. Automatik-Programm (Programmtaste) **Fehler! Textmarke nicht definiert.**
      3.1.4. User-Programm ..... **Fehler! Textmarke nicht definiert.**
      3.1.5. Dimmer ..... **Fehler! Textmarke nicht definiert.**
      3.1.6. Sonder-Funktion und anschließend eine Zahl (1..6) **Fehler! Textmarke nicht definiert.**
   3.2. Ansteuerung über FCUxxxx 6
   3.3. Ansteuerung über RS232 8

1. Safety

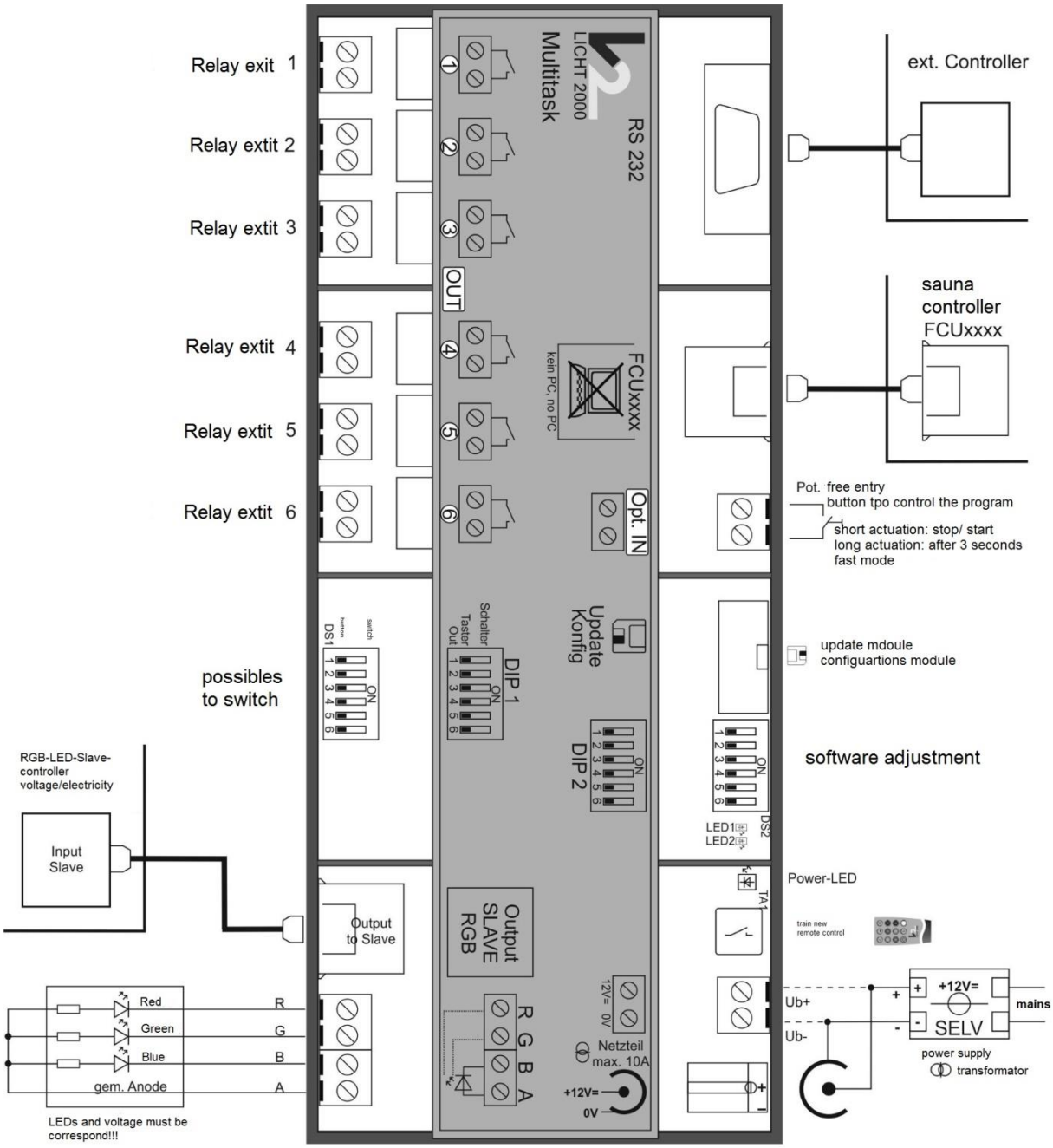
Safety-instruction		**WARNING!** Please mind the generally saftey instructions for LEDs!
Safety precaution		**ATTENTION1** Please mind the generally safety precautions for ESD!

2. Assembly instruction and wiring diagram

Attention! The controlr may not positioned generate immediatly beneath tools with magnatic radiations (as for examples transformers or loudspeackers).

The minimum distance must be 500 mm.

The control is desgined for a standard 35mm rail.



2.1. Power adapter!

Safety instrutions

WARNING!
Use only the protective-low-voltage power adapter, which is included!

2.2. Connection from the LED's

Take attention about the voltage from the LEDs. She hast o correspond with the power adapter whicfh is used and the declaration on the label from the control. It is only allowed to connect LEDs, which are suited for constant voltage.

At the connection from white LEDs as room lighting (DIP1 of DIP2= ON) the load distribution could be distribute on the single LED- strands on R, G and B (the total current must not be overrun), the brightness will be the same.

2.3. Slaves

For more total power, or for controlling constant current LEDs, it is possibel to connect more „RGB-LED-Slave control" on the connection „SLAVE RGB".

2.4. Special function relay

The relay exite could be configured as button- or scitch function.

Dip-switch DS1	OFF	ON
DIP 1	Relay 1 as button	Relay 1 as switch
……	……	……
DIP 6	Relay 6 as button	Relay 6 as switch

2.5. Traine remote control

Remote control synchronize with the control

- Push the button beneath the Power Led (see wiring diagram „button enter remote control)
- The power Led beneath the button (see wiring diagram „Power Led") start to blink green.
- Now push any button on the remote control till power Led stop to blink and change to a permanent green shine.
- Now the remote control is synchronized with the control. Option entry

2.6. Dipschalter DS2

Dip-Schalter DS2	OFF	ON
DIP 1	RGB-LED-Mode	Wihte LED's (as dimmer)
DIP 2		
DIP 3		
DIP 4		
DIP 5	Standard RS485 Adr.	Adr. For more Multitasks
DIP 6		

2.7. Option entry Opt.IN (not in evry version)

These entry is for a connection with a extern button. With these button it is possible to control the internal automatic programm. With a short push from the button the coloure sequenze will stop or start. With a conformitation time from aroun 3 sec. The coloure sequenz will be in a fast mode.

2.8. Update und Konfig - plug

About these connection can be install a update or a configuration can be tranfered tot he Multitask (see at special instruction)

2.9. Interfaces

2.9.1. FCUxxxx

Connection to control the Leds about a sauna control from type FCUxxxx. These interface is only useable with the saunaa control type which s called above.

2.9.2. RS232

Connection to control the Leds with an external control system..

2.10. Technische Daten

Articelnumber: 55-LIC-MULTI-TASK-V1.0
Description: Multi-Task control for top hat rail assembly

articelnumber	40-FA.212.12.MULTI-TASK-STD
General supply (voltage)	12V=
General supply (electricity)	max. 10A DC
max. power	110W
Coloure sequenz	Above remote control, RS485 and RS232 adjustable
brightness	Multi-stage adjustable about remote control (4 steps)
Coloure sequenz	Ajustable about remote control
Rate	Multi-stage adjustable aboute remote control (3 steps)
max. numbers of slaves	5
Special function relay	230V / 16A (max. 100A for 5ms)
Package dimensions	210 x 90 x 60 (L x B x T)
max. temprature range	0°C – 40°C

Manual for LED Controller

3. . Remote control

Connect remote control to Master controller:

- Press red button on the backside oft he master controller (on the onnection diagram button „connect remote control“)
- The power-LED next tot he button starts to blink (green light)
- While pressing the red button press any button on the remote control constantly until the light stops blinking and lights constantly.
- Now the remote control is connected to this master controller

If a button is pressed on the remote control, a red light is flashing on the remote control as long as you press the button

Remote control buttons

3.1. ON/OFF

LED are turned on or off. The program will start with the last used color. If you used the automatic user programm, they will start with the first color again.

3.2. Farbtasten

If pressed the selected color will be shown as long until you press another button

3.3. Automatik-Programm (Programmtaste)

If pressed, the program will be started signalized by green blinking LEDs (1x time). The whole color show lasts for 15 minutes.
If pressed again, the show lasts for 10 minutes (LEDs are blinking 2x times) If pressed a third time, the time is limited to 5 minutes (LEDs are blinking 3x times) If you press the button a fourth time, the program will start at the beginning again, 15 minutes (LEDs are blinking 1x time).

3.4. User-Programm

1. For indiviual programing:
   - First, turn off LEDs (On/Off button)
   - Press user program button (LEDs are blinking 1 time)
   - Up to 16 different colors can be chosen by pressing the desired color buttons one after another (the color flashes for confirmation). For each time you press the button the duration will be increased for one minute. Ten minutes per color is maximum.
   - Press the user program button again to save your chosen program.
   - Press the user program button again to save your chosen program. All chosen colors will flash briefly for you to doublecheck your input. After that the program will start with the first color.

2.Starting your own program:
   - First, turn on LEDs (On/Off button)
   - Press the user button to start your own program.

2

3.5. Dimmer

With the dimming button you can dimm the LEDs in three different steps. If you press it four times, it will start with the brightest mode again.

3.6. Sonder-Funktion and anykind of number (1…6) + z.B.

To access six 230-Volt channels. At the configuration as a button the relay exit is ON, when the button from the number will be pushed. When the button will be released, the relay exit will be OFF. At the configuration as a switch the relay exit is changing between ON and OFF and will be hold at this status.

3.7. Ansteuerung über FCUxxxx

When the Multitask is related to the sauna controller FCUxxxx, then the sauna controller will be control the LEDs and the remote control will be ineffective.

Farbe:	1	1+2	2	2+3	3	3+4	4
	Blue	violet	red	orange	white	turquoise	green

3.8. Ansteuerung über RS232

When the Multitask is related to an external controller, these controller will control the LEDs and the remote control is .ineffective.

Fasel GmbH

Interface- report for DALI-, DMX, KNX-and other converter (Master) and Multitask controller

USER-program safte in Multitask

To program the User-program	format see Multitask RS232-interface-report 0x..'U' (0x55) 0x02 [each colour phases in sequenz] 0x03 [CHK-Sum]			
Dates for colour phase		Number of bytes	Range of values	
	Red value	1	0x0 .. 0xFF	
	Green value	1	0x0 .. 0xFF	
	Blue value	1	0x0 .. 0xFF	
	Colour number	1	See table colour buttons	
	Time for full coloure	2	60 … 600 (Sekunden)	
	Reserve	1	For later extension	
	Reserve	1	For later extension	
		8		
Number of colour phase	16	==>	max. 16*8 = 128 bytes	
	When there are use less colour phases (diffrent colours), then there is only „n“ colour phase with values occupied and at the colour phase“n+1„all values will be 0.			

Colour numbers for user program				
Colour	**Number**			
Blue	0x30 = '0'			
Violet	0x31 = '1'			
Green	0x32 = '2'			
White	0x33 = '3'			
Turquiose	0x34 = '4'			
Red	0x35 = '5'			
Orange	0x36 = '6'			

Multitask RS232-Schnittstellen-Protokoll

Interface- report for Dali, DMX, Knx and other converter (master) and Multitask

RS 232			**RS 232 Bitformat**					
baud rate	9600	**8 / N / 1**	1 Startbit	Bit 0	Bit 1	…..	Bit 7	1 Stopbit
connecting cable		**0- modem-cable (wiring crossed)**						
Format	START	nr. byte	function	STX	< Daten >	ETX	CHK-Sum	STOP
	function byte in Ascii-format, remaing datas in HEX							
	calculation checksum (CHK-Sum): 8-Bit Addition (Funktion + STX + < Datenblock > + ETX)							

SUB-D 9 pol. plug

Pin		Multitask
1	nc (DCD)	nc
2	RxD	entry
3	TxD	exit
4	DTR (=RTS)	(exit)
5	GND	GND
6	nc (DSR)	nc
7	RTS	exit
8	CTS	entry
9	nc (RI)	nc

button "colour", auto and user		0x01	'T' (0x54)	0x02	button-number see table	0x03	CHK-Sum		
colour		0x03	'F' (0x46)	0x02	R (0..0xFF)	G (0..0xFF)	B (0..0xFF)	0x03	CHK-Sum
speed		0x01	'G' (0x47)	0x02	total running time (like button 'C')	0x03	CHK-Sum		
brightness		0x01	'H' (0x48)	0x02	brightness	0x03	CHK-Sum		
fading time		0x01	'Z' (0x5A)	0x02	fading time	0x03	CHK-Sum		
control relays		0x01	'R' (0x52)	0x02	relay-number (1…6)	0x03	CHK-Sum	from Va.02 (before alle relays together, byte by byte)	
program user-program		0x….	'U' (0x55)	0x02	numbers of dates depending on numbers from the colour phase see 'dates per colour phase'			0x03	CHK-Sum

R = G = B = 0 => LED's

total running time from the automatical-/ USER- program
0= full, 1=2/3, 2=1/3 total running time

RGB: 0= max. dimming, 3= full brightness
White: 0= OFF. 1 max. dimming, 9= full brightness
(Bit 7=1 --> remote control locked)

fading time with external controller 0..255 s

Relay nr. 1...6 switch (only Multitask)
at button function ca. 0,5 s pulse contact retriggerable

colours	**button number**		CHK-Sum
Green	0x02	0x01 0x54 0x02 0x02 0x03	0x5B
Violet	0x04	0x01 0x54 0x02 0x04 0x03	0x5D
Blue	0x06	0x01 0x54 0x02 0x06 0x03	0x5F
Orange	0x08	0x01 0x54 0x02 0x08 0x03	0x61
Turquoise	0x09	0x01 0x54 0x02 0x09 0x03	0x62
Red	0x0A	0x01 0x54 0x02 0x0A 0x03	0x63
White	0x0C	0x01 0x54 0x02 0x0C 0x03	0x65

Multitask RS232-Schnittstellen-Protokoll

I:\DOKU\Licht2000\Mulitask\RS232-Protokoll.xls RS232 Stand: 17.09.2014

automatic program starts			0x0E			0x01 0x54 0x02 0x0E 0x03			0x67			
user program starts			0x03			0x01 0x54 0x02 0x03 0x03			0x5C			
ON / OFF			0x07			0x01 0x54 0x02 0x07 0x03			0x60			
status enquire:												
information		0x01	'I' (0x49)	0x02	'n' (0x6E)	0x03	CHK-Sum (0xBC)					For recognition, if is the Multitask- controller RGB/ White Leds and if are the relays available
answer slave -->		0x04	'I' (0x49)	0x02	Software-Version	Software-Version	unit type M=Multitask	release 0/1 Bit 0: RGB/white Bit 1: 0/6 relay	0x03	CHK-Sum		
status enquire relay		0x01	'S' (0x53)	0x02	'R' (0x52)	0x03	CHK-Sum (0xAA)					
answer slave -->		0x02	'S' (0x53)	0x02	relay condition	relay type	0x03	CHK-Sum	relay condition 1-6 / relay type 0= button 1=switcher			
status enquire program		0x01	'S' (0x53)	0x02	'P'	0x03	CHK-Sum					
answer slave -->		0x04	'S' (0x53)	0x02	program type '0', 'A' .. 'U' .. 'H'	brightness 0 … 3,	fading time 0 … 255	speed 0 … 2	0x03	CHK-Sum		programm results enquire 0 = OFF , A=Auto, U=User,H=Hand
Timout	If there were ca. 65s no data transfer, the controller will be switched off, enquires about "staus enquires", for witch on musst be send the ON/OFF function.											

Multitask RS232-Schnittstellen-Protokoll