Trig Box 3.0

User Manual

Oktober 2007
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1.Description

The TrigBox 3.0 is the perfect device to synchronize a video camera with a flashlight lighting (stroboscope). TrigBox 3.0 is working with every standard analog camera systems. A possible application is realized in the synchronisation with the Laserflash.

2.Application

If one has to light up an observed scene with a flashlight, it is necessary to synchronize the image frequency of the video camera with the flash frequency of the light source. A unsynchronized setup leads to flares in the stored movie.
In particular, if the lightning duration is shorter than the exposure duration of the camera, a careful coordination of lightning time and exposure time of the video camera is very important.

3.Operational principle:

TrigBox 3.0 uses the analog standard video signal (Fbas, Standard: CCIR, RS179 o.ae.), in order to produce 12V-driving signal (5V TTL optionally). This releases a flash during the lightning operation. The driving pulse can be coordinated with the exposure window of the CCD camera by an internal delay generator .In particular this is necessary at short exposure times of the camera (1/1000 second).

4.Conditions of work:

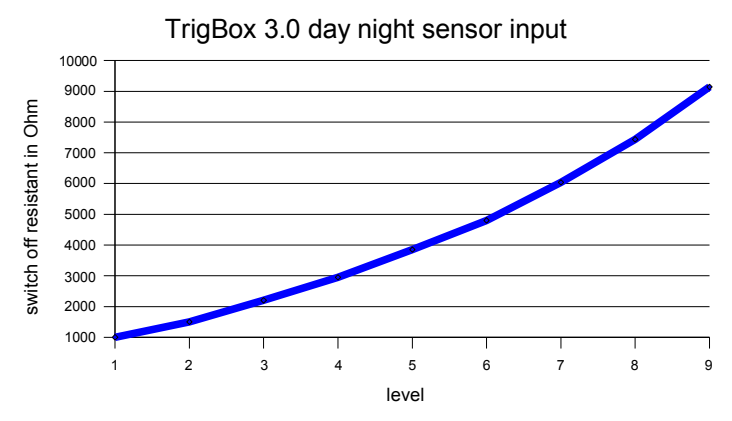
The standard version of the TrigBox 3.0 is conceived for inside application. On request also equipment for outside applications can be offered.

5.Display announcement

In the display a number between 00 and 99 is indicated. This number is proportionally to the pulse length wich is given to the Laserflash. 100µs to 5ms.
The day-night-sensor can switched on and of with the P key.
The display switches off after approx. 10 seconds automatically. It can be activated by pressing one of the buttons.
After 10s the actual value for the pulse length is stored into the system memory.

6.Day-night-sensor

The integrated daylight sensor allows the deactivation of the TrigBox at a defined daylight level. In the battery operation this leads a longer battery live. To adjust the daylight level press:“P and +“ or „P and -“ . A zero indicates that the TrigBox is always on (sensor is disabled).
1-9 defines the Switch off level.



Trig Box 3.0 Resistant of switch off level vs. TrigBox level 1-9

7.Controlling the TrigBox via RS232 (Com Port)

Each command line has to end with one of the followíng commands:
<CR> (Carriage Return, ASCII Code 13), <LF> (Line Feed, ASCII Code 10) or „#“If the command is correct the interpreter send a „OK“-string, if the command is unknown the answer is „?“. example:*D=4000 OK*

Comand	**Description**	**Value**	**What happens**
I	set pulslength	0 to 99	Change pulslength 0 to 99 (min 100µs to 5ms)
L	Iset pulslenth in µs	100 to 5000	Change pulslength 0µs to 5000µs
D	Set delayDelay setzen in µs	1 to 20000	Set pulsdelay (0ms to 20ms)
H	Read illumination value day night sensor	0 to 1023	Read 10Bit analog value from day night sensor input
V	Read version	-	Read version "Vx.xx"

8.User Interfaces

+	extend pulslength	Display	pulslength 0-99 (100us-5ms)
-	shorten pulslength	LED green	power supply
P and + -	define level of day night shut off	LED red	when receiving valid Video Signal
		Poti	pulsdelay (0-20ms)

12V	12VDC In	Cam	video signal Input
Lux	input photoresistant	Laser	LaserFlash trigger output
RS232	connection to PC		

9.Technical Specifications

Specifications	***Range***
operation temperatur	0°C to 50°C
storage temperatur	0°C to 50°C
weight	0,3 kg
dimensions HxWxL	35 mm x 110mm x 140mm
maximale humidity	80 % not condensing

Electrical Specifications	***Range***
supply voltage	12 V DC
power consumption	to 1,5W

COM Port RS 232	***Range***
baud rate	9600
Datenbit	8
Parity	no
stopp bits	1
flowcontrol	no