## CONTROLLER

## Installation and users guide

## Strobe, 1Ch, 24A, PAD1 1132/24 RS232 operated

## This package consists of:

- PAD1 1132/24, Strobe control unit
- LKA1 1032 Power/Trigger/com cable, 5m For program, see www.latab.se

| Specifications |  |
| :--- | :--- |
| Voltage supply | $24 \mathrm{~V} \mathrm{DC}( \pm 10 \%)$ |
| Current requirement | max. 1.5 A |
| Protection class | IP 30 |
| Operation temperature | $0^{\circ} \mathrm{C} \ldots .+65^{\circ} \mathrm{C}$ |
| Storage temperature | $-40^{\circ} \mathrm{C} \ldots .+80^{\circ} \mathrm{C}$ |
| Storage humidity | $\max .80 \%$ |
|  |  |


| Power output | Max 24 A |
| :--- | :--- |
| Light intensity | 0 to $100 \%$. |
| Strobe pulselength | 50 to $1500 \mu \mathrm{sec}$ |
| Trigger frequence | max. 200 Hz at 24 A |
| Communication | RS232 |

Warning!
Do not connect to other than 24 V DC

| Power/trigger cable |  |  |
| :--- | :--- | :--- |
| Yellow | 24 VDC | Pin 1, 2 |
| Brown | 0 V | Pin 3, 4 |
| Green | Trigger + | Pin 8 |
| White | Trigger - | Pin 9 |

Trigger input: Optical isolated
Trigger range: $5-24 \mathrm{VDC}, 20 \mathrm{~mA}$

## Communication.

Connect the 9-pin D-SUB, marked "COM" to a com.port on host system

## Light head connector:

Pull back the spring-loaded housing before connecting and disconnecting.

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## LED indication



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## Adjustment:

Open the units by unscrewing top cover


J4 SW1

## Adjustable parameters:

| Pulse Current | PC | $0-100 \%$ |
| :--- | :--- | :--- |
| Stobe Pulse Width | SPW | $50 \mu \mathrm{sec}-1,5 \mathrm{msec}$ |
| Trigger Delay | STD | $0-38 \mathrm{msec}$ |

Trigger delay consists of STD (0-255) multiplied with a delay factor (DF) $(2-150 \mu \mathrm{sec})$ giving a STD range of 0-38 msec.

EMC compatibility:
This product, PAD1 1131/24 follow the EG-directive for EMC-compatibility, 897336, additional 9321/EEG and 93/86//EEG

[^0]
## Communication, SW1:

The communication cable PC com. port connector contains an RS232 to RS485 interface converter for safer transmission but mainly to enable so called multi drop systems with up to 8 units, in any combination of steady state and/or strobe RS232 operated controllers, connected to the same com port. Each controller is given its own ID (0-15), set by switch, SW1.

The PC control software handles max. eight units, (available on www.latab.se).

## Termination jumper, J4:

Termination jumper J4 shall be installed on the last unit of the multidrop system.
In case of only one unit this jumper J4 shall be installed in the unit. (Preset at factory)

## RS232 interface.

Connect the 9 pin D-SUB marked "COM" to the host system PC.
Com port setting:
19.200 baud, no parity,

8 data bits, 1 start/stop bit
Set DTR and RTS pins to pos. voltage level

Trigger configuration
Positive edge
Negativ edge


[^1]
# CONTROLLER 

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## PAD1 1132/24 control protocol

The control string (hex) are 5 bytes and to be sent in the following order:
Start byte: FE.
ID-byte: $\quad 00-0 F$. Corresponding to SW1 inside the controller.
SPW/DF-byte: 00-FF. Higher nibb = SPW.
Lower nibb = DF

TD-byte: $\quad 00-F F$. Trigg delay
PC-byte: $\quad 00-$ FF. $0-100 \%$ light intensity
Example 1:
FE, 00, C6, 08, FF (five byte command)
FE = Start byte.
$00=$ Unit ID $=0$.
C6: $\quad C=S P W=100 \mu \mathrm{~s}$.

$$
6=\mathrm{DF}=50 \mu \mathrm{~s} .
$$

$08=$ TD trigg delay of $8 \times 50 \mu \mathrm{~s}=400 \mu \mathrm{~s}$.
FF $=P C=100 \%$ light intensity.
Example 2:
FE, 02, EF, BA, 7F (five byte command)
FE = Start byte.
$02=$ Unit $I D=2$.
Table for SPW (strobe pulse width) and DF (trigg delay factor) settings

| SPW higher nibb |  | DF lower nibbb |  |
| :---: | :---: | :---: | :---: |
| SPW | $\mu s e c$ | DF | $\mu s e c$ |
| 0 | 50 | 0 | 2 |
| 1 | 100 | 1 | 5 |
| 2 | 150 | 2 | 10 |
| 3 | 200 | 3 | 20 |
| 4 | 250 | 4 | 30 |
| 5 | 300 | 5 | 40 |
| 6 | 400 | 6 | 50 |
| 7 | 500 | 7 | 60 |
| 8 | 600 | 8 | 70 |
| 9 | 700 | 9 | 80 |
| A | 800 | A | 90 |
| B | 900 | B | 100 |
| C | 1000 | C | 110 |
| D | 1100 | D | 120 |
| E | 1200 | E | 140 |
| F | 1500 | F | 150 |

EF: $\quad E=S P W=1200 \mu \mathrm{~s}$.

$$
F=D F=150 \mu \mathrm{~s} .
$$

$B A=T D$ trigg delay of $130 \times 150=19.5 \mathrm{~ms}$.
$7 F=P C=50 \%$ light intensity


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