Hardware: SN75176 Transceiver (Texas), RS-485 Balanced
Baud rate: 187.5 Khz., 11 bit frame UART

Clk.
 $\square$

Txd.


| D1 | D2 | D3 |
| :--- | :--- | :--- |

D4

| D6 | D7 |  |
| :---: | :---: | :---: |
| MSB |  |  |

TB8: True $=$ Address, False $=$ Data
not used
MSB refers to $\underline{\text { Most }} \underline{\text { Significant }} \underline{B y t e, ~ L S B ~ r e f e r s ~ t o ~ L e a s t ~} \underline{\text { Significant Byte. }}$

| Effect | OFF | Legal Data |
| :---: | :---: | :---: |
| MSB: Color time <br> LSB: Color wheel position | 0 |  |
| MSB: Gobo wheel rotation <br> LSB: Gobo wheel rotation speed | 1 | $\begin{aligned} & 0=\text { no rotation } \\ & 1=\text { continuous CW rotation } \\ & 2=\text { continuous CCW rotation } \\ & \\ & 0 . .127 \text { = slow --> fast } \end{aligned}$ |
| MSB: Gobo shake speed LSB: not used | 2 | $0 . .15$ = fast --> slow, $0=$ disable |
| MSB: not used <br> LSB: Dimmer pulse | 3 | bit 5-6 $0:$ Off <br>  $32:$ Opening pulse <br>  $64:$ Closing pulse <br> bit $0-4$ $0-31:$ speed fast $-->$ slow |
| $\begin{aligned} & \text { MSB: Pan MSB } \\ & \text { LSB: Pan LSB } \end{aligned}$ | 4 | $0 . .255=$ left --> right, $128=$ neutral $0 . .127=$ left --> right, 15 bit resolution, $540^{\circ}$ |
| MSB: Tilt MSB <br> LSB: Tilt LSB | 5 | $\begin{aligned} & 0 . .255=\text { up }-->\text { down, } 128=\text { neutral } \\ & 0 . .88=\text { up }-->\text { down, } 15 \text { bit resolution, } 289^{\circ} \end{aligned}$ |
| MSB: Pan Time LSB: not used | 6 | $0 . .255,0 . .25 .5 \mathrm{Sec}, 0=\mathrm{BO}$ while moving |
| MSB: Tilt time <br> LSB: Gobo selection | 7 | $0 . .255,0 . .25 .5 \mathrm{Sec}, 0=\mathrm{BO}$ while moving $\begin{aligned} & 0=\text { Open } \\ & 1=\text { Gobo1 } \\ & 2=\text { Gobo2 } \\ & 3=\text { Gobo } 3 \\ & 4=\text { Gobo } 4 \\ & 5=\text { Gobo } 5 \\ & 6=\text { Gobo6 } \\ & 7=\text { Gobo } 7 \\ & 8=\text { Gobo } 8 \end{aligned}$ |


| MSB: Focus <br> LSB: Random strobe and color | 8 | $0 . .255$ near --> far $127=$ default <br> $0=$ Random strobe and random color off bit 0-2: <br> $1=$ Random strobe slow <br> $2=$ Random strobe medium <br> $3=$ Random strobe fast <br> bit 3-5: <br> $8=$ Random color slow <br> $16=$ Random color medium <br> $24=$ Random color fast |
| :---: | :---: | :---: |
| MSB: Gobo rotation speed <br> LSB: Boot Request Sequence <br> Autodetect enable | 9 | $0 . .127,0=$ BO while changing gobo and indexing <br> Request string: "MA250",0,0,0,0,0 <br> Decimal values: 77,65,50,53,48,0,0,0,0,0 <br> This channel is only used for special functions. For normal operation the value for this channel should be 0 . <br> Request string: "MA250",0,0,0,0,"A" <br> Decimal values: $77,65,50,53,48,0,0,0,0,65$ |
| MSB: Focus time <br> LSB: Color wheel rotation | 10 | $\begin{aligned} & 0 . .255,0 . .25 .5 \mathrm{sec} . \\ & 0=\text { No rotation } \\ & \text { bit } 0(1)=\text { continuous CW rotation } \\ & \text { bit } 1(2)=\text { continuous CCW rotation } \end{aligned}$ |
| MSB: Color wheel speed LSB: not used | 11 | 0.. 127 Fast --> Slow |
| MSB: Dimmer <br> LSB: Prism | 12 | $\begin{aligned} & 0 . .255,0 . .100 \%, 0=\text { Default (Light Off) } \\ & 0=\text { Disable } \\ & \text { bit } 0(1)=\mathrm{CW} \\ & \text { bit } 1(2)=\mathrm{CCW} \end{aligned}$ |
| MSB: Dimmer time <br> LSB: Prism speed | 13 | $0 . .255,0 . .25 .5 \mathrm{Sec}$ <br> 0.. 127 Fast --> Slow, $0=$ No rotation |
| MSB: Gobo Rotation <br> LSB: not used | 14 | $\begin{aligned} & 253=\text { Stop } \\ & 254=\text { Continuous CW rotation } \\ & 255=\text { Continuous CCW rotation } \end{aligned}$ |
| MSB: Special Commands <br> LSB: Strobe | 15 | ```bit \(0(1)=\) Free bit \(1(2)=\) Free bit 2(4) \(=\) Free bit \(3(8)=\) Free bit 4 (16) \(=\) Lamp Power OFF bit 5 (32) \(=\) Lamp Power ON bit \(6(64)=\) Reset Fixture 0.. 63 Fast --> Slow, \(0=\) Disable``` |

