

Sniper⁴⁵

Plug 'n' play Laserprojector

Runs with:

- Mamba Black
- Mamba 2004
- LaserPainter Live!
- Pangolin LD32 and LD2000
- Lasergraph DSP
- Lacon III / III+/V
- Any analogue output software



Ready to go

The system comes ready to go. Just plug it into the wall, connect the ILDA standard connector with a 1:1 cable to your ILDA standard output of your software, and start doing your laser shows. It is so easy. No mounting, no screwing, no shuttering. The cable from the computer to the Sniper can be almost as long as you want - depending on the architecture of your computer interface card. For example: Pangolin's QM2000 can handle up to 100m or 300 ft. of cable length. It is not even necessary to use shielded cables, but it is recommended.

Use it at every power voltage

The **Sniper⁴⁵** has the capability to run on any AC outlet due to extended use of switching power supply units. It is not necessary to move any switch.

Use it with every software

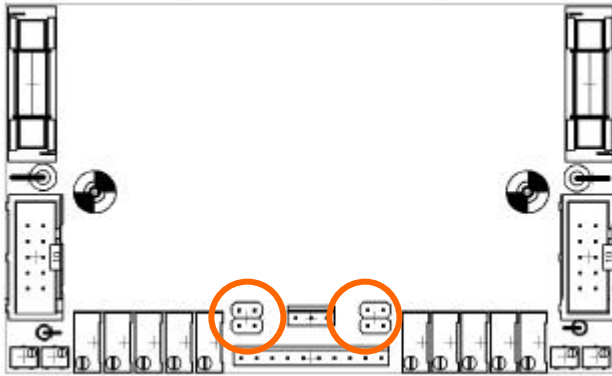
Due to the open input structure, the Sniper can be used with almost every existing Lasershow software on the market. As long as you have analogue outputs, **Sniper⁴⁵** will be compatible. We recommend the Mamba 2004 or Mamba Black software packages for easy use and sophisticated features.

Factory settings

The **Sniper⁴⁵** comes with adjusted laser, scanner drivers and power supply. It is set up for ILDA standard voltage of +/- 5V peak to peak. At full input, the deflection angle will be approx. 45 degrees optical.

The scanners are set to 25k ILDA speed at 20 degrees optical deflection.

Invert input channels / Adjust input channels



Some software packages require inverting of the Y-channel. The driver board contains an inverting circuit on every channel. To invert one channel, you need to remove the head cover of the **Sniper⁴⁵**.

Make sure the unit is not plugged into the wall outlet. Now remove the screws, which holds the head cover. Don't forget the screws on the back.

The inverting jumpers are located on the driver, as you can see on the picture, marked with a circle. To invert the channel, just remove both jumpers and put them back in at 90 degrees rotation.

To adjust the input voltage, which allows to change the deflection angle also, the trim pots "Size" are suitable, marked with the rectangle. Turn clockwise: Increase angle.

WARNING! Increasing output size may damage your scanners. No warranty on those cases.

Now add the head cover again, lock the screws and go.

Connector pins

DB25 male connector:

1:	X input +
2:	Y input +
3:	Blanking input +
14:	X input -
15:	Y input -
16:	Blanking input -
25:	Ground

Connect to symmetrical (balanced) output sources

To connect the **Sniper⁴⁵** to symmetrical output sources at original ILDA standard, just use a 1:1 cable. You do not need to connect the ground wire, just use it for shield.

Connect to unsymmetrical (unbalanced) output sources

To connect the **Sniper⁴⁵** to unsymmetrical output sources, wire the X-channel to X input +, the Y-channel to Y-input Y. Put both X input - and Y input - to ground. Use a shielded cable and watch out for ground loops between your computer and the **Sniper⁴⁵**.

Technical data:

Operating voltage:	100-230VAC at max. 120VA
Environment:	Room temperature 10 - 35° C
Input voltages:	5-5V (10V peak-peak)
Max. Scan speed:	45.000 pps at 5° optical angle ILDA standard
Max. Deflection angle:	60° optical angle, set to 45° optical angle
Laser wavelength:	532nm bright green
Laser power:	150mW max. output power, laser class 3b
Laser warm-up time:	10-15 minutes
Laser stability after warm-up:	5-15%
Weight:	Approx. 5.5kgs

Troubleshooting

Q: Internal fuse keeps blowing

A: Check your deflection angle.

Q: Output inverted

A: Open case and change jumper settings

Q: Picture is jumping or oscillating

A: Probably a ground loop. Check your wiring and connect power source to the same phase. Try to lift ground.