

GETTING TO KNOW ETHERSTOP

This is a quick EtherStop setup guide. Please refer to the full product manual for more detailed guidance and setup information for more complex networks. Contact: support@x-laser.com or 866-702-7768 ext. 155

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1 Know the system

The EtherStop system provides integrated **network and compliance signaling** for your laser control network, including:

- Compliance signals:
 - Remote stop
 - Laser emission indicator
 - System reset
- Network signals:
 - Art-Net
 - Streaming ACN (sACN)

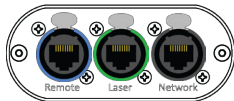
4 Know the process

Typical setup and operation of EtherStop equipment includes:

- Connect and power on equipment
- Verify Remote In ports are terminated/filled properly
- Enable key switches and release remote stop (red) buttons
- Test all remote stop system switches
- Reset system + start the show!

See system manual for full procedure

2 Know the ports



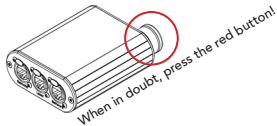
Remote
Blue ring; only compliance signal

Laser
Green, both network & compliance signal

Network
Black/no ring; only network signal

5 Know the red button

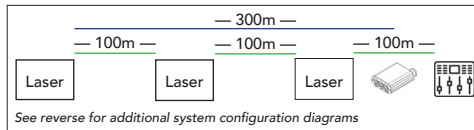
Never hesitate to disable laser output when a problem occurs. The safety of the audience, performers, and operators is **ALWAYS** more important than the show.



3 Know the limits

EtherStop cable lengths are limited to ensure signal reliability:

- **Compliance:** 300m/984ft (cables not used for network signals)
- **Ethernet:** 100m/328ft such as ex. using proper pass-through:



6 Know the blink patterns

Blinking signal seen via laser's emission indicator tells the operator that:

- Off = Laser is not ready (interlock open, key off)
- Every 3 sec. = Laser is ready to reset
- Every 1 sec. = Emission delay period (10 sec.)
- Solid on = Laser is ready to emit/is emitting

Remember:

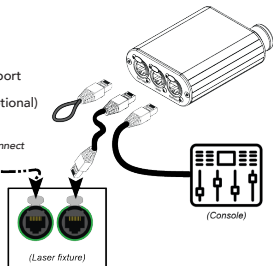
- EtherStop signals travel through Cat5 cable but **not** through standard Ethernet switches and routers.
- **NEVER** connect EtherStop devices to standard Ethernet devices except as specifically allowed in the manual.

EtherStop system configuration examples

One Pendant configuration

- Terminator in "Remote" port
- Laser system connected to "Laser" port
- "Network" connected to control (optional)

Second EtherStop port: Connect to other lasers only, do not install Terminator.

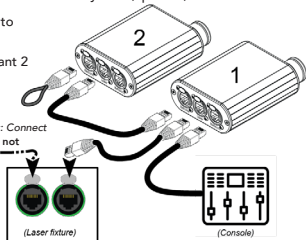


Multiple Pendants configuration

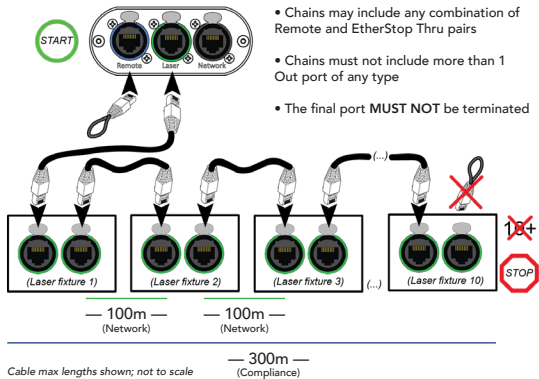
- Laser system connected to "Laser" port of Pendant 1
- "Network" port of Pendant 1 connected to control system (optional)
- "Laser" port of Pendant 2 connected to "Remote" port of Pendant 1
- Terminator in "Remote" port of Pendant 2
- Connect up to 4 Pendants in this way

Second EtherStop port: Connect to other lasers only, do not install Terminator.

Note: All Pendants must be in enabled state to allow lasers to operate.

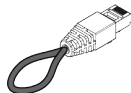


Daisy chain guidelines / example



Generally, the maximum is 10 lasers and 4 Pendants.

Using EtherStop Terminators



The EtherStop Terminator closes the interlock signal(s) on an unused Remote or EtherStop In port. Only during **service** or **testing**, Terminators may be used to temporarily enable laser output.

NEVER use an EtherStop Terminator to enable laser output in place of an EtherStop Pendant. Laser show safety and compliance standards require a remote stop system at all times.