FC FIBER LASER
Quick Start Guide

This guide allows operators to quickly assemble and understand the basics of their FC Fiber Laser Cutter. Your user manual has extended information, including safety protocols, which should be read before operating the laser.

Uncrating Your FC Fiber Marking Laser

When your FC Fiber Marking Laser arrives, it will require careful uncrating and examination of parts. Follow these instructions for best results.

1. Create a work space. You will need an open, level work space to place your fiber laser. A solid table with adequate room (the machine's dimensions are 22 ½" x 24" x 21 ¼") for the machine is recommended. Be sure the workspace is free of fire hazards and is well ventilated. Always have a fire extinguisher handy in case of emergency.

2. Carefully remove the top and sides of the crate. Set the crate on a flat surface near where you will place the machine. Open the crate by using the hand drill and 5/16" socket head bit to remove the screws holding the crate together. Start with the top of the crate and work down each side of the crate from there. Be careful not to damage/strike the machine present within the crate during the uncrating process.

3. Remove top foam and accessory kit from machine. With the top and sides of the crate removed the top foam padding can be removed. Once removed the accessory kit will be located on the foam surrounding the top of the fiber unit. Remove the accessory kit prior to removing that last piece of top foam.

4. Remove machine from the crate and bottom foam. With the fiber unit now sitting in the base of the crate and foam base, gently lift the machine out of the crate and foam base and place the unit on the desired clean flat surface such as the table you plan on keeping it. Be aware that the machine weighs 137 lbs. Find someone to help you lift it. The machine should now be flat on your work surface.

5. Remove protective saran wrap surrounding the perimeter of the fiber unit. With the machine now on the level table, you will be able to utilize a utility knife and carefully remove the saran wrap on the machine. Be carefully not to allow the cutting edge of the utility knife to touch the machine to avoid cosmetic damage.

6. Inspect the machine. With the fiber unit and accessory box now on the work table be sure to give the interior and exterior of the unit and thorough visual inspection for any defects or breakage. If you find any defects or breakage, contact your sales representative immediately. Have pictures of the damage ready to share. Your machine is now uncrated.

FC Fiber Marking Laser Parts List

Your laser shipped with the following Included parts and accessories:

DESCRIPTION (QTY)
FC Fiber Marking Laser (1)
Lenovo PC Laptop (1)
USB Cable (1)
17/19mm Wrench (1)
8/10mm Wrench (1)
5.5/7mm Wrench (1)
Allen Wrenches (set)
Steel Ruler (1)
Small Phillips Screwdriver (1)
Medium Phillips Screwdriver (1)
Large Phillips Screwdriver (1)
Needle Nose Pliers (1)
Foot Switch (1)

Additional Recommended Tools:
Pry Bar
Hammer
Utility Knife
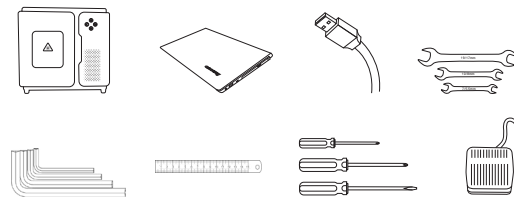
Customer Service

Full Spectrum Laser provides the best customer support in the industry. Contact us if you have any questions or issues with your Muse Laser Cutter. We can also offer convenient purchasing of accessory upgrades and replacement of consumable items. Refer to this sheet for all your customer support and reordering needs.

INSTALLATION AND ASSEMBLY

With your fiber system uncrated and placed in its permanent work space we can now assemble it. This is a simple process that should take less than half an hour to complete.

Assembly Stage One: Connect Electrical Power

1. Prepare Power Cord. Open rear compartment of FC machine and locate black power cord. Pull cord through port on machine and close rear compartment.

2. Plug in Power Cord to Outlet. Plug the power cord into any proper outlet socket in your workspace.

Assembly Stage Two: Connect USB Cable

For the laser cutter and software to communicate, you will need to attach the provided USB cable.

1. Attach USB to Laptop. Connect one end of the provided USB cable to a USB port on the laptop.

2. Attach USB to Laser Cutter. Connect the other end of the provided USB cable to the USB port located at the back of the FC Fiber machine (above the power switch).

Assembly Stage Three:
Power Machine, Laser Source & Laptop On

All Full Spectrum FC Fiber Laser Systems come with a PC laptop with Marker Software pre-installed.

1. Power Machine On. Power the machine on by flipping the switch on the back of the machine into the on position. This will power the laser cutter on (but not the laser itself).

2. Power Laser Source On. With the machine powered on press the "Laser Source" button" on the front of the machine to turn the laser source on.

3. Power Laptop On. Press the "On" button on the laptop to power it up. Wait for Windows to boot.

Assembly Stage Four: Open Marker Software

Marker (ver. 2.7.6) is the control software that communicates with and controls the laser system. It is pre-installed on the PC laptop that is supplied with the FC Fiber System. Double-click the Marker software icon to run the software. Ensure the machine is powered on prior to opening the Marker software for proper communication.

Assembly Stage Five: Establish Exhaust (Recommended)

Though not included, it is recommended that operators use an exhaust system to clear debris and fumes from the work area. This can be a simple exhaust fan that draws fumes from the point of operation, and expels them outdoors or into a filtered fume extractor. Ask your sales representative about exhaust recommendations or visit: *https://fslaser.com/Products/LaserAccessories.*

Workflow

The following is a typical workflow for each time you run a job:

1. Power On FC Fiber Laser Cutter. Flip the power switch located at the back of the machine to the "Up" position. This will turn on the power to the machine.

2. Power on Laptop. Power on the laptop and allow Windows to load. Be sure the provided USB cord is connecting the laptop to the laser cutter (see assembly).

3. Open Marker. Double-Click the Marker shortcut on the laptop's desktop and allow program to open.

4. Create Design. There are several different design tools that can assist with creating vector lines within Marker. If you have a preexisting file you want to use instead, go to step 4.

5. Import Design File. If a design is already created, select "File" in Marker and then select "Import Bitmap File..." if you are wanting to etch a bitmap. Select "Import Vector File…" if you want to etch a vector file. This will open a search window for you to locate the file you want to work with. Files compatible with Marker are bitmap, .dxf, .svg, .tiff, and most other common image and design files.

6. Position Material. Use the red beam as a guide to position your material to the laser. Never cut any unknown material without first consulting the manufacturer or MSDSonline.com. NEVER CUT PVC.

7. Focus. You can now ensure that the focus lens is in proper focus to your material.

8. Set Marking Parameters. Your parameters will depend on the specifics of the project. We suggest doing material testing prior to starting a new job for the first time.

9. Turn On Laser. To power the laser up, press the "Laser Source" button on the front of the machine.

10. Start Job. You can begin the job by pressing the footswitch. Alternatively, you can click F2 on your keyboard, click the "Mark" button in the software or press the "Run Job" button on the front of the machine. Once the laser has started operating, it will need to be closely monitored by the operator. Never leave a working laser unattended.

FOCUSING

Ensuring the scan head is in the proper focus distance from the material is vital when attempting to optimize output. An out of focus laser beam will prevent the 1064 nm beam from properly marking the material regardless of parameter setting during normal operation. The following instructions will assist with obtaining focus:

The FC systems are outfitted with an additional red dot diode that comes pre-calibrated for focusing the F Theta Lens to material, regardless of material thickness. Once the machine is powered on, and laser source turned on, remove focus lens cap and place the material intended to be marked into the work area. Two separate red dots will be present on the material. Simply raise or lower the scan head via the Z-Scan Head Controls located on the front of the machine until both the red dots overlap each other. That will put the focus lens into focus onto the material and allow the machine to be ready to perform the marking process.