



# X-CARVE Pro

## SAFETY MANUAL

**Publication date:** 5.4.21

**Updated:**

**Power Supply:**

Manufacturer: Mean Well USA Inc.

Model: LRS-350-48

Input specs: 90-132VAC, 180-264VAC,  
240-370VAC

Output: 48VDC 7.3A

**Inventables Inc.**

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[www.inventables.com](http://www.inventables.com)

Assembly Instructions available at: [XCARVEPRO.INVENTABLES.COM](http://XCARVEPRO.INVENTABLES.COM)



**Read all warnings and instructions** before assembly or operation. Failure to follow the warnings and instructions may result in electric shock, fire and/or injury.

**Save all warnings and instructions for future reference. Refer to them frequently and use them to instruct others who may use this product.** If you loan, sell, or otherwise provide this product to somebody else, provide them these instructions also.

## SELECT A LEVEL, STURDY LOCATION

- **The X-Carve Pro must be operated on a surface that is level and stable.** If the X-Carve Pro is placed on a non-level or unstable surface, X-Carve Pro can fall, damaging X-Carve Pro and risking injury to you and to others.
- **Locate the X-Carve Pro on a surface that can manage at least the weight of the machine in addition to any materials being cut (X-Carve Pro weighs approximately 300lbs)**

## ASSEMBLY



- **Due to the size and weight of the machine, several steps in the X-Carve Pro assembly process require 2 individuals. Do not attempt to fully assemble the entire machine by yourself as it could result in damage to the machine or bodily harm.**



- **Please visit [xcarvepro.inventables.com](http://xcarvepro.inventables.com) for detailed assembly instructions including images and video. To ensure the X-Carve Pro operates properly, customers should follow all assembly instructions. For any questions please contact Inventables Customer Success 312-775-7009**
- **Final machine assembly and calibration requires the machine to be powered on and moving. Components will be tightened by hand, followed by the machine physically moving after each step. Carefully follow assembly instructions and stay clear of the gantry when the machine is in motion.**

## NO MODIFICATIONS OR UNAUTHORIZED ACCESSORIES

Modifications to the X-Carve Pro or the use of any accessory or attachment that has not been recommended by the manufacturer and may result in risk of injury or damage to components:

- **Any mechanical or electrical modifications to the X-Carve Pro are expressly prohibited and will result in void of the warranty.**
- **Never attach and operate a laser or other accessory that hasn't been specifically designed for the X-Carve Pro by Inventables.**

## USE ONLY AS INTENDED

- **Never use the X-Carve Pro for something other than cutting woods, plastics, and soft metals.**
- **Use the X-Carve Pro, accessories, milling bits, etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** Use of the X-Carve Pro for operations different from those intended could result in a hazardous situation.



## ELECTRICAL SAFETY

### To reduce the risk of electrical shock:

#### Avoid cord and wiring damage

- **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the machine.** Keep cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electric shock.
- **Never operate X-Carve Pro if the wiring appears to be damaged in any way.** If wiring is damaged or loose please contact Inventables customer support: (312) 775-7009.

#### Use correct plugs and outlets

- **X-Carve Pro plugs must match the outlet. The X-Carve Pro must be plugged into a 90-132V outlet on a 15A minimum circuit. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Using unmodified plugs and matching outlets will reduce risk of electric shock.

#### No wet conditions

- **The X-Carve Pro is intended for indoor use only. Do not expose X-Carve Pro to rain or wet conditions.** Water entering X-Carve Pro will increase the risk of electric shock.

#### Do not ground yourself

- **Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.

## PREPARE YOUR WORK AREA

- **Keep work area clean and well lit.** Cluttered or dark areas can lead to accidents.
- **Do not operate X-Carve Pro in explosive atmospheres, such as in the presence of flammable or combustible liquids, gases, vapors, or dust.** X-Carve Pro can create sparks which may be a source of ignition.

## PREPARE YOURSELF

- **Do not use X-Carve Pro while you are tired or under the influence of drugs, alcohol or medication. Stay alert, watch what you are doing and use common sense when operating X-Carve Pro.** A moment of inattention while operating X-Carve Pro may result in serious personal injury.
- **Dress properly. Do not wear loose clothing or jewelry.** Keep hair, clothing and gloves away from moving parts. Loose clothes, jewelry or long hair can be caught in moving parts. Stay clear of the spindle and cutting material when the spindle is on to avoid possibility of entanglement.
- **Use protective equipment while operating your X-Carve Pro.** Always wear hearing protection, the appropriate respiratory protection, and safety glasses that meet Z87 standards, for the material you're cutting or otherwise cleaning.



## BEFORE TURNING ON

- **Prevent unintentional starting.** Ensure the switch is in the off-position before connecting to a power source.
- **Do not use the X-Carve Pro if the switch does not turn it on and off.** Any tool that cannot be controlled with the switch is dangerous and must be repaired.
- **Remove all wrenches before turning X-Carve Pro on.** A wrench attached to a rotating part of X-Carve Pro may be thrown at high speed, resulting in personal injury.
- **Be sure the dust control system is in place.** Always operate the X-Carve Pro with the included dust control system.

## OPERATION

### Only cut appropriate materials

- **Never cut materials that are not approved for use by Inventables. Dust or shavings from materials may be a health hazard. Approved materials include:**
  - **Wood/Wood Composites:** Hardwoods, softwoods, MDF, plywoods
  - **Plastics:** HDPE, Delrin®, polycarbonate, acrylic, Corian®
  - **Non-Ferrous Metals:** Aluminum, brass, copper
- **Never attempt to cut magnesium or any other flammable material or a material that produces flammable dust. Sparks or fire may occur if you attempt to cut materials with the X-Carve Pro that are not approved for use by Inventables**
- You are responsible for the materials you choose to cut. Investigate their composition and confirm that they are safe for your use before trying to use them with the X-Carve Pro.

### Securely mount materials

- **Before operating, ensure that all materials are securely mounted to the X-Carve Pro.**
- **Before operating, ensure that the tool is securely mounted to the spindle.**
- **Always operate the X-Carve Pro with the included dust control system.**

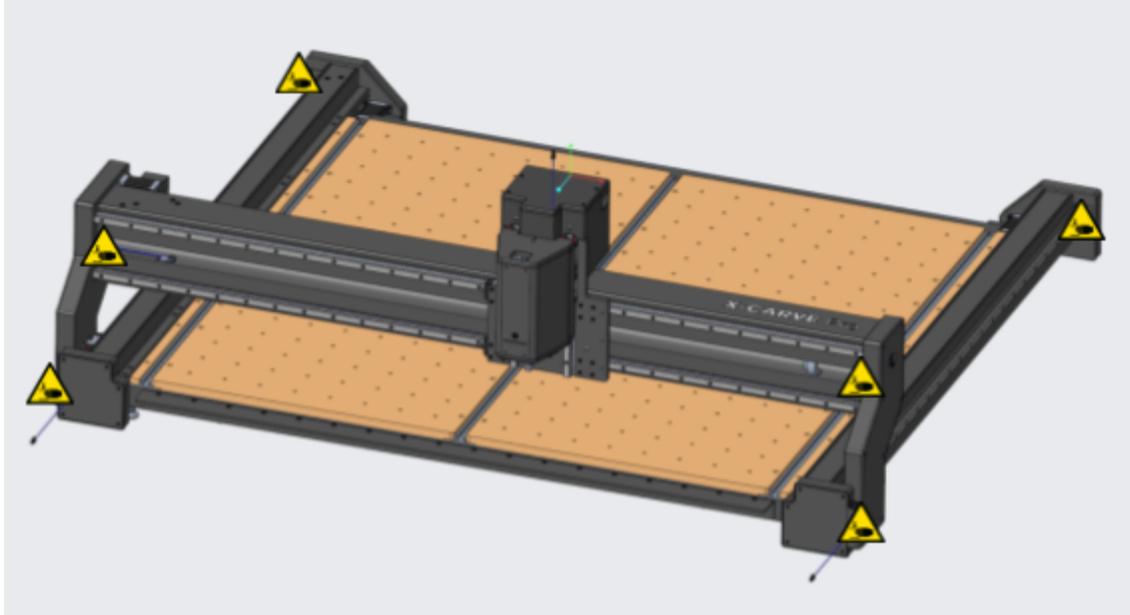
### Check dust collection system grounding

- **Ensure that the included dust collection system is properly grounded to the controller by following the assembly instructions.**

### Keep clear of moving parts

- **Keep hands clear of pinch points when operating X-Carve Pro.** Also keep hands clear of pinch points on the panel behind the spindle. The ends of motion for the X, Y and Z axes are all pinch points.
- **Keep hands clear of the sharp edges on the milling bit at all times.**
- **Disconnect the plug from the power source before making any adjustments or changing any equipment (including bits) for the X-Carve Pro.**





#### **Stay with the machine while in use**

- **Never leave the X-Carve Pro unattended while running, always stay within sight of the machine and near the emergency stop button.**
- **Always be alert and ready to press the emergency stop button in case of an emergency**

#### **Clean cutting waste safely**



- **Vacuuming cutting waste with an ordinary vacuum cleaner may result in fire or dust explosion. Check with the manufacturer of the vacuum cleaner. When the safety of vacuuming cannot be determined, manually sweep up debris instead.**
- **Regularly clean dust or chips from the X and z axis cavities to ensure proper operation.**
- **Dispose of cutting waste in compliance with local, state, and federal regulations.**

### **PREVENT UNAUTHORIZED USE**

- **When the X-Carve Pro is not in use, turn off the power switch and unplug the machine from the wall.**
- **Store idle X-Carve Pro out of the reach of children and do not allow persons unfamiliar with the X-Carve Pro or these instructions to operate the machine.** The X-Carve Pro could be dangerous in the hands of untrained users.

### **X-Carve Pro MAINTENANCE and SERVICE**

- **Keep cutting tools and bits clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- **Maintain your X-Carve Pro. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the X-Carve Pro's operation.** The X-Carve Pro is a precision-tuned machine. If damaged, have the X-Carve Pro repaired before use.
- **Have your X-Carve Pro serviced by an authorized repair person using only manufacturer's replacement parts.** This will ensure that the safety of the X-Carve Pro is

maintained. Use of unauthorized parts may create a risk of shock or injury.

- **Disposal Considerations:** Any part of the X-Carve Pro and/or waste generated by the X-Carve Pro should be disposed of in compliance with local, state and federal regulations.

## **CALIFORNIA PROPOSITION 65**

### **WARNING:**

This product and some dust created by power sanding, sawing, grinding, drilling, and other construction activities may contain chemicals, including lead, known to the State of California to cause cancer, birth defects, or other reproductive harm. ***Wash hands after handling.***

Some examples of these chemicals are:

- lead from lead-based paints,
- crystalline silica from bricks and cement and other masonry products and,
- arsenic and chromium from chemically treated lumber.

Your risk from exposure to these chemicals varies, depending on how often you do this type of work. To reduce your exposure, work in a well-ventilated area and with approved safety equipment, such as dust masks that are specially designed to filter out microscopic particles.