

Dynatorch, INC. Ground Test

Rev. 061915 RLJ, MJG

Warnings



1. This test should be performed by a qualified electrician.
2. Do not perform this test in the rain, while standing in water, or on a wet surface.
3. Do not start the plasma generator without proper grounding. This will create an unsafe condition which could result in equipment damage, injury, and/or death due to electrical shock.
4. Grounding the table permits safe operation, allows the plasma to function correctly, and reduces the effects of EMI (Electromagnetic Interference) which is being broadcast by the plasma generator and torch. The ground rod gives EMI a path back to source, which in addition to keeping your plasma generator six feet from the computer, helps to prevent EMI from corrupting the commands being sent to the drives from the computer.
5. Effective grounding does not make the environment safer for those who have a pace maker. If you have a pace maker, you should not be in proximity of the machine during operation.
6. Read the bulb packaging carefully. The bulb power consumption may be compared to other bulbs with lower or greater power ratings and may advertise the comparison and not the actual power consumption.
7. Be sure to disconnect all wires from the ground rod before performing the test. The test is measuring the effectiveness of the ground rod only. Anything that is connected to the ground rod during the test will cause a false measurement.
8. We recommend using an 9 foot grounding rod (1 foot above ground for service and 8 feet in the ground) that is at least $\frac{3}{4}$ of an inch in diameter, copper plated, no more than 15 feet from the table. Unless mandated by national, state, county, municipal, or NEC regulations, nothing else should be connected to the ground rod except for the table. It is also recommended that the ground rod be installed, with the machine, indoors to prevent corrosion from weather and humidity, to make it easier to perform regular maintenance checks, and to make it easier to test and service.

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Tools

- An incandescent light bulb, 40 to 100 watts.
- A socket for the light bulb with stripped wires.
- A digital volt meter.
- A cable to plug into a 110 VAC outlet.

Instructions

1. Disconnect all wires from the ground rod.
2. Set the digital volt meter to read AC.
3. Connect one probe to the neutral side of the 110 VAC outlet.
4. Connect the other probe to one side of the bulb and the ground rod.
5. Connect the other side of the bulb to the hot side of the 110 VAC outlet.
6. Use the chart below (Lightbulb Wattage / Voltage Reading) to determine if your ground rod is effective.

