



Plasma Table Setup

Version 8.26

Congratulations on the purchase of your plasma table! You've purchased the best, and this article will assist you in setting up your new plasma table.

Shipping

The plasma table ships in a wood crate with an underlying steel frame. You'll need a forklift to remove it from the truck. The crate should be lifted by the steel beams, not the wood flooring. The crates use 8mm hex head self drilling wood screws. An 8mm drill bit nut driver works wonders.

Delivery / Damage

We understand you're probably excited to get your plasma table and just want to get on with it. But - you should not sign the delivery receipt until you've accomplished a thorough inspection. A signed delivery receipt with no comments means that you've received your table in good condition, with no damage. Make sure to annotate any damage, especially to the crate. If the delivery diver insists you sign without performing an inspection, then notate that on the delivery receipt **before** you sign it.

Unpacking

Be careful lifting your plasma table out of the crate - watch the forks, and only lift the table by the steel frame. There are three main pieces - the plasma table, the control stand, and the exhaust fan.

Setup - Plasma Table

The plasma table has rollaway wheels with integrated jack pads. If the table doesn't freely roll, it may be that one or more of the jack pads is extended. Using a 24mm wrench, turn the nut inside the jack pad until the jack pad is retracted and the table rolls freely. Position the table where desired, then extend all four jack pads to level the table.

Setup - Fan

The exhaust fan and mounting panel ships separately from the plasma table, and must be connected to the plasma table before connecting power to the control stand. Note the two female wire terminals coming from the exhaust fan. They must be connected to the fan relay block **BEFORE ANY CORD IS PLUGGED INTO POWER.**

Setup - Control Stand

The cables from the plasma table must be connected properly to the associated aviation style aviation plugs on the connector plate located inside the control stand. Note that there are two different keys - one to power on the control stand, and a second style to lock / unlock the control stand access panels. To begin, first remove the 58mm gland nut ring from the gland nut connector on the end of the wiring bundle. Next, remove the bottom rear control stand access panel and carefully feed the eleven cables and grounding wire into the control stand conduit opening. Feed the wires and grounding wire through the 37mm gland nut, and secure the gland nut onto the gland fitting, thereby securing the protective conduit to the control stand.

Next, you need to attach the individual cables to their respective ports on the connector plate located inside the control stand. Be aware that the cables and ports are individually labeled, and **MUST**

MATCH EXACTLY in order to not damage the electronics. Make CERTAIN you positively match the cable identification to the connector plate identification. Because some of the ports have the same pin configuration, it's possible (if you're not paying attention) to plug them into the wrong port. Doing so will damage the electronics. Be attentive, and be careful. Lastly, secure the grounding wire from the wiring bundle to the ground bus located on the 'floor' of the control stand.

Grounding

Proper grounding is an essential part of plasma cutting. Make sure to properly ground your plasma table with a grounding rod. We have articles on our library page on how to properly do this. Always consult with a qualified, trained electrician if you have any questions or concerns.

Setting up the Torch

The point of this exercise is to make sure the torch has the most range of motion, without hitting the lower limit switch, which if it happens during cutting, will pause the operation. Therefore, it's **VERY IMPORTANT TO FOLLOW THIS PROCEDURE CAREFULLY.**

Make sure your plasma cutter and the controller is unplugged and turned OFF, and assemble your torch with the proper consumables for the job. While the standard mechanized consumables are good, we recommend using Hypertherm FineCut consumables whenever possible. On the plasma table, open the 'doghouse' torch cover, and insert the assembled plasma torch into the torch holder, then tighten the 4mm hex screws. Don't over tighten them, as we'll be moving the torch again in a moment - just ensure the torch is secure.

Ensure the CPC cable from the plasma table is connected to your plasma cutter. Turn the controller on, and jog the torch (with the blue arrow keys) above a blank spot between the slats - we want the torch to travel down to the lowest possible position (don't place any material below the torch). Press K2 to drive the torch holder to the lower limit switch - you should be able to see the lower limit status message on the screen (THC Lower Limit 1)

Next, load a thin sheet of metal onto the plasma table, right behind the torch. Make sure to connect the grounding cable from the plasma cutter to the material. Make sure to route the cable in a manner in which gantry movement will not cut or sever the grounding cable.

Loosen the torch holder screws and slide the torch so that the bottom of the torch is at least half an inch **below** the material surface, then tighten the retaining screws. Connect the ohmic grounding wire on the left lower side of the lifter to the connecting tab of the ohmic retaining cap, then close and secure the doghouse cover.

Turn the controller back on, then press K1 to raise the torch to it's highest position, and reposition your metal as necessary.

Testing Ohmic Sensing

Load a sheet of metal onto the plasma table and connect the grounding cable from the plasma cutter to the material. Ensure the CPC cable from the plasma table is connected to the CPC port on your plasma cutter. There's no need to turn the plasma cutter on. Jog the torch until it's above the material, then press K2 on the control panel. The torch will be driven down until it barely touches the material, then drive up to 'Locate Height'. The torch should barely touch the material, if at all.

Testing Floating Head

Jog the torch until it's above the material, then place a block of wood on top of the material, beneath the torch (this simulates the material is not conductive, either due to rust or paint). Press K2 on the control panel - the torch will be driven down until it pushes against the material, then drive up to

'Locate Height'. In this instance, the torch will press against and possibly deflect the material, especially if it's thin or flexible.

Perhaps the most important thing we can stress is this - if you get stuck and can't figure it out - call us and let us help you. Finally, we truly value your opinion. If you notice something we've missed or have a suggestion, please email us at arcstar@mail.com. Thank you!

