

DC Design Studio, LLC – Hand Held Trigger Setup and Use Instructions

Disclaimer: Upon purchase of this mechanism, operator takes full responsibility for its use as well as the safety of the people around and or exposed to it. Failure to take precautions, attempt structural modifications, or use outside the operating guidelines is dangerous and is highly discouraged. Taking the proper precaution and using this mechanism within the scope it was designed will give you years of worry free use.

Basic setup and integration of a Push Button Trigger:

First ensure the power supply is off and had not been plugged in for at least 2 minutes; the power supply holds power, and if it is or was recently plugged in, there is a possible shock hazard.

With the power supply un-energized, take the power cord that is running from the power supply to the valve and separate (spilt apart) the two wires about a foot from the power supply. As a precaution, all wiring should be kept as far from the valve and water as possible. Once split you should be left with a solid black wire and a black wire with a white stripe.

The black wire with the white stripe is the constant and you won't touch that one. The solid black wire needs to be cut and the shielding stripped about 3/8 of an inch on each cut end. With both ends stripped, now you can connect the push button trigger connections.

If you received the trigger pre-wired from DC Design Studio, the red wire will be pre-connected to the "C" terminal, and the black will be wired to the "A" terminal. This is a normally open (N/O) configuration and depressing the button closes the loop to start a show or fire a prop.

To wire in the trigger, connect the red wire to the stripped end of the power supply wire, and the black ("N/O" - normally open) will connect to the other stripped end of wire running to the valve.



We strongly recommend soldering these connections, then covering all of the bare wire with heat shrink tubing, then wrapping with electrical tape.

With those connected, you have created a normally open circuit/switch that closes (ie triggers the valve) when someone steps on the mat or when the button is depressed.

Basic setup and integration of a hand held controller directly to a valve (air cannon, ankle tickler, valve setup):

If you are adding a hand held trigger to an existing DC Design Studio prop that has a clear smoke colored solenoid cover over the electrical wiring, you can add a hand held trigger directly into the coil cover for a cleaner appearance.

To do so, first remove the silver screw from the solenoid coil cover; pull this out completely.

Next, remove the coil cover by gently lifting it off the electrical poles. The coil may separate or lift completely off when pulled. If it does not separate; loosen the wire retainer (large clear bolt on the coil cover) and use the screw to push the black retainer clips down the screw hole. If the clips are free, and the wire is loose the black electrical box should easily slide apart from the cover.

Now run your hand held trigger wire (opposite end from the trigger) into the coil housing and strip the red and black wires. The positive wire (black with white stripes) should run directly into the solenoids electrical screw terminals (to the side of the valve with white writing), and the solid black (from the power supply) will be soldered to the red wire of the hand held trigger. Cover this connection with heat shrink tubing. Next insert the remaining black wire from the hand held trigger into the negative (#2) terminal (side of the valve with no markings).

With the connections made, carefully feed the excess wire back out of the coil housing and re-seat the electrical connection box inside the housing. Reconnect the electrical box to the solenoid; re-insert the connection screw and hand tighten (do not over tighten or it may crack the coil housing).

Your valve should be complete, test by plugging in the power supply. The valve should not activate (the red LED will not lite) until the push button is depressed.