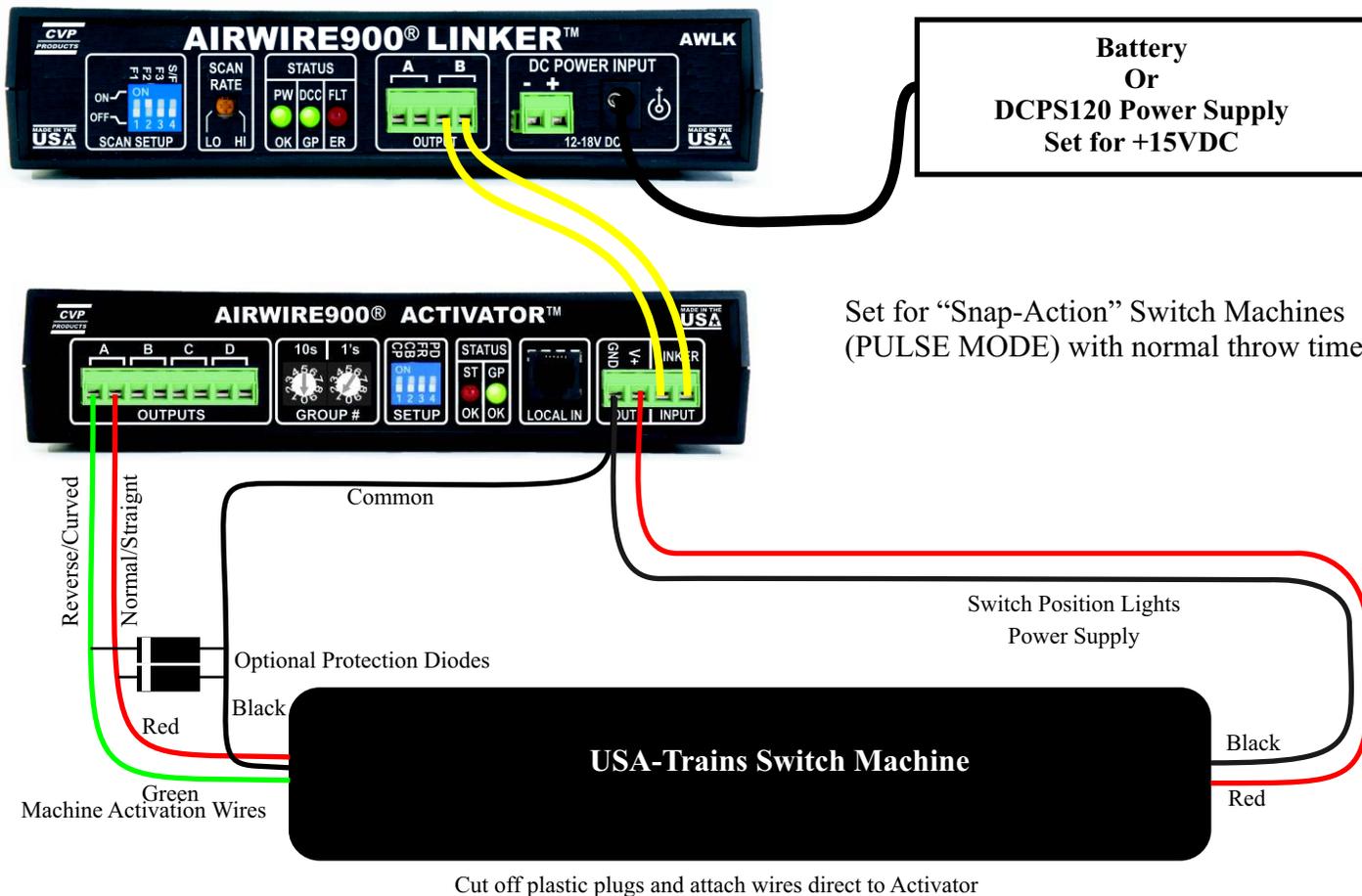
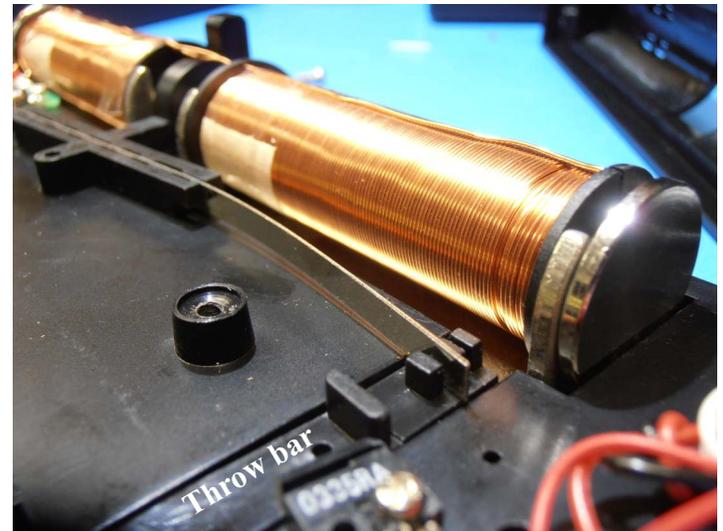
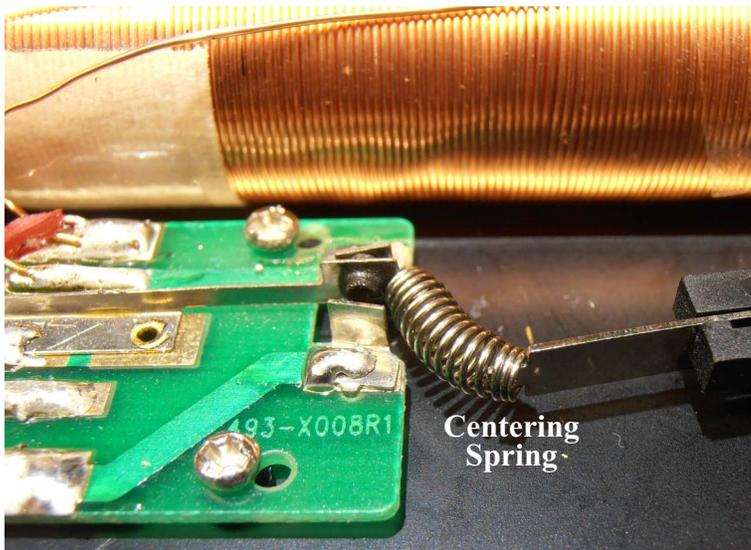
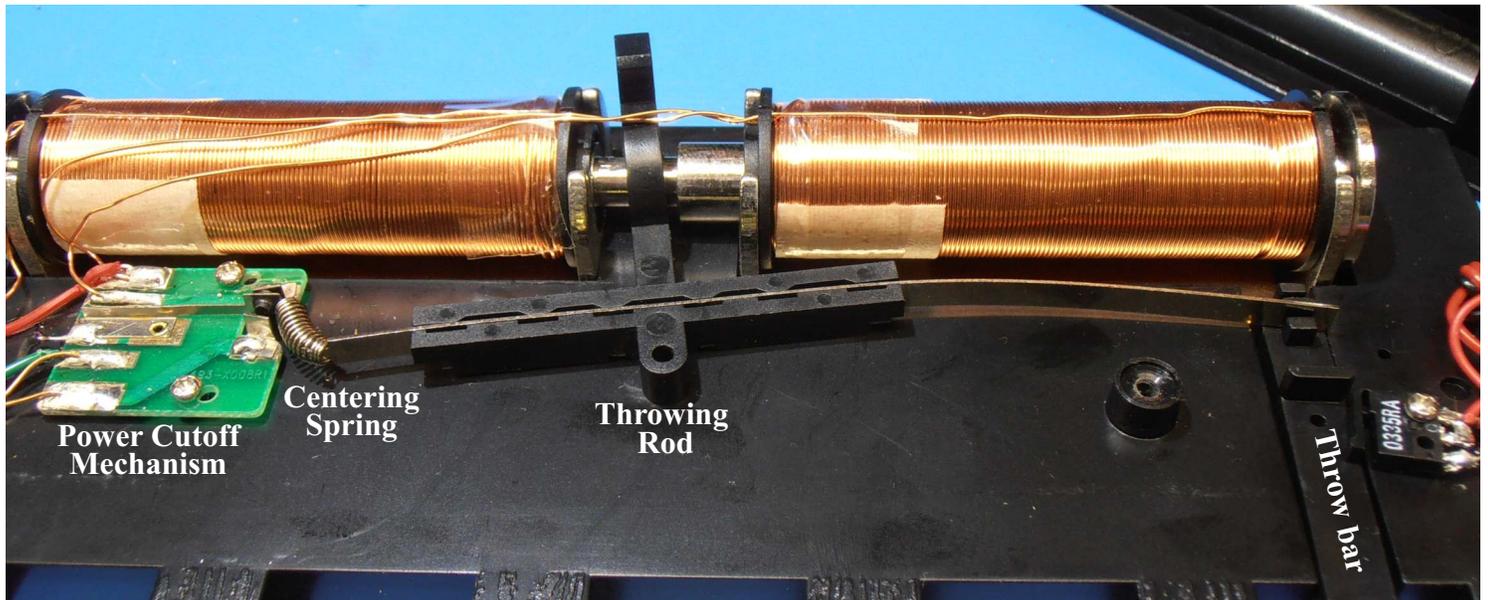


Detailed Hookup For USA-Trains Remote Switches



Notes and Tips

- The USA-Trains switch machine is a 3-wire type with two solenoids in the machine. One solenoid throws the switch in the reverse/curved direction. The other solenoid throws the switch to the normal/straight direction.
- The incandescent light bulbs mounted on the switch machine to show direction, are not electrically tied to the machine. The red and black wire pair exiting the machine must be connected to a power supply of 15 to 18 volts DC. When the machine throws, it mechanically switches the appropriate light on. The lights are always on when the power supply is on.
- Cut off the plastic plugs from the switch machine wires. It is OK to splice additional wire if the wires are too short. Use 18AWG size wire if extending the wire to go a long distance.
- Set Activator for PULSE mode only. This means that power is applied to throw the solenoid and then power is removed. If accidentally set for CONTINUOUS, the Activator and solenoids will burnout.
- Maximum switch machine voltage is set by Linker Power Supply. Subtract 1.5V from the source power supply to determine voltage applied to the switch machine.
- Duration of applied power can be increased by setting Activator #4 switch up or ON.
- Maximum switch machine current must be less than 1 amp or there is risk of damaging the Activator.
- If switch machine throws the wrong direction, swap the red and green wires.
- Common wire from switch machine is connected to the Activator GND terminal.
- Consider the addition of external protection diodes. The switch machine coils are powerful and the Activator's internal protection diodes might not be capable of sustaining the high voltage. Any standard one amp diode, like a 1N4002, can be used. Orient the diode's banded end as shown.



If the USA-Trains switch machine doesn't throw but you see a bit of movement when activated, it is possible that the mechanism is jammed internally. Remove the two screws and carefully lift the lid over the solenoids.

Verify the spring is attached to the throwing rod.

Make sure the throwing rod is in the center groove of the throw bar too. Use the plastic slide actuator which is part of the throwing rod to move the machine between the two positions.

Both the spring and the throwing rod are loose; the lid holds the rod in place which in turn holds the spring in the proper position. If any of these are out of place, the machine won't throw.