AIMTRAK RECOIL KIT

What the kit contains:

- Recoil solenoid
- Replacement trigger switch PCB with recoil driver
- Wiring to sensor module

What it does not contain:

- Power supply. You will need a power supply which can output 20-36 volts with a peak current capacity of 2 amps or greater. (4 amps would give optimum recoil power) The best type would be a simple unregulated unit although some laptop supplies output the required voltage/current and would be suitable. Old laptop supplies should be easy to find on Ebay.
- Wiring from power supply to the trigger PCB. Two wires are required, flexible insulated wire or 2 core light-duty power cable. The power supply may already have wiring attached.
  You may want to encase this, and the USB cable in an arcade-style hose covering.
  We now stock the recoil-compatible USB cable with power wires. This cable is only suitable for use with sensor modules having a 5-pin header, as used on the boxed guns.

You will also need:

- Basic soldering ablity and tools.
- Light oil

Before Starting:

Remove the plunger from the solenoid and clean. You could polish it using scotchbrite or similar. Apply a small amount of light oil to the surface.

Assembly Steps

Solder the switch, MOSFET and recoil signal wire to the PCB as shown below. The wire connects to the R connection.

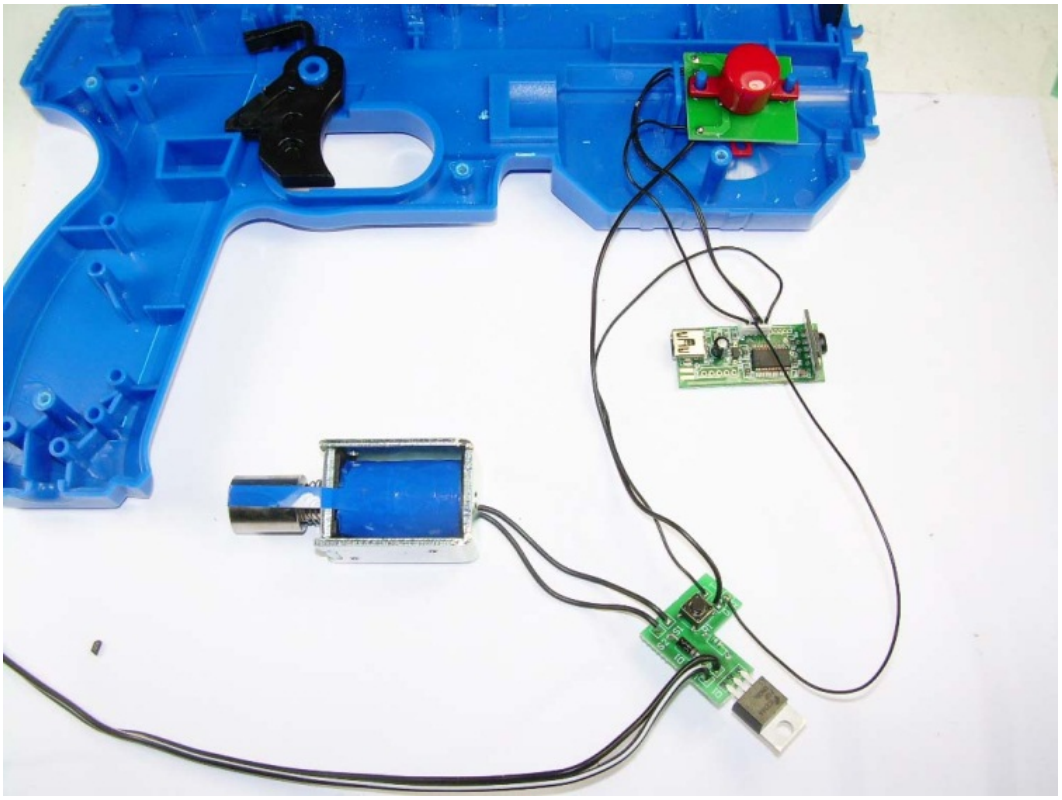
Solder the 2 solenoid wires to the S1 and S2 connections on PCB (the orientation does not matter)

Solder your own power supply wiring to the V- and V+ PCB connections.

Unsolder the existing 2 wires from the trigger PCB and solder onto the new PCB. The location marked “G” is wired to the common ground which runs to the side button PCB. The location marked “T” is the trigger switch connection to the sensor module.

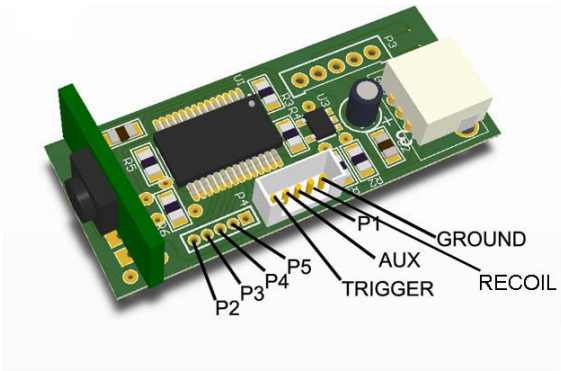
List of all connections:

G:	Common ground to all switches and module
R:	Recoil signal from module
S1, S2	Solenoid
V- V+	From recoil power supply

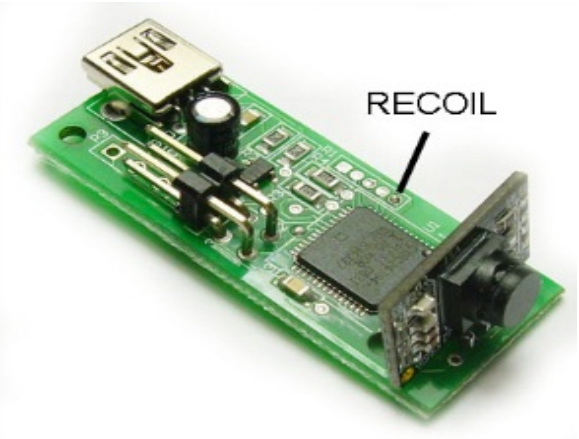


Module Connection

Newer type module



Older type module



The following assumes you have the recoil-compatible gun shells, which were fitted to all guns from 2013 onwards. If you don't have these, you will need to find an alternative method of securing the solenoid.

Insert the trigger signal wire into the unused connection in the white module connector housing. (The older type module will require soldering). Assemble all parts into the bottom half of the replacement housing. Make sure no wires are trapped and resting on any of the internal "walls" of the housing before fitting the top half.

Ensure the firmware is version 8.15, 9.15 or 1.15. Download the latest version from http://www.ultimarc.com/recoil.html

The latest firmware includes a "recoil strength" adjustment. This must be used with the latest version of the config utility which also has a link on the above page. This will need to be increased as the default is zero.

When testing remember that the recoil only fires when the gun is aimed "on screen".