

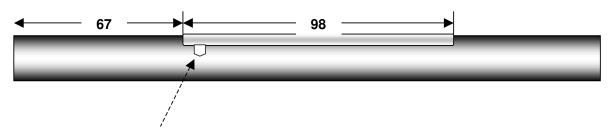
The Zip, or Pen Gun, as it is sometimes referred to, is perhaps the simplest of all improvised firearms and is usually found in .22 calibre due to the relatively low pressures generated by this small cartridge.

I decided that a need existed for a simple homemade version of this tried and tested "contraption" and came up with the following design!

I designed this weapon with the caveat that it should be buildable in one day or less, and I think I have achieved that requirement.

The Receiver.

The receiver is basically a steel tube into which the other component parts are fitted. It consists of a 9 $\frac{1}{4}$ " (233mm) length of 15.88mm (5/8") x 1.5mm steel tubing, as illustrated below. Into this tube a slot is cut, either by drilling a series of interconnecting holes first, and then trimming the slot to shape with a file, or (for the lucky individual) cut using a milling machine, if available! The slot should be $\frac{1}{4}$ " in width and will accept the breech block handle in due course. The slot is 98mm in length, starting 67mm from any end of the tube.



Small Cut out in rear of slot to allow the weapon to be cocked.

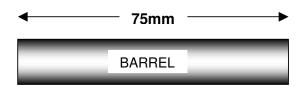
Component Parts

(There are only three component parts to the weapon)

- 1. Barrel
- 2. Breech Block
- 3. Breech Plug
- 4. Mainspring

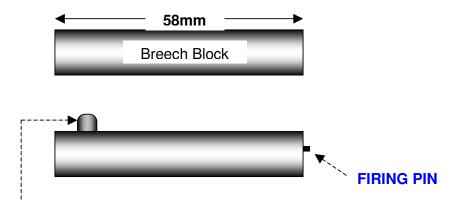
Barrel Construction.

The Barrel can be nothing more than a short length of steel Airgun barrel, turned to a diameter of 12.70mm (½"). The length of the barrel is 75mm. One end of the barrel is chambered using a 5.8mm diameter drill bit to accept the .22 rimfire cartridge.



Breech Block

The breech block is just a 58mm long section of ½" diameter mild steel bar. Into one end of the block a firing pin is fitted, made from a short length of 2mm diameter drill shank. The pin must be carefully fitted so as to be in the correct position to detonate the .22 rimfire cartridge.



Near to one end of the breech block a 1/4" Dia' hole is drilled to accept the breech block cocking handle. The handle consists of a simple steel pin about 1" in length.

Mainspring

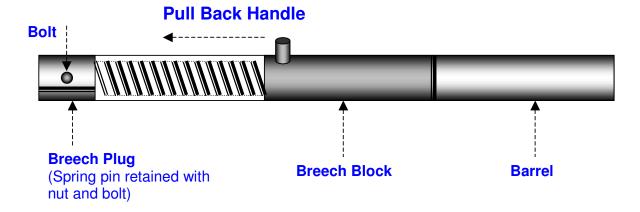
The mainspring powers the breech block and should be reasonably strong. I designed this gun to use a spring about 8-9mm in diameter and made from 20 gauge wire.

The Breach Plug

The breech plug is responsible for holding the spring and breech block in place. It consists of nothing more than a 1" \times 1/2" spring pin. The pin is held in place by a 6mm diameter steel bolt and nut which passes through the receiver from side to side, as illustrated below.

Fully Assembled

Pull back cocking handle and turn to right to cock weapon. Load cartridge. When ready to fire disengage handle using thumb or finger..... Bang!

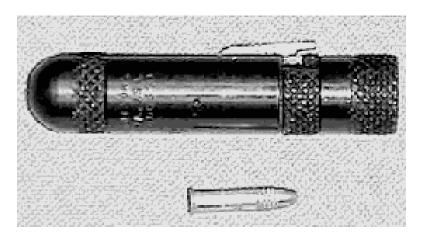


This design may be very simple, but I think it would be easy and quick to build!

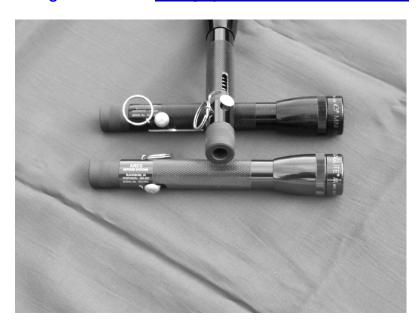
A few examples of Zip / Pen guns built by other private individuals and arms manufacturers.



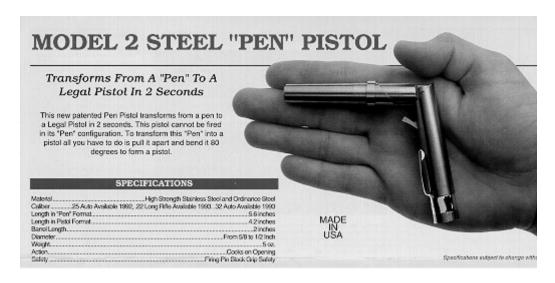
Armitage Pen Gun. www.lawdogs.8m.com/ catalog.html



"Stinger" Pen Gun. www.gurpsmaster.de/ undercover.htm



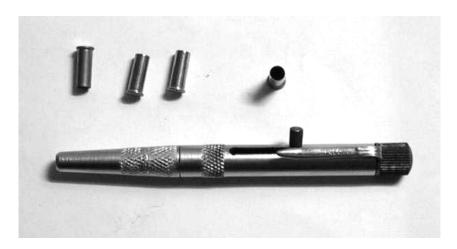
"Mini Mag Light" .22 Torch Guns. www.lawdogs.8m.com/ catalog.html



American factory made "Pen" pistol. www.gurpsmaster.de/ undercover.htm



Unknown origin. Very nice homemade Pen Gun. http://membres.lycos.fr/abpw/22-misc/pages/Pen_Gun1_by_Nobody.htm





A .44 calibre Pen Gun. This is an old collectors piece made by the 'Lake Erie Chemical Co'. www.adrax.com/watsons/pengun.htm