

# Research and Development

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## My Bluetooth Sniper Weapon

### Summary

This is my version of the the Bluetooth Sniper weapon, it features a medium sized YAGI antenna combined with a 10\* magnification scope and a metalised parabolic which may bundle the Bluetooth signal, thus further enhancing the range. The interior is made from a [Linksys USB dongle](#) soldered to the [YAGI antenna](#) and to a [USB cable contractor](#)



### USB Dongle

The soldering process was a mess, I never soldered in my life and hence I wasted a dongle trying. The Antenna hole is really thin, so instead of poking the cable through the hole I soldered it directly on to existing solder by lightly heating it up indirectly through the cable.

Anyway after several hours of work trying different cable combinations and temperatures I succeeded. Great care should be taken not to heat up the chip to much while soldering. (Hint: I used Aluminum foil to shield it from excess heat)

After I successfully soldered it to some coax cable, I closed the USB dongle and glued the cable in place using a [hot glue gun](#).

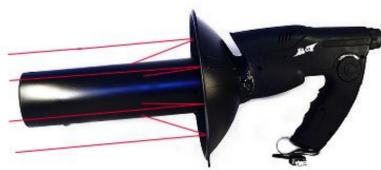
### YAGI Antenna

Then modifications to the YAGI had to be made, initially the [YAGI Antenna](#) has the cable ending come out of the side of the antenna, I wanted the end of the cable to come out at the horizontal end of the Antenna. The goal was that the cable directly enters the gun through the parabola without any cable visible. This was done by simply bending the cable inside, drilling a hole here and there and have it go out at the end of the antenna.

### Combining YAGI and the Bluetooned Dongle

Now both had to be interconnected while taking care that the cable, dongle and USB connector fit inside the plastic molding of the main part the gun. The tricky part here was that the Yagi, the parabola, the gun, the cables and the dongle had to align correctly for the whole to fit.

Bluetooth Signal Wavelength 12,5 cm



### The Parabola

The parabola was clear plastic and had to be metalised in order to correctly reflect the bluetooth wavelength, I used 99% zinc spray to create a flat metal surface. Bluetooth uses a different part of the electromagnetic spectrum with quite different signal propagation characteristics then Wifi. The signal wavelength used with Bluetooth communication (about 12.5 cm, at its associated frequency of 2.4GHz). At this wavelength, radio frequency (RF) communications can penetrate many non metallic obstacles.

10 \* Magnification



### The Scope

The scope gives a 10 fold magnification directly through the parabola, the lens itself can be accommodated to compensate for vision problems.

### Pictures



## Wait, what's this?



This is my Personal "Blog", well kind of, my name is Thierry Zoller I am currently working as a Security Engineer and Penetration Tester for "some company" in [Luxembourg](#). On these pages i'll treat everything I enjoy and I get in touch with. This may not be strictly related to security but may also touch parts of my personal life.

Speaking of which, on the left that's me, I am 26 and have been involved in the security field since I was 16. I do sports, Fitness and Body Building, I hack various things such as cars, electronics...

## Disclaimer

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