# Try This Experiment

As no-one seems able to follow my sketchy details of how to build your own longrange detector, it looks like I need to create a detailed step-by-step guide. A number of people have already sent requests asking for more information. This may take me a little while to complete, particularly as I will be away on business from this coming Saturday until the end of January. However, I will have intermittent access to email during that time.

While you are waiting for me to put together the detailed step-by-step guide, have a look at the attached experiment. This is the Avramenko's Fork circuit that I mentioned in a previous post. It's very simple to build and is quite fascinating.

Hmmm... What has this got to do with LRLs? Well, you decide...

This is not a wind-up. It actually works.

If you construct the circuit as shown without the antenna, then the LED will glow very dimly (if you're lucky). But as soon as the antenna is attached, the LED starts to glow more brightly. Initially I tested this circuit with a 1m length of insulated wire attached to a crocodile clip. Longer lengths of wire will increase the brightness.

How can the LED be illuminated? There is no DC path to ground for the return current, as there's basically only a single wire connection. Does this have anything to do with ionic detection? Again, you decide...

The circuit values and layout are not critical. In fact, they're probably already far from ideal. I just hacked this circuit together quickly for your enjoyment, and the fact that it's sufficiently unusual to be of interest. The 8MHz frequency is also not critical. If you have a 1Mhz or even 10MHz crystal, then these should also work, although the 74LS04 is already struggling at 8MHz. The output waveform at this frequency is far removed from a squarewave, but that's not critical for this experiment either. You might be able to replace this circuit with a signal generator that has sufficient output current to drive an LED. I've never attempted this with a 555 timer, but I suspect that would also be successful, and may even be a better solution given that a higher voltage power supply could be used.

I think we all agree that the description on the Mineoro website is incorrect. As I've said previously, it has more to do with the "continually replenished alternating potential" (C.R.A.P. for short) that is expelled by objects that have been buried for a long time. It is their interaction with the electrostatic field generated by the Earth's rotation that is detectable by LRLs.

Anyway - please build this interesting circuit. I promise you will not be disappointed, and I guarantee that it works. This is not like testing a full-blown LRL (which is a subjective experience to say the least) but is simply a case of looking at the LED. Either it's alight, or it's not.

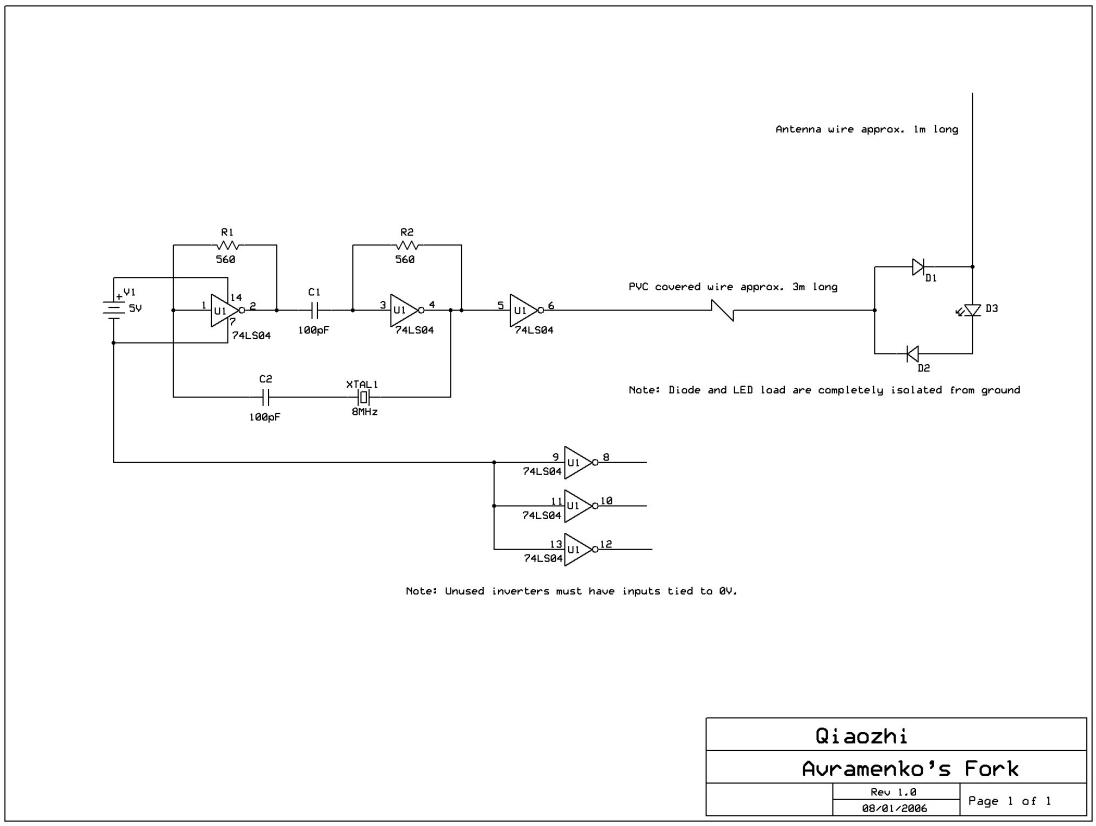
There is a schematic below, plus a suggested Veroboard (stripboard) layout. The board layout was generated using a freeware program called VCAD (which may be of some interest) and is downloadable from here -> http://www.geocities.com/rogerlasau/VCad.html

There used to be a similar program available a few years ago called StripBoardMagic, but the company has ceased to exist, and this program can no longer be downloaded. If anyone has StripBoardMagic I would be interested in acquiring a copy.

One last point - please make sure that D1 and D2 are fast signal diodes.

Good luck, and please post your experiences with this circuit. Remember - never buy a commercial LRL with hard-earned money. The LRL details I intend to post on this forum are guaranteed to work at least as well as any LRL that you can purchase. The advantage here is that you can build one at a fraction of the cost of a commercial unit. The step-by-step guide will be posted in the near future.

Any problems - please ask.


Antenna wire approx. 1m long
R1
560
R2
560
V1
5V
U1
74LS04
C1
100pF
PVC covered wire approx. 3m long
D1
D3
D2
C2
100pF
XTAL1
8MHz
Note: Diode and LED load are completely isolated from ground
Note: Unused inverters must have inputs tied to 0V.
Qiaozhi
Avramenko's Fork
Rev 1.0
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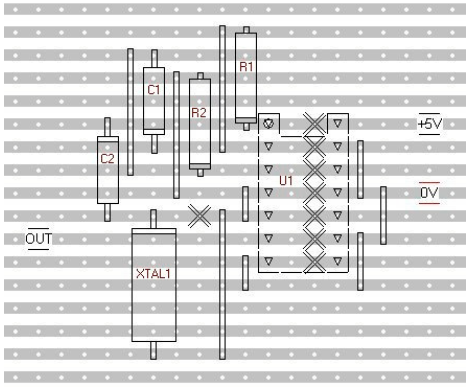
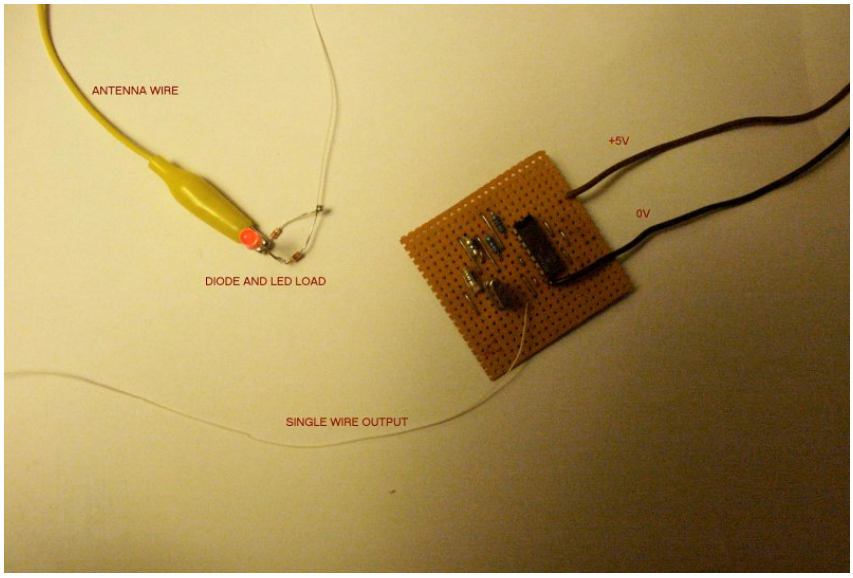
Page 1 of 1


R1
C1
R2
C2
U1
+5V
0V
OUT
XTAL1


ANTENNA WIRE
+5V
0V
DIODE AND LED LOAD
SINGLE WIRE OUTPUT