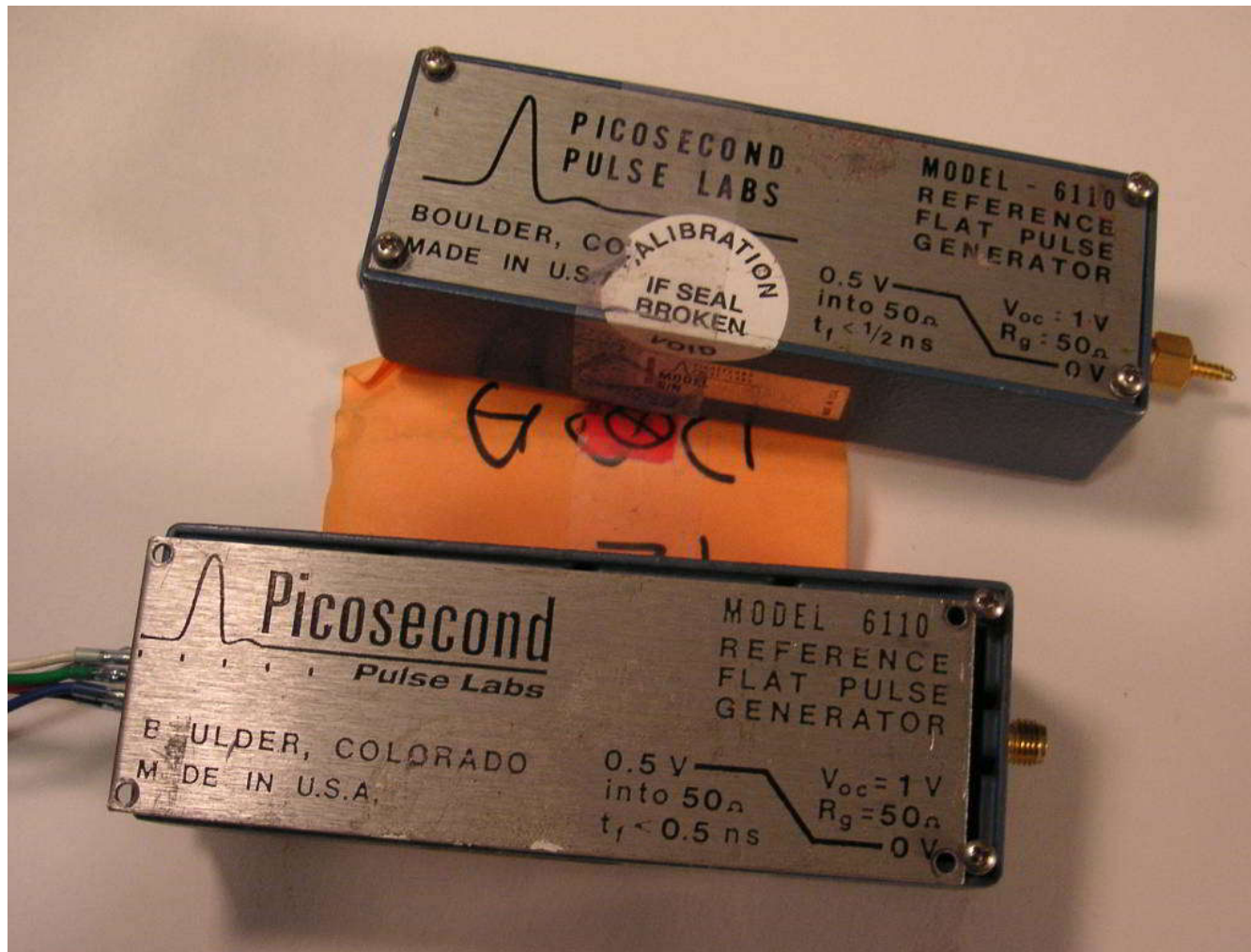# ─RAKO STUDIOS─

Rako Studios » Media » Tech » Teardowns » Picosecond Pulse Labs 6110D teardown

Picosecond Pulse Labs 6110D teardown
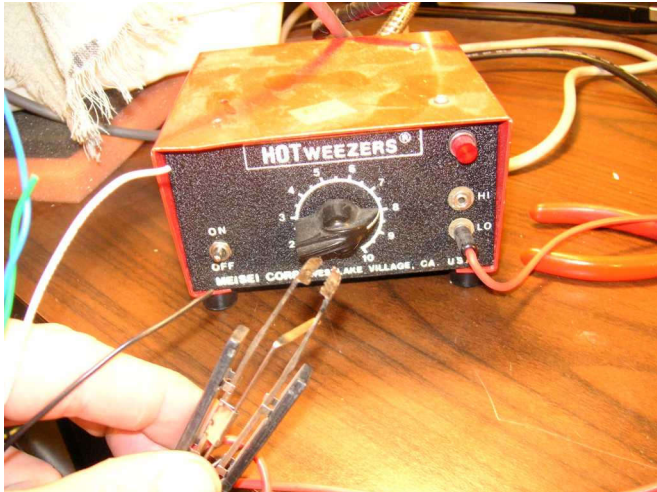### Opening up a reference flat pulse generator shows some old-school design.
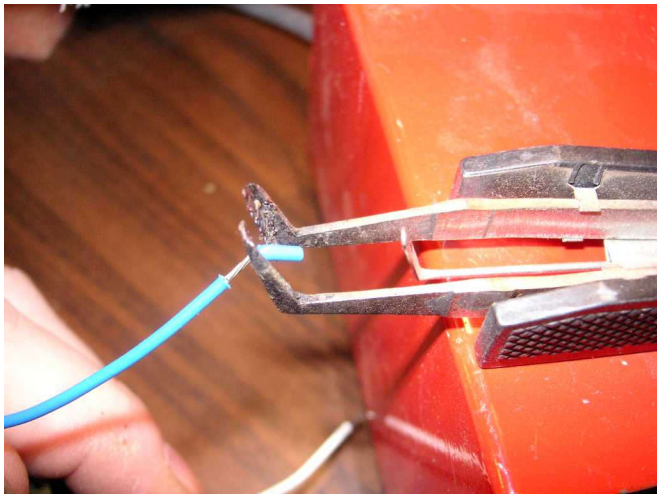

A local calibraion lab had a half-dozeon of these pulse generators on eBay. I bought three to hand out as party favors to my pals. What a reference flat pulse generort does is take and input pulse train, and output a pulse train that goes fron 1 volt to ground. But when it drops to ground it does so with very little ringing or undershoot. This lets you feed the siganl to amlifer circuit sto see how little ringing the amplifer has.

The power and input signals come into the unit via a 5-pin mini-DIN connector. So its nice to have a wire kit to make the harness:
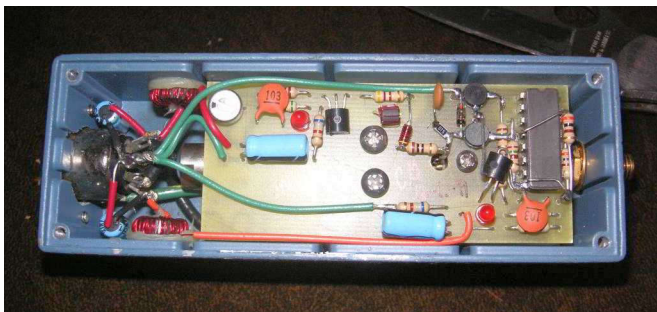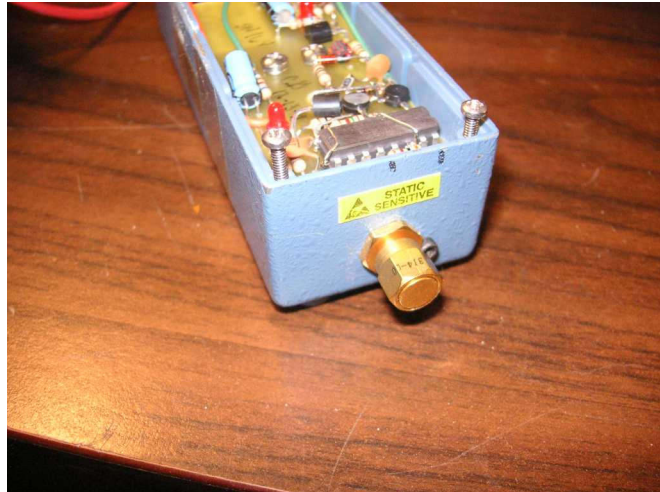
Stripping wire is a delight with the HOTweezers thermal wire stripper. I got two in the local salvage yards.

The output is an SMA connector as befits a high-speed pulse. The pulses are slow, but with sharp edges, the Fourier components are fast.
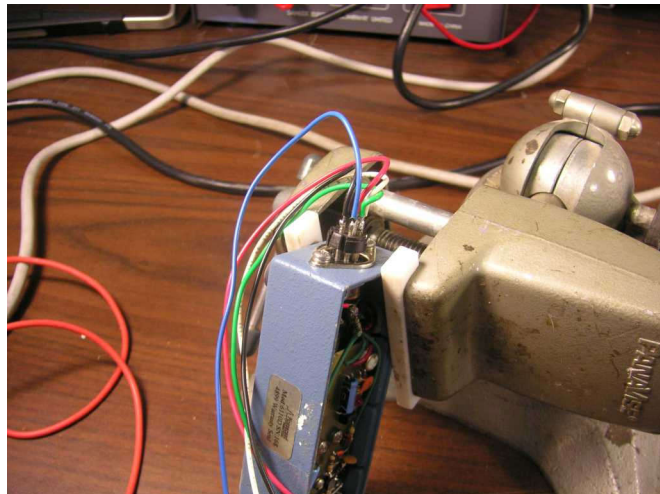

Thermal strippers melt the insulation and will not nick the copper wire. I first saw them used in at a military contractor that made satellites and jet avionics.
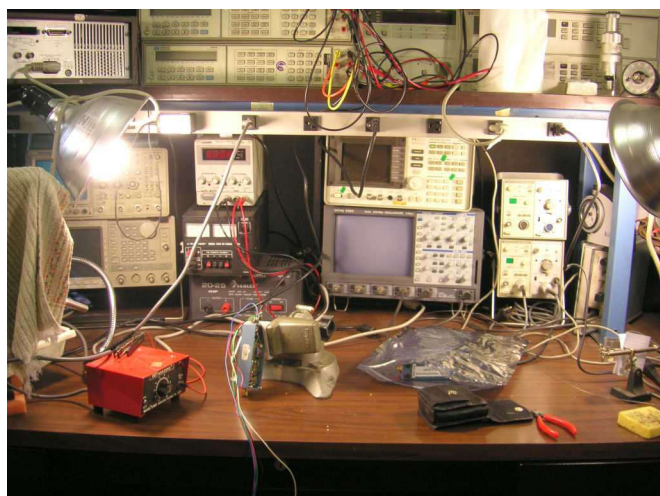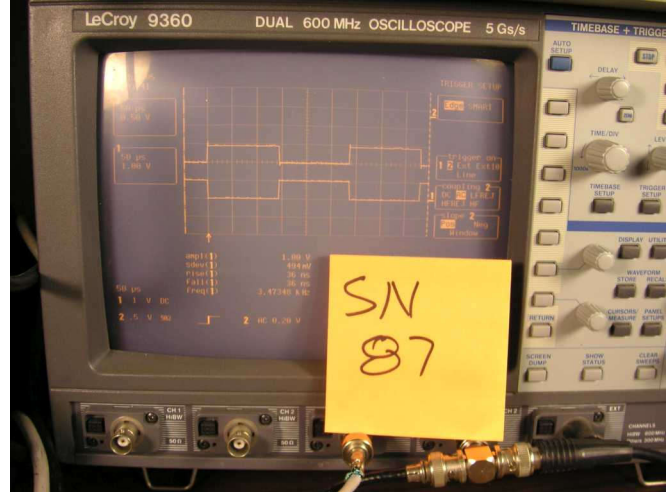

Fitting the mini-DIN input connector.

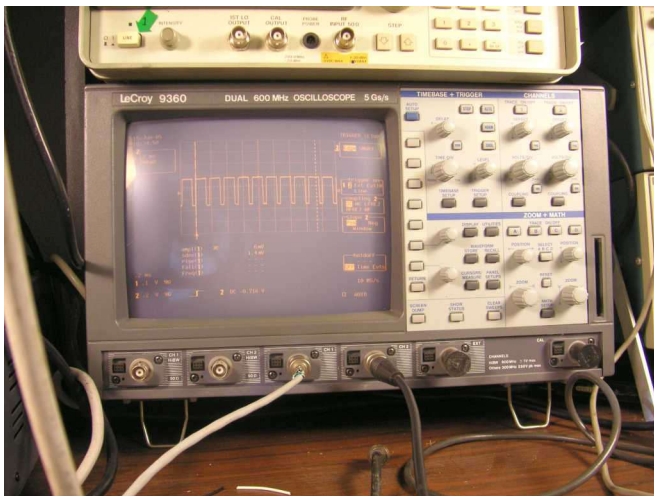Opening the cover shows a mix of point-to-point wiring a a PCB (printed circuit board).

A fully-equipped lab evaluates the modules.

A machinists headband magnifier helps you see the parts.
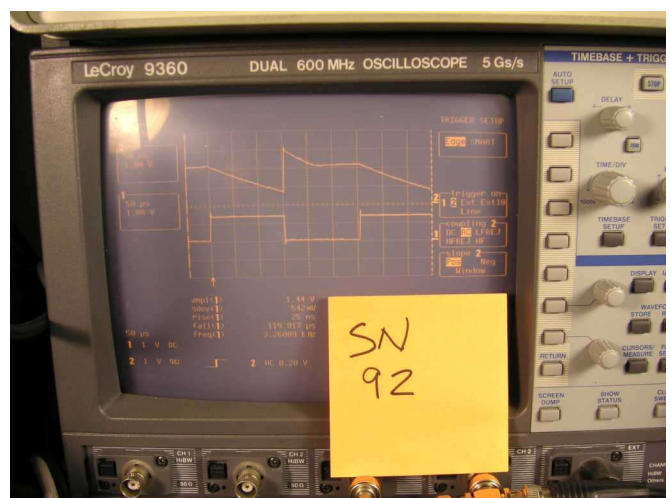

The scope is triggered by input pulse generator.

This HP 8082A pulse generator feeds the Picosecond pulse generator.

The first unit works fine.

The second unit also works.

The third unit is bad, the waveform is not tightly driven.

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Here is a good one opened up, with the bad unit right above it.

You can see the SMA cable from the unit to the scope. I have sinse stopped using right-anlge SMA cables, since they usualy have more impednce anomiliew that a simple straight cable.

Files