

Homebrew 2021



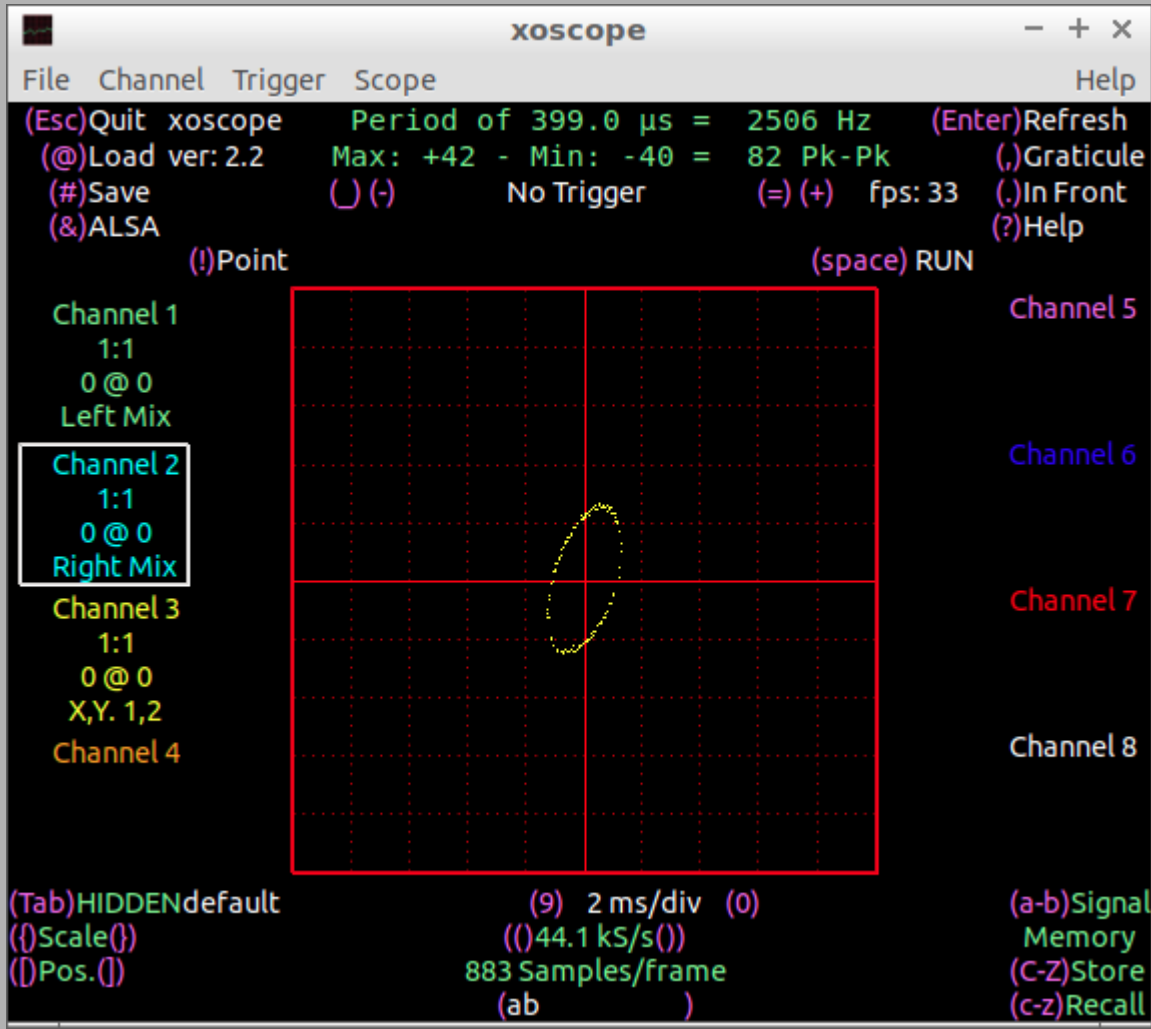
New batteries + cable fixed old UPS (success)



The old tag said “non-op”, but Sam WB6RJH found that it still worked.

4 new 7Ah batteries, battery cable with large PowerPole, rear enable socket defeated.

Added X/Y plot mode to xoscope (success)



xoscope is a sophisticated “software oscilloscope” linux. The primary limit is the soundcard, in my case Creative X-fi USB dongle.

X/Y plot mode used to be implemented in a separate program, which had been abandoned.

My simple add-on math function is good enough, although it cannot display more than one Y value at each X value.

Used for zero-beating during FMT.

ADS-B upgrade



FAA required new transponders with ADS-B capability.

New unit was larger than previous, requiring major surgery to instrument panel.

New sub-panel has standard 6.5" mounting rails.



6m hexbeam (partial success)

Using junkbox parts from previous hexbeam projects.



12V improvement (success)



Old connections were too long, with too many fuses in series.

Volt-Ammeter consolidated with bolted ring terminals for power to transceivers.

2 loose connectors were found during this reorganization!

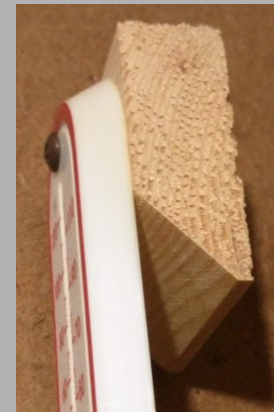


French Cleat wall storage (success)

After watching multiple youtube videos, I bought 10 1x5 pine boards.

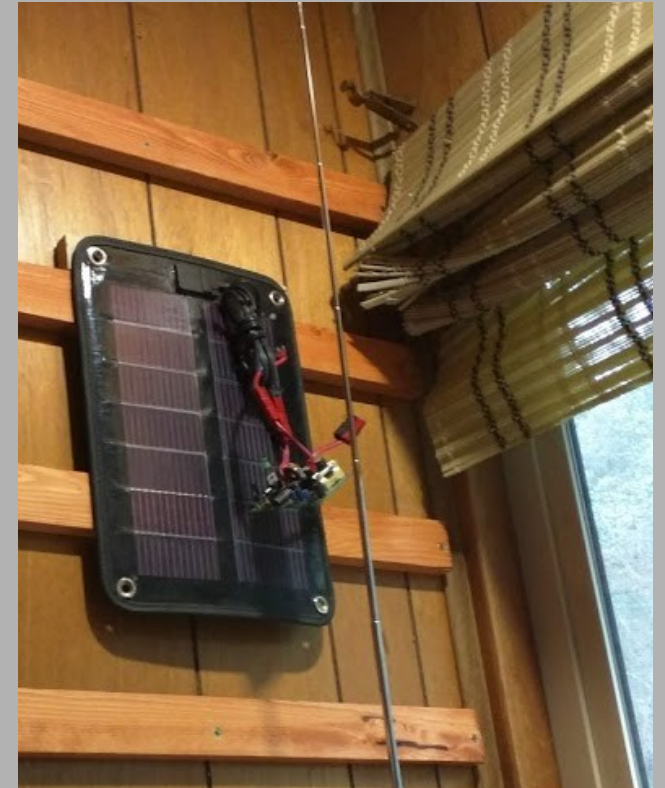
Tuck AF6GQ table-sawed them in half at 45 degree angle.

After staining, I chose a spacing, & screwed them into the studs.

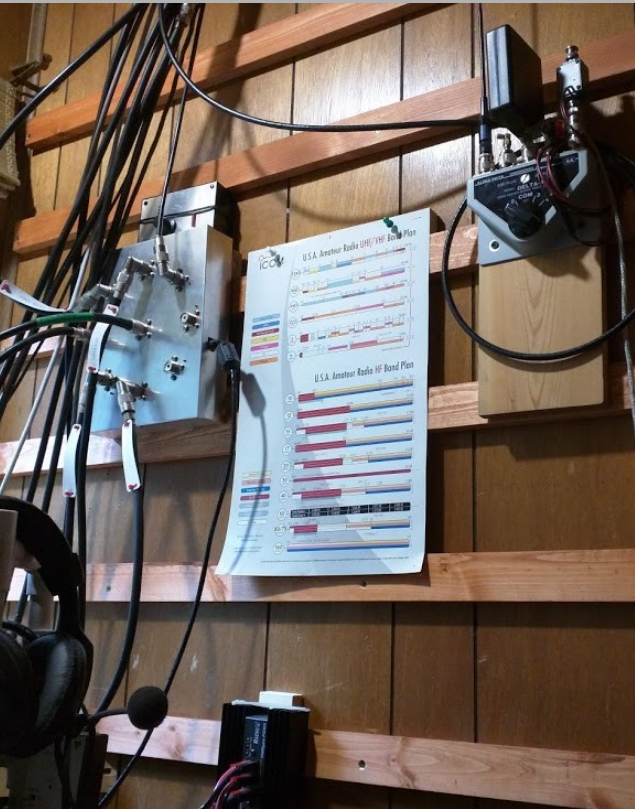


Items are easily hung, and can be easily moved.

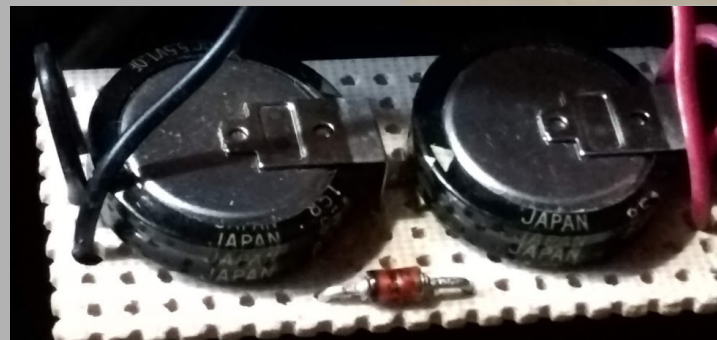
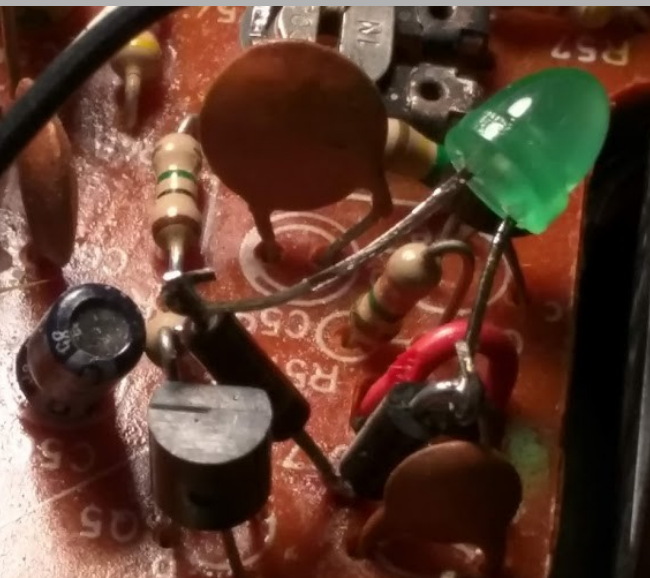
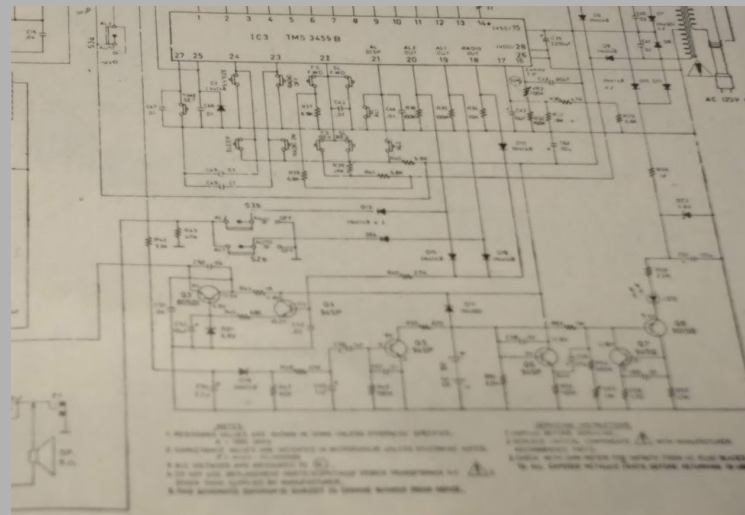
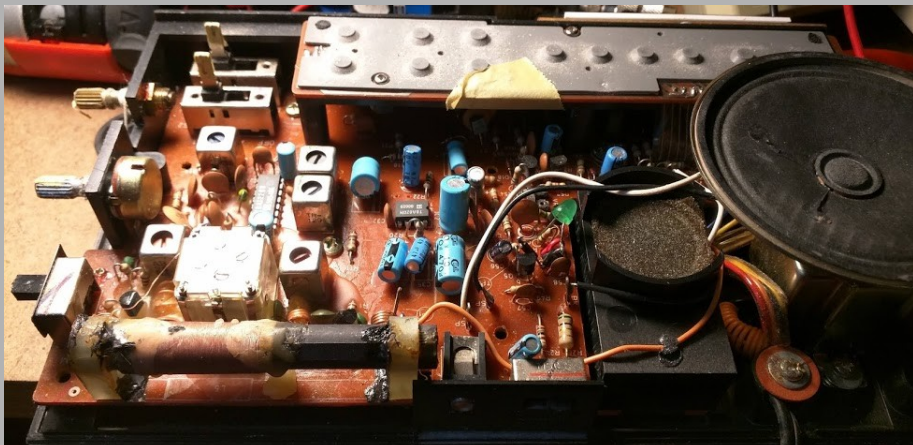
French Cleat wall storage (success)



French Cleat wall storage (success)



super-cap backup for RadioShack clock (partial success)

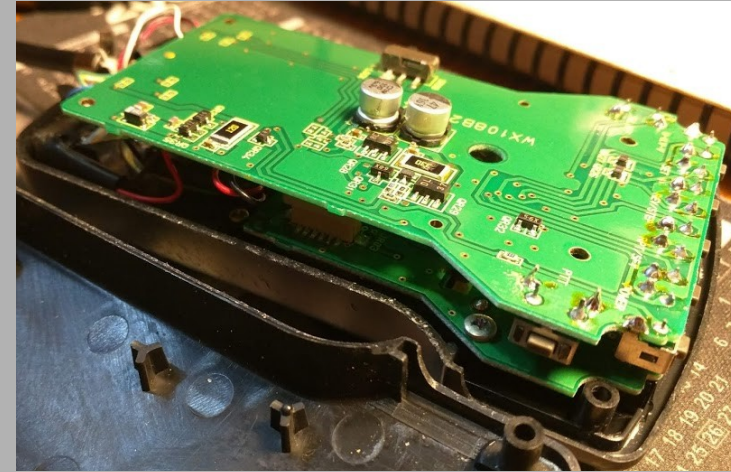
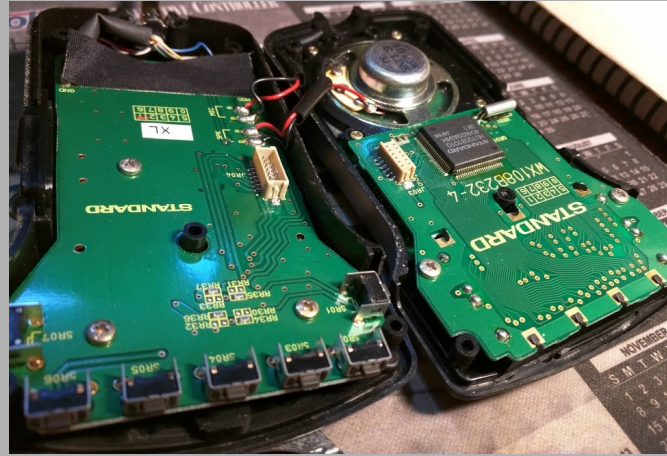


LED + R charges
2 super-caps in series.

Works OK for 2 seconds,
but not for hours.

Larger super-capacitors ???

Standard CMP843 LED backlight (no progress)



“all the controls in the mic” is difficult without the backlight!

Twisting the mic case indicates it is an intermittent connection.

Suspected inter-board connector is not the problem.

\$50 service manual has X-ray views, etc.,
but does not have complete schematic details of LED power.

MDS RC-1 Display contrast (no progress)



MDS
RC-1

Azimuth can be read & set from computer, but the display is needed to access the setup menus.

Display contrast goes through wild swings, just from hand capacitance near the case.

Case cover cannot be removed without disconnecting power, which changes the symptoms.

Oven heating coil not working (partial success)



Zinsco circuit breakers were designed during a shortage of Copper, so they started using Aluminum.

6061 alloy is not a good choice for electrical work, because the coefficient of thermal expansion is large, i.e. connections shrink open when cold.

Oven is working again, but service panel, subpanel, & all the breakers need replacement.

Things to come ?

