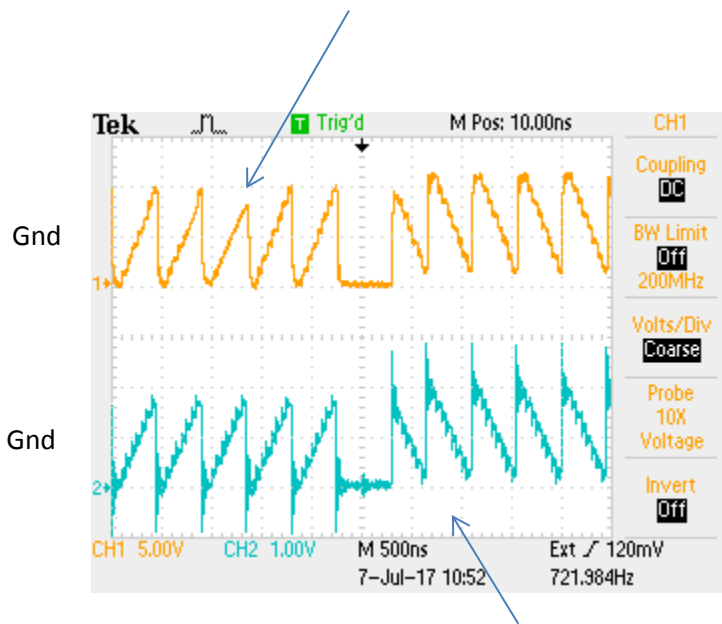


Day 2 Pictures

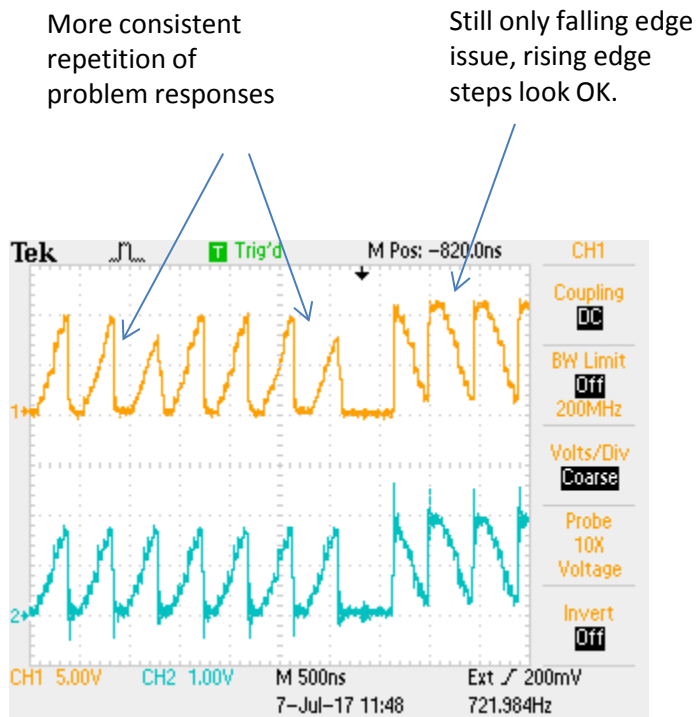
Less frequent THS6002 difficulties and they don't persist as long.



Sorry, trashy ribbon cable input side probed.

- Today's channel selection and setup was behaving better, reflecting inconsistency day-to-day.
- Amp behavior degraded slightly after running system for a while and warming up.

Increase to +/- 15V Supply Rails



- Re-wired to run THS6002 directly on +/- 15V supply rails.
- Behavior improved slightly in that output was bit more stable with less randomness.
- Not the magic solution, supply headroom saturation not the problem?

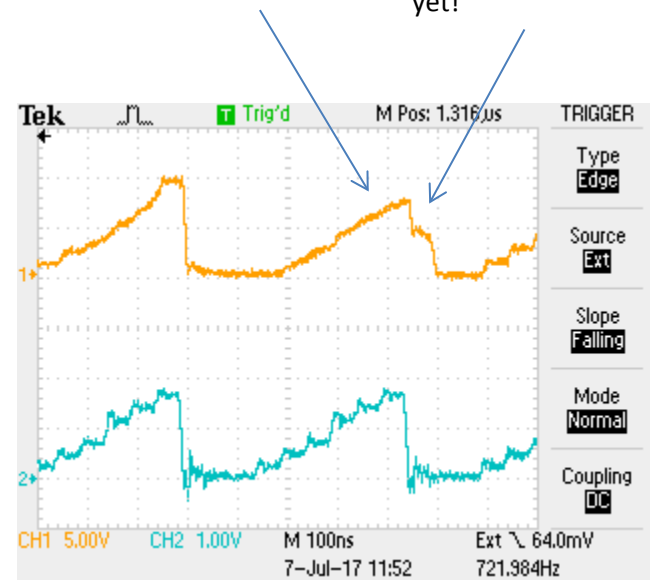
Close-Up, Filtering of Small Steps

BW issue? – Can't quite respond to input steps fast enough.



More of same, attenuated peak.

Wait a minute, not ready for that step yet!

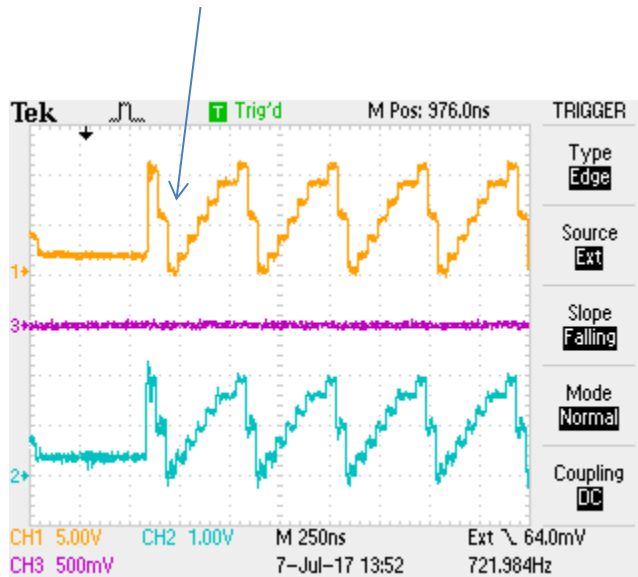


Is it possible this HF input ringing is exceeding 6002 BW capabilities and causing a saturation/recovery period?

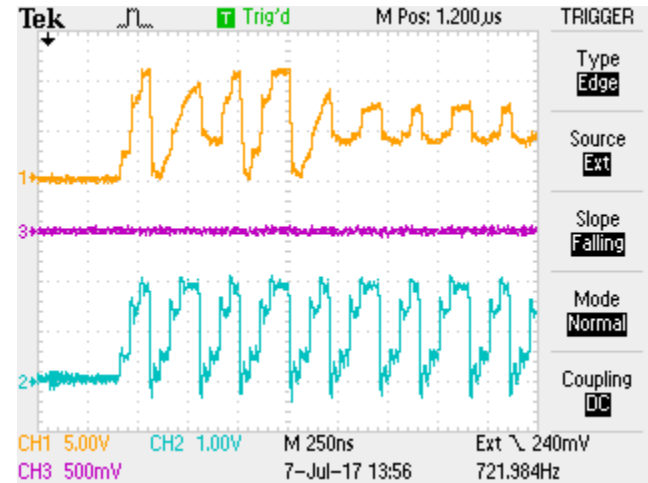
But wait, the ringing is there every falling step, not just occasionally.

Different Image Waveforms

This one avoids full-scale falling step, two steps of half scale. No problem!

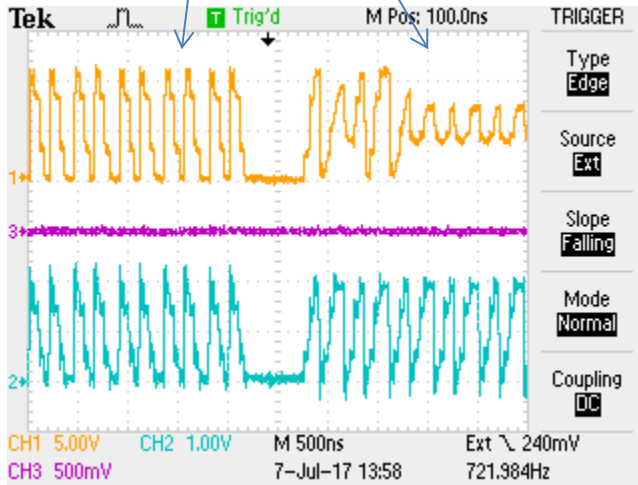


Much faster cycle rate, full-scale falling edge, 3-sample rising edge. Now we have a problem!

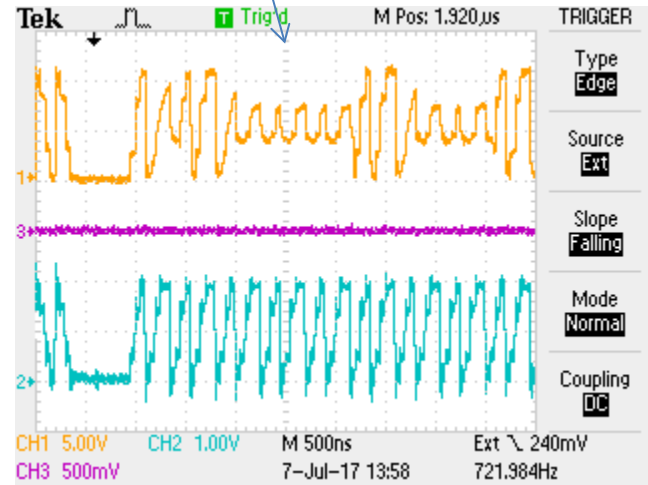


Zoom Out Pics

Again no problem with large rising edge steps. Fast falling edges – Wooha!

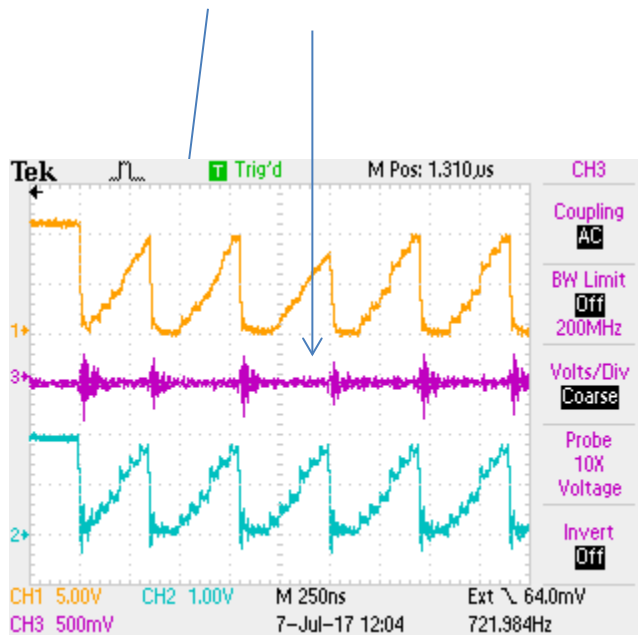


Again, long recovery periods.



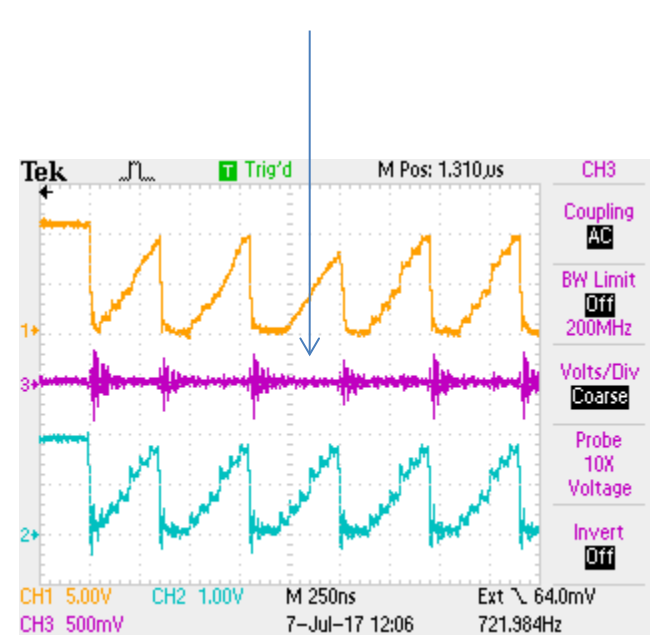
Power Rail Switching Noise

+15V supply at pcb input.



0.5V p-p ripple not too surprising since there are 32 op-amps all switching simultaneously in this case.

-15V supply at pcb input



Could stand to add more/larger decoupling caps - -