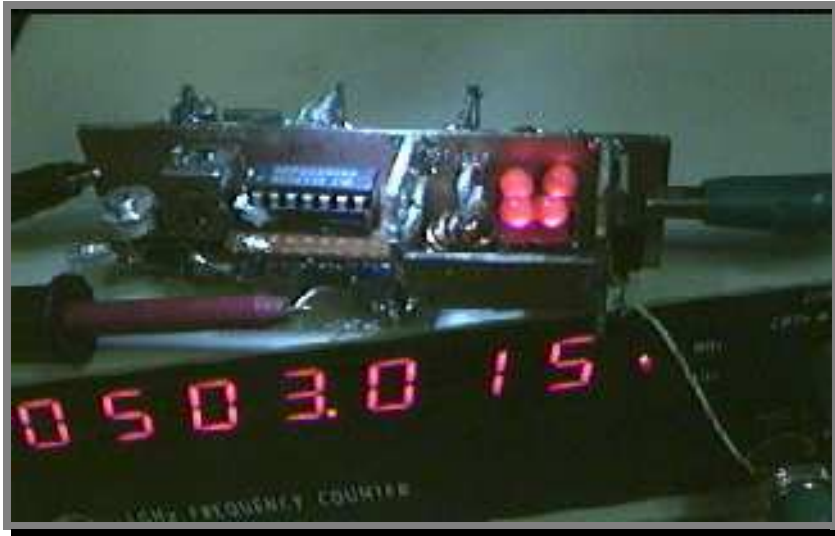


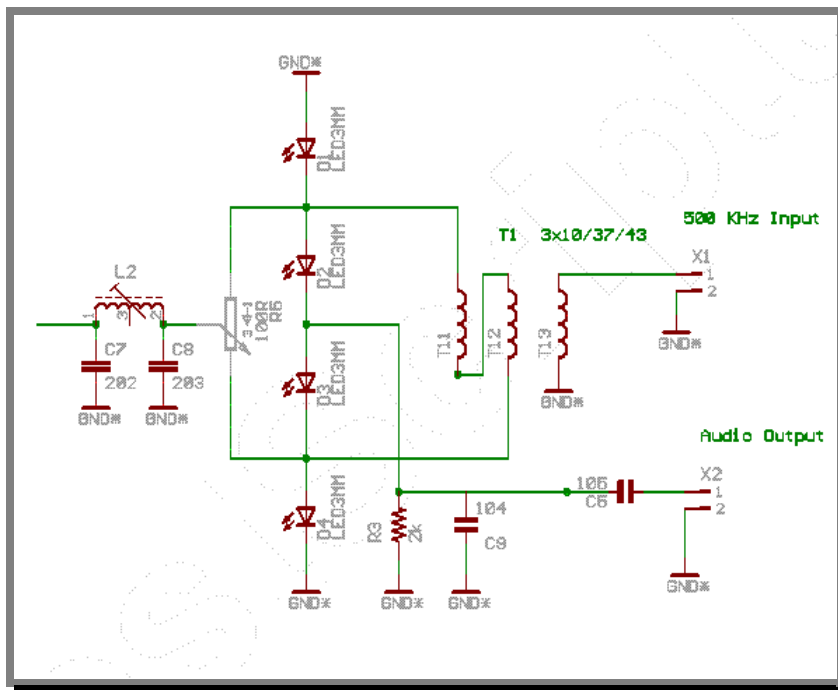
HIGH LEVEL MIXER

by Pascal Nguyen

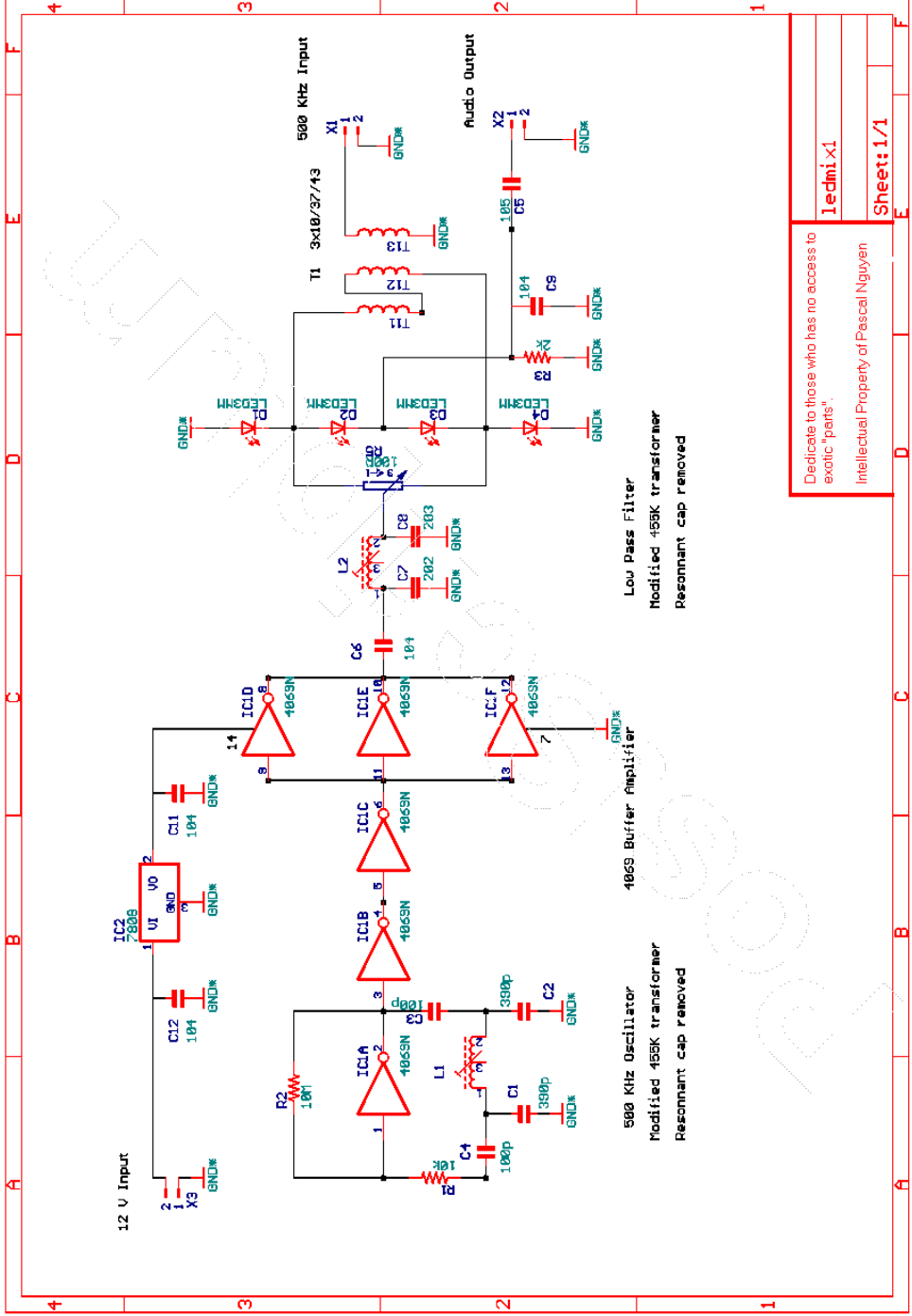
This mixer was built in 1998 as part of a high dynamic range “RX98” 2 - 30 MHz HF receiver. Common Led was used as a passive switching device to terminate a trifilar 4:1 balun transformer, to multiply the IF frequency to the BFO frequency. It was structured to produce a matching impedance to a low noise OPAMP and a TD 2030A amplifier.



A single balance mixer with 4 common red Leds and a CMOS 4069UB as BFO were designed. The circuit consumes an average of 18mA, an advantage comparing to other high level mixing circuits.



The leds are arranged in singly balanced detector, a potentiometer splitting BFO signal to two arms to improve balance of non matched leds and to provide a better isolation of the BFO.



Dedicate to those who has no access to exotic "parts".
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ledmix1

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