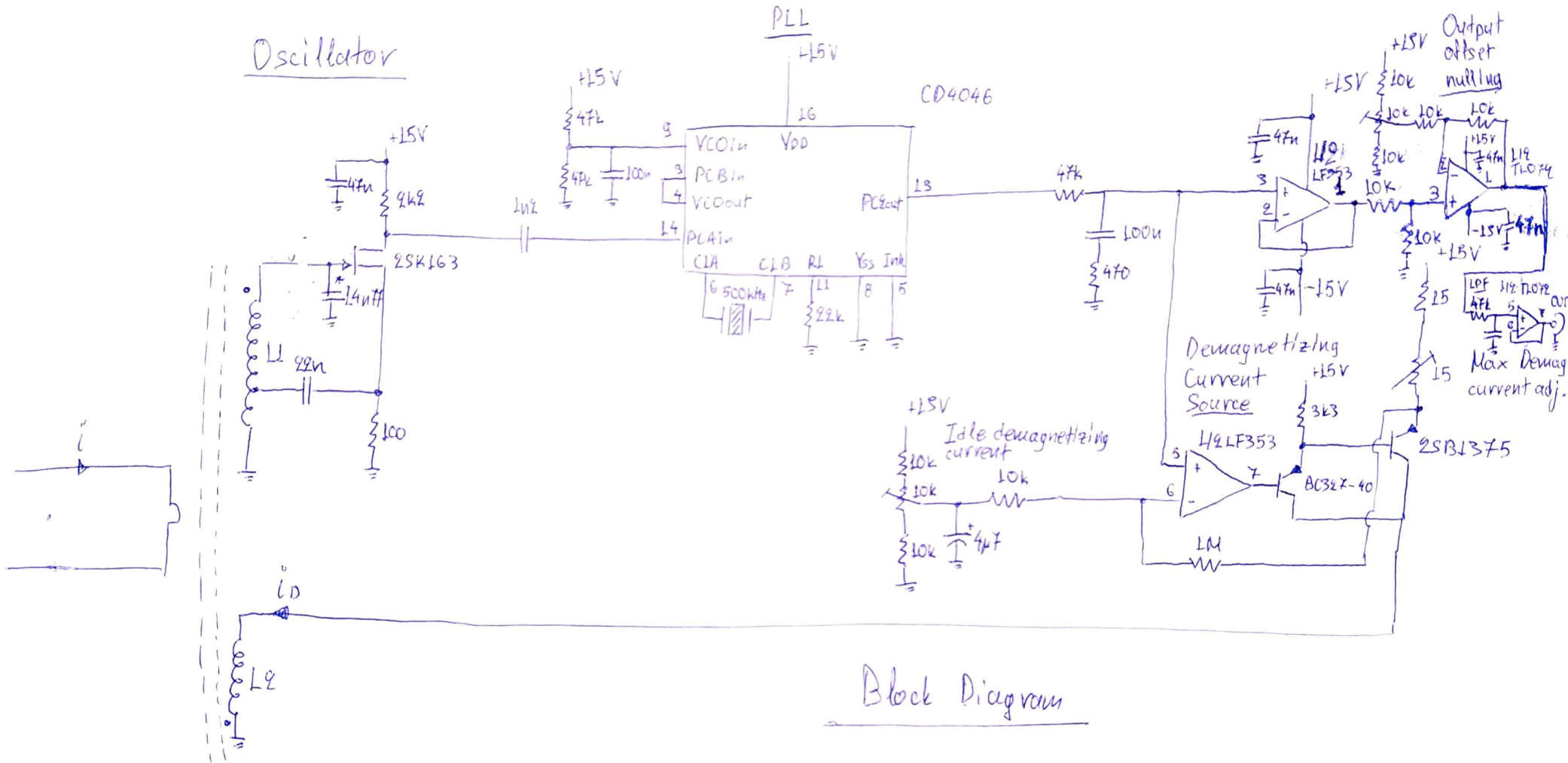
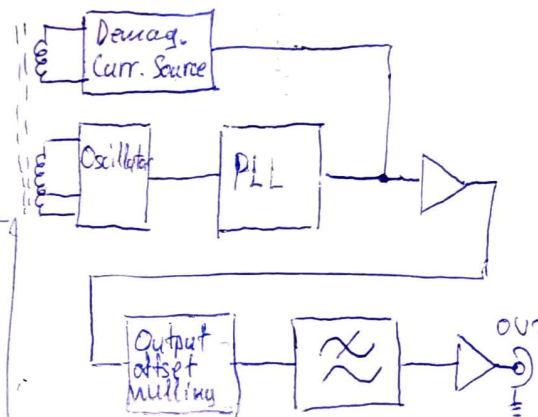


Oscillator



Block Diagram



L1 & L2

- Wound on the same ferrite toroidal core (unknown type)
- L1: 22 turns (tap at 4 turns from the low end)
- L2: 10 turns

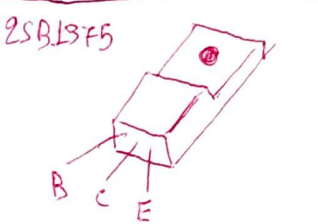
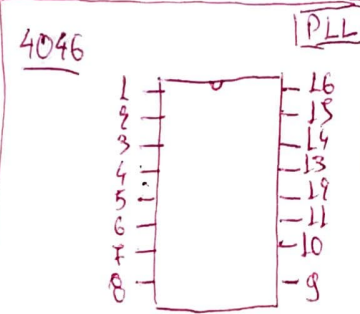
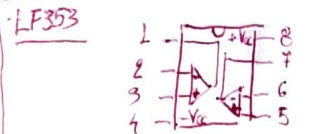
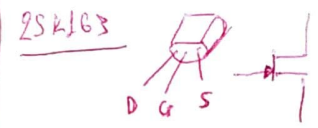
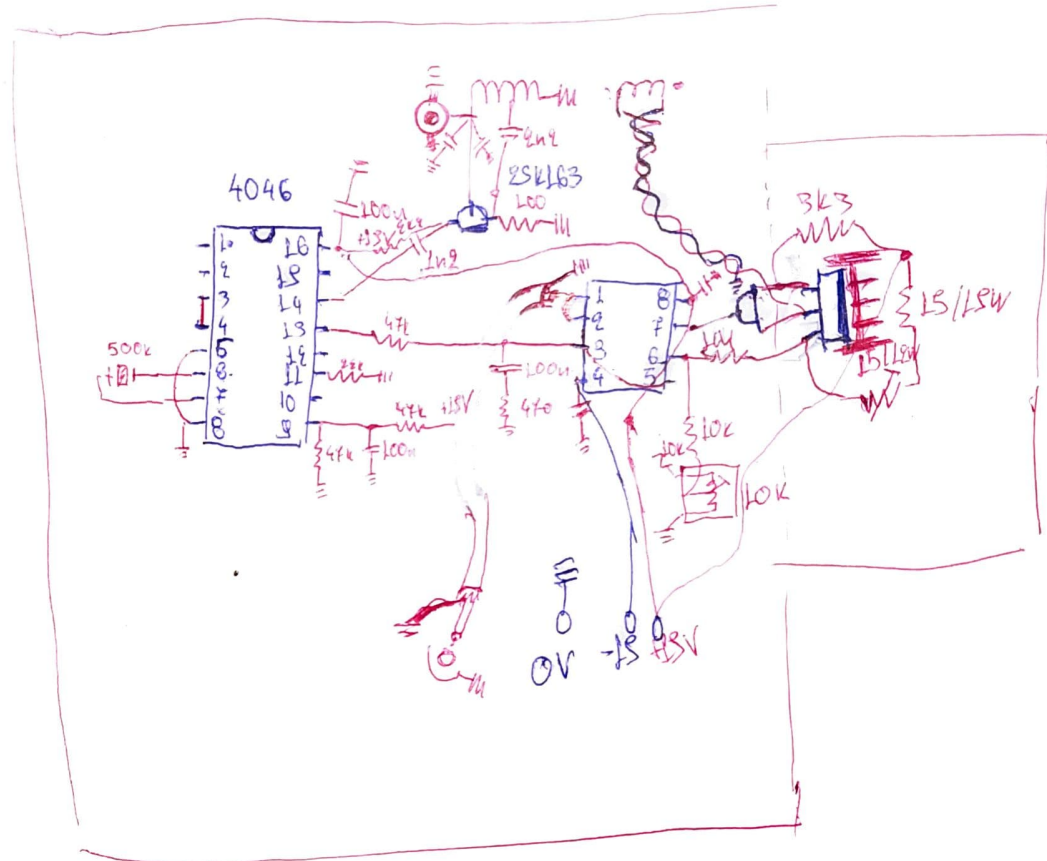
$$\Delta i_D = \frac{L}{10} i$$

* Adjusted so that
When $i = 0$, $i_D = \frac{i_{Dmax}}{2}$

Linear Current Sensor
(from E.W. Circuit Ideas)

MK labs Apr '21

Layout Planning



Linear DC Current Sensor

$$V_{\text{supply}} = \pm 15V$$

$i(A)$	Reading (V)
0.00	-0.0010
0.09	0.0025
0.19	0.0060
0.32	0.0103
0.51	0.0170
0.61	0.0203
0.80	0.0264
0.90	0.0297
1.14	0.0376
1.40	0.0461
1.66	0.0548
1.97	0.0682
-0.10	-0.0045
-0.19	-0.0079
-0.31	-0.0119
-0.49	-0.0182
-0.59	-0.0227
-0.77	-0.0286
-1.10	-0.0379
-1.55	-0.0529

(Current direction same as the one indicated by the arrow on the board)

(After 2A instability occurs)

(Opposite current direction)

(After -1.6 A instability occurs)