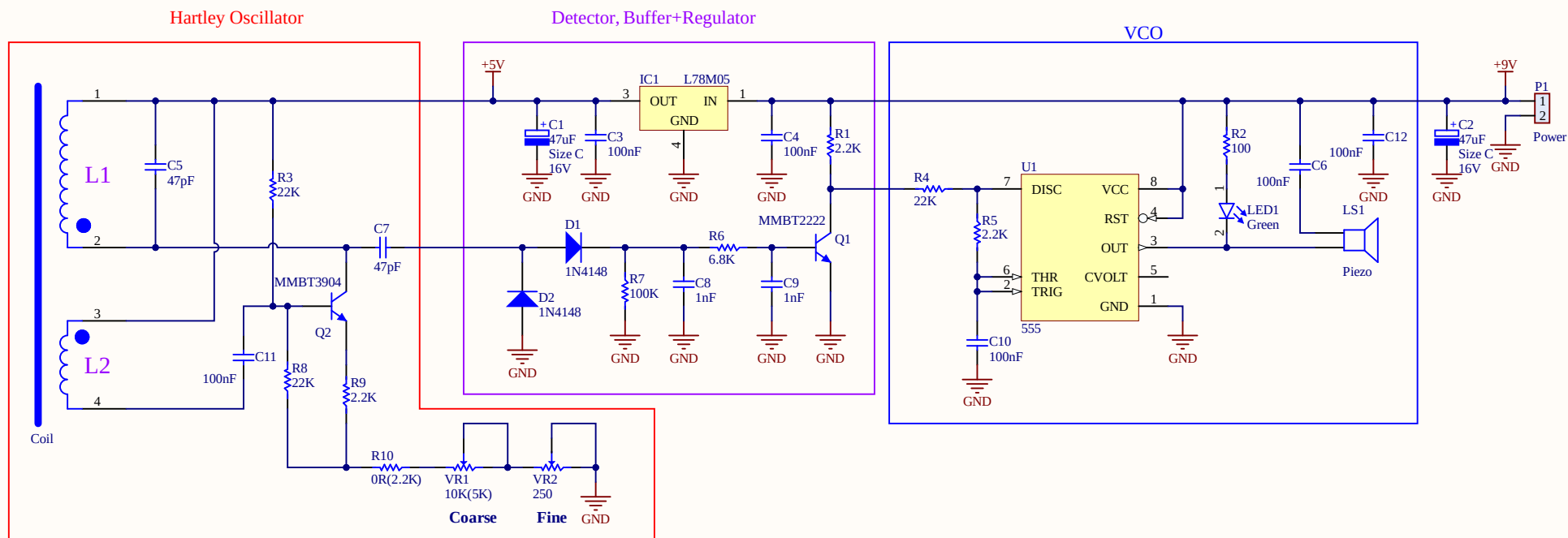




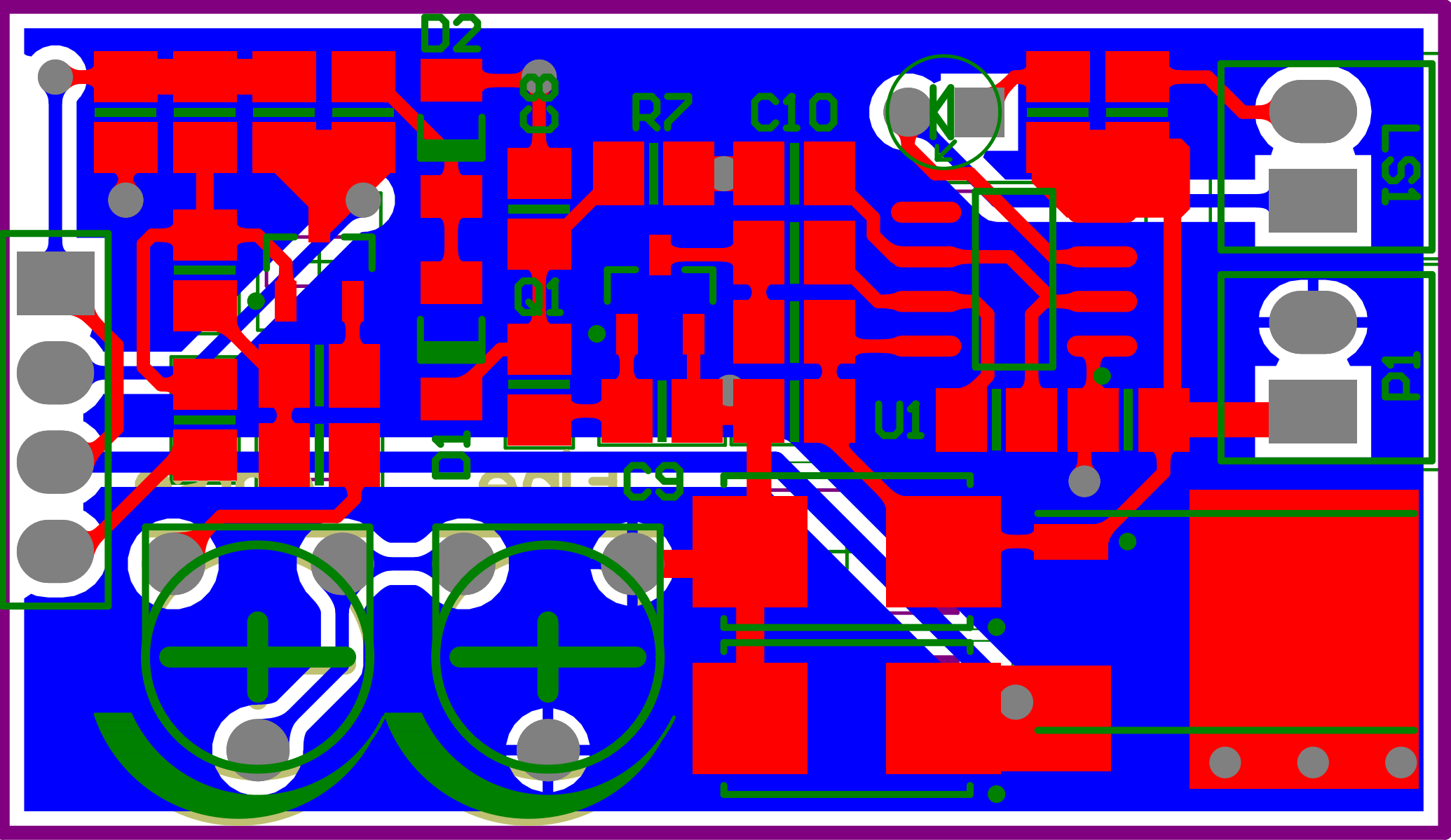
L1=2mH
L2=160μH

L1 is Wound first on a ferrite Rod
L2 is wound Over top of L1

Variant:
[R10] can be 0R and [VR1] can be 10K for more
threshold setting points
Def values are 2.2K for [R10] and 5K for [VR1]

<https://sisoog.com/>

Title Pin Point Metal Detector			Main Project: Metal detector	
Size: A4	Number:1	Revision:1.1	Sub Project: EDU	
Date: 10/21/2026	Time: 1:24:50 AM	Sheet1 of 1	Type: Free Design	
File: D:\Projects\PCB Traning\Basic Examples\PinPoint Metal Detector_SMT\PinPoint Metal Detector\SCH_PP\SchDoc				



Comment	Description	Designator	Footprint	LibRef	Quantity
47uF	Polar Capacitor	C1, C2	CAP-TANT-C	Cap-Tantalium	2
100nF	Bipolar Capacitor	C3, C4, C6, C10, C11, C12	SMD_CAP_0805 - MIL	Cap-Ceramic	6
47pF	Bipolar Capacitor	C5, C7	SMD_CAP_0805 - MIL	Cap-Ceramic	2
1nF	Bipolar Capacitor	C8, C9	SMD_CAP_0805 - MIL	Cap-Ceramic	2
Coil	L1:2mH L2:160uH on ferrite core	CL1	HEADER4X1	Coil	1
1N4148	High Conductance Fast Diode	D1, D2	LL4148	Diode 1N4148	2
L78M05	Precision 500mA Regulator	IC1	TO-252	L78M05	1
Green	LED	LED1	LED-3mm	LED	1
Piezo	Loudspeaker	LS1	Molex-1X2	Speaker	1
Power	Molex Board to Wire Connector	P1	Molex-1X2	PCB-HDR-2	1
MMBT2222	NPN Bipolar Transistor MMBT5088	Q1	SOT23_BEC_N	NPN	1
MMBT3904	NPN Bipolar Transistor	Q2	SOT23_BEC_N	NPN	1
2.2K	Resistor	R1, R5, R9	RES0805-MIL	Resistor SMD	3
100	Resistor	R2	RES0805-MIL	Resistor SMD	1
22K	Resistor	R3, R4, R8	RES0805-MIL	Resistor SMD	3
6.8K	Resistor	R6	RES0805-MIL	Resistor SMD	1
100K	Resistor	R7	RES0805-MIL	Resistor SMD	1
0R(2.2K)	Resistor	R10	RES0805-MIL	Resistor SMD	1
555		U1	SO8_NARROW_N	555	1
Coarse	Variable Resistor	VR1	Pot 00	Resistor Variable	1
Fine	Variable Resistor	VR2	Pot 00	Resistor Variable	1