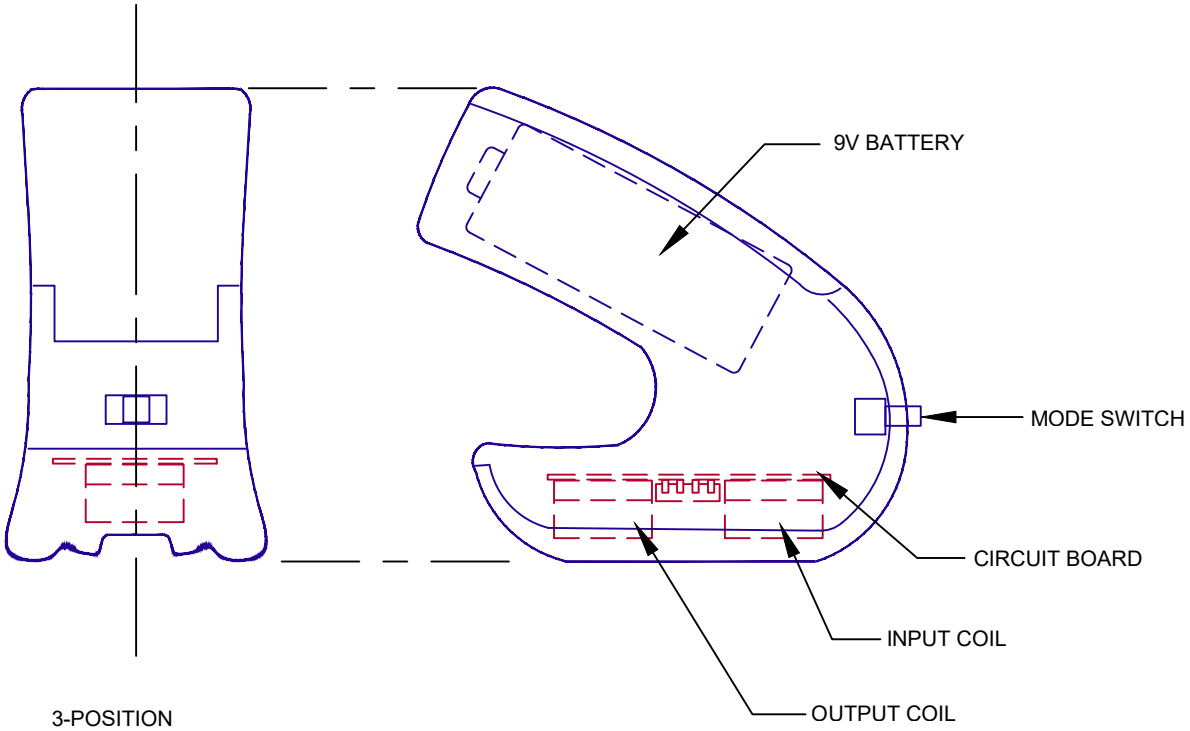
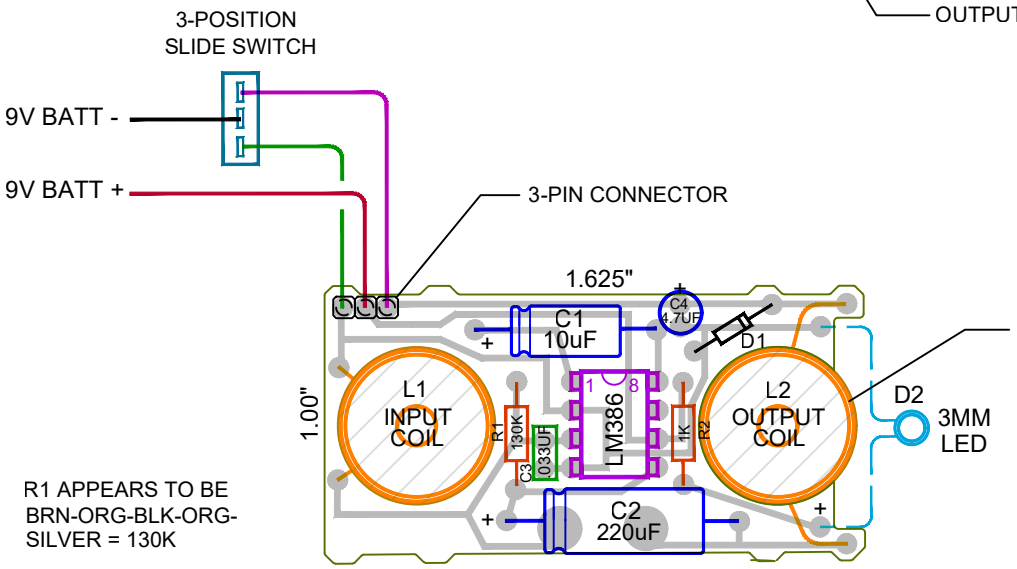




R1 APPEARS TO BE
BRN-ORG-BLK-ORG-
SILVER = 130K

PCB (VIEW FROM
GUITAR STRING SIDE)

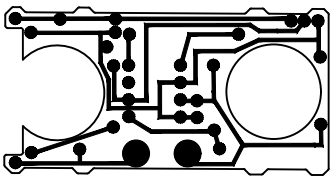
FLAT ROUND MAGNET
BELOW COIL. SMALL STEEL
CYLINDRICAL POLE PIECE
IN CENTER OF WINDINGS
(BOTH COILS)

ESTIMATED COIL SPECS:

INPUT COIL
DC RESISTANCE: 600 OHMS (?)
INDUCTANCE:45-50mH
WIRE: 46 AWG / 0.04mm DIAMETER
APPROX. 3000 TURNS

OUTPUT COIL
DC RESISTANCE: 16-32 OHMS (?)
INDUCTANCE: 2-3mH
WIRE: 36 AWG / 0.12MM DIAMETER
APPROX. 300 TURNS?

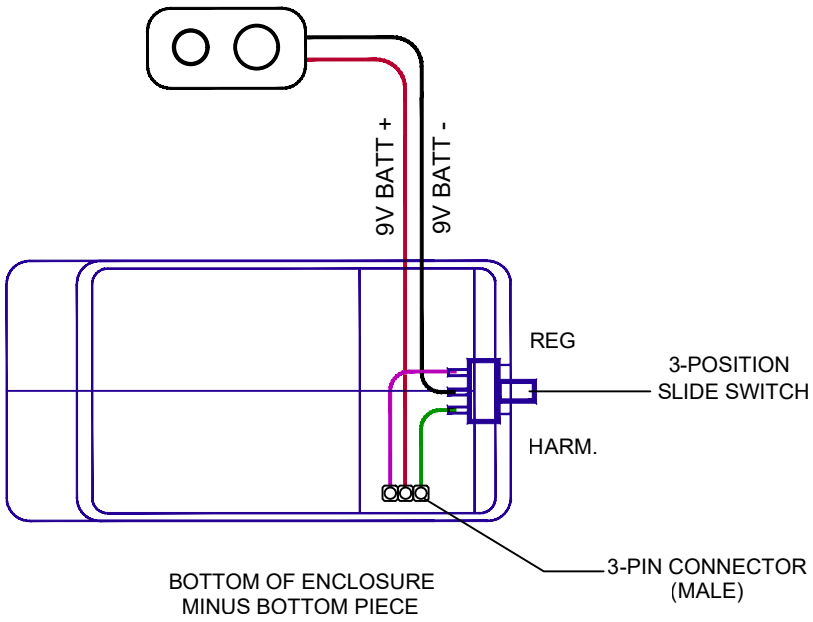
DIAMETER OF BOTH WINDINGS
IS APPROX. 9.3mm

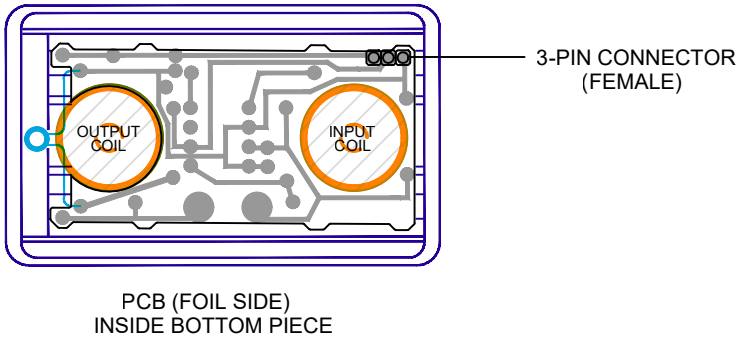


PCB (FOIL SIDE)
ACTUAL SIZE

Ebow Circuit Board

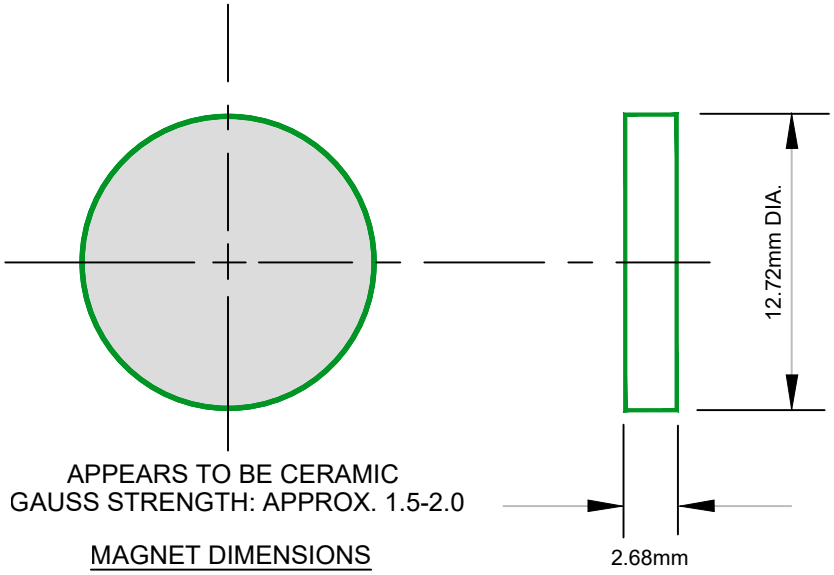
Device Designed by Gregory S. Heet
Drawn & Verified by Paul Marossy 12/10/2022





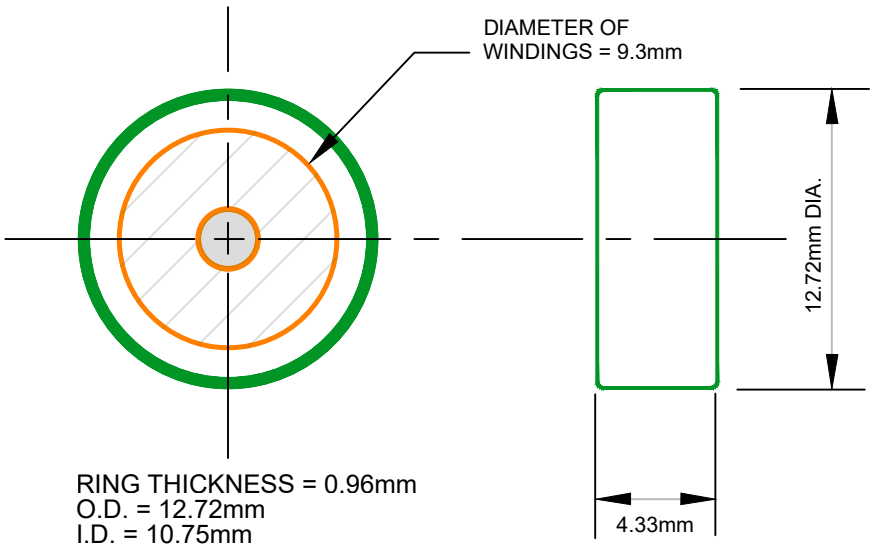
Ebow Switch Wiring

Device Designed by Gregory S. Heet
Drawn & Verified by Paul Marossy 12/10/2022



APPEARS TO BE CERAMIC
GAUSS STRENGTH: APPROX. 1.5-2.0

MAGNET DIMENSIONS



RING THICKNESS = 0.96mm
O.D. = 12.72mm
I.D. = 10.75mm
COATED W/ SOMETHING THAT
GIVES APPEARANCE OF FERRITE

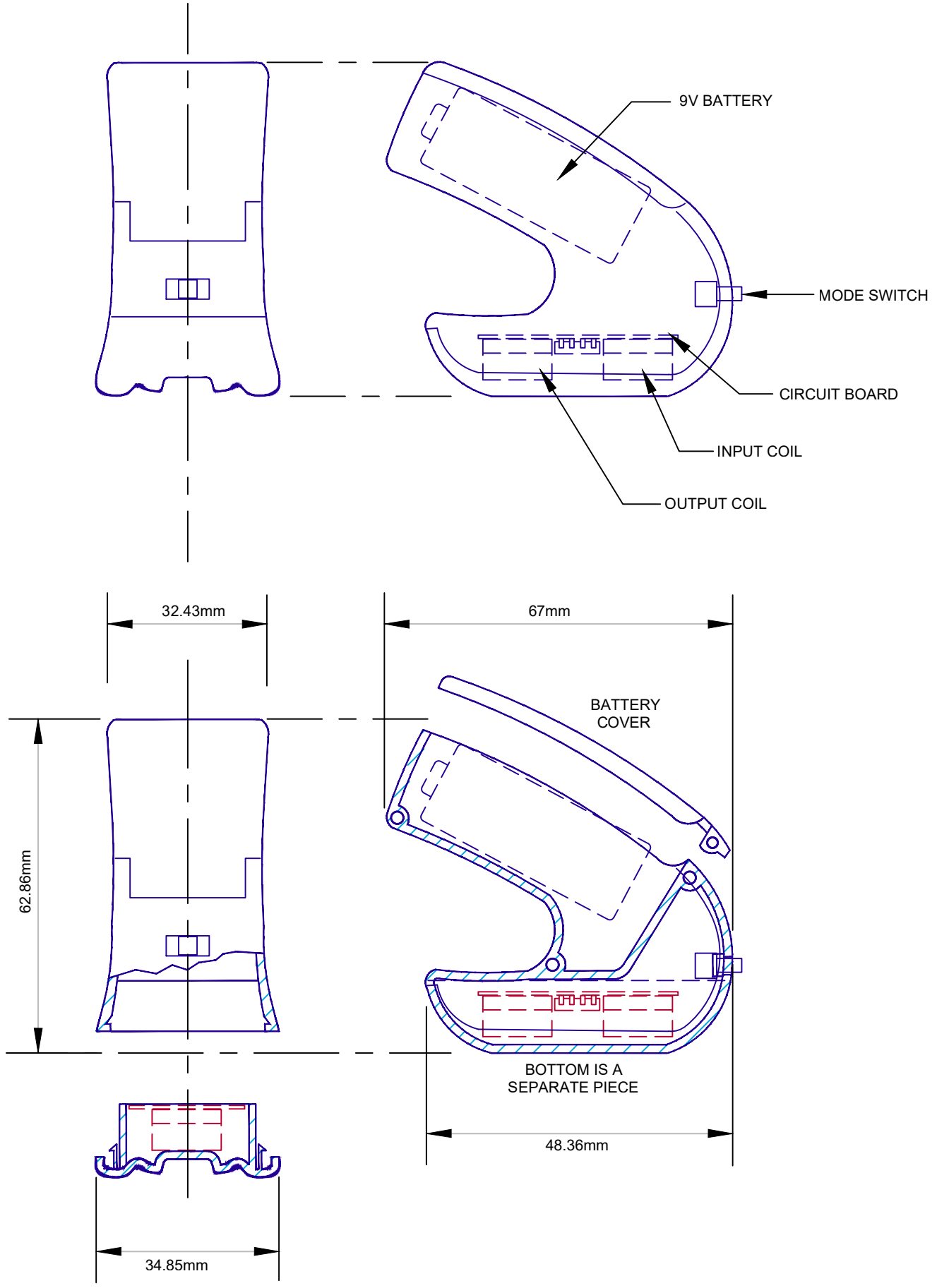
COATED STEEL RING DIMENSIONS

O.D. = 3.97mm

STEEL CORE DIMENSIONS

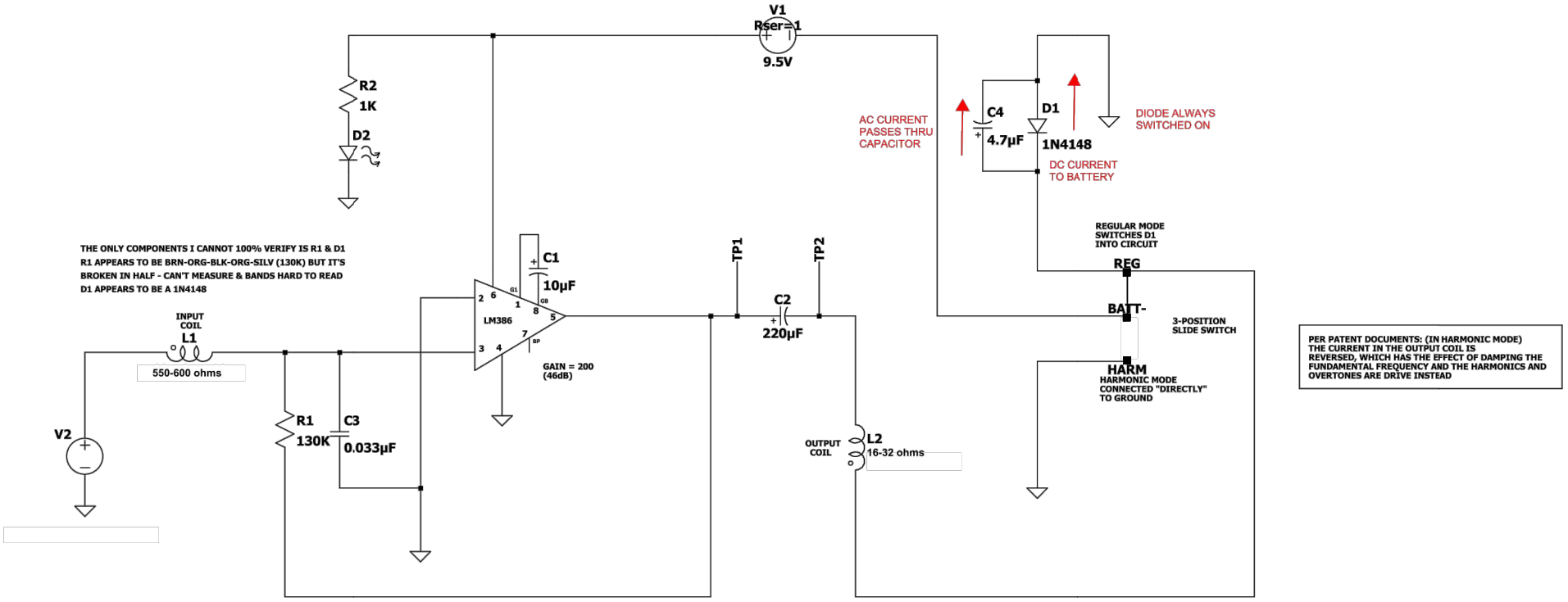
Ebow Magnet & Core Data

Device Designed by Gregory S. Heet
Drawn & Verified by Paul Marossy 12/10/2022



Ebow Plastic Enclosure

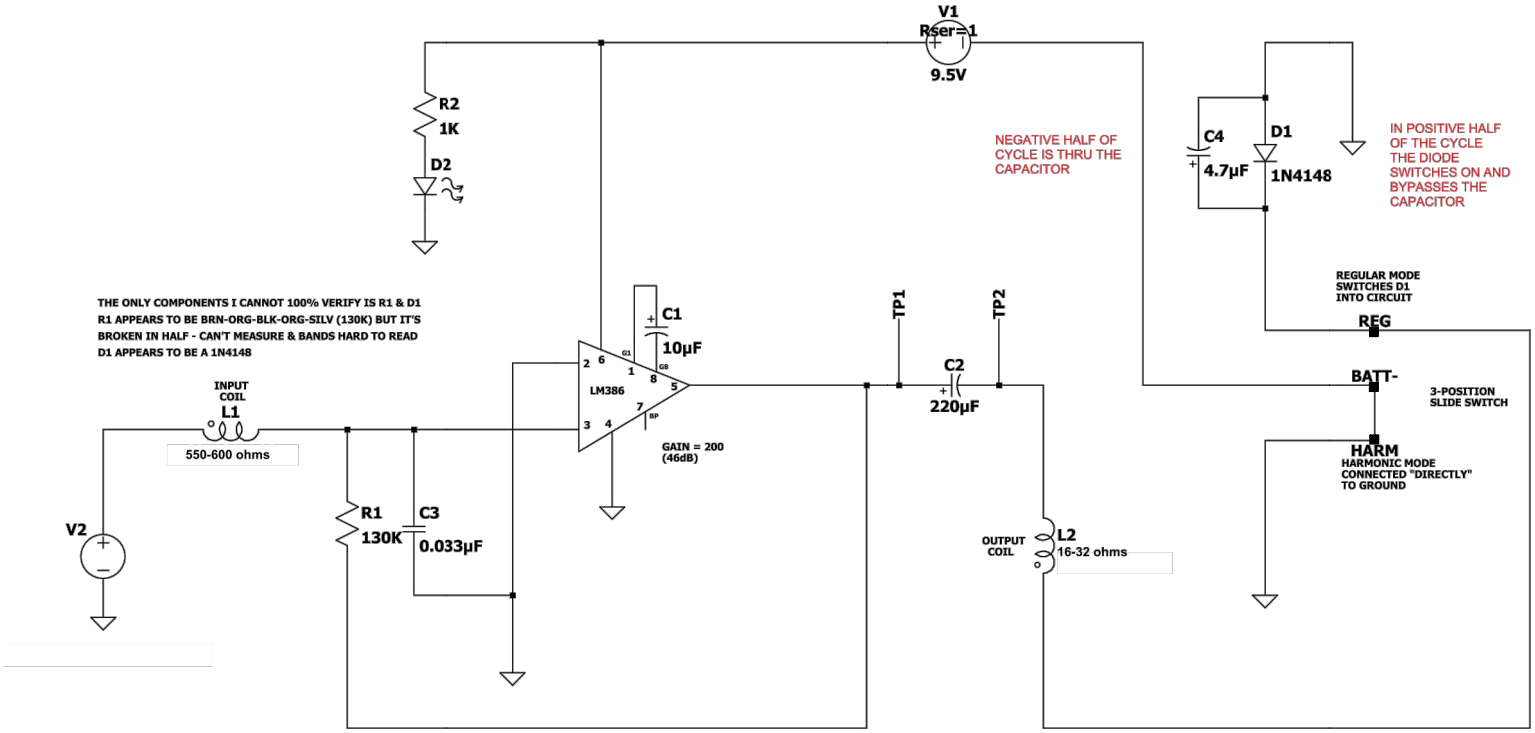
Device Designed by Gregory S. Heet
Drawn & Verified by Paul Marossy 12/10/2022



Ebow Schematic

NORMAL MODE

WAVE FORM AT PICKUP OUT



WHEN THE WAVE FORM IS NEGATIVE, THE 4.7uF CAPACITOR INTRODUCES AN RC HIGH PASS FILTER (ACTUALLY RLC IF YOU INCLUDE THE DRIVER COIL INDUCTANCE). IF THE OUTPUT OF THE LM386 IS SQUARE WAVE-ISH, THE SIGNAL ACROSS THE DIODE WILL LOOK LIKE A CURVED SAWTOOTH AND THE POWER WILL BE REDUCED IN THE DRIVER COIL. *

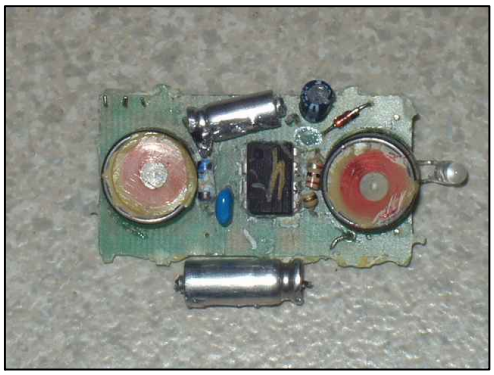
* HOWEVER, IN REAL WORLD TESTING, THE HARMONIC MODE HAS A HIGHER OUTPUT AT THE PICKUP OUT

PER PATENT DOCUMENTS: (IN HARMONIC MODE) THE CURRENT IN THE OUTPUT COIL IS REVERSED, WHICH HAS THE EFFECT OF DAMPING THE FUNDAMENTAL FREQUENCY AND THE HARMONICS AND OVERTONES ARE DRIVE INSTEAD

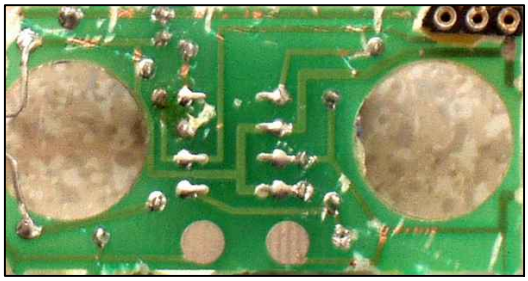
Ebow Schematic

HARMONIC MODE

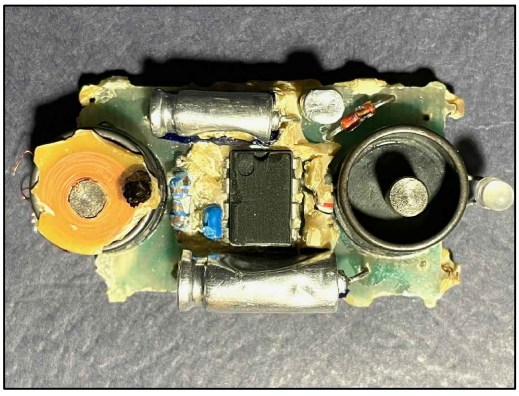
WAVE FORM AT PICKUP OUT



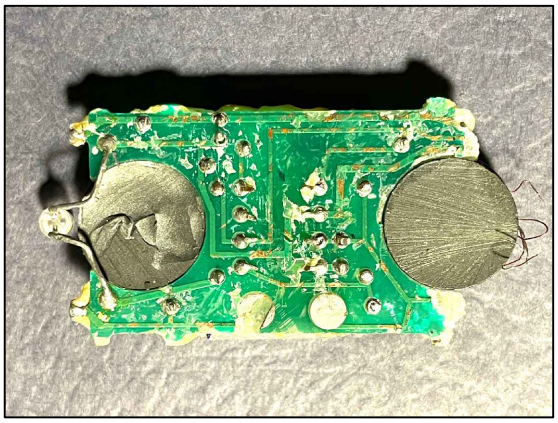
EXAMPLE #1: PCB COMPONENT SIDE



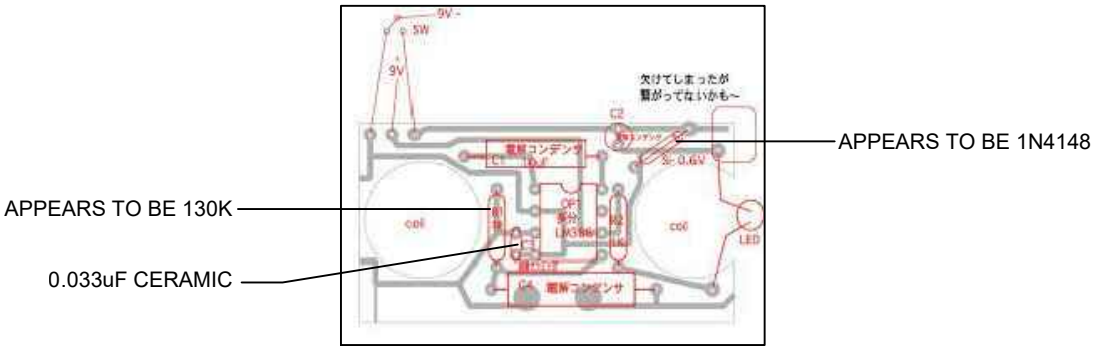
EXAMPLE #1 PCB FOIL SIDE



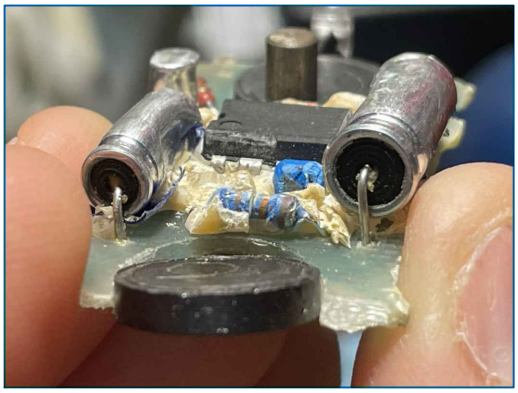
EXAMPLE #2: PCB COMPONENT SIDE



EXAMPLE #2 PCB FOIL SIDE



PCB COMPONENT SIDE



CLOSE UP OF R1. APPEARS TO BE
BRN-ORG-BLK-ORG-SLV 130K