

EXHIBIT T – Operational Description

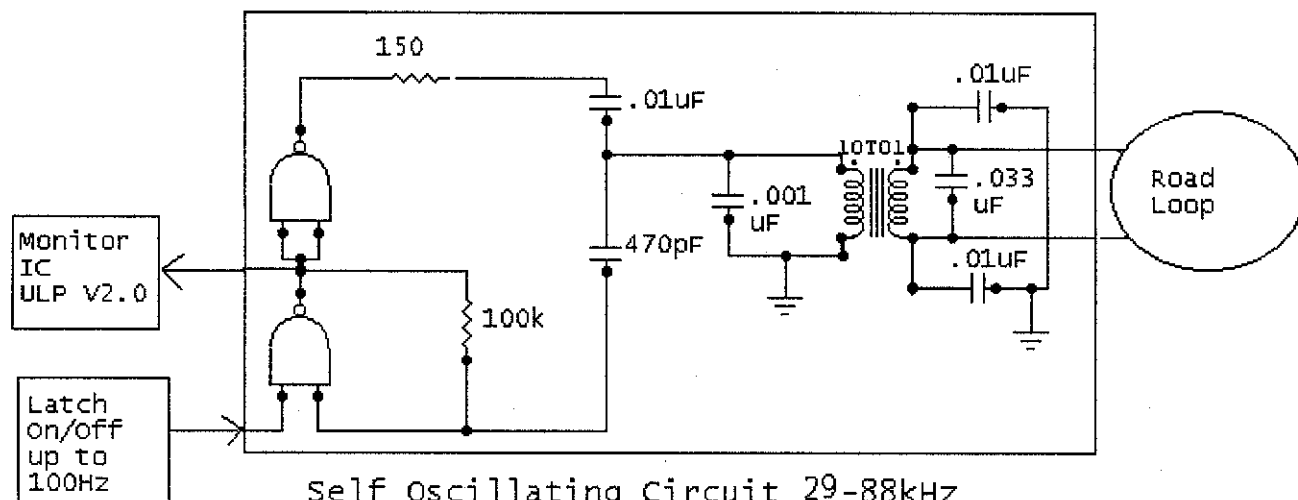
FCC ID O7O-UPP

Phoenix Traffic Classifier O7O-UPP

Operational Description

Inductive road loops are excited by self oscillating circuit driven by a CMOS 4093 Schmitt-triggered pair of NAND gates. Oscillation frequency is defined by several capacitors and a resistor. The oscillation is latched on or off by the state of one input of one of the 2 input NAND gates. Road loop events are monitored by a proprietary chip known as ULP1 (V2.00) that monitors voltage levels at the output of one of the NAND gates. Oscillation is transferred to the loops through a 10:1 ratio isolation transformer. There are three capacitors on the output side of the transformers. Two of these capacitors are coupled to the board ground for noise rejection. The third capacitor matches road loop impedance.

11. Block Diagram
Unicorn/Phoenix/Pegasus



Self Oscillating Circuit 29-88kHz
NAND gates are 2/4 of a CMOS 4093 IC