A $29 Interlock System to prevent Carbon Monoxide Deaths

...built, tested and demo in less than 2 hours.

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PROBLEM: Portable gasoline generators and many CO generating appliances account Carbon Monoxide deaths annually.

SOLUTION: A interlock system can ***switch off*** generator engine or furnaces when excessive CO levels are detected, and hence preventing deaths.

OBJECTIVE: To demo a low cost carbon monoxide interlock system attached and integrated to a portable generator.

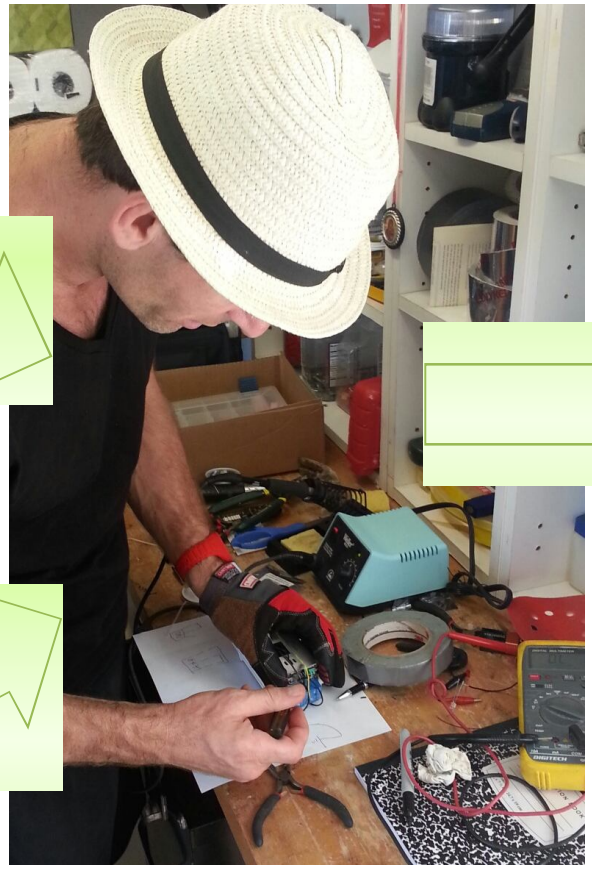
PARTS :

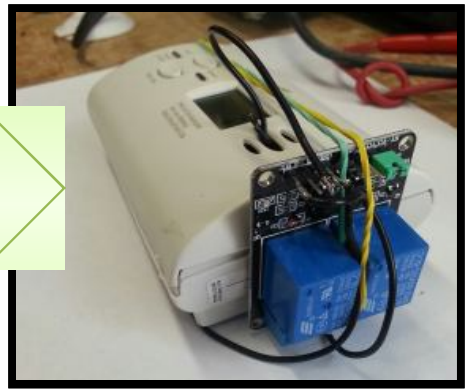
1. CO detector ($25)

2. Electromechanical Relay ($4)

3. Generator

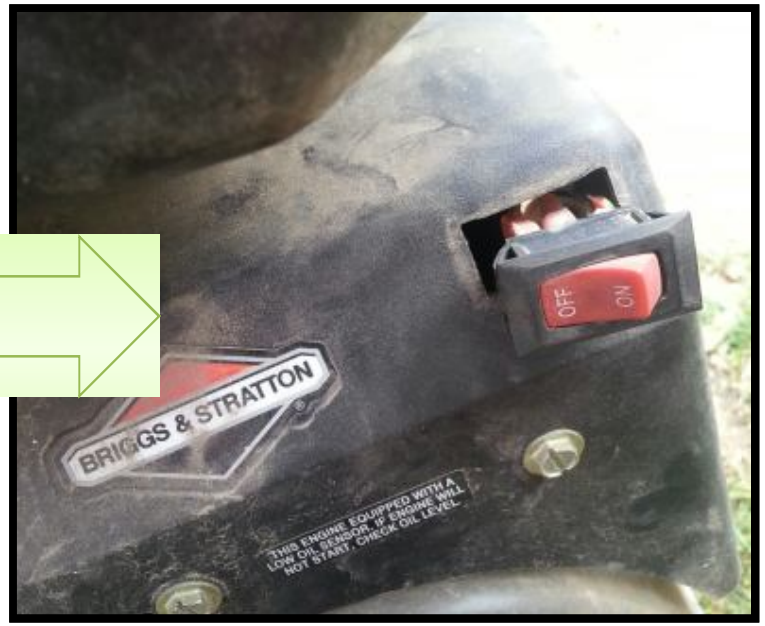
CONSTRUCTION





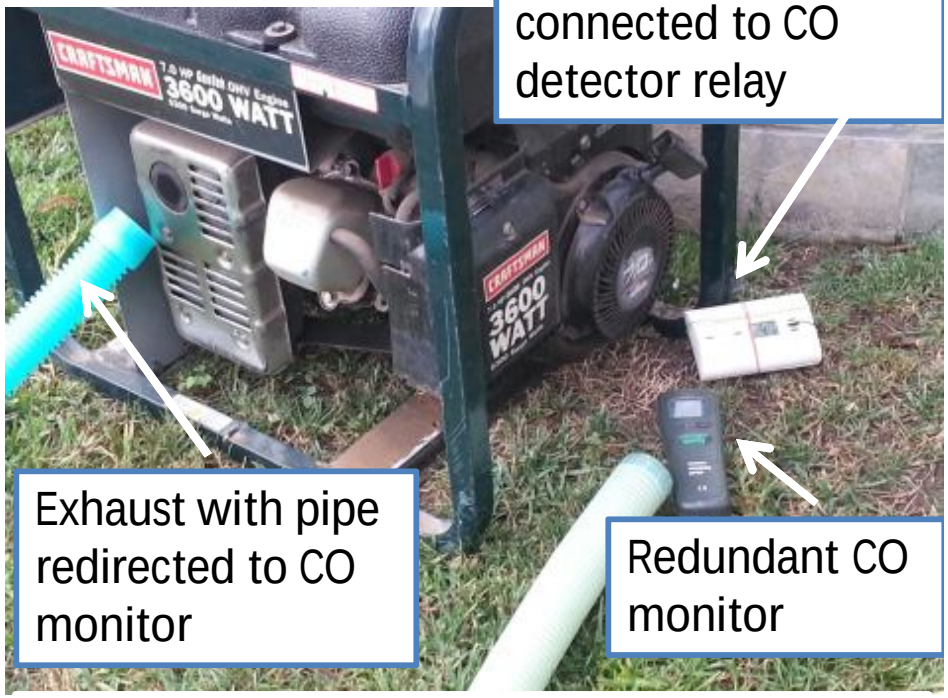
METHOD: Obtained alarm signal from CO detector and connected to relay (labor time = 1 hour)

INTEGRATION



METHOD: Connect Relay to On/Off generator switch to enable SWITCH OFF when CO detector triggers (labor time = 0.5 hours)

TESTING & DEMO



BENCHTOP TEST: Sample of exhaust gas in a bag and placed detectors. Relays switches & works!

PIPE TEST: In 2 minute CO levels increase above 999ppm and generator switched OFF & works!

CONCLUSIONS

1. A low cost $29 Interlock System built in less than 2 hours can prevent Carbon Monoxide Deaths.

2. Existing off-the-shelf technology exists to built a low cost CO interlock system.

3. Deaths and injuries caused by CO poisoning generated by combustion engines is totally preventable.