

# Seismo-Quake™ Fact Sheet

Quake Generator  
 Quake Control  
 Street Light  
 Traffic Light

## Description

Seismo-Quake™ Fact Sheet		Quake Generator	Quake Control	Street Light	Traffic Light	Description
<b>Technological Gain</b>						
<b>Electrical</b>						
•	Motor	✓				Seismo-Quake™ include a 6 Volt electric motor, producing a torque of 5.5 g.cm.
•	LED (Light Emitting Diode)			✓	✓	Traffic Light consist of red, amber and green LEDs for traffic and pedestrians. Street Light consist of white LEDs.
•	9 Volt battery clip	✓	✓	✓	✓	A 9 Volt battery may be used as an electrical power source.
•	Variable resistor		✓			A PCB mounted variable resistor controls the magnitude of the earthquake.
•	Press switch 5V logic				✓	The press switch is implemented as a 5 Volt logic input that connects to the interrupt pin on the microcontroller.
•	Printed Circuit Board		✓	✓	✓	Consist of a designed PCB. Components and surface mount devices are pre-soldered.
<b>Analogue Electronics</b>						
•	555 Timer				✓	The 555 timer is configured as an astable multivibrator (oscillator).
•	Op Amp		✓	✓		Op amp configuration branches into negative feedback and positive feedback.
•	Transistor as a switch			✓		This mean that the transistor is operated in cutoff and saturation.
•	Transistor as an amplifier		✓			The current at the base of the transistor is linearly increased (amplified).
•	Voltage Regulator			✓	✓	A voltage regulator supply a constant dc output voltage. The popular positive 5V series regulator is implemented.
•	LDR			✓		The light dependant resistor is indirectly proportional to the intensity of light.
<b>Digital Electronics</b>						
•	Motorola 8-bit micro				✓	High performance 8-bit microcontroller unit.
•	555 Timer				✓	The 555 timer IC is configured to generate a stable square wave output.
<b>Protocol Interface</b>						
•	RS-232					A standard for serial transfer of data bits, interfacing to equipment.
•	USB					Universal Serial Bus, an industry-standard protocol for the PC.
<b>Communication Medium</b>						
•	IR					The transmitter and receiver for infrared needs to be in line of sight and is not physically connected.
•	RF					The transmitter and receiver for radio frequencies is not physically connected and line of sight is not a requirement.
•	Copper Cable					Physically connected copper cable, transmitting data at a slower rate.
•	Optical Cable					Physically connected fibre-optic cable, capable of transmitting data at a fast rate.
<b>IBM Compatible Computer</b>						
•	Windows OS					Windows based operating system.
•	Linux OS					Linux based operating system.
•	Software Program					Software interfacing to external hardware.
<b>Manual</b>						
•	OnLine		✓	✓	✓	User manual or help file may be downloaded from <a href="http://www.seismoquake.com">www.seismoquake.com</a> .
•	CD / DVD					User manual or help file provided on disc.
•	Paper Booklet					User manual or help file provided in a booklet.