

**Novel Engineering Rapid Design Services, Inc. dba ReadyShot**  
**Model: RS-MGZ**  
**Operational Description**

The RS-MGZ is installed in a standard Glock pistol by being placed in the magazine cavity of a Glock handgun, which is facilitated by enclosing the circuit board into a plastic housing whose outer dimensions are shaped similarly to the actual magazine. A neodymium magnet of size 5/16 inch diameter by 1/16 inch thick is affixed to the back of the gun's trigger. A hall-effect sensor on the circuit board is set to effective zero based on the initial position of the magnet, and when the user pulls the trigger, the change in magnetic field strength is communicated to a microprocessor on the circuit board. The processor determines the validity of the event, and initiates a two-part response: 1) a pulsed voltage of peak 5 V is output to a connected 650 nm < 5 mW laser diode, and 2) a coded RF signal is transmitted. The coded RF signal consists of a pre-amble, 6 bits of data, and a post-amble. The microprocessor then waits for the next polling period to check for hall-effect sensor activity. This is repeated for up to 11 minutes, at which point the microprocessor's firmware causes the circuit board to enter a sleep state. The circuit is awakened using a user-accessible button protruding from the bottom of the plastic housing.