

Operational Description: HA09 – Handy Controller

The HA09 controller has a main PCB with pushbutton traces printed on the front side. The microprocessor located on the Z-wave ASIC governs the processes that involve low-battery detection, button scanning, and the EEPROM. DC power is supplied by 4 size AAA alkaline batteries, whose voltage is passed through a voltage regulator to supply a constant 3.3VDC.

The RF module PCB is a separate PCB that houses the Z-wave ASIC, crystals, EEPROM, various supporting components, and the RF front end. This entire PCB is completely enclosed by a metal shield connected directly to circuit ground. The RF module PCB is attached directly to the main HA09 PCB via headers. The 908.42MHz antenna measuring approximately 3.25” in length, exits the metal shield via a small hole near the bottom of the shield.

This controller can operate either manually via pushbutton controls. Pressing various buttons or combinations of buttons allows the user to use the controller’s functions such as turn ON, turn OFF, dim-up, or dim-down various loads. Types of button presses allowed are momentary press and release, and press and hold.