

# **USER'S MANUAL**

**for SmartPAK™ Controllers,**

**Models:**

**1210-xx**

**2410-xx**

**3610-xx**

**4810-xx**

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46322

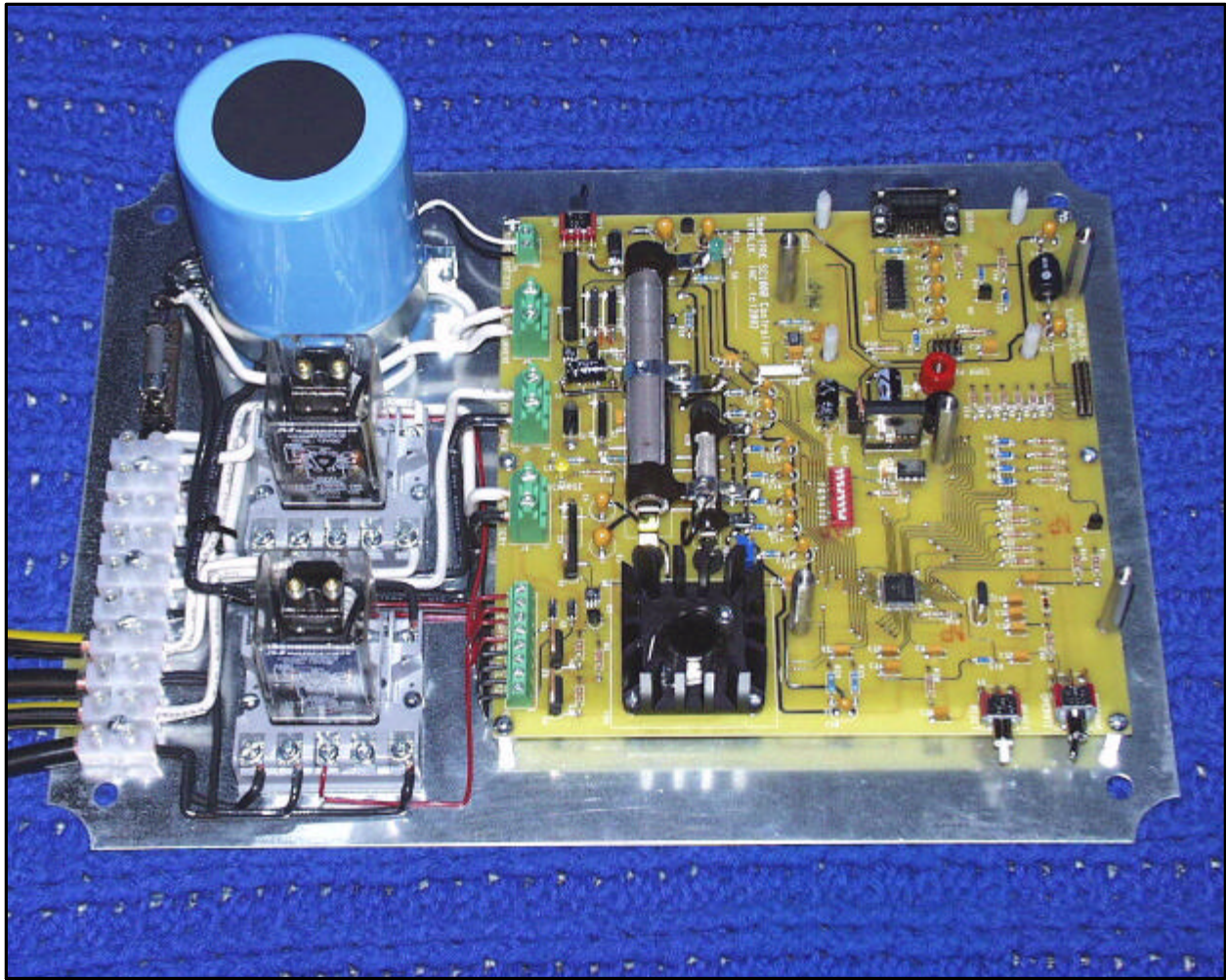
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**Figure 1. The SmartPAK™ Controller Panel Assembly**

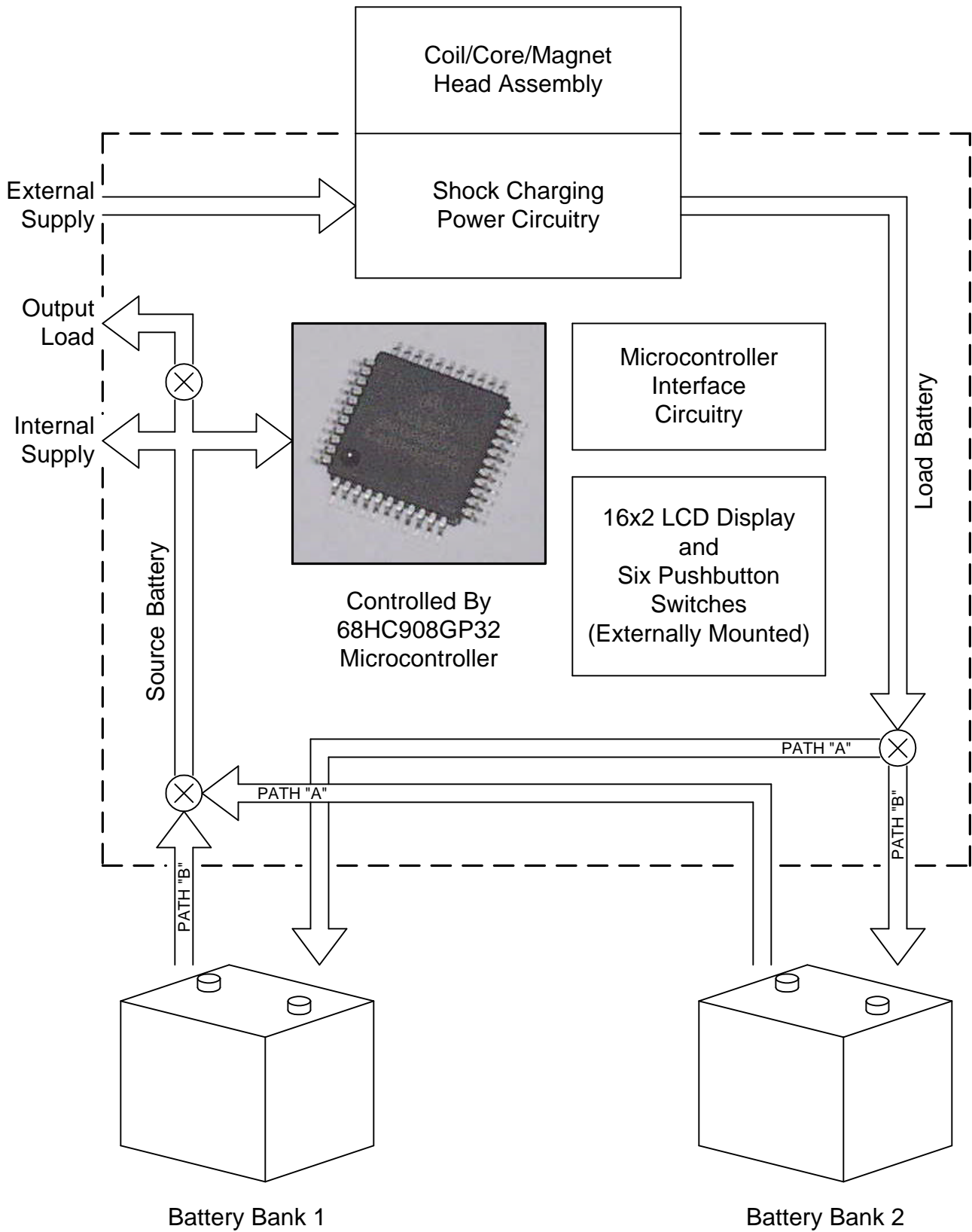
## **DESCRIPTION**

SmartPAK™ is the world's first all solid-state FREE ENERGY or OVER-UNITY power management system that transforms ambient thermal environmental energy to excess electrical energy. It provides a "standard" platform for experimenters, researchers, and developers to do energy-related practical applications, experiments, and perform exploration of the OVER-UNITY phenomena.

The theory of operation is based on the difference of energy between magnetization/de-magnetization cycles of ferromagnetic materials utilizing a coil/core or coil/core/magnet Head assembly. It has been discovered that EXCESS energy is released during the de-magnetization portion of the cycle using a suitable core assembly. The SmartPAK™ system is specially designed to measure, collect, and store this excess energy for later use.

The SmartPAK™ system is controlled by a Motorola 68HC908GP32 microcontroller programmed to measure input/output voltages and currents, calculate COP, and contains software algorithms for a complete "turn-key" power management system. The system features a "standard" user interface, which allows the user to design their own custom coil/core/magnet "head assemblies", and immediately test and display in real-time its' performance.

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**Figure 2. Functional Block Diagram**

# DIP SWITCH (S2) MODE SETTINGS

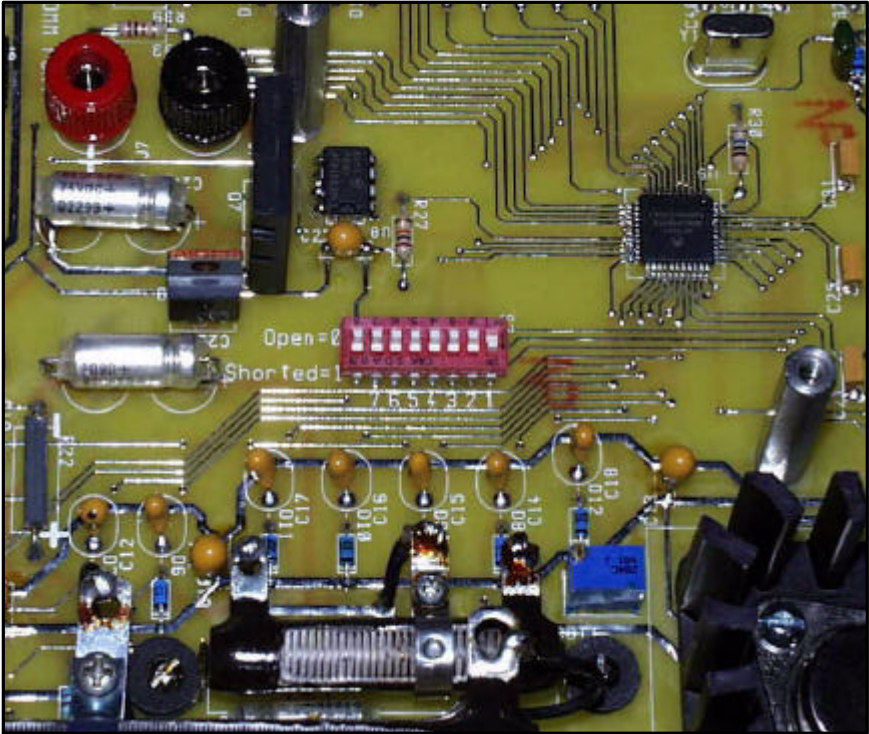
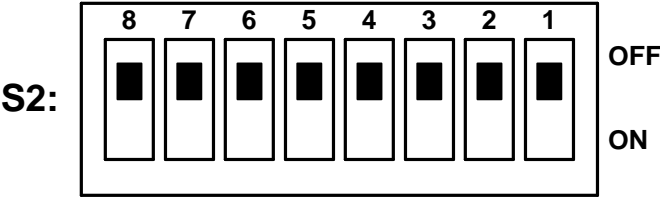
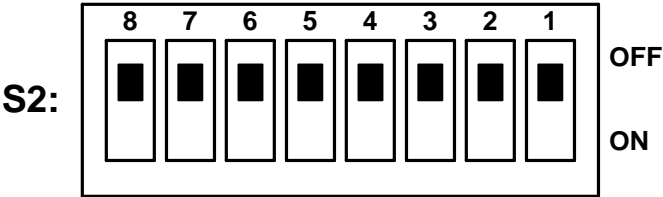


Figure 3. DIP Switch, S2.



# DIP SWITCH (S2) MODE SETTINGS (CONTINUED)



S2-8: OUTPUT CONTROL OVERRIDE  
OFF = Disable Override.  
ON = Turn On Output Control.

S2-7: CONSTANT CURRENT LOAD OVERRIDE  
OFF = Disable Override.  
ON = Turn On Constant Current Load.

S2-6: BATTERY FAILURE MODE  
OFF = Enable.  
ON = Disable.

S2-5: CHARGE TYPE  
OFF = Amps.  
ON = Percent.

S2-4: CHARGE REGULATOR  
OFF = Use Load Battery.  
ON = Use External Battery.

S2-3: NOT USED

S2-2: BATTERY TEST MODE  
OFF = Enable Battery Test.  
ON = Enable Cycle Battery Test.

S2-1: CHARGING WAIT TIMER  
OFF = Enable Long Timer.  
ON = Enable Short (5 sec) Timer.