

## **GPD102 Mattress Vacuum Pump Simplified Operational Description**

1. Press the FIRM button, remote transmits a 433MHz signal. The Charger receives this signal, decoded by the charger MCU which sends a serial data through the cord to the pump. The pump MCU decodes this serial signal, operates the small DC motor to open the air valve.
2. Press the SOFT button, remote transmits a 433MHz signal. The Charger receives this signal, decoded by the charger MCU which sends a serial data through the cord to the pump. The pump MCU decodes this serial signal, operates the small DC motor to open the air valve and operates the relay to start the motor. The pump MCU also sends out PWM data to the speed control PCB to controls the motor speed. Meanwhile, the remote MCU updates the LCD and advances the digit from 01 to 20. The charger MCU sends out commands to activate the voice IC. The pump MCU checks for pressure through the pressure sensors. If the pressure level reaches a predetermined level, the pump MCU sends out a serial signal to the charger MCU. The charger MCU determines if it should shut off the motor, shut off the air valve, plays a voice and updates the remote LCD.
3. Press the STORE button, remote transmits a 433MHz signal. The Charger receives this signal, decoded by the charger MCU which sends a serial data through the cord to the pump. The pump MCU decodes this serial signal, stores the current remote number in the EEPROM.
4. Press the RECALL button, remote transmits a 433MHz signal. The Charger receives this signal, decoded by the charger MCU which sends a serial data through the cord to the pump. The pump MCU decodes this serial signal, retrieves the stored data from the EEPROM, sends this data through the serial cable to the charger. The charger MCU decodes the serial data and determines to start the motor and open the air valve. The remaining operation is the same as pressing the SOFT button.