NextGen RFID Order of Operation

FCC ID: U4I.NB0034GXX
3/28/07 SM

- Power is supplied
  - 120 or 240 volt AC
  - Alarm relay closed
  - Pump relay open

- Microcontroller runs a start up diagnostic

- RFID Controller Chip sends out 125kHz Signal

- Transponder assembly receives the signal, extracts energy from it to provide DC power to Transponder Circuit.
  - Transponder checks alarm and on/off pressure switch state (are switches open or closed)
  - Based on the switch states, the transponder will return a signal;
    - Both Switches Inactive 150 Hz
    - On/Off Active Only 300 Hz
    - Alarm Active Only 600 Hz
    - On/Off & Alarm Active 1200 Hz
  - The transponder continuously monitors the switches

- Transceiver receives the signal back from the Transponder and;
  - Both Switches Inactive 150 Hz
    - Idle
  - On/Off Active Only 300 Hz
    - Pump is powered
  - Alarm Active Only 600 Hz
    - Alarm is powered
  - On/Off & Alarm Active 1200 Hz
    - Pump and Alarm is powered
  - If the transceiver loses or detects a frequency not within +- 30% of the above, the Alarm will be powered and the pump will be off.
- If the Transceiver loses power, the Alarm contact will be closed, the pump contacts will open