

Parallax RFID Reader Module Revision A

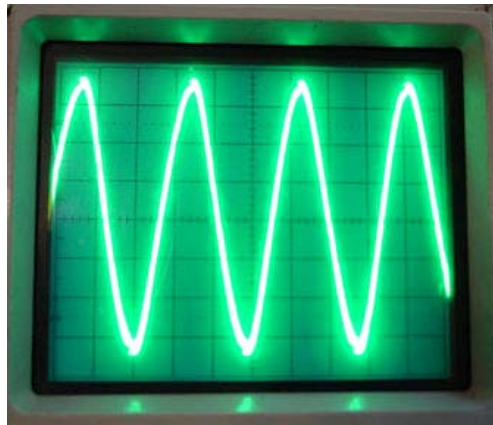
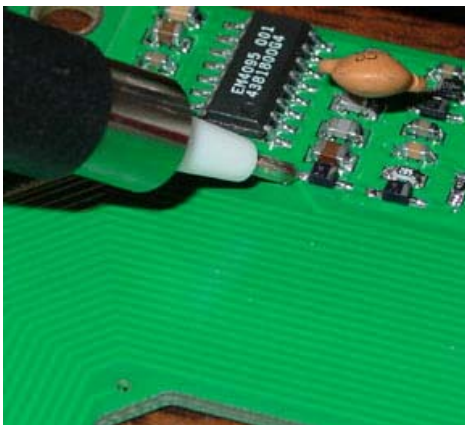
J. Grand, 4/15/05

Initial Setup:

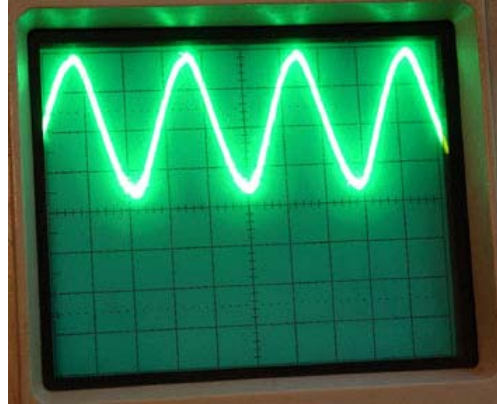
1. Connect Board-of-Education to PC
2. Plug RFID Reader module into Board-of-Education
3. Connect VCC (RFID) to VDD (BoE)
4. Connect GND (RFID) to VSS (BoE)
5. Connect /ENABLE (RFID) to P0 (BoE)
6. Connect SOUT (RFID) to P1 (BoE)
7. Enable power to Board-of-Education

RFID Module Test Points:

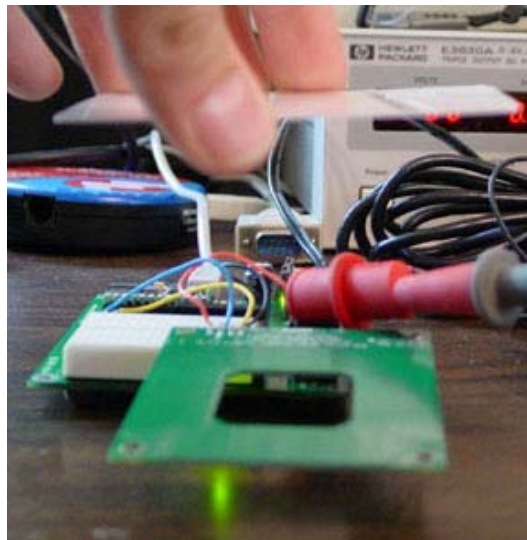
1. Idle VCC current @ 5V should be ~10mA (9.6mA)
2. RFID LED should be GREEN
3. Load and run *rfidtest.bs2* on the PC's BASIC Stamp software
4. RFID LED should turn RED (indicating the module is active and looking for a valid tag)
5. Active VCC current @ 5V should be ~90mA (88-100mA) (Note: It is not recommended to leave the RFID Reader enabled for extended periods of time - the RF circuitry may overheat and become damaged - the RFID Reader is designed to be activated in pulses when looking for an available tag to read)
6. Voltage measured at ANODE of D2 should be ~125kHz sinewave @ ~140Vpp



7. Voltage measured at U2 (EM4095) pin 8 should be ~125kHz sinewave @ V_{max} ~4V (3.6-4V)



8. Hold the tag's flat face parallel to the RFID module's antenna
 - a. At a distance of ~2-4", the RFID LED should turn GREEN (indicating the module has read a valid tag)
 - b. The BASIC Stamp Debug Terminal should display the tag's 10 character unique ID (e.g., 0101A5F18D)



9. Test complete