```
// include the library code:
#include <LiquidCrystal.h>

// initialize the library with the numbers of the interface pins
LiquidCrystal lcd(12, 11, 5, 4, 3, 2);
//pwr sensor stuff
const int sensorpin = A0;

void setup() {
  // set up the number of columns and rows on the LCD
  lcd.begin(16, 2);
    // Print a message to the LCD.

}

void loop() {
 // power in
 int sensorval = analogRead(sensorpin);
 float voltage = (sensorval/1024.0) * 5.0;
 float pwr = ((voltage - 0.269) * 40) - 77;
 float volts = ((voltage - 0.269) * 40);
 float pwrW = pow(10,((pwr - 30)/10));
 float vts = sqrt(pwrW * 50);
 float ptp = vts * 2.828;
 delay(1000);
 lcd.setCursor(0,0);
 lcd.print("Pwr ");
 lcd.print(pwr, 1);
 lcd.print("dBm PtP ");
 lcd.setCursor(0,1);
 if (vts > 0.9)
 {
 lcd.print(" V ");
 lcd.print(vts, 2);
 float ptp = vts * 2.828;
 lcd.print("  ");
 lcd.print(ptp, 2);
 }
 if (vts < 1 and vts > 0.001)
 {
   vts = vts * 1000;
   lcd.print("mV ");
   lcd.print(vts, 2);
    float ptp = vts * 2.828;
 lcd.print("  ");
 lcd.print(ptp, 2);
 }
 if (vts < .001)
 {
   vts = vts * 1000000;
   lcd.print("uV ");
```

```
  lcd.print(vts, 2);
   float ptp = vts * 2.828;
 lcd.print("  ");
 lcd.print(ptp, 2);
 }

}
```