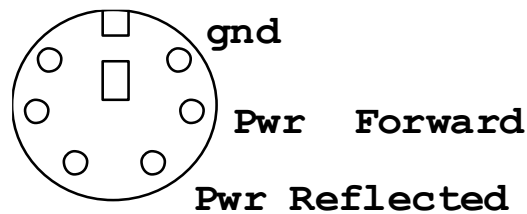


## Wavenode Sensor Interface (For Customers Using Wavenode sensors in their own applications)

### 1. Information regarding the Sensor Interface Plug.



A view of the Sensor minidin connector, as seen looking at the pins.

The voltage at the Forward and reflected pins is proportional to the voltage on the coax line, which is proportional to the square root of the power in the coax.

### 2. The Voltages Appearing at the Inline Sensor Plug:

Use the following calibration for the sensor output voltage for HF-1 and UHF-1 sensors:

100 watts = 2.82 volts at the pin.

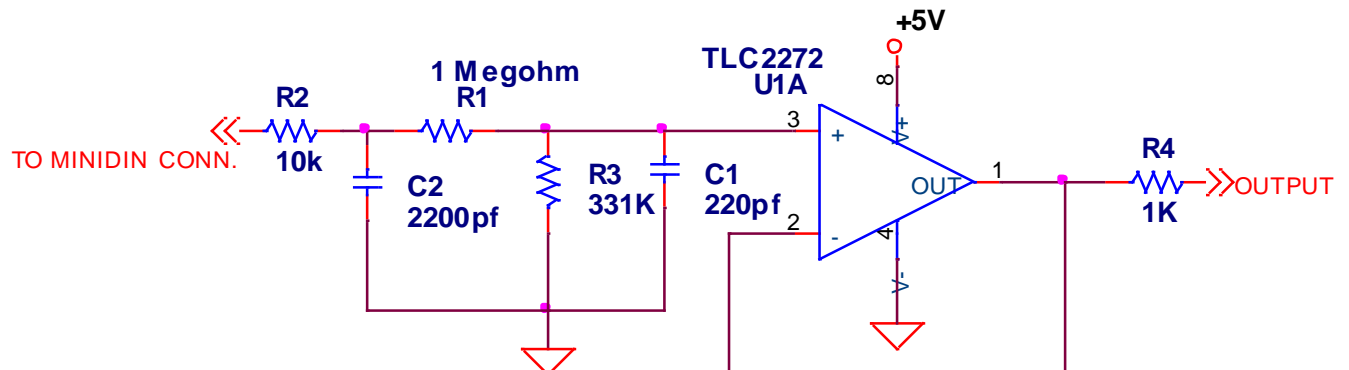
10 watts = 0.891 volts

1 watt = .281 volts

The calibration is the same for both the forward and reflected power.

**NO supply voltage is required for WaveNode sensors.**

### Inline Sensor Interfacing Schematic for all Wavenode Control Boxes.



The schematic above shows a 4:1 divider and decoupling circuit to interface to an A/D converter. The WN-2(d)(m) A/D converter uses a 0-3.6 volt input range, but you can change the divider ratio to accommodate a different A/D converter by changing R3. Note that R2 and C2 form a lowpass filter to keep RF out of the opamp buffer. The output impedance of the sensor outputs is 10K ohms.

The opamp can be any Rail-rail input/output opamp. We use a Texas Instruments TLC2272, easily available. You use the same buffer circuit for both the forward and reflected power outputs of the sensor. You do not need the reflected power unless you wish to calculate the VSWR on the coax.