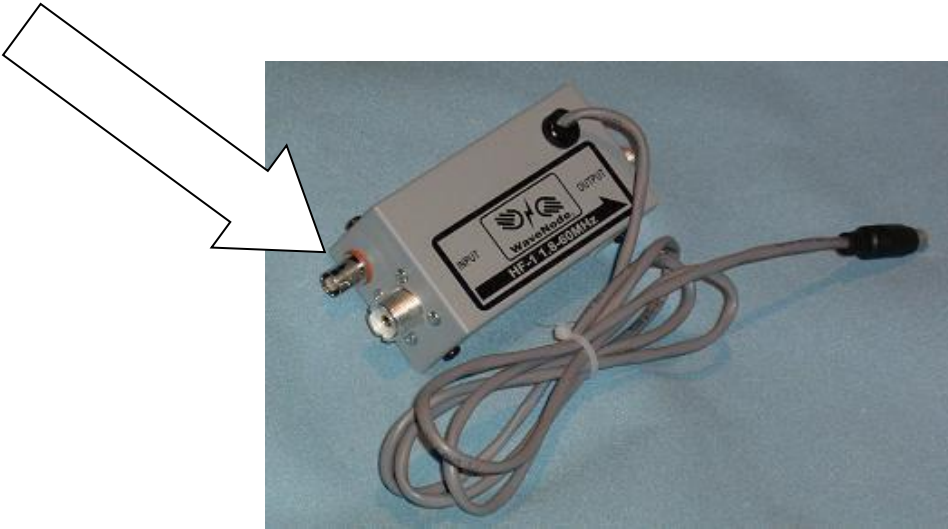


What is the RFView Optional Port on Wavenode Sensors?

Rev.1



BRIEF:

The RFView port option is a separate feedline sensor port to provide a safe method to view the feedline current via an oscilloscope, spectrum analyzer or other equipment. It provides 400 millivolts P.P. signal @ 100 watts forward power. You can safely connect this port directly to your equipment, it is designed to be terminated in 50 ohms.

Your RFView port output level was optimized for use with the Anan SDR radio IMPure system.

DETAILS:

Some SDR radios, such as the Anan, provide a means to dramatically reduce amplifier IMD and splatter products by a tried-and-true method used in many communication systems. This involves pre-distorting the input signal to account for non-linearity inherent in large power amplifiers.

The RFView port allows the amplifier output to be directly coupled to the SDR transmitter circuitry, which then pre-distorts the amplifier input to account for the amplifier non-linearity. IMD and splatter can be reduced by 20 db with this technique. Some version of this predistortion technique is probably going to be incorporated into new SDR radios in the future. Wavenode customers should prepare for this by having the RFView port on at least one HF sensor.

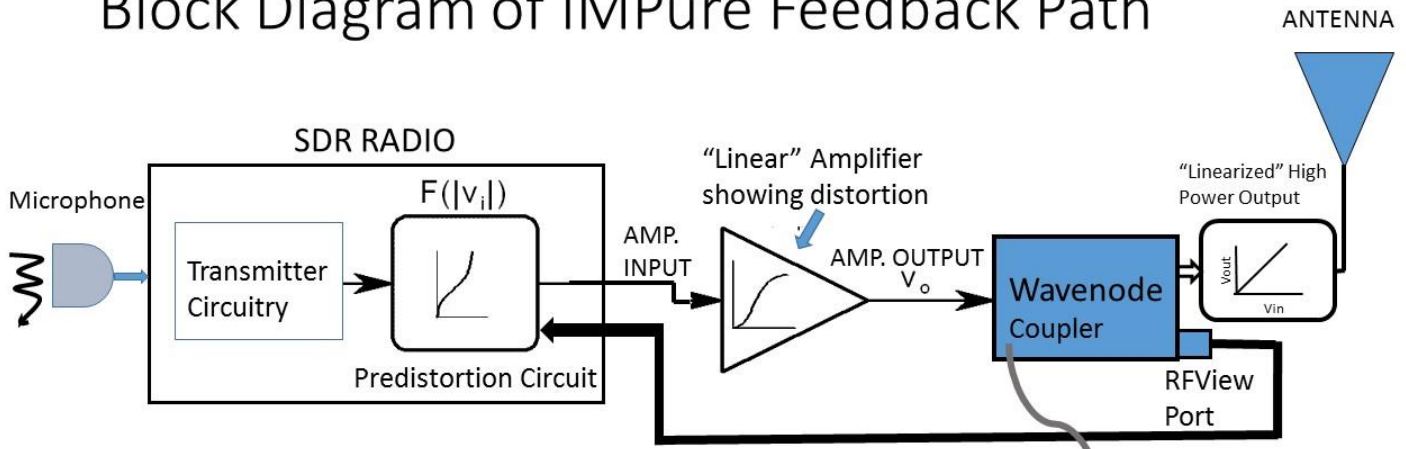
The Wavenode RFView output is:

Output level is +13 dbm @ 1500 Watts, or 400 millivolts P.P @ 100 watts forward power.

The RFView port is coupled via toroid (HF sensors) or additional stripline coupler (VHF and UHF couplers). This provides a safe and de-coupled port that cannot damage other devices.

See Figure #1 below for a diagram of how IMPure can improve your audio:

Block Diagram of IMPure Feedback Path



Note:

1. No particular amplifier is specified. Any amplifier can be "Linearized".
2. There are no tables or coefficients to be input. The Predistortion circuit "learns" the amplifier non-linearity characteristics by monitoring the RFView port signal.



Wavenode WN-2 Wattmeter

Figure #1 Block Diagram