

Important Precautions when using the RTSA7500

Connecting Signal Sources to the RTSA7500 Receiver Front-end

Berkeley Nulceonics' receivers can tolerate a maximum input signal of **-10 dBm** when the front-end attenuator is out of the circuit and **0 dBm** when the attenuator is in the circuit. **Injecting signal levels that exceed these specifications will result in permanent damage to the receiver.**

It is therefore recommended that the output of a signal source be verified with the use of a power meter prior to connecting the source directly to the RF IN connector. Until it can be determined the front-end attenuator is in the circuit, it is best to inject signals lower than -10 dBm. Please refer to the Programmer's Guide for more information on how to query the attenuation.

Additionally any external signal sources connected to RF IN must be turned on only after powering on the RTSA7500 and turned off prior to powering down the RTSA7500

The Use of BNC Products with External 10 MHz Reference

BNC's RTSA7500 can be synchronized with the use of an external 10 MHz reference. The 10 MHz reference can be obtained, for example, from an external oscillator or from the digitizer section of the data acquisition system. As well, this 10 MHz is redistributed within the RTSA7500 and sent to the 10 MHz OUT SMA connector for use by external equipment that needs a 10 MHz reference source.

To set the RTSA to use the external 10 MHz reference, send the SCPI command :SOURCE:REFERENCE:PLL EXT (Refer the Programmer's Guide for more details)

The external 10 MHz reference level must be between **-10 dBm** and **0 dBm**.



Caution: Exceeding the level of **0 dBm** will result in permanent damage to the internal clock circuit. Additionally the **10 MHz** reference must be powered down prior to powering down the RTSA7500.

For any questions on the above information please email: support@berkeleynucleonics.com.

