

- **YOU ARE RESPONSIBLE TO ENSURE THAT YOUR FEEDBACK IS ALWAYS SUFFICIENTLY ATTENUATED SUCH THAT IT DOES NOT DAMAGE YOUR RECEIVER HARDWARE.**
- For proper operation, feedback MUST NOT create an ADC Overload. For PowerSDR_mRX, ADC Overload will be reported via a flashing warning across the bottom of the panadapter.
- For accurate calibration, the feedback level must be as close as practical to ADC Overload without actually causing an overload. A green-yellow-red indicator is provided on the "Linearity" form to report the feedback level. (See "PureSignal Controls & Operation" below.)
- With a radio attenuator setting of 0dB, ADC Overload occurs at approximately -11dBm. For best results, feedback should be above -17dBm and, as stated above, must NOT create ADC Overload. With a higher radio attenuator setting, you can run a higher feedback level into the receiver input.
- Helmut, DC6NY, has provided an excellent design for an RF Sampler that can be used to capture the feedback signal. See "<http://www.hamsdr.com/dnld.aspx?id=1441> Right-click to Save RF Sampler for Pre-Distortion Loop".

ANAN-100 Feedback

For the ANAN-100, on the Setup > General > Ant/Filters > Antenna tab, two check boxes, "Ext 2 on Tx" and "Ext 1 on Tx" are provided. If one of these is checked, during transmit, other settings will be overridden and the chosen EXT connector will be connected to the receiver input. Therefore, a coupler providing feedback can be connected to the chosen EXT connector.

At the time of this writing, we have little experience with PureSignal on the ANAN-100. We note that there is a very high level of crosstalk between the transmitter output and receiver input even without a direct feedback connection. That feedback MAY be sufficient for accurate calibration of a "barefoot" ANAN-100. One disadvantage of that approach is that this feedback is due to stray coupling and the feedback level is likely to vary substantially from band to band. Using this stray coupling will NOT work to linearize a following linear amplifier since "clean" feedback from the output of the amplifier must be provided. Please share your results using the ANAN-100.

Alex Feedback

For systems using the Alex filters, you have two options for PureSignal feedback. On the Setup > General > Alex > Antenna tab, check boxes "RX1 IN on TX" and "RX2 IN on TX" are provided. If one of these is checked, during transmit, other settings will be over-ridden and the chosen RX connector will be connected to the receiver input filters. Therefore, you can input your feedback to the chosen RX connector. Alternatively, if you provide your own T/R switching (such as using the relay on the coupler designed by Helmut, DC6NY, and referenced above), you can insert feedback between the "Out to Rx" connector and your receiver card input.

Amplifiers

The current PureSignal algorithm does not attempt to dynamically compensate for "memory effects." Memory Effects are phenomena whereby the amplifier gain and phase are not only a function of the