



**CleanRF Systems**  
 450 Circle Drive  
 Fort Collins, CO 80524  
 Phone: 970-412-3456  
 e-mail: Tyler@CleanRF.com

## RF-D (RF Demodulator)

The model **RF-D** (RF Base-Band Demodulator) designed to directly demodulate the RF envelope from your transmitter to a usable signal suitable for feeding the Horizontal "X" input of your oscilloscope. This establishes a pre-amplifier reference signal when used with any of the series **RF-S** Variable RF Samplers for Splatter View operation!

The base-band AM Audio Demodulator provides a signal boasting a flat audio frequency response ranging from 10 Hz to 16 kHz! This signal is suitable for feeding stereo headphones, line level amplifiers or audio mixers with the final audio level adjustable via the AF output level pot to the 1/4" TRS output Jack.

Additionally, the **RF-D** also provides RF envelope source trigger synchronization. This unique signal is fit for supplying the "Internal Source CH 1 (X) Trigger" selection of your oscilloscope. This option has the ability to synchronize your horizontal modulation envelope sweep, regardless of changing voice or data modulated frequencies in either SSB or AM envelope monitoring making your envelope lock-in-place when you speak! No more difficult-to-view envelope patterns!

The **RF-D** features a passive-flat operational VSWR over a broad frequency range and insertion loss is a negligible 0.1 dB and produces a rectified, non-directional, demodulated source at the BNC and a continuously adjustable AF output to the 1/4" TRS jack.

All CleanRF Systems chassis are built, assembled and tested here in the USA headquartered near the grounds of WWV and are finished over by a baked-on black textured finish outer-coating for decades of continual service and performance. Connectors are custom long barrel SO239's for easy installation. Products are fully warrantied against any defects both electrically or mechanically and include BNC cables and adapters for plug and play operation!

6 Ft. cable and adapter included!

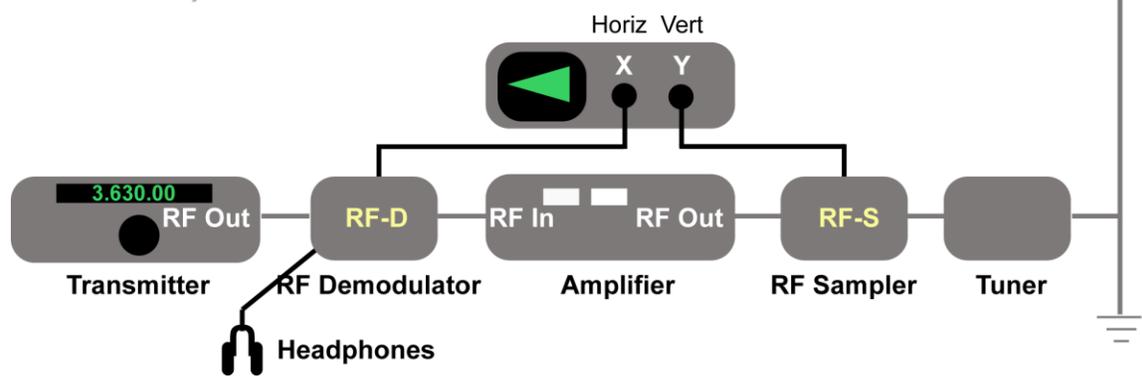
## RF-D Specifications

- Frequency Response: 500 kHz ~ 60 MHz – Audio: 10 Hz ~ 16 kHz
- Rated Input: 1.5w ~ 200w PEP
- AM Dynamic Range: 60dBu
- Connectors In: SO-239
- Connectors Out: SO-239, BNC and 1/4" TRS Audio Out
- Controls: Variable AF Output
- VSWR: < 1:1.1
- Insertion Loss: < 0.1 dB
- Cable and Adapter: 6 Ft. BNC Male-to-BNC Male and UHF Male-to-Male Adapter
- Applications:
  - Oscilloscope Horizontal "X" In (Pre-Amplifier Reference Signal)
  - AM Audio Modulation Monitor
  - RF Envelope Source Trigger Synchronization
- Dimensions: W 2 1/8" x L 3 1/4" x H 1 5/8"



### Scope / RF Demodulator / RF Sampler Wiring Chain

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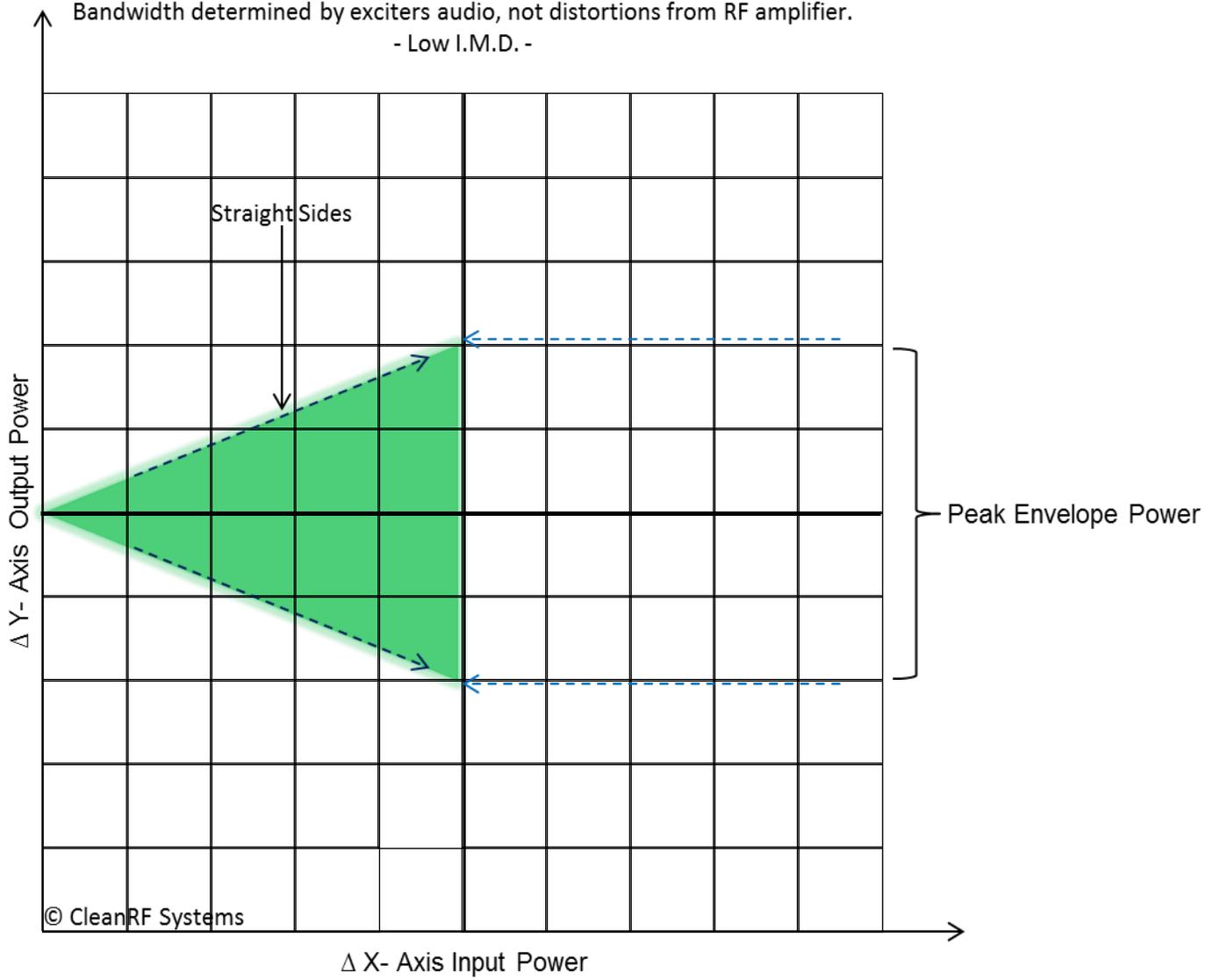


Trapezoidal Linear RF Pattern Provided by CleanRF Systems Splatter View.

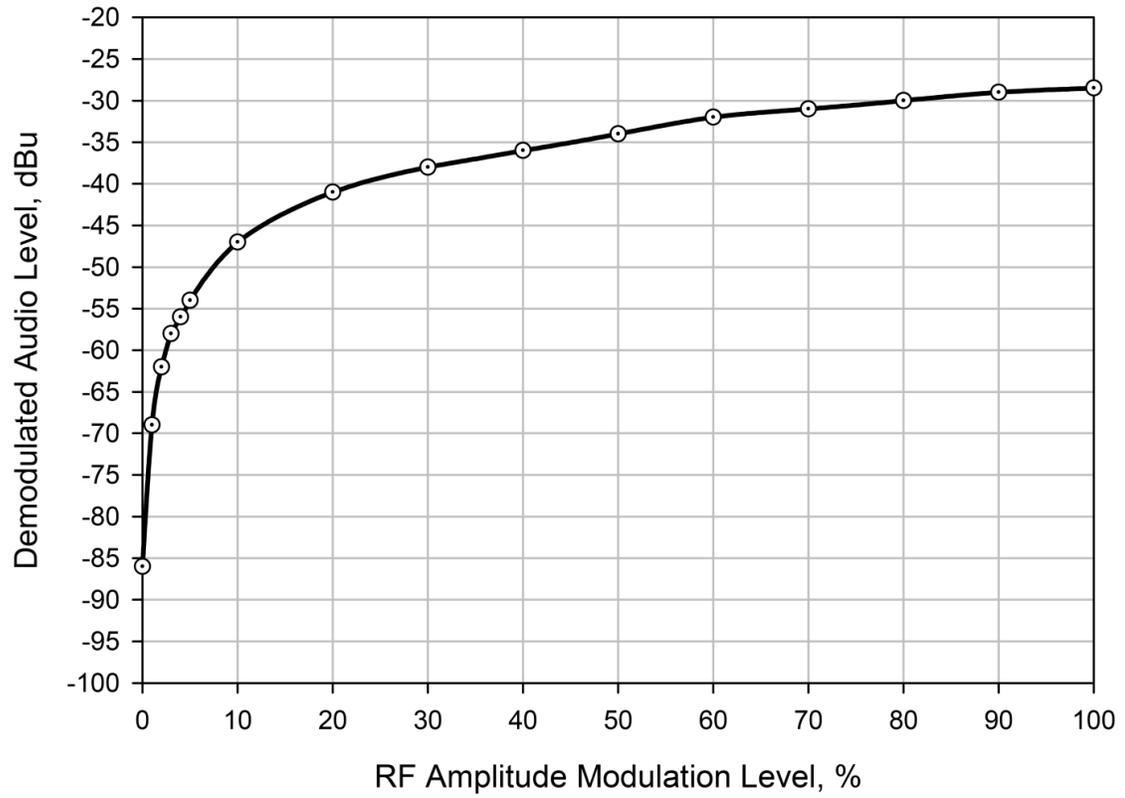
Note sides of Trapezoid are straight with distinct angles.

Bandwidth determined by exciter's audio, not distortions from RF amplifier.

- Low I.M.D. -



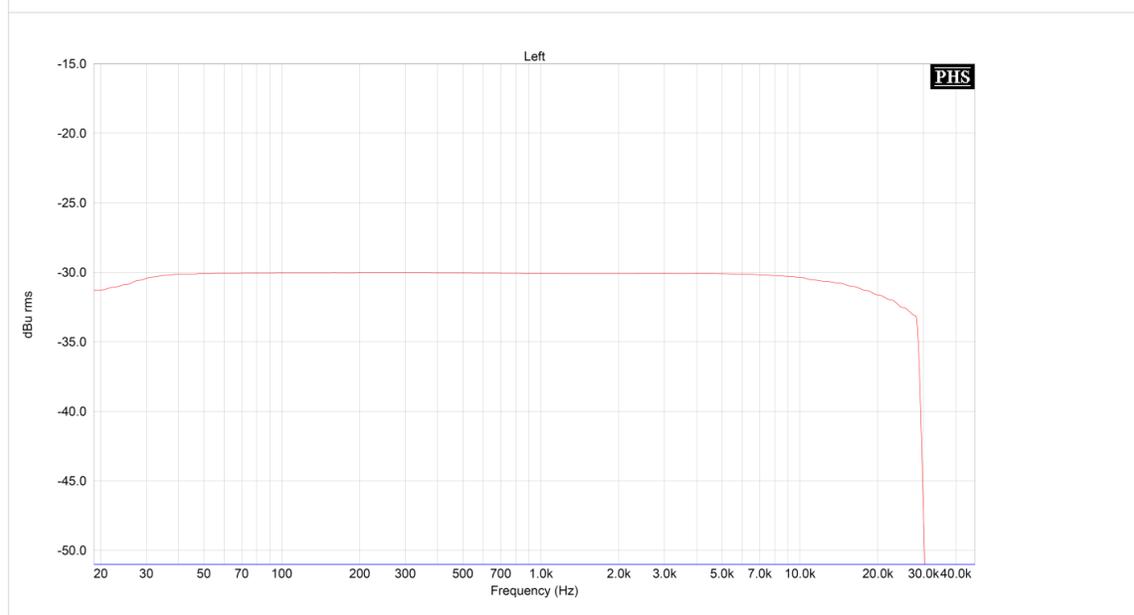
Amplitude Modulation Dynamic Range at 1 kHz



Sampling: 96000 Hz  
FFT size: 65536  
Averaging: 1  
Window: Hanning

CleanRF.com RF Demodulator  
RF at +7.1dBm, AM sweep 80% depth

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RF signal generated by HP2920A Comm Test Set = 7 MHz at +7.1 dBm carrier and 80% AM level.  
RF Demodulator BNC output to M-Audio Delta 1010LT soundcard calibrated with Fluke 289 True RMS Meter at 1kHz.