APx555 B Series | Audio Analyzer

High-performance, modular 2-channel audio analyzer

KEY FEATURES

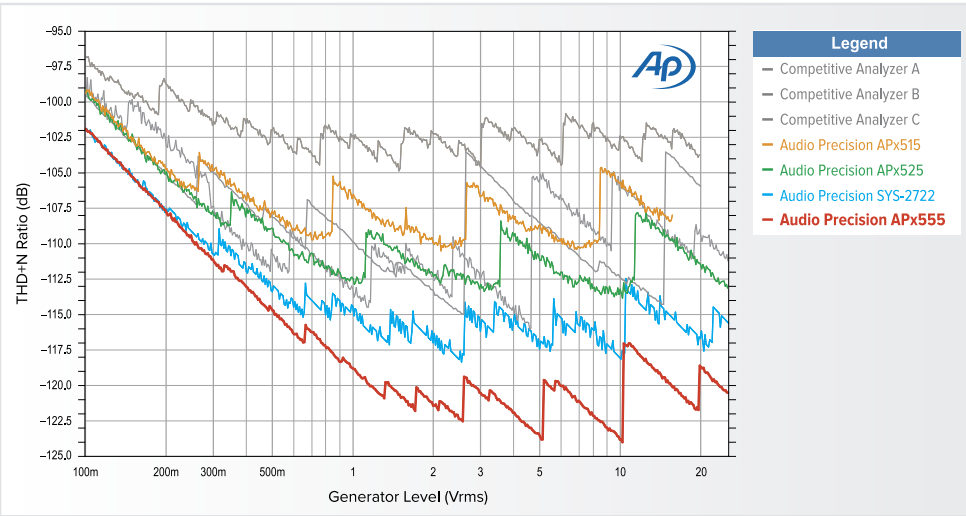
- Industry-best analog performance
- Residual THD+N: -120 dB (typical)
- Over 1 MHz bandwidth @ 24 bits on two channels
- Signal generation up to 204 kHz and 26 Vrms
- 1.2 M point FFTs
- ADC Test Mode option
- Support for the complete range of APx digital I/O options, including 32-bit digital serial I/O at up to 432 kHz sample rate
- Transfer Function Measurement
- Open-Loop Chirp Measurement
- Support for jitter capable digital interface options
- Advanced Master Clock for Reference, Sync and Trigger
- Independent output channel configuration

The New Standard – the highest performance and most versatile audio analyzer ever made.

A culmination of 30 years' experience making test equipment recognized as the standard of the audio industry, the B Series APx555 is an analyzer without compromise. It combines the best analog performance we have ever delivered with complete support for all APx digital I/O options and fast, intuitive measurement software. With the introduction of the B Series, the APx555 further lowers analog system residual distortion at sinewave frequencies above 50 kHz over the full 1 MHz bandwidth.

Unprecedented Performance

With a typical residual THD+N of -120 dB and over 1 MHz bandwidth, the APx555 B series surpasses the analog performance of all other audio analyzers. This performance is supported by 1.2 million point FFT resolution.



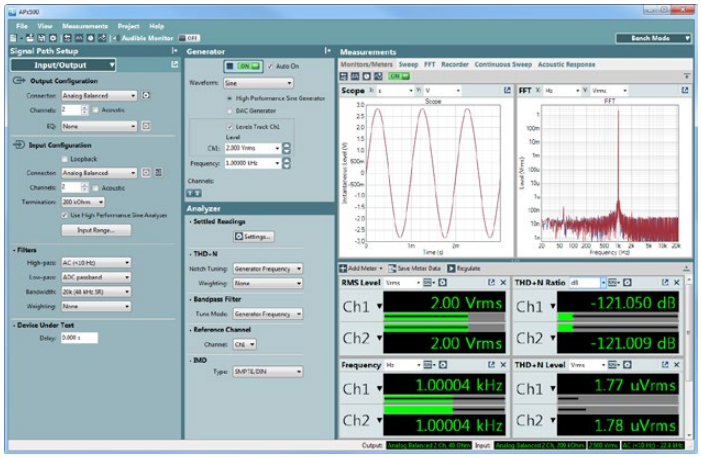
The chart above shows the residual THD+N of several current audio analyzers as a function of generator level; lower values are better. The red trace at the bottom is the APx555; the blue trace above that is the SYS-2722, and the green trace is the APx525.

Multi-mode UI

APx500 measurement software allows the B Series APx555 to adapt to the needs and preferences of audio designers, engineers and technicians.

Sequence Mode provides complete, code-free automation of pre-defined measurement sequences to enable fast and reliable results.

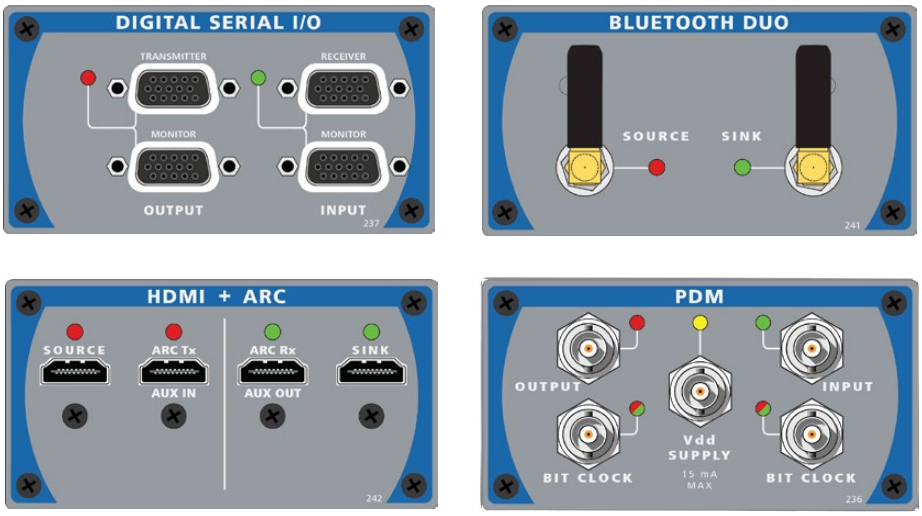
Bench Mode provides a real-time interface, with waveforms, FFTs and meters for virtually any parameter enabling the identification of important device interactions.



APx500 Bench Mode, showing live meters and monitors for waveforms, FFT, RMS levels, frequency and THD+N.

ADC Test Mode Option

The ADC Test Mode option provides an adjustable common mode VBias DC offset voltage on the balanced analog outputs. A Pin Voltage Protection mode, when enabled, prevents overvoltage damage to your direct-coupled ADC device's input during performance tests.



The B Series APx platform incorporates a modular architecture enabling configuration for a variety of digital I/O options.

Unmatched Flexibility

The APx555 supports the complete range of APx digital I/O options, ensuring compatibility with a wide array of audio formats and devices.

- Digital Serial – I²S, TDM, multi-line support (including jitter*)
- *Bluetooth*® – supports A2DP, AVRCP, HFP and HSP profiles
- HDMI+ARC – source, sink & monitor (including metadata)
- PDM – one-bit audio generation & analysis (including PSRR and jitter*)
- Advanced Digital – AES/SPDIF/Optical (including jitter*)

**Advance Master Clock is standard on the APx555, and supports all jitter capable digital interface modules.*

KEY SPECIFICATIONS

SYSTEM PERFORMANCE

Residual THD+N (22 kHz BW)
–117 dB +1.0 µV
Typically < –120 dB (1 kHz, 2.0 V)

GENERATOR PERFORMANCE

Sine Frequency Range
0.001 Hz - 80 kHz, DAC
5 Hz - 204 kHz, Analog
Frequency Accuracy
3 ppm, DAC
30 ppm, Analog (Precision Tune)
IMD Test Signals
SMPTE & MOD, DFD, DIM
Maximum Amplitude
26.66 Vrms bal, 13.33 Vrms unbal
(10 Hz to 100 kHz)
Amplitude Accuracy (1 kHz)
±0.03 dB (+15° C to +30° C)
Flatness (5 Hz - 20 kHz)
±0.008 dB
Analog Output Configurations
Unbalanced, balanced (differential or single-ended) or CMTST
Digital Output Sampling Rate
27 kS/s to 200 kS/s*
ADC Test VBias Range
–0.4 to +4.2 VDC

ANALYZER PERFORMANCE

Maximum Rated Input Voltage
300 Vrms (bal)
160 Vrms (unbal)
Maximum Bandwidth
> 1 MHz
IMD Measurement Capability
SMPTE & MOD, DFD, DIM
Amplitude Accuracy (1 kHz)
±0.03 dB (+15° C to +30° C)
Amplitude Flatness (10 Hz - 20 kHz)
±0.008 dB
Residual Input Noise (22 kHz BW)
≤ 1.0 µVrms
Individual Harmonic Analyzer
H2-H10
Maximum FFT Length
1248K points
DC Voltage Measurement
Yes

**Optical 27 kS/s to 108 kS/s*

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