



2700 Series Audio Analyzer

Extraordinary performance in a renowned audio analyzer



SYS-2722 dual domain audio analyzer

Key Features

- Extraordinary performance, long the recognized standard in audio test
- Dedicated analog circuitry for very low residual noise and THD+N
- 192 kHz digital input and output capabilities
- MLS, white noise, pink noise and other special purpose waveforms
- AP Basic scripting, Learn mode, LabVIEW & GPIB
- User-defined sweeps and switcher support for up to 192 channels

The 2700 Series is designed for audio engineers who need high performance, low distortion and great flexibility in their audio analyzer.

The 2722's true dual domain architecture enables uncompromised measurement of both analog and digital signals: the analog generator and analyzer performance surpasses that of any digital converter-based design, while digital analysis techniques offer a wide array of precise, high-speed measurement techniques for either domain. Cross-domain work can be accomplished using the best of both worlds.

The typical residual THD+N of the 2700 Series is ≤ 115 dB at 2.0 Vrms. However, even with Audio Precision's conservatively specified THD+N of -112 dB across the entire amplitude range, the 2700 Series is only surpassed by Audio Precision's much newer APx555 audio analyzer.

Extraordinary analog performance

No digital converter can beat the performance of Audio Precision's analog circuitry.

The analog generator has a bandwidth of 10 Hz to 204 kHz, flat within a few thousandths of a dB across the audio band. The analog analyzer has a bandwidth of 10 Hz to 500 kHz.

The 2700 Series matches the APx555 and surpasses competitive instruments with a maximum analog input of 160 Vrms and maximum generator output of 26.66 Vrms.

Models & Options

Select the analyzer that matches your needs. Modular hardware allows for future upgrades.

| | | | |
|----------|---|----------------|--|
| SYS-2722 | Analog and Digital Input and Output, with DSP. Dual domain. | Analog options | Burst, square, noise, IMD, W&F, Dolby Digital generator, source impedance, more. |
| SYS-2712 | Analog Input and Output, with DSP. | Analog filters | Weighting, de-emphasis, bandpass, more. |
| SYS-2702 | Analog Input and Output, no DSP. | PC Interface | USB, GPIB or APIB. |

Digital Analysis with 2700

The 2700 Series offers AES3/IEC60958 serial digital interfaces, with fully configurable serial data and clock ports available via the optional Programmable Serial Interface Adapter.

All digital input and output capabilities are functional over the full range of sample rates from 8 kHz to beyond 200 kHz.

The Digital Input/Output panel provides complete control and display of serial interface parameters including connector and format selection, sample rate, resolution, pulse amplitude, active data bits, error flags and received jitter amplitude. A Status Bits panel enables you to set and read interface metadata in both professional and consumer formats. Metadata is displayed in both hex and English interpretations.

Test the performance of AES3/IEC60958 receivers with sub-standard signals by introducing impairments to the output serial interface signal. Impairments include variable sample rate, pulse amplitude and rise and fall times, the addition of noise, common-mode signals, controllable jitter and a long cable simulation.

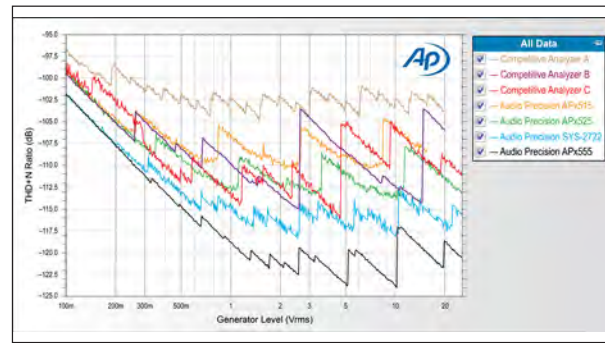
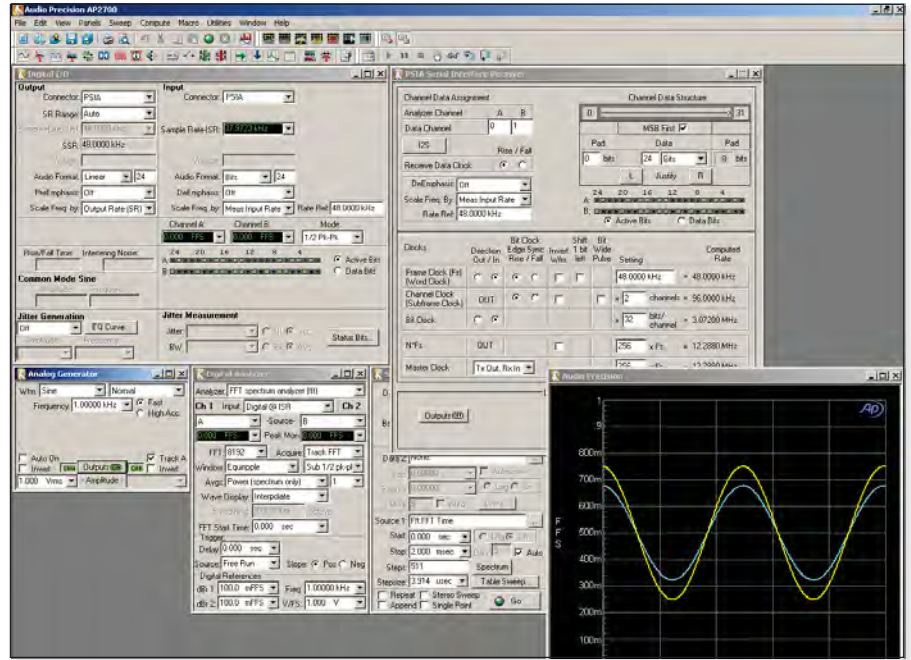
Use the Digital Interface Analyzer tool to measure and display the interface signal or jitter waveform and spectrum, histograms for a number of interface measurements or to generate an eye pattern. Add jitter of various types and amplitudes to the generated bitstream and measure the effect on the receiver and the resulting audio signal.

Chip-level design with the PSIA

The Programmable Serial Interface Adapter (PSIA-2722) enables the connection of chip-level devices, such as analog-to-digital converters, digital-to-analog converters or sample rate converters to a 2700 Series analyzer. The PSIA offers more connectivity options than any other serial digital audio adapter, including a variety of interface protocols beyond I²S, different logic families and voltage levels, clock rates, word



orientations, and formats.



1 kHz tone; 20 kHz BW

▲ MAXIMUM FLEXIBILITY
AP2700 panel-based UI allows power users to create nearly any audio measurement imaginable.

◀ LOW THD+N
The performance of seven audio analyzers available on the market today. The 2700 Series is the blue trace second from the bottom. The lowest trace in black is Audio Precision's APx555.

2700 Series Audio Analyzer Key Specifications

SYSTEM PERFORMANCE

Residual THD+N, 1 kHz
-112 dB, + 1.0 μ V, 22 kHz BW
Typical <-115 dB (1 kHz, 2V)

GENERATOR PERFORMANCE

Sine Frequency Range
10 Hz-204 kHz
Frequency Accuracy
3 ppm
IMD Test Signals
SMPTE, CCIF, DFD, DIM, TIM, DIN
Maximum Amplitude (balanced)
26.66 Vrms
Amplitude Accuracy
 ± 0.06 dB
Flatness (20 Hz-20 kHz)
 ± 0.008 dB (typically <0.003 dB)
Analog Output Configurations
Unbalanced & balanced
Digital Output Sampling Rate
28 kHz-200 kHz
Dolby Digital Generator
Optional

ANALYZER PERFORMANCE

Maximum Rated Input Voltage
160 Vrms
Maximum Bandwidth
>500 kHz
IMD Measurement Capability
SMPTE, CCIF, DFD, DIM, TIM, DIN
Amplitude Accuracy (1 kHz)
 ± 0.05 dB
Flatness (20 Hz-20 kHz)
 ± 0.008 dB
Residual Input Noise (22 kHz BW)
 ≤ 1.0 μ V [-117.8 dBu]
Individual Harmonic Analyzer
d2-d15
Max FFT Length
32K points
DC Voltage Measurement
Yes

ISO/IEC: 17025 ACCREDITED

Accredited by A2LA for equipment calibration under ISO/IEC: 17025. Calibration report and test data included with all new instruments.



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