APx515 | AUDIO ANALYZER

2-Channel audio analyzer

KEY FEATURES

- Typical THD+N –106 dB and 1.2M point FFTs
- Comprehensive test in 3 seconds without any coding
- Intuitive UI with one-click measurements
- Supports VB.NET, C#.NET, MATLAB, full LabVIEW driver
- Share projects and .wav acquisition files with any APx analyzer
- Create custom reports using MS Word and the APx UI
- Advanced measurement library includes IMD, MOL, dynamic range, FFTs, and more

Ideal for production test and entry-level R&D applications

The **APx515** is a high-performance audio analyzer optimized for production test. It is a best-in-class instrument for its combination of speed, performance, automation and ease-of-use.

APx515 can make all of the key audio measurements in less than three seconds. Despite its low cost, APx515 still has excellent performance, with a typical THD+N of –106 dB, 1.2M point FFTs and up to 216k digital I/O, as well as the one-click automation and ease-of-use of all APx Series audio analyzers. Like all AP instruments, APx515 comes with an ISO:17025 Accredited Calibration and three year warranty, so its results are trusted everywhere.

Comprehensive test in 3 seconds, easy automation AND low cost

APx515 operates either as a stand-alone test unit with its own user interface, or it can be controlled by a master .NET or LabVIEW application. In either case, an operator can control the APx515 with a keyboard, foot switch or barcode scanner, or the system can be totally automated. Switchers and external devices such as pass/fail lights are also supported.

In stand-alone mode, sophisticated test sequences are created by selecting from a list of common audio measurements—no coding required. Pass/fail limits, advanced configurations and user prompts can be added as necessary. Test reports may be generated automatically in a variety of formats and test data are easily exported to spreadsheets and other file formats. Additionally, a production test mode with simplified user interface is available that locks the project to prevent accidental changes once on the production line.

On an automated manufacturing line, a master .NET or LabVIEW application can control the APx515 directly using the API or APx LabVIEW driver. Individual measurements can be made or the master application can call a test sequence created with the APx user interface.

OPTIONS

APx515 has several software options for additional measurement capabilities.

SOFTWARE OPTIONS

SW-HST	Adds high speed multitone and continuous sweep measurements	**SW-ASIO**	Adds software connectivity for PC audio interfaces	**SW-POLQA-2**	Adds perceptual audio testing and MOS results for POLQA
SW-AML	Adds IMD, MOL, dynamic range, FFTs and other advanced measurements	**SW-BEN**	Adds Bench Mode capability to APx515	**SW-PESQ**	Adds perceptual audio testing and MOS results for PESQ
SW-ACR	Adds acoustic response measurements	**SW-SPK-PT**	Adds Polarity, Rub & Buzz, Airleak detection, and other advanced measurements	**SW-STI**	Adds STI measurement capability (STIPA method)
		SW-SPK-RD	Adds all SW-SPK-PT and SW-ACR, Thiele/Small, other advanced measurements		

Trusted results between vendors, designers and manufacturers

Thousands of engineers around the world trust measurements made with AP instruments, so collaboration can start with the mutual agreement that each party's test equipment is accurate and reliable.

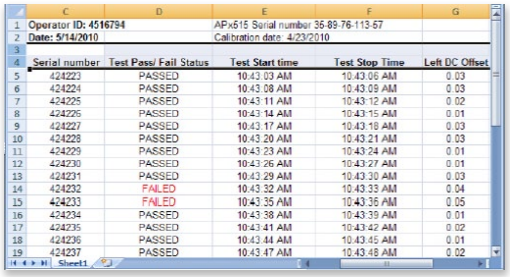
From a practical perspective, all APx audio analyzers use the same software, making tests and results easier to share between vendors, R&D and production facilities anywhere in the world.

For example, a test designer using an APx525 can create a production test sequence and email it to a contract manufacturer whose APx515 will run the project natively. Performing quality assurance on the production line, the APx515 operator can save a recording of the actual output of a device under test and email it (along with the 515's settings) in a single project back to Engineering for further analysis.

APx515 Standard Measurements

- Level & Gain
- Frequency Response
- THD+N
- Signal-to-Noise Ratio
- Noise
- Crosstalk
- Interchannel Phase
- DC Level
- Frequency Measurement
- Measurement Recorder
- Stepped Level Sweep
- Stepped Frequency Sweep
- Compare Encoded Bitstream
- CMRR
- SINAD
- Pass / Fail
- Scope Monitor
- DC Level Sweep
- Q-peak Noise
- Level Ratio
- Input Sample Rate

FAST & INTUITIVE UI
An example of the APx500 software's Production Test mode. In this mode, a test operator's use of the system is limited to a range of custom configurable presets.



	C	D	E	F	G
1	Operator ID: 4516794		APx515 Serial number 35-89-76-113-67		
2	Date: 5/14/2010		Calibration date: 4/23/2010		
3					
4	Serial number	Test Pass/ Fail Status	Test Start time	Test Stop Time	Left DC Offset
5	424223	PASSED	10:43:03 AM	10:43:06 AM	0.03
6	424224	PASSED	10:43:08 AM	10:43:09 AM	0.03
7	424225	PASSED	10:43:11 AM	10:43:12 AM	0.02
8	424226	PASSED	10:43:14 AM	10:43:15 AM	0.01
9	424227	PASSED	10:43:17 AM	10:43:18 AM	0.03
10	424228	PASSED	10:43:20 AM	10:43:21 AM	0.03
11	424229	PASSED	10:43:23 AM	10:43:24 AM	0.01
12	424230	PASSED	10:43:26 AM	10:43:27 AM	0.01
13	424231	PASSED	10:43:29 AM	10:43:30 AM	0.03
14	424232	FAILED	10:43:32 AM	10:43:33 AM	0.04
15	424233	FAILED	10:43:35 AM	10:43:36 AM	0.05
16	424234	PASSED	10:43:38 AM	10:43:39 AM	0.01
17	424235	PASSED	10:43:41 AM	10:43:42 AM	0.02
18	424236	PASSED	10:43:44 AM	10:43:45 AM	0.01
19	424237	PASSED	10:43:47 AM	10:43:48 AM	0.02

BEST-IN-CLASS FOR SPEED
Production line results from APx515.

KEY SPECIFICATIONS

SYSTEM PERFORMANCE

Residual THD+N (20 kHz BW)
–102dB + 1.4 µV
Typical <–106 dB (1 kHz, 2.0 V)

GENERATOR PERFORMANCE

Sine Frequency Range
0.1 Hz to 80.1 kHz

Frequency Accuracy
3 ppm

IMD Test Signals
SMPTE, MOD, DFD

Maximum Amplitude (balanced)
16.00 Vrms

Amplitude Accuracy
±0.05 dB

Flatness (5 Hz - 20 kHz)
±0.010 dB

Analog Output Configurations
Unbalanced,balanced, common mode

Digital Output Sampling Rate
27 kS/s - 200 kS/s*

Dolby / DTS Generator
Yes (encoded file)

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

ANALYZER PERFORMANCE

Maximum Rated Input Voltage
125 Vpk

Maximum Bandwidth
>90 kHz

IMD Measurement Capability
SMPTE, MOD, DFD

Amplitude Accuracy (1 kHz)
±0.05 dB

Amplitude Flatness (10 Hz - 20 kHz)
±0.010 dB

Residual Input Noise (20 kHz BW)
1.4 µV

Individual Harmonic Analyzer
d2–d10

Maximum FFT Length
1024K points

DC Voltage Measurement
Yes

ACCREDITED
Certificate # 2527.01

Accredited by A2LA
under ISO/IEC: 17025
for equipment calibration

Audio Precision
5750 SW Arctic Drive
Beaverton, OR 97005 USA

ap.com
(800) 231-7350
sales@ap.com