PHONIC

PAA3X | PAA6

PERSONAL TESTING SOLUTIONS

Complete audio and spectrum analysis tools for use both in and out of the field.

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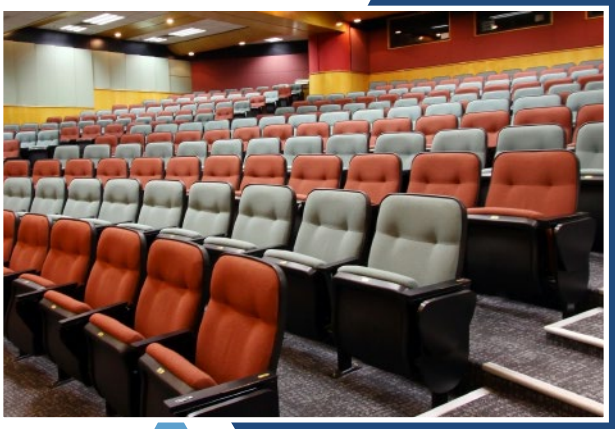
PHONIC PAA SERIES ADVANTAGES

If you take a gander into the toolbox of any audio engineer, chances are you will find a portable analyzer – and more often than not, it's a Phonic. Since the original release of the PAA1 portable analyzer, roadies, engineers, installers, manufacturers, and audiophiles alike have all been enticed by the phenomenal features and incredible accuracy of these portable audio analyzers. The ability to measure a wide range of signals – from audible to electrical signals – combined with their handheld design, makes the PAA series perfect for anybody who needs a quick, effective means to measure signals in the field.



- Compact size – fits right into your toolbox, or even your back pocket.
- Completely portable – easy to take with you out in the field.
- Long battery life – at least 3 hours of use on a single set of batteries or full charge.
- Flexible placement – using mic-stand adapters and microphone holders (if included).
- Selectable weightings – including A, B, C and flat weightings.
- Flexible measurement possibilities – take readings in dB SPL, dBu, dBV and Voltage.
- Adjustable response time – read results lightning fast or slow and steady.
- EQ settings – automatically calculates best equalizer settings for smooth response.
- Type I microphones – for accurate readings every time (within ±0.7dB).
- Factory calibrated – with user mic calibration possible through 94dB calibrator.
- Built-in tone generators – with sine waves, polarity signals, and more.
- Backlit screen – take measurements and view readings in dark areas.

PAA3X

In 2016, Phonic breathed new life into their series of personal analyzers with the PAA3X. Taking many core features of the classic PAA3 and combing them with the operating system of the PAA6, Phonic engineers were able to offer the best of both worlds with the PAA3X – enhanced digital audio analysis with field-tested measurement features. The all new PAA3X also features a first for Phonic analysers: a completely detachable – yet still highly accurate – condenser microphone. Connected via a mini-XLR jack, the PAA3X comes complete with a 16 foot / 5 meter extension cable allowing for unprecedented flexibility when placing the microphone! The PAA3X is available in stores globally now.

Available Functions:
1/3rd Octave RTA
1/6th Octave RTA
GEQ Settings Calculator
Level Meter (SPL and more)
RT-60 Reverb Time Calculation
Polarity Checker
Screen Capture

Included Items:
- Mic Stand Adapter
- Microphone Holder
- 5m Mic Extension Cable
- Micro SD Card
- USB Cable
- Power Adapter

Overview

Precision Mic
The PAA3X offers a detachable precision microphone that can be placed in virtually any position. The system comes complete with a 5m extension cable and a mini microphone holder that enables the mic to be placed in areas that may otherwise be difficult to analyze.

USB Connection
The PAA3X's internal lithium-ion battery can be charged through the USB connector.

Micro SD Card Slot
The PAA3X offers a screen shot function that will instantly capture an image of the screen and storing it an inserted SD Card as a BMP file.

XLR Input
Measure incoming line signals in dBu, dBV and voltage using the balanced XLR input connectors.

XLR Output
The PAA3X's internal signal generator offers pink noise, sine waves, polarity signal, and sweep waves.

PAA6

The feature-rich PAA6 is an advanced, two-channel digital handheld professional analyzer controlled through a large, full-color touch screen. The PAA6 inherits significantly improved functions from popular models in the Phonic audio analyzer family, including real time spectrum analysis, RT60, signal generator, LEQ, EQ setting, sound pressure level, and polarity checking. Moreover, the PAA6 provides engineers with an even wider array of essential sound analysis tools than ever before – now adding Fast Fourier-Transform, THD+N, and scope functions to the mix, as well as two built-in precision mics that can take highly accurate measurements in any given situation.

Available Functions:

1/3rd Octave RTA
1/6th Octave RTA
Real-time GEQ Settings Calculator
FFT – Fast Fourier Transform
RT-60 Reverb Measurement
Level Meter (SPL and more)
THD+N (Total Harmonic Distortion & Noise)
Oscilloscope
Phase Meter
Polarity Checker
LEQ - Equivalent Continuous Noise Level
Screen Capture

Included Items:

- Carry Case
- Audio Test CD
- Mic Stand Adapters
- USB Cable
- Power Adapter

Overview

Precision Mic

The PAA6 has two onboard Type 1 condenser measurement microphones for stereo readings, accurate within ±0.5 dB.

USB Port

The USB port has two main functions. The first is for transferring files from the internal memory to your computer. The second is for real-time operation through the Windows software. The Windows software mirrors the PAA6 screen on the computer and requires a firmware update.

SD Card Slot

Memory readings and screen caps can be saved directly to any FAT-32 formatted SD-HC card.

DC Power Inlet

his port is for connection of the PAA6's power adapter. This can be used to charge the internal battery in addition to providing power when in use.

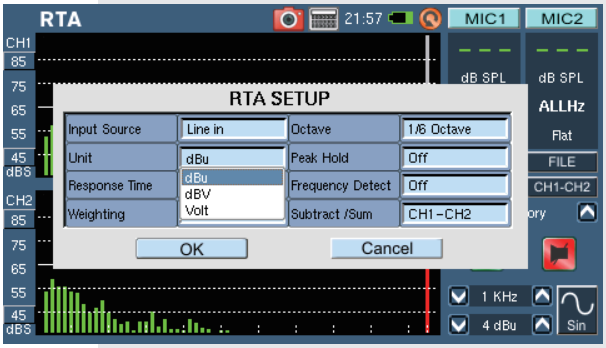
Controls

The PAA6 includes 3 buttons and a joystick allowing easy use of the device without the touch screen. The Run and S.G. buttons instantly enable the current functions/signal generator, while the screen capture button will immediately take a snapshot of the screen and store it to an SD card. The joystick enables the menu to be accessed without use of the touch screen.

Touch Screen

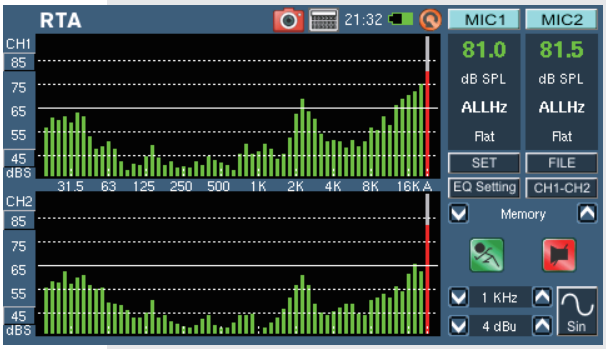
Complete control of the PAA6 Audio Analyzer is possible through the color capacitive touch screen. Phonic has also included a stylus placed in a holder on the rear of the device to ensure more accurate control.

ANALYZER ESSENTIALS



VERSATILE SIGNAL MEASUREMENT

Phonic analyzers provide accurate measurement of signals between 20 Hz and 20 KHz, but measurement isn't limited to just audible sounds. All models, in fact, have 4 different input methods that users can utilize. The first is SPL (measured in decibels), which is measured through the highly accurate measurement microphones. These measure signals between 30 Hz and 130 dB SPL. Other input methods are measured through the devices' XLR input connectors. These include dBu – able to measure input signals between -85 and 25 dBu – and dBV – for signals between -87.2 and 22.8 dBV. The final option every analyzer offers is Voltage. This allows input of signals between 0.0436mV all the way through to 13.7V.

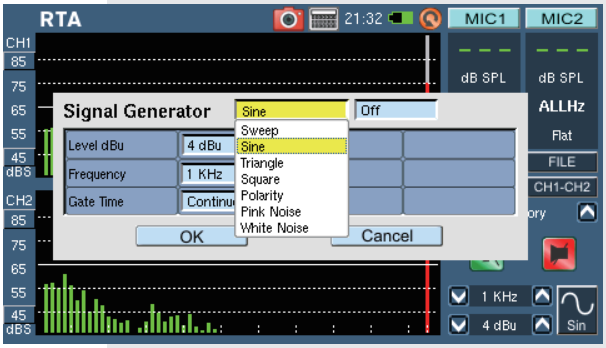


MEASURE IN REAL-TIME

Each of the Phonic Personal Audio Analyzers features a Real-Time Analyzer (RTA) function for full-spectrum analysis of audio signals from 20 Hz to 20 KHz. Depending on the model, Phonic analyzers offer 1/3rd or 1/6th octave RTAs for 31 or 61 frequency bands, respectively. In addition to these, the PAA6 offers an FFT – or Fast Fourier Transform – for more detailed real-time analysis for better visibility of harmonics.

REVERB MEASUREMENT

Phonic's analyzer series provide a simple and effective means to measure reverb decay time in any venue. This is done by measuring background noise, then waiting for trigger a signal 30dB over the background noise. The system then calculates the time it takes for this trigger signal to decay to calculate an RT60 time (ie. The time it takes the signal to decay 60 dB). A high RT60 result is a perfect indicator of reflections off walls and other surfaces. For example, in a church or cathedral, there may be a high reverb time, while in a recording studio or sound booth you would expect a significantly lower RT60 result.



SIGNAL GENERATOR

Exclusive to the PAA3X and PAA6, Phonic's fully-featured signal generator offers every manner of test signal an audio engineer could need. White noise and pink noise are included as standard, as well as adjustable sinewaves (at user-selectable frequencies) and sweep waves (with adjustable ranges). The PAA6 further incorporates triangle and square waves into their signal generator, allowing better visibility of distortion and clipping – among many other great uses.

PAA3X	
Input / Output	
Microphone	Detachable condenser microphone
Line	XLR jacks for line input and output
Data Port	Charging only
Display	320 x 240 RGB LCD screen
Measurement Units	dB SPL, dBu, dBV, Volt
RTA	1/3rd or 1/6th octave resolution 31-band or 61-band Center frequencies ISO standard from 20Hz to 20KHz
Measurement Range	
SPL (Microphone Input)	30 to 130 dB SPL
dBu (Line Input)	-85 to 25 dBu
dBV (Line Input)	-87.2 to 22.8 dBV
Voltage (Line Input)	0.0436mV to 13.7V
Settings	
Weighting	A, B, C, or Flat
Peak Hold	On/Off
Maximum Level Display	Reset
Response Time	35 ms, 125 ms, 250 ms, 1 sec
Other Functions	Reverberation time display, up to 30 seconds Screen shot function
RT60	Time
Memory	Yes
EQ Setting Value Display	31-band or 61-band (real-time display)
Phase Checker	Polarity checker (Negative / Positive)
Tone Generator (based on 6VDC power source)	Yes
Pink Noise	Balanced output, -10 dBu
Sine Wave	Balanced output, -10 dBu
Polarity Signal	Balanced output, -10 dBu
Sweep Wave	Balanced output, -10 dBu
Power Source	Built-in lithium-ion battery Charging: DC 5V, 2A
Dimensions (H x W x D)	156 x 90 x 37.5 mm (6.14" x 3.54" x 1.5")
Weight (with batteries)	325 g (0.7 lbs)

PAA6		
Inputs / Outputs	Microphone	Built-in omni-directional condenser microphones
	XLR Jack	Balanced XLR inputs and outputs
	USB	USB High Speed 2.0 Interface
Display		480 x 272, 16-bit, full color touch screen
Measurement Units	All Available Functions	dB SPL, dBu, dBV, Volt
Range	Mic In / Line In	30 to 130 dB SPL / -85 to 25 dBu / -87.2 to 22.8 dBV / 0.0436mV to 13.7V
Memory	Location	SD card and internal memory
	Capture	BMP format (480 x 272 pixels)
Generator		Sine, triangle, square, polarity, sweep, pink noise, white noise
RTA	Frequency	20 Hz to 20 KHz
	EQ Setting	EQ Cut or Boost
	Subtract / Sum	CH1+CH2. CH1-CH2. CH2-CH1
	Dynamic Range	30 to 130 dB. 60dB display range
	dB-scale Setting	+ / - 5dB steps on Y-Axis
	Octave	1/1, 1/3, 2/3, 1/6
	Weighting	A, B, C, Flat
FFT	Frequency Range	13 selectable bandwidths
	Subtract / Sum	CH1+CH2. CH1-CH2. CH2-CH1
	Octave	1/1, 1/3, 2/3, 1/6
	Weighting	A, B, C, Flat
RT-60	Trigger	Internal / External
	Weighting	A, B, C, Flat, 1 octave
THD+N		Less than 0.005%, 20 to 20KHz +4 dBu
Meter		30 to 130 dB SPL / -85 to 25 dBu / -87.2 to 22.8 dBV / 0.0436mV to 13.7V
Phase	Phase Degree	Phase Correlation
Oscillator Scope	Trigger	CH1, CH2, CH1+CH2
	Mode	Auto, Normal
Polarity	Polarity Checker	Negative / Positive
LEQ	Weighting	A, B, C, Flat
	KHz	Selectable Frequency
	Time	Selectable up to 48 hours
Battery	Lithium-ion	DC3.7V - 2 x 1100 mAh
Dimensions	(W x H x D)	174.5 x 40 x 105.5 mm (6.89" x 1.57" x 4.17")
Weight		460g (1 lbs)