

Trinnov ST2-HiFi: Preamplifier, AD/DA Converter, Room/Speaker Optimizer

Easy Setup	<ol style="list-style-type: none"> 1. Insert the system between your player/pre-amplifier and the amplifiers, and connect the microphone 2. Run the measurements at one or multiple mic positions. 3. Listen to the optimized sound 4. Change the <i>target curves</i> and other optimization parameters 5. Store up to 6 customisable profiles and 29 user-defined presets
Powerful Algorithms	<ul style="list-style-type: none"> • Multi-point measurements of all loudspeakers • Time-frequency analysis: the loudspeakers and the room are separately equalized • Automatic optimization of amplitude and phase response according to Target Curves • Intelligent active crossovers: automatic alignment of delays and gains for every driver
Flexible Fine-Tuning	<ul style="list-style-type: none"> • Comprehensive acoustical graphs • Optimization parameters: maximum boost, maximum attenuation... • Manual FIR, parametric and graphic EQs
High Performance Audio	<ul style="list-style-type: none"> • All audio boards designed and manufactured by Trinnov Audio • A/D signal-to-noise ratio: 119 dBA • D/A signal-to-noise ratio: 118dBA • Advanced jitter-rejection technology • 64-bit floating point processing • 96 kHz (192kHz ready) • 4 simultaneous inputs and outputs processing channels • Available speaker settings : one stereo pair, bi-amplified stereo, two stereo pairs, 2.1, 2.2, LCR, LCRS, 3.1, quad.
Remote control	<ul style="list-style-type: none"> • Via optional IR module and/or KVM • Using optional touchscreen • From any PC, Mac, iPad, iPhone or Android phone (using a VNC client application, through the network) • Real-time control of the processor
Inputs	<ul style="list-style-type: none"> • 1 AES on XLR connector • 1 Spdif on RCA connector • 4 single ended analog on RCA connectors • 4 balanced analog on XLR connectors
Outputs	<ul style="list-style-type: none"> • 1 AES on XLR connector • 1 Spdif on RCA connector • 4 single ended analog on RCA connectors • 4 balanced analog on XLR connectors
Power Supply	<ul style="list-style-type: none"> • 2 Independent Power Supply Units for audio and processing sections
Dimensions	<ul style="list-style-type: none"> • Width x Height x Depth: 444 x 88,5 x 405 mm



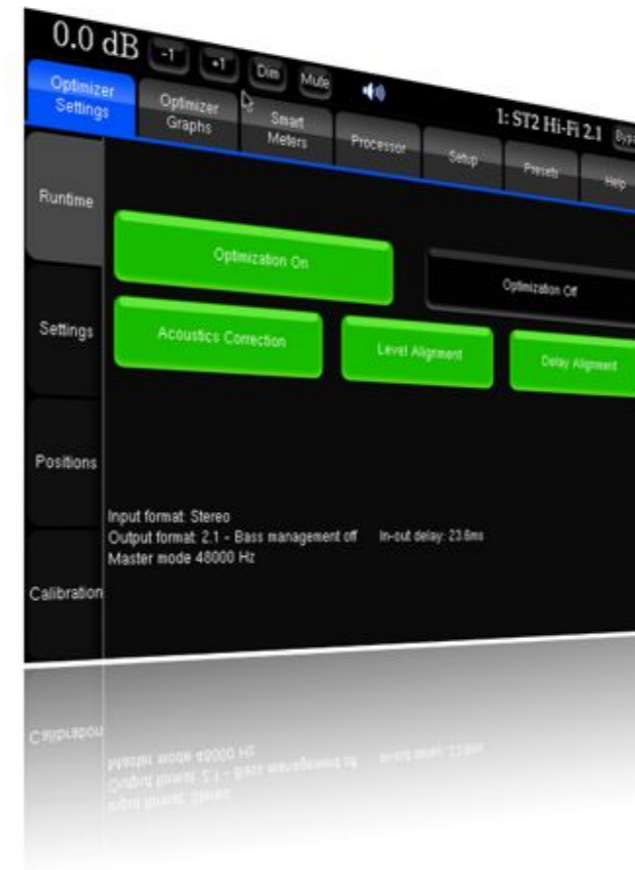
Request a demo from a Trinnov partner near you :



Headquarters: 2 Avenue de l'Europe, 94360 Bry-sur-Marne France. T: +33 147 06 61 37 / USA Operations: Curt Hoyt, Huntington Beach, CA 92649 USA. T: +1 714 840 10 65 / © 2011 Trinnov Audio SA. All rights reserved.

Trinnov ST2-HiFi

Preamplifier, AD/DA Converter, Room/Speaker Optimizer



Acoustic

The weakest element of any high-fidelity system is the **room**. Typical rooms introduce up to 10dB of **distortion** in the frequency response. Furthermore, loudspeakers with a perfect impulse response don't exist.

Fidelity

Trinnov's ST2-HiFi **solves** the acoustic equation. It takes your high-end system to a whole new level of **accuracy**, from high-fidelity to **acoustic-fidelity**.



Trinnov ST2-HiFi

From High-Fidelity to Acoustic-Fidelity

Room acoustics are anything but transparent. In fact, when you consider your system as a whole, the room is the only element that introduces large amounts of *distortion*. Therefore, as long as the room is adding its own sound to the music, the *fidelity* of your system is highly compromised. Trinnov's breakthrough research solves this complex equation. The ST2-HiFi loudspeaker/room optimizer takes your system from *high fidelity* to *acoustic fidelity*.

Modern Acoustic Measurements

The ST2-HiFi uses MLS signals to measure the full *impulse response* of every loudspeaker in the room. This adds the *time* dimension to the frequency response, and enables the Optimizer to see the *full picture* of the loudspeaker's behavior in the room.

Exclusive Acoustic Analysis

Trinnov's state-of-the-art *time-frequency* analysis algorithms identify room modes, first reflections and late reverberation. Every acoustic aspect is analyzed and compensated with a specific technique. All the subtlety of the Optimizer resides in knowing which defects can be corrected with *acoustic transparency*.

Powerful Equalization

The ST2's intelligent acoustic engine *automatically* computes FIR and IIR filters to improve the consistency of *direct sound* against *late reverberation*. Full-phase, time domain techniques are applied compensating for the loudspeaker's *group delay* and for very early reflections (deconvolution), while later reflections are left untouched.

Comprehensive Graphs

The integrated acoustic analysis tools provide insight on the measurements. You can easily overlay multiple graphs to compare the loudspeakers, the measurement points, or the results of the optimization against the graphs without optimization.



Trinnov Audio
3D Measurement Microphone



The ST2-HiFi features *Trinnov audio boards*, *separate power supplies*, Intel *dual-core processor* and *silent fan*.

Tonal Balance and Target Curves

The loudspeaker's sound (including the *early reflections*) and the room (*energy response*) are separately equalized, opening up the listening window. Trinnov corrects the tonal balance to obtain a neutral timbre for every speaker. If a specific target curve is defined, the optimization algorithms automatically compute the filters to reach it.

Stereophonic Image and Phase Response

The ST2-HiFi also corrects the *phase* response by applying *FIR* filters that work in the time domain. The result is a high resolution stereophonic image with well-focused phantom sources.

Wide Listening Area and Multi-point

Trinnov's sophisticated multipoint algorithms can take into account the measurements of *different positions* to perform the optimization. You can assign a higher *weight* to the most important listening position(s), and lower weights to the other points.

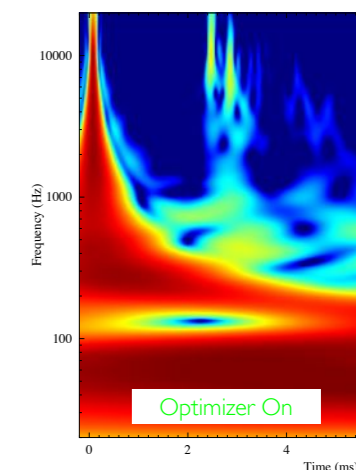
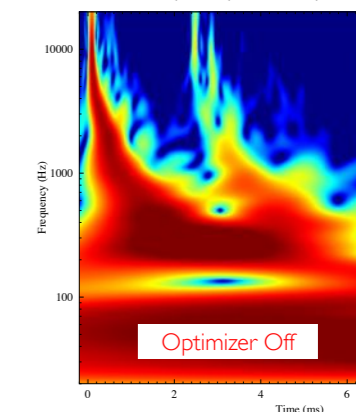
Easy Fine Tuning

Intuitive parameters can be modified, such as the *maximum boost* and *maximum attenuation*. Manual FIR, parametric and graphic EQs are included to *fine-tune* the results of the automatic optimization. Your ears have the final word.

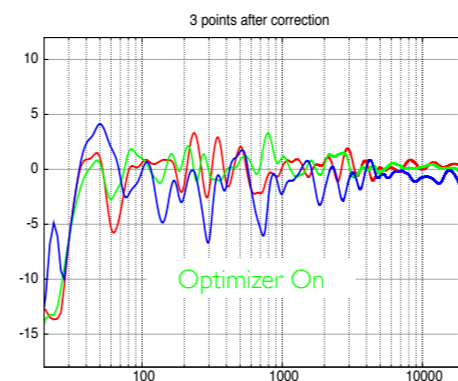
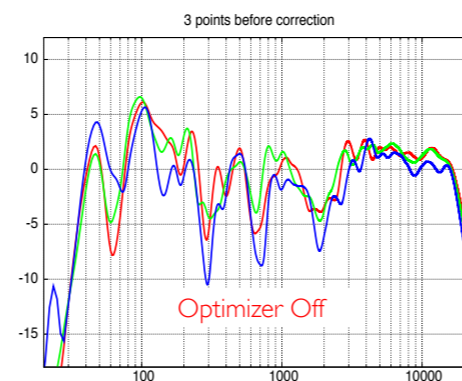
Intelligent Crossover Alignment

Individual driver and system measurements are acquired and analyzed, including the impulse response, delays and gains of every driver. The Trinnov calibration engine computes the ideal filters, finding the best compromise to improve *flatness*, directivity and attack in the *overlapping* frequency region.

Time-Frequency analysis (wavelet)



Multi-point Optimization



Testimonials

"I never imagined such an impressive result on my loudspeakers. The perfect matching of the loudspeaker's phase creates an amazingly accurate soundstage: all instruments take their space effortlessly and accurately. I don't have doubts anymore about the timbre. A wealth of details emerge thanks to the removal of any masking effect. I wonder if a restless quest for the perfect loudspeaker/amplifier combination could have given me the same result. What is for sure is that my system has made a huge leap forward."

PhL, Paris, France

"With or without this device, it's night and day. Two things are obvious: the sound has more air, and it's cleaner. We make a big leap towards the obvious musicality. Even on lower quality recordings the sound is smoother. At high levels, any confusion is removed. The room becomes your ally: only the defects are removed, and the qualities are preserved. I wouldn't say that the result is spectacular. Rather it's obvious. What is spectacular is when you switch back to the non optimized sound. You just think to yourself: how could I live without it? "

Blaise Runner, Paris, France