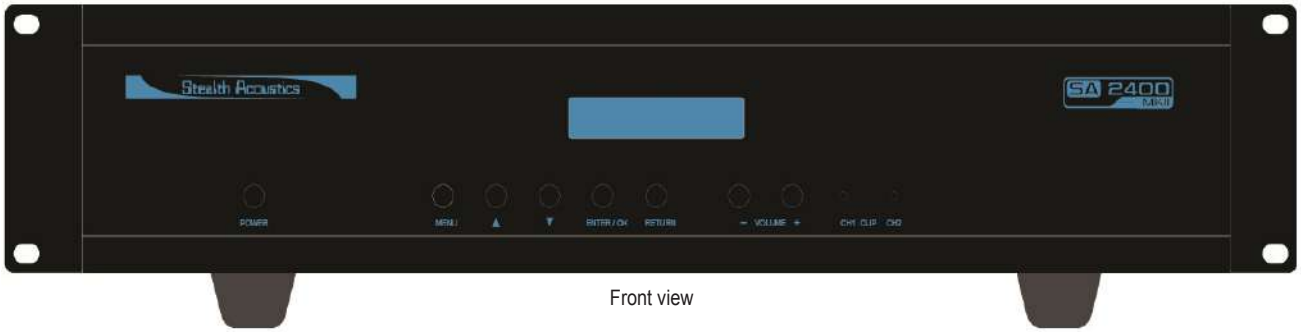
Stealth Acoustics

SA 2400 MKII

## SA2400MKII 2-Channel, High-Current Amplifier with DSP




Front view


Rear view

The Stealth Acoustics SA2400MKII is a high-current two-channel amplifier with powerful built-in digital signal processing functions suitable as a low distortion power source for Stealth Acoustics speakers, Stealth subwoofers, or other un-powered speakers and subwoofers. Intended for distributed audio, fixed installations, or home theater applications, the SA2400MKII mounts using the supplied removable rack ears in a standard 19" (482 mm) equipment rack requiring only two RU spaces (3-1/2" - 89 mm), or may stack with other free-standing components. The SA2400MKII delivers a solid 310 watts per-channel into an 8Ω load and 450 watts per-channel into 4Ω.

The SA2400MKII's internal DSP functions may be programmed for each channel independently or together and include 11 bands of fully-parametric EQ, variable High and Low Pass filters with selectable slopes, fully-programmable limiter stage and delay functions. All parameters may be programmed using front panel controls or via a USB connected computer utilizing Stealth Signal Management System software (SSMS).

For maximum flexibility integrating into any audio system, the SA2400MKII includes RCA unbalanced line level, balanced XLR line level, and phoenix speaker level inputs for each channel, all with "pass-through" output connectors. Line level pass through outputs may be programmed as either "pre" or "post" DSP feeds to facilitate extending DSP tuning to additional amplifiers. The speaker level input/pass-through connections allow the SA2400MKII to feed directly from full-range speaker lines, anywhere in the system and will track the speaker's output level. A stereo optical input is provided for connecting digital sources to the amplifier. Inputs may be mapped to either channel and may be "mono-summed" via programming. The SA2400MKII amplifier output connections are via 5-way binding posts designed to accept heavy gauge speaker wires.

10 internal, remotely re-callable, read-write presets allow the amplifier to quickly change profile states for different modes of usage, or to load factory speaker optimization curves for Stealth invisible and environmental speakers and subwoofers. Users may store and recall unlimited amplifier profile files via the SSMS App. A selectable automatic turn-on feature activates the amplifier only when audio signals are present, or the 12V trigger function may be utilized to activate and deactivate the amplifier, along with other system components. The IR control functionality also allows for remote control of master volume and preset selection via most 3rd-party control systems. Quiet 8-stage cooling fans automatically engage as required. The front panel includes direct master volume and menu access controls as well as an LCD display window and dual clip indicators. 115VAC through 230VAC 50/60 input line voltages are automatically accommodated via the auto-sensing IEC power inlet. The Stealth Acoustics SA2400MKII amplifier is covered by a 2-Year manufacturer's warranty.

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Totally Invisible Audio Solutions

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# SA 2400 MKII

## 2-Channel, High - Current Amplifier with DSP

## Architectural & Engineering Specifications

The amplifier shall be dual-channel high-current class A/B+B device with analog power supply and built-in DSP functions designed as a low distortion power source for Stealth Acoustics speakers, Stealth subwoofers, or other un-powered speakers and subwoofers. The amplifier shall provide a minimum of 310 watts per channel into an 8Ω load and 450 watts per channel into a 4Ω load with both channels driven. The amplifier shall have an autosensing IEC AC mains power input supporting 115VAC - 230VAC 50/60Hz voltages.

The amplifier shall have internal DSP functions programmable for each channel independently or together and shall provide 11 bands of fully-parametric EQ (Frequency, Gain, and Bandwidth), variable High and Low Pass filters with four selectable filter slopes, fully-programmable limiter stage including knee parameter, and 100Ms of delay. All DSP functions shall be programmable using front panel controls or via a USB connected computer utilizing Stealth Signal Management System software (SSMS).

The amplifier shall feature a flexible complement of input and output connectors. Inputs shall include RCA unbalanced line level, XLR balanced line level, and phoenix speaker level connectors, all with pass-through output capability. Line level pass-through outputs shall be selectable as either “pre” or “post” DSP. The amplifier shall have an optical stereo digital audio input (TOS). Any input connection may be routed to any input channel via programming or “mono-summed” for routing to either or both channels. The amplifier output connections shall be via 5-way binding posts designed to accept heavy gauge speaker wires.

The amplifier shall provide 10 user configurable remotely-recallable internal presets as well as IR control functions for volume control. 12V trigger connections and a switch-selectable automatic turn-on feature shall automatically activate the amplifier when signals are present. The amplifier shall also feature internal 8-stage cooling fans. The front panel controls shall include direct master volume and menu access button controls as well as a 2-line LCD display window and dual clip indicators. The front panel lighted graphics and LCD display shall have 3 levels of dimming.

The unit shall weigh 29.5 lbs (13.4 kg) and be supplied with removable rack ears. The unit shall measure 19” (482 mm) wide with rack rails – 17” (432 mm) wide without rails, 3-1/2” (89 mm) high and 15-3/4” (400 mm) deep.
The amplifier shall be the Stealth Acoustics model SA2400MKII and shall be covered by a 2-year manufacturer’s warranty.

## Digital Signal Processing Features

- **Each channel independently programmable**
- **11 Bands fully-parametric EQ** (Frequency, Gain and Bandwidth)
- **Full Limiter stage** (programmable Threshold, Attack, Release, Ratio and Knee parameters)
- **Programmable High-pass filter** (20Hz-150Hz with selectable 6db, 12dB, 18dB and 24dB slopes)
- **Programmable Low pass filter** (50Hz-100Hz with selectable 6db, 12dB, 18dB and 24dB slopes)
- **Delay** (100Ms maximum per channel)
- **Phase Reversal**
- **Input signal routing and summing**
- **IR Control of Volume and Preset Selections**
- **Front panel Menu Programming or via USB connection using optional free SSMS software**

## Product Specifications

**Power Output (per channel – both channels driven)**
310 watts @8Ω < 0.05 THD
450 watts @4Ω < 0.05 THD

**Frequency Response**
20Hz-50kHz (+1/-3dB)

**Total Harmonic Distortion**
< 0.05 @ 450 watt @4Ω / 1 kHz

**Signal to Noise Ratio**
>105 dB / A weighting 20Hz-20kHz

**System Impedance**
8Ω Nominal - 4Ω Minimum

**Full Output Current Draw**
1080 watts @115V / 8 Ω (100Hz sine wave - both channels driven)
1560 watts @115V / 4 Ω (100Hz sine wave - both channels driven)
Typical audio power current draw is 1/8 to 1/4 Full Output Current Draw, depending on source material / load

**Amplifier / Load Protection**
Full short circuit, open circuit, thermal, ultrasonic and RF protection
On/Off muting with auto volume ramp up on power-up
DC fault power supply shutdown
Fixed high-pass filter @18Hz
Stable into reactive or mismatched loads

**Dimensions**

| | |
|---|---|
| Width: | 19” (482 mm) |
| Height: | 3-1/2” (89 mm) – without feet |
| Depth: | 15-3/4” (400 mm) |

**Finish**
Black anodized aluminum

**Shipping Weight**
38 lbs. (17.2 kg)

## Product Features and Functions

**Flexible Inputs with Selectable Pass Through**
Phoenix connector speaker level inputs / outputs
RCA unbalanced line level inputs / pre or post DSP outputs
XLR balanced line level inputs / pre or post DSP outputs
Optical Digital input (stereo TOS - routable, no pass through output)

**Amplifier Output Connectors**
5-way binding posts (each channel)

**Front Panel LCD Display**
Input level readout
Programming / parameter display
Dimming function (3 levels)

**USB Connection**
For Computer programming of DSP features via SSMS software

**Auto On / Standby Function**
Switch selectable “On” or “Auto” or via 12V Trigger

**Fan Cooled**
Automatic – 8 speed stages

**Autosensing 115V-230V 50/60Hz Input Voltages**

**Rack Mountable**
(2) RU spaces: 3-1/2” (89mm)
Removable Rack Ears

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