

SSOUNDS D24X

Flagship 4-channel high-power DSP amplifier, subwoofer-grade output with full FIR processing.

Part of the XTO, LS and M Systems. Quad-amplified processing for the 12P and 10P elements. Full system documentation at soundspro.com/systems/xto.



SSOUNDS D24X · PRODUCT VIEWS

AT A GLANCE

MODEL / SKU	CATEGORY
SS-D24X	Amplifiers
BRAND	DRIVE
SSOUNDS	Active
POWER	CONDITION
17600 W	New
APPLICATIONS	
DSP SUBWOOFER AMPLIFIER FIR DANTE AES	

OVERVIEW

The D24X is the flagship high-power DSP amplifier, subwoofer-grade output with full FIR processing, cardioid sub presets and networked control. The reference engine for the largest SSOUNDS low-frequency arrays. Processing runs on the SSOUNDS DSP platform, 32-bit floating point at 96 kHz: PhaseTrue linear-phase FIR crossovers with IIR shelving, parametric and notch sections, and DynaControl peak, thermal and excursion limiting on every channel. End-to-end latency is 0.466 ms, analog input to loudspeaker output.

- 4 × 2,200 W into 8 Ω, 4 × 4,400 W into 4 Ω, 17,600 W total
- 0.466 ms latency, analog input to loudspeaker output
- SSOUNDS DSP, 32-bit floating point at 96 kHz
- PhaseTrue linear-phase FIR crossovers, with IIR shelving, parametric and notch
- DynaControl peak, thermal and excursion limiting, plus cardioid subwoofer presets
- Dante audio and SNet control over one network infrastructure
- 16-band input and 16-band output EQ, parametric, notch and shelving
- Variable-speed cooling under continuous temperature monitoring, with GPIO

TECHNOLOGIES

 DYNACONTROL	Holds the tuned tonal balance as voice coils heat under sustained output.
 PHASETRUE	FIR phase-linear crossovers for a coherent impulse response through the crossover region.
 SNET	Networked control and monitoring for every amplifier and processor in the system.
DANTE	Dante® audio-over-IP with primary and secondary redundant ports.

SPECIFICATIONS

GENERAL

Type	4-channel DSP power amplifier, networked
Protection	Over-current · thermal · DC · short-circuit
Cooling	Forced-air front-to-rear, variable-speed fans under continuous temperature monitoring
Certifications	CE · UKCA · TÜV (rack mounting) · FCC · cULus · EAC · RoHS

PERFORMANCE

Frequency response	20 Hz - 20 kHz (±0.5 dB)
THD+N	< 0.02% @ 1 kHz
S/N ratio	> 112 dB (A-weighted)
Damping factor	> 500 @ 8 Ω
Efficiency	> 90%
Dynamic range	112 dB

PROCESSING

Presets and delay	SSOUNDS loudspeaker presets, cardioid subwoofer modes, per-channel delay
Converters	32-bit AD / DA at 96 kHz
DSP platform	SSOUNDS DSP, 32-bit floating point with 40-bit extended precision
Latency	0.466 ms, analog input to loudspeaker output
Crossover filters	PhaseTrue linear-phase FIR, with IIR shelving, parametric and notch sections
Limiting	DynaControl peak, thermal and excursion limiting, per channel
Equalisation	16 bands on the input and 16 bands on the output, parametric, notch and shelving
Load monitoring	Per-channel load impedance monitoring with fault reporting over SNet
Maximum delay	1,000 ms per channel

ELECTRICAL

Channels	4 × Class-D
Power @ 8 Ω	4 × 2,200 W
Power @ 4 Ω	4 × 4,400 W
Bridged @ 8 Ω	2 × 8,800 W
Minimum load impedance ¹	2 Ω (all channels driven)
Total output	17,600 W
Mains	200-240 V switch-mode with PFC

CONNECTORS & I/O

Network	Dante audio network + control, 2 × RJ45 (primary / secondary, front panel)
Inputs / outputs	4 × XLR analog / AES3 · Dante · 4 × NL4 speakON out
Control	SNet remote control and monitoring (SSOUNDS Network Manager)
GPIO	General-purpose I/O for external monitoring and control
Input sensitivity	0 dBu / 6 dBu selectable

PHYSICAL & CONSTRUCTION

Format	19" 1U rack
Net weight ²	9 kg / 20 lb

ENVIRONMENT

Operating temperature	-10 °C to +40 °C continuous, +50 °C short term
Storage temperature	-20 °C to +70 °C
Humidity	< 70% relative humidity, non-condensing

NOTES

1. Nominal impedance is the manufacturer's rating for amplifier load calculation; minimum impedance across the operating band may be lower.
2. Net weight excludes packaging, flight case, accessories and optional rigging hardware.
3. All figures are typical values for production units specified under the conditions above. Individual units may vary within published tolerances.

DOWNLOADS & DATA FILES

<u>SSOUNDS D24X: User Manual</u>	MANUAL
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Loudspeaker data files for prediction software (GLL / CLF for EASE), 2D and 3D drawings and certification documents are issued on request. Contact support@s-soundspro.com and we will send the current release for this model.

ARCHITECTURAL & ENGINEERING SPECIFICATION

The amplifier shall be of the SSOUNDS D24X type, configured as a 4-channel DSP power amplifier, networked. The amplifier shall be capable of meeting the following performance criteria: a frequency response of 20 Hz – 20 kHz (±0.5 dB); a sensitivity of 0 dBu / 6 dBu selectable. Electrically the amplifier shall provide a power rating of 17600 W, a nominal impedance of 2 Ω (all channels driven), a crossover at PhaseTrue linear-phase FIR, with IIR shelving, parametric and notch sections. Connection shall be by 4 × XLR analog / AES3, Dante, 4 × NL4 speakON out. The amplifier shall weigh 9 kg / 20 lb. The amplifier shall be covered by the manufacturer's two (2) year limited warranty and shall be supplied by SSOUNDS or an SSOUNDS-authorized distributor. No alternate shall be accepted without prior written approval of the consultant or specifying engineer.

SAFETY & COMPLIANCE

Read this section before specifying, installing or operating this product. It summarises the safety requirements set out in full in the product documentation supplied with the unit; where the two differ, the product documentation takes precedence.

SOUND PRESSURE LEVEL & HEARING

This equipment is capable of producing sound pressure levels that cause permanent hearing damage. Do not operate at high level in close proximity, and ensure that operators, performers and audience exposure complies with applicable occupational noise-exposure regulation. Provide hearing protection where exposure limits may be exceeded.

ELECTRICAL SAFETY

Connect only to a correctly earthed supply of the voltage and frequency stated on this sheet and on the product rating label. Where the supply is a generator, confirm stable voltage and frequency and adequate earthing before connection; unstable supply is the most common cause of amplifier failure and is not covered by warranty. Do not operate with a damaged mains lead or connector. There are no user-serviceable parts inside. Refer all servicing to SSOUNDS or an authorised service centre.

ENVIRONMENT & MECHANICAL

Unless a published IP rating states otherwise, this product is intended for indoor use or for outdoor use under cover, and must be protected from rain, standing water and prolonged direct sun. Ensure ventilation openings are unobstructed. Stack, pole-mount and transport only as described in the product documentation, and secure the product against toppling wherever the public has access.

DISPOSAL

At end of life, dispose of the product and any packaging in accordance with local regulation for electrical and electronic equipment. Do not dispose of electronic components in general waste.

LIMITED WARRANTY: TWO (2) YEARS

SSOUNDS products are warranted against defects in materials and workmanship for a period of two (2) years from the original date of purchase by the end user. Within that period SSOUNDS will, at its option, repair or replace the defective item with no charge for parts or labour. The item must be adequately packaged and dispatched, carriage pre-paid, to SSOUNDS or an SSOUNDS-authorised service centre, accompanied by proof of purchase and a returns reference issued in advance by SSOUNDS. Unauthorised repair, modification or removal of serial-number labelling voids this warranty.

THIS WARRANTY DOES NOT COVER

- Cosmetic wear, finish, grille cloth, paintwork and consumable parts.
- Damage caused by misuse, abuse, accident, neglect, or operation outside the published ratings on this sheet.
- Damage caused by transport or handling after delivery, or by inadequate packaging on return.
- Damage caused by mains or generator supply faults (over-voltage, under-voltage, phase imbalance, surge or incorrect earthing) or by lightning.
- Water, dust or corrosion ingress on products not carrying a published IP rating for the conditions of use.
- Damage resulting from amplification or processing outside the recommended configuration on this sheet, or from third-party presets.
- Products not purchased from SSOUNDS or an SSOUNDS-authorised distributor.

This warranty is in addition to, and does not affect, any statutory rights the purchaser may have under applicable consumer law. It is the sole warranty offered; no other warranty, express or implied, is given.

Warranty claims and returns references: support@s-soundspro.com · +44 20 3769 6537

LEGAL NOTICE

All information on this data sheet is subject to change without notice. SSOUNDS reserves the right to alter specification, design and construction in the course of continuous product development.

Specifications, drawings and images are provided for guidance in system design and tender documentation. Where a figure is critical to a design, confirm it in writing with SSOUNDS before committing to a specification.

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SS-DS-D24X-EN-A4 · Rev. 2608 · Issued 14 Aug 2026