

SSOUNDS XTO 12P

Flagship element of the XTO System, 3-way quad-amplified, 149 dB peak SPL from a Socapex-loomed touring element.

Part of the XTO System. Flagship element. The largest hangs, longest throw and highest output in the system. XTO stands for Xtended Touring Output. Full system documentation at s-soundspro.com/systems/xto.



SSOUNDS XTO 12P - PRODUCT VIEWS

AT A GLANCE

MODEL / SKU	CATEGORY
SS-XT0-12P	Line Array Speakers
BRAND	DRIVE
SSOUNDS	Passive
CONDITION	
New	
APPLICATIONS	
TOURING	CONCERT
	LINE-ARRAY

OVERVIEW

The XTO 12P is the flagship element of the XTO System, the SSOUNDS large-format touring platform. Twin 12" drivers, a 10" high-excursion midrange and dual 3" compression drivers deliver 149 dB peak SPL with response reaching 35 Hz. Quad-amplified via system DSP with an 8-pole Socapex touring loom, Fast-Set 0°–7° splay rigging on high-grade titanium hardware, and 18 mm Baltic birch construction with Polyurea finish. It flies on the same rigging language, the same amplifier platform and the same preset library as every other module in the system, so a design scales up or down without changing method. This is the box we fly when the show cannot be anything less than perfect.

- 2 × 12" LF, 10" MF and 2 × 3" HF compression drivers
- 149 dB peak SPL, 35 Hz – 20 kHz (–10 dB)
- Quad-amplified via system DSP with 8-pole Socapex touring loom
- High-grade titanium rigging with Fast-Set 0°–7° splay
- Up to 24 elements per hang
- 18 mm Baltic birch enclosure with Polyurea finish
- DynaControl holds the tuned response flat at maximum SPL
- PhaseTrue FIR crossovers keep the impulse response coherent

TECHNOLOGIES

 CARDIOSTEER	Steerable cardioid arrays that direct low-frequency energy forward.
 DYNACONTROL	Holds the tuned tonal balance as voice coils heat under sustained output.
 FASTSET	Steel and aluminium rigging with captive titanium pins and detented splay for repeatable array geometry.
 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.
 VOXCLEAR	Voicing developed for speech intelligibility in acoustically difficult rooms.

SPECIFICATIONS

GENERAL

Type	3-way line-array element · quad-amplified
Certifications	CE · TÜV (rigging system) · EAC · WEEE

ACOUSTIC PERFORMANCE

Frequency response ²	35 Hz - 20 kHz (-10 dB)
Coverage ⁴	70° or 100° × 8°
Directivity control ⁴	Nominal horizontal maintained to 350 Hz
Sensitivity ³	109 dB SPL nominal (1 W @ 1 m)
Maximum SPL ¹	149 dB peak @ 1 m

TRANSDUCERS & COMPONENTS

Low frequency	2 × 12" cone drivers, dipolar arrangement · 8 Ω
Mid frequency	1 × 10" horn-loaded cone driver · 8 Ω
High frequency	2 × 1.4" exit compression drivers, 3" coil · 8 Ω

ELECTRICAL

Recommended amplifier power ⁵	5,480 W
Nominal impedance ⁶	LF 8 Ω · MF 8 Ω · HF 8 Ω
Crossover	220 Hz · 900 Hz
Amplification	Quad-amplified by SSOUNDS D24X system DSP amplifier (LF1 · LF2 · MF · HF)
Cabinets per amplifier	2 per quad amplifier · two 8 Ω sections in parallel present 4 Ω per channel

CONNECTORS & I/O

Connectors	8-pole Socapex input + link output
Pin map	A/B LF1 · C/D LF2 · E/F MF · G/H HF (8-pole Socapex)

RIGGING & MOUNTING

System	High-grade titanium 3-point captive rigging · Fast-Set splay
Splay angles	0° - 7° adjustable
Array compatibility	Locks with XT0 10P and XT0 8P via transition hardware for far-throw and downfill sections
Max per array	Up to 24 elements per hang

PHYSICAL & CONSTRUCTION

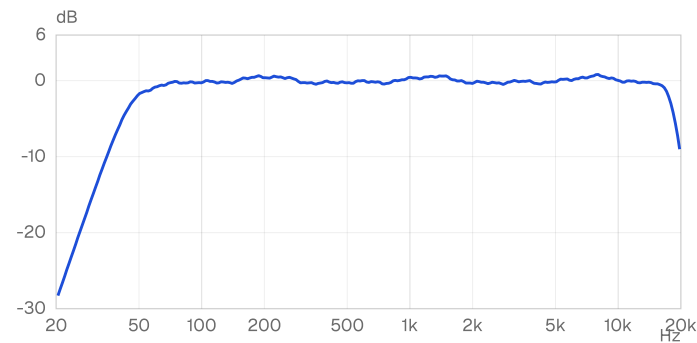
Dimensions (H × W × D) ⁸	360 × 1123 × 620 mm
Net weight ⁷	67 kg / 148 lb
Enclosure	18 mm Baltic birch · Polyurea finish
Grille	Powder-coated perforated steel with acoustic cloth backing
Handles	2 side · 2 rear recessed
Colour	Black (custom RAL on request)

NOTES

- 1. Maximum SPL is the peak level at 1 m, driven with pink noise at crest factor 4 to the clipping point of the recommended amplifier, with the SSOUNDS system preset applied. Full-range enclosures are specified under free-field conditions; figures marked half-space are specified over a reflecting plane, the condition subwoofers are deployed in, which adds approximately 6 dB.
- 2. Frequency response is specified on axis at 1 m in a free field. The tolerance the figure is referenced to is stated alongside it; where no tolerance is given, the figure is the -6 dB bandwidth.
- 3. Sensitivity is specified at 1 W into the nominal impedance at 1 m on axis, averaged across the pass band of the enclosure.
- 4. Coverage angles are nominal -6 dB values averaged across the pass band. Per-octave directivity data is available from SSOUNDS system design support for prediction and modelling.
- 5. Recommended amplifier power is the amplifier output SSOUNDS specifies for this enclosure, driven with the SSOUNDS system preset. It guides amplifier selection and is not an AES power-handling rating for the transducers.
- 6. Nominal impedance is the manufacturer's rating for amplifier load calculation; minimum impedance across the operating band may be lower.
- 7. Net weight excludes packaging, flight case, accessories and optional rigging hardware.
- 8. Dimensions are stated in millimetres and exclude protruding rigging hardware, handles and connector panels unless noted.
- 9. All figures are typical values for production units specified under the conditions above. Individual units may vary within published tolerances.

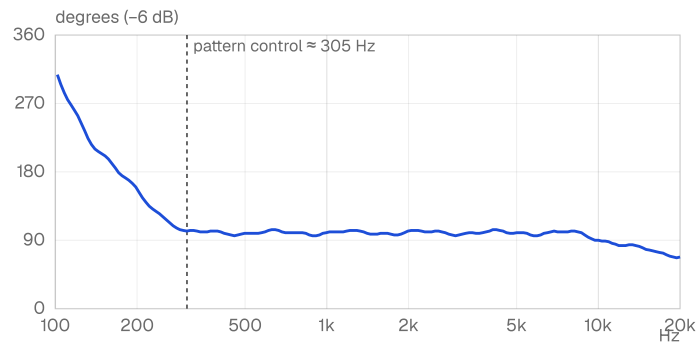
RESPONSE

FREQUENCY RESPONSE



Frequency response: 35 Hz to 20 kHz (-10 dB) · 1/24-octave smoothed

HORIZONTAL BEAMWIDTH

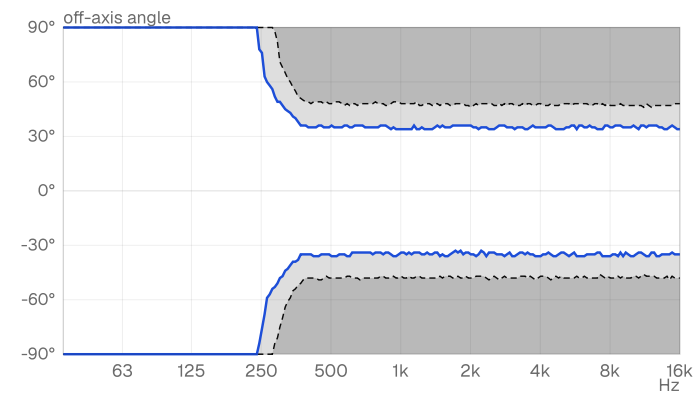


-6 dB horizontal beamwidth: 100° nominal

Plot conditions. Curves are generated by the SSOUNDS engineering toolchain from this product's specification. Frequency response is shown 1/24-octave smoothed, normalised to the midband reference, with the passband corners at the stated tolerance; response varies within ± 1 dB across the passband with a subtle shelf in the top octave. Magnitude slopes are 24 dB/octave beyond the passband corners. The beamwidth curve shows the -6 dB included angle: nominal coverage holds down to the pattern-control limit set by the cabinet width ($f \approx c/w$) and widens below it.

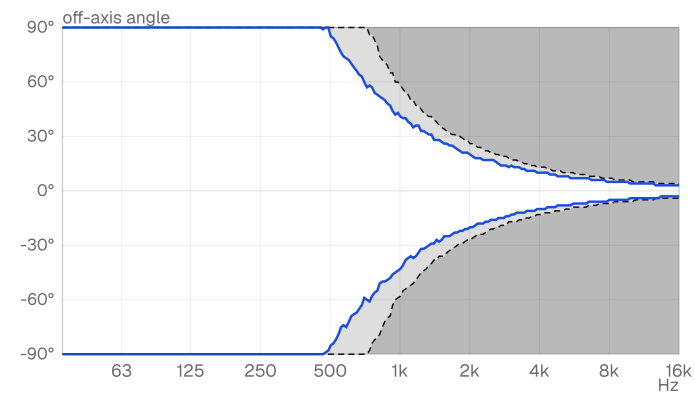
DIRECTIVITY

ISOBAR DIAGRAM, HORIZONTAL



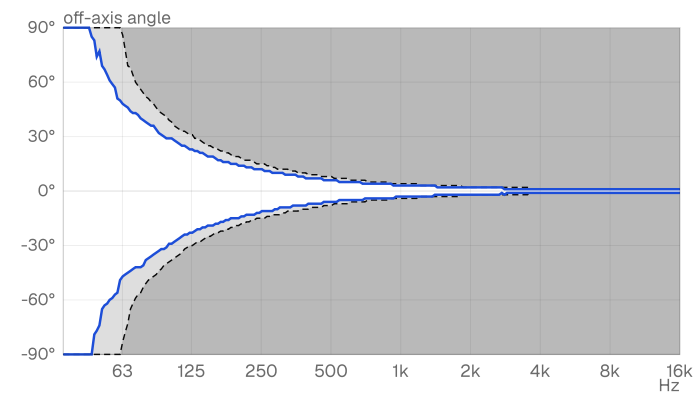
Lines of equal sound pressure. Blue: -6 dB. Dashed: -12 dB. White region holds within 6 dB of on-axis.

ISOBAR DIAGRAM, VERTICAL



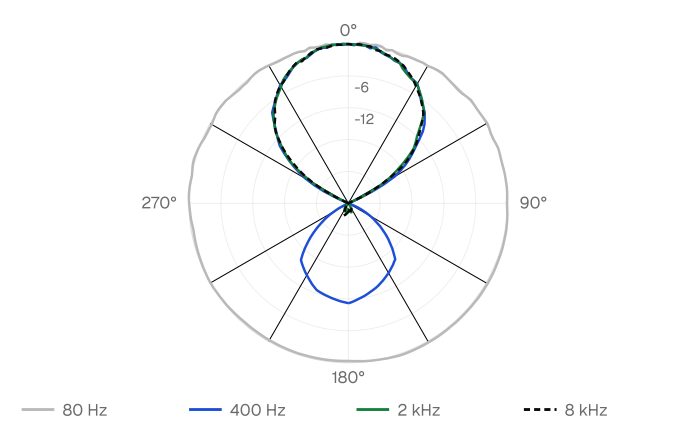
Lines of equal sound pressure. Blue: -6 dB. Dashed: -12 dB. White region holds within 6 dB of on-axis.

ISOBAR DIAGRAM, VERTICAL, 12-ELEMENT ARRAY



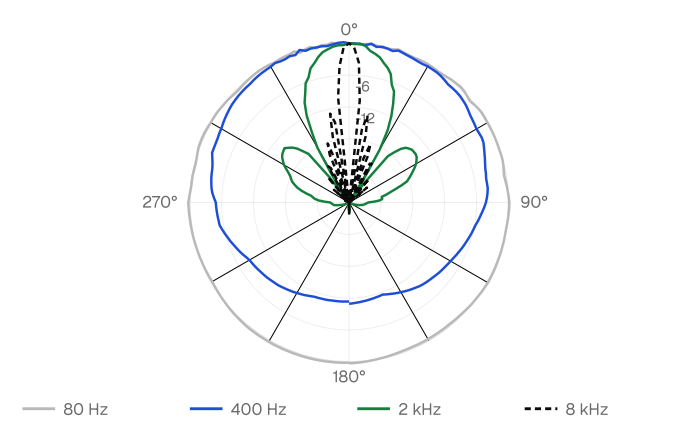
Lines of equal sound pressure. Blue: -6 dB. Dashed: -12 dB. White region holds within 6 dB of on-axis.

POLAR RESPONSE, HORIZONTAL



Normalised to on-axis. Rings at 6 dB intervals to a -30 dB centre. 1/3-octave band power.

POLAR RESPONSE, VERTICAL



Normalised to on-axis. Rings at 6 dB intervals to a -30 dB centre. 1/3-octave band power.

Charts span 35 Hz to 16 kHz, this cabinet's own operating band. The single-cabinet charts rate one element. Vertical pattern below the midrange is set by the length of the array, not by one box: the 12-element chart is a straight column of 4.32m at 0° splay, and it is the figure to design from. Horizontal coverage is a property of the cabinet and does not change with array length.

VERTICAL COVERAGE BY ARRAY SIZE, -6 DB

Elements	Length	31.5	63	125	250	500	1k	2k	4k	8k
4	1.4 m	—	—	—	71°	34°	17°	8.3°	4.1°	2.1°
8	2.9 m	—	—	70°	33°	17°	8.2°	4.1°	2.1°	1.0°
12	4.3 m	—	99°	45°	22°	11°	5.5°	2.7°	1.4°	0.7°
16	5.8 m	—	70°	33°	17°	8.2°	4.1°	2.1°	1.0°	0.5°
20	7.2 m	131°	54°	27°	13°	6.6°	3.3°	1.6°	0.8°	0.4°
24	8.6 m	99°	45°	22°	11°	5.5°	2.7°	1.4°	0.7°	0.3°

Frequencies in Hz. A dash means the column is not yet long enough to hold a pattern at that frequency and radiates through the full vertical plane. Straight hang, 0° splay: splaying the array trades pattern width for reach and widens these figures.

Chart conditions. Directivity charts are computed by the SSOUNDS system prediction engine as a phase-coherent wave solution of this product's driver complement: each way represented by its physical radiator (rigid-piston cones with real diameters and spacings; waveguides as continuous mouth apertures, holding the rated coverage on a flare-controlled axis above the mouth's pattern-control limit and radiating the mouth's own diffraction limit on a wavefront-shaped axis; a horn-loaded mid shares the high-frequency mouth), summed as complex pressure through crossovers at the published points in the topology the cabinet is driven with (linear-phase FIR where the ways run on separate channels of a system DSP amplifier, Linkwitz-Riley where a passive network splits them), with way alignment referenced on axis and 1/24-octave band-power resolution. Single-cabinet vertical figures are free-field beamwidths of one element; the published per-element vertical coverage of a line array is its rigging splay, the sector one element covers in a curved hang. Cabinet edge diffraction, horn loading detail, driver breakup and production tolerances are outside the computation. Directivity files for prediction software (GLL/CLF) are issued from measured data only.

DOWNLOADS & DATA FILES

SSOUNDS XTO 12P: User Manual	MANUAL
Directivity table, horizontal (CSV) / vertical	CSV
SSOUNDS XTO 12P: Technical Data Sheet	DATASHEET

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.

SYSTEM OPERATION

Recommended: SSOUNDS D24X quad amplifier, two XTO 12P per amplifier, each channel driving the same section (LF1, LF2, MF, HF) across both cabinets. Two 8 Ω sections in parallel present 4 Ω per channel.

Two cabinets per amplifier is a design choice, not a limit: it gives the resolution to gain-shade and HF-shade the array zone by zone, and to set far-throw and downfill sections independently of the main hang. Load the XTO 12P preset and run the Socapex loom carrying LF1, LF2, MF and HF.

The XTO 12P locks with XTO 10P and XTO 8P via transition hardware, so a single hang can carry a 12P main section over a 10P/8P downfill.

Typical deployments, 12 × XTO 12P flown per side with 6 × XTO S218 ground-stacked: stadium and festival main hangs. 8 × XTO 12P with 4 × S218: arena and large open-air. 6 × XTO 12P over 4 × S218: large auditoria and stadium worship.

ARCHITECTURAL & ENGINEERING SPECIFICATION

The line array loudspeaker shall be of the SSOUNDS XTO 12P type, configured as a 3-way line-array element, quad-amplified. The line array loudspeaker shall incorporate a low-frequency section of $2 \times 12"$ cone drivers, dipolar arrangement, 8Ω , a mid-frequency section of $1 \times 10"$ horn-loaded cone driver, 8Ω , a high-frequency section of $2 \times 1.4"$ exit compression drivers, $3"$ coil, 8Ω . The line array loudspeaker shall be capable of meeting the following performance criteria: a frequency response of 35 Hz – 20 kHz (–10 dB); a maximum sound pressure level of 149 dB peak @ 1 m; a sensitivity of 109 dB SPL nominal (1 W @ 1 m); nominal coverage of 70° or $100^\circ \times 8^\circ$. Electrically the line array loudspeaker shall provide a nominal impedance of LF 8Ω , MF 8Ω , HF 8Ω , a crossover at 220 Hz, 900 Hz. The unit shall be passive. Connection shall be by 8-pole Socapex input + link output. The line array loudspeaker shall be constructed of 2 per quad amplifier, two 8Ω sections in parallel present 4Ω per channel, measuring $360 \times 1123 \times 620$ mm, and shall weigh 67 kg / 148 lb. The line array loudspeaker 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.

SUSPENSION & RIGGING

Overhead suspension is potentially hazardous and must be carried out only by trained and competent personnel using SSOUNDS-approved hardware, within the working load limits and array configurations published in the relevant SSOUNDS rigging documentation. Never exceed the stated number of enclosures per array or the stated splay limits. Inspect all rigging components, pins and retaining clips before every deployment and withdraw from service any component that is deformed, corroded or of unknown history. Secondary safety attachment is required where local regulation calls for it. SSOUNDS accepts no liability for systems suspended using non-approved hardware or outside published limits.

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.

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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