

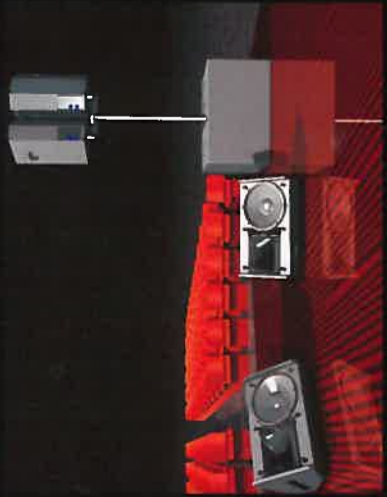
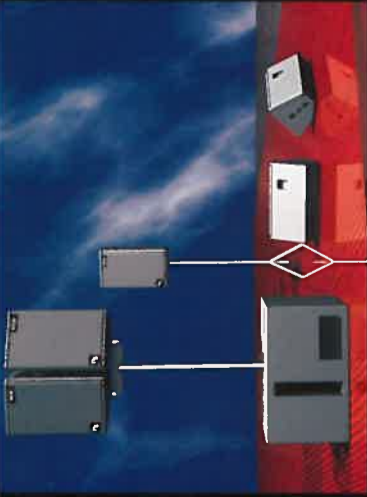
NEXO



The PS10 cabinet combines with the PS TDController and the optional LSub 500 subpass to make the most versatile and cost effective small system in the NEXO range.

- A single amplifier, 2-way passive, 8 Ohm design.
- The PS10 TDController is Stereo and includes a Sub section.
- The PS10 does not require numerous amplifiers, multiple processors or complicated wiring.

PS¹⁰



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The PS10 has a stand fitting, top & bottom plates for optional flying tracks and two sets of fasteners for Omnimount style clamps.

The LS500 has a stand fitting on top where a mast supporting one or two PS10's can be inserted. It also has three plates for optional flying tracks.

PS10 & LSUB 500

- The PS10 can be safely driven by amplifiers of over 500 Watts per channel; yet it is only half the volume and weight of standard two-way trapezoidal systems.
- The PS10 dispersion, architecture & weight-balance are designed for optimum arrayability; but it is also a no-compromise wedge monitor and low-profile ceiling cabinet.
- The PS10 constant directivity asymmetrical dispersion horn can be rotated on four positions by the user – for fast access the front grille is fixed by a quick release system. The most suitable dispersion pattern can thus be selected for standalone use in vertical or horizontal position, multiple cabinet arrays or wedge monitoring.
- Backplates for Aircraft type flying points on top & bottom are standard on the PS10; but, for versatility, it also features an internal stand fitting and two sets of fasteners for fixed installation in horizontal & vertical position with Omnimount type clamps
- The PS10 TD Controller incorporates the advanced protection features found on larger

NEXO systems. It also has a built in LSTD section to drive the optional LS500 subwoofer.

- The LSub 500 principle is similar to the top of the range LS1500 & 2000. A stand fitting built on top of the LS500 accepts a mast supporting one or two PS10s.

- The PS10 is a 2-way passive, 8 Ohm design – it requires only one amplifier channel. The PS10 TDController is Stereo and includes a Sub section – a typical setup would only use one processor. PS10 & LS500 connectors are wired as 4 pole multipins – single cables can be used to loop-through combinations of PS10 and LS500. The PS10 does not require numerous amplifiers, multiple processors or complicated wiring.

PS10 TDCONTROLLER

The PS10 TDController is an advanced electronic processor necessary to achieve expected performance from PS10 & LSub 500 enclosures:

- Increased Sound Pressure and Operational Reliability
- Better Dynamic Control without spectrum imbalance, reduction of transient distortions.

A wide variety of specific or industry standard accessories are supported on the PS10 range



- Better use of amplifiers while minimising clipping.

- The TDController permanently simulates Temperature, Displacement & Signal Level of loudspeakers and monitors amplifier outputs.

Temperature & Displacement Protection

- If potentially dangerous values are detected, Selective Voltage Controlled Equalisers (VCEQ's) are employed to reduce levels at frequencies where it is necessary. The maximum amplitude of the VCEQ's is only a few dB with optimised attack and release for each parameter and band.

Dynamic Control

- If high levels are continuously present, compression reduces the occurrence of VCEQ protection limiting and perceptible "pumping" effects. Spectral balance is preserved.

Amplifier Control

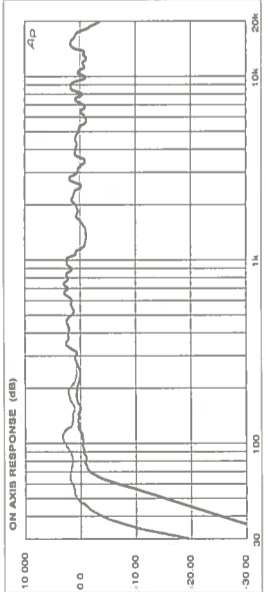
- The TDController permanently monitors the amplifiers (there is no need for any gain or clip level calibration) and prevents excessive distortion with minimal effect on maximum sound pressure.



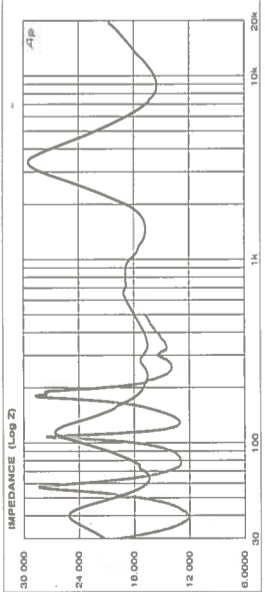
- The Sub section is used to operate the optional LSub 500. Sub On/Off switch also inserts the active crossover at 120 Hz. Sub Output Level control adjusts relative level of the LS500.
- Operation of the LS500 subbass mono channel is monitored by Amplifier Sense & Peak LED's. Loudspeaker VLF Protect LED.
- The Sub section is used to operate the optional LSub 500. Sub On/Off switch also inserts the active crossover at 120 Hz. Sub Output Level control adjusts relative level of the LS500.
- Operation of the LS500 subbass mono channel is monitored by Amplifier Sense & Peak LED's. Loudspeaker VLF Protect LED.
- The back panel 3 position gain switch allows matching with amps of (approx) 26 / 32 / 38 dB gain.
- The Maximum position of the Std/Max trimmer increases protection for additional safety in permanent unattended operation.
- If the Amplifier Return Sense lines are accidentally disconnected, the PSTD will fall back into preset protection mode. Provided the Amp Gain switch is on the correct position, the PSTD will still operate but less effectively (than with sense lines^(*)).

(*) Preset Protection Mode is only implemented on PS10 TD Controllers since serial No 361.

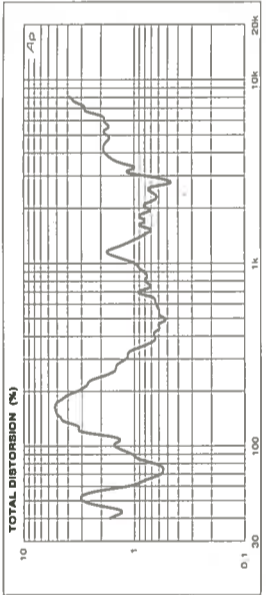




On axis responses PS10 & PS10 + LS500.

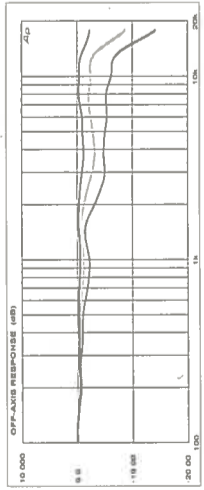


Impedance PS10 and LS500.

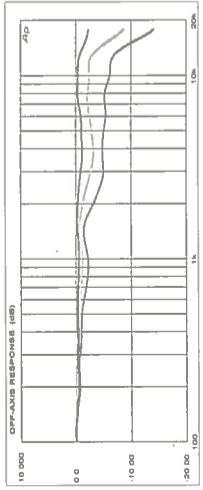


PS10 + LS500 : T.H.D. for 110 dB SPL @ 1m.

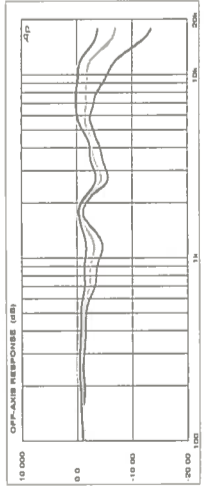
All measurements made with PS TDController.
 Response curves: Far field, half-space below 200 Hz, anechoic above 200 Hz.
 On axis responses and polar plots: 1/3 octave averaged anechoic measurements.
 Vertical orientations refer to the cabinet in "front of house" configuration.
 Directivity index and factor: computer treatment of polar plots.



Horizontal plane, vertical orientation + 25°
 10° (black), 20° (dark), 30° (light) off axis responses.



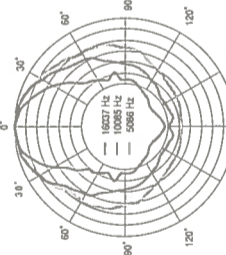
Horizontal plane, vertical orientation 0°
 20° (black), 30° (dark), 40° (light) off axis responses.



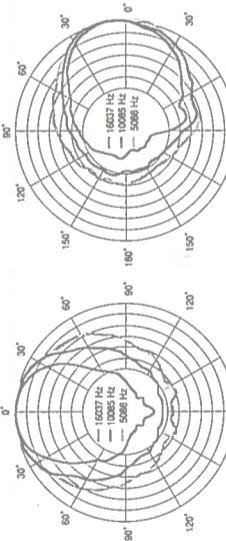
Horizontal plane, vertical orientation - 25°
 30° (black), 40° (dark), 50° (light) off axis responses.



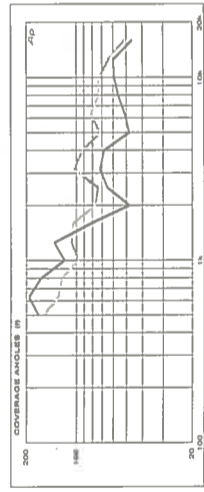
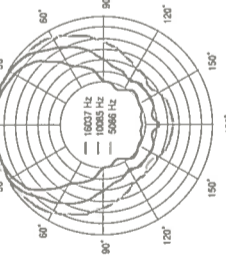
Directivity index and factor.



Horizontal polar plots (left)
 Upper plot: vertical orientation + 25°
 Center plot: vertical orientation 0°
 Lower plot: vertical orientation - 25°



Above: Vertical polar plot.



Horizontal (light) and vertical (black) Coverage Angles, - 6 dB points.

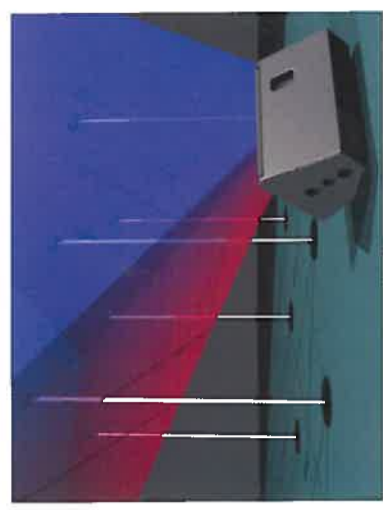


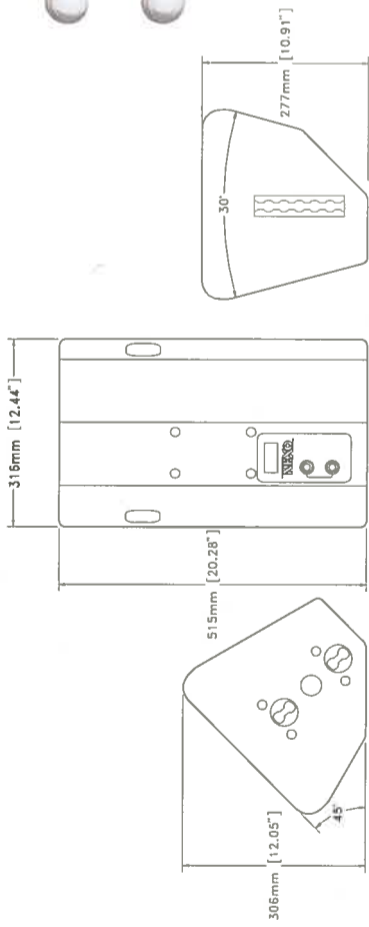
THE ASYMETRICAL DISPERSION CONSTANT DIRECTIVITY HORN is an important feature of the PS10.

This concept was only available previously for highly specialised applications; in the general purpose PS10 it is fully exploited thanks to the possibilities of user configuration.

Good coverage of audiences often requires a conflicting combination of wide coverage ("short throw") for the closest listeners (below cabinet axis) and narrow coverage ("long throw") for distant areas (on or above axis). The PS10 horizontal horn coverage varies from "short throw" to "long throw" along the vertical axis to precisely match these practical requirements in a single system. For the majority of applications the PS10 horn should be used with its "wide" dispersion side directed towards the floor in the selected operating position (all four cabinet orientations are usable). Other configurations can be useful for specialised applications such as complex arrays, systems designed with CAD software and stage monitoring.

For stage monitors the required coverage is always wider when performers are close to the wedge (above the horn axis) than when they move away from it (below the horn axis). For floor monitor use the horn must be rotated with its "wide" dispersion side directed towards the top of the PS10 in wedge position.





| SYSTEM SPECIFICATIONS | PS10 WITH PS10 TDCONTROLLER | LSUB 500 WITH PS10 TDCONTROLLER |
|---------------------------|---|--|
| Frequency Response [a] | 65 Hz - 20 kHz \pm 3dB | 40 Hz - 110 Hz \pm 3dB |
| Usable Range @-6dB [a] | 58Hz - 21 kHz | 38Hz - 120 Hz |
| Sensitivity 1W @ 1m [b] | 98 dB SPL Nominal - 96 dB SPL Wideband | 101 dB SPL Nominal |
| Nominal Peak SPL @ 1m [b] | 124 to 127 dB Peak (for 200 to 500 W RMS Amp.) | 131 to 134 dB Peak (300 to 800 W RMS Amp.) |
| HF Dispersion [c] | 50° to 100° Hor. x 55° Vert. Rotatable Horn, 4 positions | |
| Directivity : Q & D [c] | Q: 16 Nominal DI : 12 dB Nominal (f > 3 kHz) | |
| Crossover Frequencies | 2 kHz Passive | 120 Hz Active through PS10 TD |
| Nominal Impedance | 8 Ohms | 4 Ohms |
| Recommended Amplifiers | 200 to 500 Watts into 8 Ohms for 1 x PS10 per channel 400 to 1000 Watts into 4 Ohms for 2 x PS10 per channel | 300 to 800 Watts into 4 Ohms |

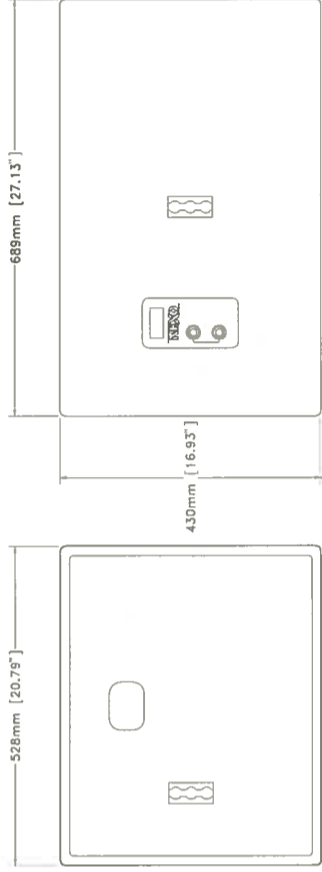
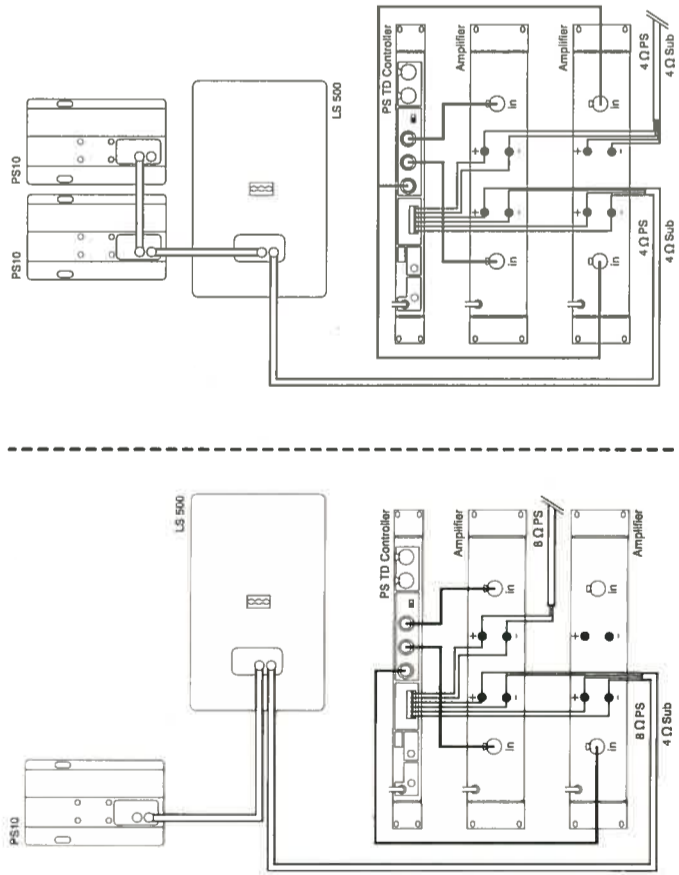
SYSTEM OPERATION

Electronic Controller
The PS10 TDCONTROLLER is precisely matched to the PS10 & LS500 cabinets and includes sophisticated protection systems. Using PS10 & LS500 without a properly connected PS10 TD will result in poor sound quality and can damage the components.

Dispersion configuration
After quick-release of the front grille from its fixings, the HF Horn can be rotated in 4 positions for dispersion configuration.

Subbass
The PS10 can be used without optional LS500 Subbass. Active two-way operation with the LS500 is included in the PS10 TD. One LS500 matches 2 x PS10, additional LS500 may be used for enhanced effect.

Speaker Cables
PS10 are wired 2- & 2+ on Speaker connectors, LS500 on 1- & 1+.
Loop through Speakers are present on both. Single identical cables can thus be used to loop through combinations of up to 2 x PS10 & 1 x LS500 in no particular order.



| PRODUCT FEATURES | PS10 | LSUB 500 |
|------------------------|--|---|
| Components : LF [VLF] | 1 x 10" (25cm) 8 Ohms driver | 1 x 15" (38cm) long excursion 4 Ohm driver |
| HF | 1 x 1" throat driver + Low Distortion, Constant Directivity Asymmetrical Dispersion Horn. | |
| Height x Width x Depth | 515 x 316 x 277 mm (20.28" x 12.44" x 10.91") | 430 x 669 x 528 mm (16.93" x 27.13" x 20.79") |
| Weight : Net | 15 kg (33 Lbs) | 33 kg (73 Lbs) |
| Connectors | 2 x NL4AMP SPEAKON 4 pole | 2 x NL4AMP SPEAKON 4 pole |
| Construction | Baltic Birch Ply finished with structured black coating | Baltic Birch Ply & structured black coating |
| Fittings | 2 Metal Handles | 2 Metal Handles |
| Front finish | Acoustic foam on hex perforated steel grille (77% transparent) | Perforated steel grilles |
| Flying Points | 1 steel anchor plate for flying track on top (6 positions) 2 steel anchor plates for flying tracks on bottom (1 position) | 3 steel anchor plates for flying tracks on sides and back |
| Stand fittings | Built in Steel Stand Fitting, 35mm (1"3/8) | Internal Steel Stand Fitting on Top (35mm, 1"3/8) accepts a mast supporting 1 or 2 PS10's |
| Fixed Installation | Two sets of 4 fixing points (Omnimount 100 Std spacing) for Horizontal or Vertical installation | |

PRODUCT FEATURES

Audio Inputs
Two L&R Audio inputs. Electronically balanced, 36 kOhm. Two XLR-3F connectors.

Sense Inputs
Three Amplifier Sense Inputs (PS10 L&R, LS500). 150 kOhm. 6 Pole Removable Strip Terminal.

Audio Outputs
Two L&R PS10 Audio outputs. Electronically balanced, 50 Ohm. Two XLR-3M.
One Mono (L+R) LS500 Audio output. Electronically balanced, 50 Ohm. One XLR-3M.

Specifications
Output Level : +20 dBm Max. +19dBm Max on 1kOhm
Noise : -86 dBm (22 Hz - 22 kHz, UnWeighted). THD+N : < 0.03% Typ. 0.05 Max for +16dBm Output

Controls & Indicators
Std/Max Protection Trimmer. Gain switch (back panel), 3 positions for Amps with Gain : 26 / 32 / 38 dB.
Sub On switch & Sub Gain Control. Speaker Protect LED's. Amp Sense & Peak LED's.

Power Supply
110/220 Volts (internal wiring), 50/60Hz. Earth-Lift (back panel)

Dimensions & Weight
1U 19" Rack 190mm (7.5") Depth. 2.9 kg (6.6 Lbs) net

SHIPPING & ORDERING

Packaging
PS10's are packaged as pairs with PS10TD (Ref: PS10P+T) or without PS10TD (Ref: PS10P) in a single box.

Shipping weight & Volume
Ref PS10P : 34 Kg (pair). Ref PS10P+T : 37 Kg (pair+processor). Shipping Volume : 0.169 m³ (5.96 cu feet)
Ref LS500 : 38 kg (unit) 0.238 m³ (8.41 cu feet)

Accessories
Flying Kit (Ref: FLYPS10) containing 1 x PS10 Top Rail, 2 x PS10 Bottom Rails, 4 x Single Stud Flying Rings.
Mast Adapter Kit (Ref: STDUPS10) containing 1 m (39") long mast & U coupler supporting 1 or 2 PS10 above LS500

As part of a policy of continual improvement, NEXO reserves the right to change specifications without notice.

[a] Response curves & data - Anechoic Far Field for the PS10 + PS10TD. Half-Space Anechoic radiation for the LS500 + PS10TD.
[b] Sensitivity & Peak SPL data - these will depend on spectral distribution and crest factor of program material. Measured with band limited Pink Noise. Nominal refers to Voice Decade (300 Hz - 3 kHz), Wideband to the specified \pm 3dB range. Data are for speaker + processor + recommended amplifier combinations. Peak SPL is at clipping of recommended amplifier.
[c] Directivity curves & data - obtained by computer treatment on off axis response curves.
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