

NEXO

The PS15 cabinet, the PS15 TD MkII Controller and the optional LS1200 subbass combine into a flexible system equally at ease with main sound reinforcement and stage monitoring.

■ The PS15 is a 2-way, switchable active/passive, design. It includes a high-power 15" speaker and a 2" throat compression driver.

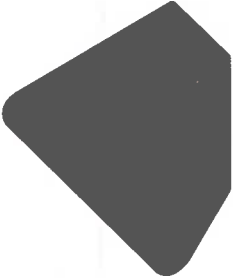
■ The reduced size PS15 handles over 1 kW and weighs less than 30 kg. The PS15 TD MkII Controller, for passive/active mode operation is Stereo and includes a Sub section.

■ The PS15 does not require numerous amplifiers and processors or complicated wiring.

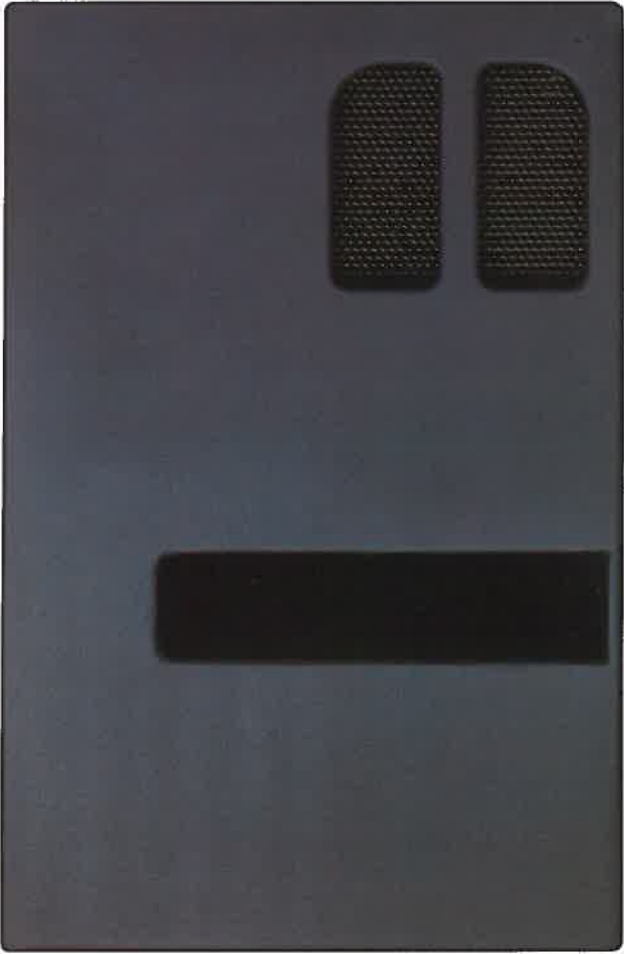




The PS15 has a stand fitting, top & bottom plates for optional flying tracks and fasteners for Omnimount style clamps.



The LS1200 has a stand fitting on top where a mast supporting one PS15 can be inserted. It also has three plates for optional flying tracks.



PS15 & LS1200

- The PS15 can be safely driven by amplifiers of over 1 kilowatt per channel; yet it has a small volume and reduced weight.
- The PS15 dispersion, architecture & weight-balance are designed for optimum high-end wedge monitor.
- The PS15 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 PS15; but, for versatility, it also features an internal stand fitting and fasteners for fixed installation in vertical position with Omnimount type clamps.
- The PS15 TD MkII Controller for passive/active mode operation incorporates the advanced protection features found on larger NEXO systems. It also has a built in LSTD section to drive optional LS1200 subwoofer.



A stand fitting built on top of the LS1200 accepts a mast supporting one PS15.

- The PS15 is a 2-way, switchable active/passive, 6/8 Ohm very high-power design. In passive mode it requires only one amplifier channel. The PS15 TD MkII Controller for passive mode operation is Stereo and includes a Sub section - a typical setup would only use one processor. The PS15 does not require numerous amplifiers, multiple processors or complicated wiring.

PS15 TD MkII Controller

The PS15 TD MkII Controller is an advanced electronic processor necessary to achieve expected performance from PS15 used in passive/active mode & LS1200 enclosures:

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

- Better use of amplifiers while minimizing clipping.
- The TD MkII controller permanently simulates Temperature, Displacement & Signal Level of loudspeakers and monitors amplifier outputs.

Temperature & Displacement Protection

- If potentially dangerous values are detected, Selective Voltage Controlled Equalizers (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 optimized 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.

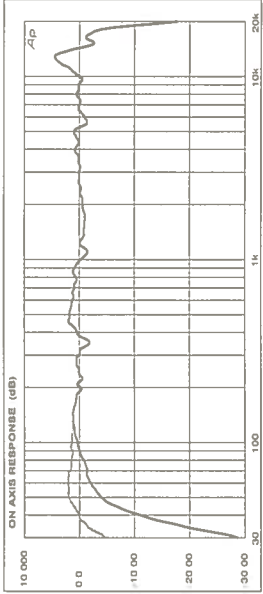
Amplifier Control

- The TD MkII controller permanently monitors the amplifiers and prevents excessive distortion with minimal effect on maximum sound pressure.

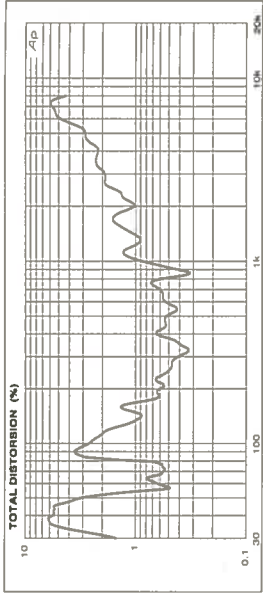
A wide variety of specific or industry standard Accessories are available on the PS15 range.



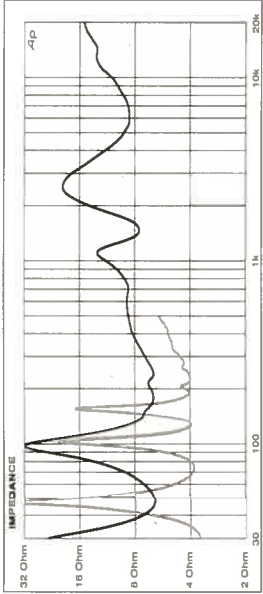
- Amplifier control (Sense & Pk)**
Green Sense LED's indicate signal presence at sense input on Left and Right channels and allow visual control of the return connection from the amplifier outputs. Red Pk LED's when lit indicates Peak Limiting is in operation resulting in reduced excessive peak output voltages for each channel.
- Protection Indicators**
The yellow LED's LF and HF indicate when protection has been activated (temperature or displacement control) for either the Bass or the Top End driver respectively on the Left or Right channel.
- Overlap / Crossover**
This button allows the main system to be filtered in order to be used with a Subbass LS1200 cabinet (Crossover mode). It does not affect the sub output which will always be turned on. This feature allows the use of an LS1200 with a wide band (Overlap mode) PS15 cabinet.
- Individual Gain controls**
12dB range. Allows the control of the Sub level. In active mode allows the adjustment required when using different gain amplifier for HF & LF.
- Peak limiters (Back Panel)**
A separate peak limiter is provided for each channel. These are independent from the protection threshold trimmers.
- LF Eq**
This control acts as a shelving filter with a range of +/- 3dB in the Low Frequencies area (on both main system and Sub).
- Output Level Switch (Back Panel)**
The three gain values available are +6dB, 0 & -6dB.



On axis response PS15 and PS15 + LS1200.

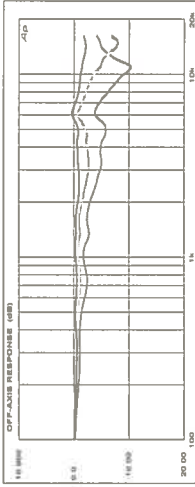


PS15 + LS1200 : THD for 115 dB SPL @ 1 m.

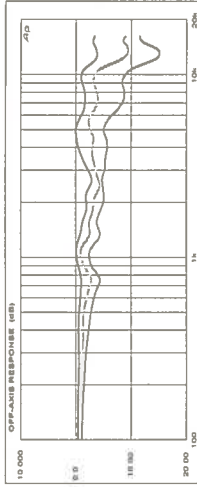


Impedance PS15 and LS1200.

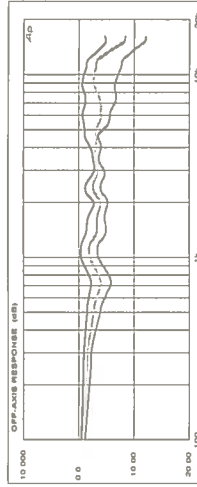
All measurements made with PS TD controller.
Response curves : Far field, half-space below 200 Hz, anechoic above 200 Hz.
Off axis responses and polar plots : 1/3 octave averaged anechoic measurements.
Vertical orientations refer to the cabinet in "front of house" configuration.
Directivity index and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



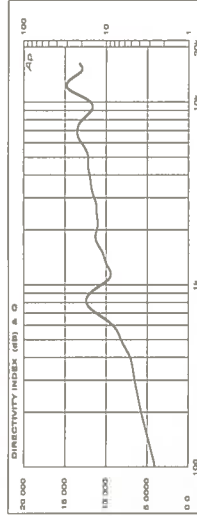
Horizontal plane, vertical orientation +25°.
10° (black), 20° (light), 30° (dark) off axis responses.



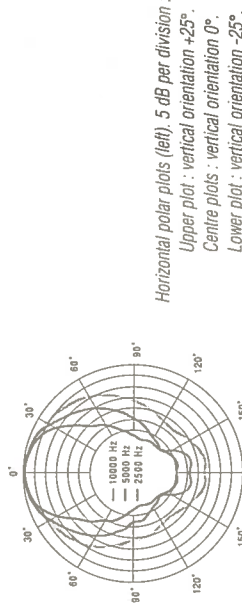
Horizontal plane, vertical orientation 0°.
20° (black), 30° (light), 40° (dark) off axis responses.



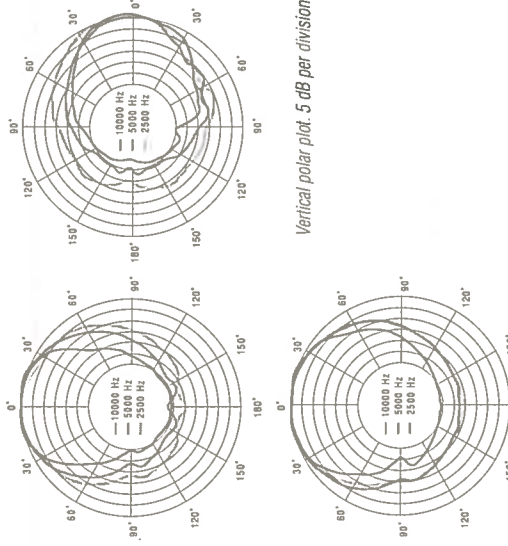
Horizontal plane, vertical orientation -25°.
30° (black), 40° (light), 50° (dark) off axis responses.



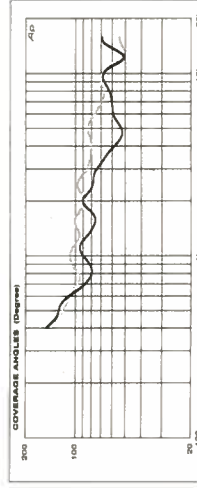
Directivity index and factor.



Horizontal polar plots (left). 5 dB per division :
Upper plot : vertical orientation +25°
Centre plots : vertical orientation 0°
Lower plot : vertical orientation -25°.



Vertical polar plot. 5 dB per division.



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



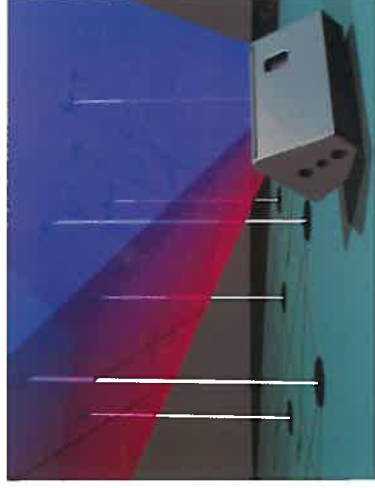
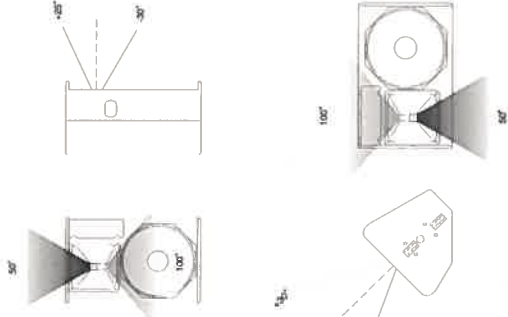
THE ASYMMETRICAL DISPERSION CONSTANT DIRECTIVITY HORN is an important feature of the PS15.

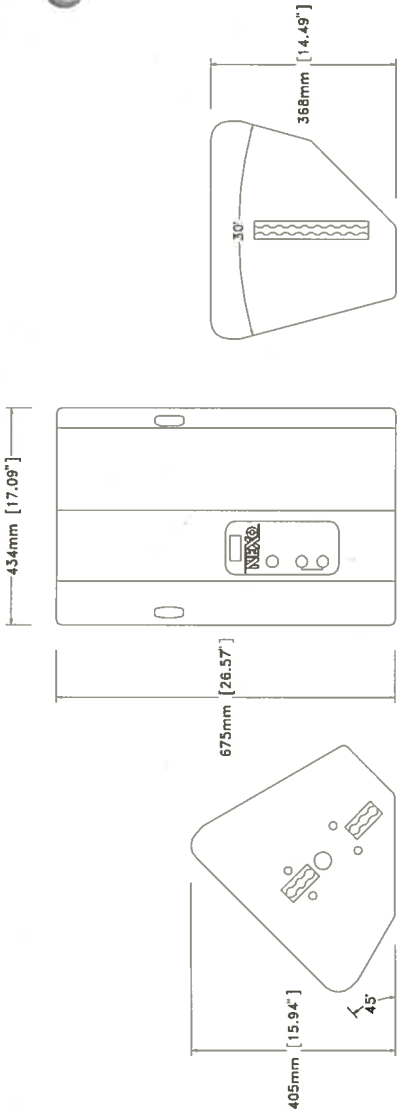
This concept was only available previously for highly specialized applications; in the general purpose PS15 it is fully exploited thanks to the possibilities of user configuration.

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 PS15 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 PS15 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 specialized 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

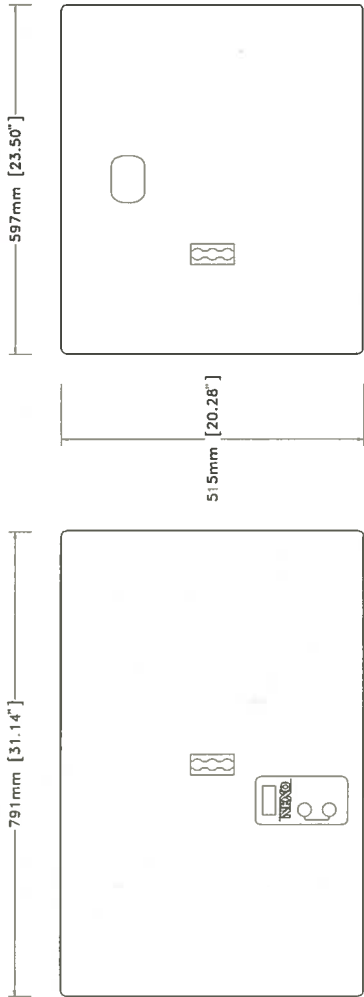
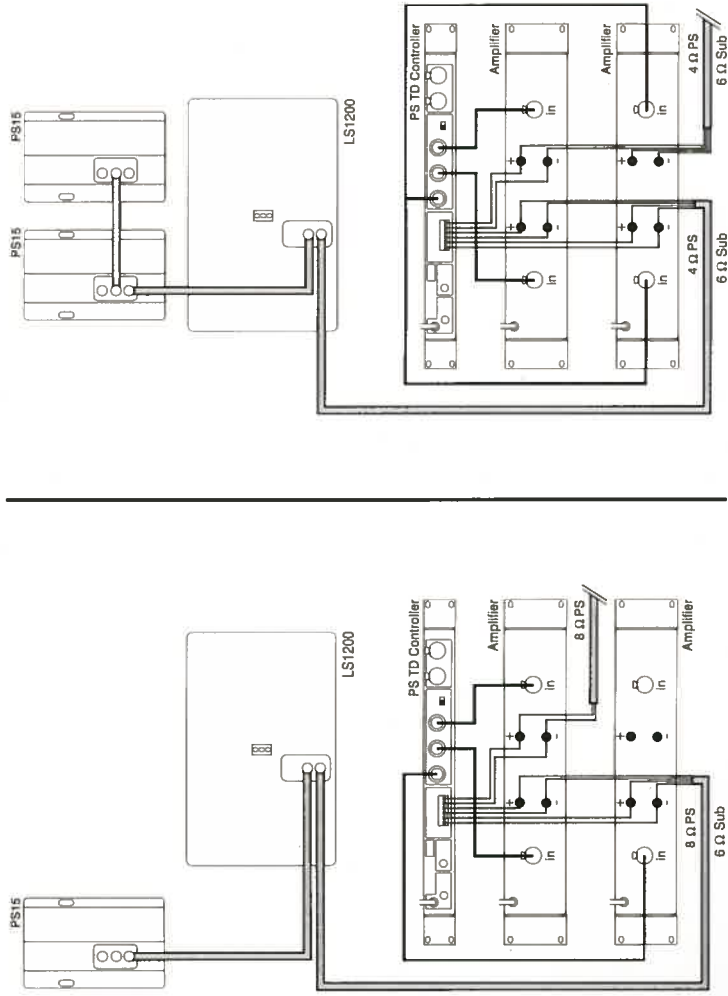
to the wedge (above the horn axis) than when they move away from it (below the horn axis).
For floor monitor use the horn must be rotated with its "wide" dispersion side directed towards the top of the PS15 in wedge position. The specific dispersion pattern, the 2" driver and the very high power handling all contribute to the exceptional performance of the PS15 as a wedge monitor.





SYSTEM SPECIFICATIONS		PS15 WITH PS15 TD MKII CONTROLLER	LS1200 WITH PS15 TD MKII CONTROLLER
Frequency Response [a]		50 Hz - 18 kHz $\pm$ 3 dB	30 Hz - 120 Hz $\pm$ 3 dB
Usable Range @-6 dB [a]		47 Hz - 18 kHz	29 Hz - 130 Hz
Sensitivity 1W @ 1m [b]		102 dB SPL Nominal, 99 dB SPL Wideband	102 dB SPL Nominal
Nominal Peak SPL @ 1m [b]		131 to 134 dB Peak (for 550 to 1200 W RMS Amp.)	133 to 135 dB Peak (800 to 1200 W RMS Amp.)
HF Dispersion [c]		50° to 100° Hor. x 55° Vert. Rotatable Horn - 4 positions	
Directivity : Q & DI [c]		Q : 16 Nominal DI : 12 dB Nominal (f > 1.5 kHz)	
Crossover Frequencies		900 Hz Passive or Active (internally switchable)	80 Hz Active through PS15 TD
Nominal Impedance		Passive : 8 Ohms or Active : LF : 6 Ohms & HF : 8 Ohms	4 Ohms
Recommended Amplifiers		550 to 1200 Watts into 8 Ohms for 1 x PS15 per channel 1000 to 1800 Watts into 4 Ohms for 2 x PS15 per channel	800 to 1200 Watts into 4 Ohms

SYSTEM OPERATION	
Electronic Controller	The PS15 TD MkII Controller is precisely matched to the PS15 & LS1200 cabinets and includes protections. Using PS15 & LSub's without a properly connected PS15 TD MkII will result in poor sound quality and can damage the components. After quick-release of the front grille from its fixings, the HF Horn can be rotated in 4 positions for dispersion configuration.
Subbass	The PS15 can be used without optional Subbass. Active operation of the LS1200 is included in the PS15 TD Mk II.
Speaker Cables	PS15 are wired 2- & 2+ on Passive Input Speakers, LS1200 on 1- & 1+. Loop through Speakers are present on both. Single identical cables can thus be used to loop through combinations of PS15 in passive & LS1200 in no particular order.



PRODUCT FEATURES		PS15	LS 1200
Components : LF HF	[Sub]	1 x 15" (38 cm) 6 Ohms proprietary	1 x 18" (46 cm) long excursion 6 Ohm driver
		1 x 2" throat, 3" Titanium diaphragm, driver + Low Distortion, Constant Directivity Asymmetrical Dispersion Horn.	
Height x Width x Depth		675 x 434 x 368 mm (26.57" x 17.08" x 14.48")	515 x 791 x 597 mm (20.28" x 31.14" x 23.50")
Weight : Net		29 kg (64 Lb.)	45 kg (99 Lb.)
Speakon Connectors		2 x 4 pole (Passive In & Loop Thru) + 1 x 4 Pole (Active In)	2 x 4 pole (In & Loop Thru)
Construction		Baltic Birch Ply finished with structured black coating	Baltic Birch Ply & structured black coating
Fittings: Handles		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 (9 positions). 2 steel anchor plates for flying tracks on bottom (3 positions)	3 steel anchor plates for flying tracks on sides and back
Stand fittings		Built in Steel Stand Fitting, 35 mm (1"3/8)	Internal Steel Stand Fitting on Top (35 mm, 1"3/8) accepts a mast supporting 1 PS15.
Fixed Installation		One set of 4 fixing points (Omnimount 100 Std spacing)	

PRODUCT FEATURES		PS15 TD MKII CONTROLLER
Audio Inputs		Two L&R Audio inputs. Electronically balanced, 50 kOhm. Two XLR-3F connectors.
Sense Inputs		Three Amplifier Sense inputs (PS15 L&R, LS1200). 180 kOhm. on 6 Pole Removable Strip Terminal.
Audio Outputs		Two L&R (HF&LF in active mode) PS15 Audio outputs. Electronically balanced, 50 Ohm. On two XLR-3M. One Mono (L+R) LS1200 Audio output. Electronically balanced, 50 Ohm.
Specifications		Output Level : +28 dBu Max on 600 Ω - 1nF load. Noise floor : (22 Hz - 22 kHz, Unweighted, output level 0dB) L&R: -90 dBm, Sub: -70 dBm. THD+N : < 0.03% Typ. 0.05% Max. for +20 dBm Output
Controls & Indicators		Front panel: Overlap / Crossover switch, Speaker Protect LED's, Amp Sense & Peak LED's, Bass EQ trimmers ($\pm$ 3dB). 3 Peak limiters adj. trimmers, one gain control trimmer per channel. Back panel: Gain switch -6/0/+6 dB. Internal: 3 protection trimmers. Switching Active / Passive.
Power Supply		115/230 Volts (switch on back panel), 50/60 Hz. Earth-Lift (switch on back panel)
Dimensions & Weight		1U 19" Rack. 210 mm (8.5") Depth. 3.3 kg (7.3 lb.) net

SHIPPING & ORDERING	
Packaging	PS15's and PS15TD's are sold as single items and in multiples thereof.
Shipping weight & Volume	PS15 : 32 Kg (70 lb.) 0.2 cu m (7 cu feet). PS15 TD MkII: 3.85 Kg (8.47 lb.) 0.02 cu m (0.6 cu feet) Ref. LS1200 : 49 kg (108 lb.)0.32 cu m (11 cu feet)
Accessories	Flying Kit (Ref.: FLYPS15) containing 1 x PS15 Top Rail, 2 x PS15 Bottom Rails, 4 x Single Stud Flying Rings. Mast Adapter Kit (Ref.: STDPS) containing 1 m (39") long mast, supporting 1 PS15 above LS1200.

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 PS15 + PS15TD MkII. Half-Space Anechoic radiation for the LS1200 + PS15TD MkII.

[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 $\pm$ 3 dB range. Data are for speaker + processor + recommended amplifier combinations. Peak SPL is at clipping of recommended amplifier. Measurements made with PS15's in passive operation mode. [c] Directivity curves & data : obtained by computer treatment on off axis response curves. Omnimount is a registered trade mark of Omnimount Systems Inc.