FL80A

8" (209 mm), 2-way, Full-range, Processed, Powered, Loudspeaker System

KEY FEATURES

- Powered two-way portable loudspeaker
- 8" neodymium woofer
- 1" HF compression driver with 1" aluminum VC
- Advanced DSP with FIR filters
- 5 different EQ presets available
- Class D amplifier module with SMPS
- Custom-designed, wide-coverage HF horn
- Lightweight and durable PP enclosure
- Symmetrical 42° wedge angle for stage monitoring
- M8 rigging points
- Pole mount socket

APPLICATIONS

- Corporate and A/V
- TV and broadcast
- Stage monitoring
- Live music venues
- Bars and restaurants
- House of Worship

TECHNICAL SPECIFICATIONS

SYSTEM	
System's Acoustic Principle	Two-way Vented Enclosure
Frequency Response (-6dB)	65 Hz – 20 kHz (processed)
Horizontal/ Vertical Coverage Angle	90° / 60° (-6dB)
Maximum (peak) Output	125 dB SPL @ 1m

TRANSDUCERS	
LF	8" (209mm) neodymium magnet low frequency woofer - 2" (50mm) VC
HF	1" (25mm) exit compression driver - 1" (25mm) aluminum VC

ELECTRICAL	
Input Impedance	30 kΩ balanced, 15 kΩ unbalanced
Input Sensitivity	+4dBu / 1.25 V
Signal Processing	DSP with FIR filters
Direct access Controls	5 Presets (STANDARD/LIVE/MUSIC/MONITOR/STANDARD LOW CUT)
Amplifier Type	Class D with SMPS
Output Power	250W + 50W
Mains Voltage Range (Vac)	100-250 VAC 50/60 Hz
IN / OUT Connectors	XLR-M / XLR-F
Mains Input / Link Connector	PowerCon® (NAC3MPA), PowerCon® (NAC3MPB)
Cooling	Passive

ENCLOSURE & CONSTRUCTION	
Dimensions (W x H x D)	270 mm (10.6") x 422 mm (16.6") x 250 mm (9.8")
Taper	42°
Enclosure Material	High-density Polypropylene with Metal Grid
Flying System	M8 flying points or dedicated metal bracket
Net Weight	8kg (17.6 lbs)

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DESCRIPTION

The FL80A is a two-way powered point source loudspeaker that provides full frequency response and controlled dispersion from an easily manageable enclosure. It is designed for many kinds of foreground sound reinforcement applications requiring high quality sound, repeatable performance, and convenience of operation in an easily portable format.

The 8" low frequency neodymium driver is matched to a 1" high frequency compression driver with 1" aluminum voice coil, for low weight and good transient response, each of them being driven by individual channels of a powerful Class D+AB amplifier module. The custom-designed HF horn that provide wide and accurate coverage of a typical auditorium

The FL80A's symmetrical vented enclosure allows it to adapt to multiple portable and fixed applications, such as front-of-house duties on a speaker stand, or pole mounted on an associated subwoofer or, by using the 42° wedge angle, as a powerful stage monitor.

The compact and lightweight high-density PP cabinet is provided with a 35mm pole mount, three recessed aluminum handles for easy lifting and handing, and M8 rigging points to allow suspension in fixed installations using optional mounting brackets.

SYSTEM PROCESSING

The system processing is based on an advanced DSP platform featuring 56bit, double precision processing and high resolution 24bit AD/DA converters for perfect signal integrity and superior sonic performance. Thanks to its massive processing power, the FL DSP is capable of providing the most sophisticated algorithms for speaker processing, including linear phase FIR filters.

The FL DSP makes it possible to set an optimal TIME ALIGNMENT for the crossover filter resulting in a linear phase response. The correct acoustic filtering has been achieved using the Constant Power Crossover technique that, thanks to a particular phase relation, results in a very smooth transition between LF and HF and an even dispersion in the crossover region.

The DSP offers the choice of 5 optimized EQ presets to adapt the system to different applications.

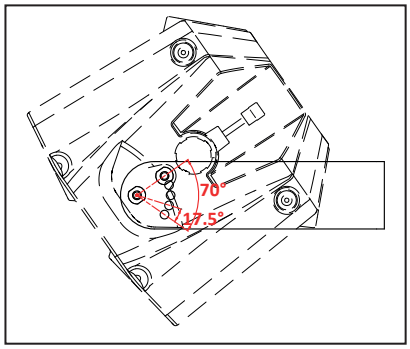
POWER AMPLIFIER

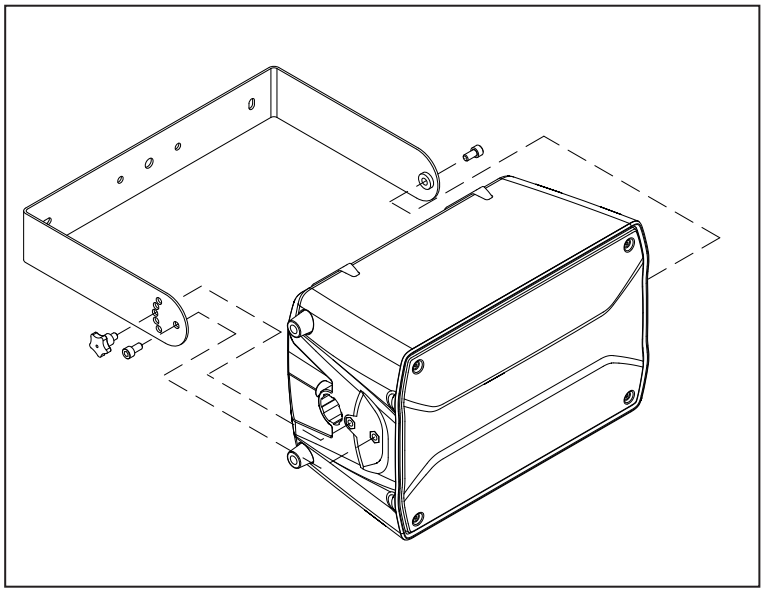
The FL80A is powered by a CLASS D power amplifier with SMPS. The innovative technology used for these amplifiers offers top-of-the-range performances, such as a superior sound definition at any audio frequency, very high dynamics even for low level signals, and very low distortion even at maximum power.

Output power is optimised specifically to the drive units for efficient power transfer, with the low frequency section producing 250 watts while 50 watts is available for the high frequency compression driver. Input and link connections are via balanced 3-pin XLR connectors, and a ground lift switch is provided for hum-free operation. Mains power is connected through a locking Neutrik PowerCON, and a Power Out connector allows mains power to be linked to additional FL80A cabinets.

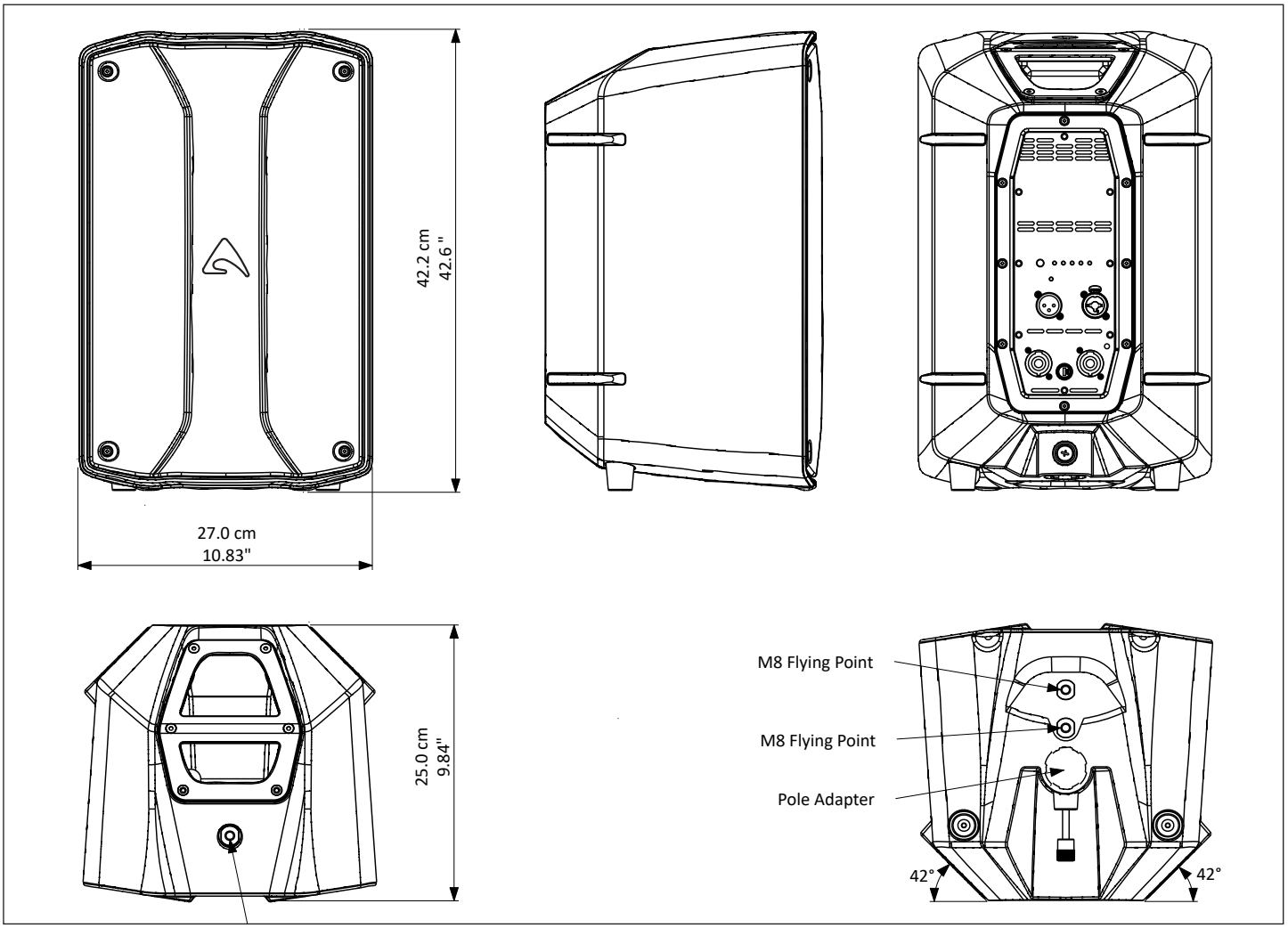
MOUNTING AND FIXING

The FL80A can be wall mounted in permanent installations either vertically or horizontally using the KPTFL80 wall bracket. The wall bracket allows five steps of incremental rotational adjustment to enable the louspeaker to be accurately aimed.





ENGINEERING DRAWING



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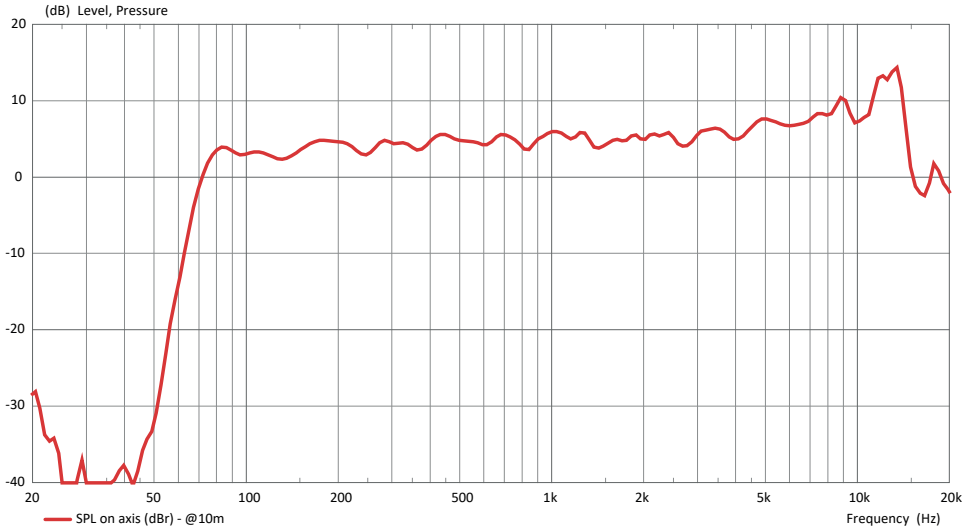
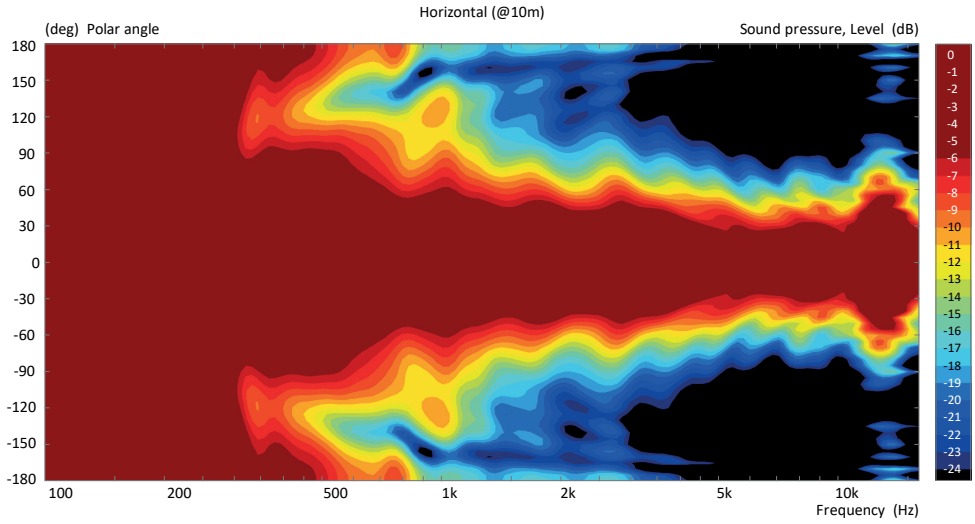
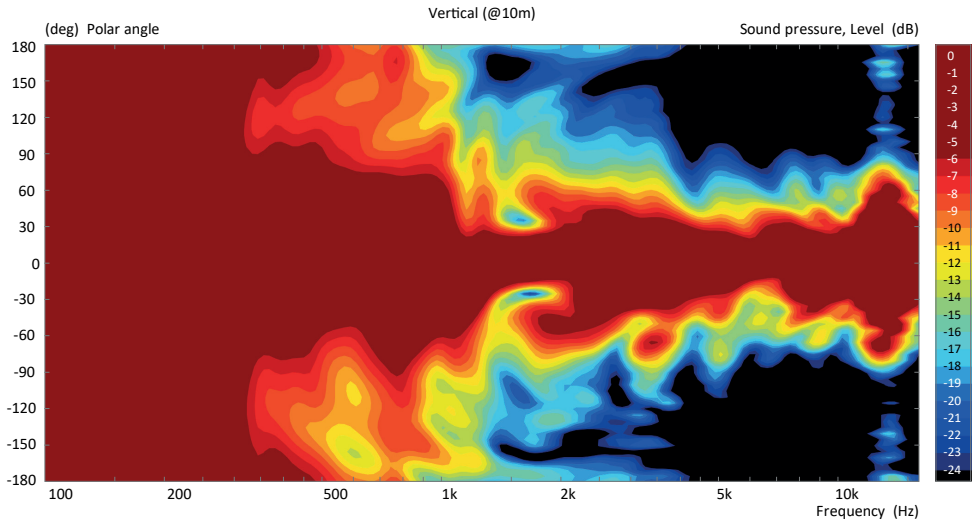
FL80A frequency response



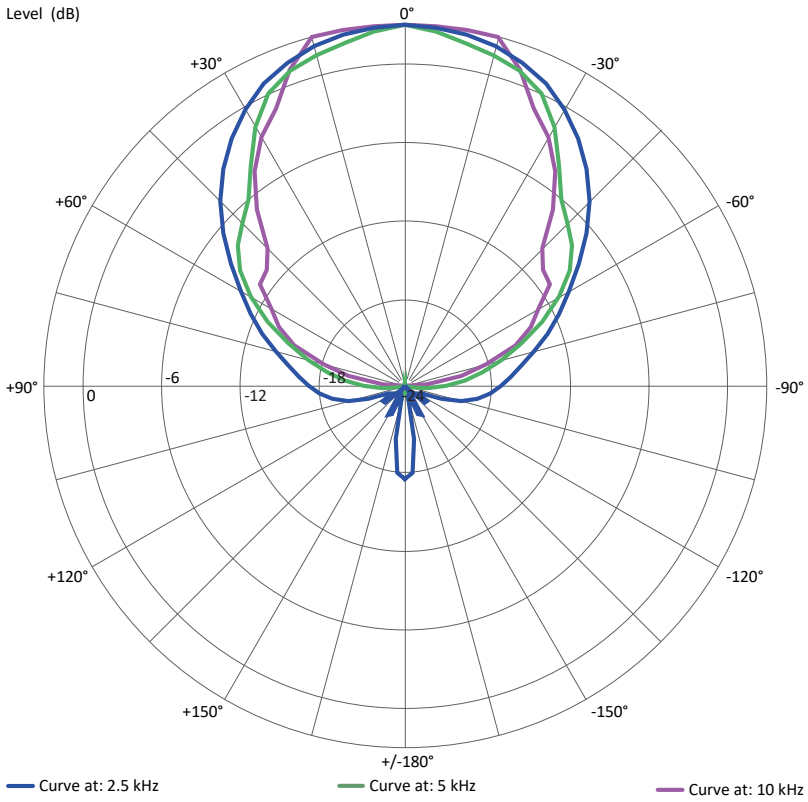
FL80A HORIZONTAL directivity map



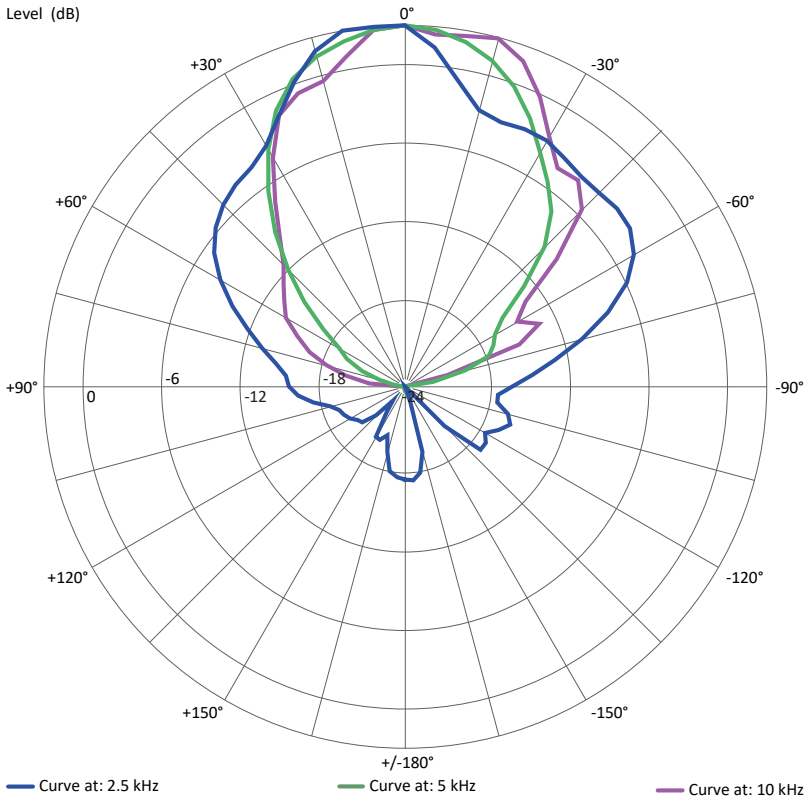
FL80A VERTICAL directivity map



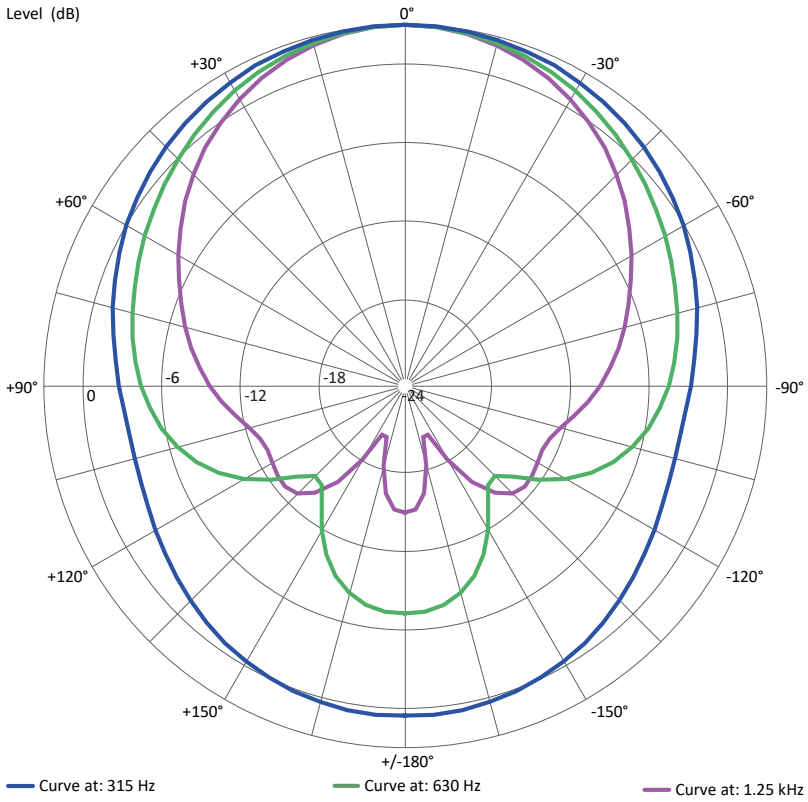
FL80A HF HORIZONTAL polar diagram



FL80A HF VERTICAL polar diagram



FL80A LF HORIZONTAL polar diagram



FL80A LF VERTICAL polar diagram