



THE SOUNDMAKERS

PULSAR

CONSISTENT FULLRANGE >



CONSISTENT FULLRANGE >

PULSAR series self-powered speaker cabinets are designed specifically for musicians and DJs who gig without a sound engineer of their own and aren't in a position to mix their up-front sound during the show. Even something as simple as varying the volume can present an acoustical problem because the master EQ really has to be adjusted from the FOH desk.

This is where PULSAR's on-board DSP comes into its own. Our innovative Consistent Fullrange technology adjusts PULSAR speakers' frequency response dynamically, shaping the sonic image to achieve the best audio result at all volume levels.

This is accomplished by means of an intelligent controller with a multiband limiter that splits the signal into several frequency bands. Each is processed separately so that the sound out front is consistent across the entire frequency spectrum. And that's why the system is able to deliver a true fullrange sonic image across the board.

PULSAR handles the sound, freeing musicians and DJs to focus on the heart of the matter: their passion for music!



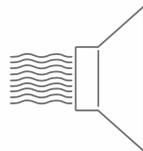
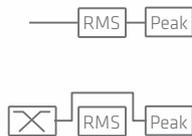


PL 110 FA, PL 112 FA, PL 115 FA, PL 118 SUB A

FEATURES & SETUP OPTIONS

1000 W

650 Watts Bass
350 Watts Mid-Hi



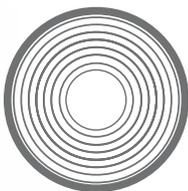
1,000 Watts of Class-D Power
PULSAR fullrange models deliver a whopping 1,000 watts of total output power (Bass: 650 watts, Mid-Hi: 350 watts).

Intelligent Multi-band Limiter
Professional-grade limiter technology stabilizes midrange and high frequency response, even at massive low-end spikes.

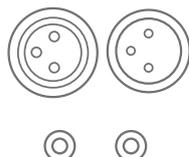
Advanced Speaker Cooling
Improved coil cooling prevents power compression and volume dips under prolonged peak loads.

90° Dispersion
The extra-wide sound field ensures optimum dispersion everywhere, including right in front of the stage.

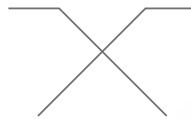
Wood Cabinet
The low-vibration wood housing delivers greater sound pressure and a uniform sonic image from soft to loud.



Custom Loudspeakers
Pulsar woofers were designed specifically for these enclosures and tuned for optimum audio performance.



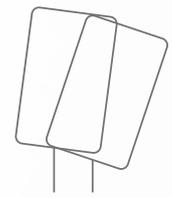
3-Channel Mixer
Additional individually adjustable mic and CD player inputs are on board to handle smaller gigs without an outboard mixer.



Active X-Over
Offering mono bass, stereo bass, half-stack and full-stack modes, the crossover built into the subwoofer feeds the filtered signal to the top units.



Multi-grip Handles
Carrying speakers is an exercise in comfort, convenience and safety with these professional-style handles.



DuoTilt Pole Mount
The DuoTilt pole mount serves to aim speakers accurately so audiences enjoy sweet sound all around.

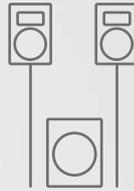
STAND-ALONE



PL 110 FA, FA PL 112 and PL 115 FA enclosures are able to cover the full frequency range, so they get the job done in style even without added subwoofers. And if you need to beef up the bass and tune the midrange for the best performance at high volumes, simply set these PULSAR cabinets' EQ presets to Standalone and Contour.

Audience size: 50-100*

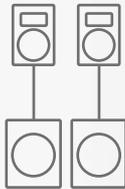
2.1



One PL 118 SUB A's preamp is able to drive two cabinets in stereo. This bin's hybrid design pairs a bass reflex port with a resonator chamber to deliver massive bass with a snappy attack. Kick drums sound oh so tight and punchy. Stereo signals (L/R) patched into the input are converted to mono in the subwoofer. Best of all, the output levels of the two cabs and the sub remain beautifully balanced.

Audience size: 100-150*

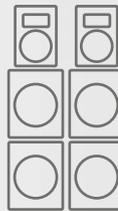
HALF-STACK



This stereo bass setup featuring two half-stacks with one PL 118 SUB A each delivers more powerful low-end performance than the 2.1 system described below. Each can be paired with a PULSAR PL 110 FA, PL 112 FA or PL 115 FA cabinet, depending on your requirements. A pair of half-stacks provides a well-balanced sonic image at high volumes, yet takes up little truck space.

Audience size: 200-350*

FULL-STACK



With two stacked subwoofers per side, this setup packs plenty of headroom to render low frequencies with remarkable sound pressure. And with twice the half-stacks' speaker cone surface area and power output, these dual-full stacks move some serious air in the low-frequency range. Shaping a uniform sonic image is easy with the Configuration switch. And the PL 112 FA and PL 115 FA cabs are perfectly matched to this setup's SPL and acoustics.

Audience size: 400-500*

*A note on audience size: these are suggestions, rather than recommendations, meaning these numbers are more for your general orientation. The actual coverage will depend on the room's size, layout, appointments and furnishings, as well as the area you want to cover and the sound pressure levels you wish to achieve.

KEY FEATURES & BENEFITS



PL 110 FA

A powered enclosure loaded with a 10" woofer, the PULSAR PL 110 FA delivers remarkably assertive and low-ranging bass response yet leaves a small footprint. Rated for 1,000 watts and equipped with the latest DSP technology, it renders fullrange signals with punch and authority. Smart limiters tame spiking bass signals to ensure even the smallest PULSAR enclosures' midrange and high frequency response remains stable. The low-vibration wood housing underpins the speaker's excellent acoustical properties to achieve greater sound pressure and a uniform sonic image. HK Audio also offers a wide range of rigging hardware, protective covers and mounting poles.



PL 112 FA

An active cabinet loaded with a 12" speaker, the PULSAR PL 112 FA delivers a whopping 1,000 watts and features three inputs. Its remarkable dynamic range and definition, paired with its compact dimensions and surprisingly manageable weight, set it apart from the crowd of competitors. This cab continues to deliver powerful bass response even at high volume levels without sacrificing any of the midrange performance that is so vital to live sound. The sturdy wood housing and the DSP controller's smart programming enhance its excellent acoustical properties. HK Audio also offers an extensive set of accessories for flown and monitoring applications as well as dust covers and Tilt Units.



PL 115 FA

An active cabinet loaded with a 15" woofer, the PULSAR PL 115 FA features a muscular 1,000-watt power amp and an input section sporting three inputs. Although much the same size and weight as the PL 112 FA, the PL 115 FA offers added headroom for the bass frequencies and low mids. With its impressive dynamic range, it is able to provide a rock-solid bass foundation even at high volume levels. And that makes it an excellent standalone solution and the perfect complement to the PL 118 SUB A subwoofer in larger setups. HK Audio also offers an extensive set of accessories for flown and monitoring applications as well as dust covers and Tilt Units.



PL 118 SUB A

An active unit loaded with an 18" subwoofer, the PULSAR PL 118 SUB A features a 600-watt amp. It renders higher-register bass tones with plenty of snap despite its remarkably low-ranging response. The hybrid design featuring a bass reflex port with resonator chamber delivers impressive SPL paired with a hair-trigger response to sub-bass frequencies. And that makes the PL 118 SUB A everything demanding DJs want and larger PAs need in a bass bin. Configuring 2.1, half-stack and full-stack setups with an input section featuring a versatile active crossover and stereo inputs. Dust covers are optional and the housing is ready for casters.

CONSISTENT FULLRANGE TECHNOLOGY

The PULSAR series' Consistent Fullrange technology uses intelligent multiband limiting and frequency response filtering to deliver sweet yet assertive sound, always and at every level, from soft to loud. The multiband limiter monitors and controls the target frequency bands separately, intervening only when and where it serves the purpose of achieving great sound.

PULSAR series mid/high units may be configured for use as a standalone cabinet and as a PA system component/monitor.

In Standalone mode, the PULSAR powered cabinet's frequency response is extended into the bass range for use as a standalone – or fullrange – speaker.

In System/Monitor mode, the PULSAR cabinet's response is largely flat, with just enough filtering

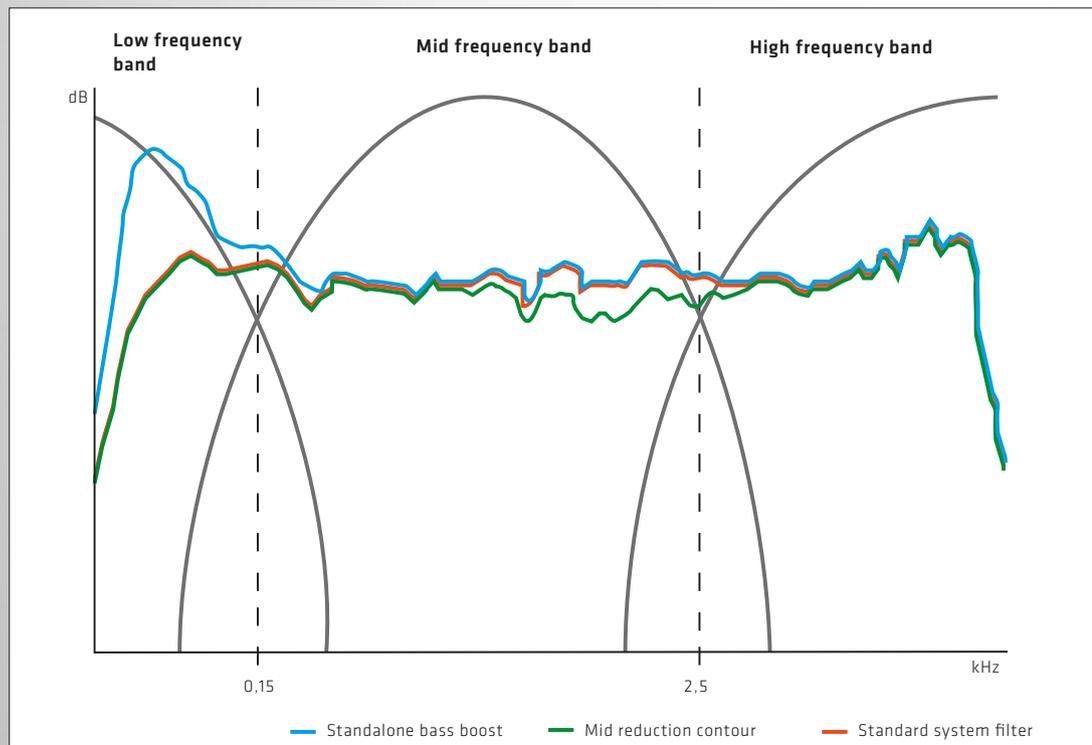
to tune it perfectly for use with its counterpart components in a PA system: for example, PULSAR series subwoofers.

The Flat/Contour selector provides two additional EQ presets that adapt the PULSAR cab's response to the given type of music and application.

Our engineers teamed up with musicians to develop, test, tune and optimize all PULSAR components for every target application, and maximize their practical benefits in each.

Consistent Fullrange technology conjures such a persuasive audio experience, and so effectively.

It liberates performers, making their lives easier on stage and leaving more room for their creativity and music to flourish.



Multiband limiter with filter presets





Cross section of a PL 112 FA

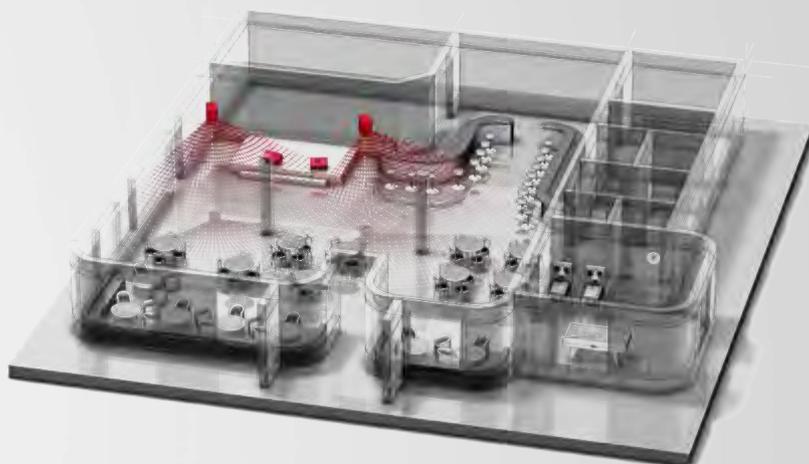


PUB SCENARIO

- For acoustic performances in smaller, narrow bars and pubs with crowds of between 50 and 100 people*, a balanced fullrange sound is required even without a subwoofer.
- For this example, an acoustic duo consisting of two singers and one acoustic guitar or keyboard performs on a 3.5 x 1.5m stage platform.
- In small rooms, the duo can be sure that they will not invoke unwanted frequencies, even if they are not using equalizers.

Function	Speakers	Setup	Setup-Details
Front-PA	2 x PL 115 FA		• Tops on tripods inclined at 3°

Monitoring	2 x PL 112 FA		• Monitor Poles
------------	---------------	--	-----------------

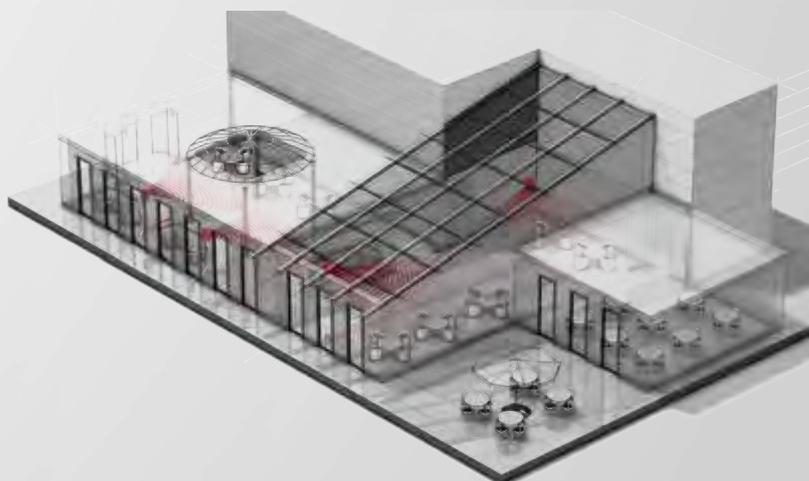


LOBBY SCENARIO

- For events like receptions or the openings of new hotels, the mobile DJ often needs to cover a series of rooms (rather than just one), to crowds of between 100 and 150* people.
- The DJ controls the PA in the 15 x 10m lobby and the neighboring 7 x 16m lounge area directly from their decks.
- Both areas are supplied with an even fullrange sound at any volume level.

Function	Speakers	Setup	Setup-Details
Front-PA	1 x PL 118 Sub A 2 x PL 110 FA		• 2.1 System • 2 x Tops on tripod inclined at 3°

Adjoining Room	2 x PL 110 FA		• Signal over Thru Sub Out • Tops on tripods inclined at 3°
----------------	---------------	--	--

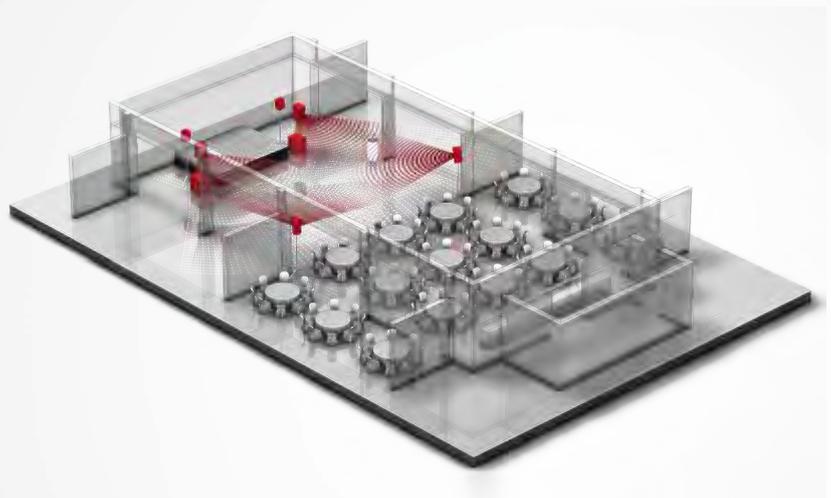


*A note on audience size: these are suggestions, rather than recommendations, meaning these numbers are more for your general orientation. The actual coverage will depend on the room's size, layout, appointments and furnishings, as well as the area you want to cover and the sound pressure levels you wish to achieve.

WEDDING SCENARIO

- Weddings or gala events for between 150 and 350 guests* require the PA to be split into two distinct sections: the dance floor and the dining area.
- In this example, a covers band (featuring drums, electric guitars and bass, vocals and a DJ) focuses its sound mainly on the dance floor from a 3 x 4m stage area.
- The PA zones are divided into the following areas:
 - The dance floor is comprehensively and optimally covered with deeper frequencies and, thanks to the additional 4-point sound system, has a disco-like feel.
 - The dining area (organized in table groups) starts 7 m away from the Front PA and the background music level can be well regulated.
 - The bar area offers ample opportunity for discussion.

Function	Speakers	Setup	Setup-Details
Front-PA	2 x PL 118 Sub A 2 x PL 115 FA		<ul style="list-style-type: none"> • Half stack • Tops on poles inclined at 7°
Extension to 4-point sound system	2 x PL 112 FA		<ul style="list-style-type: none"> • On tripod inclined at 7°
Monitoring	2 x PL 110 FA		<ul style="list-style-type: none"> • On tripod inclined at 7°



YOUTH CENTER SCENARIO

- For youth center events, the PA system must be flexible enough to adapt to a wide variety of venues sizes and conditions, and crowd sizes of 150 to 300 listeners*.
- The amateur rock band featured in this example is made up of two guitars, one bass, one drummer and one vocalist – they expect their PA to deliver a strong, assertive reproduction of their vocals and distorted guitar sounds.
- The PA, positioned at the side of the 2.5 x 4 m stage, delivers consistent sound dispersion across the entire 8 x 8 m room.

Function	Speakers	Setup	Setup-Details
Front-PA	2 x PL 118 Sub A 2 x PL 112 FA		<ul style="list-style-type: none"> • Half stack • Tops on poles inclined at 3°



*A note on audience size: these are suggestions, rather than recommendations, meaning these numbers are more for your general orientation. The actual coverage will depend on the room's size, layout, appointments and furnishings, as well as the area you want to cover and the sound pressure levels you wish to achieve.



YOUTH CENTER SCENARIO

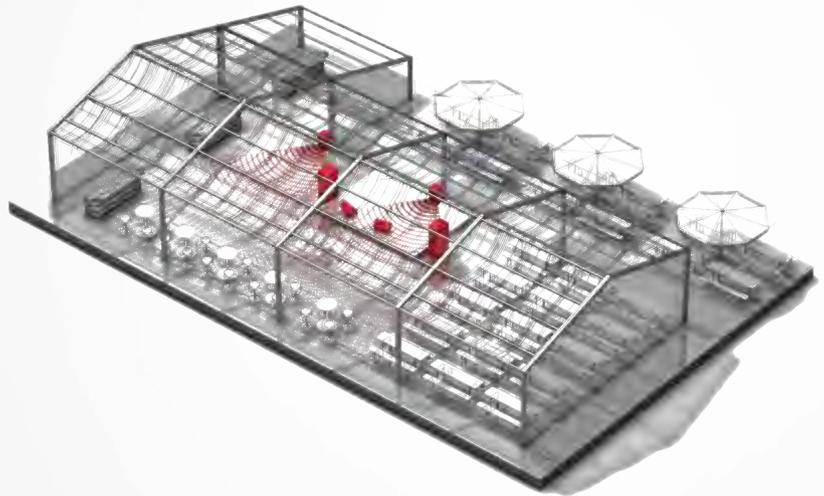
- Events in smaller marquees often offer no suspension points to optimize the sound distribution over the area that needs to be covered. In this situation, the only reasonable acoustic solution is a professionally stacked PA, as such tents typically require different volume levels in different areas for between 250 and 400 attendees*.

- For this example, the stage area is at ground level, 3 x 4m in size and set up for a trio consisting of a vocalist, keyboard player and guitarist.

- The PA zones are divided into the following areas:

- The 6 x 10m dance floor is wider than it is long, and the sound distribution covers the whole area extremely well, right up to the edge of the stage itself.
- The seating and bar areas are largely outside of the horizontal sound transmission angle, giving attendees the chance to hear the music and their own conversations without issue.

Function	Speakers	Setup	Setup-Details
Front-PA	4x PL 118 Sub A 2x PL 112 FA		• Full stack (or half stack with subwoofer add-on) • Tops on poles inclined at 3°
Monitoring	2x PL 112 FA		• Monitor Poles



*A note on audience size: these are suggestions, rather than recommendations, meaning these numbers are more for your general orientation. The actual coverage will depend on the room's size, layout, appointments and furnishings, as well as the area you want to cover and the sound pressure levels you wish to achieve.



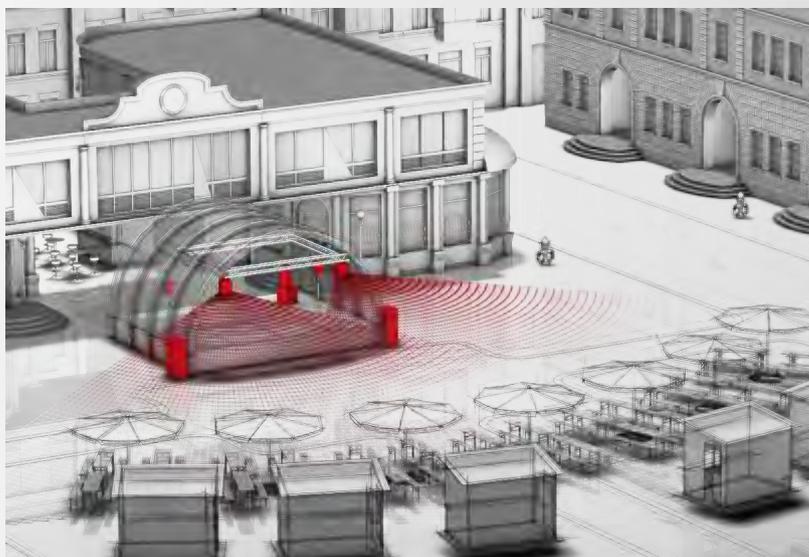
TOWN PARTY SCENARIO

- Town parties often have crowds of around 400-500 people, and they usually take place in an open-air setting. Typically, sound engineers are employed for such events, but it also regularly occurs that bands are left to fend for themselves and mix their own sound directly from the stage.

- For this example, a covers band made up of one keyboard player, one electric guitarist, one electric bassist, and one drummer – with three band members performing vocals – might find themselves playing on a 6 x 8m round arched stage 80cm off the ground.

- The PA zones are divided into the following areas:
 - The dance floor requires a sound pressure throw distance of 10m and a wide horizontal dispersion of 14m. This permits a strong bass foundation with stable mids.
 - In the seating areas, the volume level is always significant, but moderate enough to allow conversations to remain understandable.
 - In the standing and bar area, the sound pressure is at a comfortable level, which makes placing orders easily understandable.

Function	Speakers	Setup	Setup-Details
Front-PA	4 x PL 118 Sub A 2 x PL 115 FA		<ul style="list-style-type: none"> • Subwoofers stacked • Tops flown on trussing and inclined at ca. 15°
Near Fill	2 x PL 112 FA		<ul style="list-style-type: none"> • Can be used to provide additional sound dispersion directly in front of the stage • Tops on tripods • Inclined at 7° • Angled at center stage–min. 45°
Side Fill / Monitoring	2 x PL 110 FA		<ul style="list-style-type: none"> • Tops on tripods on the stage • Inclined at 7°
Drum Fill	1 x PL 118 Sub A 1 x PL 112 FA		<ul style="list-style-type: none"> • Top secured to subwoofer via Tilt Unit



ACCESSORIES



TB-1*

This single-cab tilt bracket serves to attach the L5 112 F/FA / L5 115 F/FA and the PL 112 FA / PL 115 FA to trusses using appropriate half-couplers or trigger clamps (M12). It attaches to variable positions on the recessed handles. Once the unit is aimed properly, the TB-1 is simply secured with the clamping lever.

**The TB-N and TB-QN tilt brackets can also be used*



AP-8

This attachment point has a workload limit (WLL) of 360 kg/794 lbs. It safely attaches enclosures with M8 rigging points to steel cables or chains.



PROTECTIVE COVERS

Tailored, padded covers are optionally available for all PULSAR series models. Openings afford access to the enclosures' carrying handles.



TILT UNIT

Serving to aim the mid/high unit, the Tilt Unit offers a choice of 5°, 10°, and 15° angles. It comes with a tote bag.



ADJUSTABLE POLE (STEEL) M20

Height adjustable and lockable speaker mounting pole with M20 thread. Extra strong steel construction holds cabinets up to 40kg. Adjustable from app. 90cm - 150cm. Weight 2,3kg



MONITOR POLES

Monitor poles allow PL 112 FA and PL 115 FA cabinets to be used as stage monitors. The two poles are screwed into the rigging points on the sides of the housing and are quickly and easily removed for safe transport.



SK

TECHNICAL DATA



PL 110 FA

58 Hz - 18 kHz

Max. SPL calc. 132 dB

10" woofer with a 1"-driver

Advanced Woofer Voice Coil Cooling

1,000 watts Class D - biamped

90° x 55° horn

2 EQ switches: Standalone / System and Flat / Contour

Undervoltage-Protection, Thermo-Protection, Short-Circuit Protection, Overcurrent-Protection

DSP-Controller

2 x XLR Combo IN ports,
1 x Stereo Cinch IN, 2 x XLR-Thru,
1 x XLR-Mix Out

(WxHxD) 34.3 x 49.1 x 37 cm

16 kg / 35.5 lbs



PL 112 FA

56 Hz - 18 kHz

Max. SPL calc. 133 dB

12" woofer with a 1"-driver

Advanced Woofer Voice Coil Cooling

1,000 watts Class D - biamped

90° x 55° horn

2 EQ switches: Standalone / System and Flat / Contour

Undervoltage-Protection, Thermo-Protection, Short-Circuit Protection, Overcurrent-Protection

DSP-Controller

2 x XLR Combo IN ports,
1 x Stereo Cinch IN, 2 x XLR-Thru,
1 x XLR-Mix Out

(WxHxD) 38 x 66 x 37 cm

19.7 kg / 43.4 lbs



PL 115 FA

49 Hz - 18 kHz

Max. SPL calc. 135 dB

15" woofer with a 1"-driver

Advanced Woofer Voice Coil Cooling

1,000 watts Class D - biamped

90° x 55° horn

2 EQ switches: Standalone / System and Flat / Contour

Undervoltage-Protection, Thermo-Protection, Short-Circuit Protection, Overcurrent-Protection

DSP-Controller

2 x XLR Combo IN ports,
1 x Stereo Cinch IN, 2 x XLR-Thru,
1 x XLR-Mix Out

(WxHxD) 46.5 x 69 x 45.2 cm

25.7 kg / 56.7 lbs



PL 118 SUB A

35 Hz - X-Over

Max. SPL calc. 130 dB

18" woofer

Advanced Woofer Voice Coil Cooling

600 watts Class D

Undervoltage-Protection, Thermo-Protection, Short-Circuit Protection, Overcurrent-Protection, Look Ahead Thermo-Management

Active X-over with 100 Hz/120 Hz frequency selector

Phase Reverse

2 x XLR Combo IN ports, 2 x XLR-Thru, 2 x XLR-Mid/High Out

M20 Pole Mount

Mounting hardware for casters 100 mm

(WxHxD) 52.5 x 69 x 69.1 cm

40.5 kg / 89.3 lbs



THE SOUNDMAKERS

HK Audio®
Postfach 1509
66595 St. Wendel, Germany

info@hkaudio.com
www.hkaudio.com

© 2016 Music & Sales P.E. GmbH
Subject to change without notice, MS D-2866