

Troubleshooting

Problem	Possible cause(s)	Action
1. No Sound	Amplifier	Connect a known working test speaker to the amplifier outputs. If there is no sound, check that all the electronics are on, the signal routing is correct, the source is active, the volume is turned up, and so on. Correct/repair/replace as necessary. If there is sound, the problem is in the wiring.
	Wiring	Verify that you have connected the correct wire pairs to the amplifier. Play something at low level through the amplifier (for example, from a CD player or tuner). Connect the test speaker in parallel with the malfunctioning line. If the sound level has gone or is very weak, the line has a short in it (possibly a severe scrape, pinch, or staple puncture). If the sound level is normal, the wire is open (possibly a cut wire or a missed connection). Using the test speaker, move down the line and test each connection/junction until you find the problem and correct it. Observe proper polarity.
2. Poor Low-Frequency Response	WITH SUB switch activated	Set the FULL RANGE / WITH SUB switch to the FULL RANGE position.
3. Intermittent output such as crackling or distortion	Faulty Connection	Check all connections at amplifier and speakers to ensure they are all clean and tight. If the problem persists, it may be in the amplifier or wiring. See Problem 1 above.
4. Constant noise such as buzzing, hissing, humming	Defective source or other electronic device	If the noise is present but no program material is playing, the likely cause is the signal chain in the electronics. Evaluate each component as necessary to isolate the problem.
	Poor system grounding or ground loop	Check and correct the system grounding, as required.
	Incorrect gain structure	Verify level controls of the source are properly structured. Verify MIC/LINE switch is in the correct position.
5. No sound produced with microphone connected to input B	Microphone requires phantom power	Use a dynamic microphone that does not require phantom power. If using a microphone that requires phantom power, an external phantom power source will be needed.
	MIC / LINE switch is in LINE position	Set the MIC/LINE switch to the MIC position
6. Sound is distorted. LIMIT LED is constantly on or flashing regularly	Excessive input level	Reduce the input level or loudspeaker level knobs to prevent limit.
	Line level source connected to INPUT B with MIC/LINE switch in MIC position	Set the MIC/LINE switch to the LINE position.
7. Sound is distorted. LIMIT LED is not blinking	Source input (mixing console/preamp) is overdriven	Verify level controls of the source are properly structured.
8. Microphone produces acoustic feedback when input level is amplified.	Incorrect gain structure	Reduce the microphone levels at the mixing console or input source. If the microphone is connected directly to the speaker reduce the input level on the speaker. Positioning the microphone close to the sound source will increase gain-before feedback.
	EQ switch is in the EQ (~) position	Set the EQ switch to the EQ (-) position for vocal applications.
	Microphone position is too close to the front of the speaker	Whenever possible setup the speakers so the microphone is behind them. If using the speakers in a monitor position aim the speaker to the back of the microphone.

If these suggestions do not solve your problem, contact your nearest PD Professional dealer or PD Professional distributor.

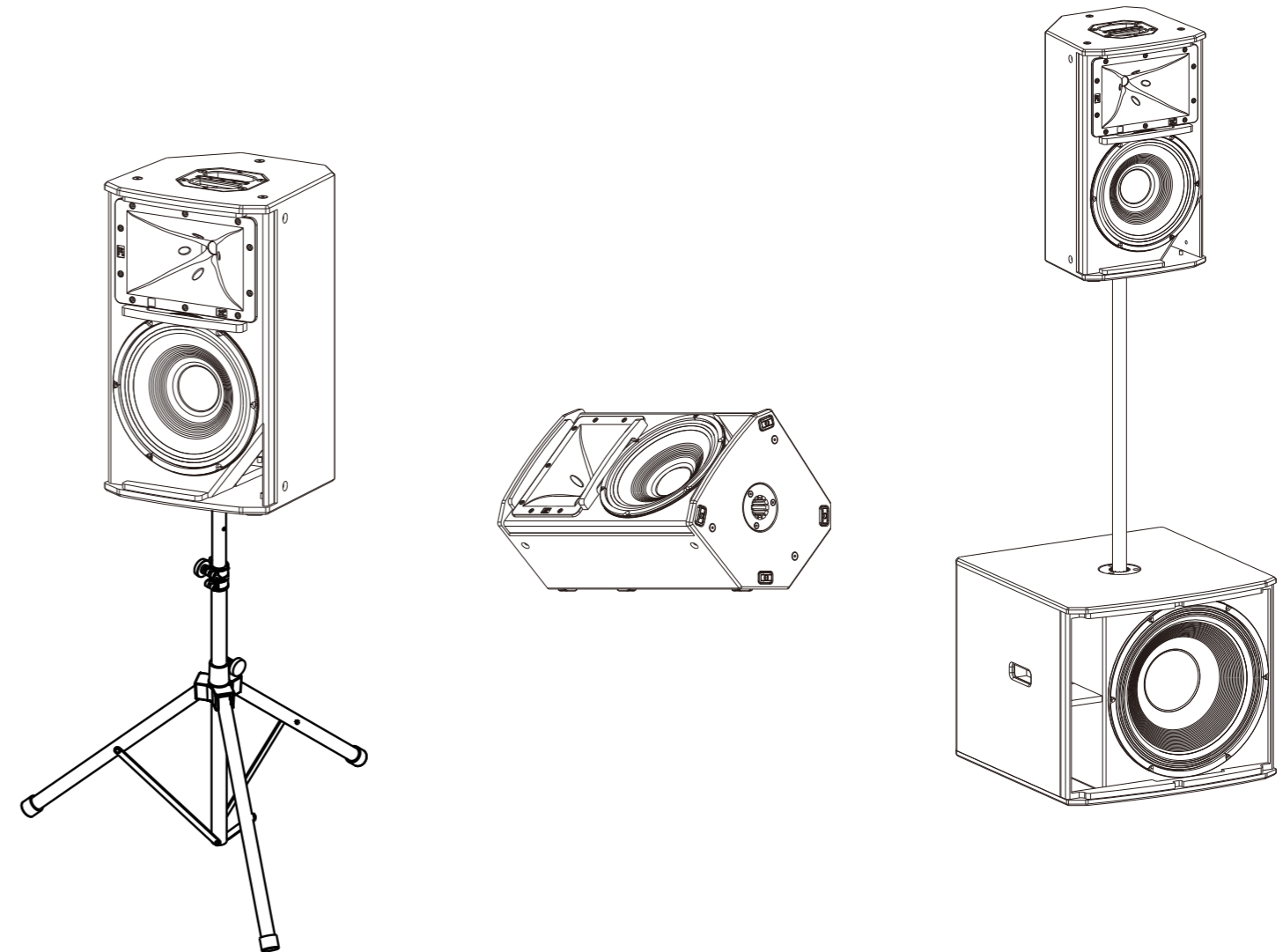
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ACTIVE PORTABLE LOUDSPEAKER



AP112, AP115, AP115SP, AND AP118SP



PRECISION DRIVE



Safety

Important Safety Instructions



WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT OVEREXPOSE THIS APPLIANCE TO RAIN OR MOISTURE

AVIS: RISQUE DE CHOC ELECTRIQUE, NE PAS OUVRIR.

WARNING: THE MAINS PLUG OR AC INLET IS USED AS A DISCONNECT DEVICE. THE DISCONNECT DEVICE SHALL REMAIN READILY OPERABLE.

WARNING: CONNECT ONLY TO MAINS SOCKET WITH PROTECTIVE EARTHING CONNECTION.

WARNING: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK) AS THERE ARE NO USER-SERVICABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.



The lightning flash with arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.



The asterisk within an equilateral triangle is intended to inform the user to necessary installation or removal instructions regarding equipment or hardware use relating to the system.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
8. Only use attachments/accessories specified by the manufacturer.
9. Do not expose this apparatus to dripping or splashing and ensure that no objects filled with liquids, such as vases, are placed on this apparatus.
10. Do not block any ventilation openings. Install in accordance with the manufacturers instructions.
11. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
12. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
13. Unplug the apparatus during lightning storms or when unused for long periods of time.



14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. To completely disconnect AC power from this apparatus, the power supply cord must be unplugged.

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Suspension

Warning!

Suspending any object is potentially dangerous and should only be attempted by individuals who have a thorough knowledge of the techniques and regulations of suspending objects overhead. Precision Drive strongly recommends all loudspeakers be suspended taking into account all current national, federal, state, and local laws and regulations. It is the responsibility of the installer to ensure all loudspeakers are safely installed in accordance with all such requirements. When loudspeakers are suspended, Precision Drive strongly recommends the system be inspected at least once per year or as laws and regulations require. If any sign of weakness or damage is detected, remedial action should be taken immediately. The user is responsible for making sure the wall, ceiling, or structure is capable of supporting all objects suspended overhead. Any hardware used to suspend a loudspeaker not associated with Precision Drive is the responsibility of others.



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Precautions

	If an Precision Drive <i>loudspeaker is used outdoors on a sunny day, place the loudspeaker in a shaded or covered area. The loudspeaker amplifiers have protection circuits that temporarily shut the loudspeaker off when extremely high temperatures are reached. This can happen on hot days when the loudspeaker is in direct sunlight.</i>
	Do not use Precision Drive <i>loudspeakers in an environment where temperatures are below 0°C (32°F) or exceed +40°C (104°F).</i>
	Never expose an Precision Drive loudspeaker to rain, water, or high moisture.
	Precision Drive <i>loudspeakers are easily capable of generating sound pressure levels sufficient to cause permanent hearing damage to anyone within normal coverage distance. Caution should be taken to avoid prolonged exposure to sound pressure levels exceeding 90 dB.</i>

*



Old electrical and electronic appliances

Electrical or electronic devices that are no longer serviceable must be collected separately and sent for environmentally compatible recycling (in accordance with the European Waste Electrical and Electronic Equipment Directive). To dispose of old electrical or electronic devices, you should use the return and collection systems put in place in the country concerned.



Quick Setup

The powered loudspeakers are fully integrated audio systems with carefully matched electronics and transducers. These products make it easy to setup a high quality sound system quickly with a minimum amount of cables and external electronics.

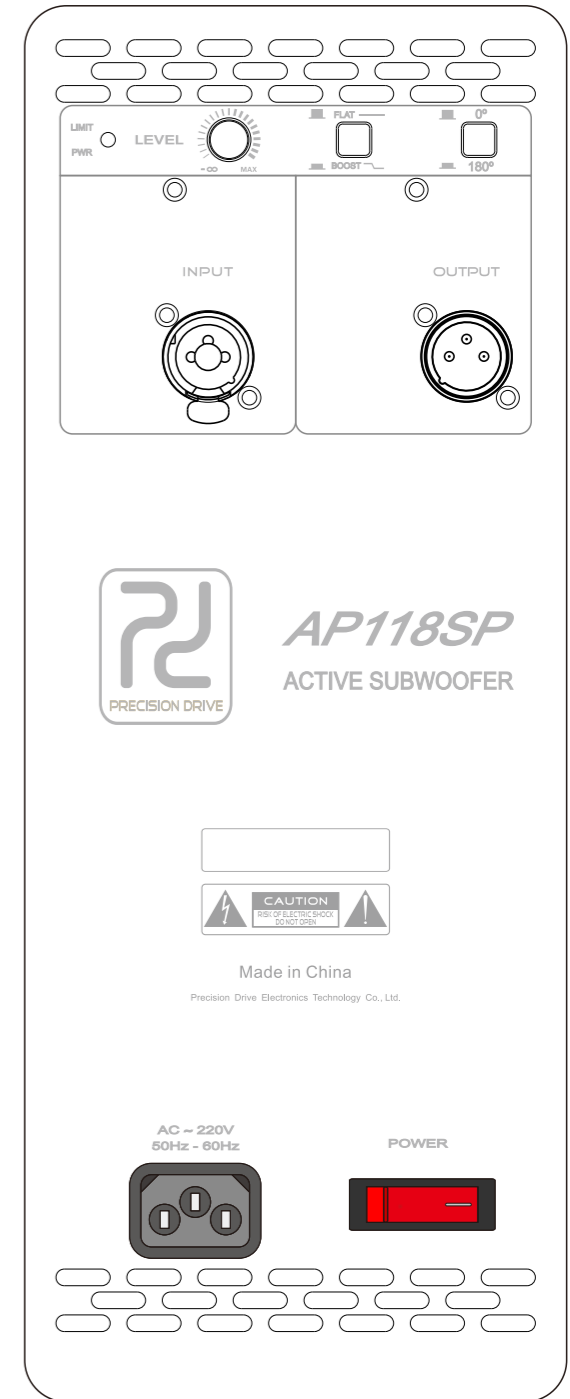
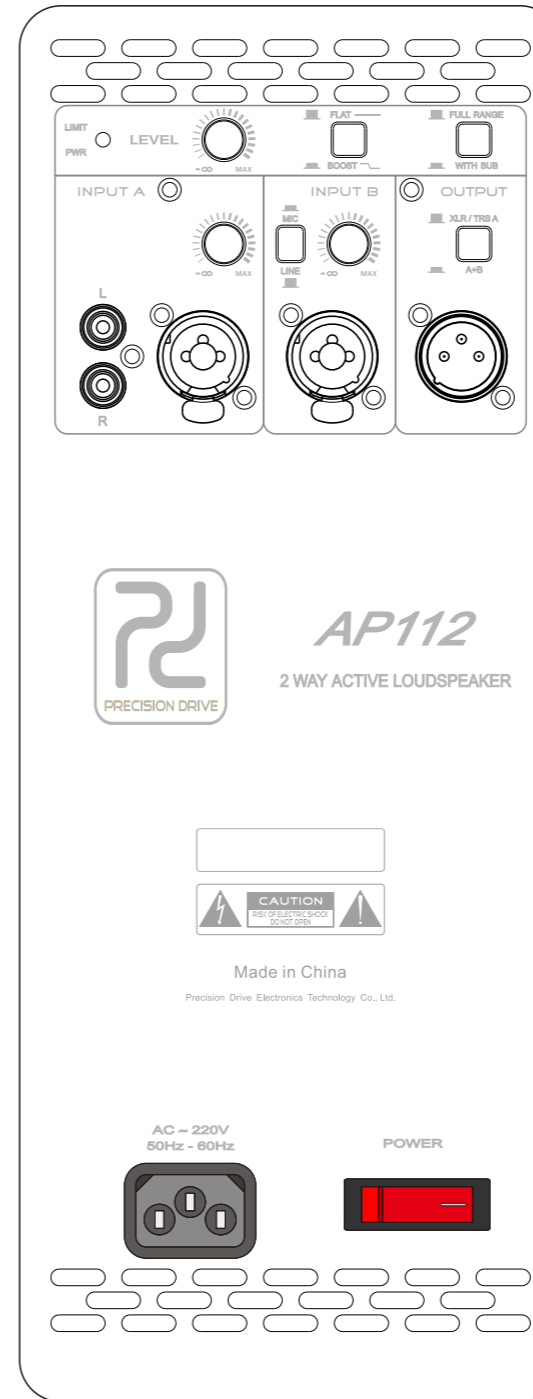
To get the loudspeaker into operation as quickly as possible, please observe the following steps:

Step	Illustration
1. Turn INPUT LEVEL and LOUDSPEAKER LEVEL to $-\infty$.	
2. Connect the AC power cord from a grounded line receptacle to MAINS IN.	
3. Connect a XLR, TRS or RCA cable from an audio source to INPUT A or INPUT B.	
4. Switch POWER to ON.	
5. Slowly increase INPUT LEVEL and LOUDSPEAKER LEVEL to the desired volume	



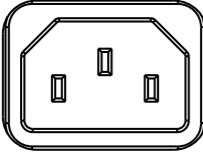

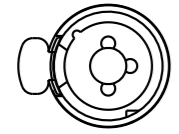



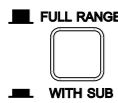
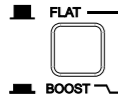

Amplifier Controls

The amplifier has a combination of controls and connectors to ensure the most versatile loudspeaker system. Each component below has a description on the following pages.



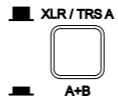





Amplifier Controls (cont')

	<p>MAINS IN AC connection is established via an IEC-connector. For 230V operation, the AC voltage must be 190V - 264V. A 1.5m (10') AC cord with fitting IEC-plug is supplied. Extension cords can be used to lengthen the AC cable as necessary. Make certain they are 3-conductor cables of suitable gauge and they are properly grounded to avoid electrical hazards and extraneous noise. Under high signal conditions, the loudspeaker amplifier can draw 0.6 amps of current at 230V. Be cautious of what else is plugged into the same electrical service line to avoid electrical problems and poor performance.</p>
	<p>POWER AC switch for switching the power ON or OFF. The switch lights after turning the power ON. If the LED is not lit upon turning the power on, make sure that the AC cord is correctly connected and the outlet is properly working.</p>
	<p>XLR/TRS INPUT Electronically balanced input for the connection of high-level signal sources like mixing consoles or signal processors. Connections can be established using 1/4" TRS or XLR-type connectors. INPUT B will accept a microphone input if MIC/LINE switch is depressed.</p>
	<p>MIC / LINE When depressed, activates a microphone preamp for use with dynamic microphones. A pen or paperclip is needed to depress the switch to MIC mode.</p> <p>CAUTION! Do not plug a line level signal into INPUT B when MIC/LINE is in the mic position.</p>
	<p>RCA INPUT Stereo unbalanced RCA inputs for connecting sources such as CD players or MP3 players. Both RCA inputs are summed and can be controlled with INPUT A LEVEL. The inputs can be used simultaneously with XLR/TRS INPUT A.</p>
	<p>INPUT LEVEL Level control for adjusting the individual input's amplification. The level control affects the volume of the individual input section.</p>
	<p>FULL RANGE / WITH SUB When switched to WITH SUB, activates a 100 Hz highpass for use with a subwoofer. Always select WITH SUB when using the FULL RANGE with a subwoofer for proper acoustic summation.</p>
	<p>FULL RANGE EQ The FULL RANGE EQ switch controls the low-frequency extension, or bass boost, of the full range. EQ FLAT (-) works best when the full range is used under normal applications. EQ BASS BOOST (∩) provides additional low-frequency extension and works best for applications requiring enhanced bass performance.</p>
	<p>SUBWOOFER phase switch controls</p>



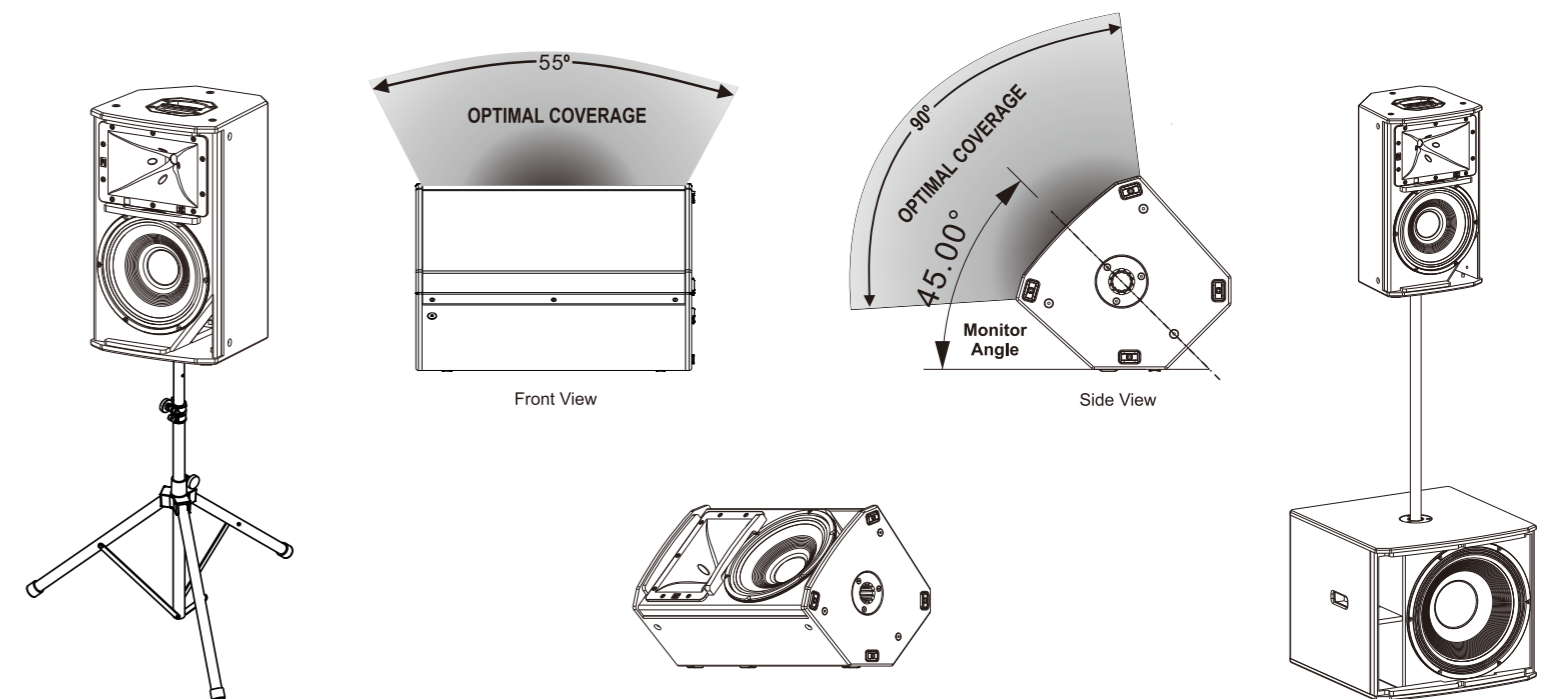
	<p>LOUDSPEAKER LEVEL Level control for adjusting the volume of the loudspeaker. The level control affects the volume of both INPUT A and INPUT B. LOUDSPEAKER LEVEL control does not affect the level of the THRU OUTPUT connector.</p>
	<p>LIMIT The LED lights up when the loudspeaker is operated at its limit. Short-term blinking is uncritical, because the integrated limiter keeps distortion under control. Constant lighting of the LED indicates that the sound is negatively affected. Reduce LOUDSPEAKER LEVEL or INPUT LEVEL knobs to prevent limit.</p>
	<p>INPUT SELECT XLR/TRS A allows the signal from XLR/TRS Input A to pass to THRU OUTPUT. INPUT A LEVEL does not affect the level of THRU OUTPUT. The signal from RCA INPUT is not passed to THRU OUTPUT. A+B is a mix of INPUT A and INPUT B. A+B allows the loudspeaker to act as a basic two-channel mixer that can send the mix to another loudspeaker via the THRU OUTPUT connector.</p>
	<p>THRU OUTPUT XLR output connector to send the signal to another speaker or subwoofer. The output is based on the selection made at the INPUT SELECT switch.</p>

Tripod and Floor Monitor Operation

Floor Monitor

The Full-Range loudspeakers may be used as a floor monitor by placing the speaker on the integral monitor angle. Make sure to:

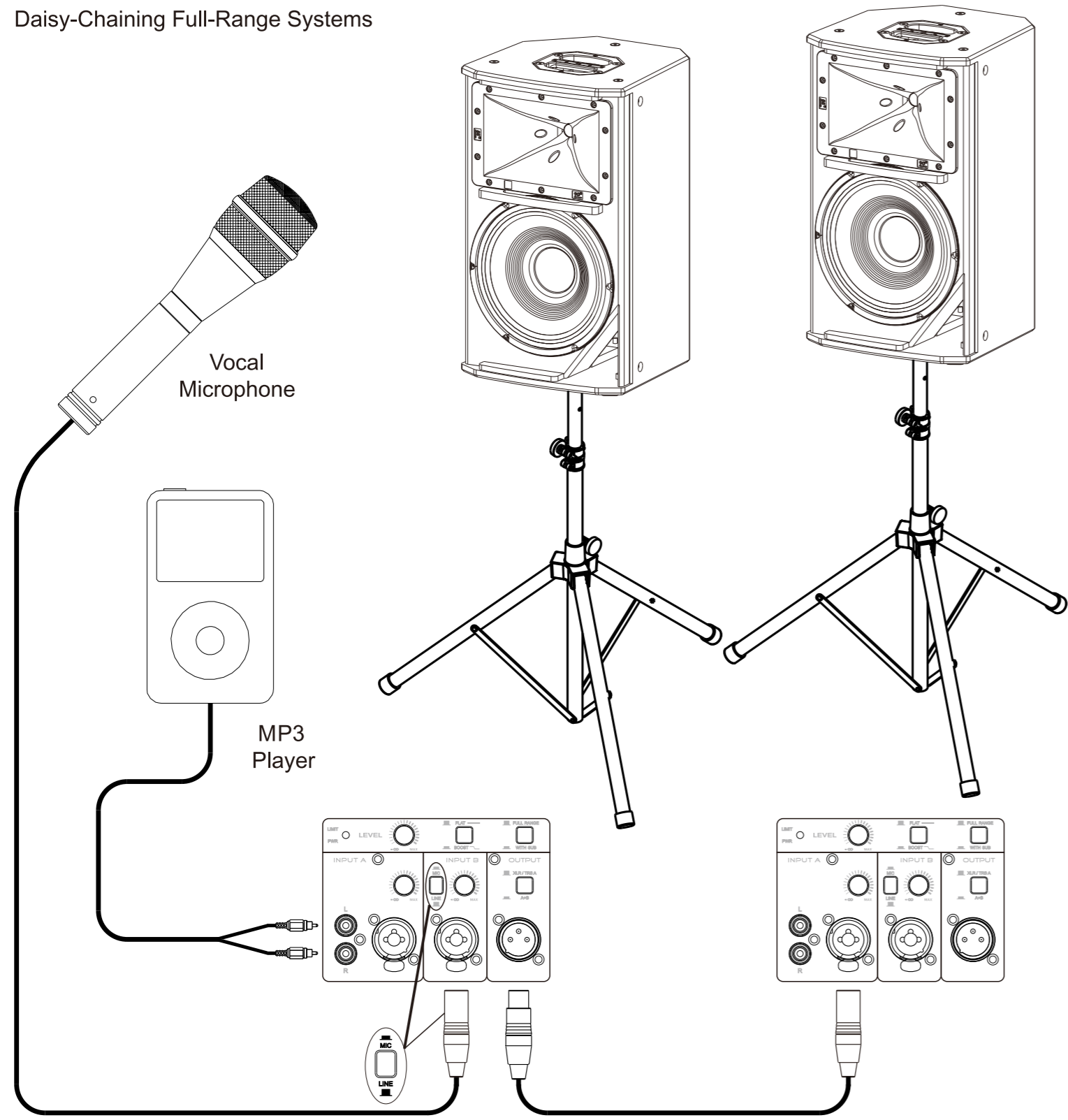
- Place the speaker on a level, stable surface that is solid and secure.
- Route cables so that performers, production crew and audience members will not trip over the cables. Secure cables with wire ties or tape whenever possible.





Recommended Configurations

Daisy-Chaining Full-Range Systems

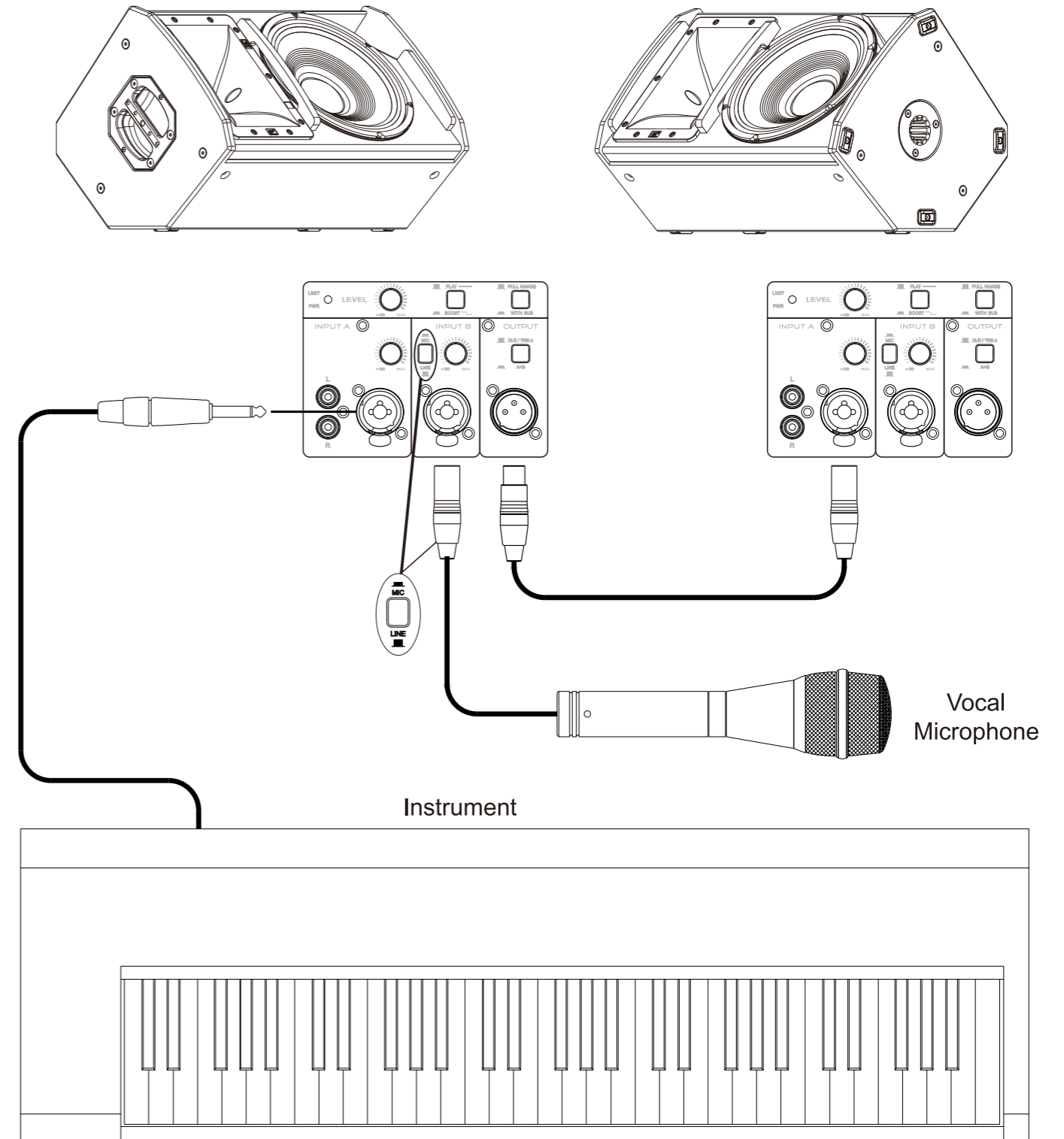


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Recommended Configurations (cont')

Using Full-Range Systems as Monitors

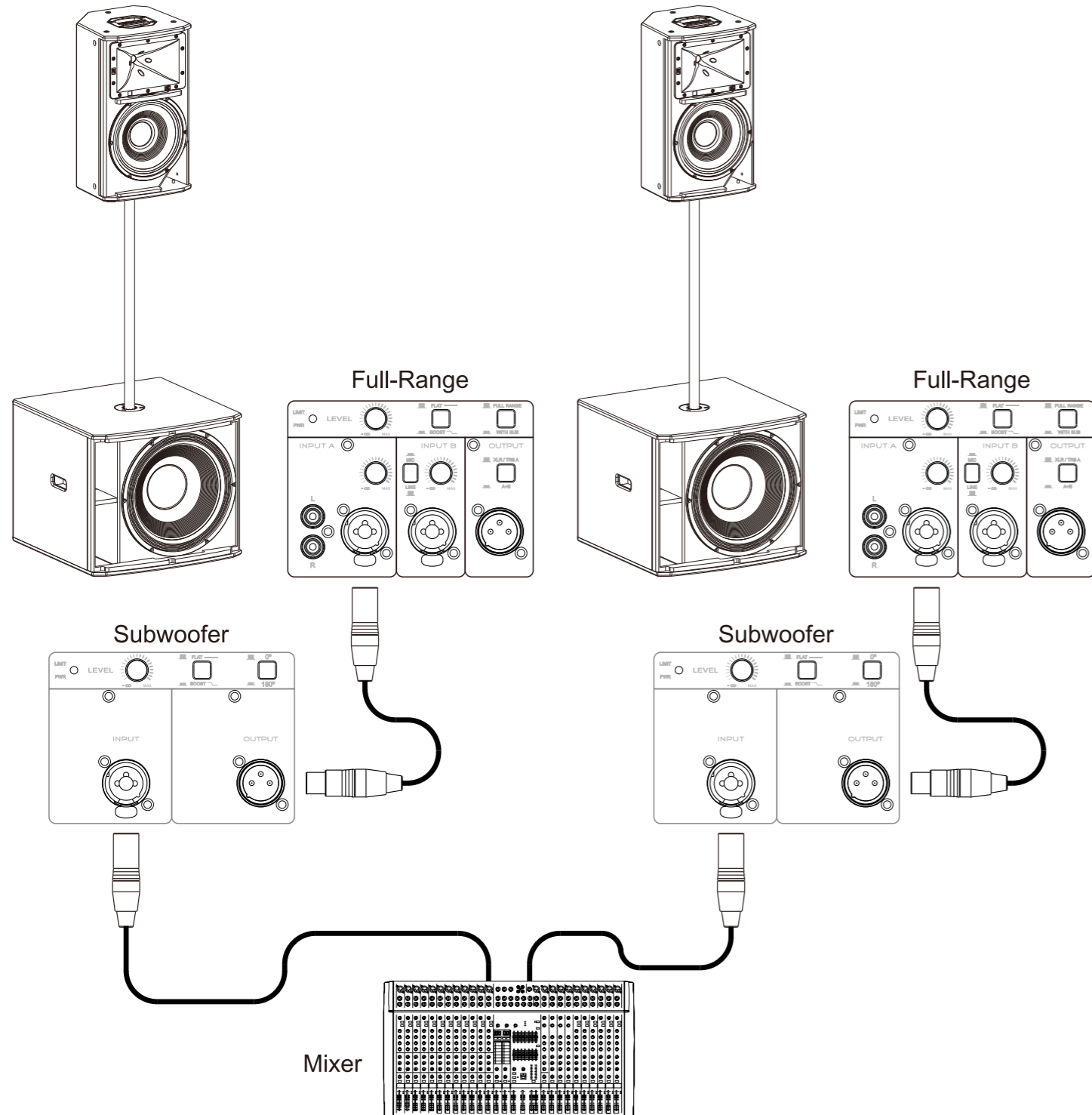


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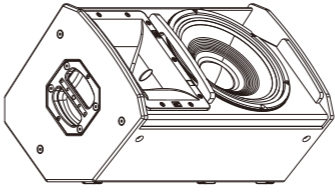
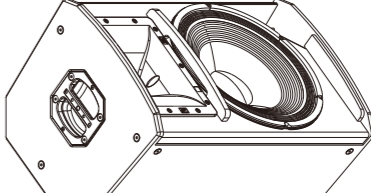


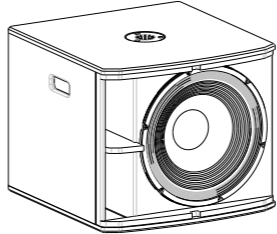
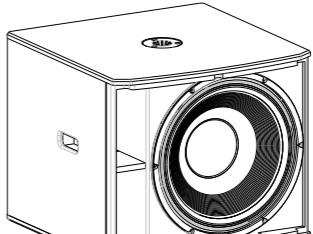
Recommended Configurations (cont')

Stacking Full-Range Systems with Subwoofers



Specifications

			
Model	AP112	Model	AP115
System design:	12" 2 way vented	System design:	15" 2 way vented
LF Driver:	12" woofer with 2" coil	LF Driver:	15" woofer with 2" coil
HF Driver:	36mm compression driver, horn loaded	HF Driver:	36mm compression driver, horn loaded
Nominal Impedance:	8Ω	Nominal Impedance:	8Ω
Frequency range:	60hz-20khz(-3dB)	Frequency range:	55hz-20khz(-3dB)
Max. SPL/1m:	124dB	Max. SPL/1m:	126dB
Power rating:	1500W Class D	Power rating:	1500W Class D
Crossover Freq:	1.8kHz	Crossover Freq:	1.8kHz
Coverage pattern:	90H*50V	Coverage pattern:	90H*50V
Connectors:	(2) XLR/TRS Combo Jacks, (1) Stereo RCA, (1) XLR Link Output	Connectors:	(2) XLR/TRS Combo Jacks, (1) Stereo RCA, (1) XLR Link Output
Handle	1	Handle	3
Pole mount	35mm*1	Pole mount	35mm*1
Dimensions:	W600*H360*D350mm	Dimensions:	W432*H678*D430mm
Net Weight:	17.00Kg	Net Weight:	22.00Kg

			
Model	AP115SP	Model	AP118SP
Max SPL Long-term	128dB	Max SPL Long-term	130dB
Max SPL Peak	131dB	Max SPL Peak	133dB
Response	48Hz to 93Hz (-3dB)	Response	45Hz to 93Hz (-3dB)
Response	34Hz to 130Hz (-10dB)	Response	30Hz to 130Hz (-10dB)
Impedance	8Ω	Impedance	8Ω
DSP Crossover Point Set	100Hz	DSP Crossover Point Set	100Hz
Amplifier type	Class D	Amplifier type	Class D
Power rating(RMS)	800Watts	Power rating(RMS)	800Watts
Number of Drivers	1	Number of Drivers	1
Woofer Size / Voice Coil	15" / 2.5" Inside Outside	Woofer Size / Voice Coil	18" / 2.5" Inside Outside
Diameter / Design		Diameter / Design	
Diaphragm Material	Treated paper cone	Diaphragm Material	Treated paper cone
Magnet Type	Ferrite	Magnet Type	Ferrite
Speaker I/O	XLR*2	Speaker I/O	XLR*2
Cabinet Material	birch	Cabinet Material	birch
Handles	2	Handles	2
Pole Mount	35mm	Pole Mount	35mm
Color	Matt Black	Color	Matt Black
Dimensions:	W530*H453*D551mm	Dimensions:	W606*H513*D612mm
Net Weight:	23.5 Kg	Net Weight:	29.3 Kg