

User's Guide
for the
CRATE PRO AUDIO

PS-18S
Subwoofer



The Crate Pro Audio PS Concert Enclosures feature premium components, rugged construction and perfected enclosure design. Each model is designed in concert with the drivers to ensure a perfectly integrated cabinet/transducer system. These powerful systems give you more ways to satisfy your PA needs at reasonable prices. The PS-18S subwoofer adds a powerful punch to any system by faithfully reproducing the all-important low bass tones.

In order to achieve the highest level of performance from your subwoofer, please read this owners guide prior to its use.

And "Thank You" from





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WARNING: THIS SPEAKER IS CAPABLE OF PRODUCING SOUND PRESSURE LEVELS WHICH MAY LEAD TO HEARING IMPAIRMENT OR LOSS. HEARING PROTECTION IS RECOMMENDED.

The chart below shows the U.S. Government Occupational Safety and Health Administration (OSHA) regulations for permissible noise exposure, per 29CFR1910, Table G-16.

SOUND LEVEL dBA SLOW RESPONSE	DURATION PER DAY IN HOURS	SOUND LEVEL dBA SLOW RESPONSE	DURATION PER DAY IN HOURS
90	8	102	1-1/2
92	6	105	1
95	4	110	1/2
97	3	115	1/4 or less
100	2		

According to OSHA, any exposure in excess of those listed above could result in some hearing loss.



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INTRODUCTION

Your PS-18S is a single speaker, direct radiating, vented subwoofer enclosure with a built-in passive crossover. The input jacks are switchable for use with either the subwoofer's built-in crossover or an external active crossover. Two 1/4" and two Speakon® jacks are provided for easy connection in nearly every conceivable application. The PS-18S has a durable carpet-covered enclosure with a rugged 16 gauge steel front grill for superior protection.

The PS-18S is designed to produce solid low-frequency sound for medium to large venues. It may be used singly or in multiple unit arrays to supplement the low frequency response of other speakers or as the sole low frequency component in a system.

A stand mount adapter is mounted into the top of the cabinet for supporting a full range cabinet.

CAUTION: ANY SPEAKER SUPPORTED ON A STAND POSES A RISK OF PERSONAL INJURY IN CASE OF COLLAPSE OR TIPPING OF THE STAND OR SPEAKER.

WHEN USING THE PS-18S STAND MOUNT, BE SURE THAT THE SPEAKER IS FULLY SEATED ON THE STAND POLE, THAT IT IS NOT LOOSE, THAT THE PS-18S IS PROPERLY SET UP ON A LEVEL NON-SKID SURFACE, AND THAT THE SUPPORTED SPEAKER DOES NOT EXCEED THE MAXIMUM WEIGHT.

NEVER SUPPORT ANYTHING EXCEPT A SPEAKER ON THE STAND MOUNT ADAPTER. NEVER SUPPORT ANYTHING HEAVIER THAN THE RATED WEIGHT ON THE STAND MOUNT ADAPTER.

BE SURE THE SPEAKER CABLES DO NOT POSE A TRIPPING HAZARD, AND THAT THEY CANNOT TIP THE SPEAKER IF PULLED. NEVER SET UP A SPEAKER ON A STAND WHERE TIPPING OR COLLAPSE COULD CAUSE IT TO FALL ON PEOPLE.

WARNING: THIS SPEAKER IS NOT DESIGNED TO BE SUPPORTED OR SUSPENDED OFF THE FLOOR FROM CABLES OR IN ANY OTHER MANNER. SUSPENSION IS NOT RECOMMENDED. IF SUSPENSION IS DESIRED, CONSULT A REGISTERED PROFESSIONAL ENGINEER.

Speakon® is a registered TM of Neutrik AG



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THE INPUT/OUTPUT PLATE:



1. 1/4" INPUT JACKS: Two 1/4" jacks, wired in parallel, allow connection for low power and/or temporary installations. These jacks are also in parallel with the two Speakon® jacks (#2), allowing any of the four input jacks to be used as in/thru connections.

2. SPEAKON® INPUT JACKS: Two Speakon® jacks, wired in parallel, allow connection for high power and/or permanent installations. These jacks are also in parallel with the two 1/4" jacks (#1), allowing any of the four input jacks to be used as in/thru connections.

3. DIRECT IN / X-OVER IN SWITCH: This switch determines whether or not the signal passes through the internal crossover (**X-OVER IN**) or bypasses the internal crossover (**DIRECT IN**). Directions for using this switch and sample interconnection diagrams are shown on pages 5 and 6.

4. HIGH OUT JACK: When using the subwoofer's internal crossover, this jack supplies the high-pass signal for connection to the full range speaker of your sound system. Directions for using this jack and a sample interconnection diagram is shown on page 5.



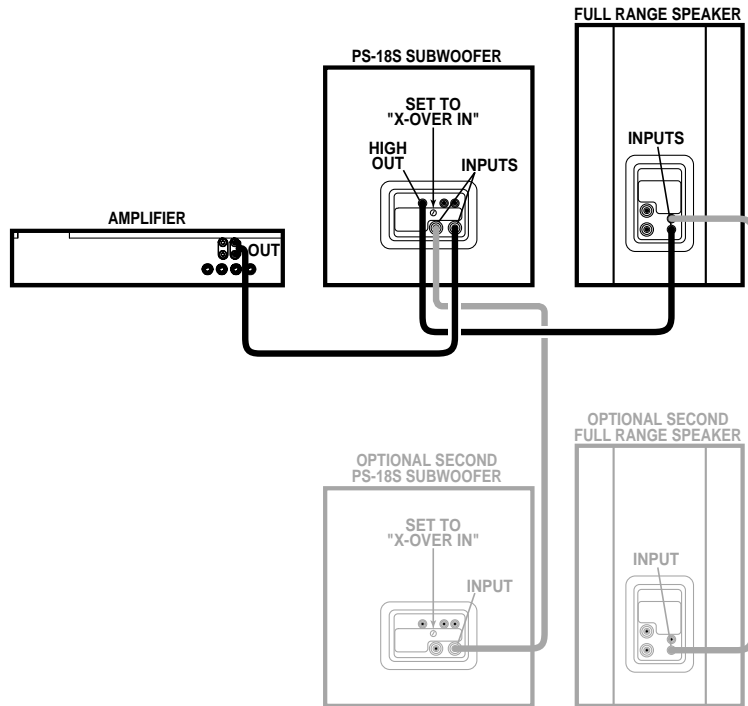
PS-18S Subwoofer

OPERATION – USING THE INTERNAL CROSSOVER:

The PS-18S has a built in crossover which may be used to send the high-pass signal (frequencies above the 120Hz crossover point of the subwoofer) to the full range speaker. This allows adding a subwoofer without using an external crossover or any additional amplifiers.

To use this feature, set the **DIRECT IN/x-OVER IN** switch (#3, page 4) to “X-OVER IN.” Connect the output of your amplifier to one of the input jacks. Connect the PS-18S’s **HIGH OUT** jack to the input of your full range speaker.

One of the unused input jacks may be connected to a second subwoofer/full range speaker set (shown below as “optional”), providing your amplifier can deliver adequate power into 2 ohms.





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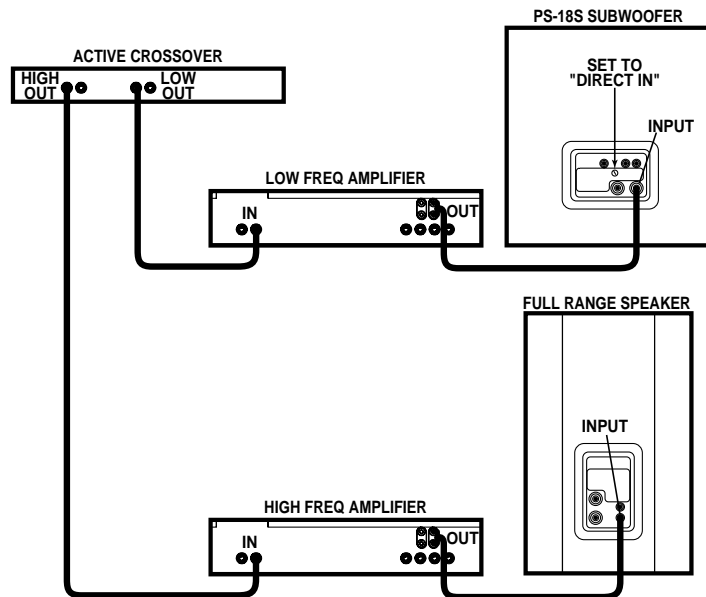
OPERATION – USING AN EXTERNAL CROSSOVER:

The PS-18S's built in crossover may be bypassed if desired. This requires using an external crossover and an additional amplifier.

To bypass the internal crossover, set the **DIRECT IN/X-OVER IN** switch (#3, page 4) to "DIRECT IN."

Connect the low frequency output of your active crossover to your low frequency amplifier. Connect the output of the low frequency amplifier to one of the PS-18's input jacks.

Connect the high frequency output of your active crossover to your high frequency amplifier. Connect the output of the high frequency amplifier to your full range speaker.



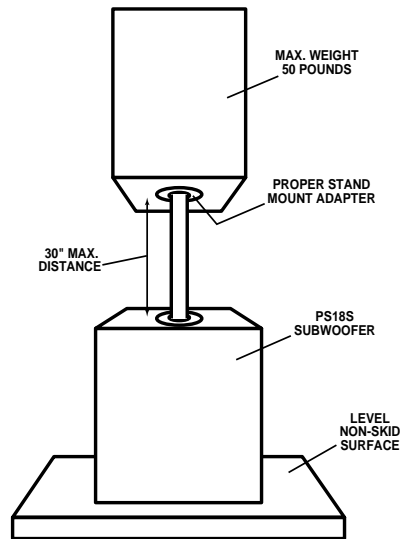


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USING A STAND TO SUPPORT ANOTHER SPEAKER

The PS-18S is equipped with a stand mount adapter for supporting another speaker on a stand pole. The adapter is not intended to support the subwoofer itself, nor to support anything other than a speaker.

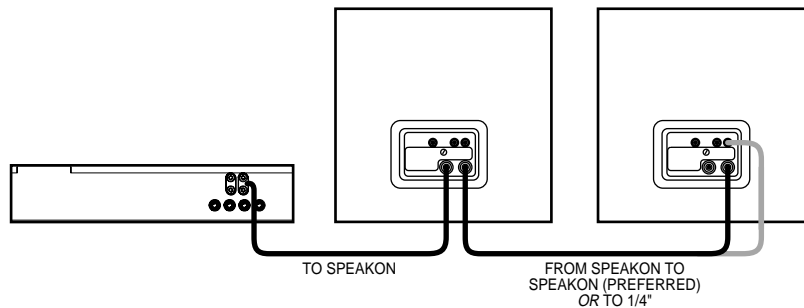
The maximum weight of the supported speaker should not exceed 50 pounds. The stand pole must be a standard 1-1/2" diameter speaker support, with a maximum distance of 30" between the subwoofer and the supported speaker. Observe the cautions listed on page 3.



CONNECTING MULTIPLE SUBWOOFERS

The PS-18S has an impedance of 4 ohms. Two cabinets may be powered by one amplifier, providing the amplifier is rated for 2 ohm operation.

The Speakon® and 1/4" jacks are wired together in parallel. This allows any of the jacks to be used as an input or a thru connection. The use of the Speakon® jacks is recommended due to their higher power handling capabilities. However, the 1/4" jacks may be used to connect the second subwoofer if necessary.





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Technical Specifications:

Impedance	4 ohms nominal	
RMS Power Rating	300 Watts	
Peak Power Handling	1200 Watts	
Frequency Response	40Hz – 500Hz	
Useable Low Frequency Limit (-10dB down)	30Hz	
Nominal Sensitivity	97dB 1W/1m	
Crossover Out	120Hz	
Dimensions (H x W x D)	24-3/4" x 23-3/4" x 23-3/4"	
Weight	72 lbs.	
Transducer	Size:	18"
	Impedance:	4 ohms
	Useful Response:	40Hz – 350Hz
	Magnet Weight:	109 oz.
	Voice Coil Dia:	4"
Dispersion Angle	Essentially Omnidirectional	
Maximum Weight of Supported Speaker	50 lbs. (on 30" maximum stand tube)	

Specifications subject to change without notice.



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