

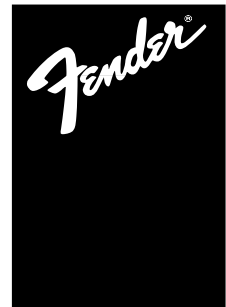
# PROFESSIONAL LOUDSPEAKER SYSTEMS



From Fender Pro Audio

Owner's Manual for  
115sA/118sA Subwoofer

P/N 051712  
REV A





Fender Musical Instruments  
7975 North Hayden Road, Scottsdale, Arizona 85258 U.S.A.

Fender knows the importance of sound reinforcement. From the simple box-top mixer to today's professional touring concert systems, the need to communicate, to make the connection between the performer and the audience is foremost in Fender's mind.

Perhaps no other single piece of gear can make or break your band's sound. You see, your sound system is more than just a combination of dials, wires and speakers. It is an integral part of the audio chain and should be treated with special care and attention to detail.

At Fender, we know what building quality musical instruments and sound reinforcement equipment is all about. In fact, many of the world's best sounding electric musical instruments and sound reinforcement equipment proudly wear the Fender name.

Whether you need a simple box top powered mixer for your Saturday afternoon jam, or a professional full-size concert system, Fender has the sound reinforcement equipment to meet your needs. Likewise, your decision to purchase Fender pro audio gear is one you will appreciate with each performance for years to come.

Wishing you years of enjoyment and a heartfelt *thank you*,

**Bill Schultz**

Bill Schultz  
Chairman  
Fender Musical Instruments Corporation

# **ARTIST SERIES 115sA/118sA PROFESSIONAL SUBWOOFER LOUDSPEAKER**

## **INTRODUCTION**

**3/4" (1.9 cm) Oriented Strand Board Cabinet**

**700W or 900W Program Power Handling**

**48 Hz to 110 Hz (115sA) / 42 Hz to 110 Hz (118sA) Frequency Response**

**99 dB Sensitivity @ 1W / 1m**

**One 15" (38 cm) / 18" (46cm) Woofer with 2.5" (6 cm) Voice Coil**

**High Current 1/4" Phone Jacks**

**Large Diameter Vents for Minimum Air Turbulence**

Thank you for purchasing an Artist Series 115sA/118sA Professional Subwoofer from Fender Pro Audio. We know that your music is important to you. With the addition of this subwoofer, your music will be reproduced as it was meant to be...Full, well rounded, and balanced throughout the frequency spectrum.

Featuring one 15" (115sA) or 18" (118sA) woofer with a 2.5 " voice coil and parallel high current 1/4" jacks that allow you to "daisy chain" other subwoofers or full range speakers to your system. The sA's bandpass design naturally rolls off high frequencies so there is no need to use a passive or active crossover network in multi-speaker systems. The single reflex enclosure design provides for high sensitivity, high power handling and excellent low frequency response.

Please read through this owner's manual in order to more thoroughly understand the operation, and applications of your 115sA/118sA professional subwoofer.

**CAUTION:** Almost all speakers produce strong magnetic fields which may interfere with the normal operation of nearby electronic devices, including televisions and computer video monitors. To reduce or eliminate interference, increase the distance between this product and other nearby electronic devices.

## CONNECTIONS

The two 1/4" phone jacks on the 115sA/118sA are wired in full parallel so that any one of the connectors may be used as an input and the other connector as an output to another enclosure. This allows multiple cabinets to be "daisy chained", eliminating the need for several long runs of speaker cable.

*Note: A single 115sA/118sA subwoofer represents an 8Ω load to the amplifier. Daisy chaining two of them in parallel will represent a 4Ω load to the amplifier. Only amplifiers rated for 4Ω output should be used in this configuration.*

The following polarity convention should be used when making connections to the 115sA/118sA:

| <u>Polarity</u> | <u>Phone Jack</u> |
|-----------------|-------------------|
| Positive (+)    | Tip               |
| Negative (-)    | Sleeve            |

## USING THE 115sA/118sA IN A SYSTEM

The 115sA/118sA is designed to augment the low frequency performance of the main P.A. speakers. The single reflex bandpass design of these systems automatically rolls off the high frequencies eliminating the need for an active or electronic crossover network. Thus, the subwoofers can be wired directly in parallel with almost any full-range speaker system.

Nonetheless, a line-level electronic crossover, such as a Fender® PCN-2™ or PCN-4™, can be used in order to split frequencies and send mid/high frequencies to a full-range speaker system and low frequencies to a subwoofer. By reproducing high levels of low bass frequencies, the 115sA/118sA relieves the smaller main speakers from having to supply this energy. ***If a crossover is used in your set-up, make sure that the crossover point is between 100/120 Hz to ensure maximum efficiency from your 115sA/118sA.***

Two different configurations are shown on pages 5 and 6, demonstrating how easy it is to add a subwoofer to your system. Figure 3, on page 7, shows a more extensive configuration for those set-ups requiring additional power.

## SETUP SUGGESTIONS

The placement of any speaker can dramatically affect its sound. Thus, there are three primary considerations to review when placing subwoofers.

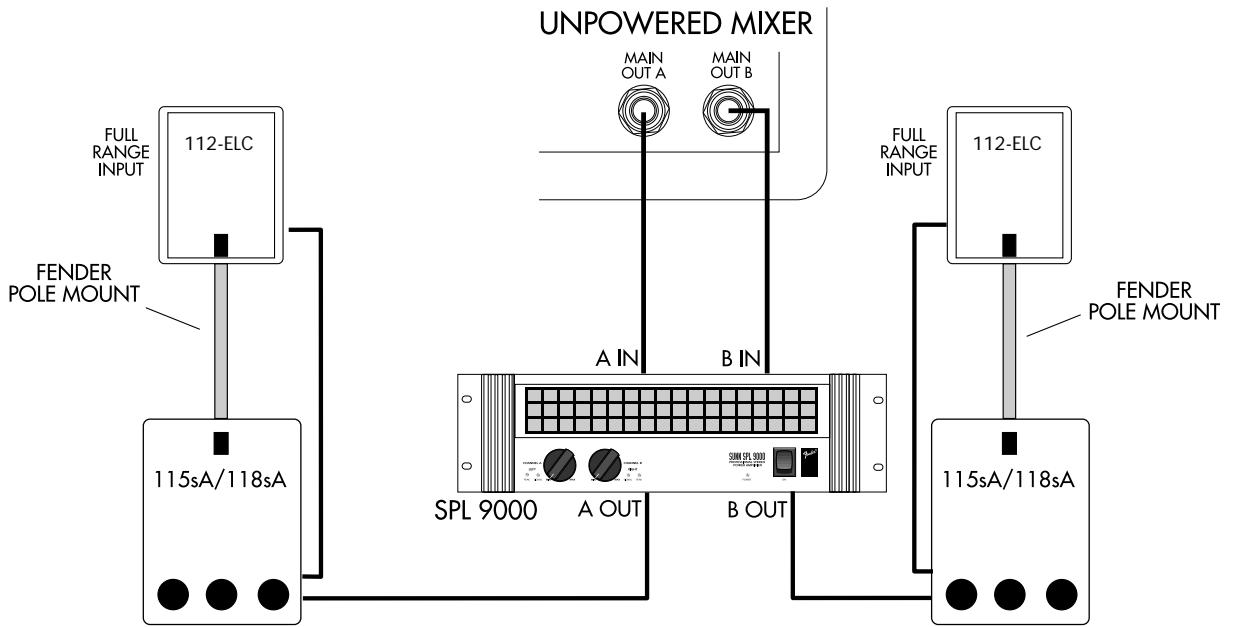
The **first** is time alignment. The full-range speaker system should be as close as possible to the subwoofer so the sound from the subwoofer reaches the audience at the same time as the sound from the full-range speaker systems. If the subwoofer is placed too far from the full-range speaker systems, a slight smearing of the lower bass frequencies may occur. While ideal placement for this consideration would involve stacking the full-range speaker on top of the subwoofer, this effect is quite subtle and an obvious effect may not be heard until the separation between the two cabinets is large enough to cause an audible time delay.

The **second** consideration is to try to obtain as much bass as possible from the subwoofer. A speaker in the middle of the floor or up in the air with its back against a wall is referred to as operating in "half space". Placing a speaker near a large, flat wall and on the floor (quarter space) will boost the bass performance by about 3 dB as compared to half space. The more surfaces the subwoofer is placed against, the fewer the number of subwoofer enclosures are needed to achieve a desired SPL.

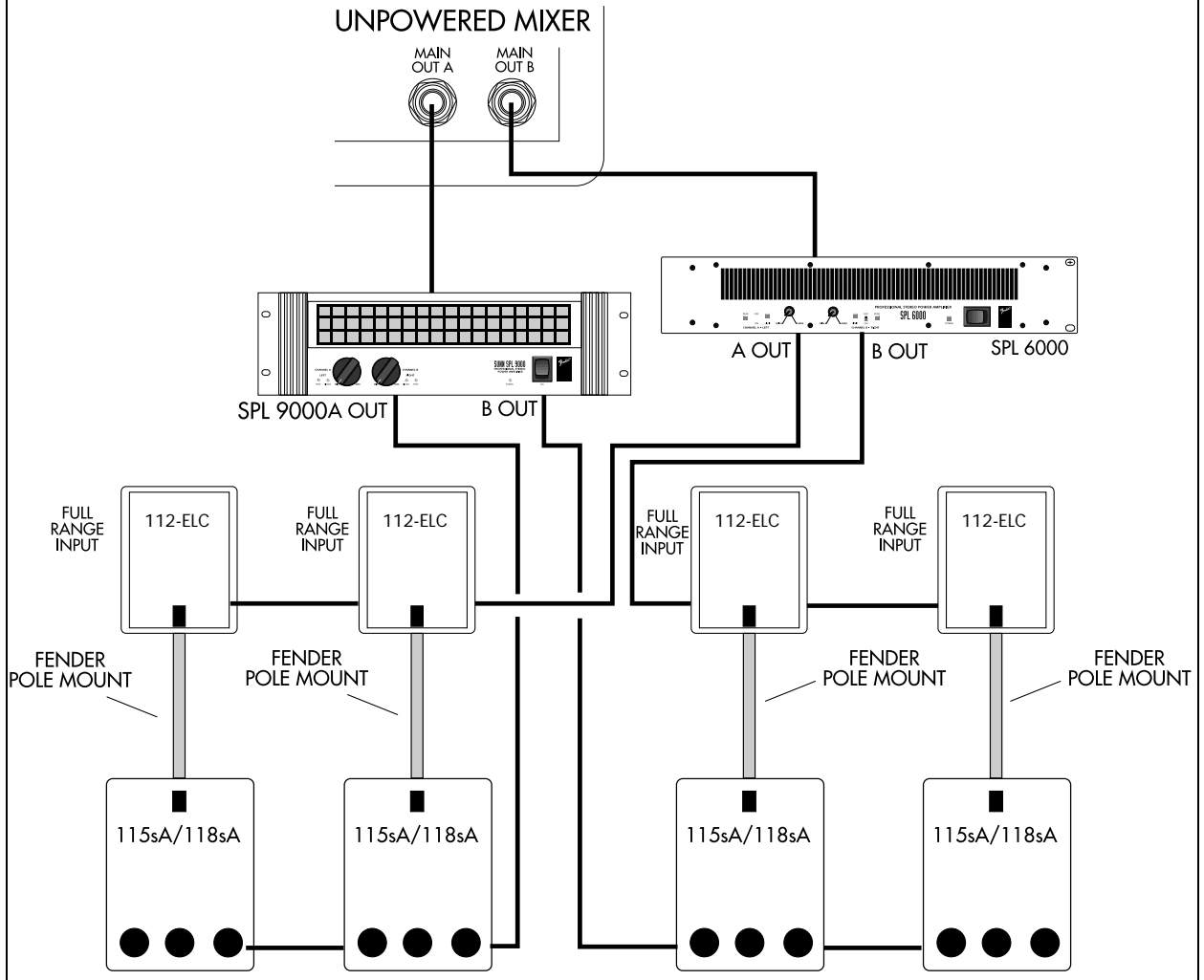
The **third** consideration is convenience and the visual aspect of the speaker array. For temporary installations, the subwoofer can be used as a support for a full-range speaker system mounted directly on top of the subwoofer. ***Use only the 27" Fender Mounting Pole (P/N 711327) which has been specifically designed for use with both the 115sA/118sA subwoofer enclosures.*** In permanent installations, the 115sA/118sA can be placed under a stage, table, or podium.

For each particular situation, a compromise among these three factors should yield the best solution possible.

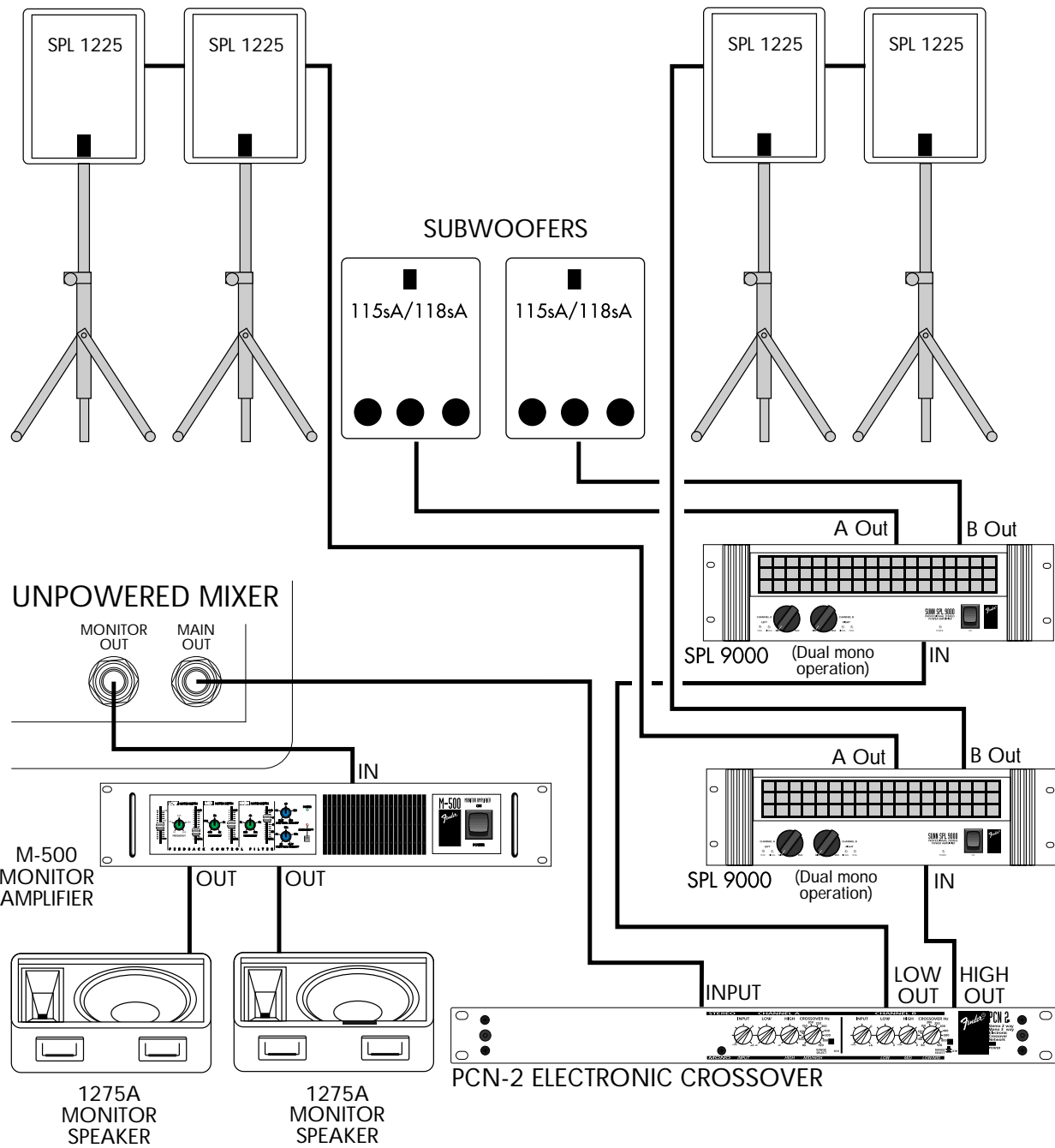
**USING A FULL RANGE CABINET AND A 115sA/118sA SUBWOOFER**



# USING MULTIPLE FULL RANGE CABINETS AND 115sA/118sA SUBWOOFERS



# BI-AMPED MAIN SYSTEM WITH MONITORS



## SPECIFICATIONS

|  |   |  |  |
|--|---|--|--|
| <b>MODEL</b>                               |   | 115sA  | 118sA  |
| <b>PART NUMBER</b>                         |   | 071-1150-000   | 071-1180-000   |
| <b>MAXIMUM dB SPL<br/>OUTPUT LONG TERM</b> |   | 124 dB   | 125 dB   |
| <b>DRIVER</b>                              |   | 15" (38 cm) woofer<br>2.5" (6 cm) voice coil                               | 18" (46 cm) woofer<br>2.5" (6 cm) voice coil                               |
| <b>CABINET</b>                             |   | 3/4" (1.9 cm)<br>Oriented Strand Board                                     | 3/4" (1.9 cm)<br>Oriented Strand Board                                     |
| <b>FREQUENCY<br/>RESPONSE</b>              | +/- 3 dB:   | 48 Hz to 110 Hz  | 42 Hz to 110 Hz  |
| <b>AXIAL<br/>SENSITIVITY</b>               | SPL @ 1W/1m:<br>1/2 Space Efficiency:                             | 99 dB<br>5.4 %   | 99 dB<br>5.4 %   |
| <b>POWER<br/>HANDLING</b>                  | E.I.A. RS 426-A Noise:<br>Program:<br>Peak:<br>Nominal Impedance: | 350W<br>700W<br>1400W<br>8 $\Omega$  | 450W<br>900W<br>1800W<br>8 $\Omega$  |
| <b>DIMENSIONS</b>                          | Weight<br>Height<br>Width<br>Depth                                | 65 lbs. (29.5 kg)<br>26" (66.0 cm)<br>24.75" (62.8 cm)<br>24.25" (61.6 cm) | 87 lbs. (39.5 kg)<br>32" (81.3 cm)<br>24.75" (62.8 cm)<br>24.75" (62.8 cm) |

Product specifications are subject to change without notice.

A PRODUCT OF:  
**FENDER MUSICAL INSTRUMENTS CORP.**  
 CORONA, CA 91720 USA