

1272X / 1275X Loudspeaker Monitor Systems

Reference / Owner's Manual
for 1272X / 1275X

P/N 053996 REV A

FENDER[®]
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BUILT FROM THE SOUND UP[™]



Fender Musical Instruments
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A Message from the Chairman

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

Perhaps no other piece of gear can make or break your message or your band's sound than your sound reinforcement gear. Your sound system is far 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.

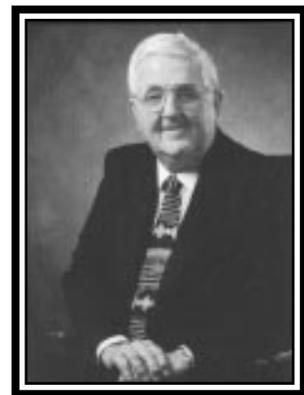
Fender knows what building quality musical instruments and sound reinforcement equipment is all about. In fact, many of the world's best sounding electric musical instruments and sound reinforcement equipment proudly wear the Fender name.

Whether you need a small powered mixer for your Saturday afternoon "jam" or a professional full-size concert system, Fender has the sound reinforcement gear to meet your needs. Likewise, your decision to purchase quality Fender Professional Audio Equipment 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 of the Board
Fender Musical Instruments Corporation



1272X / 1275X LOUDSPEAKER MONITOR SYSTEMS

INTRODUCTION

All Wood Construction with Sturdy Dado Joints

Thank you for your purchase of a 1272X / 1275X loudspeaker monitor system from Fender® Pro Audio. We are sure you will find it both a unique and effective sound reinforcement product, providing years of trouble-free service day in and day out.

High Current 1/4" Phone Jacks

Metal Corners and Rubber Feet

1272X / 1275X loudspeaker monitor systems are professional, full-range, two-way, compact loudspeaker monitors designed for both permanent or portable sound reinforcement requirements. With a wide response, low distortion and controlled directivity, 1272X / 1275X loudspeaker monitor systems are designed to form the basis of everything from a small public address system to the nightly rigors of a "working band's" sound system. After moisture sealing, the 1272X / 1275X loudspeaker monitor systems are covered in tough black indoor/outdoor synthetic carpet covering. Likewise, 1272X / 1275X loudspeaker monitor systems also feature metal corners and rubber feet for a longer life and lasting looks.

Level Control for Adjusting Levels at the Cabinet

Three Angles of Orientation: 30°, 60° and Vertical for Side Fill Use

Tough Indoor / Outdoor Synthetic Carpet Covering

Only the finest components are used to provide maximum efficiency and response. In order to more fully understand the operational characteristics of your 1272X/1275X loudspeaker monitor system enclosure, please read through this operational user's guide.

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.

SPEAKER WIRING AND CONNECTIONS

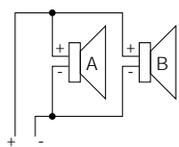
Parallel or *series* are the two basic ways which multiple speakers can be connected to a single power amplifier. When speakers are connected in parallel, their combined impedance decreases. For speakers wired in series the opposite is true, their combined impedance increases. Thus, when speakers are wired in series, higher impedance speakers in the series draw more power from the amplifier than do speakers in the series with lower impedances. When speakers are wired in parallel, the opposite is true. Higher impedance speakers will draw less power from the amplifier than lower impedance speakers will draw.

At Fender®, we recommend connecting multiple speakers in parallel for several reasons. First, if one speaker fails, the others will continue to operate. Second, because in a series connection one speaker affects the output of the other speakers, unpredictable frequency response is a concern. Third, most speaker cabinets are already wired for parallel connections making parallel connections the most common wiring method.

Below are two charts demonstrating how to calculate both parallel and series impedance.

PARALLEL IMPEDANCE

Cabinet B Impedance	16Ω*	5.3*	8
	8Ω	4	5.3
		8Ω*	16Ω

$$Z_p = \frac{1}{\frac{1}{Z_1} + \frac{1}{Z_2} \dots \frac{1}{Z_n}}$$


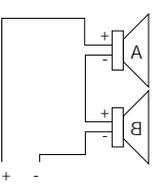
Cabinet A Impedance

*Example - Cabinet A is 8 ohms. Cabinet B is 16 ohms. The total impedance when connected in parallel is:

$$Z_p = \frac{1}{\frac{1}{8} + \frac{1}{16}} = 5.3 \text{ ohms.}$$

SERIES IMPEDANCE

Cabinet B Impedance	16Ω*	18	20*	24	32
	8Ω	10	12	16	24
	4Ω	6	8	12	20
	2Ω	4	6	10	18
	2Ω	4Ω*	8Ω	16Ω	

$$Z_s = Z_1 + Z_2 \dots Z_n$$


Cabinet A Impedance

*Example - Cabinet A is 4 ohms. Cabinet B is 16 ohms. The total impedance when connected in series is 4 + 16 = 20 ohms.

Keep in mind, power and audio signal cables are the most common sources of sound system failure. Well made and carefully maintained cables are essential to the reliability of the entire sound system. If long speaker cables are required, it is important to ensure the cable's gauge is sufficient to transfer all of the available amplifier power to the speakers rather than absorbing the power itself. As a rule of thumb, larger wires are better as they conduct more power to the speakers (larger wire has smaller gauge numbers).

Below are two charts listing speaker wire gauges and recommendations for best results.

SPEAKER WIRE GAUGE

SPEAKER WIRE LENGTH	100'-UP (30.5 m-UP)	10	12	14
	50'-100' (15.25-30.5 m)	12	14	16
	*25'-50' (7.60-15.25 m)	14	*16	18
	10'-25' (3.05-7.60 m)	16	18	18
	0'-10' (0.00-3.05 m)	18	18	18
		4Ω	*8Ω	16Ω

SPEAKER IMPEDANCE [z]

*Example - If the speaker wire length required is between 25-50 feet (7.60-15.25 meters) and the speaker impedance is 8Ω, the minimum recommended speaker wire gauge is 16.

AWG	Cross-Section [mm ²]	Resistance in Ω per foot (30.5 cm) @ 77° F (25° C)
18	0.83	.00651
16	1.32	.00409
14	2.10	.00258
12	3.32	.00162
10	5.27	.00102
8	8.38	.00064

1272X /1275X SPEAKER CONNECTIONS



The 1/4" jacks are wired in parallel allowing any one of the jacks to be used as an input and the other as an output. This allows "daisy chaining" of multiple loudspeakers, eliminating the need for several long, cumbersome runs of speaker cable. The connections are as follows:

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

Connect the amplifier to the loudspeaker with a minimum 16 gauge wire when a length of no more than 100 feet is used. When multiple speakers are "daisy chained" together or where longer cable runs are encountered, use a larger gauge wire. Although no harm or hazard will result, using too small a gauge of wire may cause the sound quality and level to degrade.

CARPET COVERING CARE



1272X /1275X cabinets are covered in a tough, black indoor/outdoor synthetic carpet for long life and lasting good looks. To clean the carpet covering, simply vacuum away any smudges or dirt. For stubborn stains, use a light

soapy solution or carpet shampoo with a brush. Avoid spilling liquids on the input panel, grille and speakers.

SETUP SUGGESTIONS



The placement of any speaker can affect its sound. Thus, there are several considerations to review when placing your 1272X /1275X monitor.

CAUTION! When operating with large amplifiers (greater than 150 watts at 4 ohms) always set the level control between the 3 o'clock and 5 o'clock positions. Failure to do so may lead to overheating and damage the level control.

1) When using stage monitor systems, the reduction of feedback is probably the most important criteria. The best way to reduce feedback is to use a CARDIOID pattern microphone with it's rear aimed at the loudspeaker. Remember: Do not cover the side or top slots of the microphone with your hands as this could cause feedback.

2) Select a 30 or 60 degree angle based upon the working distance that you will need. A 30 degree angle is preferable for performers who require a greater working distance from the monitor so that movement about the stage is on axis with the monitor. A 60 degree angle is preferable for performers who have a shorter working distance and who do not move around the stage.

3) When larger movements are expected, 1272X /1275X monitors may be used as side fill monitors so that wide horizontal coverage can be provided. If used in the side fill position, it may be advantageous to elevate the speaker from the floor to keep it aimed at the performer's ear level.

The side fill position at about 10 to 15 feet from the performer is particularly useful for drummers and keyboard players. This allows program monitoring while keeping the monitor clear of your equipment. In the side fill position, the drummer's / keyboardist's vocal microphone can be positioned to the side allowing the rear of the microphone to face the front of the monitor minimizing feedback.

SPECIFICATIONS

TYPE		PR 395	PR 396
MODEL		1272X	1275X
PART NUMBER		071-1272-200	071-1275-200
CABINET		3/4" (1.9 cm) Particle Board	3/4" (1.9 cm) Particle Board
CONNECTIONS		(2) 1/4" Phone Jacks	(2) 1/4" Phone Jacks
DRIVERS	Low:	12" (30.5 cm) woofer 2" (5.1 cm) voice coil	15" (38 cm) woofer 2" (5.1 cm) voice coil
	High:	Dual Piezoelectric	Dual Piezoelectric
FREQUENCY RESPONSE	On Axis, Half Space +/- 6 dB	60 Hz to 20kHz	50 Hz to 20kHz
ON AXIS SENSITIVITY	SPL @ 1W/1m:	95 dB	95 dB
COVER AGE PATTERN	Vertical Horizontal	70° @ 5 kHz 35° @ 5 kHz	70° @ 5 kHz 35° @ 5 kHz
POWER RATING		200W program 100W EIA RS 426A	200W program 100W EIA RS 426A
NOMINAL IMPEDANCE		16Ω	16Ω
DIMENSIONS	Height Width Depth	17.3" (43.9 cm) 22.2" (56.4 cm) 13.8" (35.1 cm)	19.2" (48.8 cm) 25.2" (64.0 cm) 15.8" (40.1 cm)
WEIGHT		37 lbs. (16.8 kg)	47 lbs. (21.4 kg)

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