

Sherbourn[®] Technologies, Inc.

Model LDS2/75 Owner's Manual

Thank you so much for your decision to purchase one of our superb Sherbourn amplifiers. We take enormous pride in the design and build quality of all of our products and we are confident that our product will provide you with many years of enjoyable and trouble-free service. Should you have any need to call upon our services please feel free to contact us at the address shown at the end of this booklet; or, of course, you can contact the dealership from which you purchased the product.

Full details of the warranty coverage provided by Sherbourn Technologies can be found at the end of this booklet.

Safety Instructions

1. Important Safety Instructions! Please read all the safety and operating instructions shown in this manual before operating this equipment.

2. The lightening flash within an equilateral triangle shown above is intended to alert you to the presence of uninsulated 'dangerous voltage' within the product's enclosure that may be of sufficient magnitude to constitute an electric shock.



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

4. Please retain this manual in a safe place for future reference about safety and operating matters.

5. Adhere to all warnings and follow all operating instructions.

6. Warning: To reduce the risk of fire or electrical shock, do not expose this equipment to rain or moisture.

There are no user serviceable parts inside. Refer servicing to qualified personnel.

7. Caution: To prevent electrical shock do not use this (polarized) plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted to prevent blade exposure.

8. For added protection for this product during a lightening storm or when it is left unattended and unused for long periods of time, it is recommended that you unplug the unit from the wall outlet. This will prevent damage to the product due to lightning or power line surges.

9. Do not use attachments not recommended in this owner's manual as they may cause hazards.

10. Locate the equipment for proper ventilation. For example, the product should never be allowed to operate while positioned on a bed, rug, sofa or any such surface where proper ventilation is not possible. Nor should the unit be placed in a built-in installation such as a cabinet or armoire, etc. in such a way as to impede the air flow. Always ensure adequate ventilation openings - please see later comments regarding such an installation.

11. Locate the product away from heat sources such as stoves, heat registers, radiators or other appliances including other amplifiers that produce heat.

12. Mount the equipment in a wall or cabinet only as described in this owner's manual.

13. Do not use the equipment near water; for example near a bathtub, washbowl, kitchen sink, a wet basement, swimming pool, etc. This product is meant for indoor use only.

14. Do not place the product on an unstable cart, stand tripod, bracket or table. The equipment is heavy and should it fall, it could cause serious injury to a person and/or serious damage to the equipment.

Caution For Installation

1. Your Sherbourn amplifier can be placed on any table or shelf. It can also be custom installed in a rack, and/or in a piece of cabinetry or furniture of your choice. It is however, important that if the am-

plifier is going to be housed in an enclosed environment, that you allow for adequate ventilation. Despite the adequately sized heatsinks built into the amplifier, it is still important that good ventilation be provided. Do not install the amplifier directly above another heat generating component such as another amplifier without adequate ventilation.

2. If your amplifier is going to be placed in an enclosed space such as an armoire, it is essential that adequate ventilation be provided.

3. The dealership from which you purchased the product is an expert on custom installation procedures and can provide invaluable advice to help you make an aesthetically pleasing and trouble free installation.

Caution For Connections

1. Connect this equipment only to the type of AC power source as marked on the unit. Always route AC power cords so they are not likely to be walked on, or tripped over, or where they may be pinched by items placed on or against them. Always pay particular attention to cords at plugs and/or convenience receptacles, and at the point where they exit from the product.

2. Do not defeat the inherent design features of the polarized plug. Non-polarized line cord adapters will defeat the safety provided by the polarized AC plug. If the plug should fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding-type plug. If you use this product in a country which only has two slotted receptacles in the house, you must use a three-pin adapter plug to earth ground which is the "E" (earth pin) of the power cord connected to this product.

3. Do not overload wall outlets, extension or integral convenience receptacles, as this could result in a risk of fire or shock.

Operating Voltage

The LDS2/75 amplifier is factory-set for 110V, 120V or 230V AC operation at either 50 or 60 Hz, according to the country for which the unit was manufactured (230V in European Union countries, in compliance with CE regulations). The operating voltage cannot be changed by the user and any attempt to do so will void the warranty.

Care of the Product

Clean the product by dusting with a dry cloth. Do

not permit objects of any kind to be pushed and/or fall into the product through the enclosure openings.

General Description

The LDS2/75 is an intuitive product that has been designed to provide amplification for up to two pairs of 8 ohm speakers or one pair of 4 ohm speakers.

The LDS2/75 outputs a total of 100 watts into 8 ohm loads and 150 watts into 4 ohm loads. An embedded MPU (Micro Processing Unit) ensures that the amplifier cannot be 'overdriven', and the LDS (Load Detection System) ensures that all speaker connections must be good before the amplifier is connected to the speakers.

The LDS2/75 has an automatic internal sub-sonic filter of -18dB per octave which rolls off very low frequency content (below 20 Hz) to avoid low frequency saturation of a transformer volume control.

The unit can be set for a bridged/mono application in which case the output will be 150 watts into 8 ohm loads.

The 2/75 has a great many features all of which are described in this manual.

Front Panel Description

The front panel has a blue LED will glow brightly when the unit is active and will dim considerably whenever the unit is in its 'sleep' mode.

The volume control knob allows you to set a preferred level.

Rear Panel Description

The following description identifies each of the main controls/connection options and follows the rear panel from left to right.

Input

The amplifier offers both speaker level and line level inputs. A "balanced" input buffer is employed in the speaker level input circuit that will accept an output signal from either a 'grounded' or a 'floating' music source.

Line Output (Buffered)

For use whenever a 'daisy-chain' installation and multiple LDS2/75's are used.

Mode Switch

This control allows for a selection of 'Stereo'

‘Mono’ or ‘Mono/Bridged’. In the latter mode, the maximum output power is 150 watts. Please note that ‘R-Channel’ input is accepted under the bridged operation. Bridging is ONLY recommended when 8 Ohm speakers (or greater impedance) are used.

Music

With the LDS2/75’s trigger switch in the ‘music’ position, it will automatically function once it receives a music signal and will move into its standby mode whenever the signal is absent for approximately five minutes. It will reactivate immediately a signal is again received.

12 Volt Trigger

With the switch in the 12V position, the LDS2/75 can be turned on from a ‘standby’ state whenever a 6V to 15V input signal appears at the 12V input connector.

12 Volt Connector

For 12V trigger input and output use the upper two circuits marked ‘+IN-’ for 12V trigger input (to turn on the LDS2/75 amplifier) and use the lower two circuits marked ‘-Out+’ for trigger output. The input accepts only a continuous DC trigger signal from 6V minimum to 15V maximum for turning on the LDS2/75 amplifier.

The trigger output is capable of delivering a continuous 12V, 30 mA of DC current to drive the down-stream products (or multiple units of LDS2/75 amplifiers) that may be associated with the LDS2/75 amplifier.

NOTE: If the music is discontinued for longer than 5 minutes, the LDS2/75 will automatically enter its sleep mode to cut down on energy consumption. The front blue LED will then ‘dim’ to indicate that the amplifier is in ‘Sleep’ and will only return to its full luminance when it again receives a music signal.

LDS LED

This important control indicator is provided to indicate the correctness of your speaker connections and to indicate that the intended speaker load is not too great for the amplifier.

Speakers 1 and 2

These are the speaker-out terminals that are connected with the cables from the loudspeakers.

Power Switch

Normally once you have switched on the amplifier the signal sensing mode or the 12 volt trigger switch will ensure that the amplifier goes into a ‘sleep/standby’ mode whenever it is not being directly used.

Protection Features

Your LDS2/75 includes some important circuits that are designed to protect the amplifier.

LDS (Load Detection System)

The LDS feature is a patent pending circuit that prevents ‘bad’ speaker connections to be made that could cause the amplifier to ‘short’.



Fig. 1. Front panel view

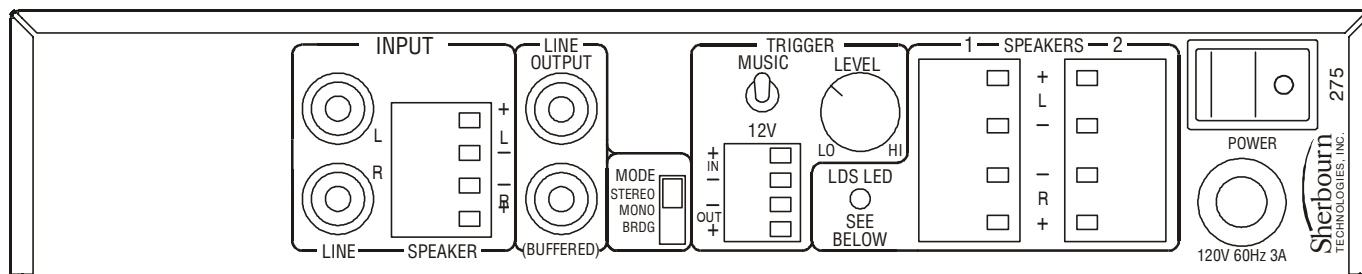


Fig. 2. Rear panel view

MPU (Micro Processor Unit)

The MPU circuitry measures the impedance of the speaker load that is intended to be connected. The MPU only permits impedances above 3.5 ohms to be connected.

How to use the LDS and MPU Test Functions

1. In order for the LDS2/75 to correctly carry out its designated LDS and MPU test functions, you must make all of your speaker connections with the master power switch in the 'off' position.

2. Only when you are satisfied that you have made all the connections correctly should you turn the power switch to its 'on' position. Once the switch is on the 'on' position the LDS2/75 will then proceed with its diagnostic testing and the result will show with the rear panel LED illuminating in either Green or Orange.

3. If the LED illuminates in Green then everything has been tested satisfactorily. This happens instantly and you could easily miss the green LED illuminations so we urge you to watch the signal closely.

4. If the LED continues to flash in orange then there is a problem with either a) the speaker connections or b) the load impedance of the speakers.

5. To determine if the problem is one of 'connection' you should listen to see if a low level synchronized test tone is absent from any of your speakers. If you do not hear the tone from one of the speakers, it is almost certainly that will be the one with the bad connection. You should turn off the power and carefully reconnect the speaker cables and then repeat (2) above.

6. If the same synchronized test tone can be heard from all the speakers, then almost certainly it is because the impedance is too low. If you are trying to use more than two pairs of speakers, it is suggested that you remove one pair, turn off the amplifier and then carry out another test by repeating step (2). If this solves the problem, then it will indicate that the load impedance with the two pairs of speakers was too low. If the amplifier still does not work, then it is suggested that you consult the speaker manufacturer to determine the exact impedance of the loudspeakers.

7. The LDS function refers to a ground potential for measuring the speaker impedance. It does not measure the speaker under the bridge mode operation and care should therefore be exercised in connecting the speaker wires when the LDS2/75 is being used in its bridged mode.

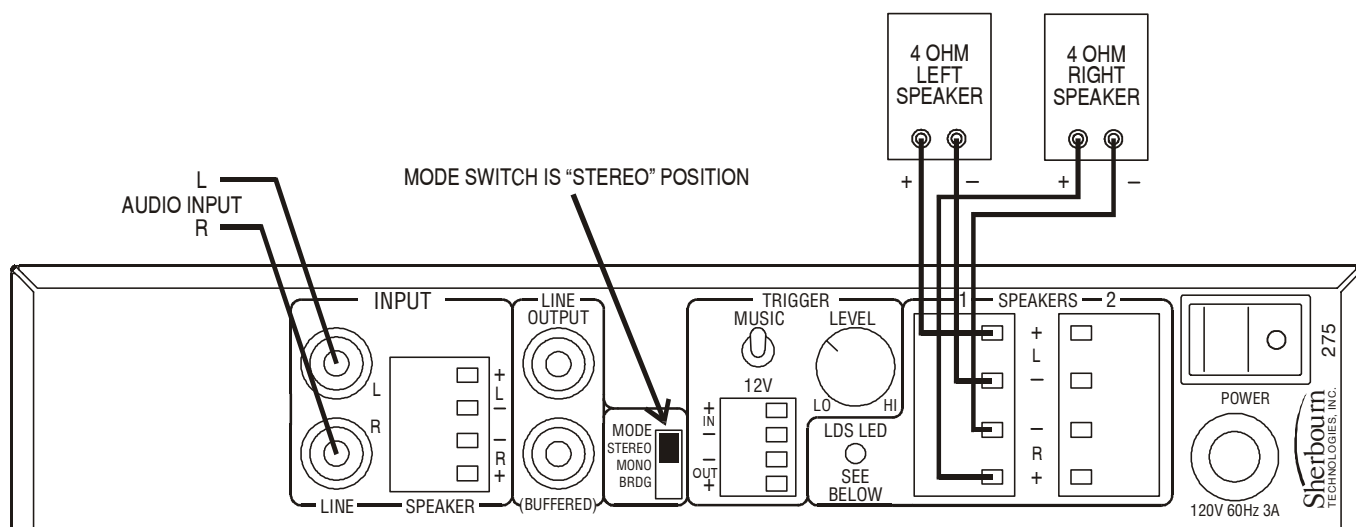


Fig. 3. LDS2/75 configured as a Stereo Amplifier with 4 ohm speakers.

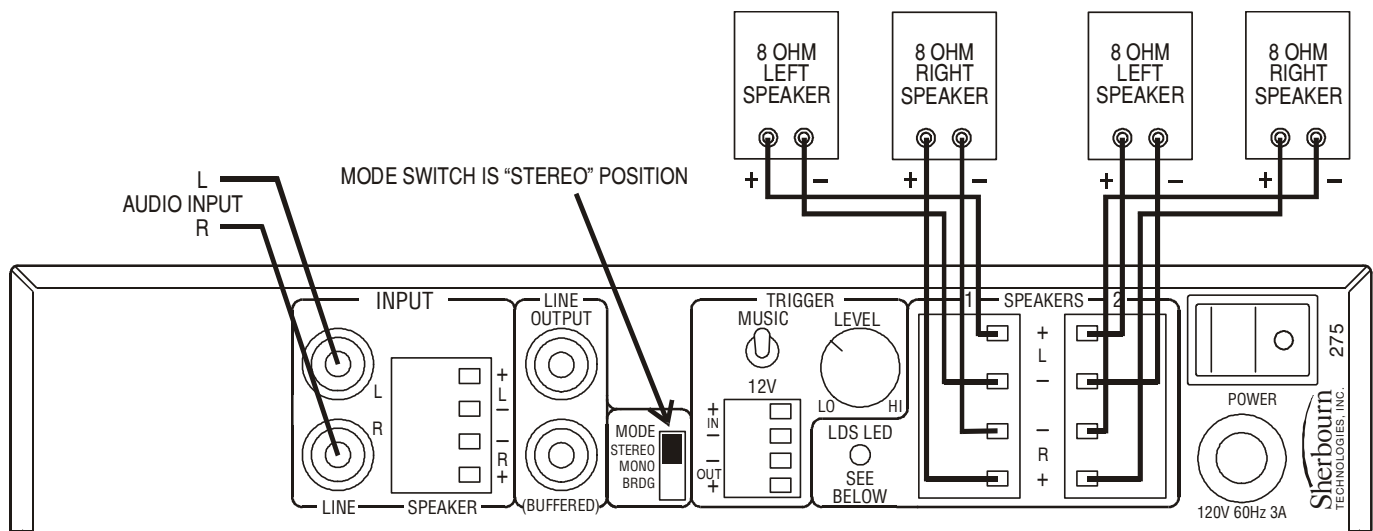


Fig. 3. LDS2/75 configured as a Stereo Amplifier with two pair of 8 ohm speakers.

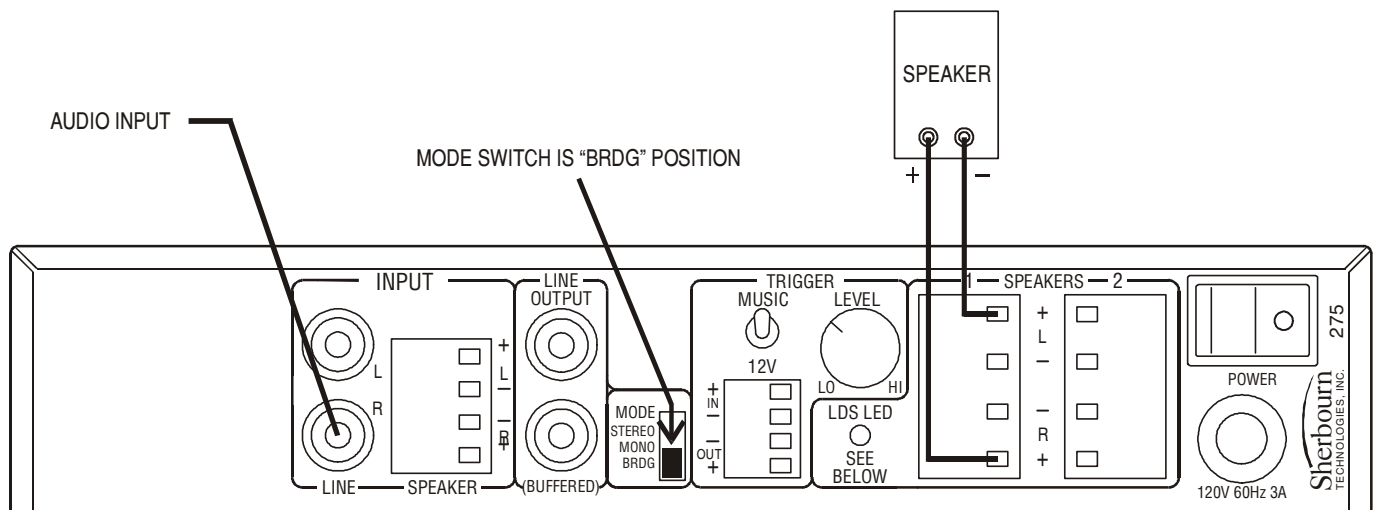


Fig. 4. LDS2/75 Configured in Bridged Mode.

Use only the right channel input for bridged connection. Connect the "+" polarity of the speaker to the "R+" speaker output, and the "-" polarity of the speaker to the "L+" speaker output.

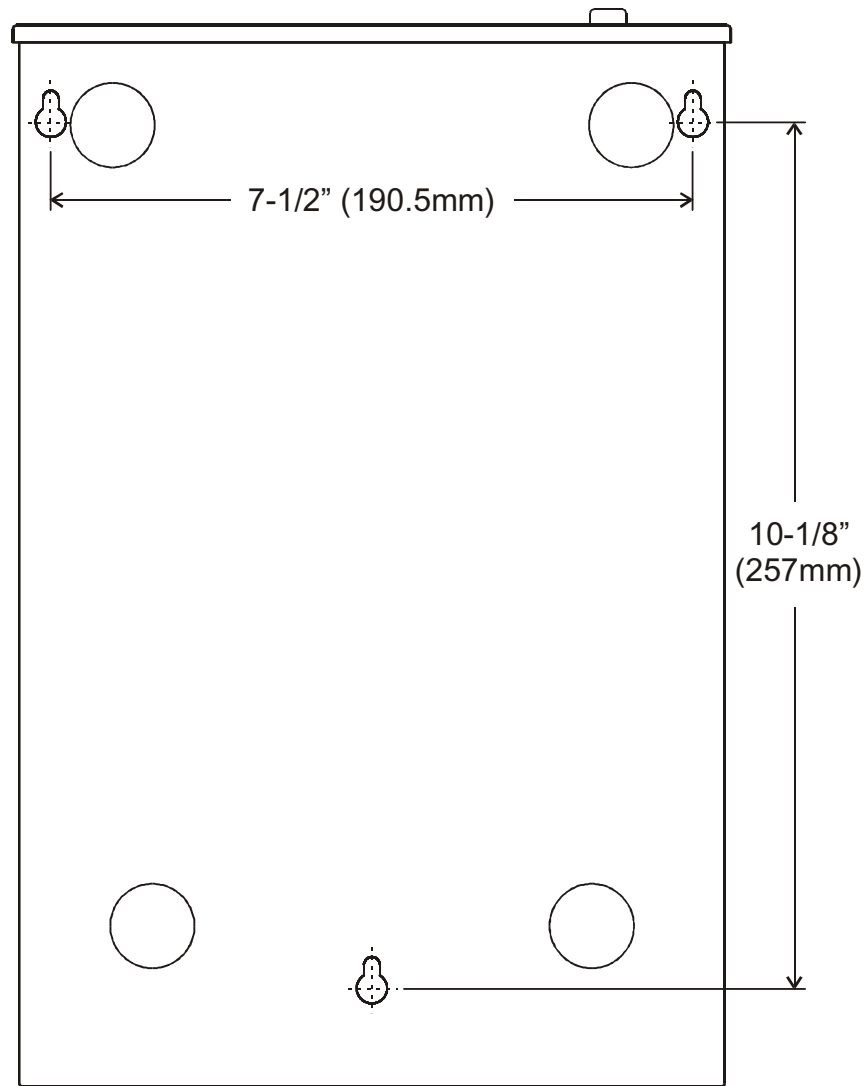


Fig.5. Location of bottom cover keyway slots used to mount the LDS2/75 amplifier vertically against a wall with screws.

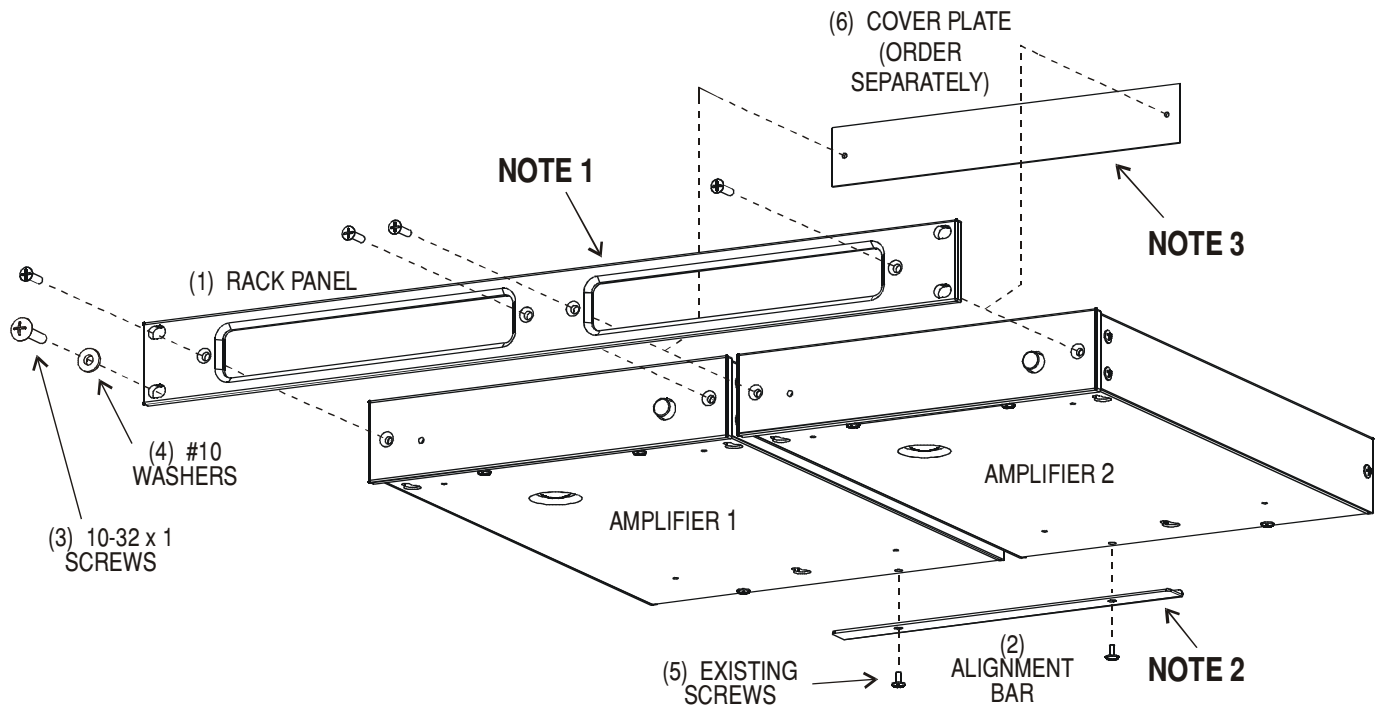


Fig. 6 Optional Rack Panel assembly

Note 1 - Remove two M4 flat head screws from front panel of amplifier and use them to fasten the amplifier to the Rack Panel as shown above. The amplifier front panel is not removed.

Note 2 - Fasten the Alignment Bar (when two amplifiers are used) to the bottom cover of the amplifier using the two screws already in place. This will hold the back of the amplifiers in alignment.

Note 3 - When only one amplifier is mounted to the Rack Panel, the second opening can be covered with a Cover Plate that is not part of this kit.

Each Rack Mount Kit contains:

Item	Qty	Name	To Mount
(1)	1	Rack Panel	
(2)	1	Alignment Bar	
(3)	4	10-32 x 1" truss head screws	Rack Panel
(4)	4	#10 shoulder washers	Rack Panel
(5)	2	existing amplifier screws	Alignment Bar

Separately available from Sherbourn:

(6)	1	Cover Plate with mounting screws
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Three Year Limited Warranty

Subject to the terms and conditions stated below, Sherbourn Technologies, Inc. (Sherbourn) warrants to the original owner that this model LDS2/75 shall be free from defects in workmanship or materials for a term of three (3) years from its date of purchase from an Authorized Sherbourn Dealer. Transfer of this product by its original owner (the 'Owner') will automatically terminate this Warranty regardless of when occurring.

In the event of any defect covered by this warranty, Sherbourn shall provide all parts, materials, and labor necessary to restore the Product to its original specifications, and shall return the Product to its owner at Sherbourn's expense. In the alternative, Sherbourn may at its sole option either replace the Product without charge, or if its replacement is not commercially practicable or repair or replacement cannot be accomplished within a reasonable time, Sherbourn may refund the purchase price of the Product, subject where appropriate to reasonable depreciation for actual use in accordance with applicable laws, in full satisfaction of its warranty obligations.

Sherbourn's sole obligation under this warranty shall be to repair or replace the product, or at its option refund the purchase price, as provided for hereinabove. Sherbourn does not warrant against, nor shall it be liable for, any of the following: removal or installation charges, shipping expenses to Sherbourn or its authorized service facility, loss of use, property damage of any kind, or other incidental or consequential damage or losses of any kind.

Note: Some states do not allow exclusion or limitation of consequential damages, so the foregoing exclusions may not apply to you.

This warranty does not cover any of the following: (a) cabinetry, trim, or other appearance items (except where they are defective at the time of original sale and the Product is delivered for repair within the first thirty days (30) thereafter); (b) failures arising from accident, catastrophe, misuse, neglect, or failure to properly connect and operate the product in accordance with the accompanying instruction; (c) failures arising from improper installation of the Product or incompatibility of other components in the system of which the Product is a part; (d) failures of any kind in products (i) which have been purchased from other than Authorized Sherbourn dealers, or (ii) which evidence any tampering, alteration, or attempted servicing by any-

one other than Sherbourn or an Authorized Sherbourn Service Facility; and Sherbourn shall have no liability or obligation of any kind with respect to any of the foregoing losses types of failures.

To obtain service under this Warranty, the Owner must first obtain from Sherbourn a Return Authorization Number, and must then, at the owner's expense (i) arrange for any necessary de-installation of the Product, and (ii) deliver or ship the Product, properly packaged and clearly identified with the Return Authorization Number, prepaid, and insured, to Sherbourn at the address shown below, or to an Authorized Sherbourn Service Facility. In addition, the Owner must provide evidence that the Product is at the time of delivery within the scope of this Warranty, by including the ORIGINAL dated sales receipt with the Product when submitted for repair. Safeguard your original sales receipt, as it may be required to validate Warranty coverage

The owner is solely responsible for payment of all expenses for removing the Product from its installation, delivering it to Sherbourn or an Authorized Sherbourn Service Facility, and reinstalling it following repair, as well as for any repairs made to Products which are subject to the exclusions noted above.

In order to learn the name and address of the nearest Authorized Sherbourn Service Facility, obtain a Return Authorization Number and shipping instructions, or obtain answers to any other questions you may have concerning this Warranty, you may telephone Sherbourn between the hours of 9:00 am and 5:00 pm Eastern Standard Time, Monday through Friday at (978) 663-7385, or write to our Service Department at Sherbourn Technologies, Inc., 19-3A Sterling Road, North Billerica, MA 01862.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

If this product has been purchased outside of the United States of America, you should contact your local dealer or distributor to determine the warranty coverage provided in your country.

The logo for Sherbourn, featuring the word "Sherbourn" in a serif font with a registered trademark symbol. Above the text is a curved line that starts under the 'S', arches over the 'h' and 'e', and ends under the 'n'.

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