

Sherbourn® Technologies, Inc.

Owner's Manual for Power Amplifier Models 7/2100A and 5/5210A

The 7/2100A amplifier has seven 300/200 watt channels (4 ohms/8 ohms) and the 5/5210A amplifier has five 300/200 watt channels. The instructions, specifications and connections described in this manual apply to both models.

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 lightning 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 to persons.

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.

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.

Attention: Pour pevenir les chocs electriques pas utiliser cette fuche polarisee avec un prolongateur, une prise de courant ou un autre sortie de courant, sauf si les lames peuvent etre inserees afond ans en laisser aucune partie a decouvert.

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 lightening or power line surges.

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

Caution For Installation

1. Do please 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.

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

3. Please mount the equipment in a wall or cabinet only as described in this owner's manual.

4. Do not use the equipment near water; for example near a bathtub, washbowl, kitchen sink, a swimming pool or in a wet basement, etc.

5. 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.

Connections and Care of the Product

Connections

1. Connect this equipment only to the type of AC power source as marked on the unit.

2. Always route AC power cords so that 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.

3. 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 please 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 the "E" (earth pin) of the power cord connected to this product.

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

Care of the Product

1. Clean the product by dusting with a dry cloth.

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

Custom 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 amplifier 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. We strongly suggest that the shelf on which the product is being placed includes a cutout of at least twenty inches by twelve inches (50 cm by 30 cm) directly under

the ventilation slots on the bottom of the amplifier. A similarly sized cutout should be made in the upper or rear wall behind the shelf so that free air can flow from beneath the unit to the outside atmosphere. Also allow a minimum of three inches (7.5 cm) free space above the product and two inches (5 cm) on either side of the product. This combination of space will allow for a free flow of circulating air to help keep the amplifier from overheating. If your cabinet includes a number of products, it may be advisable to install a quiet fan to assist the cooling process.

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.

Front Panel Indicators

With your amplifier connected to its preamp and receiving an input signal at its first POWER ON the blue LED will turn on with a full brightness. Should you not hear music through the speakers it could be that there is no signal to the input of your amplifier and you should check the preamp/control center for proper settings and connections.

Your amplifier front panel includes multiple blue LED's (one per channel). Adjacent to these LED's is a switch to allow you to turn them off should you wish to do so.

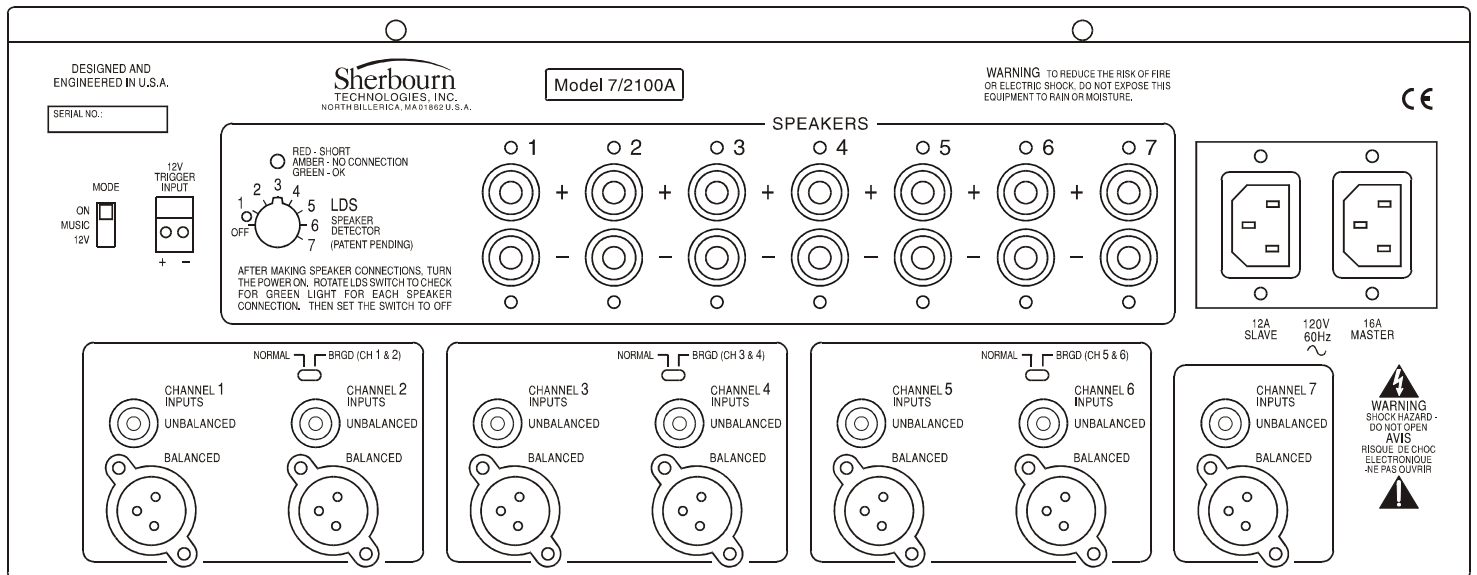
Rear Panel Connections

It is strongly recommended that you make all of your connections and check them thoroughly before powering up your amplifier from the front panel switch. This will ensure that you do not accidentally short the output of the amplifier or encounter any electric shock or sparks or cause any initial and surprisingly loud signals to be played through your loudspeakers.

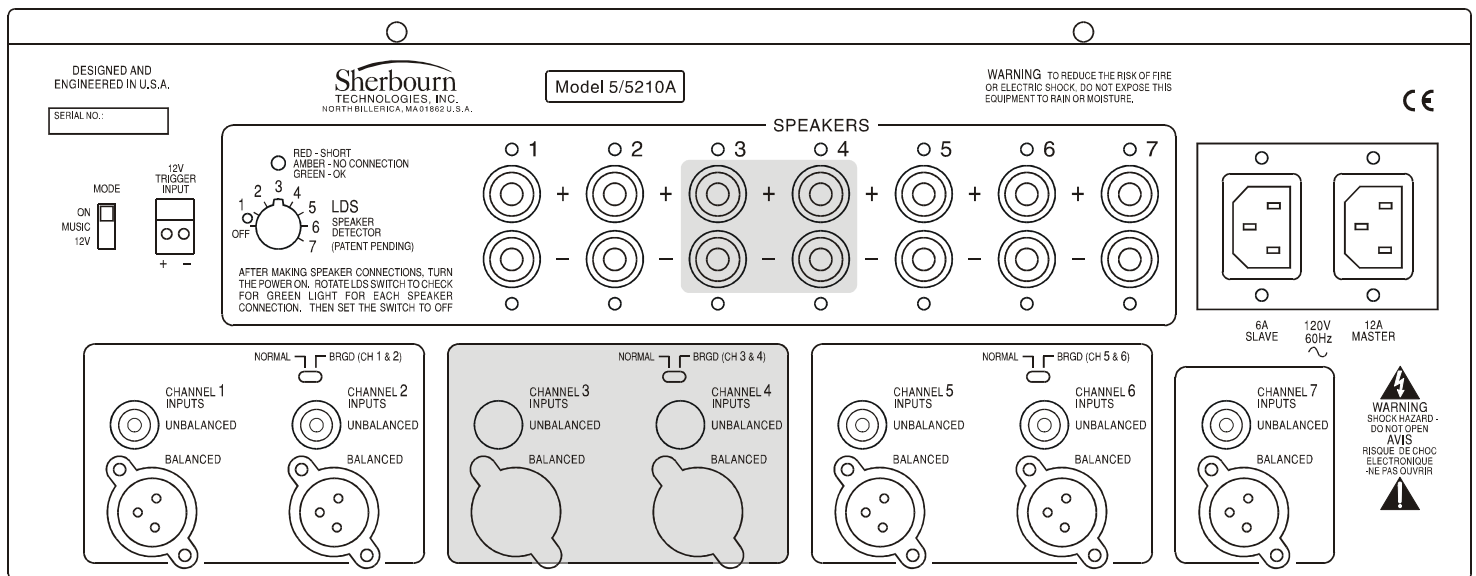
1. The connection between your Preamp/Control Center will be made discretely via a cable from the output of your Preamp to the input of your amplifier.

2. The amplifier gives the option (depending on your preamp) of making the connection with either an XLR Balanced Input or an RCA Unbalanced Input.

3. If your system has a noisy ground connection or if you need to run a distant input cable to the



Rear panel view of model 7/2100A



Rear panel view of model 5/5210A showing nonfunctional channels in shaded areas

amplifier, it is recommended that wherever possible you use the XLR Input for your connection.

4. Your amplifier includes a 12V DC trigger input connector to allow for remote integration with your preamp/control center. If your preamp includes provision to output 12V DC to remotely turn on other equipment, you can use a control cable to connect the preamp to the trigger input of your amplifier to allow it to automatically turn on whenever you turn on your preamp. We recommend that a shielded coaxial cable be used for this purpose. A removeable plug at the 12V trigger input

(comes with the amplifier) shall be unplugged and wired with the 12V in the correct polarity. The input impedance of the 12V input is 2.2k ohms; it will accept an input voltage from 9V to 12V.

5. It is strongly advised that you only use the power cords supplied with the amplifier. Never use any other power cords with a smaller gauge than the one provided. Do not use an extension cord to install your amplifier since it could effectively reduce the current capacity supplied to the amplifier.

Trigger Mode Switch

On

Setting the trigger mode switch to the ON position allows the 7/2100A or 5/5210A to stay “on” all the time. The power amplifier can only be turned off by turning off the front panel switch or by disconnecting the two power cords.

Music (Automatic Signal Sensing)

Setting the trigger mode switch to the MUSIC position sets the 7/2100A or 5/5210A into an auto-on-standby power control mode. The amplifier can sense a very low-level music signal fed to any of the signal inputs which will turn the amplifier into an active state and will play music. When the music stops and no further signal is received for more than 5 to 7 minutes (typically) the amplifier will turn into a standby mode, which cuts off the power consumption substantially. The amplifier will wake up from the standby mode whenever it again receives a music signal.

Important note for using the 12V trigger: If 12V DC is not used for triggering, make sure the trigger switch is not set to the 12V position or the amplifier will not come out of the ‘power-on-standby’ mode.

12V

Setting the trigger mode switch to 12V allows the power-on-standby function to be controlled by a 12V DC voltage connected to the 12V input connector. When 12V DC is present at the 12V trigger input, the amplifier will be turned ON, and when the 12V disappears it will enter the standby mode in a few seconds. Under standby mode, no music signal will go through the amplifier and there is no output sent to the speakers. The amplifier will wake up from the standby mode whenever it receives a 12V trigger input again.

Important note for using the LDS Switch: For every first installation of a 7/2100A or 5/5210A amplifier, do not set the LDS switch to the OFF position until the switch has been used to sequentially check through each connection, or the amplifier will not output a signal.

Operating the LDS switch

After physically installing the 7/2100A or 5/5210A amplifier in a location according to the safety instructions at the beginning of this manual, carefully complete the signal cable wiring and speaker lead connections.

Check and make sure that the LDS switch is set to

the full clockwise direction (position 7). Connect the two power cords and turn on the amplifier’s power switch on the front panel. The front panel blue light will illuminate and the LDS LED (on the rear panel) will show the status of the speaker connection at the speaker output terminal of speaker number 7. If the LED is green, it indicates a good speaker connection has been made and a correct speaker impedance has been used. Orange indicates an open circuit or a speaker of higher impedance is used. Red indicates either a short circuit connection or a speaker impedance that is too low for the amplifier.

Sequentially test each speaker connection by winding the switch in a counterclockwise direction from 7 through to 1 observing the LED color for each of the 7 positions. If a red or orange color is detected, check and rewire the connection of that channel until the LED turns green.

Note – For the model 5/5210A, channels 3 and 4 are not installed and you will see orange when rotating the LDS Switch to positions 3 and 4.

You must never turn the LDS switch to the OFF position whenever an LDS LED is RED during the above checking. This could connect a dead short to the amplifier which may cause damage.

Activating the 7/2100A and 5/5210A

After checking through every speaker connection with the LDS switch and having confirmed that all LDS LEDs are green, then remove the tiny locking screw between the OFF and 1 position. Turn the switch to the OFF position which will fully activate the 7/2100A or 5/5210A. The power-on-standby control is then handed over to either the external 12V DC Trigger, or the Music Trigger, or the always power ON position (but controlled by the front panel power switch) depending upon how the trigger mode setting is made. Make sure to reinstall the locking screw so that the LDS switch cannot be turned because to do so will immediately disable the power on setting of the switch.

Power Cords

In order to obviate the need to install a special 20/30 amp circuit (that will be required if seven 4 ohm speakers are used) your 7/2100A or 5/210A has been equipped with two power cords. Please note that the rear “Master” AC receptacle must be connected to the AC power first in order to allow power to enter the “Slave” receptacle of the amplifier. The amplifier will not power up if only the rear “Slave”

receptacle is connected to AC power.

Many homes have double outlet sockets which are supported by one 15 amp circuit. If you are using 4 ohm speakers, and you like the amplifier to play very loud through each speaker, (*Warning : Exposing your ears to continuous loud levels of sound may result in serious permanent hearing loss*) it will be necessary to use two different power supply outlets EACH of which should be supplying separate 15 amp circuits. This is the reason for supplying the two power cords with different lengths. If your speakers are 8 ohm impedance, you can connect both power cords to the same double outlet 15 amp circuit. You are strongly advised to check with your authorized Sherbourn dealer to ensure that you are making the correct connection to your available wall outlets.

Bridging

Each two channels of 1 & 2, 3 & 4 or 5 & 6 of the 7/2100A (or 1 & 2, 5 & 6 for the 5/5210A) can be bridged into a mono channel to output up to 400 watts at 8 ohms. Make sure the toggle switch is placed in the "BRDG" position for each pair of channels to be bridged.

It is important that the output connections for your loudspeakers be wired between the pair of red post speaker outputs (each will be marked "+") of the bridged channels. Use the red posts of channel 1, 3 and 5 for positive polarity, and the red posts of channel 2, 4 and 6 for the negative polarity speaker connections.

Please note that it is not recommended to use 4 ohm (or speakers of less than 4 ohm) in a bridged configuration.

When operating the 7/2100A in bridged mode, audio input is accepted via channels 2, 4 and 6 only (if they are all bridged), and channels 1, 3 and 5 inputs are NOT accepted by the amplifier.

When operating the 5/5210A in bridged mode, audio input is accepted via channels 2 and 6 only (if they are all bridged), and channels 1 and 5 inputs are NOT accepted by the amplifier.

Specifications

POWER OUTPUT

200 watts into 8 ohms.

300 watts into 4 ohms minimum sine wave continuous output.

TOTAL HARMONIC DISTORTION

Less than 0.05% at 8 ohms and 0.075% at 4 ohms.

OUTPUT LOAD IMPEDANCE

8 or 4 ohms in Normal mode

8 ohms minimum in Bridged mode

INPUT LOAD IMPEDANCE

Balanced input 20K ohms

Unbalanced input 20K ohms.

INPUT SENSITIVITY (Balanced or Unbalanced)

1.1 volts.

UNBALANCED INPUT SENSITIVITY

1.10 volts.

POWER BANDWIDTH

5Hz to 75kHz.

SIGNAL TO NOISE RATIO

100dB wideband

110dB A-weighted.

WEIGHT (in carton)

Model 7/2100A 115 pounds (52.2Kg)

Model 5/5210A 85 pounds (38.6Kg)

DIMENSIONS

Width 19 inches (483mm)

Depth 17.7 inches (450mm)

Height 7 inches (177mm).

POWER REQUIREMENTS

Model 7/2100A:

120V operation (USA/Canada) 2 x 15A

230V operation (Europe/Australia) 2 x 7.5A

Model 5/5210A:

120V operation (USA/Canada) 2 x 12A

230V operation (Europe/Australia) 2 x 6A

Trouble-Shooting Symptom

Possible Causes

Amplifier does not power up and the front LED does not turn on.

1. Power cord not connected at the rear “master” AC receptacle.

No sound out of all channels.

1. Load connections not checked with LDS switch. Make sure switch is set to OFF to complete the procedure.

2. Trigger mode switch set incorrectly.

3. Music source not turned on.

No sound out of channels 1, 2, 3 and 4.

1. Power cord not connected at the rear “slave” AC receptacle.

Does not enter power standby mode under music trigger mode.

1. Trigger Mode Switch may be incorrectly set to ON, switch it to MUSIC to correct.

2. Leak through signal or noise from a preamp keeps the amp on. You may need to switch off the preamp completely or try 3 and 4 below.

3. System ground current may enter the 7/2100A or 5/5210A via the signal cable. Earth ground the preamp or the source CD player/tuner to bypass the ground current from entering the power amplifier.

4. Insert an isolation transformer with each signal cable to break a noisy ground system.

No sound from bridged channels.

1. Signal is not applied to the input of the even numbered channels.

Low power from bridged channels.

1. Speaker not connected between the related two red speaker posts.

Low bass

1. Speakers may be connected out of phase.

Five Year Limited Warranty

Subject to the terms and conditions stated below, Sherbourn Technologies, Inc. (Sherbourn) warrants to the original owner that this model 7/2100A or 5/5210A shall be free from defects in workmanship or materials for a term of five (5) 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.

Sherbourn®

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