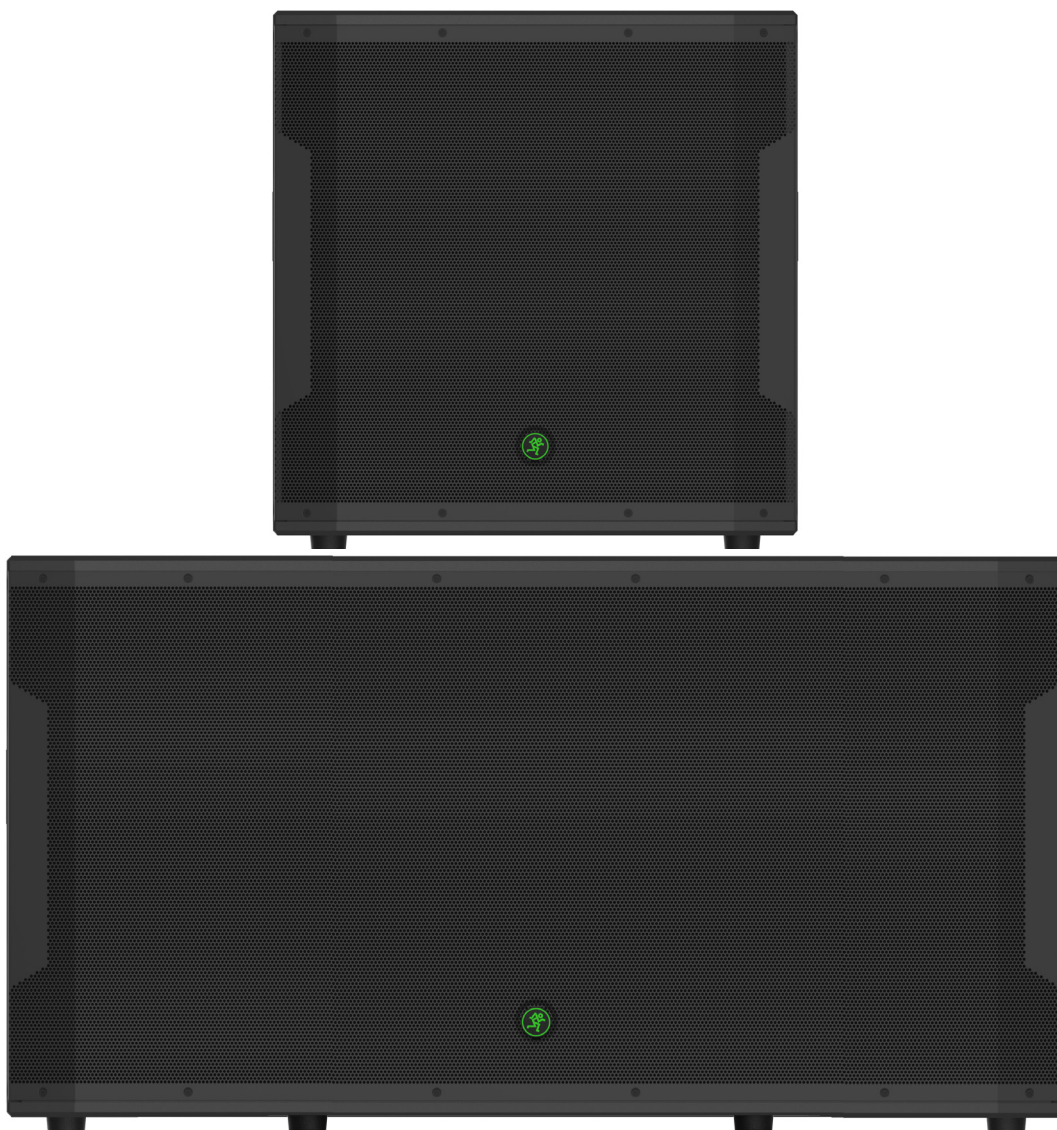


SRM1850 • SRM2850

1600W 18" POWERED SUBWOOFERS

OWNER'S MANUAL



Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. This apparatus shall not be exposed to dripping or splashing, and no object filled with liquids, such as vases or beer glasses, shall be placed on the apparatus.
16. Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.
17. This apparatus has been designed with Class-I construction and must be connected to a mains socket outlet with a protective earthing connection (the third grounding prong).
18. This apparatus has been equipped with a rocker-style AC mains power switch. This switch is located on the rear panel and should remain readily accessible to the user.



CAUTION

RISK OF ELECTRIC SHOCK! DO NOT OPEN!

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.



The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure, that may be of significant magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintaining (servicing) instructions in the literature accompanying the appliance.

Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan.

Apparatet må tilkoples jordet stikkontakt.

Apparaten skall anslutas till jordat uttag.

19. The MAINS plug or an appliance coupler is used as the disconnect device, so the disconnect device shall remain readily operable.
20. NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
 - Reorient or relocate the receiving antenna.
 - Increase the separation between the equipment and the receiver.
 - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
 - Consult the dealer or an experienced radio/TV technician for help.

CAUTION: Changes or modifications to this device not expressly approved by LOUD Technologies Inc. could void the user's authority to operate the equipment under FCC rules.

21. This apparatus does not exceed the Class A/Class B (whichever is applicable) limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of the Canadian Department of Communications.
22. Exposure to extremely high noise levels may cause permanent hearing loss. Individuals vary considerably in susceptibility to noise-induced hearing loss, but nearly everyone will lose some hearing if exposed to sufficiently intense noise for a period of time. The U.S. Government's Occupational Safety and Health Administration (OSHA) has specified the permissible noise level exposures shown in the following chart.

According to OSHA, any exposure in excess of these permissible limits could result in some hearing loss. To ensure against potentially dangerous exposure to high sound pressure levels, it is recommended that all persons exposed to equipment capable of producing high sound pressure levels use hearing protectors while the equipment is in operation. Ear plugs or protectors in the ear canals or over the ears must be worn when operating the equipment in order to prevent permanent hearing loss if exposure is in excess of the limits set forth here:

Duration, per day in hours	Sound Level dBA, Slow Response	Typical Example
8	90	Duo in small club
6	92	
4	95	Subway Train
3	97	
2	100	Very loud classical music
1.5	102	
1	105	John screaming at Troy about deadlines
0.5	110	
0.25 or less	115	Loudest parts of a rock concert

WARNING — To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

CAUTION — To prevent electric shock hazard, do not connect to mains power supply while grille is removed.



Correct disposal of this product: This symbol indicates that this product should not be disposed of with your household waste, according to the WEEE directive (2012/19/EU) and your national law. This product should be handed over to an authorized collection site for recycling waste electrical and electronic equipment (EEE). Improper handling of this type of waste could have a possible negative impact on the environment and human health due to potentially hazardous substances that are generally associated with EEE. At the same time, your cooperation in the correct disposal of this product will contribute to the effective usage of natural resources. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, waste authority, or your household waste disposal service.

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Features

- 1600W of intense power paired with custom high-output 18" woofers for room-shaking, chest-pounding low end performance
- “Built-Like-A-Tank” all-wood, internally-braced cabinet delivers professional-grade road-worthiness and near-zero distortion, even at high volume
- Front ported for maximum low-frequency extension and punch
- Stereo XLR inputs plus stereo XLR full-range and high-pass outputs
- Integrated digital crossover with variable control and presets for SRM loudspeakers
- Smart Protect™ DSP kicks in to protect your investment when things get pushed a little too hard
- Built-in cup for easily pole-mounting full-range loudspeakers

Please write your serial number here for future reference (i.e., insurance claims, tech support, return authorization, make dad proud, etc.)

Purchased at:

Date of purchase:



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Introduction

SRM 18" Powered Subwoofers are "Built-like-a-Tank," delivering 1600W of intense power in an ultra-high output design that can shake the room. The professional-grade, internally-braced all-wood enclosure provides tour level road-worthiness with maximum low-frequency extension and punch.

SRM subwoofers feature stereo XLR inputs, full-range and high-pass outputs plus a variable digital crossover that includes presets for SRM top boxes.

The Smart Protect™ DSP is also in place to protect your investment when things get pushed a little too hard. Get the high-output, air-moving lows you demand in a rock solid subwoofer with our proven performance.

How to Use This Manual:

After this introduction, a getting started guide will help you get things set up fast. The hookup diagrams show some typical setups, while the remaining sections provide details of the SRM subwoofers.



This icon marks information that is critically important or unique to the subwoofer. For your own good, read and remember them.

Getting Started

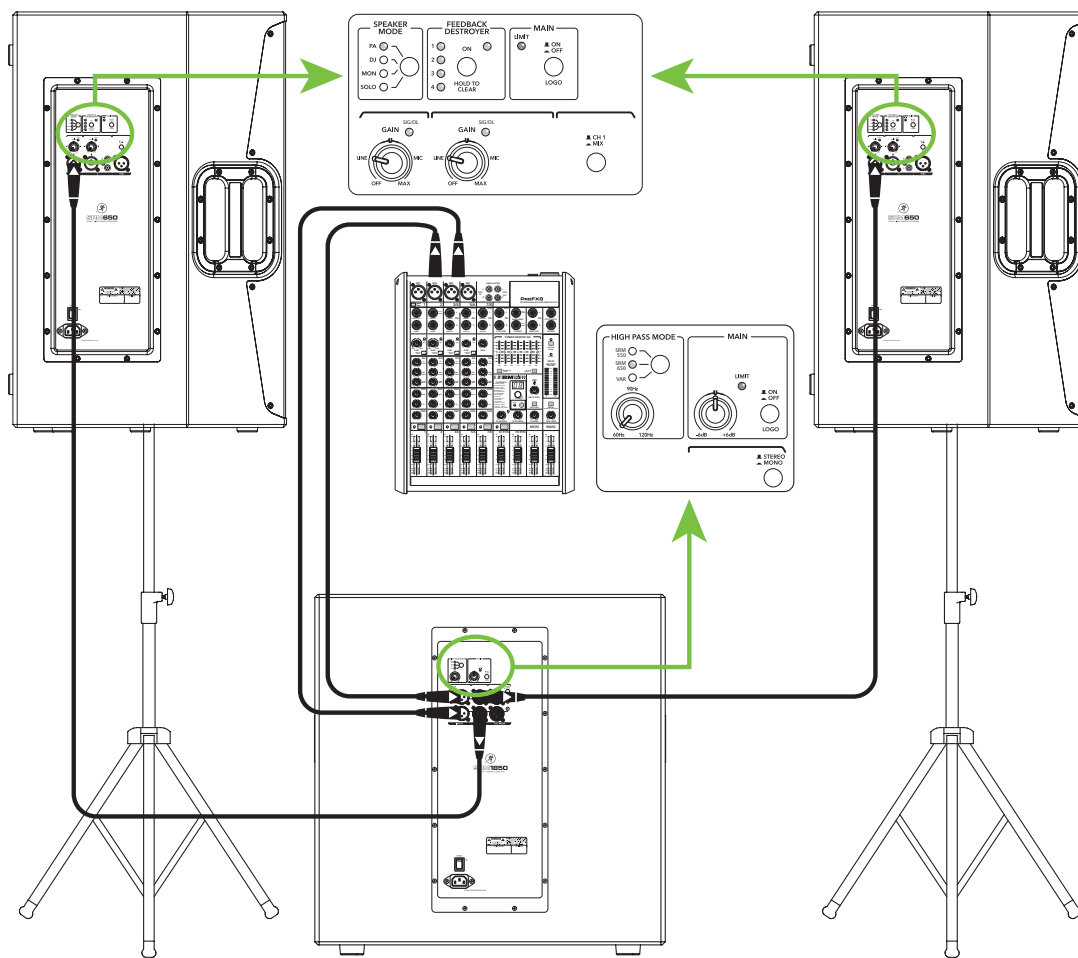
The following steps will help you set up the subwoofers quickly.

1. Make all initial connections with the power switches OFF on all equipment. Make sure the master volume, level, or gain controls are all the way down.
2. Connect the line-level outputs from the mixing console (or other signal source) to the XLR inputs on the rear panel of the SRM subwoofers.
3. Connect the high pass outputs from the SRM subwoofers to the inputs of powered loudspeakers (or to an amplifier powering passive loudspeakers).
4. Connect the supplied AC power cords to the IEC sockets on the rear panel of each subwoofer. Plug the other end into an AC outlet properly configured with the correct voltage as indicated below the IEC socket.
5. Turn the mixer (or other signal source) on.
6. Turn the subwoofers on.
7. Turn the loudspeakers on.
8. Start the signal source and raise the mixer's main L/R fader up until audio may be heard.
9. Adjust the master volume of the mixer to a comfortably loud listening level.
10. Read the rest of this manual to learn how to set the high pass mode to really dial in a sound for the venue.

Things to Remember:

- Never listen to loud music for prolonged periods. Please see the Safety Instructions on page 2 for information on hearing protection.
- As a general guide, the mixer (or other signal source) should be turned on first, subwoofers next, and loudspeakers last. As such, the loudspeakers should also be turned off first, followed by the subwoofers, then the mixer. This will reduce the possibility of any turn-on or turn-off thumps and other noises generated by any upstream equipment from coming out of the speakers.
- Save the shipping boxes and packing materials! You may need them someday. Besides, the cats will love playing in them and jumping out at you unexpectedly. Remember to pretend like you are surprised!
- Save your sales receipt in a safe place.

Hookup Diagrams



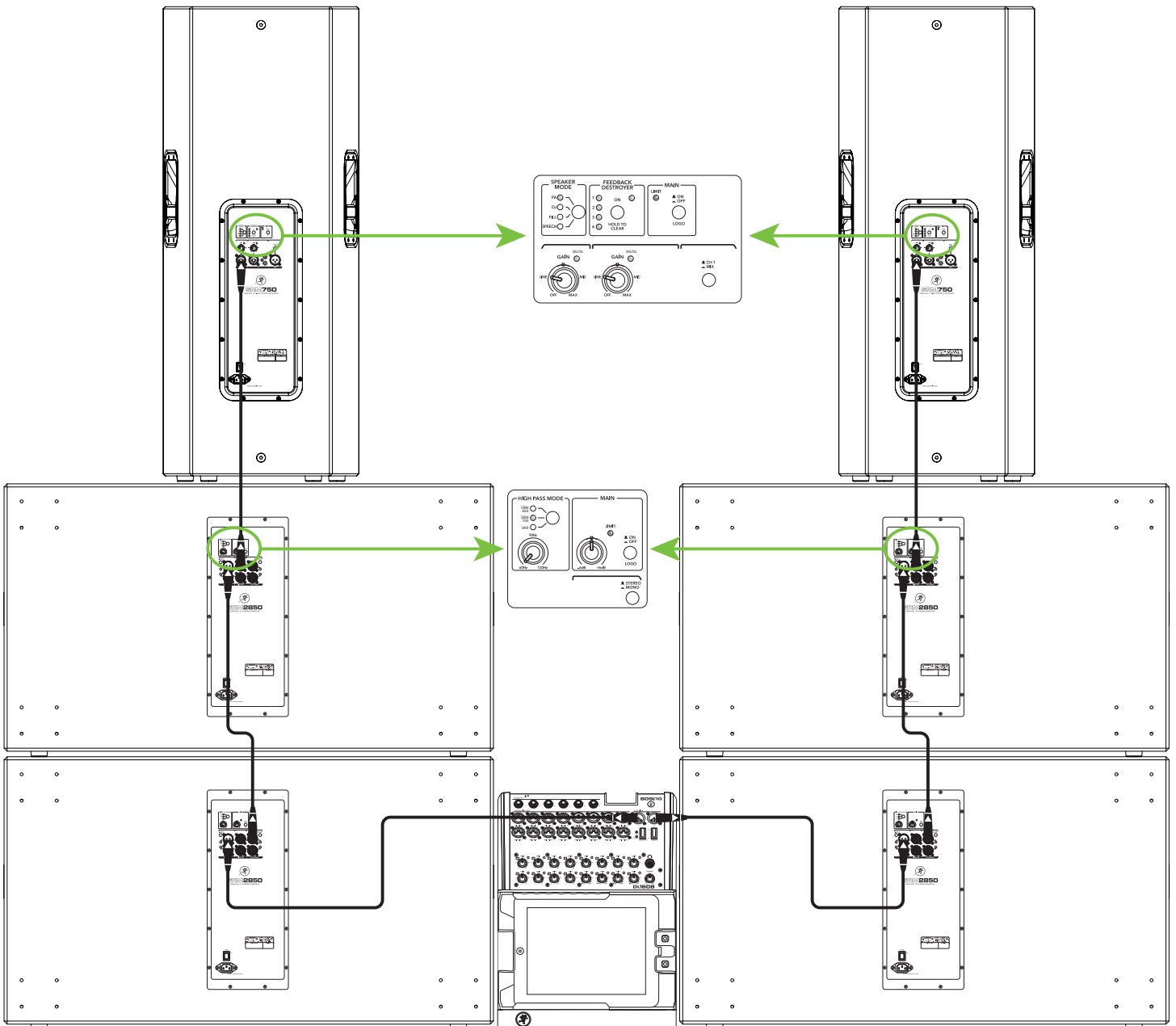
In this example, an SRM1850 subwoofer is connected to two SRM650 loudspeakers. It is a perfect setup for a small club.

Here, the L/R outputs of a ProFX8 mixer are connected directly to the channel A and B inputs of a single SRM1850 subwoofer.

The channel A and B high pass outputs of the SRM1850 subwoofer are connected directly to the channel 1 inputs of each SRM650 loudspeaker. Be sure that the gain knob on each is set to "line" or get ready to be blasted! Select the SRM650 high pass mode on the SRM1850 for a matched system.

Small Club System

Hookup Diagrams continued...



Feel the awesome power! In this example, a pair of SRM2850 subwoofers line each side of the venue... four subs total! The top sub on each side is connected to an SRM750 loudspeaker. This fully powered PA is desired when you really need a slammin' system with deep, commanding lows and nice, crisp highs.

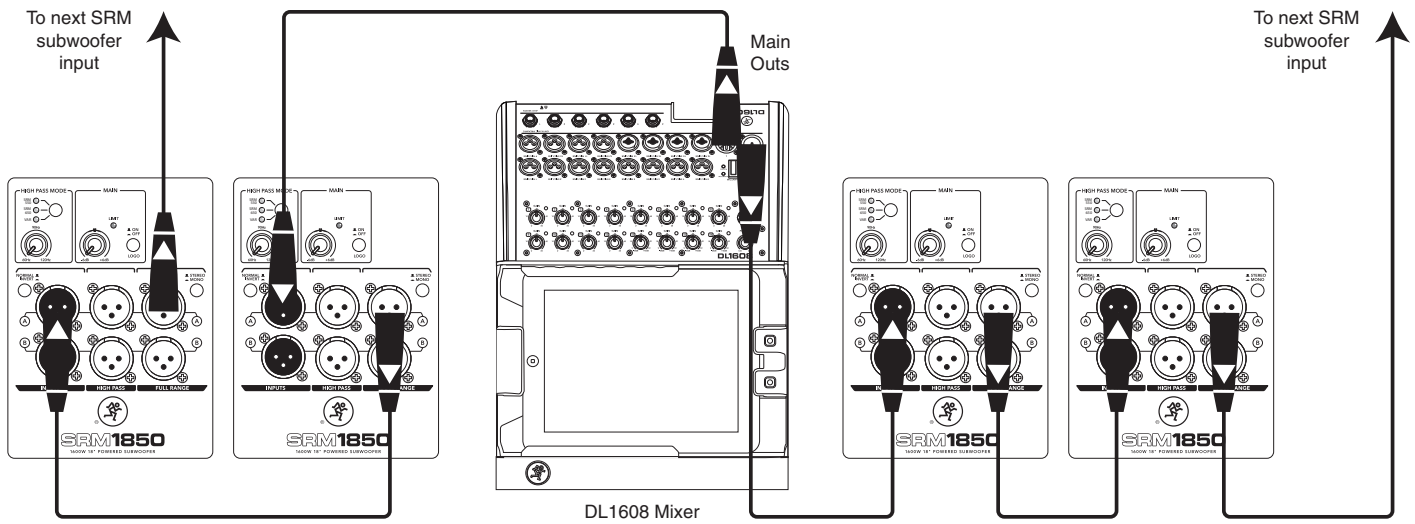
Here, the L/R outputs of a DL1608 mixer are connected directly to the channel A input of each bottom SRM2850 subwoofer. The channel A full range output of each (bottom) SRM2850 subwoofer is connected directly to the channel 1 input of each (top) SRM2850 subwoofer.

From here, the channel A high pass output of each (top) SRM2850 subwoofer is connected directly to the channel 1 input of each SRM750 loudspeaker. Be sure that the gain knob on each is set to "line" or get ready to be blasted! Select the SRM750 high pass mode on the SRM2850 for a matched system.

***Please note that the SRM750 loudspeakers are **stacked** on top of the SRM2850 subwoofers, not pole-mounted. SRM750s may be pole-mounted on a tripod stand, but must be stacked on subwoofers.

BIG PA

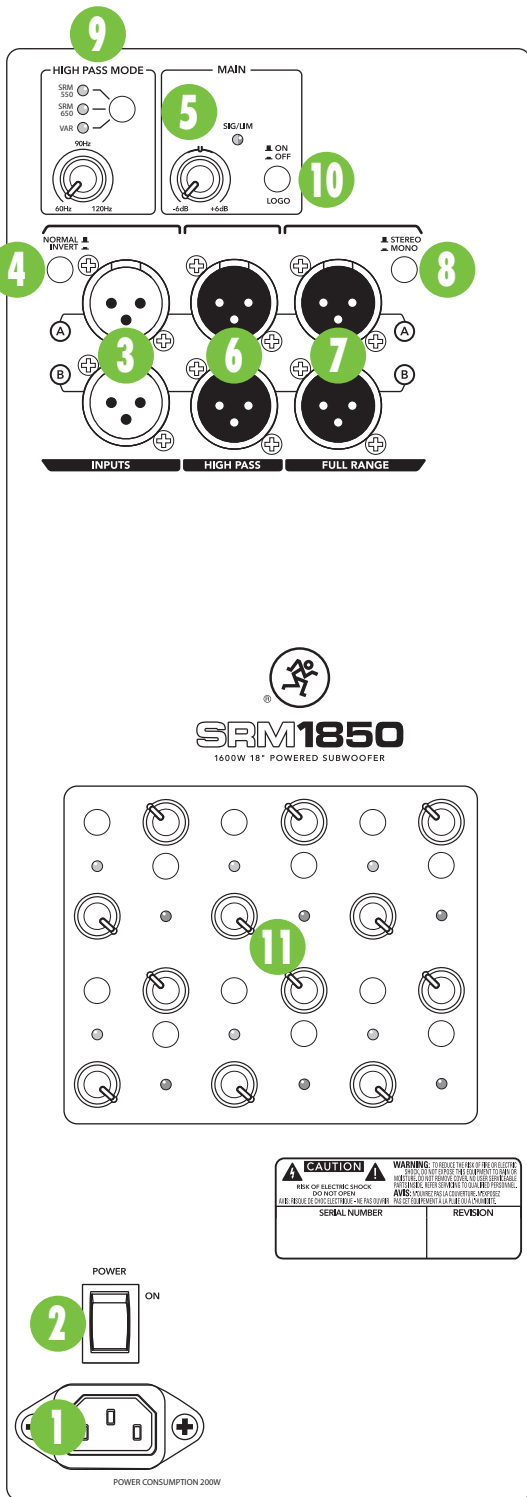
Hookup Diagrams continued...



SRM subwoofers may be daisy-chained via the male XLR connector labeled "FULL RANGE". Simply plug the signal source (i.e., mixer output) into the input jack(s), and patch that subwoofer's full range jack to the next subwoofers' input jack, and so on, daisy-chaining multiple SRM subwoofers. See above for a visual representation of daisy-chaining.

Daisy-Chaining Multiple SRM Subwoofers

SRM Subwoofer: Rear Panel Features



1. Power Connection

This is a standard 3-prong IEC power connector. Connect the detachable power cord (included in the packaging with the subwoofer) to the power receptacle, and plug the other end of the power cord into an AC outlet.

VERY IMPORTANT Make sure that the AC power is matched to the AC power indicated on the rear panel (below the IEC receptacle).

VERY IMPORTANT Disconnecting the plug's ground pin is dangerous. Don't do it!

2. Power Switch

Press the top of this rocker switch inwards to turn on the subwoofer. The front panel Running Man logo will glow with happiness...or at least it will if the subwoofer is plugged into a suitable live AC mains supply and the main logo switch [10] is disengaged.

Press the bottom of this rocker switch inwards to turn off the subwoofer.

VERY IMPORTANT As a general guide, the mixer (or other signal source) should be turned on first, SRM subwoofers next, and loudspeakers last.

As such, the loudspeakers should also be turned off first, followed by the subwoofers, then the mixer. This will reduce the possibility of any turn-on or turn-off thumps and other noises generated by any upstream equipment from coming out of the speakers.

3. XLR Inputs

Balanced XLR female connectors are provided for the left and right inputs. Connect the full-range line-level signal from the mixer (or other signal source) to these input jacks.

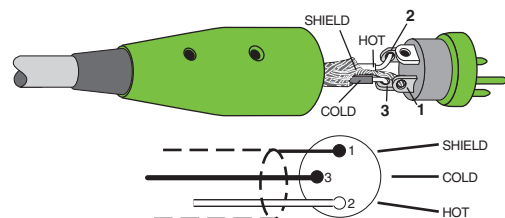
If you are connecting a single subwoofer output, or LFE (low-frequency effects) output to the subwoofer, you may use either the A or B input connector.

VERY IMPORTANT NEVER connect the output of an amplifier directly to the input of the subwoofer. This could damage the input circuitry of the active subwoofer.

They are wired as follows, according to standards specified by the AES (Audio Engineering Society):

Balanced XLR Input Connector

- Pin 1 – Shield (ground)
- Pin 2 – Positive (+ or hot)
- Pin 3 – Negative (– or cold)



Balanced XLR Input Connector

For more information on these connectors, see Appendix B on page 14.

SRM Subwoofer: Rear Panel Features continued...

4. Normal/Invert Switch (Polarity)

This switch reverses the polarity of the signal going into the subwoofer amplifier by 180°. It has no effect on the signal at the outputs.

There is no right or wrong setting for this switch. Listen to the overall blend of the subwoofer with the rest of the system and select the switch position that gives you the best sound for your audience. In fact, your system may vary when positioned differently and in alternate venues. Don't be afraid to experiment with the position of the polarity switch. See page 11 for more information.

5. Gain Knob & Sig / Lim LED

The gain knob adjusts the input sensitivity of the mic inputs. This allows signals from the outside world to be adjusted to run through each channel at optimal internal operating levels. There is -6 dB of gain with the knob fully down (off), ramping up to 6 dB of gain fully up (max).

The accompanying dual-colored LED will illuminate green when the input signal is present, indicating signal. It will remain lit so long as there is signal above -20 dBu present.

SRM subwoofers have a built-in limiter that helps to prevent the amplifier outputs from clipping or overdriving the transducers. The LED illuminates yellow when the limiter is activated. It's okay for it to blink yellow occasionally, but if it blinks frequently or lights continuously, turn down the gain knob until it only blinks occasionally.

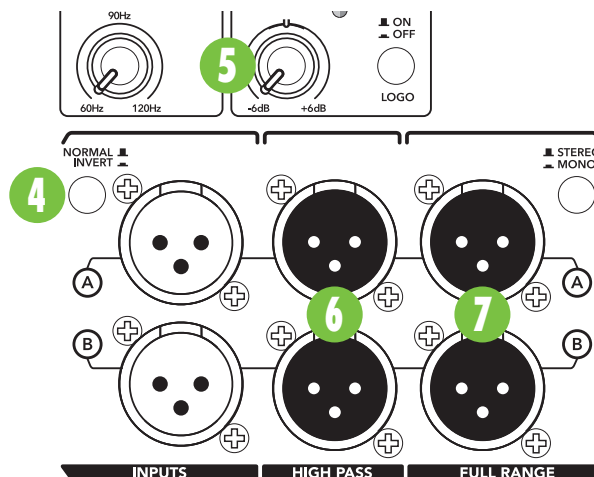


Excessive limiting may lead to overheating, which in turn trips the thermal protect circuitry and interrupts the performance. See 'Thermal Protection' on page 12 for more information.

6. High Pass Outputs

Typically, full-range loudspeakers are connected to the high pass outputs to "split" the work with the subwoofer. The subwoofer handles all of the low frequencies and the loudspeakers handle the rest. As a result, it is more efficient and a bit louder.

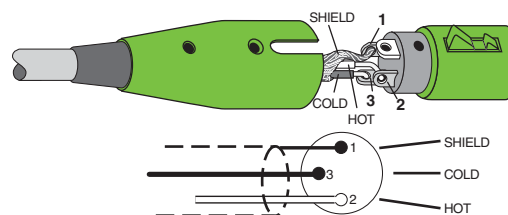
Balanced XLR male connectors are provided for the line-level A and B high pass outputs. The subwoofer's crossover splits the input signals into two frequency bands. The low frequency range below 20 Hz – 200 Hz goes to the internal amplifier that powers the subwoofer. The frequency range above 20 Hz – 200 Hz is sent to these line-level output jacks. The frequency range depends on where the high pass mode [9] is set.



They are wired as follows, according to standards specified by the AES (Audio Engineering Society):

Balanced XLR Output Connector

- Pin 1 – Shield (ground)
- Pin 2 – Positive (+ or hot)
- Pin 3 – Negative (- or cold)



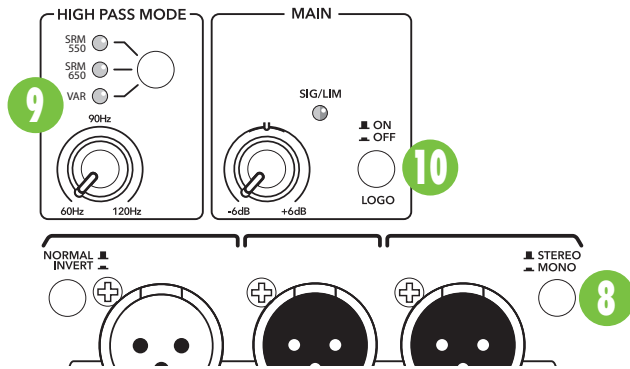
Balanced XLR Output Connector

7. Full Range Outputs

Connect the full range outputs to the inputs of another powered subwoofer, powered loudspeakers, or to an amplifier powering passive loudspeakers. Balanced XLR male connectors are provided for the line-level A and B full range outputs.

The signal at these outputs is a direct copy of the input signals. These outputs allow you to daisy-chain multiple subwoofers and/or send the full range signals to loudspeakers. It's a great way to add side fills, too!

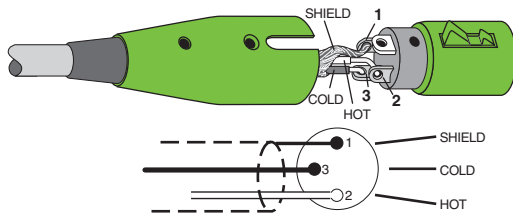
SRM Subwoofer: Rear Panel Features continued...



They are wired as follows, according to standards specified by the AES (Audio Engineering Society):

Balanced XLR Output Connector

- Pin 1 – Shield (ground)
- Pin 2 – Positive (+ or hot)
- Pin 3 – Negative (– or cold)



Balanced XLR Output Connector

See page 7 to learn more about daisy-chaining SRM loudspeakers.

For more information on these connectors, see Appendix B on page 14.

8. Stereo/Mono Switch (Full Range)

This switch allows you to choose whether the A and B inputs are sent out separately [switch out] or as a mono sum of both inputs [switch in].

For example, if a mixer's L/R outputs are connected to the A and B inputs of an SRM subwoofer and the full range outputs are connected to strategically placed SRM loudspeakers, engage the switch so the signal is mono-summed. Otherwise, you'll get just the left or right signal from the mixer's output sent from the A and B full range outputs to the SRM loudspeakers.

9. High Pass Mode

The high pass mode allows you to choose from a list of presets for SRM loudspeakers, as noted below. This optimizes the subwoofer and loudspeakers connected to the SRM high pass outputs. If not using SRM loudspeakers, a variable mode allows you to select the best high pass mode suited for your PA system from 60 Hz to 120 Hz.

Frequencies below the crossover frequency are sent to the subwoofer. Additionally, the SRM loudspeaker presets apply alignment delay to the subwoofer creating an optimally aligned 3-way system. Frequencies above the selected crossover frequency are sent to the high pass outputs [6]. The high pass mode should be set to the lowest frequency response rating of the main loudspeakers. Press the high pass mode button repeatedly until the desired high pass mode setting LED illuminates. If "variable" is selected, turn the high pass mode knob to the frequency you desire.

SRM550 – 115 Hz plus alignment delay

SRM650 – 115 Hz plus alignment delay

SRM750 – 115 Hz plus alignment delay

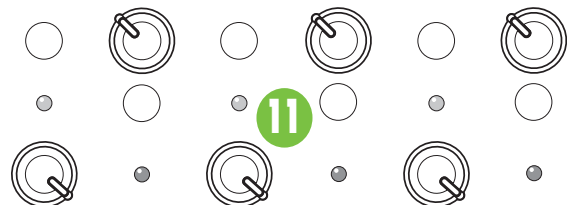
VAR – 60 Hz – 120 Hz

10. Main Logo Switch

The Running Man logo on the front of the subwoofer illuminates when this switch is disengaged and AC power is available at the mains input [1]. Engage the switch if you do not want the Running Man logo to illuminate.

11. Extra Knobs, Buttons and LEDs

What's cooler than extra bells and whistles on a new toy? Well, a lot of things, I suppose, but that didn't stop us! The rear panel of each SRM subwoofer is stacked with a variety of extra knobs, buttons and LEDs. We ran out of time, so we're not really sure what any of them does. Go ahead and experiment with each knob and button. Once you have an idea of what each feature is used for, be sure to drop us a line to let us know. We can revise the manual with this newfound knowledge, all thanks to you!



12. Rock 'n Roll

Congratulations, you have reached the end of the features section! At this point, you should have a pretty good understanding of how the SRM subwoofer functions. If this is true, the next step is to rock 'n roll! If this is not true, head back to page 8 and read it all over again. The following pages discuss SRM placement, an in-depth look at polarity and Smart Protect, technical information and more. Check it out!

Placement

SRM subwoofers are designed to sit on the floor or stage. They are not designed to be pole-mounted or suspended.

When pole-mounting loudspeakers, be sure that the subwoofers are stabilized and secured from falling over or being accidentally pushed over.



Please note that SRM750 loudspeakers should be stacked, not pole-mounted.

Failure to follow these precautions may result in damage to the equipment, personal injury, or death.

Speaking of stacking, SRM2850 subwoofers have footholes located on the top of each cabinet. While we realize that crowds will fall head over heels at their beauty, believe it or not, these footholes do indeed serve a purpose.

Should you decide to stack an additional SRM2850 – creating a monster PA – the feet located on the bottom of each subwoofer line up nicely with the footholes located on the top of each subwoofer. The same can be said of the four feet of an SRM750 and the four footholes located near the center of the SRM2850.

For either of these stacked scenarios, it is highly suggested that straps are utilized. To reiterate, failure to follow these precautions may result in damage to the equipment, personal injury, or death.



These cabinets have no rigging points and are not suitable for rigging. NEVER attempt to suspend an SRM subwoofer by its handles.

The Ins and Outs of Polarity

SRM subwoofers include a switch that allows you to quickly invert the polarity of the subwoofer's output relative to the input signal it is receiving from the mixer or other sound source. But what exactly does that mean? A subwoofer works by literally pumping air as the woofer cone moves in and out with respect to the cabinet in which it is housed. It does so according to the low-frequency portion of the signal it receives from the sound source.

The woofer cone is simply following the waveform as seen in the sine wave in Figure 1. As the sine wave rises, the woofer cone pushes out. Likewise, as the sine wave falls, the woofer cone pulls into the cabinet. A musical signal is much more complex, of course, but the same principle applies. Movement of the woofer cone causes air pressure changes that we perceive as sound.

When the normal/invert [polarity] switch [4] is engaged, the original waveform is simply reversed 180° [see Figure 2]. Again, the subwoofer cone follows the waveform. However, this time the woofer cone starts by pulling into the cabinet followed by the woofer cone pushing out. If you have ever experimented with a subwoofer polarity switch, you may not have noticed any changes to the sound regardless of its position, especially if you are listening to just the subwoofer. This is normal, as our ears perceive them both at the same time.

The normal/invert [polarity] switch comes into play when the subwoofer is paired with a loudspeaker. Ideally, the woofer cones of the subwoofer and full range loudspeaker would work together by pushing and pulling in unison. SRM subwoofers are designed to be used in a broad range of applications. The flexibility provided by the polarity switch is necessary to ensure that you are receiving the best possible sound from your system, regardless of your setup.

Polarity Waveforms

Figure 1: Normal [0°]

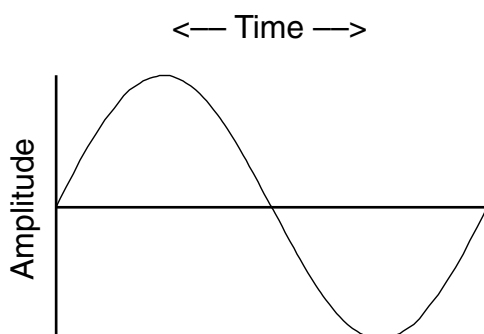
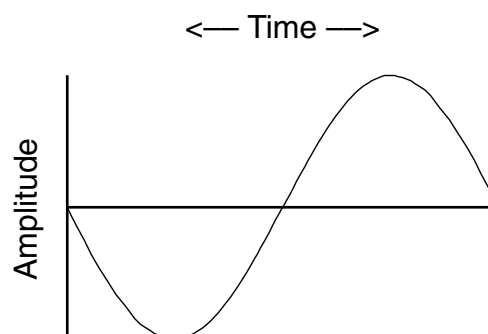


Figure 2: Invert [180°]



Smart Protect

There are advanced DSP protection mechanisms to safeguard the subwoofers and amplifiers from inadvertent damage.



The protection circuits are designed to protect the subwoofers under reasonable and sensible conditions. Should you choose to ignore the warning signs [e.g. excessive distortion], you can still damage the speaker in the subwoofer by overdriving it past the point of amplifier clipping. Such damage is beyond the scope of the warranty.

Limiting

The driver has its own compression circuit which helps protect it from damaging transient peaks. The compressor is designed to be transparent and is not noticeable under normal operating conditions.

Overexcursion Protection

The SRM1850 has a 24 dB/octave high-pass filter at 30 Hz, while the SRM2850 has a 24 dB/octave high-pass filter at 32 Hz just prior to the low-frequency amplifier. This prevents very low frequencies from being amplified. Excessive low-frequency energy can damage the woofer by causing it to “bottom out,” also known as overexcursion, which is equivalent to a mechanical form of clipping.

Thermal Protection

All amplifiers produce heat. SRM subwoofers are designed to be efficient both electrically and thermally.

In the unlikely event of the amplifier overheating, a built-in thermal switch will activate, muting the signal.

When the amplifier has cooled down to a safe operating temperature, the thermal switch resets itself, and the subwoofer resumes normal operation.

If the thermal switch activates, try turning down the level control a notch or two on the mixing console (or the back of the subwoofer) to avoid overheating the amplifier. Be aware that direct sunlight and/or hot stage lights may be the culprit of an amplifier overheating.

AC Power

Be sure the subwoofer is plugged into an outlet that is able to supply the correct voltage specified for your model. It will continue to operate at lower voltages, but will not reach full power.

Be sure the electrical service can supply enough amperage for all the components connected to it.

We recommend that a stiff (robust) supply of AC power be used because the amplifiers place high current demands on the AC line. The more power that is available on the line, the louder the speakers will play and the more peak output power will be available for a cleaner, punchier bass. A suspected problem of “poor bass performance” is often caused by a weak AC supply to the amplifiers.



Never remove the ground pin on the power cord or any other component of the SRM subwoofer. This is very dangerous.

Care and Maintenance

SRM subwoofers will provide many years of reliable service if you follow these guidelines:

- Avoid exposing the subwoofers to moisture. If they are set up outdoors, be sure they are under cover if rain is expected.
- Avoid exposure to extreme cold (below freezing temperatures). If you must operate the subwoofers in a cold environment, warm up the voice coils slowly by sending a low-level signal through them for about 15 minutes prior to high-power operation.
- Use a dry cloth to clean the cabinets. Only do this when the power is turned off. Avoid getting moisture into any of the openings of the cabinet, particularly where the drivers are located.

Appendix A: Service Information

If you think your subwoofer has a problem, please check out the following troubleshooting tips and do your best to confirm the problem. Visit the Support section of our website (www.720trees.com) where you will find lots of useful information such as FAQs and other documentation. You may find the answer to the problem without having to part with your subwoofer.

Troubleshooting

No power

- Our favorite question: Is it plugged in? Make sure the AC outlet is live [check with a tester or lamp].
- Our next favorite question: Is the power switch on? If not, try turning it on.
- Make sure the line cord is securely seated in the line cord socket and plugged all the way into the AC outlet.
- Is the Running Man logo on the front panel illuminated? If not, make sure the AC outlet is live. If so, refer to “No sound” below.
- The internal AC line fuse may be blown. This is not a user serviceable part. If you suspect the AC line fuse is blown, please see the "Repair" section next.

No sound

- Is the input gain knob for the input source turned all the way down? Verify that all the volume controls in the system are properly adjusted. Look at the level meter to ensure that the mixer is receiving a signal.
- Is the signal source working? Make sure the connecting cables are in good repair and securely connected at both ends. Make sure the output level control on the mixing console is turned up sufficiently to drive the inputs of the speaker.
- Make sure the mixer does not have a mute on or a processor loop engaged. If you find something like this, make sure the level is turned down before disengaging the offending switch.
- Has it shut down? Make sure there is at least six inches of free space behind each subwoofer.

Poor bass performance

- Check the polarity of the connections between the mixer and the subwoofers. You may have your positive and negative connections reversed at one end of one cable, causing one subwoofer to be out-of-phase with the other.
- Poor bass performance may be the result of bad AC power. See the section titled ‘AC Power’ on the previous page for further details.

Poor sound

- Is it loud and distorted? Make sure that you're not overdriving a stage in the signal chain. Verify that all level controls are set properly.
- Is the input connector plugged completely into the jack? Be sure all connections are secure.

Noise

- Make sure all connections to the active subwoofers are good and sound.
- Make sure none of the signal cables are routed near AC cables, power transformers, or other EMI-inducing devices.
- Is there a light dimmer or other SCR-based device on the same AC circuit as the subwoofer? Use an AC line filter or plug the subwoofer into a different AC circuit.

Hum

- Try disconnecting the cable connected to the input jack. If the noise disappears, it could be a “ground loop,” rather than a problem with the subwoofer. Try some of the following troubleshooting ideas:
- Use balanced connections throughout your system for the best noise rejection.
- Whenever possible, plug all the audio equipment's line cords into outlets which share a common ground. The distance between the outlets and the common ground should be as short as possible.

Repair

For warranty service, refer to the warranty information on page 19.

Non-warranty service is available at a factory-authorized service center. To locate the nearest service center, visit www.720trees.com, click “Contact Tech Support” and select “Locate a Service Center or Distributor” [3]. Service for SRM subwoofers living outside the United States can be obtained through local dealers or distributors.

If you do not have access to our website, you may call the Tech Support department at 1-800-898-3211, Monday-Friday, during normal business hours, Pacific Time, to explain the problem. Tech Support will tell you where the nearest factory-authorized service center is located in your area.

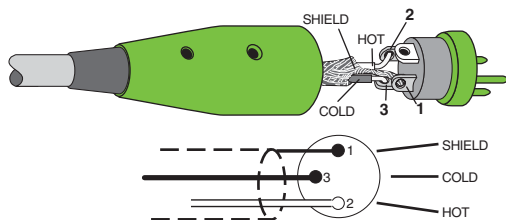
Appendix B: Connections

Balanced XLR Input Connector

Each SRM subwoofer has two female XLR inputs. Be sure the cables are wired per AES (Audio Engineering Society) standards:

Balanced XLR Input Connector

- Pin 1 – Shield (Ground)
- Pin 2 – Positive (+ or hot)
- Pin 3 – Negative (– or cold)



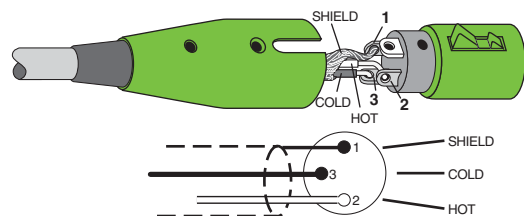
Balanced XLR Input Connector

Balanced XLR Output Connector

There are also four male balanced XLR output connectors on each SRM subwoofer [two high pass and two full range]. Be sure the cables are wired per AES (Audio Engineering Society) standards:

Balanced XLR Output Connector

- Pin 1 – Shield (Ground)
- Pin 2 – Positive (+ or hot)
- Pin 3 – Negative (– or cold)



Balanced XLR Output Connector

SRM subwoofers may be daisy-chained via the male XLR connector labeled “FULL RANGE”. Simply plug the signal source (i.e., mixer output) into the input jack(s), and patch that subwoofer’s full range jack to the next subwoofer’s input jack, and so on, daisy-chaining multiple SRM subwoofers. See page 7 for a visual representation of daisy-chaining.

Appendix C: Technical Information

SRM Subwoofer Specifications

Acoustic Performance:

Frequency Response (-3 dB)	40 Hz – 120 Hz [SRM1850] 34 Hz – 100 Hz [SRM2850]
Frequency Response (-10 dB)	35 Hz – 150 Hz [SRM1850] 26 Hz – 145 Hz [SRM2850]
Max peak SPL	132 dB [SRM1850] 135 dB [SRM2850]
Crossover Point	115 Hz plus alignment delay [SRM550] 115 Hz plus alignment delay [SRM650] 115 Hz plus alignment delay [SRM750] 60 Hz – 120 Hz [Variable]
Slope	3rd order HP, 4th order LP

Transducer

Woofer Diameter	18 in / 457 mm
Voice Coil Diameter	3.0 in / 76 mm
Subwoofer Diaphragm Material	Paper
Magnet Material	Ferrite

Power Amplifier

Rated Power	800 watts rms 1600 watts peak
Rated THD	< 1%
Cooling	Convection
Design	Class D

Input/Output

Input Type	Female XLR balanced differential (stereo left/right)
Input Impedance	20 k Ω balanced, 10 k Ω unbalanced
Full Range Outputs	Male XLR balanced (parallel with inputs – mono)
High Pass Outputs	Male XLR balanced

Line Input Power

US detachable line cord	100 – 120 VAC, 50 – 60 Hz, 200W
EU detachable line cord	200 – 240 VAC, 50 – 60 Hz, 200W
AC Connector	3-pin IEC 250 VAC
Power Supply Type	Switchmode

Safety Features

Input Protection	Peak and RMS limiting, power supply and amplifier thermal protection
Display LEDs	Defeatable front power ON (Running Man logo), Front load power limiter, High Pass Mode, input signal

Construction Features

Cabinet	18 mm Poplar plywood
Finish	High durability black paint
Handles	One on each side [SRM1850] Two on each side [SRM2850]
Grille	Powder-coated 16 gauge steel

Physical Properties

SRM1850:	
Height	22.5 in / 572 mm
Width	22.2 in / 565 mm
Depth	23.9 in / 608 mm
Weight	64 lb / 29 kg
SRM2850:	
Height	24.5 in / 623 mm
Width	44.0 in / 1117 mm
Depth (without casters)	24.0 in / 610 mm
Depth (with casters)	29.5 in / 750 mm
Weight	144 lb / 65.2 kg

Mounting Methods

SRM subwoofers are designed to sit on the floor or stage. They are NOT designed to be pole-mounted or suspended. The cabinet has no rigging points and is not suitable for rigging. Never attempt to suspend an SRM subwoofer by its handles.

Options

SRM1850 Cover	P/N 2036809-24
SRM2850 Cover	P/N 2036809-27
SPM200 Loudspeaker Pole Mount	P/N 2035170-01

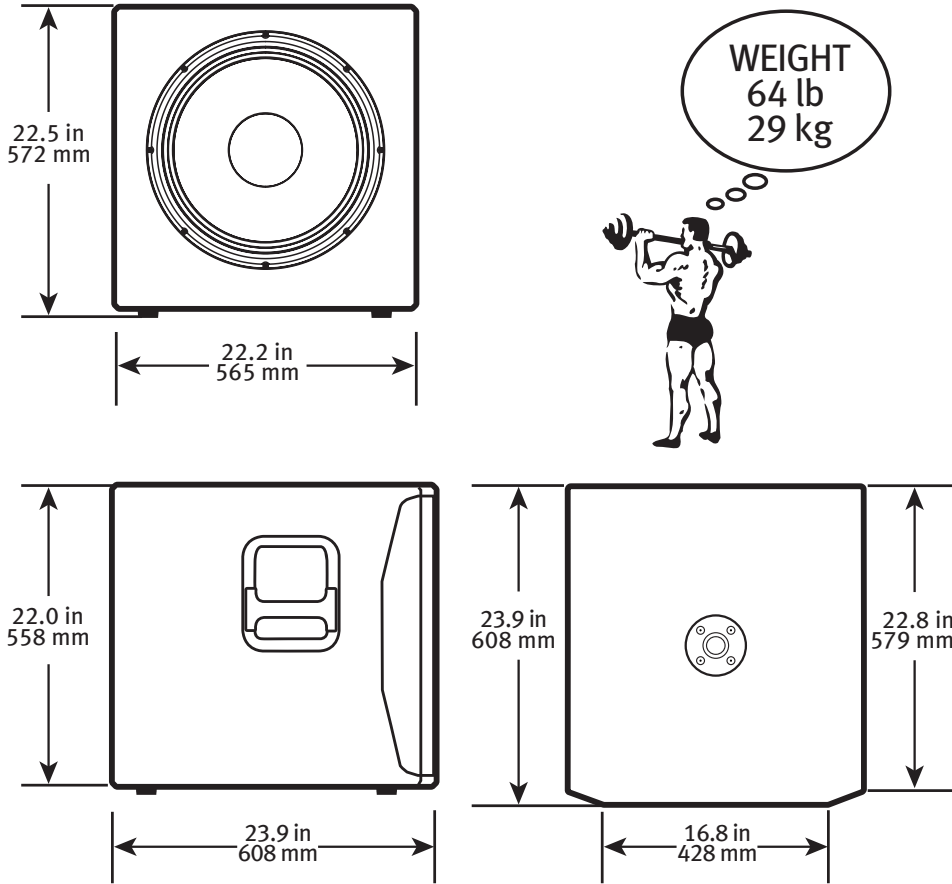
Disclaimer

Since we are always striving to make our products better by incorporating new and improved materials, components, and manufacturing methods, we reserve the right to change these specifications at any time without notice.

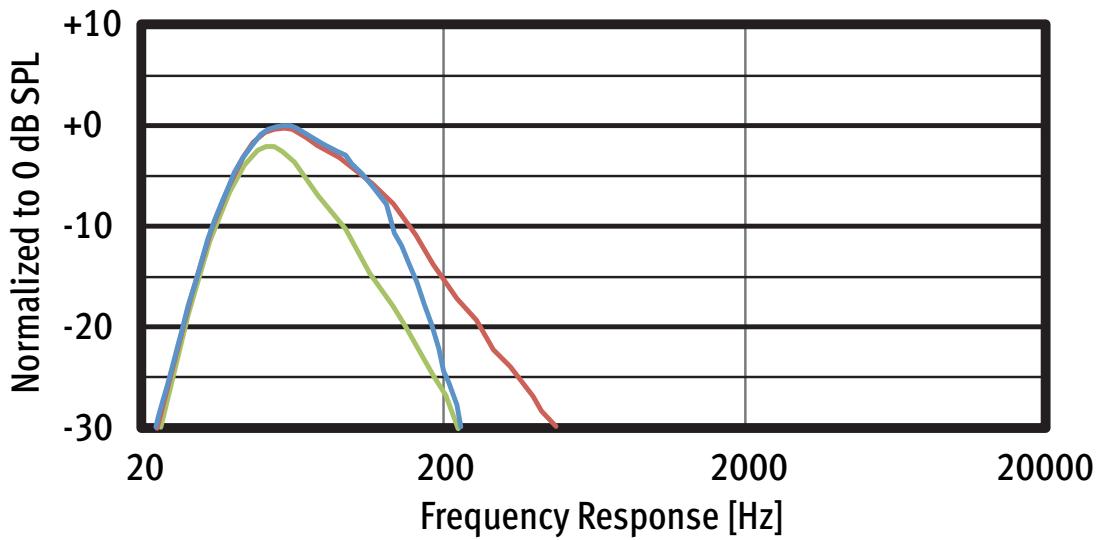
The "Running Man" figure is a registered trademark of LOUD Technologies Inc.

All other brand names mentioned are trademarks or registered trademarks of their respective holders, and are hereby acknowledged.

SRM1850 Subwoofer Dimensions



SRM1850 Subwoofer Frequency Response

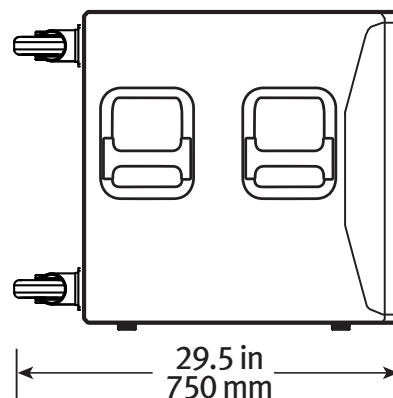
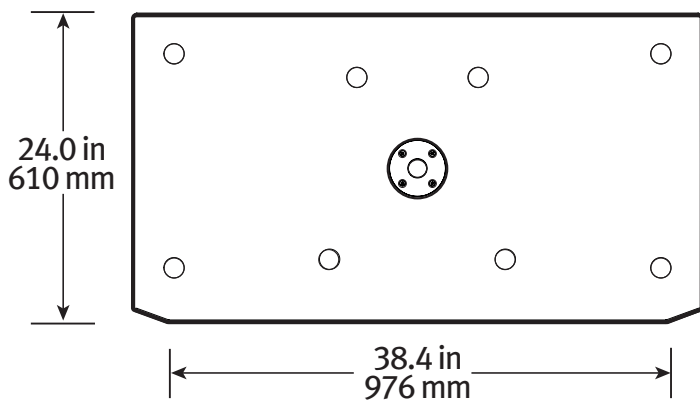
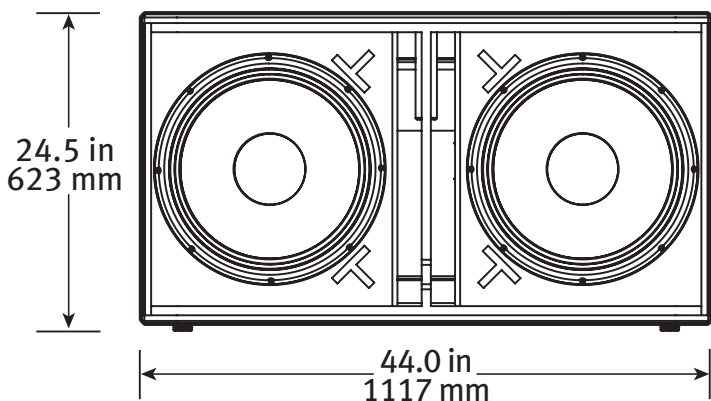


SRM550 / SRM650

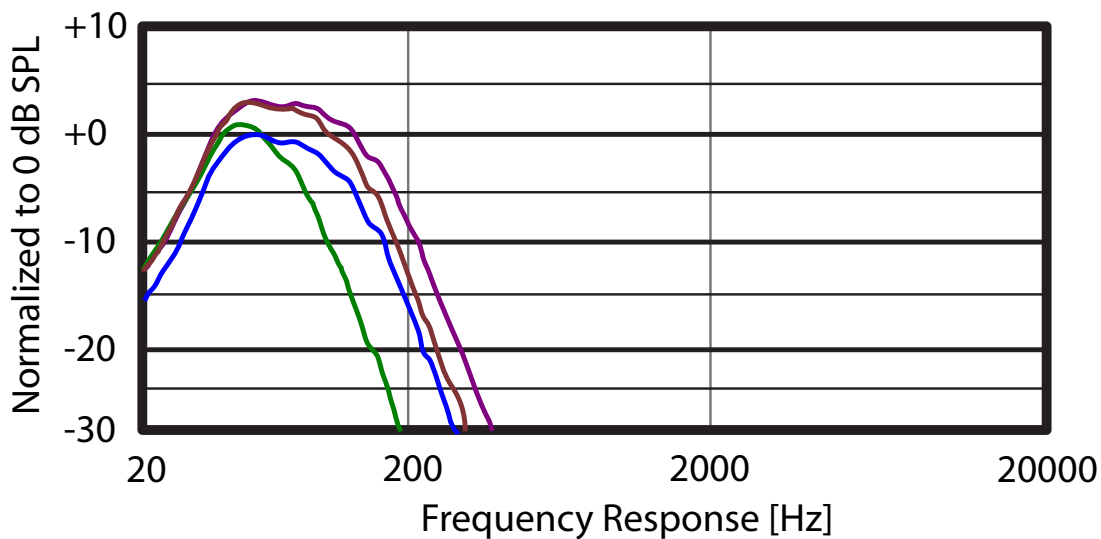
VARIABLE: HIGH

VARIABLE: LOW

SRM2850 Subwoofer Dimensions



SRM2850 Subwoofer Frequency Response



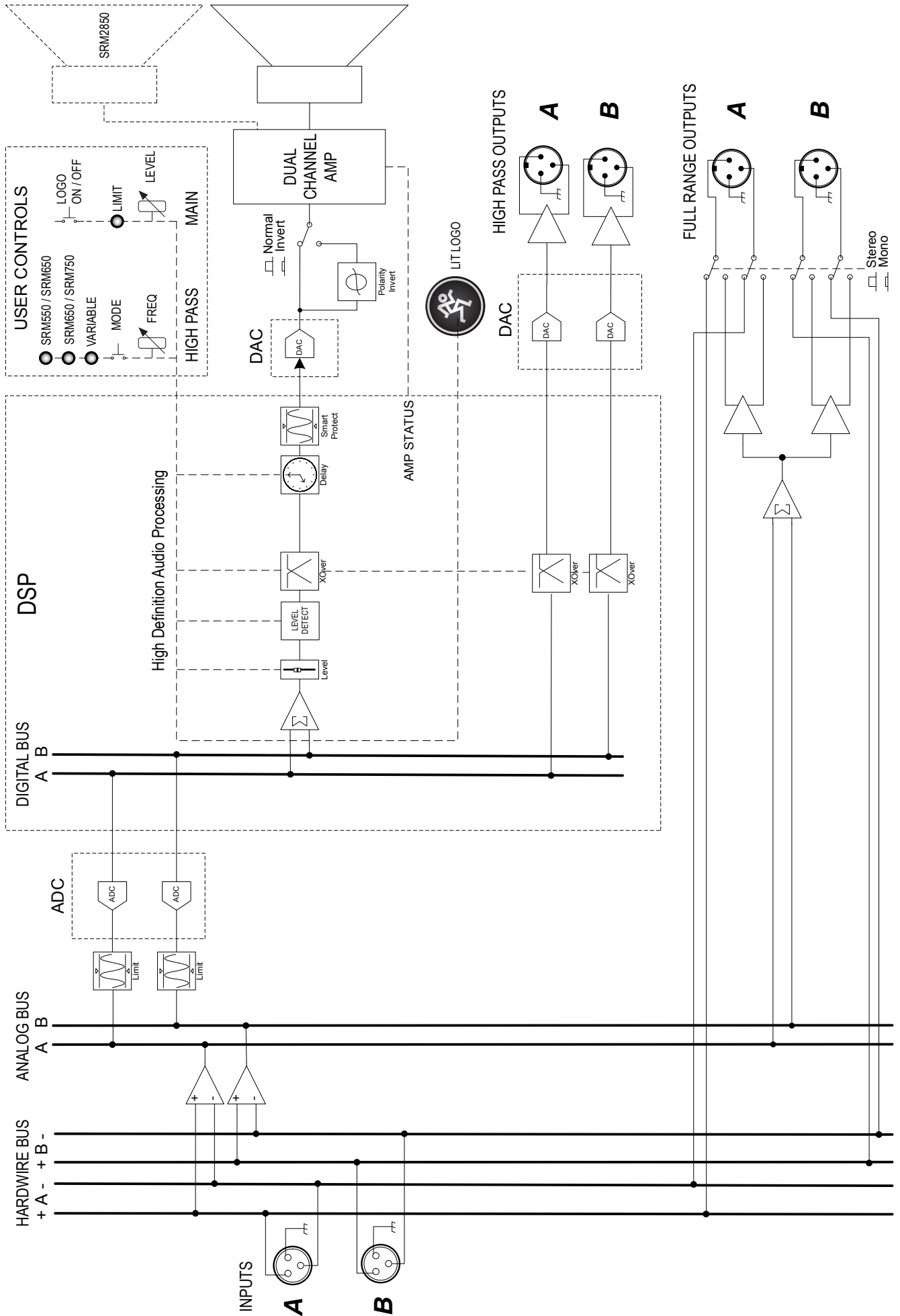
SRM650

SRM750

VARIABLE: 60 Hz

VARIABLE: 120 Hz

SRM Subwoofer Block Diagram



Limited Warranty

Please keep your sales receipt in a safe place.

This Limited Product Warranty ("Product Warranty") is provided by LOUD Technologies Inc. ("LOUD") and is applicable to products purchased in the United States or Canada through a LOUD-authorized reseller or dealer. The Product Warranty will not extend to anyone other than the original purchaser of the product (hereinafter, "Customer," "you" or "your").

For products purchased outside the U.S. or Canada, please visit www.720trees.com to find contact information for your local distributor, and information on any warranty coverage provided by the distributor in your local market.

LOUD warrants to Customer that the product will be free from defects in materials and workmanship under normal use during the Warranty Period. If the product fails to conform to the warranty then LOUD or its authorized service representative will at its option, either repair or replace any such nonconforming product, provided that Customer gives notice of the noncompliance within the Warranty Period to the Company at: www.720trees.com or by calling LOUD technical support at 1.800.898.3211 (toll-free in the U.S. and Canada) during normal business hours Pacific Time, excluding weekends or LOUD holidays. Please retain the original dated sales receipt as evidence of the date of purchase. You will need it to obtain any warranty service.

For full terms and conditions, as well as the specific duration of the Warranty for this product, please visit www.720trees.com.

The Product Warranty, together with your invoice or receipt, and the terms and conditions located at www.720trees.com constitutes the entire agreement, and supersedes any and all prior agreements between LOUD and Customer related to the subject matter hereof. No amendment, modification or waiver of any of the provisions of this Product Warranty will be valid unless set forth in a written instrument signed by the party to be bound thereby.

Need help with the subwoofer?

- Visit www.720trees.com and click Support to find: FAQs, manuals, addendums, and other documents.
- Email us at: techmail@loudtechinc.com.
- Telephone 1-800-898-3211 to speak with one of our splendid technical support chaps (Monday through Friday, normal business hours, Pacific Time).



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