

MRS10

10" Powered Studio Subwoofer

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. Minimum distance (5 cm) around the apparatus for sufficient ventilation. The ventilation should not be impeded by covering the ventilation openings with items, such as newspapers, tablecloths, curtains, etc. 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. No naked flame sources, such as lighted candles, should be placed on the apparatus.
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. Warning: 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.
19. The MAINS plug or an appliance coupler is used as the disconnect device, so the disconnect device shall remain readily operable.



20. The use of apparatus is in moderate climates.
21. 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.

22. 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.

ATTENTION — *Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de class A/de class B (selon le cas) prescrites dans le règlement sur le brouillage radioélectrique édicté par les ministere des communications du Canada.*

23. 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 | JR screaming at Troy about deadlines |
| 0.5 | 110 | |
| 0.25 or less | 115 | Loudest parts at 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.

Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan.

Apparatet må tilkoples jordet stikkontakt.

Apparaten skall anslutas till jordat uttag.

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.



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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MRS10 Features

- Powerful, deep extended low end for your studio, perfect for electronic music, hip-hop and more.
- Designed for responsive and accurate low frequency reproduction.
 - o 120 watts of Class A/B amplification.
 - o 10" glass aramid composite woofer.
- Shelf-ported for satisfying, deep low end.
- Stereo XLR and TRS connection offer input flexibility.
- Stereo XLR and TRS outputs for connection to mains .
- Adjustable 40 Hz to 180 Hz crossover point.
- Polarity switch (0° / 180°).
- Included footswitch bypasses the subwoofer and returns the connected monitors to full range.
- Professional MDF cabinet design built to last and look great in any studio.
- Vibration-absorbing rubber feet minimize undesirable resonances.
- Allows your mains to focus on highs/mids for optimum studio performance.

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

Designed to add the perfect amount of dynamic, accurate low-end, the MRS10 10" subwoofer will enhance the listening experience in your studio without artificially adding boomy bass to your mix.

Optimizing features include an adjustable crossover to dial in the right amount of low end for your studio plus a polarity switch to make sure your mix is always in phase.

With foot-switchable bypass functionality, MRS10 can be muted while returning your monitors to full range at the push of a button.

When your mix has some serious low end that needs to be heard, look no further than the MRS10.

A Brief History Of Time...

We have been designing and re-designing studio monitors and subwoofers for nearly 20 years. Our talented engineering team has now designed monitors and subwoofers that love music as much as you do. Targeted at music lovers and post-production studios alike, the new MRS10 Powered Studio Subwoofer has been re-voiced and re-kitted, offering unparalleled clarity and unbelievable depth for today's demanding home project or post-production studio requirements.

Music Is All That Matters

When designing the MRS10 Powered Studio Subwoofer, we didn't start on paper. Instead, we poured through countless hours of music from every possible genre and source. From perfectly optimized electronics to amps and a woofer custom-matched for performance, the MRS10 Powered Studio Subwoofer is designed for your music.

Designed To Enhance Your Sonic Experience

The ability to reveal the character of your music is the number one reason to get professional studio monitors and subwoofers. The MRS10 Powered Studio Subwoofer is packed with design features to enhance this experience. From the added punch and bass extension provided by the custom-tuned ports to the rugged cabinet packed with sound-tightening acoustic absorption material, you can be confident that this subwoofer is revealing the natural, low-end character that your music deserves.

As Versatile As Your Application

All studio spaces are different. As such, having the right connection types and customizable control over your acoustics is necessary.

Adding an MRS10 studio subwoofer to your system only adds to the experience. It not only delivers the chest-pounding punch critical for genres like hip-hop and dance, but also lets your mains focus on what they do best for optimum studio performance.

What's more, two types of professional input connectors are provided [XLR and 1/4"] to interface with virtually any application you may have.

Also, the variable crossover allows you to dial in the perfect amount of low end for your studio.

Your studio deserves a professional monitoring system with the flexibility and performance to up the level of your music production.

A Variety Of Applications...

An MRS10 Powered Studio Subwoofer may be used in a variety of applications. Some examples include:

- Home and project studios – Music production for solo artists, small bands and DJs. Post-production edit/mix suites, recording, editing, mixdown, mastering of everything from spoken word performances to full music productions.
- A/V broadcast studios – Live broadcast/streaming of audio-only or AV content such as radio and TV. Production/Post-production focused on podcasts or other streaming audio. Voiceovers, too.
- Video post-production – Edit suites for small productions such as commercials, budget films or multimedia for internet broadcast, etc.
- Home theater and other multimedia – Music and movie playback, video game sound system, social function/party system, etc.

Quick Start

We realize that you can't wait to hook up your MRS10 Studio Subwoofer and try it out. Nevertheless, please take the time to read this page NOW, and the rest can wait until you're good and ready.

1. Turn the input level control on the back of the cabinet down (fully counterclockwise) before turning on the subwoofer for the first time.
2. Set the power switch on the back panel off. This will prevent you from accidentally connecting a hot signal source to the subwoofer and getting a rude surprise.
3. Connect the L/R line-level signal from your mixer, interface, or other signal source to the input jacks on the MRS10 Studio Subwoofer (XLR or 1/4").
4. Connect the line-level signal from the output jacks on the MRS10 Studio Subwoofer to the studio monitors' input jacks (XLR or 1/4").
5. Connect the supplied AC power cord to the IEC socket on the back of the subwoofer. Plug the other end into an AC outlet properly configured with the voltage corresponding to the markings next to the IEC socket.
6. Start your signal source (mp3 player, CD player, DAW, 8-track player, turntable, other), but leave the master volume control on the mixer or preamp down.
7. Turn on the power switch on the MRS10.
8. Slowly turn up the input level control on the back of the subwoofer to center position (12 o'clock, aka unity gain).
9. Adjust the master volume on the mixer or preamp to a comfortably loud listening level.
10. Balance the subwoofer to your desired low-frequency output level and adjust the crossover to your desired setting.

Enjoy the authoritative, commanding lows of the MRS10. Then read the rest of this manual.

An Extremely Important Note on MRS10 Bass Response and Your Control Room



MRS10s achieve the best bass response in a room that's optimized for bass reproduction. A lot of factors can conspire to thwart the MRS10s' extended low frequency – including room shape, room volume and acoustical treatment.

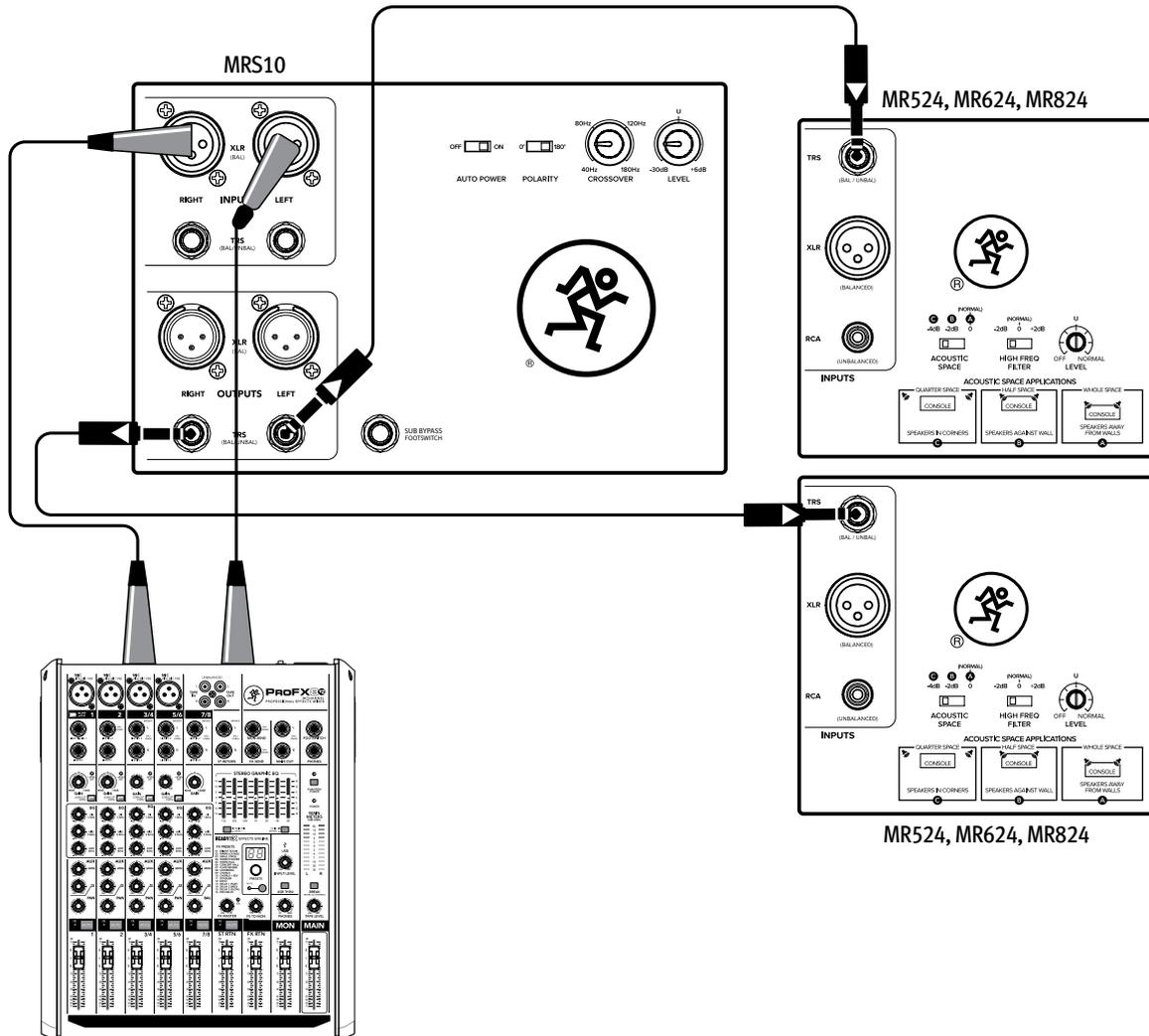
This is not a cop-out or an apology. It's plain old physics in action. Luckily we've armed you with some compensating controls that you can use to optimize the frequency response of the speakers in your particular room. Consider the following:

When you put your MRS10s in a corner or up against walls, their bass characteristics change. The apparent loudness of the low frequencies increases when the subwoofers are placed close to a wall, and even more so when they are placed in a corner.

Additional Tidbits of Wisdom

- Never listen to loud music for prolonged periods. Please see the Safety Instructions on page 2 for information on hearing protection.
- When you shut down your equipment, turn off the MRS10 studio subwoofers first to prevent thumps and other noises generated by any upstream equipment from coming out the speakers. When powering up, turn on the subwoofers last.
- Save the shipping box! You may need it someday.
- Save your sales receipt in a safe place. It's your warranty!

Hookup Diagram



Connecting an MRS10 to the signal chain is quite easy, so let's take a quick look at a fairly typical setup. In this example, whatever sources you desire are plugged into the mixer's inputs. [Note: you could also plug a source – such as a smartphone or other mp3 player – directly into the subwoofer's input(s)].

Here, the main L/R outputs from a mixer are connected to the L/R inputs of the MRS10 using balanced/mic XLR connectors. And from there, the L/R outputs from the MRS10 are connected to the inputs of a pair of MR studio monitors using balanced 1/4" TRS connectors.

Yeah, that's all there is to it! Now that connections have been made, it's time for playback...let's hear how those tunes turned out!

Typical MR Series Setup

Rear Panel Description

This is where the signal is connected to the subwoofer and adjustments are made to the frequency response of the speakers to match the subwoofer's location and the room's environment. First things first, though...power!

1. Power Connection and Fuse

Connect the power cord to this IEC socket securely, and plug the other end into a live AC outlet. Make sure the AC outlet has the correct voltage indicated below the IEC socket.

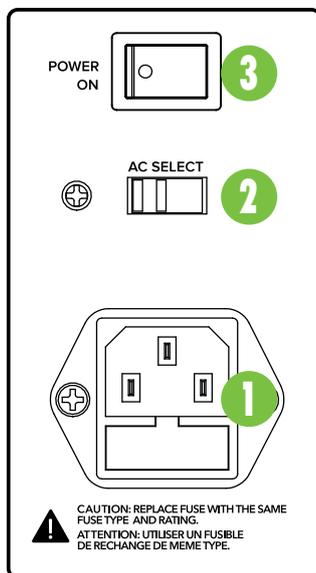


Disconnecting the plug's ground pin is dangerous. Don't do it!

The fuse is located behind the fuse cover, at the bottom of the IEC socket. See the "Troubleshooting" section on page 11 for information about replacing the fuse.

2. Voltage Selector Switch

Make sure the switch is in the correct position for your local AC mains voltage before connecting the AC power cord. Use a small flat screwdriver to slide the switch, if required.



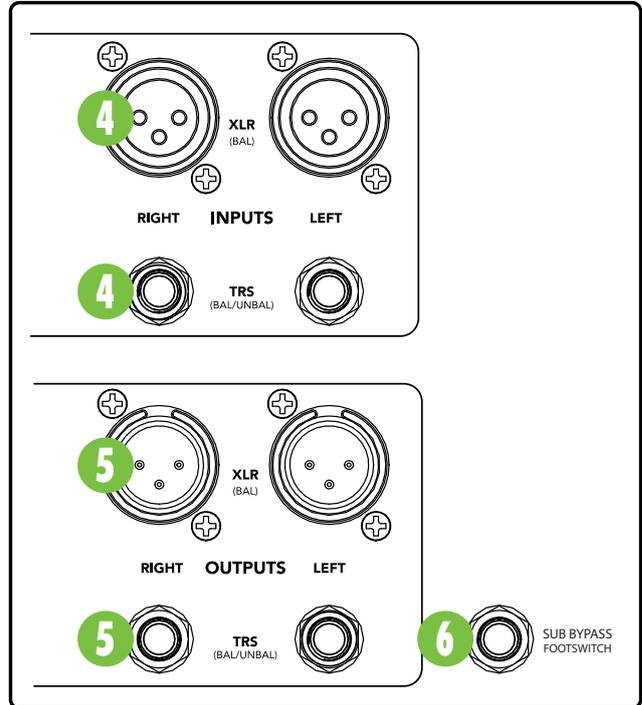
3. Power Switch

Press this switch left to turn the MRS10 studio subwoofer on. Make sure the level control is down before you turn it on. When the power switch is turned on and the MRS10 studio subwoofer is plugged into an AC outlet, the LED on the front panel illuminates green to let you know that it's ready to go.

Press the right side of this switch down to put the subwoofer into standby mode. It will not function, but the circuits are still live. To remove AC power, either turn off the AC supply, or unplug the power cord from the speaker and the AC supply.

4. Signal Inputs

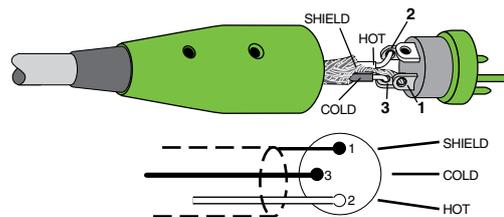
Connect the line-level signal from the mixer (or other signal source) to these input jacks. Balanced XLR and 1/4" female connectors are provided for the left and right inputs.



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

Balanced XLR

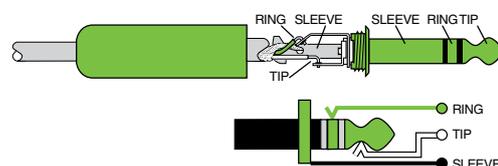
| | |
|-----------------|-------|
| Hot (+) | Pin 2 |
| Cold (-) | Pin 3 |
| Shield (Ground) | Pin 1 |



Balanced XLR Connectors

Balanced 1/4" TRS

| | |
|-----------------|--------|
| Hot (+) | Tip |
| Cold (-) | Ring |
| Shield (Ground) | Sleeve |



Balanced 1/4" Connectors

5. Signal Outputs

Connect these output jacks to the input jacks of studio monitors. Balanced XLR and 1/4" female connectors are provided for the left and right outputs.

The frequency range depends on where the crossover level is set.

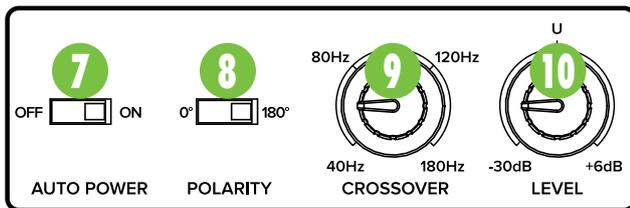
These output jacks are wired the same as the input jacks as seen on the previous page.

6. Sub Bypass Footswitch Jack

This unbalanced 1/4" TRS connector is where to connect the included footswitch. This allows you to easily enable or disable the subwoofer at will.

When the footswitch is disengaged [default], the subwoofer is on with the studio monitors during playback. When engaged, however, the subwoofer "turns off", so playback only occurs through the studio monitors.

The front panel LED will pulse when the footswitch is engaged, indicating that the subwoofer is off. That said, we're quite confident that you will know if the subwoofer is on or off!



7. Auto Power Switch

This switch sets the amplifiers to automatic [on/off] mode or leaves them on full-time. Use this switch to set the MRS10 to your preferred mode of operation.

- When this switch is in the ON position, the amplifiers turn on and off depending on the presence or absence of an input signal. An input signal of at least -55 dBu activates the auto-on function. A silent period greater than 13 minutes activates the auto-off function.
- In the OFF position, though, the power amplifiers (and thus the monitors) remain powered ON at all times, even if no signal is present.

NOTE: If your MRS10 is powered on, but the front panel LED is not illuminated, you could (1) position this switch to the left [OFF] and the LED will illuminate or (2) position this switch to the right [ON], add signal and then the LED will illuminate. One other thing to check is the position of the Sub Bypass footswitch. If engaged, the LED will slowly pulse – i.e. "breathe" – green.

8. Polarity Switch

This switch – when left – sends a normal (0°) polarity of the signal into the subwoofer amplifier. It has no effect on the signal at the outputs.

This switch – when right – 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 10 for more information.

9. Crossover Level

The MRS10 crossover allows you to choose a crossover frequency for studio monitors ranging from 40 Hz to 180 Hz.

Refer to the frequency ranges listed in the monitors owner's manual as a starting point for setting the crossover level, then adjust from there to what sounds best to your ears.

10. Input Level

MRS10 studio subwoofers expect a line-level signal at its input. Use this control to adjust the sensitivity of the input section (from -30 dB to $+6$ dB) according to the signal strength at its input.

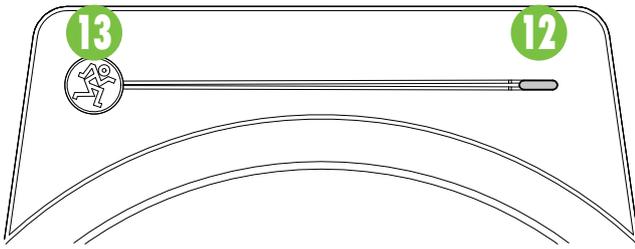
- Balance the subwoofer to your desired low-frequency output level and adjust the crossover to your desired setting.

11. Custom-Tuned Rear Shelf Port

Located above all of the power components, input / output jacks, switches and knobs is an oval-ish-shaped port. This custom-tuned rear shelf port uses the radiation from the rear of the woofer cone to extend the low-frequency response of the speaker. The size of the port is carefully designed with respect to the volume of the cabinet and the characteristics of the woofer to produce low-frequency extension.

Front Panel Description

This is where the sound comes from...the front! Unlike the rear panel, the front panel only has one feature (other than the aforementioned woofer)...an LED.



12. Front Panel LED

This LED will illuminate solid green to indicate that the MRS10 subwoofer is powered up, IF (1) the auto power switch is to the left [OFF] or (2) there is an input signal of at least -55 dBu present when the auto power switch is to the right [ON]. This same LED will slowly pulse – i.e. “breathe” – green when the Sub Bypass footswitch is engaged. This indicates that the subwoofer is off and that only the studio monitors are currently playing back the signal.

13. Running Man logo

There was an extra space on this page, so why not give a little shout out to this fella? This is Mackie’s “Running Man” logo. It may be seen at least once on every Mackie product, all over the website, documentation and more.

Protection Circuits

There are several protection mechanisms designed into the MRS10 studio subwoofers to safeguard the speakers and amplifiers from inadvertent damage.



CAUTION: The protection circuits are designed to prevent damage to the speakers under reasonable and sensible conditions. Should you choose to ignore the warning signs (i.e., excessive distortion), you can still damage the speaker in the MRS10 studio subwoofer by overdriving it. Such damage is beyond the scope of the warranty.

Overexcursion Protection

A 12 dB/octave high-pass filter just prior to the low-frequency amplifier 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. The MRS10 studio subwoofer is designed to be efficient both electrically and thermally.

- If for some reason the heatsink gets too hot, a thermal switch activates and turns off the amplifier.
- When the heatsink cools down to a safe temperature, the thermal switch resets and normal operation resumes.
- If the heatsink temperature again gets too hot, the shutdown process repeats. Should this happen, make sure that airflow to the rear of the cabinet is not restricted.

Integrated Magnetic Shielding

MRS10 studio subwoofers contain drivers with large magnetic structures. The drivers’ magnets are not shielded. Unshielded speakers can cause distortion in both the shape and color of the picture if placed too close to a CRT (cathode ray tube). If you have a particularly sensitive computer monitor or TV screen, it may be necessary to move the speakers a few inches away.

Input Signal Wiring

We recommend using high-quality, shielded cables to connect the signal source to the signal input jacks on MRS10 studio subwoofers.

Two types of input connectors are provided to interface with virtually any application you may have:

- Balanced microphone cables work well with the XLR inputs.
- Balanced TRS cables work well with the 1/4" inputs.

NOTE: Route the cable away from AC power cords and outlets. These are common sources for hum in an audio signal. Wall warts and line lumps are especially insidious hum inducers!

NOTE: In certain home theater applications, it may be necessary to connect the speaker outputs from a stereo receiver to the inputs of the MRS10 studio subwoofer if the receiver doesn’t have preamp outputs or other line-level output connections.



CAUTION: Do not attempt to connect a speaker output directly to the input of the MRS10 studio subwoofer! Speaker levels are much higher than line levels and can damage the input circuitry in the MRS10 studio subwoofer.

However, it is possible to insert a speaker-level to line-level signal attenuator between the receiver’s speaker output and the MRS10 studio subwoofer’s input. Any local authorized dealer should be able to assist, or you can build your own.

Care and Cleaning

MRS10 Reference Studio Subwoofers will provide many years of reliable service if you follow these guidelines.

- Avoid exposing the subwoofers to moisture.
- Avoid exposure to extreme cold (below freezing temperatures).
- Use a dry cloth to clean the cabinets. Only do this when the power is turned off.

The Ins and Outs of Polarity

The MRS10 studio subwoofer includes 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 polarity switch is to the right, 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 polarity switch comes into play when the MRS10 studio subwoofer is paired with a studio monitor. Ideally, the woofer cones of the subwoofer and monitor would work together by pushing and pulling in unison. MRS10 studio 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: 0°

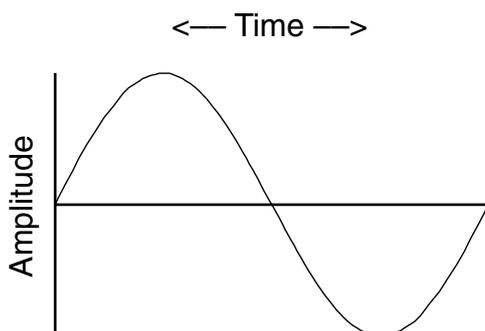
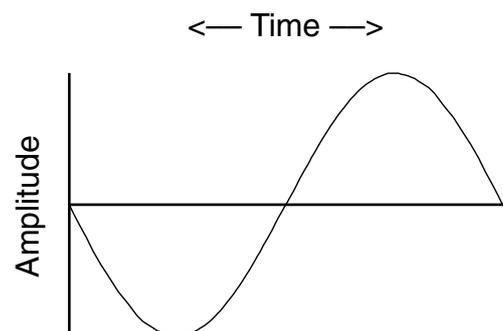


Figure 2: 180°



Appendix A: Service Information

If you think your MRS10 Studio Subwoofer has a problem, please check out the following troubleshooting tips and do your best to confirm the problem. Visit the Contact Tech Support section of our website (www.mackie.com/support) 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 send your MRS10 away.

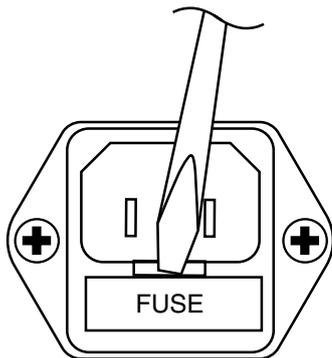
Troubleshooting

No Power

- Our favorite question: Is it plugged in?
- Make sure the power cord is securely seated in the IEC socket and plugged all the way into the AC outlet.
- Make sure the AC outlet is live (check with a tester or lamp).
- Is the power switch on the rear panel in the ON position?
- Is the power LED on the front panel illuminated? If not, make sure the AC outlet is live. If so, refer to “No Sound” to the right.
- If the power indicator is not illuminated, and you are certain that the AC outlet is live, it is possible the fuse has blown.

To remove and replace the fuse:

1. Disconnect the power cord from the IEC socket.
2. Remove the fuse drawer by prying it open with a small screwdriver. It will slide all the way out.



3. Remove the fuse and replace it with an equivalent-type fuse.

100-120V unit: T2.5AL 250V
220-240V unit: T1.25AL 250V

4. Replace the fuse drawer by pushing it all the way back into the IEC socket.

If two fuses blow in a row, then something is very wrong. See the “Repair” section on the next page to find out how to proceed.

No Sound

- Is the power LED on the front panel illuminated? If not, refer to “No Power” to the left.
- Is the input level control turned up?
- Is the signal source turned up? Make sure the signal level from the mixing console (or whatever device immediately precedes the studio subwoofer) is high enough to produce sound.
- If it's a stereo pair, try switching them around. For example, if a left output is presumed dead, switch the left and right cords at the subwoofer end. If the problem switches sides, it's not the subwoofer. It could be a bad cable, or no signal from the mixer.

Bad Sound

- Is the input connector plugged completely into the jack? If using a 1/4" connector, make sure it is plugged all the way in.
- Is it loud and distorted? Reduce the signal level at the mixer.
- If possible, listen to the signal source with headphones plugged into the preamp stage. If it sounds bad there, it's not the subwoofer.
- Too much bass or not enough bass? Move around the room and see if the bass response changes. It's possible your listening position coincides with a room mode where the low frequencies either become exaggerated or nulled. If so, try moving the subwoofers to a different position, or moving your listening position.

Noise/Hum/Buzz

- Check the signal cable between the mixer and the subwoofer. Make sure all connections are secure. These problems usually produce crackling noises, hum, or buzz.
- If a CATV cable is connected to the system, try disconnecting it. If the hum goes away, call your cable carrier to check for proper grounding of the cable.
- Make sure the signal cable is not routed near AC cables, power transformers, or other EMI sources (including wall warts and line lumps!). These sources usually produce hum.
- Is there a light dimmer or other triac-based device on the same AC circuit as the subwoofer? Dimmers cause buzzing noises. Use an AC line filter or plug the subwoofer into a different AC circuit.
- Excessive hiss is an indication of an incorrect gain setting somewhere before the speaker.
- If possible, listen to the signal source with headphones plugged in. If it sounds noisy there, it's not the subwoofer.

Repair

For warranty service, please refer to the warranty information on page 15.

Non-warranty service is available at a factory-authorized service center. To locate the nearest service center, visit www.mackie.com/support/service-locator. Service for an MRS10 living outside the United States may be obtained through local dealers or distributors.

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

Need help with your MRS10 Studio Subwoofer?

- Visit www.mackie.com/support to find: FAQs, manuals, and addendums.
- Email us at: www.mackie.com/support-contact
- Telephone 1-800-898-3211 to speak with one of our splendid technical support chaps (Monday through Friday, normal business hours, Pacific Time).

Appendix B: Technical Information

MRS10 Specifications

Acoustic Performance

| | |
|---------------------------|----------------|
| Frequency Range (-3 dB): | 35 Hz – 180 Hz |
| Frequency Range (-10 dB): | 28 Hz – 180 Hz |
| Maximum SPL Peak: | 119 dB |

Power Requirements

| | |
|-------|---|
| | ~100 V – 120 V, 50/60 Hz, 250W |
| | ~220 V – 240 V, 50/60 Hz, 250W |
| Fuse: | 100-120V unit: T2.5AL 250V 220-240V unit: T1.25AL 250V |

Transducers

| | |
|----------------|-----------------------|
| Low Frequency: | 10 in / 254 mm woofer |
|----------------|-----------------------|

Physical Dimensions and Weight

| | |
|-------------|---|
| Enclosure: | 0.625 in / 15 mm thick MDF with 1.3 in / 33 mm MDF front panel |
| Damping: | Adiabatic batting |
| Dimensions: | |
| Height: | 15 in / 382 mm |
| Width: | 12.6 in / 321 mm |
| Depth: | 15.2 in / 386 mm |
| Weight: | 33.1 lb / 15.0 kg |

Amplifiers

| | |
|----------------------|---|
| Low Frequency Power: | 120 watts, 4 Ω load, 240 watts peak |
| Type: | Monolithic IC, Class D with DMOS power stage |

Electronic Crossover

| | |
|----------------------|--------------------------------------|
| Crossover Type: | 12 dB/octave |
| Crossover Frequency: | 40 Hz – 180 Hz [Adjustable] |
| Sensitivity: | +4 dBu at 65 Hz for full output |
| Input Impedance: | 20 kΩ, balanced; 10 kΩ unbalanced |

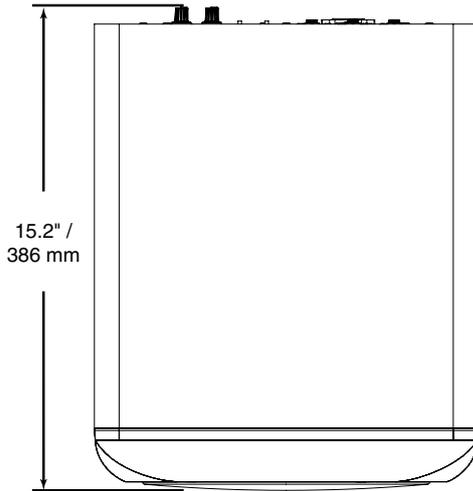
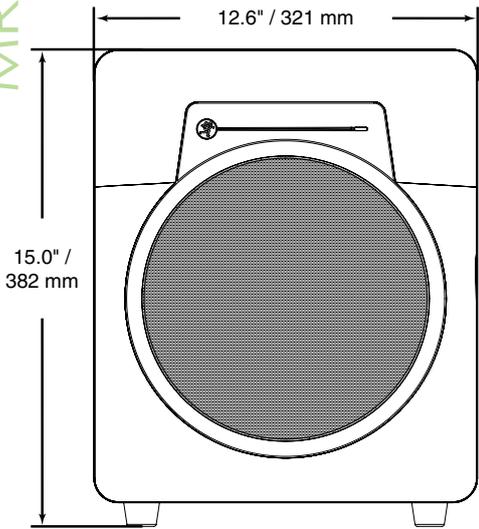
Disclaimer

LOUD Technologies is always striving to improve our products by incorporating new and improved materials, components and manufacturing methods. Therefore, we reserve the right to change these specifications at any time without notice.

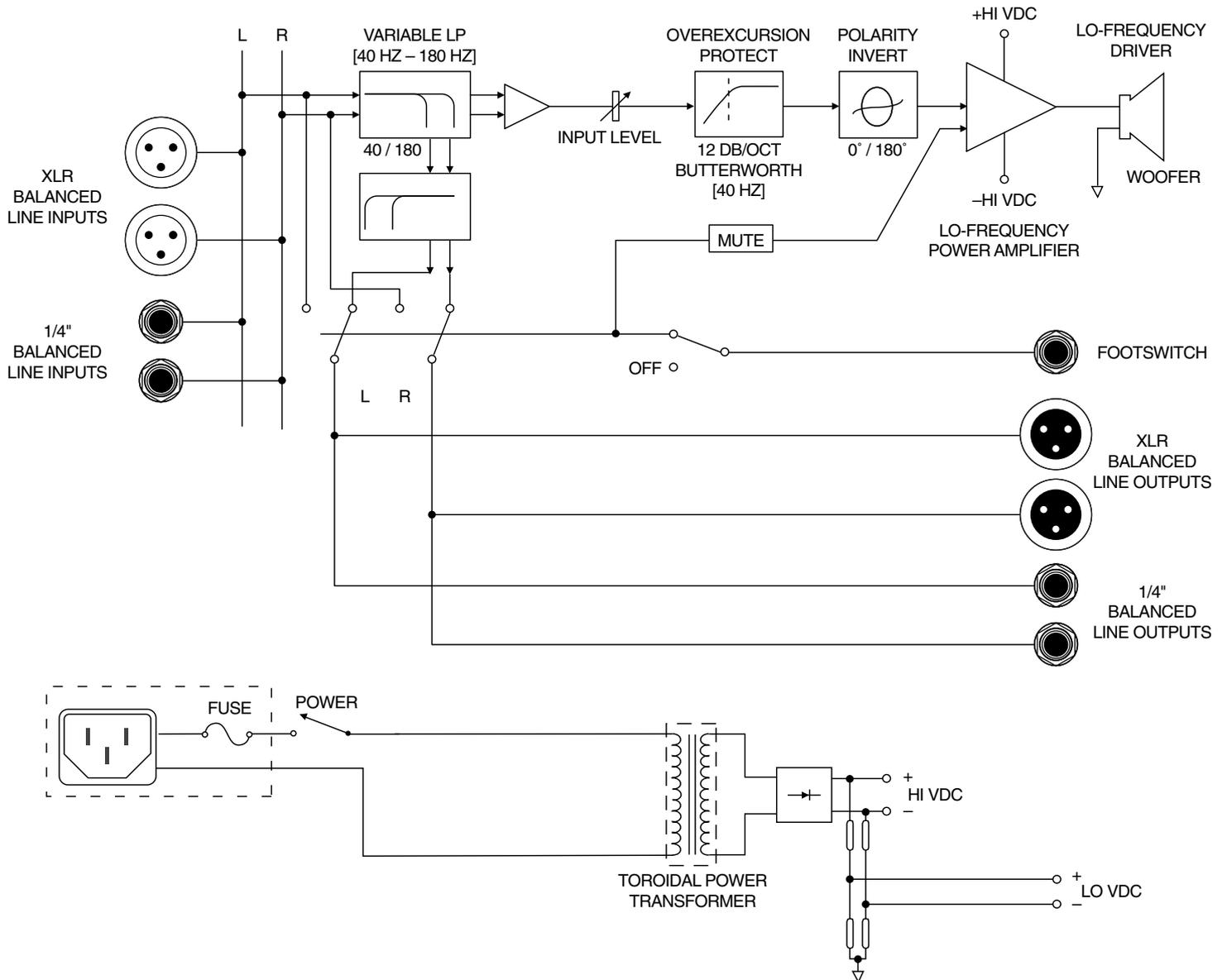
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MRS10 Dimensions



MRS10 Block Diagram



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.mackie.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.mackie.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.mackie.com.

The Product Warranty, together with your invoice or receipt, and the terms and conditions located at www.mackie.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.



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