



Operating Instructions

USW-1P

Self-Powered Subwoofer
(Serial Numbers 981000 and above)



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Keep these important operating instructions.

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Symbols Used

These symbols indicate important safety or operating features in this booklet and on the chassis.



Dangerous voltages: risk of electric shock	Important operating instructions	Frame or chassis	Protective earth ground
Pour indiquer les risques résultant de tensions dangereuses	Pour indiquer important instructions	Masse, châssis	Terre de protection
Zu die gefahren von gefährliche spanning zeigen	Zu wichtige betriebs- anweisung und unter- haltsanweisung zeigen	Rahmen oder chassis	Die schutzerde
Para indicar azares provengo de peligroso voltajes	Para indicar importante funcionar y mantenimiento instrucciones	Armadura o chassis	Tierra proteccionista

Declaration of Conformity According to ISO/IEC Guide and EN 45014

The Manufacturer:

Name: Meyer Sound Laboratories, Inc.
Address: 2832 San Pablo Avenue
 Berkeley, California 94702-2204, USA

Declares that the product:

Product Name: UPA-1P, UPA-2P, UM-1P, USW-1P, UM-100P
Product Options: All

Conforms to the following Product Specifications:

Safety: EN60065: 1994
 EMC: EN55103-1 emission
 EN55103-2 immunity
 The product herewith complies with the requirements
 of the Low Voltage Directive 73 / 23 / EEC and
 the EMC Directive 89 / 336 / EEC.

Office of Quality Manager
Berkeley, California USA
October 1, 1994

Environmental Specifications for
 Meyer Sound Electronics Products:

Operating temperature:	0° to + 45°
Nonoperating temperature:	< -40° C or > +75° C
Humidity:	to 95% at 35° C
Operating Altitude:	to 4600 m (15,000 ft)
Nonoperating altitude:	to 6300 m (25,000 ft)
Shock:	30g 11 msec half-sine on each of 6 sides
Vibration:	10 Hz to 55 Hz (0.010m peak-to-peak excursion)

Made by Meyer Sound Laboratories
 Berkeley, California USA
 European Office:
 Meyer Sound Lab. GmbH
 Carl Zeiss Strasse 13
 56751 Polch, Germany



Introduction

The Integrated Design

The Meyer USW-1P self-powered subwoofer is composed of:

- two 15-inch cone drivers.
- phase-corrected, optimized control electronics;
- a two-channel amplifier (550 watts total).

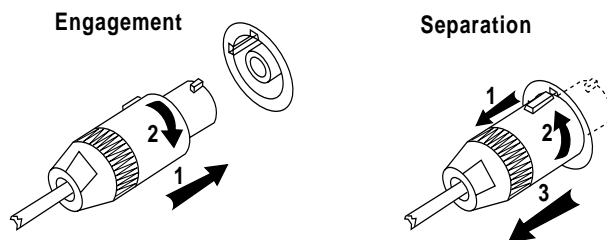
The drivers, control electronics, and amplifier are integrated into a compact enclosure. The USW-1P paired with the UPA-P Series is ideally suited for compact, high-powered PA applications, such as main PA, churches, 5.1 systems, and theatres.

The USW-1P is more than a powered version of the Meyer USW-1. The powered USW-1P implements these significant design improvements:

- The gain structure between the control electronics and amplifier is perfectly matched.
- The amplifier is optimized for the system, providing substantial power without endangering the drivers.
- The integrated design simplifies setup and installation, eliminates amp racks, and extends the durability and reliability of the loudspeaker.

AC Power

The USW-1P uses a PowerCon locking 3-pole AC mains connector that prevents inadvertent disconnection. The unit must have the correct power plug for the AC power in the area in which it will be used.



When AC power is applied to the USW-1P, an **Intelligent AC** supply automatically selects the correct operating voltage, allowing the USW-1P to be used internationally without manually setting voltage switches. The Intelligent AC supply performs the following protective functions to compensate for hostile conditions on the AC mains:

- suppresses high voltage transients up to several kilovolts
- filters EMI (radio frequencies and noise present on the AC line)
- sustains operation during low-voltage periods, which minimizes audio discontinuity
- provides soft-start power-up, which eliminates high inrush current

The USW-1P can withstand continuous voltages up to 264V and allows any combination of voltage to GND (i.e. Neutral-Hot-GND, Hot-Hot-GND). Continuous voltages higher than 264V may damage the unit.

Voltage Requirements

The USW-1P operates safely and without audio discontinuity if the AC voltage stays within the range 88–264V, 47–63 Hz. After applying AC power, the system is muted while the circuitry charges up and stabilizes. After two seconds, the **On/Temp.** LED on the user panel illuminates green, the system unmutes and is ready to pass audio signals. If the On/Temp. LED does not illuminate or the system does not respond to audio input after ten seconds, consult the Troubleshooting section.

The USW-1P's power supply uses stored energy to continue functioning for about 10 AC cycles if the voltage decreases below 88V (a condition known as *brownout*). The precise length of time the unit functions during brownout depends on the operating level and how low the voltage drops. The unit turns off if the voltage does not increase above 88V for 1 to 5 seconds. If the USW-1P shuts down due to brownout, the power supply automatically turns on if the voltage returns to the normal operating range. If the USW-1P does not turn back on after ten seconds, consult the Troubleshooting section.

NOTE: We recommend that the supply be operated at least a few volts away from the upper and lower bounds of the operating range to avoid possible shutdown.

Current Requirements

Each USW-1P requires approximately 3 Arms@115V (1.5 Arms@230V) for proper operation, allowing up to five USW-1P to be powered from one 15 A circuit. However, we recommend powering no more than three USW-1Ps per 15 A branch to allow a 30% margin for peak voltages. The USW-1P presents a dynamic load to the AC mains which causes the amount of current to fluctuate between quiet and loud operating levels. This affects the number of USW-1Ps that can be used for a given breaker type. Since different types of cables and circuit breakers heat up and trip at varying rates, it is essential to understand the types of current ratings and how they correspond to circuit breaker and cable specifications.

The **maximum continuous RMS** current is the maximum RMS current over a duration of at least 10 seconds. It is used to calculate the temperature increase in cables, which is used to select cables that conform to electrical code standards. It is also used to select the rating for slow-reacting thermal breakers.

The **maximum burst RMS** current is the maximum RMS current over a one second duration. It is used to select the rating for most magnetic breakers.

The **maximum instantaneous peak current during burst** is used to select the rating for fast-reacting magnetic breakers and to calculate the peak voltage drop in long AC cables according to the formula

$$V_{pk_drop} = I_{pk} \times R_{total\ cable}$$

Use the table below as a guide to select cables and circuit breakers with appropriate ratings for your operating voltage

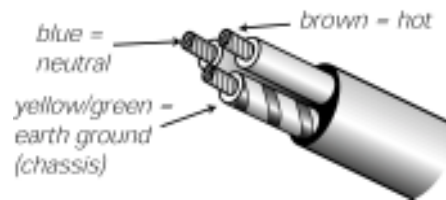
USW-1P Current Ratings

	115V	230V	100V
Idle RMS	0.25A	0.13A	0.3A
Max. Continuous RMS	2.8A	1.4A	3.2A
Max. Burst RMS	3.2A	1.6A	3.7A
Max Peak during Burst	5.0A	2.5A	5.8A

To determine the minimum total service power required by a system of USW-1Ps, or other Meyer self-powered speakers, add their **maximum continuous RMS** currents together. We recommend allowing an additional 30% above the minimum amperage to prevent peak voltage drops at the service entry and nuisance tripping.

Power Connector Wiring

Use the following AC cable wiring diagram to create international or special-purpose power connectors:



AC cable color code

If the colors referred to in the diagram don't correspond to the terminals in your plug, use the following guidelines:

- Connect the blue wire to the terminal marked with an *N* or colored black.
- Connect the brown wire to the terminal marked with an *L* or colored red.
- Connect the green and yellow wire to the terminal marked with an *E* (or \oplus) or colored green (or green and yellow).

Safety Issues



Do not use a ground-lifting adapter or cut the AC cable ground pin.

Keep all liquids away from the USW-1P to avoid hazards from electrical shock.

Do not operate the unit with worn or frayed cables; replace them immediately.

If the USW-1P will be installed outdoors, contact Meyer Sound for information about the optional rain hood which protects the amplifier and heat sink from rain. Weather protection for the drivers is also available.

The Modular Rear Panel


The rear panel of the USW-1P has two slots for modules. The top slot contains the **Audio Input Module**; the bottom slot contains the optional **Remote Monitoring System™ (RMS) Module**. A blank plate covers the bottom slot if RMS is not installed.

Audio Input

There are three, interchangeable Audio Input Modules with optimized connectors and controls for different applications. Each module has a 24V Fan connector to power an optional fan (see fan section on page 6).

Each module uses a three-pin, female XLR audio input connector with a 10 k Ω balanced input impedance wired with the following convention:

Pin 1 — 220 k Ω to chassis and earth ground (ESD clamped)

Pin 2 — Signal+  Differential Inputs

Pin 3 — Signal-

Case — Earth (AC) ground and chassis

Pins 2 and 3 carry the input as a differential signal. Use standard audio cables with XLR connectors for balanced signal sources. A single audio source can drive multiple USW-1Ps with a paralleled input loop, creating an unbuffered hardwired loop connection, with negligible loss in signal level. For example, since the input impedance of one USW-1P is 10 k Ω , looping 20 USW-1P produces a balanced input impedance of 500 Ω . With a 150 Ω audio source, the 500 Ω load results in only a 2.28 dB loss.

For drawings of the modules refer to page 12.

Looping Audio Input Module

This standard module uses a balanced, female XLR connector for audio input and a male XLR loop connector to interconnect multiple speakers. The audio input connector is hardwired with pin 2 hot to comply with audio industry standards. The loop connector, wired in parallel to the audio input, transmits the input signal even if the USW-1P is turned off for any reason.

Summing Audio Input Module

This module has two balanced female XLR connectors. The second female XLR connector functions as a summing input. Applying a signal to one of the inputs results in a normal signal level. Utilizing both summing inputs creates a correctly summed mono signal with each input 6 dB below the level of a single input. This is an effective method for distributing both sides of a stereo signal to a single USW-1P without requiring external level control.

Looping, Polarity, and Attenuating Audio Input Module

This module has a balanced, female XLR audio input connector, a male XLR loop connector, an input polarity switch, and a level attenuator knob. The input polarity switch offers a convenient method of reversing the polarity of the speaker. When the input polarity switch is in the up (+) position, pin 2 is hot relative to pin 3, resulting in a positive pressure wave when a positive signal is applied to pin 2. When the switch is down (-), pin 3 is hot relative to pin 2, resulting in a positive pressure wave when a positive signal is applied to pin 3. The level attenuator knob operates between 0 dB (no level attenuation) in a fully clockwise position to -12 dB in a fully counterclockwise position.

Remote Monitoring System™

The USW-1P can be equipped to operate with the **Remote Monitoring System (RMS)** network and software application. RMS displays signal and power levels, driver status, limiter activity, the state of the polarity switch, attenuator level, and amplifier temperature for all speakers in the network on a Windows-based PC. RMS can also be configured to enable speaker muting. RMS is an excellent field-diagnostic tool that removes the guesswork from troubleshooting during a performance. All Meyer Speakers with RMS can be integrated on the same network. Installing an RMS module requires only a Phillips screwdriver. Contact Meyer Sound for more information about RMS.

Amplification, Limiting, and Cooling System

Amplification and Limiting

Each driver in the USW-1P is powered by one channel of a proprietary Meyer Sound amplifier utilizing complementary power MOSFET output stages (class AB, bridged). The USW-1P employs two separate methods of limiting: Excursion Limiting which protects the drivers from over excursion and Sub Channel Limiting which prevents the drivers from damage due to thermal overload.

Limiter activity for the Excursion and Sub channel is indicated by two yellow Limit LEDs on the rear panel (the EXC. Limit LED is above the SUB limit LED). See page 12 for a diagram of the user panel.

The USW-1P performs within its acoustical specifications and operates at a normal temperature if the limit LEDs are on for no longer than two seconds, and off for at least one second.

If either LED remains on for longer than three seconds, that channel incurs these consequences:

- Increasing the input level will not increase the volume.
- The system distorts due to clipping and nonlinear driver operation.

While the USW-1P limiters fully protect the system under overload conditions and exhibit smooth sonic characteristics; we recommend that you do not intentionally drive the USW-1P into continuous limiting to attain compression effects.

For applications where large amounts of compression are required, we recommend using an outboard compressor/limiter for greater control of limit and compressor effects.

Amplifier Natural Convection Cooling System

The USW-1P's amplifier employs a *natural convection cooling* system that is cooled by the air flowing over the heatsink. Allow for proper ventilation of fresh air when using the speaker in tightly packed conditions.

If the temperature of the heatsink reaches 85°C (185°F), the On/Temp. LED on the rear panel turns from green (On) to red (Temp.) and the limiter threshold is lowered to a *safe* level to prevent the system from overheating. Under high temperature conditions the output level is reduced 6 dB. When the heatsink temperature decreases to 75°C (167°F), the On/Temp. LED changes from red to green and the limiter threshold returns to normal.



The heatsink reaches temperatures up to 185°F (85°C) during normal operation. Use extreme caution when approaching the rear of the cabinet.

Fan Assembly Kit

While convection cooling is adequate for most applications, USW-1Ps when driven into continuous limiting under severe temperature conditions, or where ventilation is restricted, may benefit from the optional fan kit which increases air flow to maintain a safe operating temperature.

The easy-to-install fan, powered by the **24V Fan** rear panel connector, blows air directly onto the heatsink. The fan speed increases as the heatsink temperature rises, which maintains a safe operating temperature with minimal fan noise. Contact Meyer Sound to order the fan kit.

Power Supply Fan

The power supply is cooled by a single small internal fan that turns on low when the unit is first powered up. The fan doubles its speed as the system is driven with audio. Since the fan draws air in from, and exhausts it out the back of the cabinet, there must be at least six inches clearance behind the cabinet, and adequate air flow.

Rigging

The USW-1P weighs 137 lb (62 kg). The maximum recommended load for an USW-1P with aircraft pan fittings is 420 lb (191 kg). This *working load* is based on a 5:1 safety factor. The USW-1P has three rigging plates on top; each plate is capable of supporting the full working load of the cabinet.

There are four types of interchangeable rigging plates, each fastened by six Phillips screws:

- aircraft pan fittings (ring and stud)
- 3/8"-16 nut plates
- M-10 x 1.5 metric nut plates
- blank plates (if no rigging brackets are requested)

NOTE: Units with nut plates are rated for the weight of one cabinet only.

Rigging load ratings assume a straight tensile pull and that the cabinet is in new condition with aircraft pan fittings. If these conditions are not met, the load ratings can be reduced significantly. Load ratings can also be reduced by age, wear, and damage. It is important to inspect the rigging hardware regularly and replace worn or damaged components immediately.



NOTE: All Meyer Sound products must be used in accordance with local, state, federal, and industry regulations. It is the owner's and/or user's responsibility to evaluate the reliability of any rigging method for their application. Rigging should be done only by experienced professionals.

Full-Range Systems

Introductory Concepts

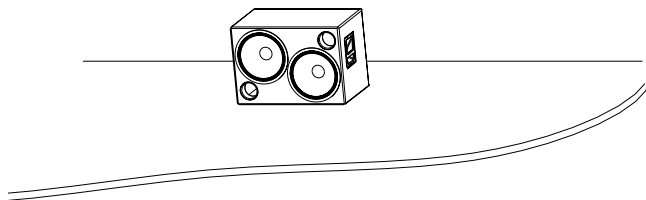
The USW-1P is used to add low frequency SPL to sound systems. It is optimized to be used with the Meyer **UPA-P series self-powered loudspeakers**. It can also be used with all Meyer Sound loudspeakers. For information on integrating the USW-1P with the UPA-P, see the UPA-P Series Operating Instructions. For information on using the USW-1P with other Meyer Sound products please contact Meyer Sound Technical Support.

Using the USW-1P in a full-range system is straight forward but the following concepts are important to consider before installing a system.

Room Loading

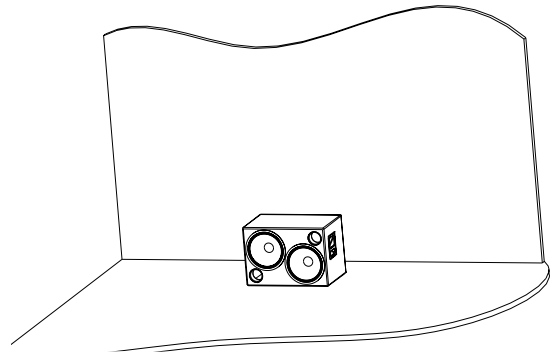
The placement of the USW-1P in a room or a space is critically important to the response of the speaker system. A USW-1P hung in the air with no boundary conditions would not add any SPL from room loading.

A USW-1P placed on a floor (half-space loading) will gain approximately 6 dB compared to its free field response.



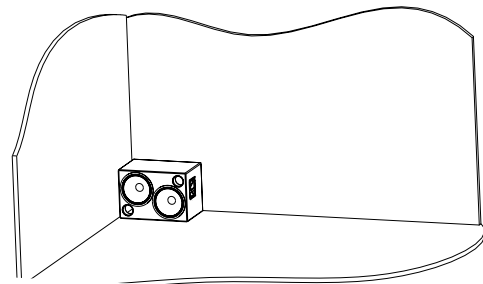
6 dB low frequency gain compared to free field.

A USW-1P placed on a floor and against a wall (quarter-space loading) will gain approximately 12 dB compared to its free field response.



12 dB low frequency gain compared to free field.

A USW-1P placed on the floor in a corner (one-eighth space loading) will gain approximately 18 dB compared to its free field response.



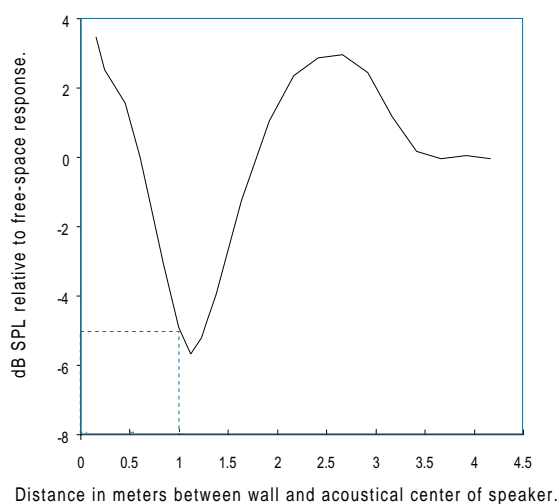
18 dB low frequency gain compared to free field.

SPL vs. Distance to Boundary

As we have seen on the previous page, the placement of a USW-1P on a floor or against a boundary significantly changes the low frequency response when compared to free field measurement of the same speaker.

The graph below represents the change in dB SPL for frequencies under 125 Hz of a single USW-1P as it is moved away from a boundary. Distance measured in meters, is based on the distance from the wall behind the speaker to the acoustical center of the USW-1P. All dB SPL measurements are made with the microphone on axis to the speaker.

Distance to Boundary vs. dB SPL below 125 Hz



To better understand the graph above, imagine a USW-1P with a wall behind it. As you move the USW-1P away from the wall the graph above shows how the response of the speaker will change. For example if the USW-1P is placed 1 meter from a wall and is measured on axis to the speaker, you will see a -5 dB change in the low frequency as illustrated by the dotted lines on the graph.

Polarity

With the USW-1P in close-proximity to, and coplanar with, the UPA-P, or other Meyer Speakers, both speakers should be set to the same polarity. Separating the subwoofers and main cabinets in a speaker system by more than 5 feet may require polarity reversal or a delay line to compensate for the propagation delay between the speakers and the measurement position.

Measurement and Correction Tools

It is recommended that even the most carefully assembled sound systems be analyzed with precise measurement tools. We recommend using the Meyer **SIM® Sound Analyzer** and **CP-10 Parametric Equalizer** to

- choose, place, and array speakers;
- measure propagation delays between speakers to set the correct polarity and delay times;
- measure and equalize variations in frequency response caused by the acoustical environment and the placement and interaction of speakers.

The VX-1:

The VX-1 is an ideal control option for USW-1P systems. The VX-1 is a stereo virtual crossover which allows the user to adjust the gain, switch between stereo and mono distribution of two inputs and make shelving EQ adjustments to the left and right sides of the system.

USW-1P with the UPA-P

The USW-1P and UPA-P can be configured in a wide variety of array configurations to suit specific application needs.

Refer to the UPA-P Operating Instructions for recommended arrays; or for additional system design ideas, contact Meyer Sound for the following *TechNotes* documents on UPA-P array design:

- Two UPA-1Ps @ 70° Horizontal Splay (Doc #: 01.990.101.90 A)
- Two UPA-1Ps @ 85° Horizontal Splay (Doc #: 01.990.101.91 A)
- Two UPA-2Ps Tight-pack (Doc #: 01.990.101.92 A).
- Three UPA-2Ps Tight-pack (Doc #: 01.990.101.93 A).

These documents are also available on the Meyer Sound website: <http://www.meyersound.com>.

Verifying Driver Polarity


Incorrect driver polarity impairs system performance and may damage the drivers. All Meyer loudspeakers are shipped with the drivers in correct alignment.

Polarity In Adjacent Loudspeakers

Use the following test procedure to verify the polarity between two USW-1P.

1. Establish a reference USW-1P, a speaker that has not been tampered with or damaged. Mark this speaker as the reference.
2. Place the USW-1P you want to test next to the reference USW-1P.
3. Place a measurement microphone 3 feet from the speakers on the axis between the speakers. See drawing at bottom of page.
4. Connect a signal source to reference speaker and note the frequency response and overall level.
5. Apply the same signal to the USW-1P under test with the first speaker still connected.

The polarity is correct if the frequency response remains constant with a 5 to 6 dB SPL increase in amplitude. Broadband cancellation (decreased overall level) indicates polarity reversal between cabinets. A 2 to 3 dB SPL increase may indicate that one of the drivers in the USW-1P under test is out of phase, in this case, proceed to the next section.

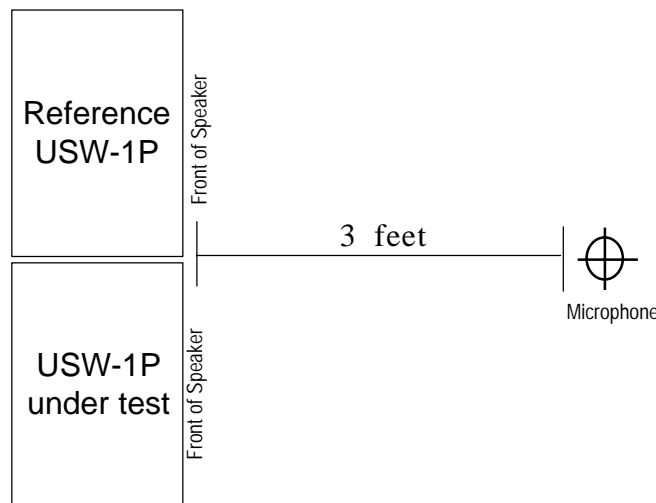
 Since polarity reversal causes excessive driver excursion at high source levels, use moderate levels when conducting these tests.

Polarity within a USW-1P

If the driver or circuit wiring has been removed or disassembled it is essential to check the polarity between drivers and between adjacent loudspeakers.

Use the following test procedure to verify polarity between drivers in the same loudspeaker :

1. Place the reference USW-1P and the USW-1P under test side to side so that the drivers are facing the same direction.
2. Place a measurement microphone 3 feet from the speakers on the axis between the speakers. See drawing at bottom of page.
3. Connect a full range signal to the reference USW-1P loudspeaker and note the frequency response and sound pressure level.
4. Compare the reference and test USW-1P results one at a time. A significant decrease in energy from 40 to 100 Hz in the USW-1P under test indicates a driver reversal. Contact Meyer Sound Technical Support for information on Service Center or field correction.
5. If the reference and USW-1P under test have similar responses, then there is no internal polarity error within the loudspeaker.



Troubleshooting

This section suggests several possible solutions to some common problems encountered by USW-1P users and is not intended to be a thorough troubleshooting guide. Contact Meyer Sound for additional information and documentation.

The On/Temp. LED does not illuminate, there is no audio, and the power supply fan is off.

1. Make sure the AC power cable is the correct type for the regional voltage and that it is securely connected to the AC inlet then unplug and reconnect the AC cable.
2. Use an AC voltmeter to verify that the AC voltage is within the ranges 88–264V, 47–63 Hz.
3. Call Meyer Sound Technical Support.

The On/Temp. LED is illuminated but there is no sound.

1. Verify that the audio source (mixer, EQ, delay) is sending a valid signal.
2. Make sure the XLR cable is securely fastened to the XLR audio input connector.
3. Verify that the XLR cable is functioning by substituting another cable or by using the cable in question in a working system.
4. Send the audio signal to another speaker to insure signal presence and that the level is within the proper range. Turn the source level down before reconnecting the audio input and increase the level slowly to avoid a sudden blast of sound.
5. If possible, monitor the audio source with headphones.

Hum or noise is produced by the speaker.

1. Disconnect the audio input. If the noise persists, the problem is within the USW-1P. In this case return the unit to the factory or nearest authorized service center. If the hum ceases, the noise originates somewhere earlier in the signal path.
2. Make sure the XLR cable is securely fastened to the XLR audio input connector.
3. Send the audio signal to another speaker to insure signal presence and that the level is within the proper range. Turn the source level down before reconnecting the audio input and increase the level slowly to avoid a sudden blast of sound.
5. Hum or noise can be produced by a ground loop. Since the USW-1P is effectively *ground-lifted*, the loop must be broken elsewhere in the system.

The audio produced by the speaker is distorted or compressed but the limit light is not illuminated.

1. Make sure the XLR cable is securely fastened to the XLR audio input connector.
2. Send the audio signal to another speaker to insure that the level is within the proper range. Turn the source level down before reconnecting the audio input and increase the level slowly to avoid a sudden blast of sound.
3. Monitor the audio source with headphones.

The audio produced by the speaker is highly compressed and the limit light is constantly red.

1. Turn down the level of the input signal to the speaker system.

There is sound but it does not seem to be at full power and the On/Temp. LED is yellow.

This occurs in conditions where the heatsink temperature reaches 85°C (185°F), indicating that the amplifier is thermally overloaded. The limiter threshold has dropped to a safe level, so the audio level is reduced.

1. Make sure there is enough clearance above, below, and behind the unit.
2. Make sure there is sufficient air flow around the unit.
3. Avoid exposing the heatsink to direct sunlight if the ambient temperature is high.
4. If the ambient temperature is greater than 30°C and this condition occurs frequently, contact Meyer Sound to order the optional Fan Kit.

See the section Amplification, Limiting, and Cooling System on page 6 for a complete discussion about the cooling system.

There is no sound, the On/Temp. LED is dim or off, and the power supply fan is on high speed.

This extremely rare event occurs when the power supply overheats, causing a 1-2 minute interruption in operation. The unit turns on again when the power supply has cooled sufficiently.

1. Make sure there is at least six inches clearance behind the unit.
2. Make sure there is sufficient air flow around the unit.

See the section Amplification, Limiting, and Cooling System on page 6 for a more information about the power supply's internal fan and cooling system.



Safety Summary



English

- To reduce the risk of electric shock, disconnect the loudspeaker from the AC mains before installing audio cable. Reconnect the power cord only after making all signal connections.
- Connect the loudspeaker to a two-pole, three wire grounding mains receptacle. The receptacle must be connected to a fuse or circuit breaker. Connection to any other type of receptacle poses a shock hazard and may violate local electrical codes.
- Do not install the loudspeaker in wet or humid locations without using weather protection equipment from MeyerSound.
- Do not allow water or any foreign object to get inside the loudspeaker. Do not put objects containing liquid on, or near, the unit.
- To reduce the risk of overheating the loudspeaker, avoid exposing it to direct sunlight. Do not install the unit near heat emitting appliances, such as a room heater or stove.
- This loudspeaker contains potentially hazardous voltages. Do not attempt to disassemble the unit. The unit contains no user serviceable parts. Repairs should be performed only by factory trained service personnel.

Français

- Pour réduire le risque d'électrocution, débrancher la prise principale de l' haut-parleur, avant d'installer le câble d'interface allant à l'audio. Ne rebrancher le bloc d'alimentation qu'après avoir effectué toutes les connexions.
- Branchez l' haut-parleur dans une prise de courant à 3 dérivations (deux pôles et la terre). Cette prise doit être munie d'une protection adéquate (fusible ou coupe-circuit). Le branchement dans tout autre genre de prise pourrait entraîner un risque d'électrocution et peut constituer une infraction à la réglementation locale concernant les installations électriques.
- Ne pas installer l' haut-parleur dans un endroit où il y a de l'eau ou une humidité excessive.
- Ne pas laisser de l'eau ou tout objet pénétrer dans l' haut-parleur. Ne pas placer de récipients contenant un liquide sur cet appareil, ni à proximité de celui-ci.
- Pour éviter une surchauffe de l' haut-parleur, conserver-la à l'abri du soleil. Ne pas installer à proximité d'appareils dégagant de la chaleur tels que radiateurs ou appareils de chauffage.
- Ce haut-parleur contient des circuits haute tension présentant un danger. Ne jamais essayer de le démonter. Il n'y a aucun composant qui puisse être réparé par l'utilisateur. Toutes les réparations doivent être effectuées par du personnel qualifié et agréé par le constructeur.

Deutsch

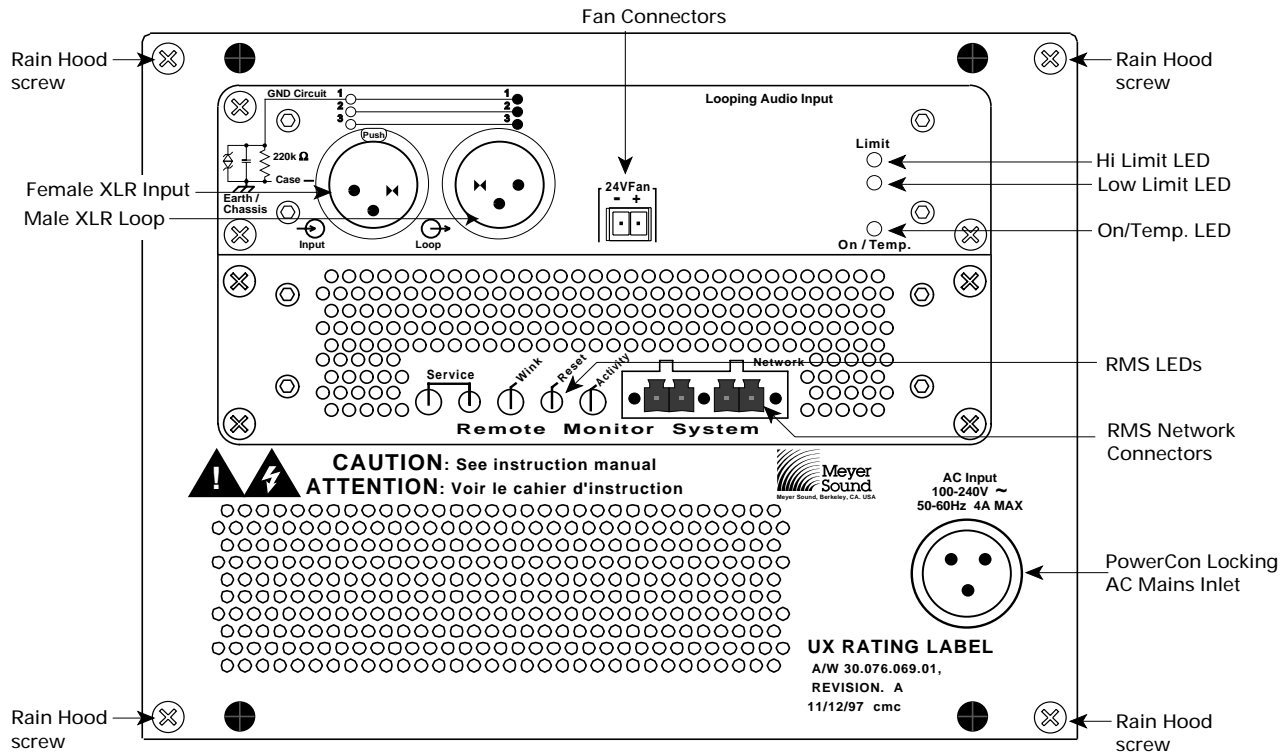
- Um die Gefahr eines elektrischen Schlages auf ein Minimum zu reduzieren, den Lautsprecher vom Stromnetz trennen, bevor ggf. ein Audio-Schnittstellensignalkabel angeschlossen wird. Das Netzkabel erst nach Herstellung aller Signalverbindungen wieder einstecken.
- Der Lautsprecher an eine geerdete zweipolige Dreiphasen-Netzsteckdose anschließen. Die Steckdose muß mit einem geeigneten Abzweigschutz (Sicherung oder Leistungsschalter) verbunden sein. Der Anschluß der unterbrechungsfreien Stromversorgung an einen anderen Steckdosentyp kann zu Stromschlägen führen und gegen die örtlichen Vorschriften verstoßen.
- Der Lautsprecher nicht an einem Ort aufstellen, an dem sie mit Wasser oder übermäßig hoher Luftfeuchtigkeit in Berührung kommen könnte.
- Darauf achten, daß weder Wasser noch Fremdkörper in das Innere den Lautsprecher eindringen. Keine Objekte, die Flüssigkeit enthalten, auf oder neben die unterbrechungsfreie Stromversorgung stellen.
- Um ein Überhitzen dem Lautsprecher zu verhindern, das Gerät vor direkter Sonneneinstrahlung fernhalten und nicht in der Nähe von wärmeabstrahlenden Haushaltsgeräten (z.B. Heizgerät oder Herd) aufstellen.
- Im Inneren diesem Lautsprecher herrschen potentiell gefährliche Spannungen. Nicht versuchen, das Gerät zu öffnen. Es enthält keine vom Benutzer reparierbaren Teile. Reparaturen dürfen nur von ausgebildetem Kundendienstpersonal durchgeführt werden.

Español

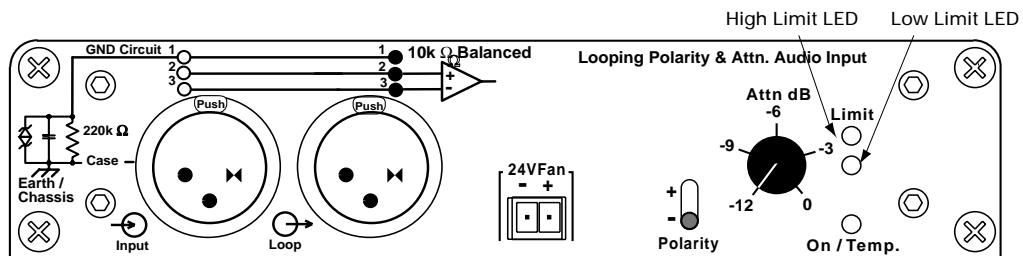
- Para reducir el riesgo de descarga eléctrica, desconecte de la red el altoparlante antes de instalar el cable de señalización de interfaz de la señal. Vuelva a conectar el conductor flexible de alimentación solamente una vez efectuadas todas las interconexiones de señalización.
- Conecte el altoparlante a un tomacorriente bipolar y trifilar con neutro de puesta a tierra. El tomacorriente debe estar conectado a la protección de derivación apropiada (ya sea un fusible o un disyuntor). La conexión a cualquier otro tipo de tomacorriente puede constituir peligro de descarga eléctrica y violar los códigos eléctricos locales.
- No instale el altoparlante en lugares donde haya agua o humedad excesiva.
- No deje que en el altoparlante entre agua ni ningún objeto extraño. No ponga objetos con líquidos encima de la unidad ni cerca de ella.
- Para reducir el riesgo de sobrecalentamiento, no exponga la unidad a los rayos directos del sol ni la instale cerca de artefactos que emiten calor, como estufas o cocinas.
- Este altoparlante contiene niveles de voltaje peligrosos en potencia. No intente desarmar la unidad, pues no contiene piezas que puedan ser reparadas por el usuario. Las reparaciones deben efectuarse únicamente por parte del personal de mantenimiento capacitado en la fábrica.

Rear Panel and Optional Modules

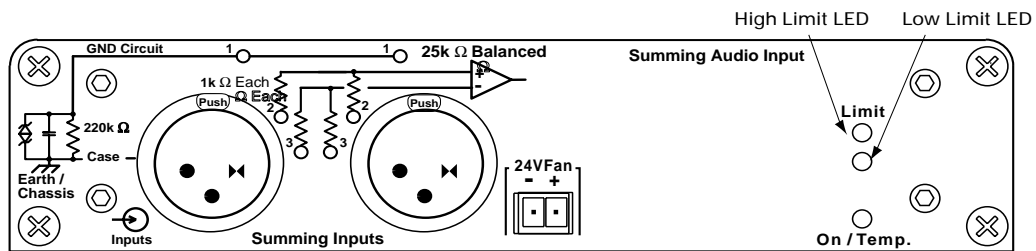
The user panel and optional modules are described on page 5 of this guide.



User Panel with RMS option and Standard Looping Audio Input Module.

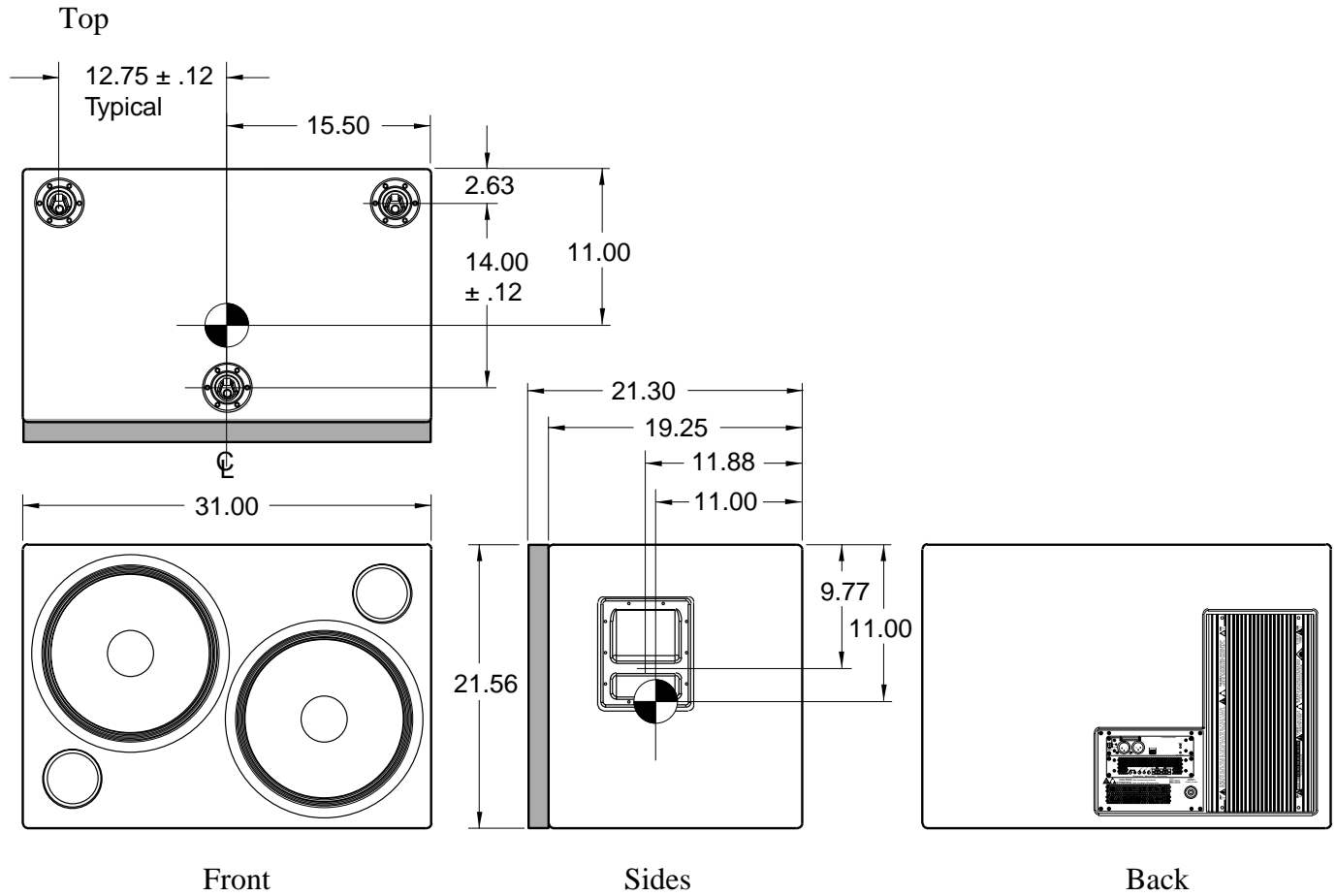


Looping, Polarity, and Attenuating Input Module



Summing Audio Input Module

Dimensions (in inches)



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