

UP-4slim™ UltraCompact Loudspeaker



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UP-4slim Operating Instructions, PN 05.274.005.01 A4

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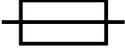
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IMPORTANT SAFETY INSTRUCTIONS

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

SYMBOLS USED

					
Dangerous voltages: risk of electric shock	Important operating instructions	Replaceable Fuse	Protective earth ground	Hot surface: do not touch	Electronic instructions for use: instruction location in QR code 
Gefährliche Spannungen: Stromschlaggefahr	Hinweis auf wichtige Punkte der Betriebsanleitung	Austauschbare Sicherung	Schutzerde	Heiße Oberfläche: nicht berühren	Elektronische Gebrauchsanweisung: anweisungsort im QR-Code
Pour indiquer les risques résultant de tensions dangereuses	Instructions d'utilisation importantes	Fusible remplaçable	Terre de protection	Surface chaude: ne pas toucher	Mode d'emploi électronique: emplacement des instructions dans le code QR
Para indicar voltajes peligrosos	Instrucciones importantes de funcionamiento y/o Mantenimiento	Fusible reemplazable	Toma de tierra de protección	Superficie caliente: no tocar	Instrucciones de uso electrónicas: ubicación de instrucciones en el código QR

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 dry cloth.
7. Do not block any ventilation openings. Install in accordance with Meyer Sound's installation instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus that produce heat.
9. Do not defeat the safety purpose of the grounding-type plug. A grounding type plug has two blades and a third grounding prong. The third prong is 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. The AC mains plug or appliance coupler shall remain readily accessible for operation.
11. Only use attachments/accessories specified by Meyer Sound.
12. Use only with the caster rails or rigging specified by Meyer Sound, or sold with the apparatus. Handles are for carrying only.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. If equipped with an external fuse holder, the replaceable fuse is the only user-serviceable item. When replacing the fuse, only use the same type and the same value.
15. Refer all other servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as when the power-supply cord or

plug has been damaged; liquid has been spilled or objects have fallen into the apparatus; rain or moisture has entered the apparatus; the apparatus has been dropped; or when for undetermined reasons the apparatus does not operate normally.



WARNING: For Meyer Sound IntelligentDC Power Supply models MPS-488HP and MPS-482HP, the external wiring connected to the output terminals of the units require installation by an Instructed person or the use of ready-made leads or cords.



WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture. Do not install the apparatus in wet or humid locations without using weather protection equipment from Meyer Sound.



WARNING: Class I apparatus shall be connected to a mains socket outlet with a protective earthing connection.



CAUTION: Disconnect the mains plug before disconnecting the power cord from the loudspeaker.

English

- To reduce the risk of electric shock, disconnect the apparatus from the AC mains before installing audio cable. Reconnect the power cord only after making all signal connections.
- Connect the apparatus 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 apparatus in wet or humid locations without using weather protection equipment from Meyer Sound.
- Do not allow water or any foreign object to get inside the apparatus. Do not put objects containing liquid on or near the unit.
- To reduce the risk of overheating the apparatus, avoid exposing it to direct sunlight. Do not install the unit near heat-emitting appliances, such as a room heater or stove.
- If equipped with an external fuse holder, the replaceable fuse is the only item that can be serviced by the user. When replacing the fuse, only use the same type and value.
- This apparatus contains potentially hazardous voltages. Do not attempt to disassemble the unit. The only user-serviceable part is the fuse. All other repairs should be performed only by factory-trained service personnel.

Deutsch

- Zur Minimierung der Gefahr eines elektrischen Schlages trennen Sie das Produkt vor dem Anschluss von Audio- und/oder Steuerleitungen vom Stromnetz. Das Netzkabel darf erst nach Herstellung aller Signalverbindungen wieder eingesteckt werden.
- Das Produkt an eine vorschriftsgemäss installierte dreipolige Netzsteckdose (Phase, Neutraleiter, Schutzleiter) anschließen. Die Steckdose muss vorschriftsgemäß mit einer Sicherung oder einem Leitungsschutzschalter abgesichert sein. Das Anschließen des Produkts an eine anders ausgeführte Stromversorgung kann gegen Vorschriften verstossen und zu Stromunfällen führen.
- Das Produkt nicht an einem Ort aufstellen, an dem es direkter Wassereinwirkung oder übermäßig hoher Luftfeuchtigkeit ausgesetzt werden könnte, solange es sich nicht um ein Produkt handelt, dass mit der Meyer Sound Weather Protection Option ausgestattet ist.
- Vermeiden Sie das Eindringen von Wasser oder Fremdkörpern in das Innere des Produkts. Stellen Sie keine Objekte, die Flüssigkeit enthalten, auf oder neben dem Produkt ab.
- Um ein Überhitzen des Produkts zu verhindern, halten Sie das Gerät von direkter Sonneneinstrahlung fern und stellen Sie es nicht in der Nähe von wärmeabstrahlenden Geräten (z.B. Heizgerät oder Herd) auf.
- Bei Ausstattung mit einem externen Sicherungshalter ist die austauschbare Sicherung das einzige Gerät, das vom Benutzer gewartet werden kann. Verwenden Sie beim Austausch der Sicherung nur den gleichen Typ und Wert.
- Dieses Gerät enthält möglicherweise gefährliche Spannungen. Versuchen Sie nicht, das Gerät zu zerlegen. Der einzige vom Benutzer zu wartende Teil ist die Sicherung. Alle anderen Reparaturen dürfen nur von im Werk geschultem Servicepersonal ausgeführt werden.

Français

- Pour éviter tout risque d'électrocution, débranchez l'enceinte de la prise secteur avant de mettre en place le câble audio. Ne rebranchez le cordon secteur qu'après avoir procédé à toutes les connexions de signal audio.
- Brancher l'appareil sur une prise secteur à trois fils et deux pôles avec mise à la terre. La prise doit être reliée à un fusible ou à un disjoncteur. Le branchement à tout autre type de prise présente un risque de choc électrique et peut enfreindre les codes locaux de l'électricité.
- N'installez pas l'enceinte dans des endroits humides ou en présence d'eau sans utiliser d'équipements de protection adéquats fournis par Meyer Sound.
- Ne laissez pas d'eau ou d'objet étranger, quel qu'il soit, pénétrer à l'intérieur de l'enceinte. Ne posez pas d'objet contenant du liquide sur ou à proximité de l'enceinte.
- Pour réduire les risques de surchauffe, évitez d'exposer directement l'enceinte aux rayons du soleil. Ne l'installez pas à proximité de sources de chaleur, radiateur ou four par exemple.
- S'il est équipé d'un porte-fusible externe, le fusible remplaçable est le seul élément qui peut être réparé par l'utilisateur. Lors du remplacement du fusible, n'utilisez que le même type et la même valeur.
- Cet appareil contient des tensions potentiellement dangereuses. N'essayez pas de démonter l'appareil. Le fusible est la seule pièce réparable par l'utilisateur. Toutes les autres réparations doivent être effectuées uniquement par du personnel de maintenance formé en usine.

Español

- Para reducir el riesgo de descarga eléctrica, desconecte el aparato de la red eléctrica antes de instalar el cable de audio. Vuelva a conectar el cable de alimentación sólo después de realizar todas las conexiones de señal.
- Conecte el aparato a una toma de corriente de tres hilos y dos polos con conexión a tierra. El receptáculo debe estar conectado a un fusible o disyuntor. La conexión a cualquier otro tipo de receptáculo representa un riesgo de descarga eléctrica y puede violar los códigos eléctricos locales.
- No instale el aparato en lugares húmedos o mojados sin usar el equipo de protección contra intemperie de Meyer Sound.

- No permita que penetre agua u otros objetos extraños en el interior del aparato. No coloque objetos que contengan líquido sobre o cerca de la unidad.
- Para reducir el riesgo de sobrecalentamiento del aparato, evite exponerlo a la luz solar directa. No instale la unidad cerca de aparatos que emitan calor, como un calefactor o una estufa.
- Si está equipado con un portafusibles externo, el fusible reemplazable es el único elemento que puede ser reparado por el usuario. Cuando reemplace el fusible, use solamente el mismo tipo y valor.
- Este aparato contiene voltajes potencialmente peligrosos. No intente desmontar la unidad. La única pieza que el usuario puede reparar es el fusible. Todas las demás reparaciones deben ser realizadas únicamente por personal de servicio capacitado de fábrica.

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INTRODUCTION

HOW TO USE THIS MANUAL

Please read these instructions in their entirety before configuring a Meyer Sound loudspeaker system. In particular, pay close attention to material related to safety issues.

As you read these instructions, you will encounter the following icons for notes, tips, and cautions:



NOTE: A note identifies an important or useful piece of information relating to the topic under discussion.



TIP: A tip offers a helpful tip relevant to the topic at hand.



CAUTION: A caution gives notice that an action may have serious consequences and could cause harm to equipment or personnel, or could cause delays or other problems.

Information and specifications are subject to change. Updates and supplementary information are available at:

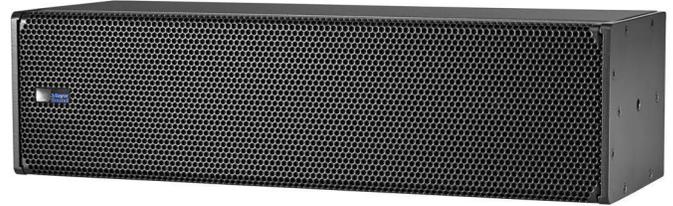
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Meyer Sound Technical Support is available at:

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(Monday through Friday 9:00 am to 5:00 pm PST)
- +1 510 486.0657
(after hours support)
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UP-4slim ULTRACOMPACT LOUDSPEAKER

The UP-4slim ultracompact installation loudspeaker is ideally suited for applications requiring a small, slim, aesthetically pleasing cabinet that delivers high sound pressure levels with low distortion and uniform coverage. The UP-4slim offers this exceptional audio performance in a compact self-powered package with a remote power supply. As a standalone loudspeaker, the UP-4slim is appropriate for vocal reinforcement, front-fill and under balcony fill applications. The UP-4slim can be optionally paired with a subwoofer to create a full-range system.



UP-4slim UltraCompact Loudspeaker

The UP-4slim is engineered to the same award-winning standards as all Meyer Sound IntelligentDC loudspeakers. Its on-board amplification and sophisticated signal processing provide the flat frequency and phase responses for which Meyer Sound loudspeakers are known. Its drivers are designed and manufactured at the Meyer Sound factory in Berkeley, California.

The UP-4slim's high-frequency section includes a 1-inch metal dome tweeter on a constant-directivity, high-frequency horn. The low/mid-frequency section includes two 4-inch cone transducers that work in parallel at low frequencies to deliver a combined acoustic output.

One of the drivers rolls off at higher frequencies to maintain constant directivity in the crossover region. With a smooth, consistent 100° coverage, fewer loudspeakers can cover a larger area, reducing system cost while maintaining the highest sound quality.

The UP-4slim boasts a very low distortion, wide operating frequency range (65 Hz – 18 kHz), and linear peak SPL of 116.5 dB with crest factor >16.5 dB (measured using M-noise).



NOTE: Linear peak SPL is measured in free-field at 4 m, referred to 1 m. M-noise is a full bandwidth test signal (10 Hz – 22.5 kHz) developed by Meyer Sound to better measure the loudspeaker's music performance. It has a constant instantaneous peak level in octave bands, a crest factor that increases with frequency, and a full bandwidth peak-to-RMS ratio of 18 dB. The presence of a greater-than (>) symbol with regard to crest factor indicates it may be higher depending on EQ and boundary loading.

The UP-4slim loudspeaker requires an external Meyer Sound IntelligentDC power supply (MPS-488HP or MPS-482HP). These power supplies distribute DC power and balanced audio to UP-4slim loudspeakers or other Meyer Sound IntelligentDC loudspeakers. The MPS-488HP model can also connect to Meyer Sound's RMS remote monitoring system. Composite multi-conductor cables (e.g., Belden® 1502) can deliver both DC power and balanced audio from a single Phoenix™ 5-pin male connector.

UP-4slim loudspeaker options include weather protection and custom color finishes for installations with specific cosmetic requirements. The top and bottom rigging plates have M8 threads to accommodate mounting options including a cradle-style yoke (Figure 1 and Figure 3), a screw-in pole-mount adapter (Figure 2 and Figure 3), and a U-bracket (Figure 4 and Figure 5). Meyer Sound powder-coats the stamped-steel grille frame with a slightly textured black finish. The box-shaped vented enclosure is aluminum.

 **TIP:** For complete information about using the MPS-488HP or MPS-482HP external power supplies, refer to their Operating Instructions available at meyersound.com/documents.



Figure 2: UP-4slim with PAS-M8 Pole-mount Adapter



Figure 1: UP-4slim with MYA-UP-4slim Yoke



Figure 3: MYA-UP-4slim Yoke, PAS-M8 Adapter Sleeve and MPK-POLE



Figure 4: MUB-UP-4slim U-bracket in Wall Mount Configuration



Figure 5: MUB-UP-4slim U-bracket in Ceiling Mount Configuration

THE UP-4slim LOUDSPEAKER

The UP-4slim requires an external Meyer Sound 48 V DC power supply. Using an external power supply eliminates the need for wiring conduits while still preserving the advantages of a self-powered loudspeaker system. The unit's onboard amplifier and signal-processing circuits are designed to store DC power and tolerate voltage drops, thereby accommodating long, light-gauge cable runs.



Figure 6: UP-4slim Rear View

UP-4slim INPUT CONNECTOR

The UP-4slim loudspeaker uses a Phoenix 5-pin male connector to receive DC power and balanced audio. The input connector's five pins, two for DC power (-, +) and three for balanced audio (shield/ground, -, +), are clearly labeled on the UP-4slim rear panel (Figure 7).



Figure 7: UP-4slim Rear Panel with Phoenix 5-pin Male Connector

CAUTION: When wiring UP-4slim loudspeaker cables, it is extremely important that each pin be wired correctly. Make sure the 48 V DC from the external power supply is wired directly (and only) to the 48 V DC pins on the UP-4slim loudspeaker connector, and that the polarity is observed (- to -, + to +) to avoid damaging the loudspeaker. Make sure to wire the audio pins correctly or system performance will be compromised.

NOTE: Also see the IntelligentDC Products Wiring Verification Installation Instructions (PN 17.902.040.01) available at meyersound.com/documents.

UP-4slim LED

The UP-4slim uses the three-color LED on its rear panel to indicate the loudspeaker's status.

Power On (Green)

When powering up the UP-4slim loudspeaker, the following startup events occur and are indicated by the LED:

1. The LED flashes all colors during power-up.
2. After a few seconds, the LED lights solid green, indicating the loudspeaker is ready to reproduce audio.

 **CAUTION:** If the power-up sequence leaves the LED flashing multiple colors or solid red, and it does not produce audio, the loudspeaker has encountered an error and may need to be serviced. Contact Meyer Sound Technical Support.

 **CAUTION:** If the power-up sequence leaves the LED solid red and the loudspeaker outputs audio, its voltage may have dropped below 25 V DC. Cease operation immediately and verify its power supply and cabling.

Limiting (Yellow)

The UP-4slim LED lights solid yellow to indicate limiting is engaged for the high-frequency channel. The LED flashes yellow to indicate limiting is engaged for the low-frequency channels.

The UP-4slim LED turns yellow when the loudspeaker's signal rises 2 dB above the limiting threshold, indicating that a safe, optimal level has been exceeded. When limiting is engaged for a channel, its gain is reduced. The limiter protects the drivers and prevents signal peaks from causing excessive distortion in the amplifier, thereby preserving headroom and maintaining a smooth frequency response at high levels. When source levels return to normal below the limiter's threshold, the LED turns green and limiting ceases.

The UP-4slim performs within its acoustical specifications at normal temperatures when the UP-4slim LED is green, or when limiting is not continuous. During continuous limiting, the loudspeaker is nearing its operational limits, resulting in the following effects:

- Increasing the input level has no effect.
- Distortion increases due to clipping and nonlinear driver operation.
- The drivers are subjected to excessive heat and excursion, which compromises their life span and may eventually damage them.

 **CAUTION:** If the UP-4slim loudspeakers in a system begin to limit before reaching the desired SPL, Meyer Sound recommends adding more loudspeakers to the system to achieve the desired SPL without exposing them to the hazardous conditions listed above.

UP-4slim Temperature and Limiting

The UP-4slim LED also lights solid yellow when its heat sink temperature reaches 65° C (145° F), indicating the unit has reached its maximum heat dissipation. Even though the UP-4slim continues to operate while the LED is yellow, the limiter threshold is lowered, causing the output level to be lowered by 3 dB, to prevent the loudspeaker from overheating. When the temperature of the heat sink cools to 50°C (122°F), the LED changes from yellow to green and the limiter threshold returns to normal.

Clipping (Red)

The UP-4slim LED turns red when the loudspeaker's input stage clips, causing the amplifier to overload. The source level must be reduced.

 **CAUTION:** If the UP-4slim LED turns solid red and the loudspeaker continues to output audio, though at reduced levels, the loudspeaker's voltage may have dropped below 25 V DC. Cease operation immediately and verify its power supply and cabling.

UP-4slim CURRENT DRAW AND CABLE REQUIREMENTS

Each UP-4slim loudspeaker draws a maximum current of 1.00 A continuous and 4.50 A peak from its external 48 V DC power supply. The current draw for the UP-4slim is dynamic and fluctuates as operating levels change. The cabling between the UP-4slim and its external power supply adds resistance and hence causes a voltage drop at the loudspeaker. Because lower DC voltages compromise amplifier performance (peak SPL), and in some cases frequency response, use short cables to minimize the cable resistance. For long cable runs, use a large cable gauge for DC power and a separate balanced audio cable for audio. For more information, see “Long Cable Runs with Separate Cable for DC Power and Audio” on page 8.

Cable Lengths and Cable Gauges for UP-4slim Loudspeakers

Cable lengths up to 150 feet between the UP-4slim and its external power supply are supported with only 1 dB of peak SPL loss using 18 AWG wire. Longer cable lengths are possible with heavier gauge wires (see Table 1 and Table 2).

Table 1: UP-4slim Loudspeaker Cable Lengths (AWG)

Cable Gauge	Resistance (Ω /ft)	Approximate Max. Length
12 AWG	0.0016	600 ft
14 AWG	0.00253	375 ft
16 AWG	0.00402	237 ft
18 AWG	0.00636	150 ft
20 AWG	0.01008	87 ft

Table 2: UP-4slim Loudspeaker Cable Lengths (European)

Cable Gauge	Resistance (Ω /m)	Approximate Max. Length
2.50 mm ²	0.0052	157 m
1.50 mm ²	0.01076	87 m
1.00 mm ²	0.02087	45 m
0.75 mm ²	0.03307	27 m



NOTE: The total cable resistance between the UP-4slim and its external power supply should not exceed 2 Ω .

Calculating the Maximum Cable Length

The maximum cable length for a UP-4slim can be calculated with the following formula:

$$\text{maximum length} = 2 \Omega / (2 * \text{cable resistance in } \Omega/\text{ft})$$

For example, the maximum length of an 18 AWG cable with a resistance of 0.00636 Ω /ft is 157.2 feet [$2 / (2 * 0.00636)$].

WIRING UP-4slim LOUDSPEAKER CABLES WITH BELDEN 1502 CABLE (OR EQUIVALENT)

The most convenient method of wiring UP-4slim loudspeaker cables is with a multiconductor cable such as Belden 1502, which has dedicated conductors for DC power and balanced audio in a single jacket. When wiring UP-4slim loudspeaker cables with Belden 1502, use the conventions illustrated in Figure 8 and in described in Table 3.

The thicker red and black wires (18 AWG) are for DC power. Cables can be up to 150 ft with just 1 dB of peak SPL loss.

The blue, white, and shield drain wires (shielded together) are for audio.

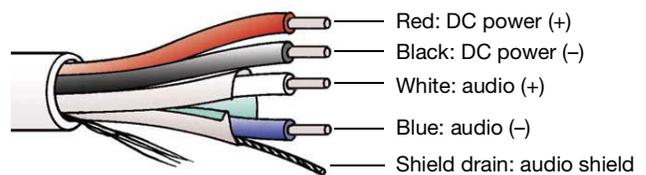


Figure 8: Belden 1502 Composite Cable

Table 3: Wiring UP-4slim Loudspeaker Cables with Belden 1502

Wire	Signal	Gauge
Red	DC power (+)	18 AWG
Black	DC power (-)	18 AWG
White	Balanced audio (+)	22 AWG
Blue	Balanced audio (-)	22 AWG
Shield drain	Balanced audio, (shield)	24 AWG



CAUTION: Make sure the 48 V DC from the external power supply is wired directly (and only) to the 48 V DC pins on the UP-4slim loudspeaker connector, and that the polarity is observed (- to -, + to +) to avoid damaging the loudspeaker. Make sure to wire the audio pins correctly or system performance will be compromised.

LONG CABLE RUNS WITH SEPARATE CABLE FOR DC POWER AND AUDIO

For installations where Belden 1502 is not feasible, or for installations that require cable runs longer than 150 ft, separate cables for DC power and balanced audio may be used: a large-gauge cable for DC and a high-quality, balanced audio cable for audio. The separate cables attach to the Phoenix connector at the loudspeaker as shown in Figure 9 and Figure 10. DC power cable runs longer than 150 ft require cable gauges larger than 18 AWG; see “Cable Lengths and Cable Gauges for UP-4slim Loudspeakers” on page 7.

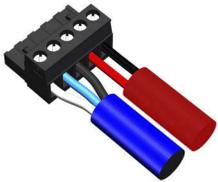


Figure 9: Phoenix Connector with Separate Power and Audio Cables

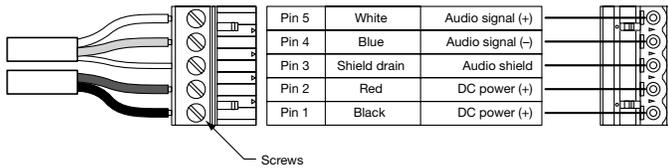


Figure 10: Separate Cables for DC Power and Balanced Audio

POWERING UP-4slim LOUDSPEAKERS

CONNECTING TO AN EXTERNAL MEYER SOUND POWER SUPPLY

UP-4slim loudspeakers require an external Meyer Sound IntelligentDC power supply. The MPS-488HP is a 19-inch (1RU) unit that distributes DC power and balanced audio to UP-4slim speakers or other Meyer Sound IntelligentDC loudspeakers. Composite multi-conductor cables (e.g., Belden® 1502) can deliver both DC power and balanced audio. The MPS-488HP can connect to Meyer Sound's RMS remote monitoring system. The MPS-488HP receives eight channels of balanced audio from its XLR female Channel Inputs. It routes the audio, along with 48 V of DC power, to its eight Channel Outputs. The MPS-488HP can drive up to eight UP-4slim loudspeakers.

The MPS-482HP is a 1RU, half-rack-width unit with two input channels and two output channels that is ideal for applications requiring a small channel count.



TIP: See meyersound.com for more details about Meyer Sound IntelligentDC power supplies.

Cable lengths up to 150 feet for DC power are possible when using 18-AWG wire, with just 1 dB of loss in peak SPL. Longer cable runs are possible for moderate applications that do not drive the loudspeakers to maximum output, or for installations with heavier gauge wires. The use of composite multiconductor cables (such as Belden 1502 or equivalent) allows a single cable to carry both DC power and balanced audio to the UP-4slims.

To connect UP-4slim loudspeakers to an MPS-488HP:

1. Power off the MPS-488HP.
2. Use balanced XLR cables to connect audio sources from a mixer or processor to the MPS-488HP Channel Inputs.
3. Use the MPS-488HP Link switches to route Channel Inputs to the desired Channel Outputs.



TIP: See the *MPS-488HP Operating Instructions, PN 05.205.005.01* available at meyersound.com/documents for complete information.

4. Connect the UP-4slim loudspeakers to the MPS-488HP Channel Outputs (Figure 11).

Use composite cables (such as Belden 1502 or equivalent) wired for both DC power and balanced audio and outfitted with the appropriate connectors.

To connect UP-4slim loudspeakers to the MPS-488HP, use Phoenix 5-pin male to Phoenix 5-pin female cables.

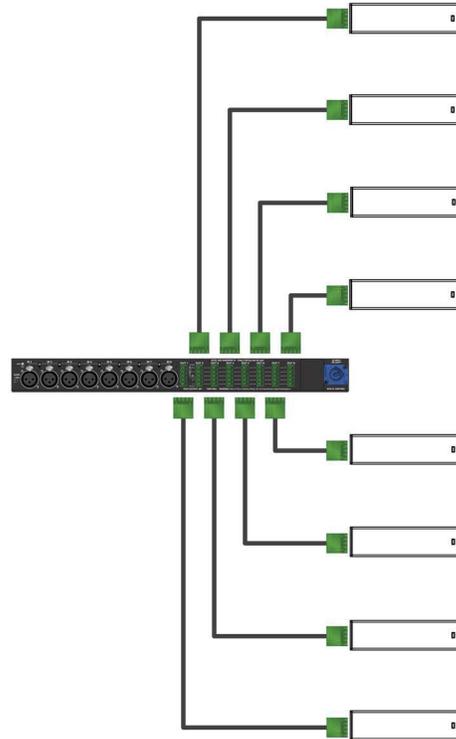


Figure 11: MPS-488HP with Eight UP-4slim Loudspeakers



TIP: It is possible to use a 2-conductor cable for DC power and a 3-conductor cable for balanced audio with both cables attached to a single Phoenix connector on each end. This approach supports use of a larger gauge DC cable, which allows longer cable runs (see “Long Cable Runs with Separate Cable for DC Power and Audio” on page 8).



CAUTION: Make sure UP-4slim loudspeaker cables are wired correctly. For details about assembling loudspeaker cables, see “Phoenix Cable Assembly” on page 25.

5. Power on the MPS-488HP and monitor the LEDs on the front panel to verify connections. For information about the MPS-488HP LEDs, refer to the *MPS-488HP Operating Instructions*.
6. Check the LEDs on the UP-4slim rear panels and verify they are green (ready to reproduce audio).

7. Enable output from the audio sources (from the mixer or processor) connected to the MPS-488HP.



NOTE: Connecting to an MPS-482HP power supply is similar. Refer to the MPS-482HP Operating Instructions (PN 05.285.005.01) available at meyersound.com/documents for complete information.



NOTE: Also see the IntelligentDC Products Wiring Verification Installation Instructions (PN 17.902.040.01) available at meyersound.com/documents.

QUICKFLY RIGGING

The UP-4slim loudspeaker is compatible with Meyer Sound's QuickFly system comprised of rugged, reliable, and easy-to-configure components. QuickFly allows the user to deploy UP-4slim loudspeakers in virtually any configuration.

IMPORTANT SAFETY CONSIDERATIONS

When installing Meyer Sound loudspeakers, the following precautions should always be observed:

- All Meyer Sound products must be used in accordance with local, state, federal, and industry regulations. It is the owner's and user's responsibility to evaluate the reliability of any rigging or mounting method for their application. Rigging should only be carried out by experienced professionals.
- The mounting and rigging hardware must be rated to meet or exceed the weight being hung.
- Make sure to attach mounting hardware to the building's structurally secure components, like studs or joists, and not to the wall surface. Verify that the building's structure and the anchors used for the installation will safely support the total weight of the mounted loudspeakers.
- Use appropriate mounting hardware for the surface where the loudspeaker will be installed.
- Make sure bolts are tightened securely. Meyer Sound recommends using Loctite® on bolt threads and safety cables.
- Inspect mounting and rigging hardware regularly. Immediately replace any worn or damaged components.

RIGGING POINTS

The top and bottom plates for the UP-4slim cabinet are constructed from aluminum and include threaded metric holes (for M8 screws) for easy connection to QuickFly rigging and third-party mounting options.

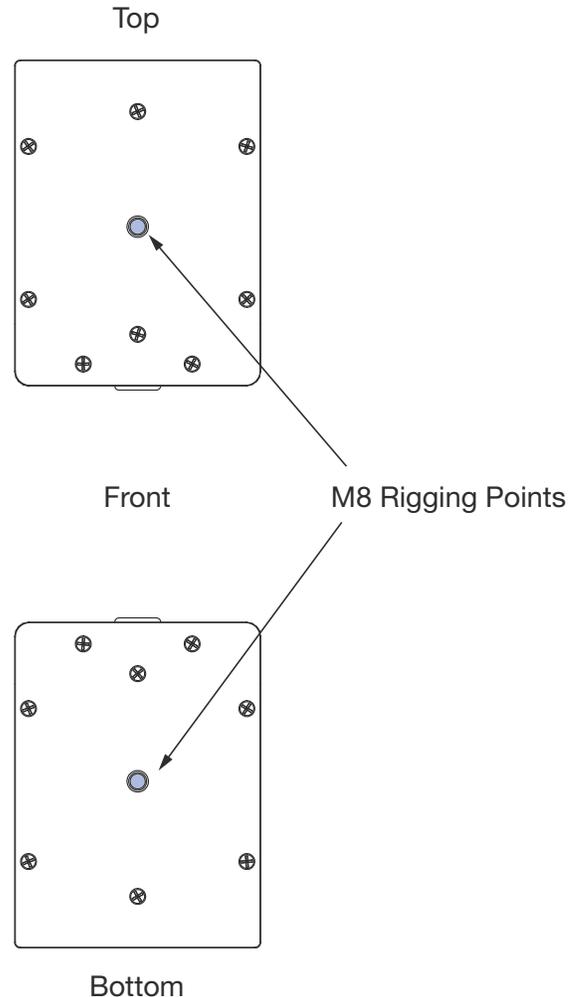


Figure 12: UP-4slim Rigging Points

UP-4slim RIGGING OPTION ACCESSORIES

Meyer Sound offers rigging options for the UP-4slim that facilitate a variety of configurations (Table 4). Dimensions, self-weights, and load ratings for the UP-4slim-specific accessories are in “Dimensional Drawings” on page 37.

Table 4: UP-4slim Rigging Options

Model	Features
MPK-POLE Adjustable Pole Mount Kit (PN 40.010.973.01)	Adjustable length 927–1524 mm (36.5–60 in) pole with assisted lift. Lower shaft fits 35 mm cups or use the removable M20 threaded lug for added stability. Upper shaft includes a PAS-M20 Adapter Sleeve to fit loudspeakers with 35 mm and M20 internal pole mounts onto a 35 mm speaker stand and the PAS-M8 Adapter Sleeve to fit loudspeakers with M8 rigging points. (Can also buy the PAS-M20 and PAS-M8 Adapter Sleeves separately). Additional 35 mm to 38 mm (1.5 in) adapter for bottom of pole included.
PAS-M8 Adapter Sleeve Kit (PN 40.010.975.01)	35 mm pole Adapter Sleeve to enable pole mounting of loudspeakers with M8 rigging points. This adapter has a threaded M8 end that screws directly into a loudspeaker’s M8 rigging point, and it has a knob on the 35 mm side to secure it to a pole. No bolts required. In addition, it can be used to mount the MYA-UP-4slim Yoke on a pole to allow for easy panning and tilting of the UP-4slim. An M8 nut and washer are required to connect the PAS-M8 Adapter Sleeve to the yoke.
MYA-UP-4slim Yoke Kit (PN 40.274.039.01)	The MYA-UP-4slim Yoke suspends a single UP-4slim loudspeaker and supports a wide range of horizontal and vertical adjustments. The yoke attaches to the top and bottom of the loudspeaker using the M8 threads on the top and bottom end plates. The kit includes two M8 bolts. The yoke may also be mounted on a 35 mm pole using the optional PAS-M8 Adapter Sleeve accessory to facilitate easy panning and tilting. (An M8 nut and washer are required for pole mounting the yoke.)
35MM Pole Stand Adapter (PN 40.010.971.01)	This large base stand adapter can be attached to the top of an MM-10 miniature subwoofer to facilitate pole-mounting the UP-4slim loudspeaker (see “UP-4slim and MM-10ACX System” on page 14). The kit includes one M8 bolt and washer set, and one 3/8-16x1.25-inch bolt and washer set.
MUB-UP-4slim U-Bracket Kit (PN 40.274.969.01)	The MUB-UP-4slim U-Bracket allows a single UP-4slim loudspeaker to be mounted to a wall (in either vertical or horizontal orientations), to the ceiling or onto the floor. The U-bracket attaches to the loudspeaker using the M8 threads on the end plates. The kit includes two M8 bolts.
MM10 Base Plate (PN 40.010.970.01)	Aluminum base plate enhances stability and protects the cabinet when placing the MM-10 subwoofer in a vertical, free-standing position (see “UP-4slim and MM-10ACX System” on page 14). Kit includes M10 and 3/8-inch-16 hardware (accommodates metric and imperial MM-10 nut plate versions) to attach the base plate to the loudspeaker.

POLE-MOUNTING A UP-4slim

It is possible to mount the UP-4slim on a 1-3/8-inch (35 mm) diameter loudspeaker stand or pole using the optional PAS-M8 (PN 40.010.975.01) (Figure 13).

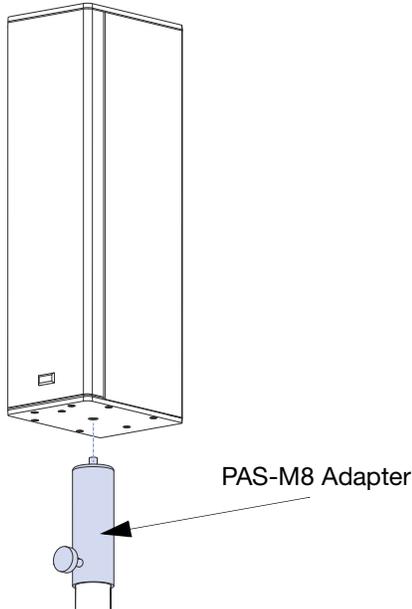


Figure 13: UP-4slim with PAS-M8 Adapter

The PAS-M8 Adapter has an M8 threaded end that screws directly into the center M8 rigging point on the bottom of the UP-4slim loudspeaker. The other end slips onto a 35 mm pole and is secured with the adapter knob.

CAUTION: When mounting the UP-4slim on a pole, make sure the pole has been rated to support the full weight of the loudspeaker. Observe all safety precautions specified by the pole manufacturer.

The UP-4slim may be mounted on top of an MM-10 or UMS subwoofer using the MPK-POLE-35MM-M20 Adjustable Pole Mount Kit (see Table 4).

The kit includes a 1-3/8 to 1-1/2 in (35-38 mm) adapter to use with the built in 1-1/2 in pole mount integrated with the UMS subwoofer.

The MM-10 requires an external 1 3/8-inch (35 mm) stand adapter (PN 40.010.971.01).

MYA-UP-4slim YOKE

The MYA-UP-4slim Yoke (PN 40.274.039.01) suspends a single UP-4slim loudspeaker and allows a wide range of horizontal and vertical adjustment (Figure 14).

The yoke allows a single UP-4slim to be mounted:

- directly to ceilings;
- on threaded rods;
- on flown bars or trusses using rigging clamps (not included); and
- on loudspeaker stands or poles with a 1 3/8-inch (35 mm) diameter using the optional MSA-STAND Adapter Cup (PN 40.086.013.01).

The yoke's bars attach to the bottom and top plate of the loudspeaker with two M8 mounting screws (included in the kit).

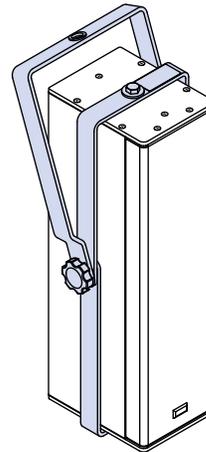


Figure 14: MYA-UP-4slim Yoke

To install the yoke:

1. Attach it to the loudspeaker's top and bottom end plates with the included bolts and washers.
2. Tighten the bottom bolt first and then the top.

The top bar of MYA-UP-4slim Yoke accommodates hanging clamps with up to 1/2-inch or 12-mm bolts

CAUTION: A steel safety cable (not included) may be required to suspend the MYA-UP-slim Yoke.

MYA-UP-4slim Yoke & PAS-M8 Adapter Sleeve

In addition to suspending a single UP-4slim, the yoke can also mount the UP-4slim on a 35-mm pole by using an M8 nut and washer to attach the optional PAS-M8 Adapter Sleeve into the yoke (Figure 15). This configuration allows a wide range of pan and tilt adjustments.

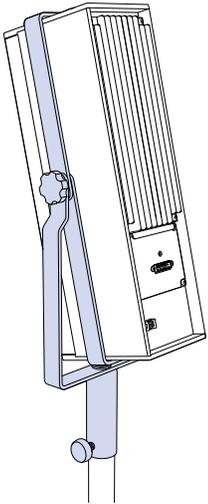


Figure 15: MYA-UP-4slim Yoke and PAS-M8 Adapter Sleeve

UP-4slim AND MM-10ACX SYSTEM

The MM-10ACX model includes onboard DC power and audio routing for driving a single UP-4slim, enabling a compact, full-range, very easy to assemble and extremely capable loudspeaker system (see Figure 16 and Figure 17).

NOTE: Meyer Sound offers a 6-foot composite cable with 5-pin Phoenix connectors on both ends to enable easy connection of an MM-10ACX (Phoenix version) to a UP-4slim (PN 28.163.009.60).

NOTE: The MM-10 Base Plate is optional but highly recommended for added stability and to protect the MM-10 subwoofer cabinet.

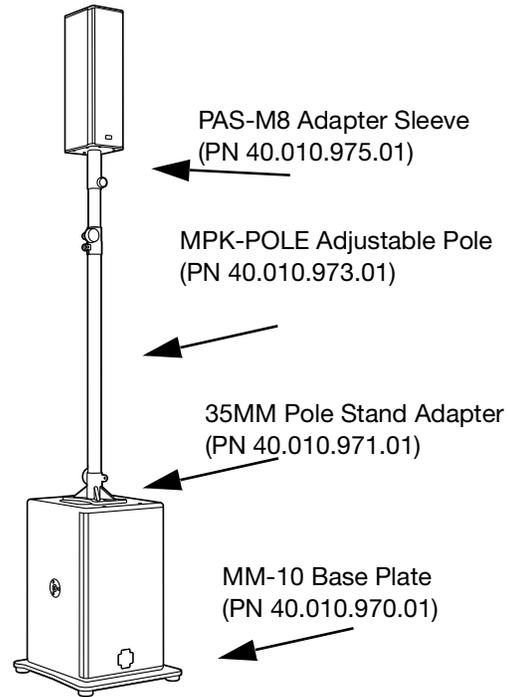


Figure 16: UP-4slim Mounted on an MM-10ACX Subwoofer

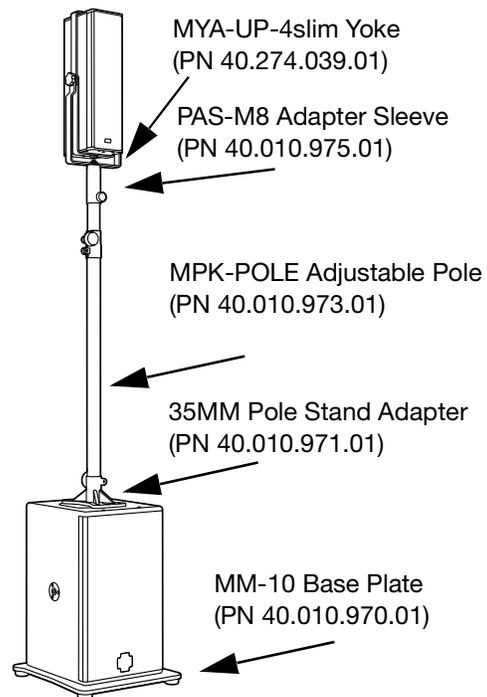


Figure 17: Yoked UP-4slim Mounted on an MM-10ACX Subwoofer

MUB-UP-4slim U-BRACKET

The MUB-UP-4slim U-bracket (PN 40.274.039.01) enables mounting of a single UP-4slim loudspeaker in a wide range of orientations:

- to ceilings;
- to walls horizontally and vertically; and
- on flown bars or trusses using a rigging clamp (not included).

Wall-Mounting with the MUB-UP-4slim

Use the MUB-UP-4slim U-bracket to mount the UP-4slim on a wall either vertically (Figure 18) or horizontally (Figure 19).

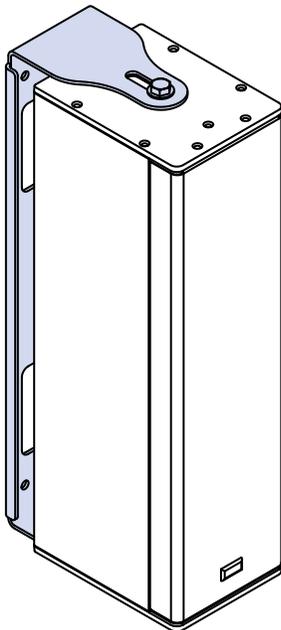


Figure 18: MUB-UP-4slim Mounted on Wall Vertically

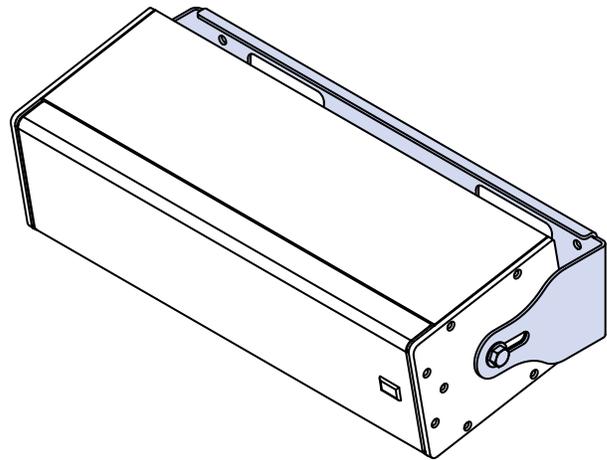


Figure 19: MUB-UP-4slim Mounted on Wall Horizontally

Ceiling-Mounting with the MUB-UP-4slim

Use the MUB-UP-4slim U-bracket to mount the UP-4slim on a ceiling (Figure 20), underbalcony, or canopy area.

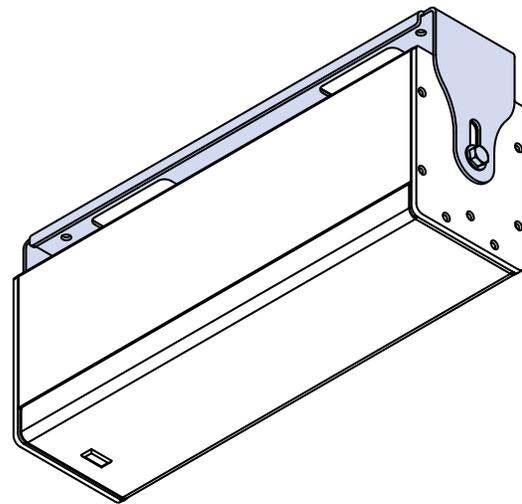


Figure 20: MUB-UP-4slim Mounted on Ceiling

Floor-Mounting with the MUB-UP-4slim

Use the MUB-UP-4slim U-bracket to mount the UP-4slim on a floor (Figure 21) or stage lip for front-fill applications.

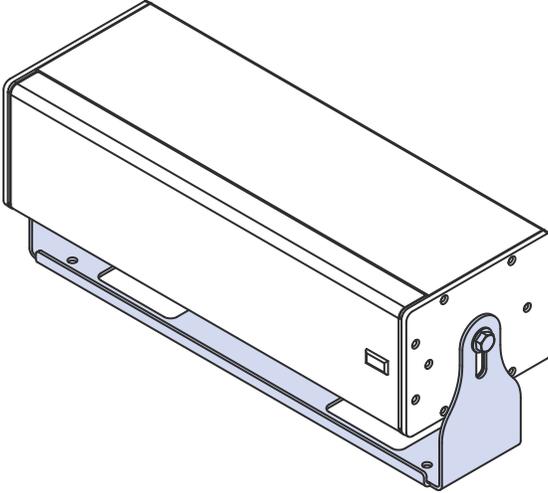


Figure 21: MUB-UP-4slim Mounted on Floor

SYSTEM DESIGN AND INTEGRATION TOOLS

This chapter introduces MAPP, Meyer Sound's patented system design tool and the Galileo GALAXY Network Platform.

MAPP SYSTEM DESIGN TOOL

The MAPP System Design Tool (Figure 22) is a powerful, cross-platform application for accurately predicting the coverage pattern, frequency response, phase response, impulse response, and SPL capability of individual or arrayed Meyer Sound loudspeakers.

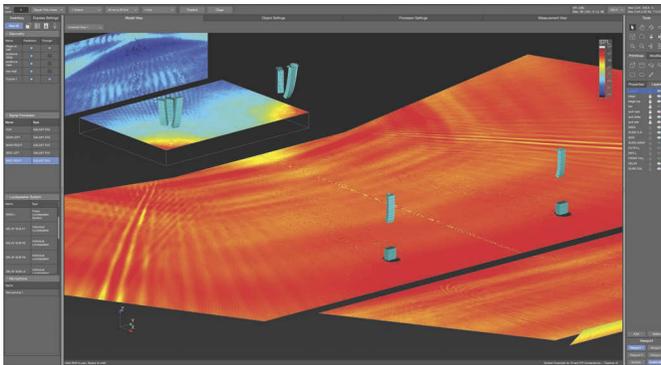


Figure 22: MAPP System Design Tool

Whether planning for fixed installations or for tours with multiple venues, use MAPP to accurately predict the appropriate loudspeaker deployment for each job, complete with coverage data, system delay and equalization settings, rigging information, and detailed design illustrations. MAPP's accurate, high-resolution predictions ensure that systems will perform as intended, thereby eliminating unexpected coverage problems and minimizing onsite adjustments.

The key to the accuracy of MAPP's predictions is Meyer Sound's exhaustive database of loudspeaker measurements. Performance predictions for each loudspeaker are based on 3-dimensional, 65,000+ 1/48th-octave-band measurements taken in the Meyer Sound anechoic chamber. The extraordinary consistency between Meyer Sound loudspeakers guarantees that predictions from MAPP will closely match their actual performance.

MAPP software allows for configuration of Meyer Sound loudspeaker systems and definition of the environment in which they operate, including air temperature, pressure, humidity, and the location of prediction surfaces. Importing both CAD (.DXF) and Sketchup (.SKP) files containing detailed venue information to act as an anchor model to the prediction surfaces and a visual aid to facilitate prediction data interpretation is also possible.



TIP: See meyersound.com for more information about and support for MAPP.

MAPP Capabilities

With MAPP, the user can:

- Simulate different loudspeaker configurations to refine system designs and determine the best coverage for intended audience areas
- Model loudspeaker interactions to locate constructive and destructive interferences so that loudspeakers can be re-aimed and repositioned as necessary
- Place microphones anywhere in the Model View space and predict loudspeaker frequency response, phase response, and sound pressure levels at each microphone position
- Determine delay settings for fill loudspeakers using the Inverse Fast Fourier Transform and phase response feature
- Preview the results of signal processing to determine optimum settings for the best system response
- Automatically calculate load information for arrays to determine necessary minimum rigging capacity, front-to-back weight distribution, and center of gravity location
- Generate and export system images and system PDF reports for client presentations
- Synchronize GALAXY processor output channel settings in real time with virtual or real GALAXY units, allowing in-the-field changes to be predicted during system alignments.

GALILEO GALAXY NETWORK PLATFORM

The Galileo GALAXY Network Platform is a sophisticated loudspeaker management tool for controlling all Meyer Sound speaker types. The GALAXY loudspeaker processor extends a high level of audio control in driving and aligning loudspeaker systems with multiple zones. It provides a powerful tool set for corrective equalization (EQ) and creative fine-tuning for a full range of applications from touring to cinema.

Users can readily program the GALAXY processor using Compass software running on a host computer or via the Compass Go application for the iPad. Connecting MAPP to the GALAXY processor will also allow the user to push output channel settings created in MAPP as a starting point. Compass Control Software includes custom-designed settings for each family of speakers, as well as to integrate families together. For example, the Product Integration feature matches the phase characteristics between Meyer speaker families to ensure the most coherent summation.

Processing tools for inputs and outputs include delay, parametric EQ and U-Shaping EQ. Output processing also includes polarity reversal, Low-Mid Beam control (LMBC), atmospheric correction, and All Pass filters.

The built-in summing and delay matrices allow a user to easily assign gain and delay values, respectively, at each cross point. This capability greatly facilitates using one loudspeaker to satisfy multiple purposes.

Front panel controls let a user intuitively and quickly operate a GALAXY processor without a computer during live use.

The GALAXY 408, GALAXY 816 and GALAXY 816-AES3 processor versions have the same audio processing capability with different I/O. See www.meyersound.com to locate their datasheets for more information.

MEYER SOUND WEATHER PROTECTION

The Weather Protection option from Meyer Sound is intended to increase the useful life of Meyer Sound loudspeakers when they are installed outdoors and exposed to different and often harsh weather conditions.

Meyer Sound Weather Protection includes a penetrating treatment to raw wood, use of special primers, and plating on all steel parts used (or alternatively, the use of stainless steel hardware). Weather Protection is designed to prevent malfunctions caused by harsh operating environments and slows the accelerated wear and tear that occurs in outdoor environments.

When Is Weather Protection Advisable?

Weather Protection is strongly recommended for all permanent outdoor installations where loudspeakers are directly exposed to the elements. This recommendation includes desert and semi-arid climates, where protection against dust and sand is important, and where infrequent rainstorms can contribute to deterioration of loudspeaker components.

Weather Protection is also recommended when the loudspeakers are sheltered from direct exposure to precipitation, but are nevertheless exposed to prolonged high humidity, fog or mist. Examples would be installations on covered outdoor terraces or pavilions.

Weather Protection is further advisable for portable or touring systems when any significant outdoor use is anticipated. Even though standard procedures may call for using external protective measures, these are often not implemented in time to prevent moisture intrusions that could lead to premature performance degradation of the loudspeaker.

Climate Variation and Owner Maintenance

The wear and tear on a loudspeaker will vary significantly with different climatic conditions. For example, a weather-protected loudspeaker installed in a sunlight-exposed location on an ocean pier will experience much harsher conditions than a loudspeaker in a similar installation that is shaded by trees and exposed only to rainfall. The constant exposure to direct UV radiation and a salt air environment will cause a loudspeaker to wear more quickly than one with partial UV shielding and exposed only to freshwater moisture.

Wear can eventually affect the performance of the loudspeaker. It also affects aesthetics. For example, in salt air environments, the exterior grille can quickly show signs of oxidation, causing unsightly discoloration.

Apart from selecting suitable weather protection, the progress of wear and tear on the loudspeaker can be slowed by a regular schedule of inspection and cleaning. This maintenance is particularly necessary in harsh environments. Inspection and cleaning should include routine removal of any visible oxidation or environmental particulates, as these can accelerate metal corrosion or decay of the cabinet. If installed loudspeakers are not in use for an extended period, exterior protection or temporary removal and storage of the loudspeakers should be considered.

Benefits of Weather Protection

There are several benefits to selecting the Meyer Sound Weather Protection option:

Functionality—Weather Protection prolongs the service life of the loudspeaker by preventing premature degradation of internal components.

Safety—Weather Protection lessens the chance of electrical malfunctions or structural failures.



WARNING: IT IS THE RESPONSIBILITY OF PURCHASERS/USERS/OPERATORS TO SELECT WEATHER PROTECTION WHEN APPROPRIATE FOR THEIR USE AND TO PERIODICALLY INSPECT THEIR LOUDSPEAKER INSTALLATIONS FOR ANY DETERIORATION THAT MAY LEAD TO SAFETY CONCERNS.

Aesthetics—Weather Protection slows wear and tear on the exterior of the loudspeaker in harsh conditions. Early signs of wear and tear on the exterior of the loudspeaker indicate over-exposure to the elements.

Standards Compliance—Weather Protection helps in meeting IP ratings for loudspeakers. IP ratings are an internationally recognized standard often used in installations involving our products. A further explanation of IP ratings is given in the “IP Ratings” Section on page 21.

WEATHER PROTECTION COMPONENTS

Standard Weather Protection

Meyer Sound designs toward an IP rating of IPX4 (see “IP Ratings” on page 21) for Standard Weather Protection, which includes the following components:

- Wood treatment—Prior to cabinet manufacturing, the raw wood receives a special treatment that penetrates and stabilizes the wood fibers to withstand a wide range of temperatures and exposure to extreme humidity.
- Cabinet finishing—The assembled cabinets receive a highly impervious finish that includes a sealing primer and a finishing topcoat. The coatings are applied on both surfaces, with one coat on the interior and two on the exterior. The final step is a two-part modified acrylic urethane similar to that used in military applications.
- Driver treatment—All cone drivers are coated with a water-resistant sealant.
- Exterior protection—Grille frames are coated to resist corrosion, and all components that mount to the cabinet use custom gaskets and stainless steel fasteners.
- Removable rain hood—The rain hood is designed to shield connectors even in wind-driven rain.

If in doubt about an installation method, contact Meyer Sound Technical Support for assistance.

Always discuss the environmental conditions of your Meyer Sound installation with your Sales Manager, and verify the availability of Weather Protection for your selected loudspeaker models. The Sales Manager, together with Technical Support, will verify the appropriate level of weather protection for the loudspeakers and related rigging hardware.

INSTALLATION PRACTICES

Meyer Sound assumes normal and accepted installation practices are used when installing Meyer Sound Loudspeakers outdoors. Deviation from such practices may cause weather protection to be ineffective and void the warranty for the loudspeaker.

Examples of unacceptable and acceptable installation practices include:

- Loudspeakers installed outdoors should not face upward.
- Loudspeakers with a rain hood should be installed in such a way that the rain hood opening is not facing any direction but down.
- Meyer Sound-supplied rigging components should not be modified (for example, by drilling additional holes in a MUB for mounting to a wall). When an installer/integrator modifies a Meyer Sound supplied rigging component to support their installation method, it is considered compromised and out of warranty.
- All speaker cabling must be installed with a “drip-loop” or equivalent method to ensure that rain/water is NOT wicked toward the speaker.

IP RATINGS

IP stands for “Ingress Protection.” The current format for expressing an IP rating is a 2-digit code. The first digit of an IP rating represents protection from solid objects. The second digit of an IP rating represents protection from water or moisture. Table 5 provides a chart of IP ratings and the corresponding definitions of the rating.



NOTE: IP ratings only apply to the “ENCLOSURE.” A loudspeaker is considered an enclosure and as such we can apply an IP rating to it. Rigging hardware is not an enclosure and therefore IP ratings do not apply. Also, cable and cable-mount connectors used to connect to the loudspeaker are NOT part of the enclosure and therefore not part of the IP rating. Only the chassis-mounted part of the connector is considered part of the enclosure.

Table 5: IP Ratings Definition Chart

First Digit (Protection against solid objects)	Definition	Second Digit (Protection against liquids)	Definition
X	Characteristic numeral is not required to be specified.	X	Characteristic numeral is not required to be specified.
0	No protection.	0	No protection.
1	Protected against solid objects over 50 mm.	1	Protected against vertically falling drops of water.
2	Protected against solid objects over 12 mm.	2	Protected against direct sprays up to 15° from the vertical.
3	Protected against solid objects over 2.5 mm.	3	Protected against direct sprays up to 60° from the vertical.
4	Protected against solid objects over 1 mm.	4	Protected against direct sprays from all directions. Limited ingress permitted.
5	Protected against dust. Limited ingress permitted.	5	Protected against low-pressure jets of water from all directions. Limited ingress permitted.
6	Totally protected against dust.	6	Protected against strong jets of water from all directions. Limited ingress permitted.
		7	Protected against the effect of temporary immersion between 15 cm and 1 m.
		8	Protected against the effect of long-term submersion of 1 m or more.

RAIN HOOD

A sealed, weather-protected version of the UP-4slim, rated at IPX5, is available with an included rain hood kit that safeguards the Phoenix connectors from the elements in fixed outdoor installations. The rain hood is made of durable, high-impact, transparent polycarbonate so the loudspeaker's connections and LEDs are visible (Figure 23 and Figure 24). The weather-protected UP-4slim can be mounted vertically or horizontally.



Figure 23: Weather-Protected UP-4slim with Rain Hood Attached

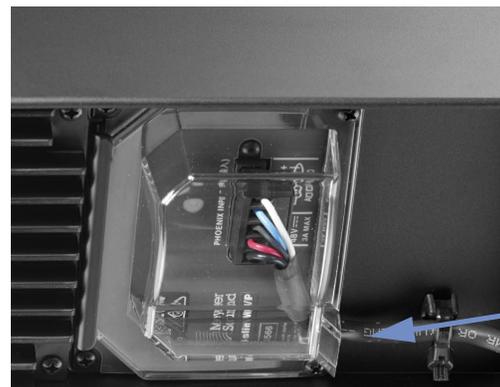
CAUTION: The weather-protected UP-4slim loudspeaker must be mounted with a 0° tilt, or preferably with a slight down-tilt with the cables exiting from the bottom. This angle shields the driver from the elements and does not allow water to accumulate. Do not tilt the cabinet up, as the drivers and cabinet will accumulate water.

NOTE: Weather-protected UP-4slim loudspeakers using the rain hood are rated IPX5 for water intrusion.



Vertical orientation: the Phoenix connector will be to the right and the cables will exit from the bottom left of the rain hood.

Figure 24: Close-up view of UP-4slim with Rain Hood and Cables Attached—Vertical Orientation



Horizontal orientation: the Phoenix connector will be at the top and the cables will exit from the bottom of the right side of the rain hood.

Figure 25: Close-up view of UP-4slim with Rain Hood and Cables Attached—Horizontal Orientation

To install the UP-4slim rain hood:

1. Orient the loudspeaker horizontally or vertically and attach the phoenix connector.

CAUTION: When mounting the loudspeaker, ensure that the cables will exit from the bottom of the loudspeaker when the rain hood is installed. There is only one horizontal and one vertical orientation possible (see Figure 24 and Figure 25).

2. Guide the cable through the exit slot on the rain hood. Attach the upper part of the rain hood assembly by slipping it under the user panel's top flange.

3. Secure the rain hood to the user panel with the two 6-32 x 0.5-inch pan head screws provided. The recommended torque value for rain hood screws is 8 in-lb (0.9 N·m).

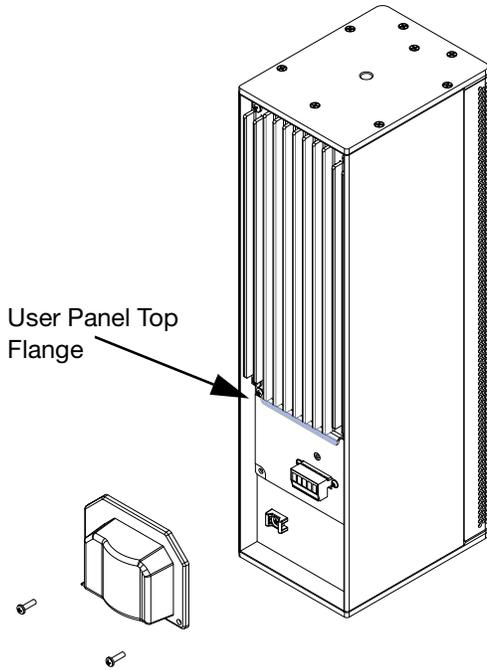


Figure 26: UP-4slim with rain hood assembly

PHOENIX CABLE ASSEMBLY

CAUTION: When wiring loudspeaker cables, it is extremely important to wire each pin correctly. Make sure the 48 V DC from the external power supply is wired directly (and only) to the 48 V DC pins on the loudspeaker connector, and that the polarity is observed (negative to negative, positive to positive) to avoid damage to the loudspeaker. In addition, make sure to wire audio pins correctly as polarity reversal on audio signals affects system performance.

To assemble a 5-pin female Phoenix to 5-pin female Phoenix cable:

1. If the cable has not yet been stripped, strip one end of the cable. Strip the outer shielding by 1 inch and then strip the black, red, blue, and white wires by 0.275 inch (Figure 27).

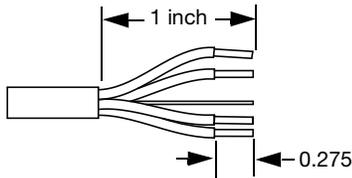


Figure 27: Stripping Cable Shielding and Wires

2. Insert the five exposed conductors into the five cable holes in a Phoenix 5-pin female cable mount connector.

The wiring scheme is shown in Figure 28.



Figure 28: Pin Destinations for Phoenix 5-Pin Female Cable Mount Connector

3. Secure the conductors by tightening the five screws in the Phoenix cable mount connector.

Torque the screws to 0.5–0.6 N·m (4.4–5.3 in-lbs).

CAUTION: Screws should not be tightened while the connector rests in a mating plug. Doing so will damage the contacts. During assembly, the Phoenix connector should only be held in place externally.

4. Repeat the previous steps and attach the other end of the cable to another Phoenix 5-pin female cable mount connector (Figure 29).
5. Verify the wiring polarity is correct for both cable ends.

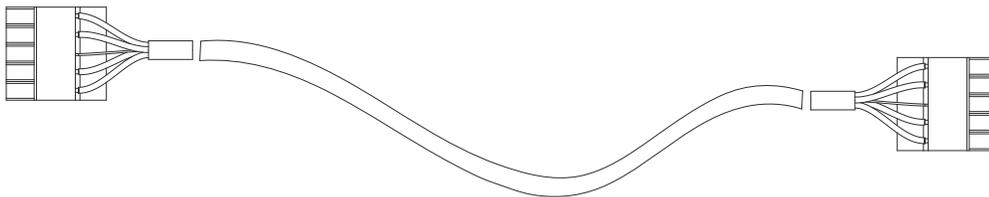


Figure 29: Assembled Phoenix-to-Phoenix Cable

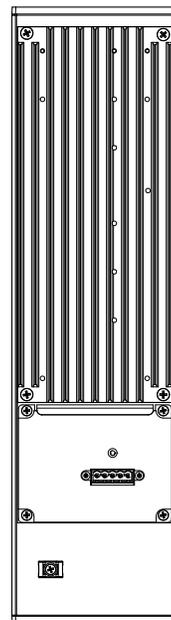
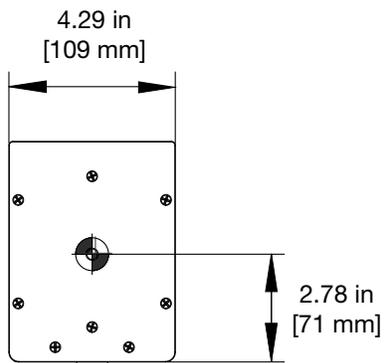
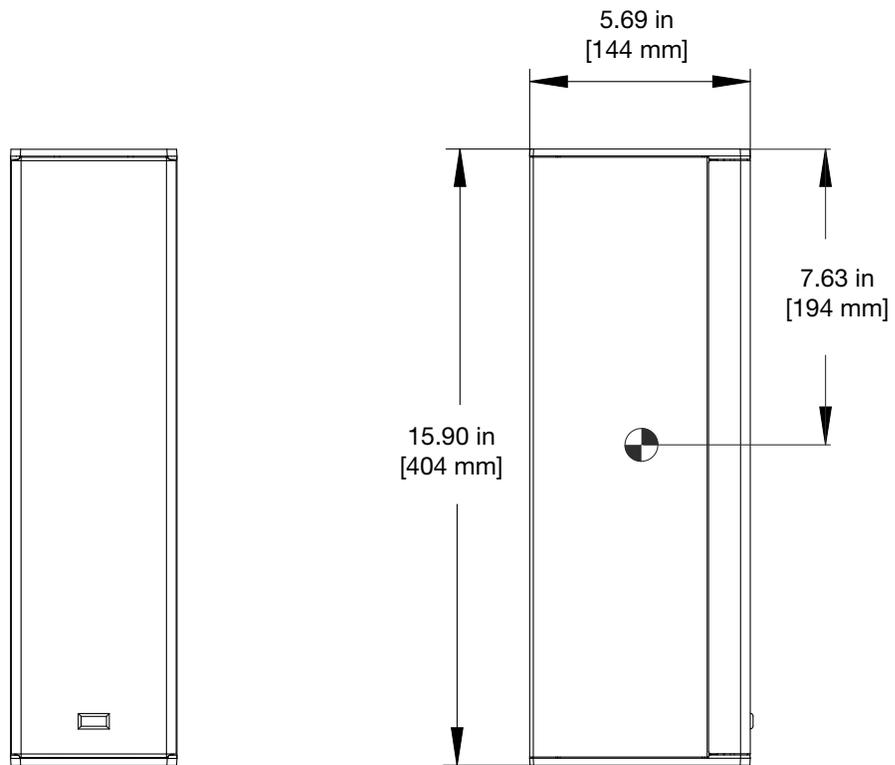
SPECIFICATIONS

ACOUSTICAL	
Operating Frequency Range	65 Hz – 18 kHz Note: Recommended maximum operating frequency range. Response depends on loading conditions and room acoustics. Note: The weather-protected version is sealed; the range is 100 Hz – 18 kHz.
Frequency Response	70 Hz – 18 kHz ± 4 dB Note: Measured free-field with pink noise at 1 m, 1/3-octave frequency resolution. Note: The weather-protected version is sealed; the response is 120 Hz – 17.5 kHz ± 4 dB.
Phase Response	102 Hz – 18 kHz $\pm 45^\circ$
Linear Peak SPL	116.5 dB with >16.5 dB crest factor (M-Noise) , 109.5 dB (Pink Noise), 112.5 dB (B-Noise) Note: Linear Peak SPL is measured in free-field at 4 m, referred to 1 m. Loudspeaker SPL compression (measured with M-Noise at the onset of limiting, 2-hr duration, and 50°C ambient temperature) is <2 dB. M-noise is a full bandwidth (10 Hz to 22.5 kHz) test signal developed by Meyer Sound to better measure the loudspeaker's music performance. It has a constant instantaneous peak level in octave bands, a crest factor that increases with frequency, and a full bandwidth Peak-to-RMS ratio of 18 dB. The presence of a greater-than (>) symbol with regard to crest factor indicates it may be higher depending on EQ and boundary loading. Pink noise is a full bandwidth test signal with a Peak-to-RMS ratio of 12.5 dB. B-noise is a Meyer Sound test signal used to ensure measurements reflect system behavior when reproducing the most common input spectrum, and verify there is still headroom over pink noise.
COVERAGE	
Horizontal	100°
Vertical	100°
TRANSDUCERS	
Low Frequency	Two 4-inch cone drivers; 4 Ω nominal impedance
High Frequency	One 1-inch metal dome tweeter; 8 Ω nominal impedance
AUDIO INPUT	
Type	Differential, electronically balanced
Maximum Common Mode Range	± 5 V DC
Connector Type	Phoenix 5-pin male
Input Impedance	10 k Ω differential between positive (+) and negative (-) audio pins
Wiring	Pin 1: DC Power (-) Pin 2: DC Power (+) Pin 3: Audio Shield, chassis/earth through 220 k Ω , 1000 pF, 15 V clamped network to provide virtual ground lift at audio frequencies. Pin 4: Audio (-) Pin 5: Audio (+)
Nominal Input Sensitivity	-2.0 dBV (0.8 V rms) continuous average is typically the onset of limiting for noise and music.
Input Level	Audio source must be capable of producing +16 dBV into 600 W to produce the maximum peak SPL over the operating bandwidth of the loudspeaker

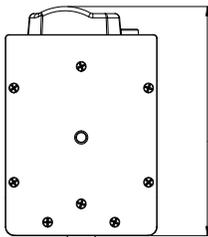
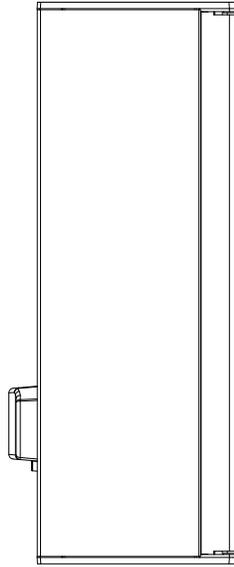
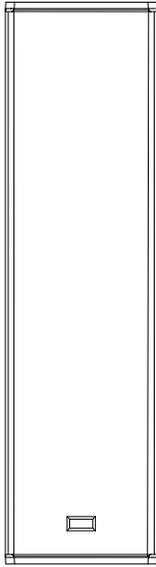
AMPLIFIER	
Type	3-channel (class D) with crossover
Total Output Power	500 W peak Note: Peak power based on the maximum unclipped peak voltage the amplifier will produce into the nominal load impedance.
THD, IM, TIM	<0.02%
Cooling	Convection
DC POWER	
Connector	Phoenix 5-pin male provides power and audio connection (see Wiring above)
Safety Agency Rated Operating Range	48 V DC (Meyer Sound IntelligentDC External Power Supply Required) Note: Tolerates voltage drops up to 30% due to long cable runs. Normal operating conditions with recommended cable gauge and length assures peak SPL remains within 2 dB of max SPL specification.
DC CURRENT DRAW	
Idle	0.23 A average
Maximum Long-Term Continuous (>10 s)	1.00 A average
Maximum Instantaneous Peak	4.50 A peak
PHYSICAL	
Dimensions	W: 4.29 in (109 mm) x H: 15.90 in (404 mm) x D: 5.69 in (144 mm)
Weight	14 lb (6.35 kg)
Enclosure	Aluminum with slightly textured black finish
Protective Grille	Power-coated, stamped steel with black mesh
Rigging	Top and bottom aluminum plates with M8 threads
ENVIRONMENTAL	
Operating Temperature	0 °C to +45 °C
Non Operating Temperature	-40 °C to +75 °C
Humidity	To 95% at 45 °C (non-condensing)
Operating Altitude	To 5,000 m (16,404 ft)
Non Operating Altitude	To 12,000 m (39,000 ft)
Shock	30 g 11 msec half-sine on each of 6 sides
Vibration	10 Hz – 55 Hz (0.010 m peak-to-peak excursion)
IP Rating	Weather-protected version rated IPx5 with properly installed rain hood. See “Rain Hood” on page 23.



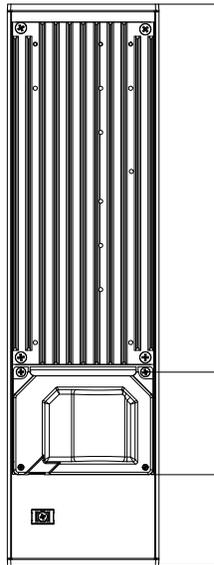
UP-4slim DIMENSIONS



UP-4slim WITH RAIN HOOD DIMENSIONS



6.49 in
[165 mm]

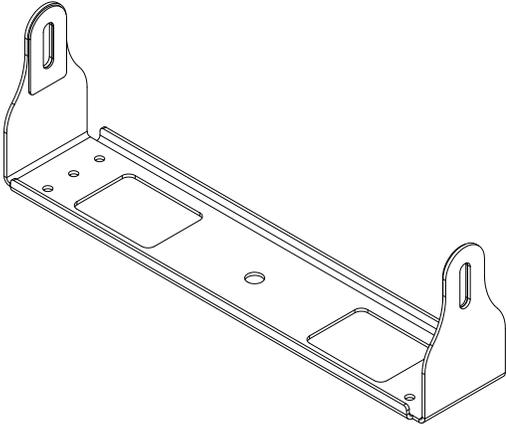
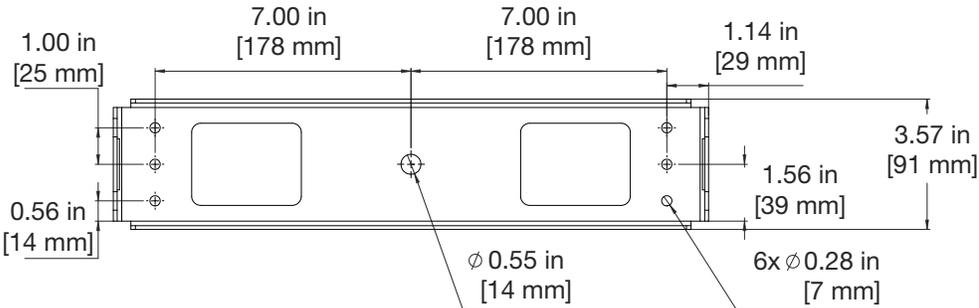
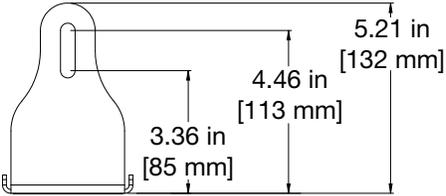


10.42 in
[265 mm]

2.58 in
[66 mm]

MUB-UP-4slim U-BRACKET DIMENSIONS

Self-weight: 2 lb [0.9 kg]
Load rating: 5:1
14 lb [6.4 kg]
(1 UP-4slim)



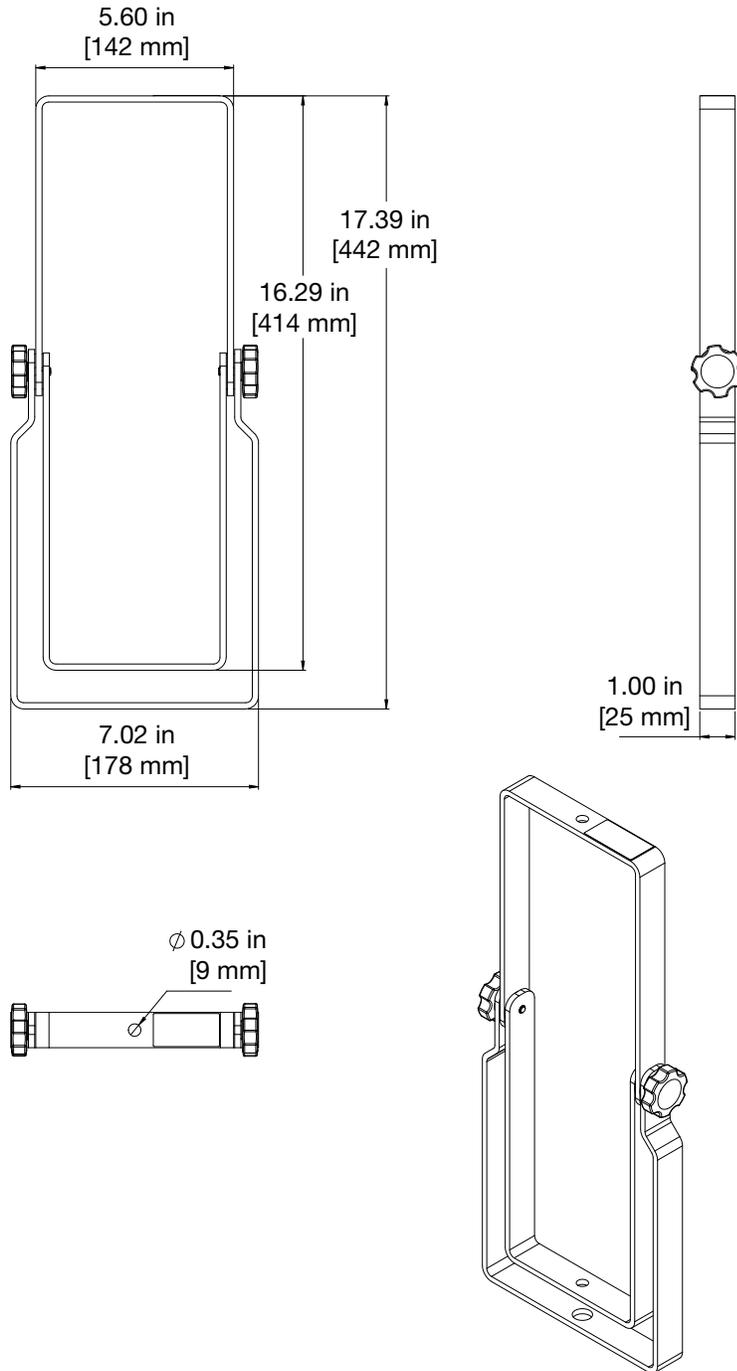
MYA-UP-4slim YOKE DIMENSIONS

Self-weight: 3 lb [1.4 kg]

Load rating: 5:1

14 lb [6.4 kg]

(1 UP-4slim)







THINKING SOUND

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UP-4slim Operating Instructions PN 05.274.005.01 A4