OPERATING INSTRUCTIONS — ULTRA-X80

TABLE OF CONTENTS

ULTRA-X80/82 Operating Instructions, PN 05.330.005.01 A 2504

MEYER SOUND PRODUCT SAFETY INSTRUCTIONS

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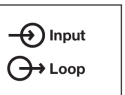
- ENGLISH
- SPANISH Español
- GERMAN Deutsch
- FRENCH Français
- RUSSIAN Английский
- JAPANESE 英語 (えいご, Eigo)
- KOREAN 영어 (Yeongeo)
- CHINESE 英语 (Yīngyǔ)
- ARABIC الإنجليزية (Al-Ingliziyya)
- HEBREW אנגלית (Anglit)

Safety Symbols Used

These symbols indicate important safety features in Meyer Sound documentation and on the frame or chassis:

							
Dangerous voltages: risk of electric shock	Important operating instructions	Protective earth ground	Hot surface: do not touch	Electronic instructions for use: instruction location in QR code	AC Power Inlet	Milan Audio Port	Analog Audio Input Analog Audio Looping Output

Important Safety Instructions

- Read these instructions.
- Keep these instructions.
- Follow all instructions.
- Do not use this apparatus near water.
- Clean only with dry cloth.
- Do not block any ventilation openings. Install in accordance with Meyer Sound's installation instructions.

- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus that produce heat.
- 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.
- 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.
- 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.
- 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.
- Only use attachments/accessories specified by Meyer Sound. Use only with the caster rails or rigging specified by Meyer Sound, or sold with the apparatus. Handles are for carrying only.
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- This apparatus contains potentially dangerous voltages. Do not try to disassemble the apparatus. 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.
- 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

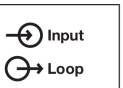
- For Meyer Sound IntelligentDC Power Supply models MPS-488HP and MPS-482HP, the external wiring connected to the output terminals of the units require installation by an Instructed person or the use of ready-made leads or cords.
- To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture. Do not install the apparatus in wet or humid locations without using weather protection equipment from Meyer Sound.
- 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 speaker.

Símbolos Utilizados

Estos símbolos indican características importantes de seguridad u operación en este folleto y en el bastidor o chasis

							
Tensiones peligrosas: riesgo de descarga eléctrica	Instrucciones de funcionamiento importantes	Toma de tierra de protección	Superficie caliente: no tocar	Instrucciones de uso electrónicas: ubicación de instrucciones en el código QR 	Entrada de corriente alterna	Puerto de audio Milán	Entrada de audio analógico Salida de bucle de audio analógico

Instrucciones de seguridad importantes

- Lea estas instrucciones.
- Guarde estas instrucciones.
- Siga todas las instrucciones.
- No use este aparato cerca del agua.
- Limpie solo con un paño seco.
- No bloquee las aberturas de ventilación. Instale de acuerdo con las instrucciones de instalación de Meyer Sound.
- No lo instale cerca de fuentes de calor como radiadores, rejillas de calefacción, estufas u otros aparatos que produzcan calor.
- No anule el propósito de seguridad del enchufe con conexión a tierra. Un enchufe con conexión a tierra tiene dos clavijas y una tercera clavija de conexión a tierra. La tercera punta se proporciona para su seguridad. Si el enchufe provisto no encaja en su tomacorriente, consulte a un electricista para reemplazar el tomacorriente obsoleto.
- Conecte el aparato a un receptáculo de red con conexión a tierra de dos polos y tres hilos. El receptáculo debe estar conectado a un fusible o disyuntor. La conexión a cualquier otro tipo de receptáculo presenta un riesgo de descarga eléctrica y puede violar los códigos eléctricos locales.
- Para reducir el riesgo de descarga eléctrica, desconecte el aparato de la red de CA antes de instalar el cable de audio. Vuelva a conectar el cable de alimentación solo después de realizar todas las conexiones de señal.
- Proteja el cable de alimentación para que no lo pisen ni lo pellizquen, especialmente en los enchufes, los receptáculos de conveniencia y el punto donde salen del aparato. El enchufe de red de CA o el acoplador del aparato deben permanecer fácilmente accesibles para su funcionamiento.
- Utilice únicamente aditamentos/accesorios especificados por Meyer Sound. Úselo únicamente con los rieles giratorios o aparejos especificados por Meyer Sound, o vendidos con el aparato. Las asas son solo para llevar.
- Desenchufe este aparato durante tormentas eléctricas o cuando no se utilice durante largos períodos de tiempo.
- Este aparato contiene voltajes potencialmente peligrosos. No intente desmontar el aparato. Si está equipado con un portafusibles externo, el fusible reemplazable es el único elemento reparable por el usuario. Cuando reemplace el fusible, use solo el mismo tipo y el mismo valor.

- Remita todos los demás servicios a personal de servicio calificado. Se requiere servicio cuando el aparato se ha dañado de alguna manera, como cuando se ha dañado el cable de alimentación o el enchufe; se ha derramado líquido o han caído objetos dentro del aparato; ha entrado lluvia o humedad en el aparato; el aparato se ha caído; o cuando por causas no determinadas el aparato no funcione con normalidad.

WARNING

- Para los modelos MPS-488HP y MPS-482HP de fuentes de alimentación CC inteligentes de Meyer Sound, el cableado externo conectado a los terminales de salida de las unidades requiere la instalación por parte de una persona instruida o el uso de cables o conductores prefabricados.
- Para reducir el riesgo de incendio o descarga eléctrica, no exponga este aparato a la lluvia ni a la humedad. No instale el aparato en lugares mojados o húmedos sin usar el equipo de protección contra la intemperie de Meyer Sound.
- Los aparatos de Clase I se deben conectar a una toma de corriente con una conexión a tierra de protección.

CAUTION

Desconecte el enchufe de red antes de desconectar el cable de alimentación del altavoz.

Verwendete Symbole

Diese Symbole weisen auf wichtige Sicherheits- oder Betriebsmerkmale in dieser Broschüre und am Gehäuse bzw. Fahrgestell hin:

Gefährliche Spannungen: Stromschlaggefahr	Hinweis auf wichtige Punkte der Betriebsanleitung	Schutzerdung	Heiße Oberfläche: nicht berühren	Elektronische Gebrauchsanweisung: anweisungsort im QR-Code	Wechselstroma Anschluss	Milan Audioanschluss	Analoger Audioeingang Analoger Audio-Loop-Ausgang

Wichtige Sicherheitsanweisungen

- Lesen Sie diese Anweisungen.

- Bewahren Sie diese Anleitung auf.
- Befolgen Sie alle Anweisungen.
- Benutzen Sie dieses Gerät nicht in der Nähe von Wasser.
- Nur mit trockenem Tuch reinigen.
- Blockieren Sie keine Lüftungsöffnungen. Installieren Sie es gemäß den Installationsanweisungen von Meyer Sound.
- Nicht in der Nähe von Wärmequellen wie Heizkörpern, Heizregistern, Öfen oder anderen Geräten installieren, die Wärme erzeugen.
- Der Sicherheitszweck des Schukosteckers darf nicht außer Kraft gesetzt werden. Ein Schukostecker hat zwei Stifte und einen dritten Erdungsstift. Der dritte Stift dient Ihrer Sicherheit. Wenn der mitgelieferte Stecker nicht in Ihre Steckdose passt, wenden Sie sich an einen Elektriker, um die veraltete Steckdose auszutauschen.
- Schließen Sie das Gerät an eine zweipolige, dreiadrige geerdete Netzsteckdose an. Die Steckdose muss an eine Sicherung oder einen Schutzschalter angeschlossen sein. Der Anschluss an jede andere Art von Steckdose birgt die Gefahr eines Stromschlags und kann einen Verstoß gegen die örtlichen Elektrovorschriften darstellen.
- Um das Risiko eines Stromschlags zu verringern, trennen Sie das Gerät vom Stromnetz, bevor Sie das Audiokabel installieren. Schließen Sie das Netzkabel erst wieder an, nachdem alle Signalverbindungen hergestellt wurden.
- Schützen Sie das Netzkabel davor, darauf zu treten oder es einzuklemmen, insbesondere an Steckern, Steckdosen und an der Stelle, an der es aus dem Gerät austritt. Der Netzstecker oder Gerätestecker muss für den Betrieb leicht zugänglich bleiben.
- Verwenden Sie nur von Meyer Sound empfohlene Anbauteile/Zubehör. Verwenden Sie es nur mit den von Meyer Sound angegebenen oder mit dem Gerät verkauften Rollenschienen oder Aufhängungen. Die Griffe dienen nur zum Tragen.
- Trennen Sie das Gerät während eines Gewitters oder bei längerer Nichtbenutzung vom Stromnetz.
- Dieses Gerät steht unter potenziell gefährlicher Spannung. Versuchen Sie nicht, das Gerät zu zerlegen. Bei Ausstattung mit einem externen Sicherungshalter ist die austauschbare Sicherung das einzige Element, das vom Benutzer gewartet werden kann. Verwenden Sie beim Austausch der Sicherung nur denselben Typ und denselben Wert.
- Überlassen Sie alle anderen Wartungsarbeiten qualifiziertem Servicepersonal. Eine Wartung ist erforderlich, wenn das Gerät in irgendeiner Weise beschädigt wurde, beispielsweise wenn das Netzkabel oder der Stecker beschädigt wurde; Flüssigkeit verschüttet wurde oder Gegenstände in das Gerät gefallen sind; Regen oder Feuchtigkeit sind in das Gerät eingedrungen; das Gerät wurde fallen gelassen; oder wenn das Gerät aus unbestimmten Gründen nicht normal funktioniert.

WARNING

- Bei den Meyer Sound IntelligentDC-Netzteilmodellen MPS-488HP und MPS-482HP muss die externe Verkabelung, die an die Ausgangsklemmen der Geräte angeschlossen wird, von einer eingewiesenen Person installiert werden oder es müssen vorgefertigte Leitungen oder Kabel verwendet werden.
- Um die Gefahr eines Brandes oder Stromschlags zu verringern, setzen Sie dieses Gerät weder Regen noch Feuchtigkeit aus. Installieren Sie das Gerät nicht an nassen oder feuchten Orten, ohne Wetterschutzausrüstung von Meyer Sound zu verwenden.
- Geräte der Klasse I müssen an eine Netzsteckdose mit Schutzerdung angeschlossen werden.

CAUTION

Ziehen Sie den Netzstecker, bevor Sie das Netzkabel vom Lautsprecher trennen.

Symboles Utilisés

Ces symboles indiquent les caractéristiques de sécurité ou de fonctionnement importantes dans ce livret et sur le cadre ou le châssis:

							
Pour indiquer les risques résultant de tensions dangereuses	Instructions d'utilisation importantes	Protection de terre	Surface chaude: ne pas toucher	Mode d'emploi électronique: emplacement des instructions dans le QR code 	Prise de courant alternatif	Port audio Milan	Entrée audio analogique Sortie de boucle audio analogique

Consignes de sécurité importantes

- Lisez ces instructions.
- Conservez ces instructions.
- Suivez toutes les instructions.
- Ne pas utiliser cet appareil près de l'eau.
- Nettoyer uniquement avec un chiffon sec.
- Ne bloquez aucune bouche d'aération. Installez conformément aux instructions d'installation de Meyer Sound.

- Ne l'installez pas à proximité de sources de chaleur telles que des radiateurs, des registres de chaleur, des poêles ou d'autres appareils produisant de la chaleur.
- N'annulez pas l'objectif de sécurité de la fiche de type mise à la terre. Une fiche de type mise à la terre a deux lames et une troisième broche de mise à la terre. La troisième broche est prévue pour votre sécurité. Si la fiche fournie ne rentre pas dans votre prise, consultez un électricien pour remplacer la prise obsolète.
- Connectez l'appareil à une prise secteur bipolaire à trois fils avec mise à la terre. La prise doit être connectée à un fusible ou à un disjoncteur. La connexion à tout autre type de prise présente un risque d'électrocution et peut enfreindre les codes électriques locaux.
- Pour réduire le risque d'électrocution, débranchez l'appareil du secteur avant d'installer le câble audio. Rebranchez le cordon d'alimentation uniquement après avoir effectué toutes les connexions de signal.
- Protégez le cordon d'alimentation contre les piétinements ou les pincements, en particulier au niveau des fiches, des prises de courant et du point de sortie de l'appareil. La fiche secteur ou le coupleur de l'appareil doit rester facilement accessible pour le fonctionnement.
- Utilisez uniquement les pièces jointes/accessoires spécifiés par Meyer Sound. Utiliser uniquement avec les rails à roulettes ou le gréement spécifiés par Meyer Sound ou vendus avec l'appareil. Les poignées servent uniquement au transport.
- Débranchez cet appareil pendant les orages ou lorsqu'il n'est pas utilisé pendant de longues périodes.
- Cet appareil contient des tensions potentiellement dangereuses. N'essayez pas de démonter l'appareil. S'il est équipé d'un porte-fusible externe, le fusible remplaçable est le seul élément réparable par l'utilisateur. Lors du remplacement du fusible, n'utilisez que le même type et la même valeur.
- Confiez tous les autres travaux d'entretien à un personnel d'entretien qualifié. Une réparation est nécessaire lorsque l'appareil a été endommagé de quelque manière que ce soit, par exemple lorsque le cordon d'alimentation ou la prise a été endommagé(e) ; du liquide a été renversé ou des objets sont tombés dans l'appareil ; de la pluie ou de l'humidité a pénétré dans l'appareil ; l'appareil a été largué ; ou lorsque pour des raisons indéterminées l'appareil ne fonctionne pas normalement.

WARNING

- Pour les modèles d'alimentation Meyer Sound IntelligentDC MPS-488HP et MPS-482HP, le câblage externe connecté aux bornes de sortie des unités nécessite une installation par une personne formée ou l'utilisation de fils ou de cordons prêts à l'emploi.
- Pour réduire le risque d'incendie ou de choc électrique, n'exposez pas cet appareil à la pluie ou à l'humidité. N'installez pas l'appareil dans des endroits mouillés ou humides sans utiliser l'équipement de protection contre les intempéries de Meyer Sound.
- Les appareils de classe I doivent être connectés à une prise de courant avec une mise à la terre de protection.

CAUTION

Débranchez la fiche secteur avant de débrancher le cordon d'alimentation de l'enceinte.

Используемые символы

Эти символы в данной брошюре и на оборудовании указывают на элементы и функции, влияющие на безопасность.

							
Опасное напряжение: риск поражения электрическим током	Важные инструкции по эксплуатации	Заземление	Горячая поверхность: не прикасайтесь	QR-код с ссылкой на инструкцию по эксплуатации 	Вход питания переменного тока	Аудиопорт MILAN	Аналоговый аудиовход Аналоговый аудиовыход

Важные инструкции по безопасности

- Прочитайте эти инструкции.
- Сохраните эти инструкции.
- Следуйте всем инструкциям.
- Не используйте это устройство вблизи воды.
- Чистить только сухой тканью.
- Не закрывайте никакие вентиляционные отверстия. Установите в соответствии с инструкциями по установке Meyer Sound.
- Не устанавливайте вблизи источников тепла, таких как радиаторы, обогреватели, печи или другие устройства, выделяющие тепло.
- Не пренебрегайте безопасностью вилки с заземлением. Вилка с заземлением имеет два штыря и третий заземляющий контакт. Третий зубец предназначен для вашей безопасности. Если прилагаемая вилка не подходит к вашей розетке, обратитесь к электрику для замены устаревшей розетки.
- Подключите аппарат к двухполюсной трехпроводной сетевой розетке с заземлением. Розетка должна быть подключена к предохранителю или автоматическому выключателю. Подключение к розетке любого другого типа представляет опасность поражения электрическим током и может привести к нарушению местных электротехнических норм.
- Чтобы снизить риск поражения электрическим током, отключите устройство от сети переменного тока перед подключением аудиокабеля. Снова подсоединяйте шнур питания только после выполнения всех сигнальных соединений.
- Защищайте шнур питания от наступания или защемления, особенно возле вилок, розеток и в месте их выхода из устройства. Сетевая вилка переменного тока или приборный соединитель должны оставаться легкодоступными для работы.
- Используйте только насадки/аксессуары, указанные Meyer Sound. Используйте только с роликами или креплениями, указанными Meyer Sound или продаваемыми вместе с устройством. Ручки предназначены только для переноски.
- Отключайте это устройство от сети во время грозы или если оно не используется в течение длительного периода времени.

- Это устройство содержит потенциально опасное напряжение. Не пытайтесь разобрать аппарат. При наличии внешнего держателя предохранителя сменный предохранитель является единственным элементом, обслуживаемым пользователем. При замене предохранителя используйте только тот же тип и то же значение.
- Обращайтесь за любым другим обслуживанием к квалифицированному обслуживающему персоналу. Обслуживание требуется, когда устройство каким-либо образом повреждено, например, когда поврежден шнур питания или вилка; пролилась жидкость или внутрь аппарата попали предметы; в аппарат попал дождь или влага; аппарат упал; или когда по неустановленным причинам аппарат не работает нормально.

WARNING

- Для моделей Meyer Sound IntelligentDC Power Supply MPS-488HP и MPS-482HP внешняя проводка, подключенная к выходным клеммам блоков, требует установки проинструктированным лицом или использования готовых проводов или шнуров.
- Во избежание возгорания или поражения электрическим током не подвергайте устройство воздействию дождя или влаги. Не устанавливайте устройство в сырых или влажных местах без использования оборудования для защиты от непогоды от Meyer Sound.
- Аппарат класса I должен быть подключен к сетевой розетке с защитным заземлением.

CAUTION
Прежде чем отсоединять шнур питания от динамика, выньте вилку из розетки.

使用的符号

这些符号表示本手册中和车架或底盘上的重要安全或操作特征

							
危险的电压：有触电的危险	重要的操作说明	保护性接地	热表面：不要触摸	电子使用说明：二维码中的说明位置 	交流电源入口	米兰音频端口	模拟音频输入 模拟音频循环输出

重要な安全に関する注意事項

- これらの指示をお読みください。
- これらの指示を守ってください。
- すべての指示に従ってください。
- この装置を水の近くで使用しないでください。
- 乾いた布のみで拭いてください。
- 通気口をふさがないでください。 Meyer Sound のインストール手順に従ってインストールしてください。
- ラジエーター、ヒートレジスター、ストーブ、その他の熱を発生する機器などの熱源の近くに設置しないでください。
- 接地型プラグの安全目的を無効にしないでください。接地タイプのプラグには 2 つのブレードと 3 番目の接地突起があります。 3 番目のプロングは安全のために提供されています。付属のプラグがコンセントに適合しない場合は、古いコンセントの交換について電気技師に相談してください。
- 装置を 2 極 3 線式接地電源コンセントに接続します。コンセントはヒューズまたは回路ブレーカーに接続する必要があります。他のタイプのコンセントに接続すると感電の危険があり、地域の電気規則に違反する可能性があります。
- 感電の危険を軽減するため、オーディオ ケーブルを取り付ける前に装置を AC 電源から外してください。すべての信号接続を行った後でのみ、電源コードを再接続してください。
- 電源コードを、特にプラグ、コンセント、および装置から出る部分で踏んだり挟まれたりしないように保護してください。 AC 電源プラグまたは機器のカプラーは、操作のためにすぐにアクセスできる状態にしておく必要があります。
- Meyer Sound が指定したアタッチメント/アクセサリのみを使用してください。 Meyer Sound が指定するキャスター レールまたはリギング、または機器と一緒に販売されるキャスター レールまたはリギングとのみ併用してください。ハンドルは持ち運び専用です。
- 雷雨のとき、または長期間使用しないときは、この装置のプラグを抜いてください。
- この装置には潜在的に危険な電圧が含まれています。装置を分解しないでください。外部ヒューズ ホルダーが装備されている場合、ユーザーが修理できるのは交換可能なヒューズだけです。ヒューズを交換する場合は、同じタイプ、同じ値のみを使用してください。
- 他のすべての保守は、資格のあるサービス担当者に依頼してください。電源コードやプラグが損傷した場合など、装置が何らかの損傷を受けた場合には修理が必要です。液体がこぼれたか、装置内に物体が落ちた。雨や湿気が装置に入った。装置が落下した。または、不特定の理由により装置が正常に動作しない場合。

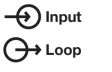
WARNING

- Meyer Sound IntelligentDC 電源モデル MPS-488HP および MPS-482HP の場合、ユニットの出力端子に接続された外部配線は、指示を受けた担当者による取り付け、または既製のリード線またはコードの使用が必要です。
- 火災や感電の危険を軽減するため、この装置を雨や湿気にさらさないでください。 Meyer Sound の耐候性装置を使用せずに、濡れた場所や湿気の多い場所に装置を設置しないでください。
- クラス I 装置は、保護接地接続を備えた主電源ソケットに接続するものとします。

CAUTION
スピーカーから電源コードを外す前に、電源プラグを外してください。

사용된 기호

이 기호들은 이 책자와 프레임 또는 섀시에 있는 중요한 안전설비 또는 작동 기능을 나타냅니다.

							
전기 위험: 감전 위험	중요 운영 지침	보호 접지	뜨거운 표면: 만지지 마세요	전자 설명서: QR 코드의 지침 위치 	AC 전원 입구	밀라노 오디오 입력 포트	아날로그 오디오 입력 루프 아날로그 오디오 출력

중요한 안전 지침

- 이 지침을 읽으십시오.
- 이 지침을 지키십시오.
- 모든 지침을 따르십시오.
- 이 장치를 물 근처에서 사용하지 마십시오.
- 마른 천으로만 청소하십시오.
- 통풍구를 막지 마십시오. Meyer Sound의 설치 지침에 따라 설치하십시오.
- 라디에이터, 방열판, 스토브 또는 기타 열을 발생시키는 장치와 같은 열원 근처에 설치하지 마십시오.
- 접지형 플러그의 안전 목적을 무시하지 마십시오. 접지형 플러그에는 두 개의 날과 세 번째 접지 단자가 있습니다. 세 번째 갈래는 안전을 위해 제공됩니다. 제공된 플러그가 콘센트에 맞지 않으면 전기 기술자에게 구식 콘센트 교체를 문의하십시오.
- 장치를 2극 3선 접지 메인 콘센트에 연결합니다. 콘센트는 퓨즈나 회로 차단기에 연결해야 합니다. 다른 유형의 콘센트에 연결하면 감전 위험이 있으며 지역 전기 규정을 위반할 수 있습니다.
- 감전의 위험을 줄이려면 오디오 케이블을 설치하기 전에 AC 주전원에서 장치를 분리하십시오. 모든 신호를 연결한 후에만 전원 코드를 다시 연결하십시오.
- 전원 코드, 특히 플러그, 콘센트 및 장치에서 나오는 부분이 밟히거나 끼이지 않도록 보호하십시오. AC 주전원 플러그 또는 기기 커플러는 작동을 위해 쉽게 접근할 수 있어야 합니다.
- Meyer Sound에서 지정한 부착물/액세서리만 사용하십시오. Meyer Sound에서 지정하거나 장비와 함께 판매되는 캐스터 레일 또는 장비만 사용하십시오. 손잡이는 휴대 전용입니다.
- 천둥 번개가 칠 때나 장기간 사용하지 않을 때는 이 장치의 플러그를 뽑으십시오.
- 이 장치에는 잠재적으로 위험한 전압이 포함되어 있습니다. 장치를 분해하지 마십시오. 외부 퓨즈 홀더가 장착된 경우 교체 가능한 퓨즈는 사용자가 수리할 수 있는 유일한 항목입니다. 퓨즈를 교체할 때 동일한 유형과 동일한 값만 사용하십시오.

■ 다른 모든 서비스는 자격을 갖춘 서비스 직원에게 문의하십시오. 전원 공급 코드나 플러그가 손상된 경우와 같이 장치가 어떤 식으로든 손상된 경우 서비스가 필요합니다. 액체를 쏟았거나 물체가 장치에 떨어졌습니다. 비 또는 습기가 장치에 들어갔습니다. 기기를 떨어뜨렸습니다. 또는 알 수 없는 이유로 장치가 정상적으로 작동하지 않는 경우.

WARNING

■ Meyer Sound IntelligentDC 전원 공급 장치 모델 MPS-488HP 및 MPS-482HP의 경우 장치의 출력 단자에 연결된 외부 배선은 숙련된 사람이 설치하거나 기성 리드 또는 코드를 사용해야 합니다.

■ 화재나 감전의 위험을 줄이려면 이 장치를 비나 습기에 노출시키지 마십시오. Meyer Sound의 기상 보호 장비를 사용하지 않고 습하거나 습한 장소에 장치를 설치하지 마십시오.

■ 클래스 I 기기는 보호 접지 연결이 있는 메인 소켓 콘센트에 연결해야 합니다.

CAUTION

스피커에서 전원 코드를 분리하기 전에 메인 플러그를 분리하십시오.

使用する記号

これらの記号は、本冊子およびフレームやシャーシに記載されている安全上または操作上の重要な特徴を示しています

							
危険な電圧 感電の危険性	重要な操作方法	保護接地	熱い表面 触れないでください	電子使用説明書：指示場所はQRコードで 	交流電源インレット	ミラノオーディオポート	アナログオーディオ入力 アナログオーディオルーピング出力

重要安全说明

■ 阅读这些说明。

■ 保留这些说明。

■ 遵循所有说明。

■ 请勿在靠近水的地方使用本设备。

- 只能用干布清洁。
- 请勿堵塞任何通风口。按照 Meyer Sound 的安装说明进行安装。
- 请勿安装在任何热源附近，例如散热器、热调节器、火炉或其他产生热量的设备。
- 不要破坏接地型插头的安全目的。接地型插头有两个插片和第三个接地插脚。第三个插脚是为了您的安全而提供的。如果提供的插头不适合您的插座，请咨询电工更换旧插座。
- 将设备连接至两极三线接地电源插座。插座必须连接到保险丝或断路器。连接到任何其他类型的插座都会造成电击危险，并可能违反当地电气规范。
- 为了降低电击风险，请在安装音频线之前断开设备与交流电源的连接。仅在连接完所有信号后才重新连接电源线。
- 防止电源线被踩踏或挤压，尤其是插头、方便插座以及电源线从设备引出的位置。交流电源插头或设备耦合器应保持易于操作。
- 仅使用 Meyer Sound 指定的附件/配件。只能与 Meyer Sound 指定的或与设备一起出售的脚轮导轨或索具一起使用。手柄仅供携带。
- 在雷雨天气或长时间不使用时，请拔下本设备的电源插头。
- 本设备含有潜在危险电压。请勿尝试拆卸设备。如果配备外部保险丝座，则可更换保险丝是唯一用户可维修的部件。更换保险丝时，只能使用相同类型和相同值的保险丝。
- 将所有其他维修工作交给合格的维修人员。当设备受到任何形式的损坏（例如电源线或插头损坏）时，就需要进行维修；液体溅出或物体落入设备内；雨水或湿气进入设备；该装置已跌落；或由于不明原因设备无法正常运行时。

WARNING

- 对于 Meyer Sound 智能直流电源型号 MPS-488HP 和 MPS-482HP，连接到设备输出端子的外部接线需要由受训人员安装或使用现成的引线或电线。
- 为降低火灾或电击风险，请勿将本设备暴露在雨中或受潮的地方。在未使用 Meyer Sound 的防风雨设备的情况下，请勿将设备安装在潮湿的地方。
- I 类设备应连接至具有保护接地连接的电源插座。

CAUTION

从扬声器上拔下电源线之前，请先拔下电源插头。

الرموز المستخدمة

تشير هذه الرموز إلى ميزات أمان أو تشغيل مهمة في هذا الكتيب وعلى الإطار أو الهيكل

							
فولتية خطيرة: خطر حدوث صدمة كهربائية	تعليمات تشغيل مهمة	التأريض الواقي	سطح ساخن: لا تلمس	تعليمات إلكترونية للاستخدام: موقع المساعدة موجود في رمز الاستجابة السريعة 	التيار المتردد لمدخلات الطاقة	"منفذ الصوت "ميلان	إدخال الصوت التناظري إخراج الصوت التناظري

تعليمات أمنية هامة

- اقرأ هذه التعليمات.
- احتفظ بهذه التعليمات.
- اتبع جميع التعليمات.
- لا تستخدم هذا الجهاز بالقرب من الماء.
- نظفه بقماش جاف فقط.
- لا تسد أي فتحات تهوية. قم بالتثبيت وفقًا لتعليمات التثبيت الخاصة بـ Meyer Sound.
- لا تقم بالتركيب بالقرب من أي مصادر حرارة مثل المشعات أو مسجلات الحرارة أو المواقد أو أي جهاز آخر ينتج عنه حرارة.
- لا تبطل غرض الأمان الخاص بالقابس الأرضي. يحتوي القابس الأرضي على شفرتين وشق أرضي ثالث. يتم توفير الشق الثالث من أجل سلامتك. إذا كان القابس المرفق لا يتناسب مع المنفذ لديك ، فاستشر كهربائيًا لاستبدال المقبس القديم.
- قم بتوصيل الجهاز بمقبس رئيسي ثنائي القطب وثلاثي الأسلاك. يجب توصيل الوعاء بفتيل أو قاطع دائرة. يشكل الاتصال بأي نوع آخر من الأوعية خطر حدوث صدمة وقد ينتهك الرموز الكهربائية المحلية.
- لتقليل خطر التعرض لصدمة كهربائية ، افصل الجهاز عن مصدر التيار المتردد قبل تركيب كبل الصوت. أعد توصيل سلك الطاقة فقط بعد إجراء جميع توصيلات الإشارة.
- احمِ سلك الطاقة من السير عليه أو الضغط عليه ، خاصةً عند القوابس ومآخذ التوصيل ونقطة خروجها من الجهاز. يجب أن يظل قابس التيار الكهربائي المتردد أو قارنة الأجهزة سهلة الوصول للتشغيل.
- استخدم فقط مع قضبان العجلات أو المعدات Meyer Sound. استخدم فقط المرفقات / الملحقات المحددة بواسطة Meyer Sound ، أو تباع مع الجهاز. المقابض للحمل فقط.
- افصل هذا الجهاز أثناء العواصف الرعدية أو عند عدم استخدامه لفترات طويلة من الزمن.
- يحتوي هذا الجهاز على جهد كهربائي يحتمل أن يكون خطيرًا. لا تحاول تفكيك الجهاز. إذا كان المصهر مزودًا بحامل فيوز خارجي ، فإن المصهر القابل للاستبدال هو العنصر الوحيد الذي يمكن للمستخدم صيانته. عند استبدال المصهر ، استخدم فقط نفس النوع ونفس القيمة.
- قم بإحالة جميع الخدمات الأخرى إلى موظفي الخدمة المؤهلين. يلزم إجراء الصيانة في حالة تعرض الجهاز للتلف بأي شكل من الأشكال ، كما هو الحال عند تلف سلك أو قابس مصدر الطاقة ؛ انسكاب سائل أو سقطت أشياء في الجهاز ؛ دخلت المطر أو الرطوبة إلى الجهاز ؛ تم إسقاط الجهاز ؛ أو عندما لا يعمل الجهاز بشكل طبيعي لأسباب غير محددة.

WARNING

- بالنسبة لموديلات Meyer Sound IntelligentDC Power Supply MPS - 488HP و MPS - 482HP ، تتطلب الأسلاك الخارجية المتصلة بأطراف خرج الوحدات التثبيت بواسطة شخص مُعلم أو استخدام أسلاك أو أسلاك جاهزة.
- لتقليل مخاطر نشوب حريق أو صدمة كهربائية ، لا تعرض هذا الجهاز للمطر أو الرطوبة. لا تقم بتركيب الجهاز في أماكن رطبة أو رطبة دون استخدام معدات الحماية من الطقس من Meyer Sound.
- يجب توصيل الأجهزة من الفئة الأولى بمأخذ التيار الكهربائي مع وصلة تأريض واقية.

CAUTION

افصل قابس التيار الكهربائي قبل فصل سلك الطاقة عن السماعة.

סמלים בשימוש

סמלים אלה מציינים מאפייני בטיחות או תפעול חשובים בחוברת זו ועל המסגרת או השלדה

Input Loop	יציאת אודיו בתקן מילאן	כניסת זרם חילופין	הוראות שימוש אלקטרוניות מיקום ההוראות בקוד	משטח חם לא לגעת	חיבור הארקה מגן	הוראות הפעלה חשובות	מתחים מסוכנים סכנת התחשמלות
כניסת שמע אנלוגית פלט לולאת שמע אנלוגי							

הוראות בטיחות חשובות

- קרא את ההוראות האלה.
- שמור את ההוראות האלה.
- בצע את כל ההוראות.
- אין להשתמש במכשיר זה ליד מים.
- נקה רק עם מטלית יבשה.
- אין לחסום פתחי אוורור. התקן בהתאם להוראות ההתקנה של Meyer Sound.
- אין להתקין בקרבת מקורות חום כלשהם כגון רדיאטורים, אורגי חום, תנורים או מכשירים אחרים המפיקים חום.
- אל תביס את מטרת הבטיחות של התקע מסוג הארקה. לתקע מסוג הארקה יש שני להבים וחוד הארקה שלישי. החוד השלישי מסופק לבטיחותך. אם התקע שסופק לא מתאים לשקע שלך, התייעץ עם חשמלאי להחלפת השקע המיושן.

- חבר את המכשיר לשקע רשת הארקה דו-קוטבי ותלת חוטים. השקע חייב להיות מחובר לנתיך או למפסק. חיבור לכל סוג שקע אחר מהווה סכנת התחשמלות ועלול להפר את חוקי החשמל המקומיים.
- כדי להפחית את הסיכון להתחשמלות, נתק את המכשיר מרשת החשמל לפני התקנת כבל שמע. חבר מחדש את כבל החשמל רק לאחר ביצוע כל חיבורי האות.
- הגן על כבל החשמל מפני הליכה או צביטה, במיוחד בתקעים, בשקעי נוחות ובנקודה שבה הם יוצאים מהמכשיר. או מצמד המכשיר יישארו נגישים להפעלה AC-תקע ה.
- השתמש רק עם מסילות הגלגלים או הציוד Meyer Sound. השתמש רק בקבצים מצורפים/אביזרים שצוינו על ידי או נמכר עם המכשיר. הידיות מיועדות לנשיאה בלבד, Meyer Sound המצוין על ידי.
- נתק את המכשיר מהחשמל במהלך סופות ברקים או כאשר אינו בשימוש לפרקי זמן ארוכים.
- מכשיר זה מכיל מתחים שעלולים להיות מסוכנים. אל תנסה לפרק את המכשיר. אם מצויד במחזיק נתיך חיצוני, הנתיך הניתן להחלפה הוא הפריט היחיד שניתן לטפל בו על ידי המשתמש. בעת החלפת הנתיך, השתמש רק באותו סוג ובאותו ערך.
- הפנה את כל הטיפול האחר לצוות שירות מוסמך. שירות נדרש כאשר המכשיר ניזוק בכל דרך שהיא, כגון כאשר כבל אספקת החשמל או התקע ניזוק; נשפך נוזל או חפצים נפלו לתוך המכשיר; גשם או לחות נכנסו למכשיר; המנגנון הושמט; או כאשר מסיבות לא ידועות המכשיר אינו פועל כרגיל.

WARNING

- החיווט החיצוני ,MPS-482HP ו-MPS-488HP דגמי Meyer Sound IntelligentDC Power Supply עבור המחובר למסופי היציאה של היחידות מחייב התקנה על ידי גורם מודרך או שימוש בכבל או כבלים מוכנים.
- כדי להפחית את הסיכון של שריפה או התחשמלות, אל תחשוף את המכשיר לגשם או לחות. אין להתקין את המכשיר במקומות רטובים או לחים מבלי להשתמש בציוד להגנה מפני מזג אוויר מבית Meyer Sound.
- יחובר לשקע חשמל עם חיבור הארקה מגן Class I מכשיר.

CAUTION

נתק את תקע החשמל לפני ניתוק כבל החשמל מהרמקול.

SAFETY INSTRUCTIONS — QUICKFLY RIGGING

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Rigging safety statement

Please read this statement carefully and in its entirety. It contains important information regarding safety issues, including guidelines for general safe use of rigging systems as well as advisories on government regulations and liability laws.

This Statement assumes that the owners and/or users of a Meyer Sound QuickFly® system are knowledgeable and experienced in the areas of rigging and flying loudspeaker systems. Many issues of crucial concern, such as the determination of appropriateness and condition of venue rigging points, cannot be addressed here. Therefore, the user must assume all responsibility for the appropriate use of QuickFly systems in any particular location or circumstance.

The suspension of large, heavy objects in public places is subject to numerous laws and regulations at the national/ federal, state/provincial, and local levels. The user must assume responsibility for making sure that use of any QuickFly system and its components in any particular circumstance or venue conforms to all applicable laws and regulations in force at the time.

Load ratings and specifications

Long-term safe operation is a central concern in the design and manufacture of any rigging/flying system. Meyer Sound has taken great care in material selection and component design. In all critical cases, load points are redundant, with a safety margin that allows one or more load points to fail while maintaining system integrity. After manufacture, all load-critical system components are individually inspected.

All load ratings and other specifications given in this manual and listed on labels are the result of accepted engineering practice and careful testing. However, such specifications and ratings are subject to change.

Users are advised to check meyersound.com or contact Technical Support at regular intervals to check for updates.

Regulatory compliance

The design and working load limit (WLL) ratings of the QuickFly system are intended to be in compliance with all known regulatory statutes currently applicable in the United States. However, as noted above, there are wide variations internationally in the regulations and practices applying to suspension of sound systems in public places. Although regulations in the United States are generally among the most stringent, safety codes may be even stricter in a few localities (such as those highly prone to earthquakes). In addition, applicable safety codes are open to interpretation: Government officials in one location may have a stricter interpretation than another local official, even when operating under the same regulations and in the same legal jurisdiction.

Consequently, users of QuickFly rigging systems should be prepared to take additional safety assurance measures beyond those outlined in this Statement. IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO MAKE CERTAIN THAT ANY MEYER SOUND LOUDSPEAKER SYSTEM IS SUSPENDED IN ACCORDANCE WITH ALL APPLICABLE NATIONAL/ FEDERAL, STATE/PROVINCIAL, AND LOCAL REGULATIONS.

Safety responsibilities “above the hook”

In most touring applications of rigging systems, the touring sound provider is normally responsible for ensuring the safety of the suspension system only below the attachment point. The safety and suitability of the attachment point is generally seen as the responsibility of the venue owner or operator. However, this distinction (“above the hook” versus “below the hook”) can be open to interpretation. Touring system operators should double-check to make certain that attachment points are approved and suitably load rated, and that the points used are those identified as such by the venue owner or operator. As an extra precaution, careful inspection of the attachment points is advised before flying, particularly in older venues or those hosting frequent events using large sound and lighting systems. IN ANY CASE, MEYER SOUND QUICKFLY SYSTEMS ARE INTENDED ONLY FOR SUSPENSION FROM APPROVED RIGGING POINTS, EACH KNOWN TO HAVE AMPLE SWL MARGINS FOR THE SYSTEM COMPONENTS SUSPENDED BELOW THEM.

Inspection and maintenance

The Meyer Sound QuickFly systems are an assembly of mechanical devices, and are therefore subject to wear and tear over prolonged use, as well as damage from corrosive agents, extreme impact, or inappropriate use.

BECAUSE OF THE SAFETY ISSUES INVOLVED, USERS MUST ADOPT AND ADHERE TO A SCHEDULE OF REGULAR INSPECTION AND MAINTENANCE. IN TOURING APPLICATIONS, KEY COMPONENTS MUST BE INSPECTED BEFORE EACH USE. Such inspection includes examination of all load-bearing components for any sign of undue wear, twisting, buckling, cracking, rusting, or other corrosion. In regard to rust and corrosion, the main components of a QuickFly system are either protected by an exterior coating or made from stainless steel, which is impervious to rust and resistant to most corrosive fluids. Nevertheless, normal use and shipping vibrations can wear through the protective coatings, and extremely corrosive fluids (such as battery acid) can cause severe damage with prolonged exposure even to protected parts. Particular attention should be given to screws, bolts, and other fasteners to make certain the fittings are tight and secure. Metal seams and welds should be examined for any sign of separation or deformation. Meyer Sound strongly recommends that written documentation be maintained on each QuickFly system, noting date of inspection, name of inspector, points of system checked, and any anomalies discovered.

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Annual comprehensive examination and test program

In addition to routine checks on the road for touring systems, Meyer Sound also recommends a careful, comprehensive system examination and testing “at home” in the warehouse or other appropriate location at regular intervals. Such at home examinations and tests should occur at least once a year, and should include a careful inspection of each component under ideal lighting conditions, and then a final comprehensive check of the entire system after it has been flown.

If any anomalies or defects are discovered that could possibly affect the safety or integrity of the system, affected parts or subsystems should be replaced in their entirety before that part of the system is flown again.

Replacement parts

Any component found to be defective, or any safety-related component you even suspect might be defective, should be replaced with the equivalent, approved part. Parts specific to a QuickFly system

should be ordered directly from Meyer Sound. No attempt should be made to substitute what appears to be equivalent or “mostly the same” generic replacements. Some parts used in QuickFly systems are identical to those used in other rigging applications. To the best of our knowledge, most of these suppliers are reputable and their products are reliable. However, Meyer Sound has no way of assuring the quality of products made by these various suppliers. Therefore, Meyer Sound is not responsible for problems caused by components that were not supplied by Meyer Sound.

Training

QuickFly systems are relatively straightforward and easy to use. However, they should only be used by persons trained in the use of loudspeaker rigging systems, who have mastered key points of assembly, rigging and flying.

MAPP for Pullback Analysis

MAPP assumes the top grid is picked up by a front and rear motor along the perimeter of the grid, directly to the middle or outer pickup points, but not to the center bar pickup points. Other rigging configurations may have reduced load capacity. These cases should be reviewed by proper personnel to verify load capacities for alternate configurations.

Limitations and Disclaimer

The safety limit analysis provided by MAPP does not apply, and may not be relied upon, if the *loudspeaker* system (1) has been improperly installed or maintained, (2) the rigging or loudspeakers of the system have been damaged prior to installation, (3) the indicated configuration of the system has been altered, (4) any weight has been added to the indicated configuration, or (5) the system is in an outdoor venue and remains installed during strong wind conditions. MEYER SOUND ASSUMES NO RESPONSIBILITY FOR ANY PART OF AN INSTALLATION “ABOVE THE HOOK” OR WHERE ANY OF THE FOREGOING LIMITATIONS APPLY.

ULTRA-X80 AND ULTRA-X82 LOUDSPEAKERS

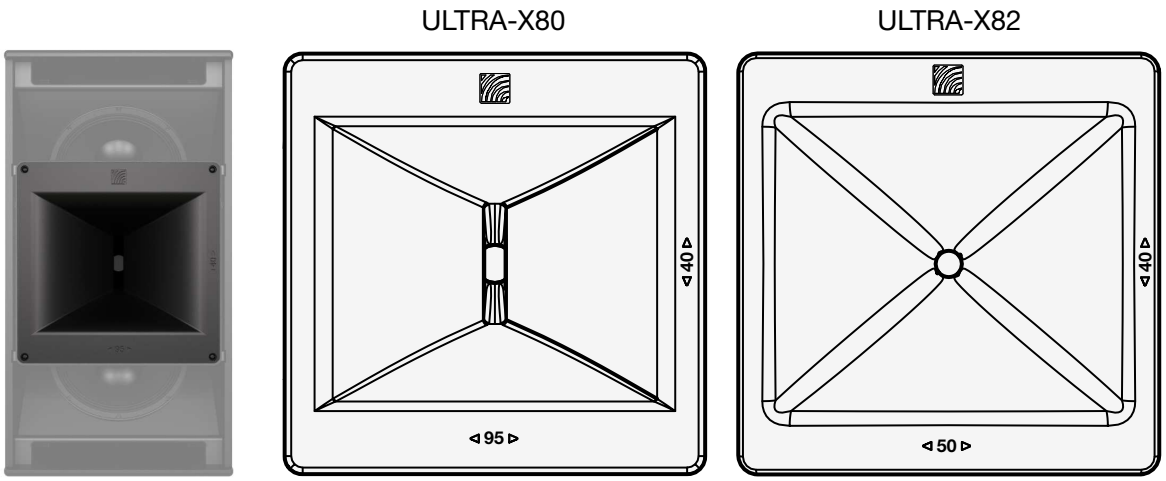
The ULTRA-X80 and ULTRA-X82 are the most capable models of the Ultra Series point source loudspeakers. These models have been designed for a variety of high-power applications. From sports arenas and stadiums to houses of worship, theaters, and live music venues, the ULTRA-X80 delivers exceptional sonic experiences for all kinds of audiences, in all kinds of venues, for all kinds of sound.

ULTRA-X80, Standard Weather Protection

FEATURES

- Constant directivity rotatable horn
- Concentric driver configuration
- Rigging points top and bottom for mounting and accessory attachment
- Available in custom colors
- Standard and Outdoor Temporary weather protection versions

The ULTRA-X80 and ULTRA-X82 have different horn dispersions, 95 x 40 degrees and 50 x 40 degrees, respectively. The horns are rotatable, allowing the cabinet to be mounted horizontally or vertically while maintaining the desired coverage.



ULTRA-X80 95 x 40° and ULTRA-X82 50 x 40° Horn Dispersions

The durable trapezoidal enclosure of the ULTRA-X80 ships with a slightly textured black finish and is also available in custom colors. A powder-coated, perforated steel grille provides protection to the front of the loudspeakers. Two versions of environmental protection are available for ULTRA-X80: Standard and Outdoor Temporary. The Outdoor Temporary versions of ULTRA-X80 loudspeakers include additional treatment of the wood cabinet and the addition of stainless-steel mesh behind the grille.

The ULTRA-X80 is designed to be deployed alongside Meyer Sound LFC series products, extending the low-frequency performance (see Adding Low-Frequency Models).

Meyer Sound's **Galileo GALAXY** signal processors typically provide signal processing and routing between mixing consoles or other source devices and the loudspeakers. In addition to the expected signal processing, the Galileo GALAXY 816 and 408 processors include additional filters and functions unique to Meyer Sound products.

The high-output switch-mode power supply reduces weight and is more efficient than linear power supplies. The operating voltage is 200-240 V AC, 50-60 Hz. When an appropriately sized and specified branch circuit breaker is in line, multiple ULTRA-X80 loudspeakers can be connected to one circuit (see AC Power Distribution).

Both analog and Milan AVB audio inputs are provided on the user panel (see Audio Inputs). The connectors provided are from Neutrik's TRUE1 TOP (True Outdoor Protection) product line. An IP65 rating is achieved for the connectors only when the connected cables are also terminated with Neutrik TRUE1 TOP connectors or when the sealing caps are properly seated when not in use. Each loudspeaker ships with Neutrik TRUE1 TOP cable-mount connectors that mate with the user panel connectors (AC inlet, analog audio, and network).

ULTRA-X80 Loudspeaker User Panel, Seated Sealing Caps (left), Open Sealing Caps (right)

Meyer Sound's **Nebra** software displays the telemetry data of ULTRA-X80, which is transmitted via the network connection. Nebra includes the functionality to manage the digital connections between Milan AVB-capable source devices and Milan Endpoint-equipped loudspeakers.

High-resolution acoustic datasets for ULTRA-X80 loudspeakers are available in Meyer Sound's **MAPP 3D** System Design and Prediction software.

Optional rigging accessories include both a yoke and u-bracket, enabling safe suspension of the loudspeaker. The MY-T1 Yoke and the MUB-T1 U-Bracket accessories allow for several mounting options and are available in custom colors.

MY-T1 Yoke, and MUB-T1 U-Bracket

POWER REQUIREMENTS

Understanding power distribution, voltage, and current requirements, and electrical safety guidelines is critical to the safe operation of ULTRA-X80 loudspeakers.

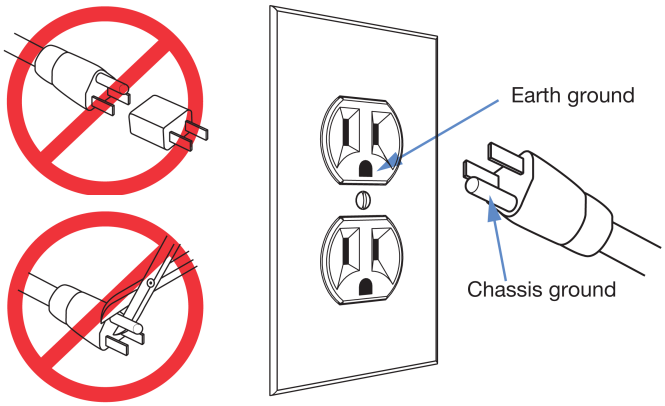
Sufficient power must be provided for ULTRA-X80 loudspeakers to accurately reproduce the full dynamic range of the input signal, especially during periods of maximum acoustic output.

AC POWER DISTRIBUTION

All components in an audio system (self-powered loudspeakers, mixing consoles, and processors) must be properly connected to an AC power distribution system, ensuring that AC line polarity is preserved. All the grounding points of the audio system components must be connected to a single node or common point using the same cable gauge (or larger) as the Neutral and Line conductors.

CAUTION

- The nominal operational AC mains voltage range is 200–240 V AC, 50-60 Hz.
- For a LINE-NEUTRAL-EARTH/GROUND supply configuration, the voltage between the Line and Earth/Ground should never exceed 264 V AC, or be less than 160 V AC to prevent damage to the loudspeaker or unintended power cycling.
- When using a Single-Line AC wiring (LINE - NEUTRAL - EARTH/GROUND), before applying AC power to any Meyer Sound self-powered loudspeaker, make sure the voltage potential difference between the Neutral and Earth/Ground conductors is less than 5 V AC.
- The Earth/Ground conductor must always be used for safety reasons.
- Improper Earth/Grounding of connections between loudspeakers and the rest of the audio system may produce noise or hum or cause serious damage to the input and output stages of the system's electronic components.



Always Ensure the Earth/Ground Conductor in Each Plug and Socket is Correctly Connected

BRANCH CIRCUITS

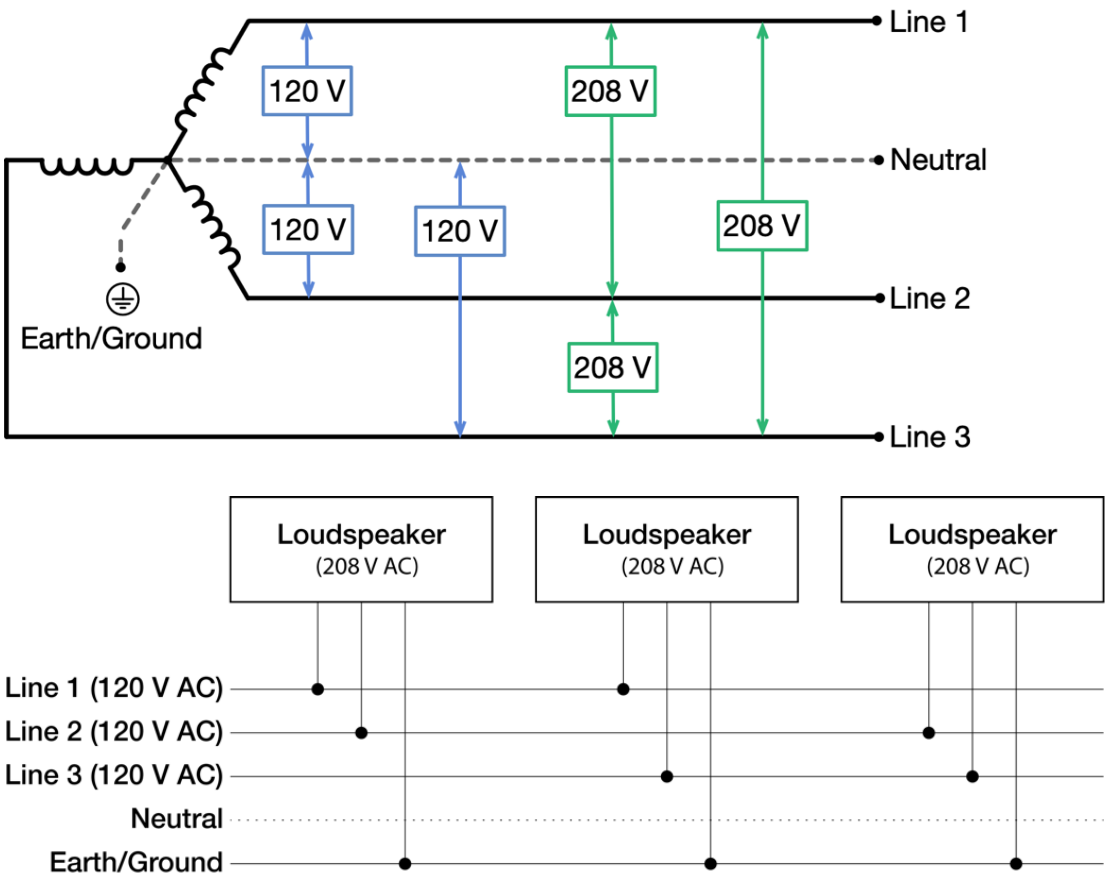
To reduce the number of branch circuits, it is common to connect multiple ULTRA-X80 loudspeakers to one branch circuit, provided the circuit breaker is sufficiently rated. To reduce the impedance of the conductors, minimize the length of cable after the branch circuit has been “split.” Typically, a single circuit is split very near the loudspeakers using a molded split, junction box, or wye cable.

120 V AC, 3-PHASE WYE SYSTEM (TWO LINES)

Line-Line-Earth/Ground

The figure below illustrates the secondary of a 120/208 V AC, 3-phase Wye distribution system. Each loudspeaker is connected to two Lines and Earth/Ground. This configuration is possible because ULTRA-X80 loudspeakers tolerate elevated voltages from the Earth/Ground conductor and do not require a Neutral line. This distribution system delivers 208 V AC to each loudspeaker.

CAUTION
Do not connect ULTRA-X80 loudspeakers to only one Line of a 120/208 V AC Wye service as the voltage delivered to the loudspeaker will be 120 V AC, below the 160 V AC minimum operating voltage.



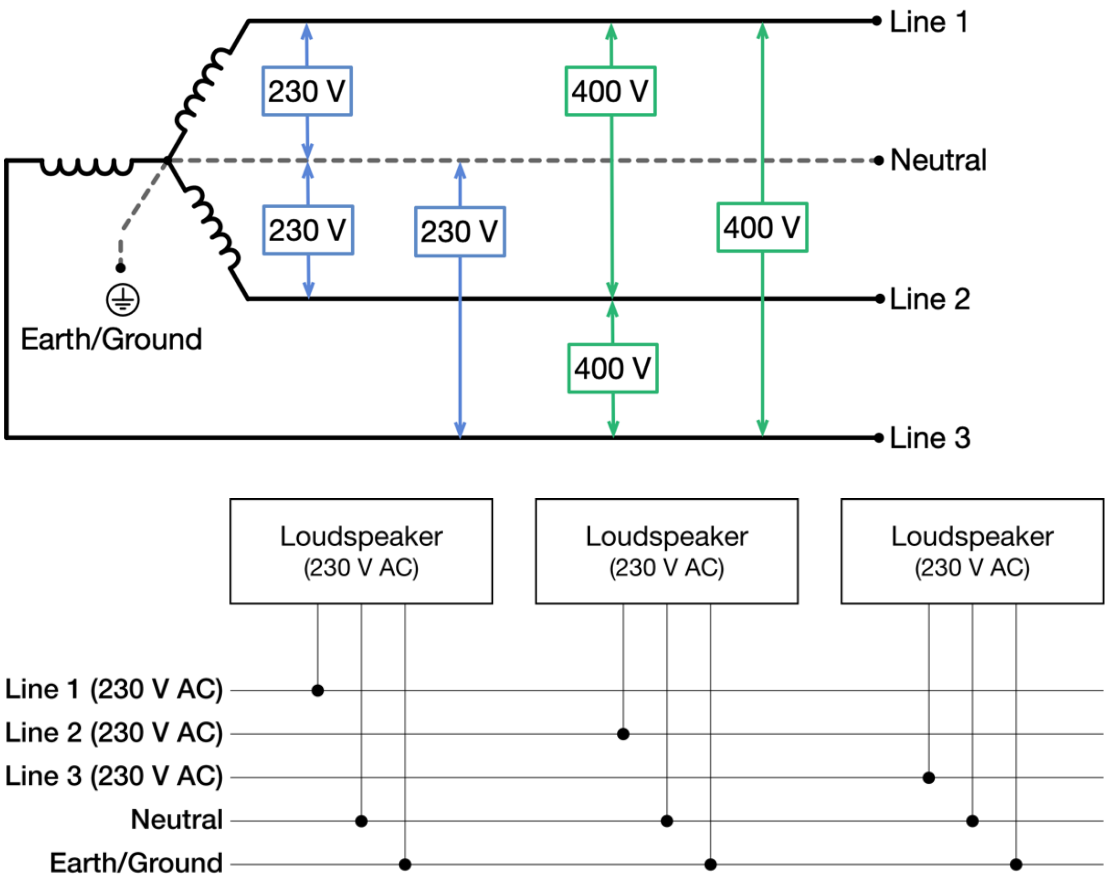
Three-Phase, 120/208 Volt AC Transformer Secondary, Wye Configuration and Loudspeaker Connections

230 V AC, 3-PHASE WYE SYSTEM (SINGLE LINE)

Line-Neutral-Earth/Ground

The figure below illustrates the secondary of a 230/400 V AC, 3-phase Wye distribution system. Each loudspeaker is connected to one of the Lines, the Neutral, and the Earth/Ground. This distribution system delivers 230 V AC to each loudspeaker.

CAUTION
For 230/400 V AC, 3-phase Wye systems, never connect two Lines to the AC inlet of an ULTRA-X80 loudspeaker. The inlet would receive 400 V AC, significantly exceeding the 264 V AC upper voltage limit and damaging the loudspeaker.



Three-Phase, 230/400 Volt AC Transformer Secondary, Wye Configuration and Loudspeaker Connections

AC INLET

The user panel of an ULTRA-X80 loudspeaker includes an AC inlet connector, a 3-conductor Neutrik powerCON TRUE1 from the TOP (True Outdoor Protection) line. This locking connector supplies electrical power to the loudspeaker, as shown in the figure below.

User Panel, Power Inlet, Neutrik powerCON TRUE1 TOP Connector

The powerCON TRUE1 TOP connectors are rated to be engaged/disengaged while under load or while the circuit is energized without damaging the connectors.

The inlet connector is certified for outdoor protection (IP65, UL50E) only when mated with a Neutrik powerCON TRUE1 TOP cable-mount connector or when the connector is not in use and the sealing cap is fully inserted.

CAUTION

- Before connecting the power cable, make sure the AC inlet connector assembly is secure and has not been damaged during prior use or transportation.
- Do not operate the loudspeaker if the power cable is frayed or broken.
- Check the sealing cap for moisture before covering the connector. If wet, dry the cap before covering the connector to avoid introducing liquid into the connector.
- Always seal the connector with the sealing cap when the connector is not in use.
- Always replace sealing caps if they become damaged or are leaking.

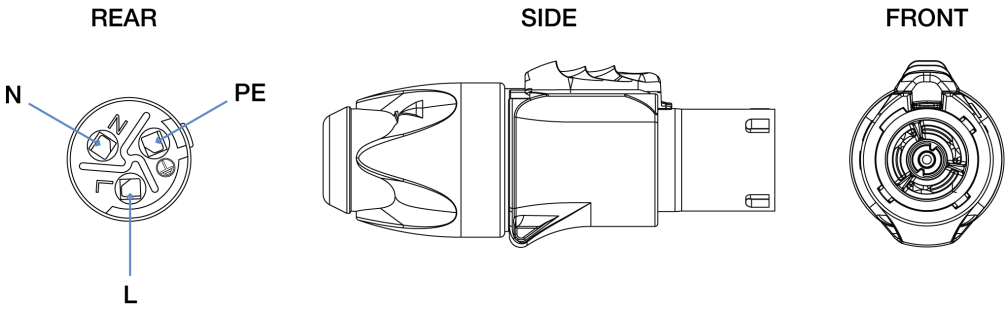
POWER CABLE ASSEMBLY

A cable-mount Neutrik powerCON TRUE1 TOP connector (NAC3FX-W-TOP, female cable mount) is included with each ULTRA-X80 loudspeaker, enabling users to assemble power cables to meet their needs.

CAUTION
The power cable conductors must be 12 AWG (2 mm²). Use only cable with an outer jacket diameter between 1/4-in [6.4 mm] and 1/2-in [12.7 mm]. For the inlet end of the cable, use a plug type that is rated for at least 16A, 250 V AC, and is approved for use in the region where the product will be used. The size of the conductors is specified to reduce the conductor impedance, which minimizes voltage sag when the acoustic output of the loudspeaker approaches its maximum acoustic output.

The pins of the powerCON TRUE1 TOP cable mount connector are labeled as follows:

- L (Line)
- N (Neutral)
- ⏚ (Protective Earth/Ground)



Neutrik powerCON TRUE1 TOP Cable Mount Connector

NOTE
Visit the Neutrik website (neutrik.com) to download the cable preparation and connector assembly instructions for the powerCON TRUE1 TOP cable-mount connector.

CAUTION
Careful attention should be paid when terminating these connectors to ensure the proper conductor of the cable is connected to the intended terminal. The terminal identification markings inside the connector can be difficult to identify. After terminating the cable conductors, we strongly advise using a continuity meter to verify the proper connections are made, preventing a shock hazard and/or damage to the loudspeaker.

How AC power cables are wired is determined by the type of AC power distribution system used (see AC Power Distribution)

CAUTION
When wiring AC power cables and distribution systems, it is important to preserve AC line polarity and connect the Earth/Ground at both ends of the cable.

VOLTAGE REQUIREMENTS

The AC mains voltage at the loudspeaker AC inlet must be within 200 V AC and 240 V AC while the loudspeaker is operating, including periods of peak acoustic output when the loudspeaker draws maximum current. Momentary voltage drops down to 160 V AC will be tolerated without powering off but may negatively impact linear performance.

Because ULTRA-X80 loudspeakers behave as a constant power load when TPL (True Power Limiting) is engaged, current increases if the voltage decreases at its AC inlet. The maximum roundtrip resistance of the power cable for a single ULTRA-X80 loudspeaker should not exceed 5 Ohms for a 230 V AC source voltage because the AC Mains voltage may fall below 160 V AC at the AC inlet when TPL is engaged or when audio burst or peak power are high.

CAUTION
ULTRA-X80 loudspeakers may be damaged or malfunction if the inlet voltage is greater than 264 V AC or less than 160 V AC.

CIRCUIT BREAKER REQUIREMENTS

The circuit breakers used in our power distribution modules are well suited for use with ULTRA-X80 loudspeakers and other Meyer Sound products:

- European, ETI model number: KZS-1M 1p+N A C16/0.03, 6kA, which includes an RCD (residual current device) with a C-type tripping time constant and 30 mA RCD.
- US, Eaton model: QCR2020 - CIRCUIT BREAKER 2-Pole, 20 A, 120/240 V AC

Circuit protection devices for main and branch circuits of any power distribution system used in conjunction with ULTRA-X80 loudspeakers should use similarly specified devices to avoid nuisance tripping. Both of the recommended devices are thermal breakers with long time constants, unlike magnetic breakers with short time constants.

Circuit sizing is based on the Maximum Long-Term Power, 900 Watts. Using Ohm’s law, the amperage can be determined based on the supplied voltage, required to be between 200 to 240 V AC. The online Amperage/BTU calculator is helpful in determining the total system current draw and thermal dissipation: https://meyersound.com/amperage-btu-calculator/.

NOTE
Many residual current circuit breakers (RCCB) are sensitive to high-frequency noise in the Line-Neutral path and may false/nuisance trip. If required, make certain the RCCBs are not sensitive to high-frequency noise or artifacts. Line-to-Earth/Ground and Neutral-to-Earth/Ground capacitance can cause an imbalance between the current-carrying conductors in a cable or a conduit, potentially causing RCCB nuisance tripping. Consult with a licensed electrician or electrical engineer when designing electrical distribution systems.

POWER SUPPLY

The power supply included in ULTRA-X80 loudspeakers prevents high inrush currents with soft-start power up, suppresses high-voltage transients up to several kilovolts, and filters common mode and differential mode radio frequencies (EMI).

POWERING ON ULTRA-X80 LOUDSPEAKERS

When powering on ULTRA-X80 loudspeakers, the following startup events take place over several seconds:

1. The On/Status LEDs flash during initial startup.
2. When both of the On/Status LEDs turn solid green, the loudspeaker is unmuted and ready to reproduce audio.

CAUTION
If the On/Status LEDs do not turn solid green after 15 seconds, disconnect the AC power and verify that the supply voltage is within the operating voltage range, 200-240 V AC, and the conductors of the power cable are connected to the proper terminals of the connectors.

AMPLIFICATION AND AUDIO

The ULTRA-X80 includes two audio input types, analog and Milan AVB digital audio.

ULTRA-X80 User Panel

Both audio inputs are always active. If signal is present at both inputs, they are summed and reproduced, which can lead to undesired results. For example, if the Milan AVB and analog input signals are identical for backup purposes but are not time aligned, comb filtering will occur if both signals are present at the loudspeaker inputs. When using one input as a backup to the other, utilizing the output mutes of upstream signal processing is one strategy to switch between input types.

The analog and Milan AVB inputs will arrive at the loudspeaker at different times due to the transport time of the Milan AVB signal through the network, usually less than two milliseconds. The latency of the Milan AVB signal is dependent on the number of network switch hops and the Presentation Time, which is set in software.

To synchronize the audio reproduction of analog and Milan AVB inputs, measure the acoustic output with an FFT analyzer. Measure and store the phase response when only the Milan AVB input is receiving signal. While only the analog input is receiving signal, add delay to the analog signal processing until both phase responses match.

When one input is used as a backup, synchronizing it with the primary input provides a smoother transition when the signal to the primary input is muted and the backup is unmuted. Synchronizing the inputs also preserves the time alignment with other components of the system, regardless of which input is receiving signal.

AUDIO INPUTS

The user panel includes two 3-pin Neutrik XLR True Outdoor Protection (TOP) connectors for analog audio input and audio loop output. The network connector is a Neutrik etherCON True Outdoor Protection (TOP), which provides connection to Milan AVB-capable output devices, including Galileo GALAXY processors, typically via Avnu-certified network switches.

CAUTION

- The analog and network chassis connectors are rated for outdoor protection (IP65, UL50E) only when mated with the Neutrik TOP cable-mount connectors, or the sealing caps are fully inserted.
- Check the sealing caps for moisture before covering the connectors. If wet, dry the caps before covering the connectors to avoid introducing liquid into the connectors.
- Always seal the connectors with the sealing caps when the connectors are not in use.
- Always replace sealing caps if they become damaged or are leaking.

ANALOG AUDIO INPUT (3-PIN XLR FEMALE)

The 3-pin XLR female Input connector accepts balanced audio signals with an input impedance of 10 kOhm. The connector uses the following wiring scheme:

• Pin 1 — 1 kOhm to chassis and Earth/Ground (ESD clamped)

• Pin 2 — Signal (+)

• Pin 3 — Signal (–)

• Case — Earth (AC) ground and chassis

Pins 2 and 3 carry the input as a differential signal. Pin 1 is connected to Earth/Ground through a 1 kOhm, 1000 pF, 15 V clamped network. This circuitry provides a virtual ground lift for audio frequencies while allowing unwanted signals to bleed to ground. Make sure to use balanced XLR audio cables with pins 1, 2, and 3 connected on both ends. Connecting the signal ground at only one end is not recommended. Shorting the signal ground conductor to the connector case may cause a ground loop, resulting in hum.

NOTE

If unwanted noise or hiss is produced by the loudspeaker, disconnect the audio signal cable from the loudspeaker input. If the noise stops, there is most likely nothing wrong with the loudspeaker. To locate the source of the noise, check the audio cable, source audio, AC power, and electrical ground.

ANALOG AUDIO LOOP OUTPUT (3-PIN XLR MALE)

The 3-pin XLR male Loop output connector allows multiple loudspeakers to be looped from a single audio source. The Loop output connector uses the same wiring scheme as the Input connector. For applications that require one drive line to provide signal to multiple loudspeakers, connect the Loop output of the first loudspeaker to the Input of the next loudspeaker, and so forth.

Analog Input and Loop Connectors

CAUTION
Make sure that all cabling for looped loudspeakers is wired correctly (Pin-1 to Pin-1, Pin-2 to Pin-2, and so forth) to prevent the polarity from being reversed. If one or more loudspeakers in a system have reversed polarity, frequency response, and coverage will be significantly degraded.

NOTE
The Loop output connector is wired in parallel to the Input connector and transmits the unbuffered source signal even when the loudspeaker is powered off.

CALCULATING ANALOG INPUT LOAD IMPEDANCE

To avoid distortion when looping multiple loudspeakers, make sure the source device can drive the total impedance load of the looped loudspeakers. In addition, the source device must be capable of producing +24 dBU into 50 Ohms to produce the maximum peak SPL over the operating bandwidth of the loudspeaker.

NOTE
Most source devices are capable of driving loads no less than 10 times their output impedance. The output impedance of third-party processors and mixing consoles typically range from 50 to 2000 Ω.

TIP
The analog outputs of Meyer Sound's **Galileo GALAXY** signal processors have an output impedance of 50 Ω. Each output can drive up to 20 Meyer Sound (10 kΩ input) loudspeakers without distortion.

To calculate the load impedance for the looped loudspeakers, divide 10 kΩ (the input impedance for a single loudspeaker) by the number of looped loudspeakers. For example, the load impedance for ten ULTRA-X80 loudspeakers is 1000 Ω, (10 kΩ / 10). Most source devices are capable of driving loads no less than 10 times their output impedance. To drive this number of looped loudspeakers, the source device should have an output impedance of 100 Ω or less (1000 Ω / 10).

NETWORK CONNECTOR

The user panel includes a Milan Endpoint (MEP) module which includes a Neutrik etherCON TOP connector, an Ethernet connectivity LED, an On/Status LED, and a Wink button/LED, as shown in the figure below.

Type 3M Milan Endpoint Module, On/Status LED, Wink Button/LED, Network Connection LED, and Network Connector

The etherCON TOP connector provides the network connection for both a Milan AVB digital audio input signal and the transmission of telemetry data.

The Milan Endpoint connects to a single channel of a Milan AVB digital audio stream as specified by the Avnu Alliance. To utilize the Milan AVB input, connect the loudspeaker to an Avnu-certified network switch that is also connected to the source device. See avnu.org for the current listing of certified AVB network switches.

The telemetry data of the loudspeaker is also transmitted via this connector, which is displayed in Meyer Sound's Nebra software. An Avnu-certified network switch is not necessary when the network connection is only used to transmit telemetry data. The speed of this network connection is 100 bT, 100 Mb/second.

DIGITAL AUDIO INPUT

When a Milan Endpoint loudspeaker and a computer are connected to the same network via an Avnu-certified network switch, the loudspeaker will be listed in Meyer Sound's Nebra software, where Milan AVB connections are established. The Milan Endpoint loudspeaker must be assigned to an available audio source channel (Talker) as a Listener for the loudspeaker to reproduce the audio transmitted by the Talker.

The speed of the connection between the last network switch and a Milan Endpoint is 100 bT, 100 Mb/second. The connection speed between network switches transporting Milan AVB digital audio signals is 1000 bT, 1 Gb/second.

TELEMETRY

Loudspeakers with Milan Endpoints transmit telemetry data via the network connection. Nebra software displays system status and performance data for each loudspeaker, including amplifier voltage, limiting activity, power output, fan speed, and driver status. Mute and identification functions are also available.

TIP
When the Milan AVB input is not used, a standard Ethernet network (IEEE 802.3 compliant, supporting at least 100 bT, 100 MB/s, full duplex) is capable of transmitting the telemetry data.

WINK FUNCTION

The Wink function facilitates the identification of physical loudspeakers that are listed in Meyer Sound's Nebra software. When routing digital audio signals in software, it is helpful when the loudspeaker name indicates which physical loudspeaker will receive the signal.

There are three locations Wink is indicated: in Nebra software, the Wink button/LED on the user panel of the loudspeaker, and the LED bar on the rear panel. Once the Milan Endpoint has been discovered in Nebra software, the icons within the loudspeaker's detail page include a button with an icon of an eye. Double-clicking the icon in Nebra software toggles the Wink function. When the Wink function is active, the Wink button/LED on the user panel of the loudspeaker and the rear LED bar illuminate. The Wink function times out after 10 seconds.

Wink Icon in Nebra, Wink Button/LED, and Blue LED Bar Highlighted

WINK/ACTIVITY LED BUTTON

To activate the Wink function in Nebra software, double-click the icon that resembles an eye, highlighted in the figure above.

To activate the Wink function from the loudspeaker, press and hold the Wink button down while observing the Limit/On/Status LED, which turns red and then off. Release the Wink button when the Limit/On/Status LED turns off, activating the Wink function. The Wink LED turns yellow for 10 seconds. If the Wink button remains depressed, the Limit/On/Status LED will turn red again, and the Wink function will remain off.

To turn off the Wink function, wait 10 seconds for it to time out, or double-click the Wink icon in Nebra software. To turn off the Wink function from the loudspeaker, depress and hold the Wink button — the On/Status LED will turn red. Wait until the On/Status LED turns off, then release the Wink button.

ETHERNET/NETWORK CONNECTIVITY LED

The Ethernet/Network connectivity LED immediately to the left of the network connector is illuminated when a 100 bT link is established; otherwise, it is off.

Type 3M Milan Endpoint Module, On/Status LED, Wink Button/LED, Network Connection LED, and Network Connector

ON/STATUS AND LIMITING INDICATION

When powered on, both of the On/Status LEDs blink many times and then turn solid green. During normal operation, the On/Status LEDs are solid green. If the On/Status LEDs blink red after the startup sequence, there is a potential issue to address. Connect the loudspeaker to a computer running Meyer Sound's Nebra software to identify the issue. A list of the faults that can be reported is available in the *Faults Reported by ULTRA-X80 On/Status LED* table.

On/Status and Limit On/Status LEDs

Limiting activity is indicated when the Limit On/Status LED on the user panel turns from green to yellow, pulsing rapidly when the high-frequency channel limits and pulsing slowly when the low-frequency channels limit.

When limiting is engaged, the channel's 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 loudspeaker performs within its acoustical specifications at normal temperatures when the Limit On/Status LED is green or when limiting is not continuous. During continuous limiting, the loudspeaker is nearing its operational limits, resulting in the following effects:

- Increases to the input level have 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
The Limit On/Status LED indicates when a safe, optimum level is exceeded. If an ULTRA-X80 loudspeaker begins to limit before reaching the desired acoustic output, consider adding more loudspeakers to the system.

TRUPOWER LIMITING

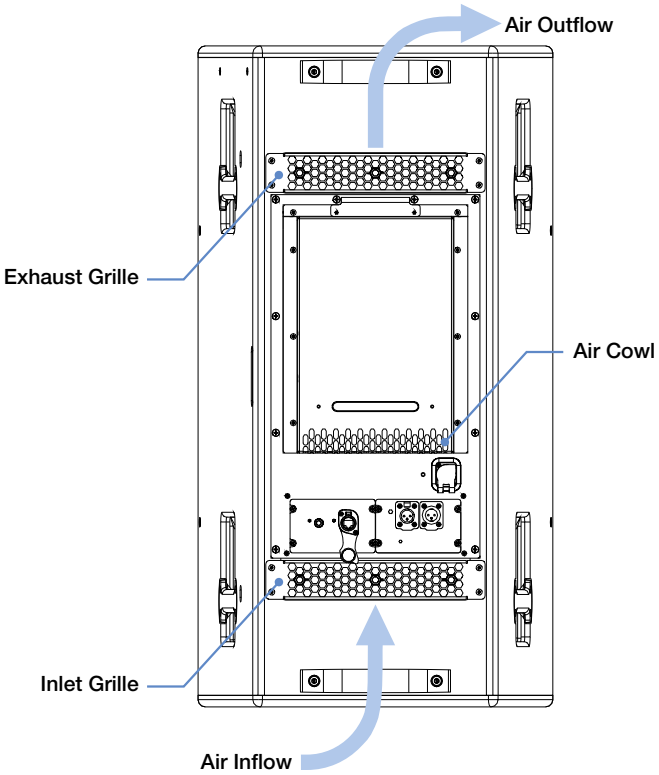
The ULTRA-X80 employs Meyer Sound's advanced TruPower® limiting. Conventional limiters assume a constant driver impedance and set the limiting threshold by measuring voltage alone. This method is inaccurate because driver impedances change as frequency content in the source material changes and as thermal values for the loudspeaker's voice coil and magnet vary. Consequently, conventional limiters often begin limiting prematurely, which reduces system headroom and dynamic range.

In contrast, TruPower limiting anticipates varying driver impedances by measuring both current and voltage to compute the actual power dissipation in the voice coil. This approach improves performance, both before and during limiting, by allowing the driver to produce the maximum SPL across its entire frequency range while also retaining signal peaks. TruPower limiting also eliminates power compression at high levels over lengthy periods, which helps regulate voice coil temperatures, thereby extending the life of the driver.

AMPLIFIER COOLING SYSTEM

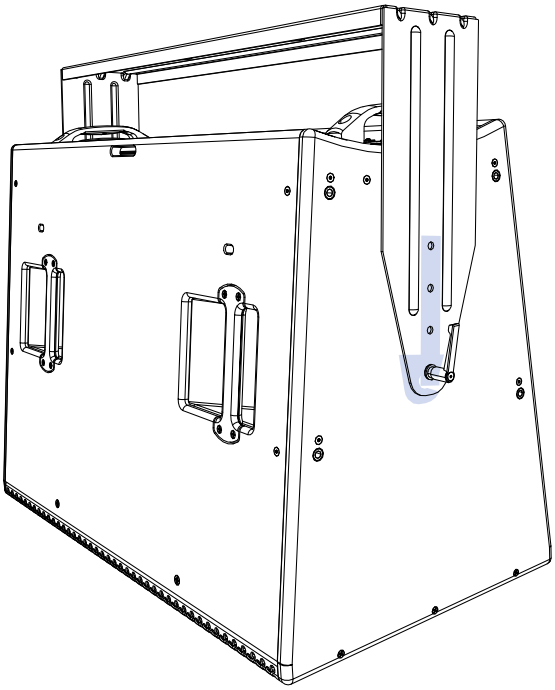
ULTRA-X80 loudspeakers employ forced-air cooling to prevent overheating. Three variable-speed fans pull air through the inlet grille located below the user panel, as shown in the figure below. Behind the inlet grille, a filter captures particulates.

CAUTION
To prevent the ULTRA-X80 loudspeakers from overheating, allow at least 15 cm (6 inches) of space with unobstructed airflow behind enclosures for proper ventilation.



ULTRA-X80 Loudspeaker Air Flow Diagram

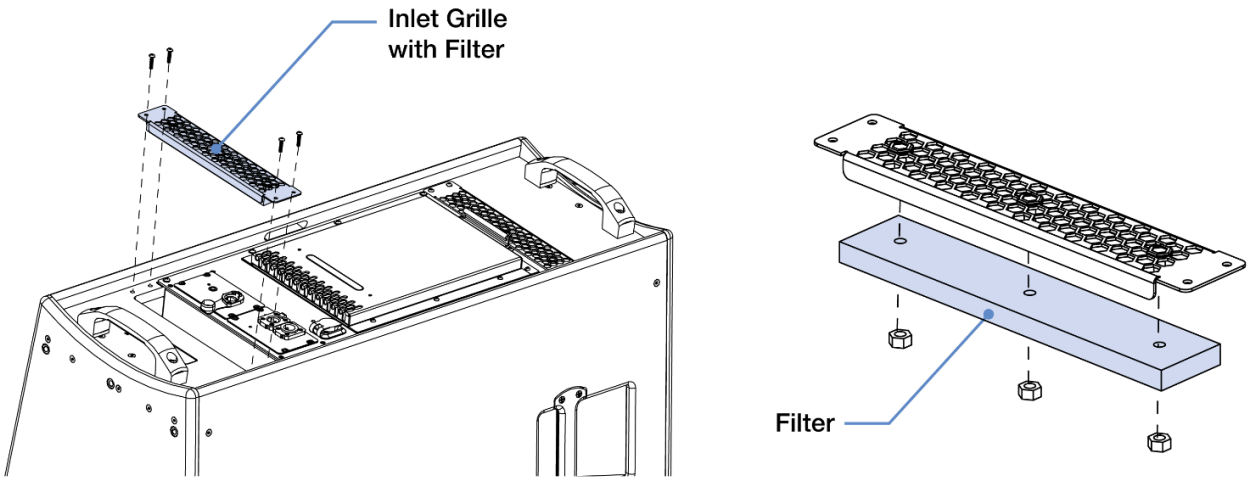
When the rear of an ULTRA-X80 loudspeaker is located near a large surface, always maintain the minimum clearance for proper ventilation. For example, when the loudspeaker is mounted to a ceiling and needs to face almost directly down, attach the loudspeaker to the attachment point of the u-bracket illustrated below. This allows for the maximum distance between the amplifier air inlet/exhaust and the ceiling, maximizing airflow.



Ceiling Mounted MUB-T1 Mounted to an ULTRA-X80 Loudspeaker, Maximum Clearance Distance

CAUTION

Regularly inspect the filter behind the air inlet grille located below the user panel. If a significant amount of particulate has accumulated on the filter, remove the inlet grille and then the filter. Vacuum the filter, and if necessary, rinse the filter with water until the particulate is removed. Allow the filter to dry completely, then reassemble.



Inlet Grille and Filter Removed

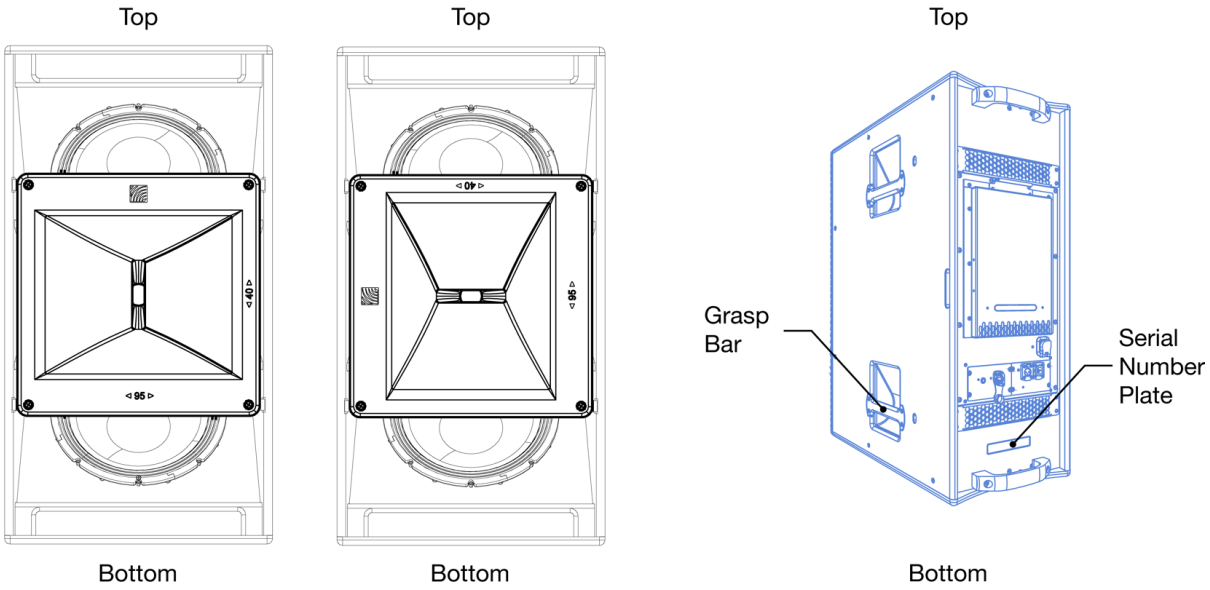
TIP
When ULTRA-X80 loudspeakers are connected to a network, Meyer Sound's Nebra software displays telemetry metrics, including the fan status and operating temperature.

HORN ROTATION

The ULTRA-X80 horns can be rotated to provide the desired dispersion independent of cabinet orientation. The horn has two correct orientations illustrated below, Meyer logo at the top, or to the left relative to the vertical cabinet orientation.

When looking at the front of the loudspeaker, there are few prompts beyond the logo on the grille to determine the cabinet orientation. The cups behind the handle grasp bars, the serial number plate, and the orientation of the user panel on the rear aid in the determination of the top/bottom of the loudspeaker, illustrated below on the right.

NOTE
Exchanging the horn of an ULTRA-X80 with an ULTRA-X82 horn, or vice versa, is not supported.

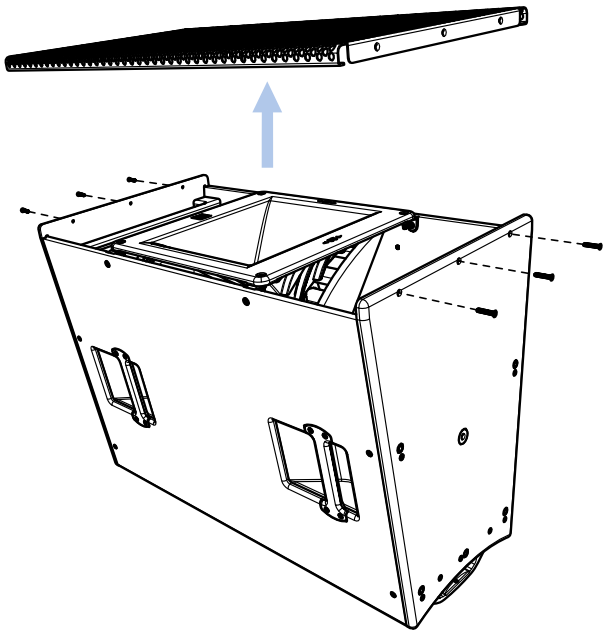


Correct ULTRA-X80 Horn Orientations (left, middle) and Top/Bottom References (right)

HORN ROTATION INSTRUCTIONS

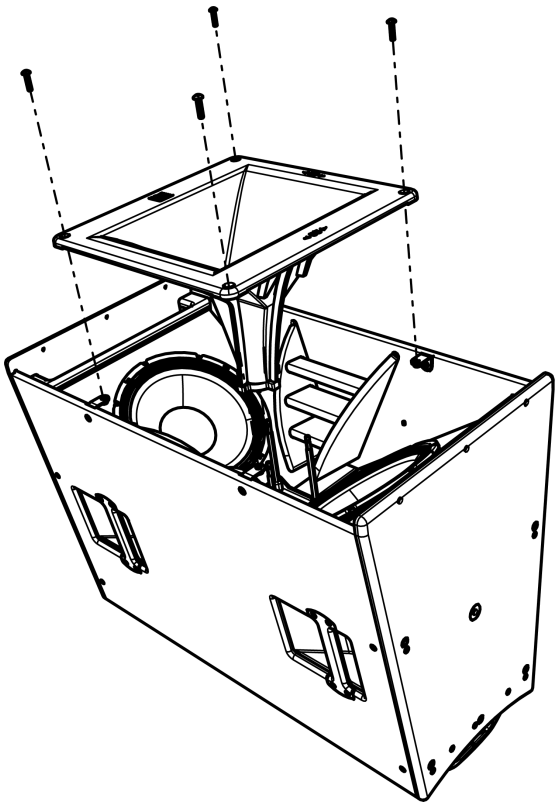
To rotate the ULTRA-X80 horn

1. Remove the six screws (PN 101.675) that secure the grille, illustrated below. Grasp the sides of the grille and lift to remove. Set the grille and mounting screws aside for later re-installation.

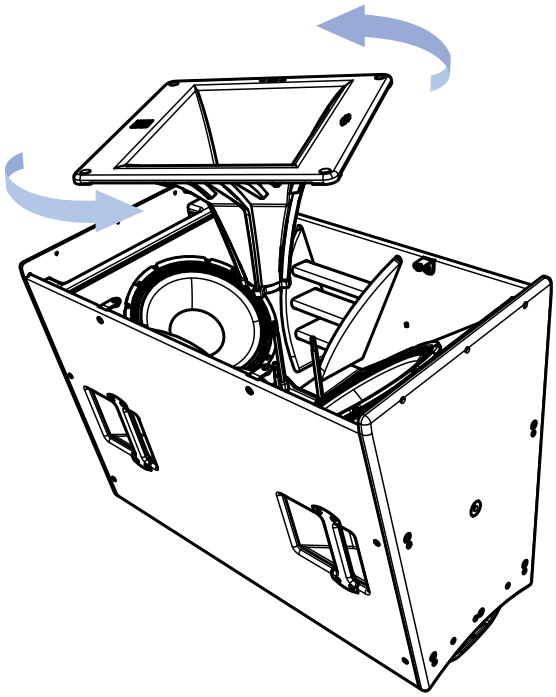


Remove the Six Screws from the Top and Bottom of the Loudspeaker, Lift the Grille to Remove

2. Remove the four screws (PN 101.620) securing the horn, lift the horn approximately 15 cm (6 in), and rotate it 90-degrees and lower it.



Remove the Four Screws Securing the Horn



Rotate the Horn and Reassemble

3. Replace the four screws removed in Step 2 that secure the horn. Tighten these to 2.7 N-m (24 in-lb) of torque.
4. Replace the grille and secure it with the six screws removed in Step 1. Meyer Sound recommends applying thread locker (medium strength, PN 640.096) to the leading three threads of the screws before replacing them. Tighten the grille screws to 1.4 N-m (12 in-lb) of torque.

ENVIRONMENTAL PROTECTION

The ULTRA-X80 is available in **Standard (STD)** or **Outdoor Temporary (OT)** versions. The Standard version is suitable for applications that are exclusively indoors. The Outdoor Temporary version protects the loudspeaker from occasional exposure to moisture and/or particulate and is suitable for use outdoors in temporary applications like a weekend outdoor music festival. Additional protection is needed when these loudspeakers are permanently mounted in locations that expose them to the natural environment, for example, rain, fog, condensation, high levels of UV light, chlorine or other water-treatment chemicals, wind-blown sand, dirt, particulate, or water, etc.

ADDING LOW-FREQUENCY MODELS

ULTRA-X80 loudspeakers are designed to be deployed with Meyer Sound self-powered LFC models listed in the table below. These low-frequency models extend the system response appreciably, increasing the overall acoustic power of the system in the lowest frequencies.

The ratio of low-frequency models to ULTRA-X80 loudspeakers generally depends on the following variables:

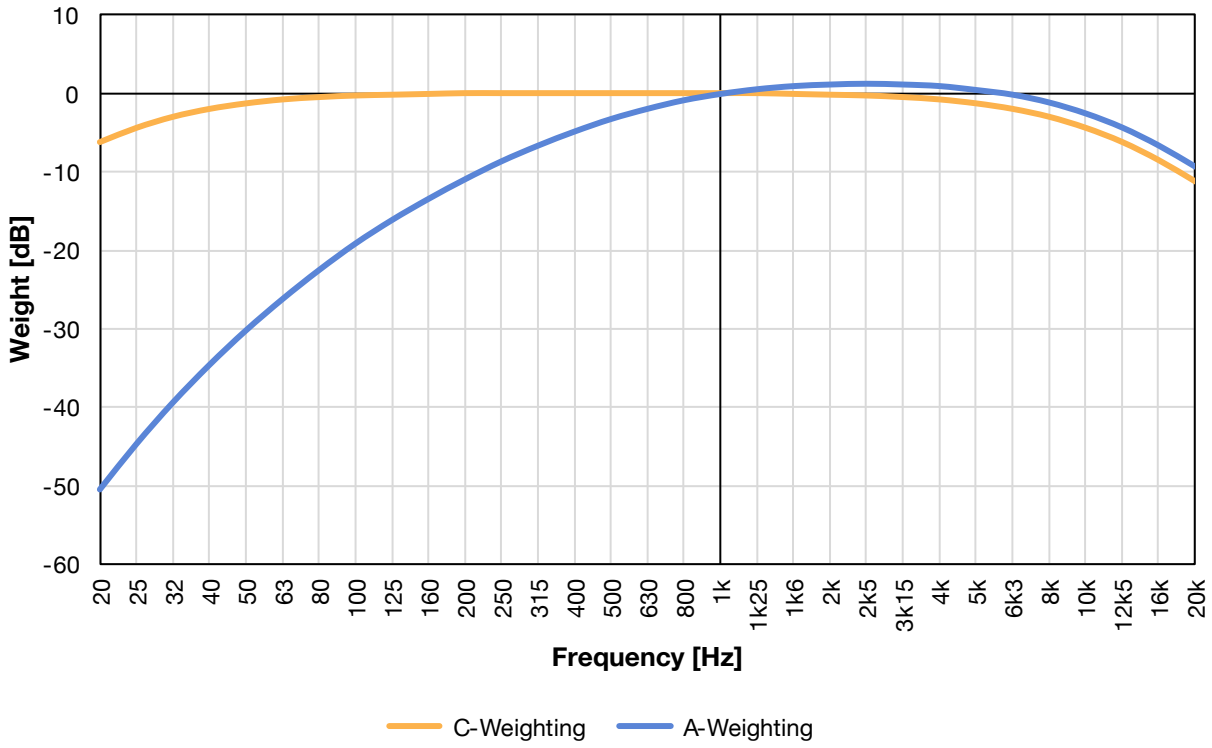
- Low-Frequency loudspeaker model
- System configuration
- Frequency content of source material
- Headroom required for low frequencies

For the various applications listed in the columns of the table below, ratios of low-frequency models to one ULTRA-X80 loudspeaker are provided as guidance to achieve the desired amount of low-frequency gain.

Table 1. Recommended Meyer Sound Low-Frequency Models to ULTRA-X80 Ratios

LFC Model	Frequency Response	Pop C Minus A	Dance	House	Ultra Bass
750-LFC	37–110 Hz, ±4 dB	2:1	3:1	5:1	N/A
900-LFC	32–115 Hz, ±4 dB	2:1	2:1	2:1	3:1
2100-LFC	30–125 Hz	1:1	1:1	1:1	2:1

NOTE
The column in the table above labeled Pop C Minus A refers to a 6 dB sound level difference between the A-weighted and C-weighted sound levels.



IEC 61672 Weighting Curves

ADDING LOW-FREQUENCY MODELS BY DAISY-CHAINING SIGNAL

Full-range signals can be connected directly to Meyer Sound self-powered loudspeakers because the loudspeakers have built-in active crossovers. Low-frequency models can be added to an ULTRA-X80 system by simply daisy-chaining the analog signal. Connect the source signal to one of the Inputs, then connect the Loop output to the next loudspeaker, and so forth.

When ULTRA-X80 loudspeakers are coplanar to the low-frequency models, or they are very close together, about one to two meters (three to six feet), the phase response is aligned enough through the acoustic crossover to be constructive, and the result will be a relatively flat frequency response. However, the response will have a gain increase in the 60–200 Hz range, where the loudspeaker responses overlap.

CAUTION
Make sure the source signal is sufficient to drive the total load impedance of the daisy-chained loudspeakers (see Calculating Analog Input Load Impedance).

NOTE
If the low-frequency model indicates limiting before reaching the desired sound level, consider adding additional units to meet the desired sound level without exposing the drivers to excessive heat and excursion.

ADDING LOW-FREQUENCY MODELS USING A PROCESSOR

When independent control of the signals reproduced by various loudspeaker models is needed or desired, a **Galileo GALAXY** signal processor is recommended. The same, full-range source signal can be routed to both an ULTRA-X80 and a low-frequency model, which can be modified with filters, gain, delay, and polarity settings in addition to the built-in signal processing. To determine the processor settings, dual-channel FFT measurements provide the most actionable data.

NOTE
One or more (up to 20) Meyer Sound loudspeakers can be connected to a single Galileo GALAXY output by daisy-chaining the signal as described above.

TIP
Meyer Sound's System Design and Prediction Tool, **MAPP 3D**, can be used to accurately predict the appropriate loudspeaker deployment for a system, including coverage data, system delay and equalization settings, rigging information, and detailed design illustrations.

QUICKFLY RIGGING

The ULTRA-X80 models are compatible with Meyer Sound's QuickFly system, a comprehensive collection of custom-designed rigging, flying, and mounting options.

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 method for their application. Rigging should only be carried out by experienced professionals.

Use mounting and rigging hardware that has been rated to meet or exceed the weight being hung. Make sure to attach mounting hardware to the building's structural components (studs or joists) and not just 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.

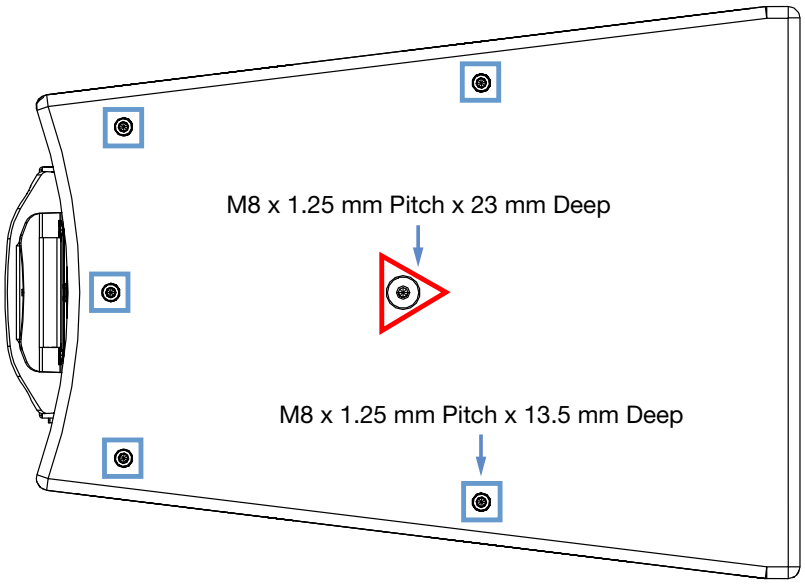
- Use mounting hardware appropriate for the surface where the loudspeaker will be installed.
- Make sure the fasteners are tightened securely. Meyer Sound recommends using medium strength thread locker on fastener threads.
- Inspect mounting and rigging hardware regularly. Immediately replace any worn, bent, or damaged components.

RIGGING POINTS

The top and bottom of the ULTRA-X80 cabinets include 12 high-strength, corrosion-resistant stainless steel rigging points that provide threaded holes for connection to QuickFly rigging and third-party mounting options, as shown in the figure below. The five perimeter rigging points have a thread depth of 13.5 mm (0.53 in), while the centrally located rigging point threads are 23 mm (0.90 in) deep. Each rigging point is rated for at least a 5:1 safety factor for the weight of one ULTRA-X80 loudspeaker.

CAUTION

- The fasteners included with rigging accessory kits are the appropriate length to engage the threads sufficiently. For connection to third-party assemblies not provided by Meyer Sound, it is the user's responsibility to ensure the fastening hardware is long enough to engage all the threads but not bottom out when the fastener is properly tightened and is sufficiently rated for the application.
- The maximum torque for hardware threaded into the rigging attachment points located on the top and bottom of ULTRA-X80 loudspeakers is 13.3 N-m (120 in-lb).



Top and Bottom Rigging Point Locations, Twelve Total

REAR HANDLES

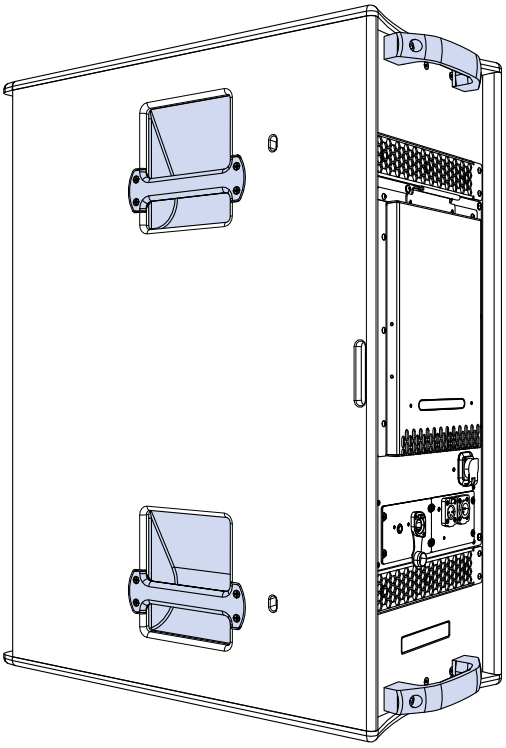
The two handles located on the rear of the cabinet have two functions: an additional grasping point when moving the loudspeaker and, unusual for Meyer Sound loudspeakers, a secondary/safety rigging connection. These handles have been rated for both perpendicular and parallel loading with at least a 5:1 safety factor for a single cabinet.

If desired, the rear handles can be removed for cosmetic reasons. They can also be removed and sufficiently rated and properly sized eye bolts or hoist rings threaded into the handle attachment points if needed for specific rigging methods. These attachment points are M8 x 1.25mm pitch with 13.5 mm of thread depth and have a maximum torque of 13.3 N-m (120 in-lb).

SIDE HANDLES

The handles located on the sides of the ULTRA-X80 cabinets are only intended for manual lifting and moving of the loudspeaker without mechanical assistance.

CAUTION
Do not attach anything to the four handles located on the sides of the cabinet. They are not safety-rated.



ULTRA-X80 Side and Rear Handles Highlighted

MOUNTING INFORMATION

When mounting ULTRA-X80 loudspeakers, it is generally required to employ two loudspeaker attachment points to the structure it's being suspended from, a primary and a secondary/safety mounting point, each sufficient to carry the entire load with adequate margin. In addition to user-provided eyebolts or hoist rings, the rear handles can serve as this secondary or safety mounting point.

CAUTION
Because these handles are metallic, if the safety point hardware is also metallic, a protective material is required to prevent wear of either or both the rear handle and the safety point hardware, e.g., flexible plastic tubing.

ACCESSORIES

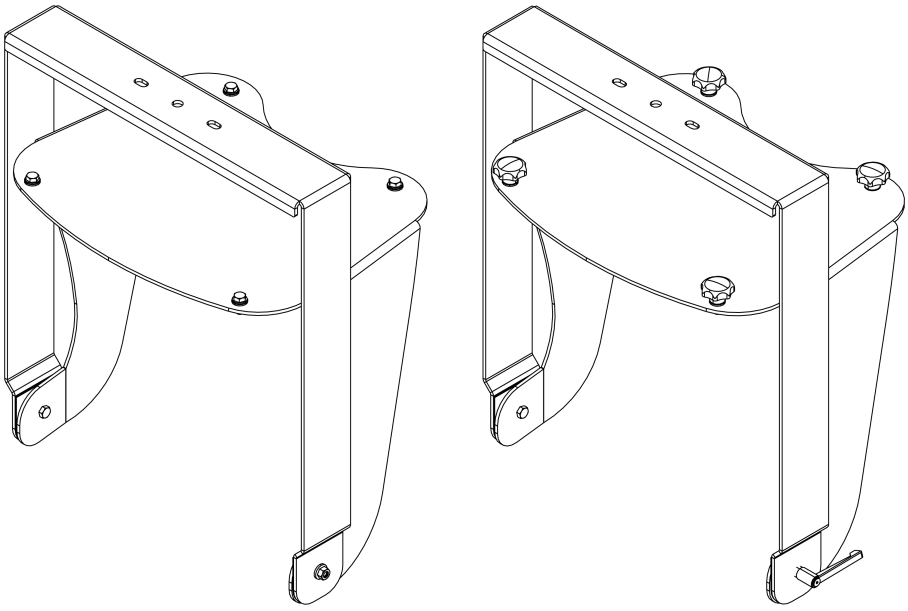
The available ULTRA-X80 rigging accessories listed in the table below are sold separately with the related ULTRA-X80 loudspeaker information.

Table 2. ULTRA-X80 Rigging Accessories and ULTRA-X80 Loudspeakers

Model	Part Number	Weight	Features
ULTRA-X80	see Price List	62.6 kg (138 lb)	12 total mounting points, six on top, six on bottom Rear handles are rated for secondary/safety connection
MY-T1	40.330.039.01	14.5 kg (32 lb)	Yoke
MUB-T1	40.330.055.01	6.8 kg (15 lb)	U-Bracket

MY-T1 YOKE

The MY-T1 Yoke suspends a single ULTRA-X80 loudspeaker, allowing both pan and tilt adjustment. The yoke attaches to the top of the loudspeaker in four locations with either hand screws for temporary deployment or bolts that minimize the visual aesthetic for installations, as shown in the figure below.
To secure the rotation points of the yoke halves, the kit includes both machine handles for temporary deployment and nuts that minimize the visual aesthetic for installations. A rated hanging clamp or fasteners and secondary/safety attachment hardware (not included) are required to suspend the MY-T1 Yoke. This accessory is available in custom colors. The fastening hardware is always black.

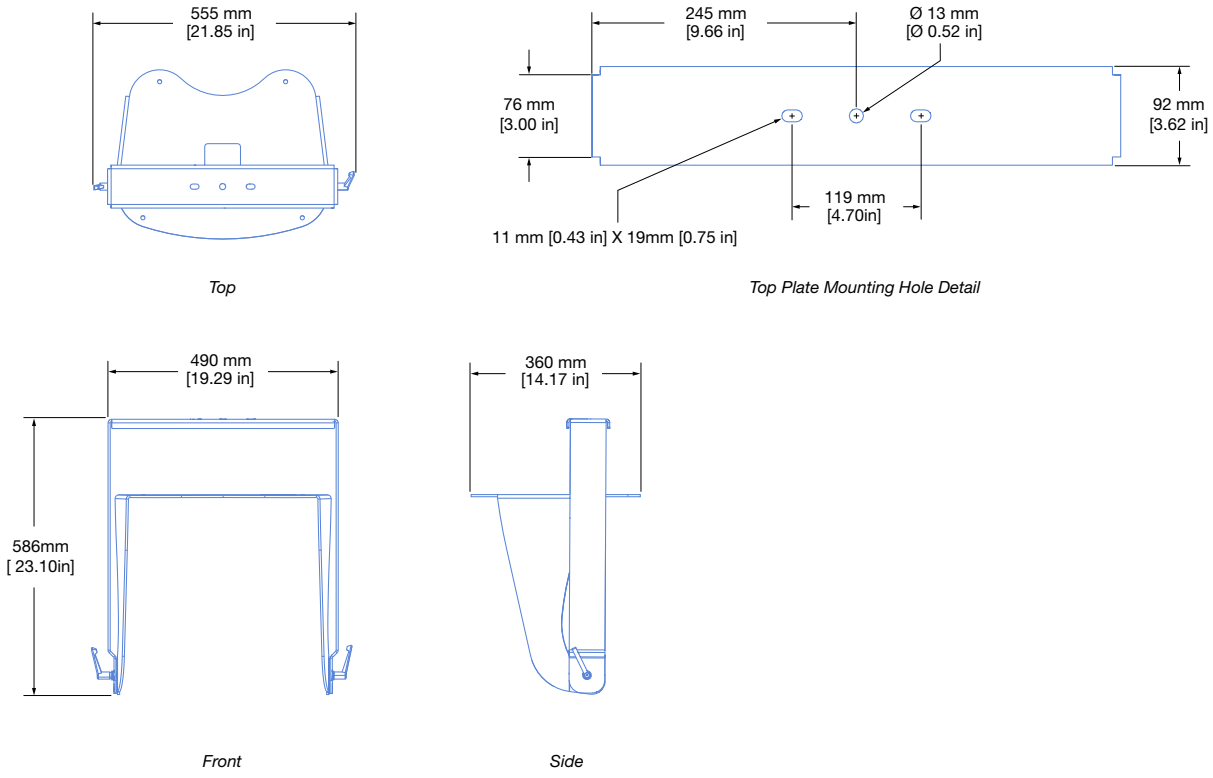


MY-T1 Yoke, Permanent (left) and Temporary (right) Fastener Options, Both Included

CAUTION

- Never suspend anything other than one ULTRA-X80 loudspeaker with a MY-T1 Yoke. This yoke is rated to suspend a single ULTRA-X80 loudspeaker with a 5:1 safety factor.
- The ULTRA-X80 and ULTRA-X82 loudspeakers weigh 62.6 kg (138 lb) and the MY-T1 Yoke weighs 14.5 kg (32 lb), and the combined weight is 77.1 kg (170 lb). The hardware and/or fasteners that are used to secure the MY-T1 to the building structure must be adequately rated to carry the combined weight with additional safety margin, usually a 5:1 safety factor.

The top plate of this yoke accommodates hanging clamps with standard 1/2-inch or 12 mm diameter hardware connected to the center mounting point. See the illustration below for dimensional details.



Top

Top Plate Mounting Hole Detail

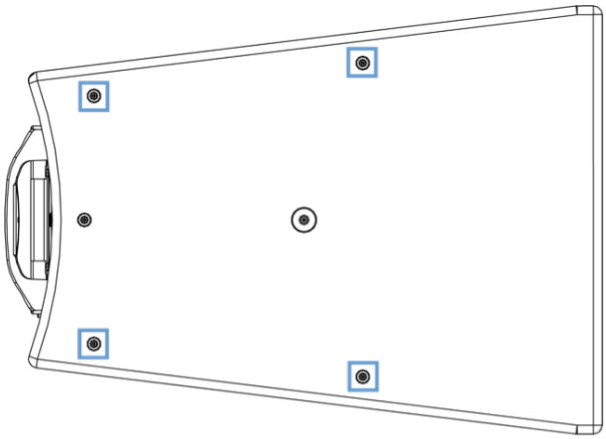
Front

Side

MY-T1 Yoke Dimensions

MY-T1 YOKE RIGGING POINTS

The MY-T1 Yoke is fastened to four of the rigging points located on the top and bottom of an ULTRA-X80 loudspeaker.



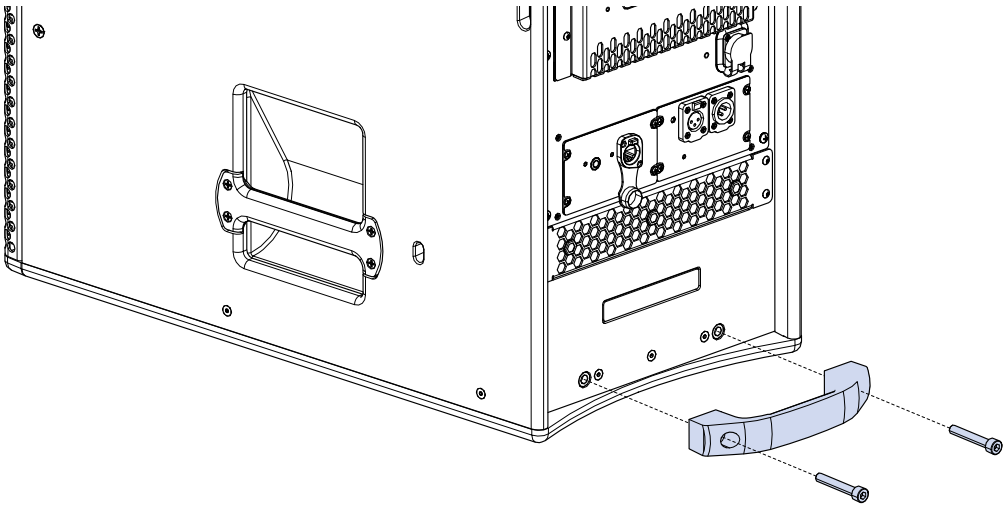
ULTRA-X80 Loudspeaker, Top/Bottom MY-T1 Yoke Mounting Locations Highlighted

MOUNTING OPTIONS

When mounting an ULTRA-X80 loudspeaker with a MY-T1 Yoke, two structural connections are generally required: a primary and a secondary/safety mounting point, each sufficient to carry the entire load with at least a 5:1 safety factor. The yoke provides the primary connection point. There are two options for the secondary connection:

Uncommon for Meyer Sound loudspeakers, the rear handles of ULTRA-X80 loudspeakers are rated at 5:1 safety factor for a single cabinet.

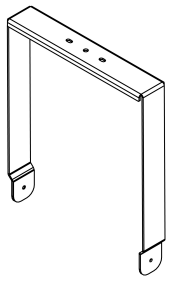
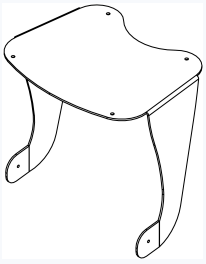
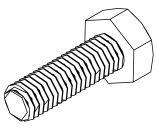
1. Make a connection between one of the rear handles and the structure it is being suspended from, usually with wire rope. If the secondary/safety point connection hardware is metallic, a protective material is required to prevent wear of the loudspeaker's metal handle, e.g., flexible plastic tubing.
2. Remove a rear handle and thread two sufficiently rated and properly sized eye bolts or hoist rings into the handle mounting points (M8 x 1.25 pitch, 13.5 mm deep). Make connections between these points and the building's structural attachment point(s).

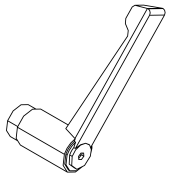
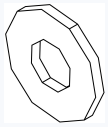
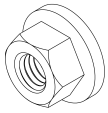
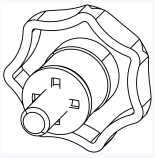
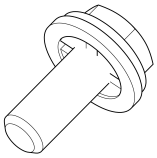


ULTRA-X80 Rear Handle Removed

MY-T1 KIT

Table 3. MY-T1 Yoke Kit Contents (PN 40.330.039.01)

Meyer Sound Part Number	Image	Qty	Description
45.330.042.01		1	MY-T1 TOP PLATE WITH GASKET & LABEL ASSY
64.330.044.01		1	YOKE BOTTOM PLATE
101.720		2	SCREW, HEX HEAD, M8 1.25 X 20 MM, STAINLESS, BLACK OXIDE
640.098	--	1	ADHESIVE LOCTITE THREADLOCKER 263, 0.5ml

Meyer Sound Part Number	Image	Qty	Description
124.066		2	MACHINE HANDLE M8 DIE CAST ZINC BLACK
113.532		2	WASHER, FLAT, 8.4 MM ID, 24 MM OD, 1.8 MM THICK, STAINLESS, BLACK
109.551		2	NUT, SMOOTH FLANGE M8-1.25, STAINLESS, BLACK OXIDE
45.287.061.01		4	KNOB & WASHER, M8 x 16.5mm, BLACK, STAINLESS ASSY 124.149 Knob 119.087 Retaining Washer
45.287.461.01		4	SCREW W/WSHR, HEXHD, M8 x 17 MM, STAINLESS, BLACK 119.087 Retaining Washer 113.530 Flat Washer 101.720 Screw
05.330.039.01	--	1	MY-T1 YOKE ASSEMBLY GUIDE
40.010.475.01	--	1	RIGGING DOCS W/SERIAL NUMBER SHIPPING KIT

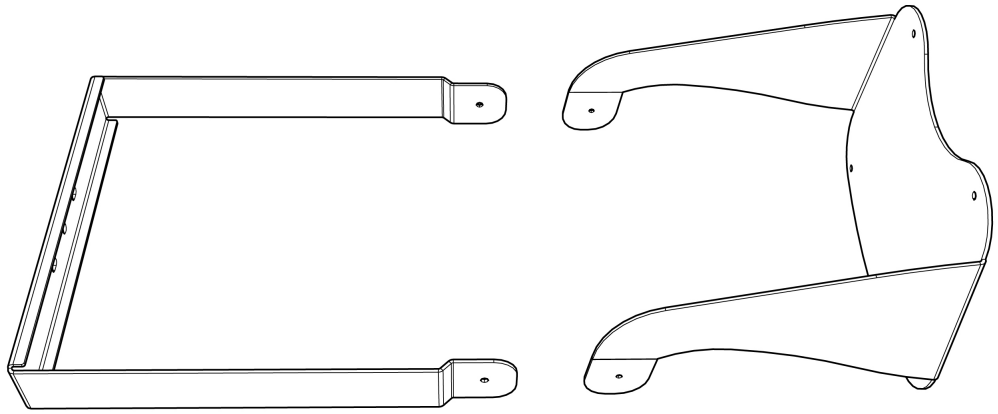
MY-T1 YOKE ASSEMBLY INSTRUCTIONS

After unpackaging the MY-T1 Yoke Kit and confirming the contents match the parts and quantities listed in the table above, follow these steps to assemble and connect an MY-T1 Yoke to an ULTRA-X80 loudspeaker:

Please review these assembly steps before starting. They are less intuitive than you may imagine.

1. Position the two yoke halves on a flat surface and orient them exactly as illustrated in the figure below.

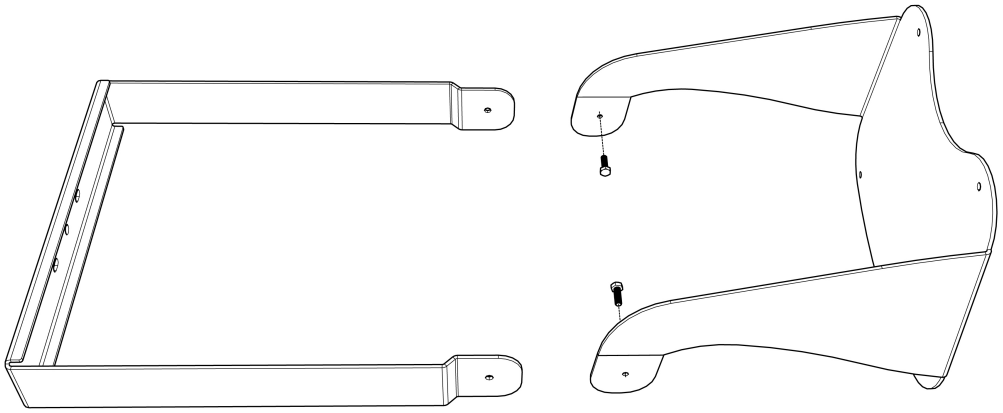
NOTE
The yoke half illustrated on the left is symmetrical, either side can face up. The yoke half on the right is not symmetrical and needs to be oriented as it is illustrated below.



Two Halves of the MY-T1 Yoke Correctly Oriented for Assembly

2. As illustrated on the right in the figure below, from the inside of the arms, thread the two hex-head screws (PN 101.720) into the threaded holes, stopping before the threaded end protrudes from the other side of the arm.

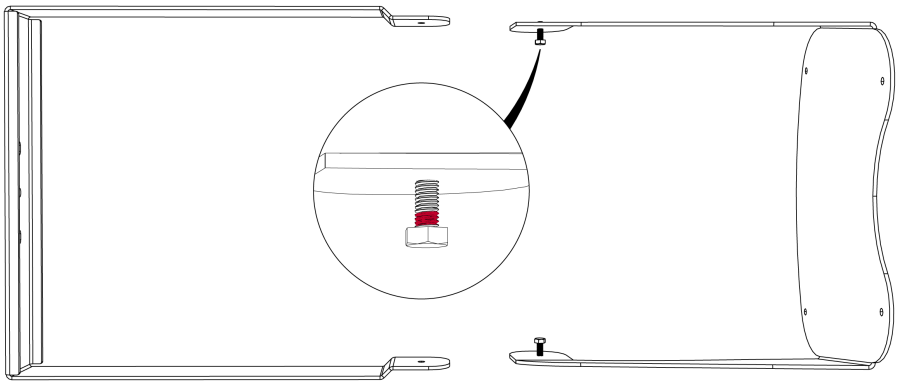
> **NOTE**
> The yoke half illustrated on the left does not have threaded holes.



Start Hex-Head Screws in Threaded Holes of the Yoke Arms of the Right-Hand Yoke Half

3. Apply 3 drops of thread locker (PN 640.098) to the threads of both screws, closest to the head of the screw.

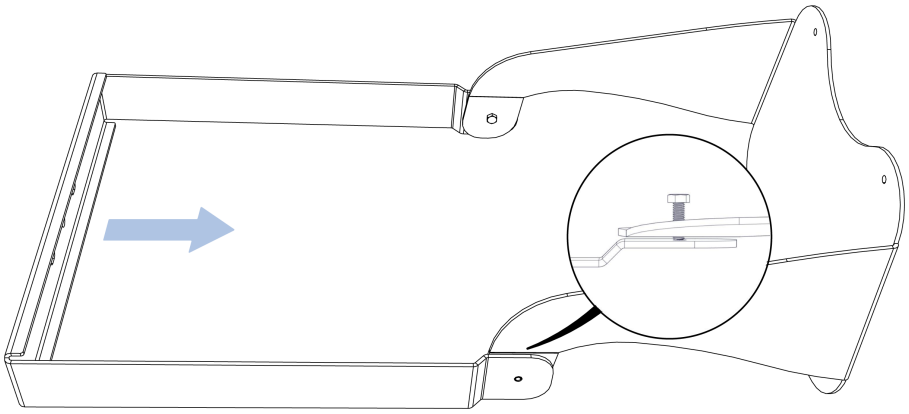
> **NOTE**
> The thread locker helps retain the screw after assembly, preventing the screw from backing out when the tensioning hardware is loosened.



Apply Thread Locker to the Threads Nearest Screw Heads

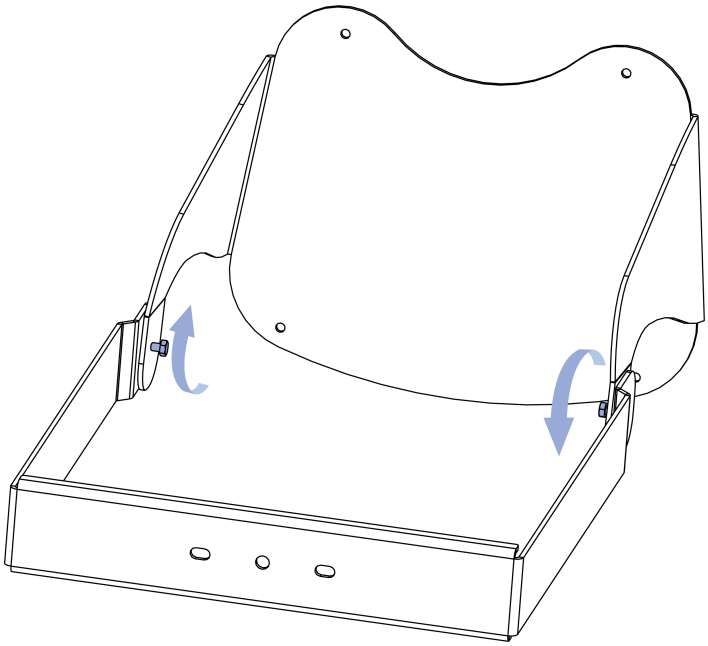
4. Move the left half of the yoke toward the right half until the holes at the ends of the arms are aligned, as shown in the figure below.

> **NOTE**
> The halves of the yoke are correctly aligned when the arms of the left half are outside the arms of the right half, as shown in the figure below.



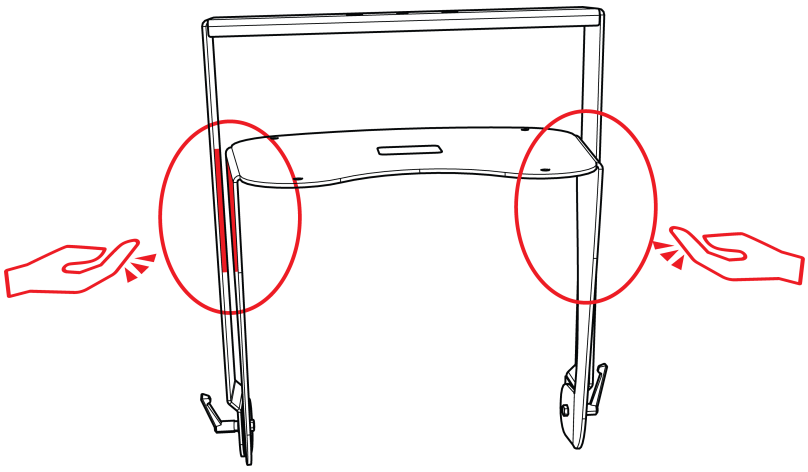
Slide Halves Together Aligning Holes at End of Arms

5. Continue to tighten both screws to 13.3 N-m (120 in-lb) of torque.



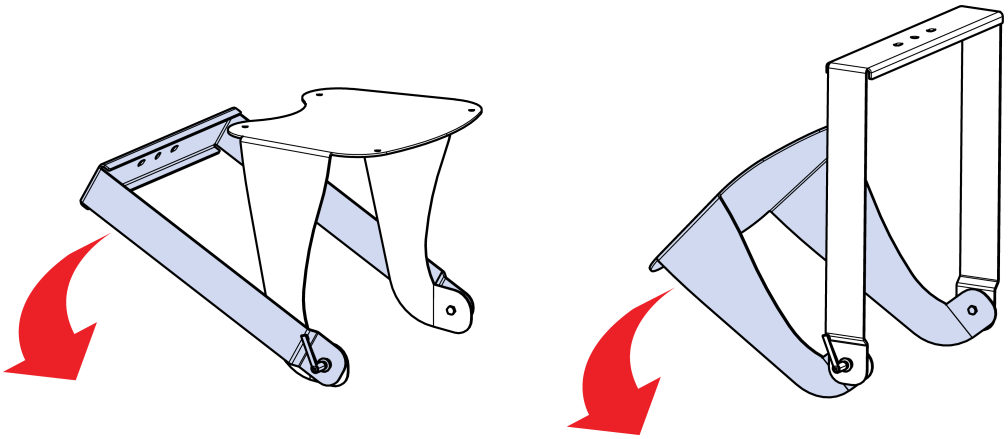
Continue Tightening Screws

CAUTION
Once assembled, always tighten the tensioning hardware and handle the yoke by grasping both halves as they present a hand/finger pinch point.



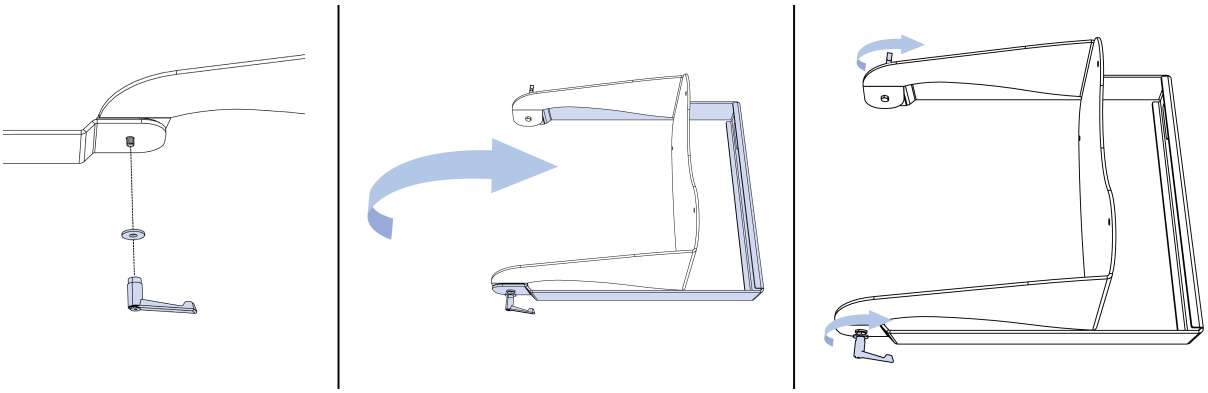
Hand Pinch Points Between Yoke Halves

CAUTION
Always tighten the tensioning hardware and handle the yoke by grasping both halves. If the yoke is grasped by only one of the halves and the tensioning hardware is loose, there is a risk of injury if one of the halves rapidly realigns to gravity and impacts the lower extremities of the person handling the yoke.



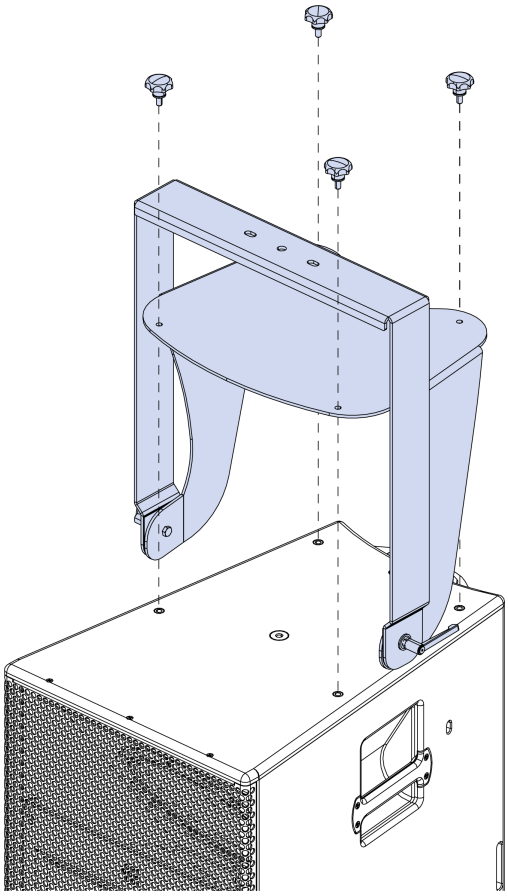
Loose Tensioning Hardware, Unrestrained Yoke Half Rapidly Orients to Gravity

6. Perform these tasks in order, as illustrated in the figure below:
   a. Thread one of the tensioning hardware options onto both screws using either the machine handle or nut:
      - **Machine handle**: Slide a washer (PN 113.532) onto both screws and then thread the machine handles (PN 124.066) onto them
      - **Nut**: Thread the two nuts (PN 109.551) onto the screws (no washer needed)
   b. Fold the left half of the yoke to the right half
   c. Tighten the machine handles very firmly or the nuts to at least 6.6 N-m (60 in-lb) of torque to prevent unintended rotation when handled – a safety issue



Thread Tensioning Hardware onto Both Screws (left), Fold Left Half to Right Half (middle), and Tighten Tensioning Hardware (right) - Machine Handle Option Illustrated

7. Set the yoke on an ULTRA-X80 loudspeaker, aligning the mounting holes of the yoke with the rigging points of the loudspeaker.
8. Secure the yoke to the loudspeaker with either the four knobs with washers (PN 45.287.061.01) or the four screws with washers (45.287.461.01), as shown in the figure below. Tighten the fasteners to at least 11 N-m (97 in-lb) of torque. Maximum torque is 13.3 N-m (120 in-lb).



Attach Yoke to Loudspeaker - Knob/Washer Option Illustrated

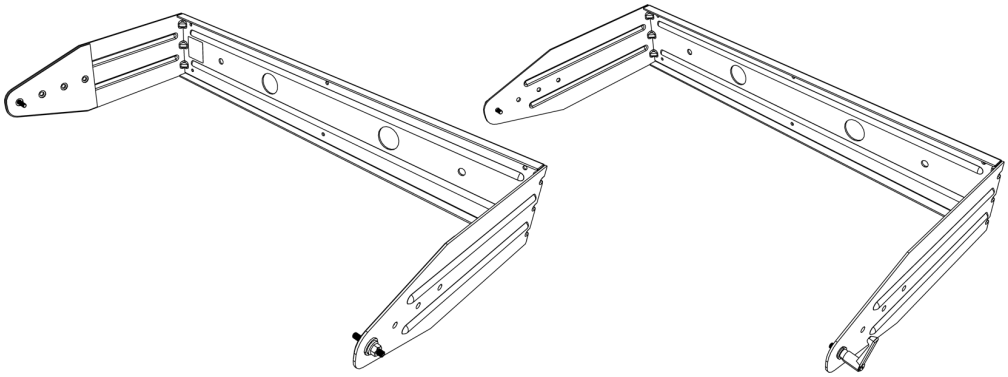
MY-T1 YOKE MOUNTING INSTRUCTIONS

1. Attach a sufficiently rated clamp or other rigging hardware to the center mounting hole of the yoke, or mount the yoke with two sufficiently rated and sized fasteners through the two slotted holes next to the center mounting hole.
2. Suspend the loudspeaker from a sufficiently rated structural attachment point and attach the secondary or safety mounting point to a sufficiently rated structural attachment point. Adjust the horizontal aim of the loudspeaker and tighten the mounting hardware.
3. Loosen the machine handles or nuts to adjust the tilt of the loudspeaker, then tighten again. The rotation point of the yoke and the center of gravity of the loudspeaker are well aligned, minimizing the friction needed at the yoke rotation point to maintain the loudspeaker position.
4. Retain this document, along with the product warranty and rigging safety document, for reference.

MUB-T1 U-BRACKET

The optional MUB-T1 U-Bracket enables a single ULTRA-X80 loudspeaker to be mounted to the floor or ceiling with a 5:1 safety factor. The u-bracket includes four holes on the loudspeaker connection arms to adjust the distance between the loudspeaker and mounting surface.

The MUB-T1 U-Bracket Kit includes two M8 machine handles for easy angle adjustment when temporarily deployed. For permanent installation, the included M8 nuts secure the u-bracket to the loudspeaker, minimizing the visual footprint. This accessory is available in custom colors. The fastening hardware is always black.



ULTRA-X80 Loudspeaker with MUB-T1 U-Bracket, Permanent Hardware (left), Temporary Hardware (right)

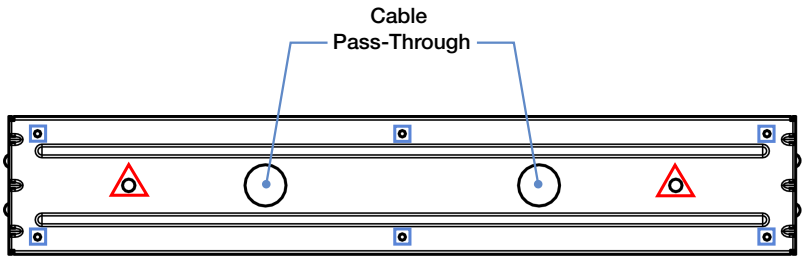
One ULTRA-X80 loudspeaker can be safely mounted with the MUB-T1 U-Bracket with a 5:1 safety factor. When mounting an ULTRA-X80 with the MUB-T1, the u-bracket must be secured to the mounting surface by one of the configurations listed in the table below.

Table 4. MUB-T1 Mounting Hole Use

Hole Location	Safety Factor
Six 7.1 mm [0.28 in] perimeter holes	5:1
Both 13.9 mm [0.55 in] inner holes	5:1

There are two sets of mounting points on the top of the MUB-T1. The blue squares shown in the figure below identify the six, 7.1 mm [0.28 in] diameter perimeter holes. The red triangles identify the two inner 13.9 mm [0.55 in] diameter mounting holes.

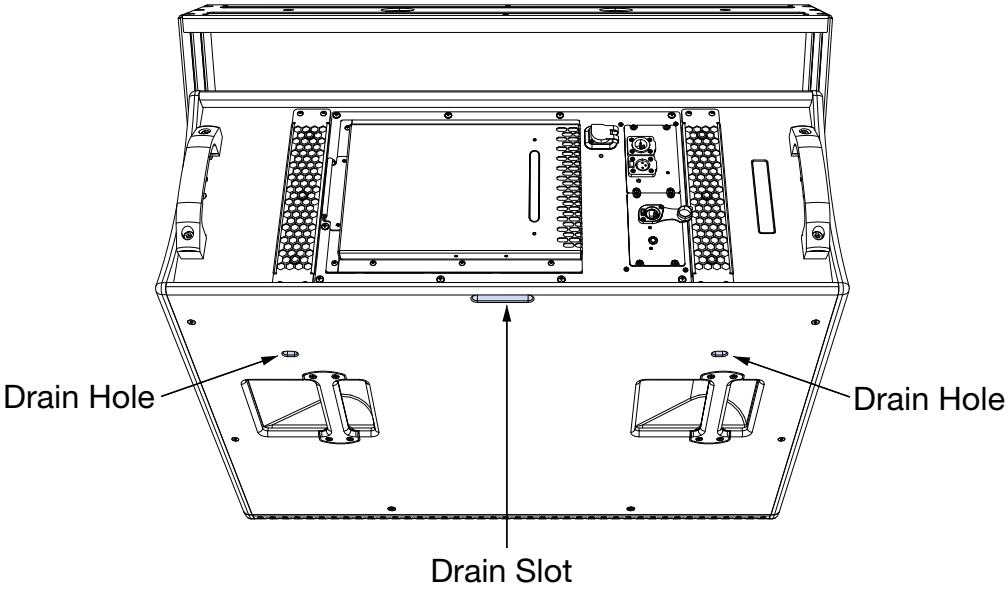
Once mounted to the structure, the two cable pass-through holes provide an unobtrusive routing path for the power and signal cables from above the mounting surface.



MUB-T1 Top Plate, Mounting Holes, and Cable Pass-Through Holes

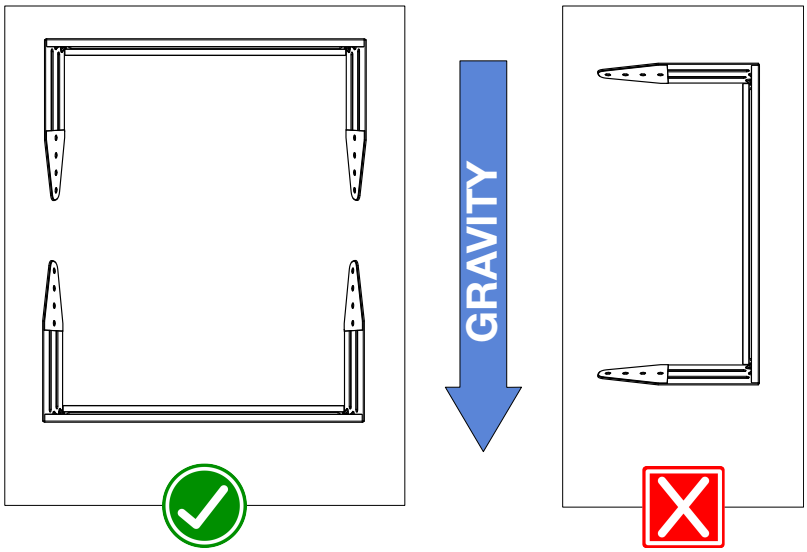
The ULTRA-X80 cabinet is designed to resist the accumulation of liquid in the internal cavities - exits are provided if it does. However, the mounting instructions must be closely followed for the exits to be effective. There are two drain holes and a drain slot on one side of the cabinet. The two holes on the side drain any accumulated liquid from two internal chambers. The slot prevents liquid from accumulating between the side and rear panels.

CAUTION
When mounting ULTRA-X80 loudspeakers horizontally, always mount the cabinet with the drain holes facing down.

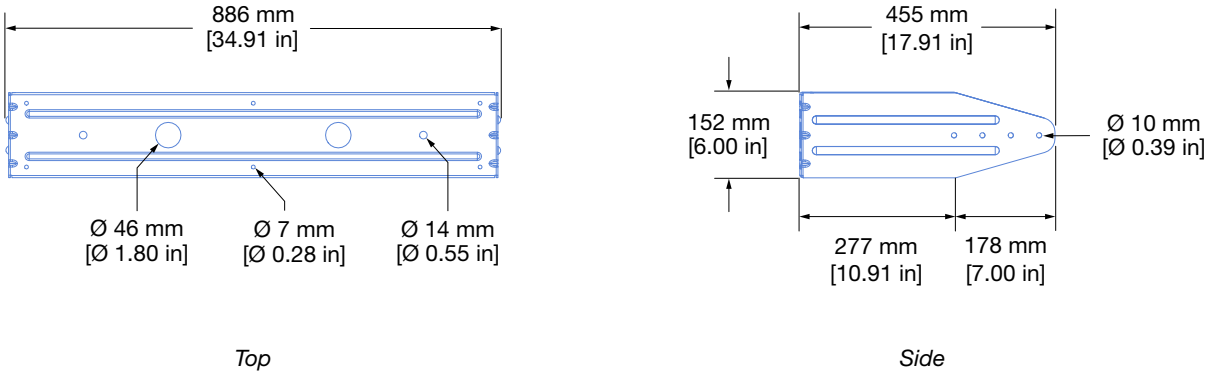


Horizontally Oriented ULTRA-X80 Loudspeaker, Drain Holes and Slot Highlighted

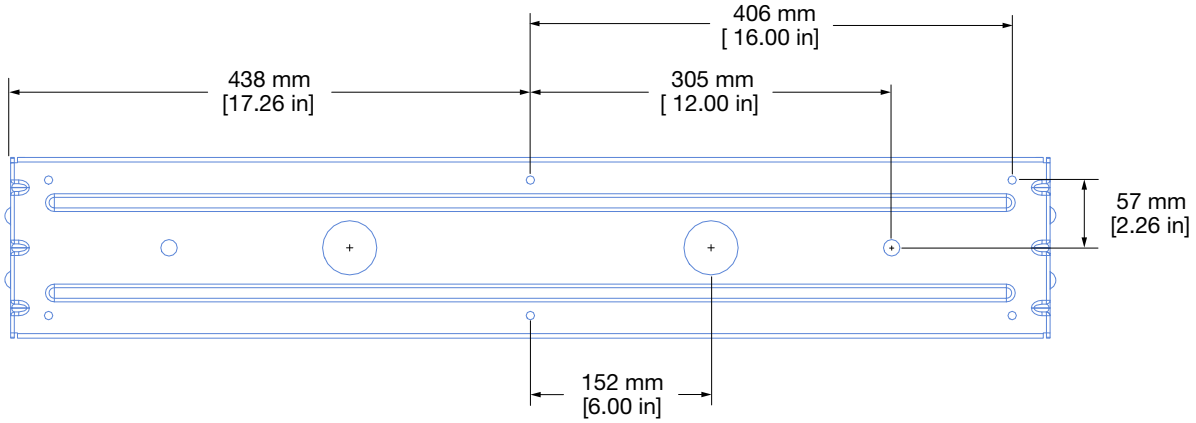
CAUTION
The MUB-T1 U-Bracket is not rated to be mounted in a vertical orientation, only horizontally, with the mounting plate surface perpendicular to gravity, usually to ceilings or floors.



MUB-T1 U-Bracket - Horizontal Mounting Supported, Vertical Mounting Not Supported



Top *Side*



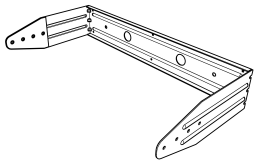
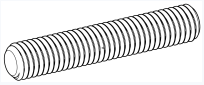
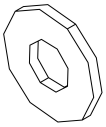
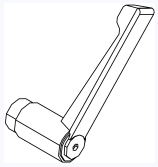
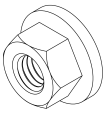
Top Plate Mounting Hole Detail

MUB-T1 U-Bracket Dimensions

MUB-T1 KIT

The MUB-T1 U-Bracket kit includes the items listed in the table below.

Table 5. MUB-T1 U-Bracket Kit Contents (PN 40.330.055.01)

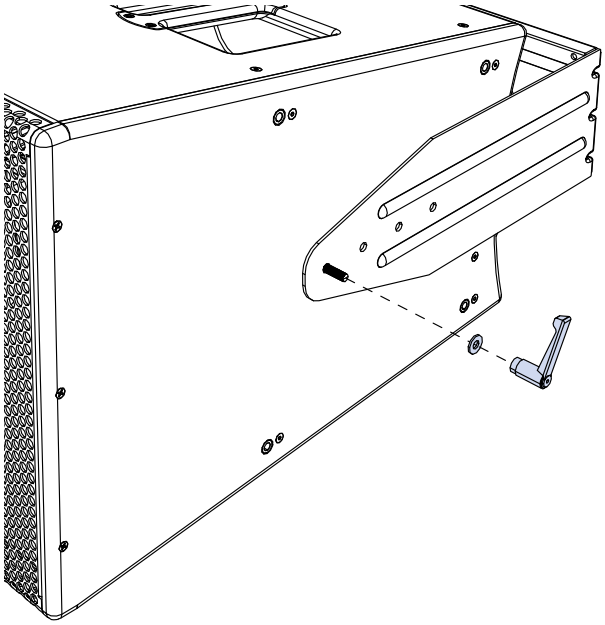
Meyer Sound Part Number	Image	Qty	Description
45.330.055.01		1	MUB ASSEMBLY
108.011		2	SET SCREW, HEX , M8 x 45, STAINLESS, BLACK OXIDE
113.532		2	WASHER, FLAT, 8.4 MM ID, 24 MM OD, 1.8 MM THICK, STAINLESS, BLACK
124.066		2	MACHINE HANDLE M8 DIE CAST ZINC BLACK
109.551		2	NUT, SMOOTH FLANGE M8-1.25, STAINLESS, BLACK OXIDE
552.169	--	1	ALLEN WRENCH, 5/32-inch
640.096	--	1	MED STRENGTH, REMOVABLE, THREADLOCKER, 0.5ML

MUB-T1 U-BRACKET ASSEMBLY INSTRUCTIONS

To attach a MUB-T1 U-Bracket to an ULTRA-X80 cabinet:

1. Determine which of the four mounting holes on the arms of the u-bracket are appropriate for the application, which is usually the mounting hole that will minimize the distance between the cabinet and the mounting surface while maintaining at least 15 cm (6 inches) of space between the rear of the cabinet and large surfaces for proper ventilation.
2. Lay the ULTRA-X80 cabinet on its side, with the drain holes and slot facing down.
3. Apply thread locker to the first three threads of the two set screws (PN 108.011).
4. Align the selected holes of the u-bracket arms with the center rigging point on each end of the cabinet and thread the set screw (PN 108.011) into the center rigging points.

5. Tighten the set screws with an Allen wrench (included) to a maximum of 13.3 N-m (120 in-lb) of torque.
6. Slide the flat washer (PN 113.532) onto the set screw, as shown in the figure below.
7. Thread either the Machine Handle (PN 124.066) or the M8 nut (PN 109.551) onto the set screw and tighten sufficiently to prevent cabinet rotation, maximum torque 13.3 N-m (120 in-lb).



Washer and Machine Handle Installation

LIMIT ON/STATUS LED ERROR CODES

The Limit On/Status LEDs located on the user panel indicate faults by blinking after the initial startup sequence. After powering the loudspeaker on, if these LEDs do not turn green after 15 seconds but instead flash or blink red, count the number of times it flashes between pauses and reference the table below to determine the fault. Faults are also displayed in Meyer Sound's Nebra software and can be downloaded as a log file. In some cases, power-cycling or restarting the loudspeaker may clear the fault. For faults that are listed as **non-clearable**, contact your nearest Meyer Sound Service location with the loudspeaker model, serial number(s), and the fault indication.

Table 6. Faults Reported by ULTRA-X80 On/Status LED

Fault Indication (number of LED blinks)	Error Description	Trigger Condition(s)	Loudspeaker Action	Initial or Running	Clearable / Non-Clearable
1	Driver Harness Not Connected	Sense Circuit Open	Audio Muted	Initial	Non-Clearable
2	Sense circuit not compatible with firmware	Sense circuit mismatch with loudspeaker firmware type	Audio muted	Initial	Non-Clearable
3	Load fault compression driver, ch 1	open failed driver	DSP reduces threshold for TPL and peak limiters	Running	Clearable
4	Load fault lower LF driver, ch 2a	open failed driver	DSP reduces threshold for TPL and peak limiters	Running	Clearable
5	Load fault upper LF driver, ch 2b	open failed driver	DSP reduces threshold for TPL and peak limiters	Running	Clearable
6	*not used*				
7	*not used*				
8	Fan controller not found	Fan controller not found	Audio muted	Initial	Non-Clearable
9	Amplifier not ready	Amplifier not passing audio	Audio muted	Running	Clearable
10	*not used*				
11	*not used*				

Fault Indication (number of LED blinks)	Error Description	Trigger Condition(s)	Loudspeaker Action	Initial or Running	Clearable / Non-Clearable
12	Within 20°C of amplifier thermal limit	High amplifier component temperatures	TPL reduced by 60%	Running	Clearable
13	Amplifier thermal limit exceeded	Maximum amplifier temperatures exceeded	Audio muted – high-voltage supply and amplifier turned off	Running	Clearable
14	DSP non-responsive	DSP not detected	No audio output	Initial	Non-Clearable
15	Board temperature sensor non-responsive	Temperature sensor not detected	Warning, no action	Initial or Running	Clearable
16	*not used*				
17	*not used*				
18	*not used*				
19	Wrong DSP for loudspeaker model	Could not verify correct DSP	No audio output	Initial	Non-Clearable
20	Communication failure	CAN startup message failure	No action – at startup only	Initial	Non-Clearable
21	AC Mains voltage > 160 V AC	RMS voltage exceeds threshold for one second	TPL reduced by 80%	Running	Clearable
22	*not used*				
23	*not used*				
24	SE/BTL Mode Check BTL unbal	Amp hardware not configured for X80	No audio output	Initial	Non-Clearable