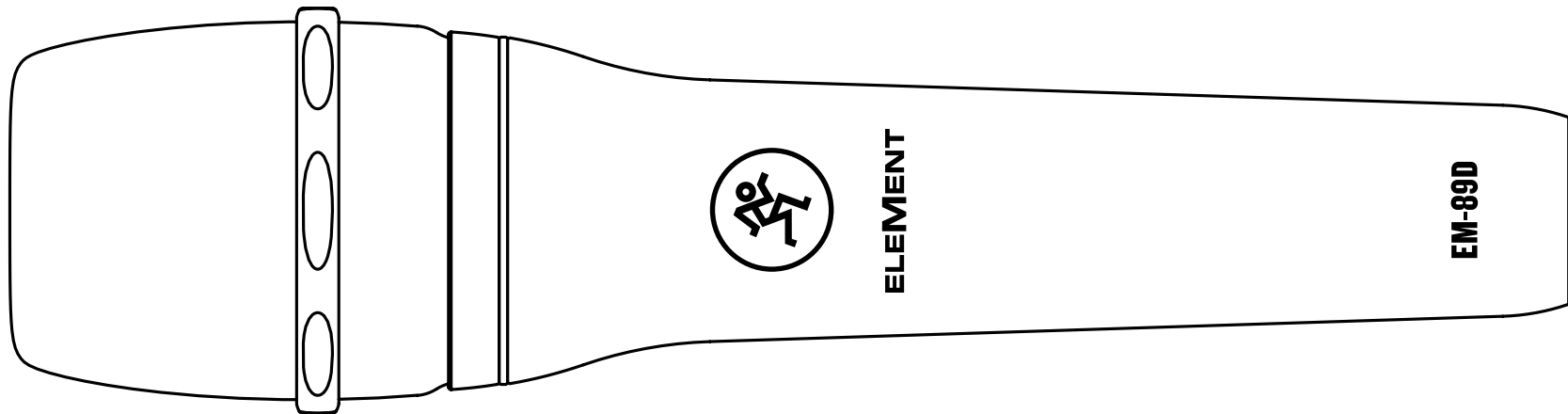


EM-89D

Dynamic Vocal Microphone



OWNER'S MANUAL



www.mackie.com

IMPORTANT SAFETY INSTRUCTIONS

- 1. Read, follow, and keep these instructions. Heed all warnings.
- 2. Do not expose the microphone to extreme cold or heat.
- 3. Do not expose the microphone to rain, use it in water or in damp or wet conditions.
- 4. Do not expose the microphone to any excessive dust and other foreign particles.
- 5. Keep the microphone clean by washing outside with a dry cloth.
- 6. Be sure to lower the mixer's channel and master fader when connecting and disconnecting the microphone.
- 7. Keep the microphone in the case when not in use.
- 8. Never attempt to disassemble the microphone.
- 9. Mackie cannot be held responsible for any damage caused by improper use or modifications of the microphone.
- 10. Exposure to extremely high noise levels may cause permanent hearing loss. Individuals vary considerably in susceptibility to noise-induced hearing loss, but nearly everyone will lose some hearing if exposed to sufficiently intense noise for a period of time. The U.S. Government's Occupational Safety and Health Administration (OSHA) has specified the permissible noise level exposures shown in the chart. According to OSHA, any exposure in excess of these permissible limits could result in some hearing loss:
- 11. This device complies with part 15 of the FCC rules for the U.S. and the ICES-003 for Canada. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Duration, per day in hours	Sound Level
8	90 dB
6	92 dB
4	95 dB
3	97 dB
2	100 dB
1.5	102 dB
1	105 dB
0.5	110 dB
0.25 or less	115 dB



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

LIMITED WARRANTY Please keep your sales receipt in a safe place.

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

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

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

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

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

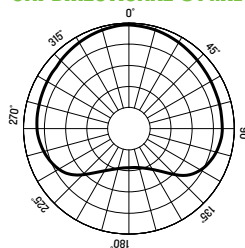
INTRODUCTION

The Element Series EM-89D Dynamic Vocal microphone encapsulates the finest in reliability, performance, and value.

Not only is it an excellent choice for singers, but its road-worthy construction and precisely tuned voice are as adept at miking instruments as it is highlighting your vocal performance.

Handheld dynamic microphones are the workhorses of the audio industry, and the Element Series EM-89D dynamic vocal mic is up to the task at an incredible value.

UNI-DIRECTIONAL @1 kHz



FEATURES

PROFESSIONAL QUALITY THAT'S AFFORDABLE

- Voiced for the stage, built for the road, priced for your wallet

RUGGED CONSTRUCTION

- Enjoy consistent performance night after night, gig after gig

LIVE FOR THE STAGE, WORK IN THE STUDIO

- Excels both onstage performance and studio recording
- Great for vocals and instruments

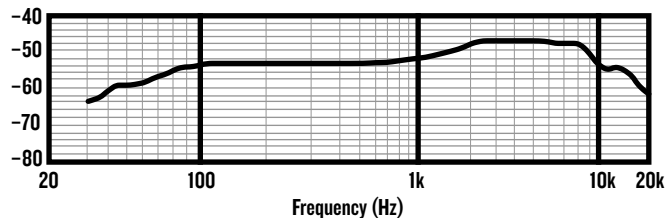
CARDIOID POLAR PATTERN

- Rejects peripheral noise to keep your performance crystal clear

INCLUDED ACCESSORIES

- Mic clip
- XLR cable
- Zipper pouch

FREQUENCY RESPONSE GRAPH



Technical Specifications	EM-89D
Element	Dynamic
Polar Pattern	Uni-directional
Frequency Response	50 Hz – 16 kHz
Sensitivity	-52 dB ±3 dB (0 dB = 1 V/Pa @ 1 kHz)
Output Impedance	600 Ω ±30% (@ 1 kHz)
Size (H × W)	7.3" × 2.0" 185 × 51 mm
Weight	0.66 lb • 0.30 kg
All specifications subject to change	

NEED HELP WITH THE MICROPHONE?

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

INSTRUCCIONES IMPORTANTES DE SEGURIDAD

1. Lea, cumpla y conserve estas instrucciones. Preste atención a todas las advertencias.
2. No permita que el micrófono quede expuesto a temperaturas extremas (tanto si es frío como calor excesivo).
3. No permita que el micrófono quede expuesto a la lluvia, ni lo use dentro del agua o en entornos muy húmedos.
4. No permita que el micrófono quede expuesto a niveles elevados de polvo o suciedad, ni partículas externas.
5. Mantenga el micrófono limpio frotando la superficie exterior con un trapo suave y seco.
6. Asegúrese de reducir el nivel del canal del mezclador y el fader máster a la hora de conectar y desconectar el micrófono.
7. Recoja el micrófono en su funda cuando no lo esté usando.
8. No intente nunca desmontar el micrófono.
9. Mackie no se hace responsable de posible daños provocados por un uso inadecuado o modificaciones no autorizadas del micrófono.
10. La exposición a niveles de ruido extremadamente altos puede causar problemas de sordera crónica. La susceptibilidad a esta pérdida de audición inducida por el ruido varía considerablemente de una persona a otra, pero casi cualquier persona tendrá una cierta pérdida de audición al quedar expuestos a un ruido intenso durante un determinado periodo de tiempo. El Departamento de Salud y Seguridad en el Trabajo de Estados Unidos (OSHA, por sus siglas en inglés) ha establecido unos niveles de ruido permisibles que aparecen en la siguiente tabla. De acuerdo a la OSHA, cualquier exposición que sobrepase estos límites permisibles puede dar lugar a un problema de sordera.
11. Este dispositivo cumple con la sección 15 de las normas FCC de EE.UU. y el ICES-003 de Canadá. Su funcionamiento está sujeto a las dos condiciones siguientes: (1) este dispositivo no debe producir interferencias molestas, y (2) este dispositivo debe aceptar cualquier interferencia recibida, incluyendo aquellas que puedan producir un funcionamiento no deseado.

Duration, per day in hours	Sound Level
8	90 dB
6	92 dB
4	95 dB
3	97 dB
2	100 dB
1.5	102 dB
1	105 dB
0.5	110 dB
0.25 or less	115 dB



Forma correcta de eliminar este aparato: Este símbolo indica que este producto no puede ser eliminado junto con la basura orgánica, de acuerdo a lo indicado en la Directiva de Residuos de Aparatos Eléctricos y Electrónicos (2012/19/EU) y a la legislación vigente de su país. Este producto debe ser entregado en uno de los "puntos limpios" autorizados para su reciclaje. La eliminación inadecuada de este tipo de residuos puede tener un impacto negativo en el medio ambiente y la salud humana debido a las sustancias potencialmente peligrosas asociadas generalmente con este tipo de aparatos. Al mismo tiempo, su cooperación a la hora de eliminar adecuadamente este producto contribuirá a un uso más eficaz de los recursos naturales. Para más información acerca la correcta eliminación de este tipo de aparatos, póngase en contacto con el Ayuntamiento de su ciudad, empresa local de recogida de basuras o con uno de los "puntos limpios" autorizados.

GARANTÍA LIMITADA

Conserve su factura en un lugar seguro.

Esta garantía limitada de producto ("Garantía de producto") es ofrecida por LOUD Audio, LLC. ("LOUD") y es aplicable a los productos adquiridos en los Estados Unidos o Canadá a través de un distribuidor oficial LOUD. Esta Garantía de producto no cubrirá a ninguna otra persona distinta al comprador original del producto (al que haremos referencia como "Comprador", "usted" o "tú").

Para aquellos productos adquiridos fuera de los Estados Unidos o Canadá, visite la web www.mackie.com para ver la información de su distribuidor local y sobre la cobertura en garantía ofrecida por dicho distribuidor en ese país.

LOUD garantiza al comprador que el producto está libre de defectos en materiales y mano de obra bajo condiciones de uso normales durante el Periodo de Garantía. Si el producto no cumple con lo establecido en esta garantía, LOUD o su servicio técnico autorizado, a nuestra elección, reparará o sustituirá ese aparato, siempre y cuando el comprador notifique a fábrica esa situación dentro del Periodo de Garantía a través de la web: www.mackie.com o llamando al servicio técnico de LOUD en el 1.800.898.3211 (llamada gratuita en los Estados Unidos y Canadá) en horario comercial de la Costa del Pacífico, excluyendo fines de semana o vacaciones de LOUD. Conserve la factura original sellada como prueba de la fecha de compra. Es necesaria para cualquier reclamación en periodo de garantía.

Para consultar todos los términos y condiciones, así como la duración concreta de la garantía de este producto, visite la www.mackie.com.

La Garantía de Producto, junto con su factura o recibo y los términos y condiciones que encontrará en www.mackie.com constituyen el contrato completo y sustituyen a cualquier otro contrato anterior entre LOUD y el comprador relativo al producto en cuestión. No será válida ninguna enmienda, modificación o cambio de cualquiera de las condiciones de esta Garantía de Producto salvo que aparezca previamente en un documento oficial sellado por el fabricante y/o responsable.

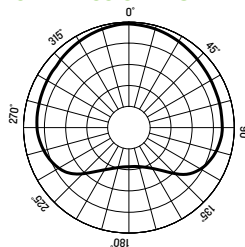
INTRODUCCIÓN

El micrófono dinámico vocal Element Series EM-89D reúne lo mejor en fiabilidad, rendimiento y precio.

No solo es una opción excelente para los cantantes, sino que su gran robustez y su sonido perfectamente afinado permite unos resultados tan perfectos para la captación de instrumentos como para realzar su interpretación vocal.

Los micrófonos dinámicos manuales son los burros de carga de la industria del audio y el micro dinámico vocal Element Series EM-89D realiza a la perfección su tarea con un precio inmejorable.

UNIDIRECCIONAL @1 kHz



CARACTERÍSTICAS

CALIDAD PROFESIONAL A UN PRECIO ASEQUIBLE

- Calidad para rendir sobre el escenario, construcción para soportar la carretera y precio para alegrar su bolsillo

CONSTRUCCIÓN ROBUSTA

- Disfrute de un rendimiento fiable, noche tras noche y gira tras gira

BUEN DIRECTO PARA EL ESCENARIO, TRABAJO FIABLE PARA EL ESTUDIO

- Excelente rendimiento tanto para el directo como para el estudio de grabación
- Perfecto por igual para voces e instrumentos

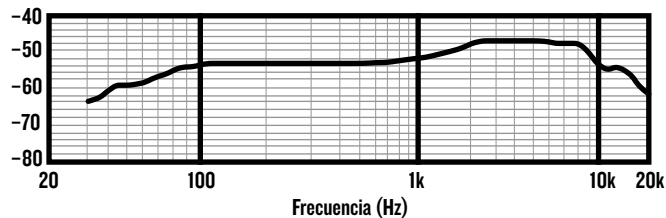
PATRÓN POLAR CARDIOIDE

- Rechaza el ruido periférico para mantener su interpretación limpia y cristalina

ACCESORIOS INCLUIDOS

- Pinza de micro
- Cable con conector XLR
- Funda con cremallera

GRÁFICO DE RESPUESTA DE FRECUENCIA



Especificaciones técnicas	EM-89D
Elemento	Dinámico
Patrón polar	Unidireccional
Respuesta de frecuencia	50 Hz ~ 16 kHz
Sensibilidad	-52 dB ±3 dB (0 dB = 1 V/Pa @ 1 kHz)
Impedancia	600 Ω ±30% (@ 1 kHz)
Tamaño (A × L)	7.3" × 2.0" 185 × 51 mm
Peso	0,66 lb • 0,30 kg
	Todas estas especificaciones están sujetas a cambios sin previo aviso

¿NECESITA AYUDA CON EL MICRÓFONO?

- Visite la web www.mackie.com y haga clic en Support para encontrar: Preguntas frecuentes (FAQ), manuales y otros documentos anexos.
- Teléfono 1-800-898-3211 si quiere hablar con uno de nuestros estupendos técnicos (lunes a viernes, horario laboral clásico, hora de la Costa del Pacífico).

CONSIGNES DE SÉCURITÉ IMPORTANTES

1. Lisez, appliquez et conservez ces instructions. Tenez compte de tous les avertissements.
2. N'exposez pas le micro à une chaleur ou un froid extrême.
3. N'exposez pas le micro à la pluie, ne l'utilisez pas dans l'eau ou dans un environnement très humide.
4. N'exposez pas le micro à de la poussière excessive ou autres particules étrangères.
5. Nettoyez régulièrement l'extérieur du micro avec un chiffon sec.
6. Assurez-vous que le volume de la tranche de la console de mixage ainsi que le volume général sont bien au minimum avant de connecter ou déconnecter le micro.
7. Conservez le micro dans sa boîte lorsque vous ne l'utilisez pas.
8. Ne tentez jamais de démonter le micro.
9. Mackie ne peut pas être tenu responsable des dommages causés par une mauvaise utilisation ou par une modification du micro.
10. L'exposition à des niveaux de bruit très élevés peut entraîner une perte permanente de l'ouïe. La sensibilité à ces dommages varie d'un individu à l'autre, mais tout le monde est appelé à des dommages auditifs extrêmes en présence de niveaux sonores élevés. L'Administration de la Sécurité et de la Santé (OSHA) du Gouvernement des États-Unis a publié les niveaux de bruit indiqués dans le tableau ci-dessous. Selon l'OSHA, toute exposition au-delà de ces limites entraîne des dommages auditifs.
11. Cet appareil est conforme à la section 15 de la réglementation FCC aux États-Unis et à l'ICES-003 au Canada. Son fonctionnement est soumis aux deux conditions suivantes : (1) cet appareil ne peut pas causer d'interférences nuisibles et (2) il doit accepter toute interférence reçue, y compris celles pouvant entraîner un dysfonctionnement.

Duration, per day in hours	Sound Level
8	90 dB
6	92 dB
4	95 dB
3	97 dB
2	100 dB
1.5	102 dB
1	105 dB
0.5	110 dB
0.25 or less	115 dB



Mise au rebut appropriée de ce produit: Ce symbole indique qu'en accord avec la directive WEEE (2012/19/EU) et les lois en vigueur dans votre pays, ce produit ne doit pas être jeté avec les déchets ménagers. Ce produit doit être déposé dans un point de collecte agréé pour le recyclage des déchets d'équipements électriques et électroniques (EEE). Une mauvaise manipulation de ce type de déchets pourrait avoir un impact négatif sur l'environnement et la santé à cause des substances potentiellement dangereuses généralement associées à ces équipements. En même temps, votre coopération dans la mise au rebut de ce produit contribuera à l'utilisation efficace des ressources naturelles. Pour plus d'informations sur l'endroit où vous pouvez déposer vos déchets d'équipements pour le recyclage, veuillez contacter votre mairie ou votre centre local de collecte des déchets.

GARANTIE LIMITÉE Conservez vos tickets de caisse dans un endroit sûr.

Cette garantie limitée du produit ("Garantie du Produit") est fournie par LOUD Audio, LLC. ("LOUD") et est applicable aux produits achetés aux états-Unis ou au Canada chez un revendeur ou fournisseur agréé par LOUD. La Garantie du Produit n'est valable que pour l'acheteur original du produit (ci-après appelé "l'Acheteur," "vous" ou "votre").

Pour les produits achetés en dehors des USA ou du Canada, consultez www.mackie.com pour trouver les informations de contact de votre distributeur local ainsi que des informations sur la couverture de la garantie fournie par le distributeur de votre marché local.

LOUD garantit à l'Acheteur que le Produit est exempt de tout défaut de matériaux et de fabrication pour une utilisation normale pendant la période de garantie. Si le Produit ne se conforme pas à la garantie mentionnée ici pendant la période de la garantie, LOUD ou son représentant agréé s'engage, à son choix, à réparer ou à remplacer le Produit défectueux, à considérer que l'Acheteur signale le défaut durant la Période de Garantie à la Société sur : www.mackie.com ou en appelant le support technique de LOUD au 1.800.898.3211 (appel gratuit aux états-Unis et au Canada) aux heures ouvrables normales, heure du Pacifique, à l'exception des week ends et pendant les vacances de LOUD. Merci de conserver le ticket de caisse original daté comme preuve de la date d'achat. Il vous sera demandé pour tout service de garantie.

Pour les termes et conditions complets, ainsi que pour la durée spécifique de la garantie pour ce Produit, consultez www.mackie.com.

La Garantie du Produit, conjointement à votre facture ou reçu, ainsi que les termes et conditions mentionnés sur www.mackie.com constituent le contrat intégral, et supplantent tout accord préalable entre LOUD et l'Acheteur sur l'objet de cet accord. Aucun avenant, modification ou désistement des dispositions de cette Garantie du Produit ne sera valide sauf mention écrite par la partie responsable par la présente.

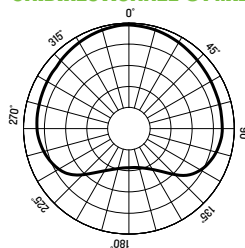
INTRODUCTION

Le micro dynamique pour voix EM-89D de la série Element vous assure fiabilité, performances et qualité.

Idéal pour les chanteurs, sa conception robuste et sa grande précision en font également un excellent choix pour la sonorisation d'instruments.

Les micros dynamiques sont omniprésents sur toutes les scènes et dans tous les studios ; le micro EM-89D de la série Element n'est pas en reste et vous surprendra par son rapport qualité/prix.

UNIDIRECTIONNEL @1 kHz



CARACTÉRISTIQUES

UNE QUALITÉ PROFESSIONNELLE À UN PRIX ABORDABLE

- Conçu pour la scène, à l'épreuve de la route, doux pour votre portefeuille

CONSTRUCTION ULTRA ROBUSTE

- Vous pourrez compter sur lui concert après concert

À LAISE SUR SCÈNE COMME EN STUDIO

- Idéal pour les performances scéniques ou durant les sessions d'enregistrement
- Parfait pour la voix et les instruments

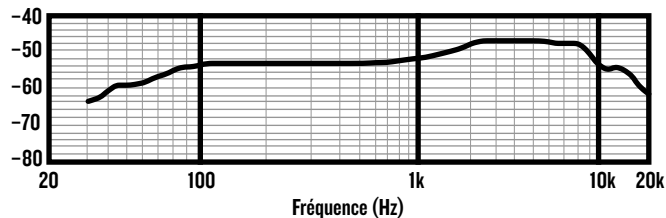
DIRECTIVITÉ CARDIOÏDE

- Ne capte pas les bruits ambiants pour des performances parfaites

ACCESSOIRES FOURNIS

- Pince micro
- Câble XLR
- Sacoche à fermeture éclair

GRAPHE DE RÉPONSE EN FRÉQUENCE



Caractéristiques techniques	EM-89D
Élément	Dynamique
Courbe de directivité	Unidirectionnel
Réponse en fréquence	50 Hz - 16 kHz
Sensibilité	-52 dB ±3 dB (0 dB = 1 V/Pa @ 1 kHz)
Impédance	600 Ω ±30% (@ 1 kHz)
Dimensions (H × L)	7.3" × 2.0" 185 × 51 mm
Poids	0,66 lb • 0,30 kg
Les caractéristiques peuvent être modifiées	

BESOIN D'AIDE AVEC VOTRE MICRO ?

- Consultez www.mackie.com et cliquez sur Support pour trouver : des FAQs, les modes d'emploi et des informations supplémentaires.
- Appelez le 1-800-898-3211 pour contacter le support technique (du lundi au vendredi, aux heures ouvrables normales, heure du Pacifique).

WICHTIGE SICHERHEITSHINWEISE

1. Anleitungen lesen, befolgen und aufbewahren. Warnhinweise beachten.
2. Setzen Sie das Mikrofon nicht extremer Kälte oder Hitze aus.
3. Setzen Sie das Mikrofon nicht dem Regen aus und verwenden Sie es nicht im Wasser oder feuchten oder nassen Umgebungen.
4. Setzen Sie das Mikrofon nicht extremem Staub oder anderen Fremdpartikeln aus.
5. Halten Sie das Mikrofon sauber, indem Sie es außen mit einem trockenen Tuch reinigen.
6. Schieben Sie die Kanal- und Master-Fader des Mixers zurück, wenn Sie das Mikrofon anschließen oder trennen.
7. Bewahren Sie das Mikrofon in seinem Koffer auf, wenn es nicht benutzt wird.
8. Versuchen Sie nicht, das Mikrofon in seine Bauteile zu zerlegen.
9. Mackie ist nicht verantwortlich für Schäden, die durch unsachgemäße Verwendung oder Modifikationen des Mikrofons verursacht werden.

10. Extrem hohe Geräuschpegel können zu dauerhaftem Hörverlust führen. Lärmbedingter Hörverlust tritt von Person zu Person unterschiedlich schnell ein, aber fast jeder wird einen Teil seines Gehörs verlieren, wenn er über einen Zeitraum ausreichend hohen Lärmpegeln ausgesetzt ist. Die Occupational Safety and Health Administration (OSHA) der US-Regierung hat den zulässigen Geräuschpegel in der folgenden Tabelle festgelegt. Nach Meinung der OSHA können alle Lärmpegel, die diese zulässigen Grenzen überschreiten, zu Hörverlust führen.

Duration, per day in hours	Sound Level
8	90 dB
6	92 dB
4	95 dB
3	97 dB
2	100 dB
1.5	102 dB
1	105 dB
0.5	110 dB
0.25 or less	115 dB

11. Dieses Gerät entspricht Part 15 der FCC Vorschriften für die USA und des ICES-003 für Kanada. Der Betrieb unterliegt folgenden zwei Bedingungen: (1) Dieses Gerät darf keine schädlichen Interferenzen erzeugen und (2) dieses Gerät muss empfangene Interferenzen verkraften können, einschließlich Störungen, die möglicherweise den Betrieb auf unerwünschte Weise beeinflussen.



Korrekte Entsorgung dieses Produkts: Diese Symbol weist darauf hin, dass das Produkt entsprechend den WEEE Richtlinien (2012/19/EU) und den Landesgesetzen nicht im Hausmüll entsorgt werden darf. Dieses Produkt sollte einer autorisierten Sammelstelle zum Recyceln von unbrauchbaren elektrischen und elektronischen Geräten (EEE) übergeben werden. Unsachgemäßer Umgang mit dieser Abfallart könnte aufgrund der in EEE enthaltenen gefährlichen Substanzen negative Auswirkungen auf die Umwelt und menschliche Gesundheit

haben. Gleichzeitig tragen Sie durch Ihre Teilnahme an der korrekten Entsorgung dieses Produkts zu einer effektiven Nutzung natürlicher Ressourcen bei. Weitere Informationen zu Annahmestellen, die unbrauchbare Geräte recyceln, erhalten Sie bei der örtlichen Stadtverwaltung, dem Entsorgungsträger oder der Müllabfuhr.

BESCHRÄNKTE GARANTIE Kaufbeleg bitte sicher aufbewahren.

Diese beschränkte Produktgarantie („Produktgarantie“) wird von LOUD Audio, LLC. („LOUD“) gewährt und gilt für Produkte, die in den USA oder Kanada bei einem von LOUD autorisierten Wiederverkäufer oder Einzelhändler gekauft wurden. Die Produktgarantie gilt nur für Erstkäufer des Produkts (im Folgenden „Kunde“, „Sie“ oder „Ihren“).

Bei außerhalb der USA oder Kanada gekauften Produkten informieren Sie sich bitte unter www.mackie.com über die Kontaktdaten unseres örtlichen Vertriebspartners und die Details der Garantieleistungen, die vom Vertriebshändler für Ihren lokalen Markt gewährt werden.

LOUD garantiert dem Kunden, dass das Produkt während der Garantiezeit bei normalem Gebrauch frei von Material- und Verarbeitungsfehlern ist. Wenn das Produkt dieser Garantie nicht entspricht, kann LOUD oder ihre autorisierte Service-Vertretung das fehlerhafte Produkt nach ihrer Einschätzung entweder reparieren oder ersetzen, vorausgesetzt dass der Kunde den Defekt innerhalb der Garantiezeit unter www.mackie.com bei der Firma meldet oder indem er den technischen Support von LOUD unter 1.800.898.3211 (gebührenfrei innerhalb der USA und Kanada) während der normalen Geschäftszeiten (SPT), mit Ausnahme von Wochenenden oder LOUD-Betriebsferien, anruft. Bitte bewahren Sie den originalen datierten Kaufbeleg als Nachweis des Kaufdatums auf. Er ist die Voraussetzung für alle Garantieleistungen.

Die kompletten Garantiebedingungen sowie die spezielle Garantiedauer für dieses Produkt können Sie unter www.mackie.com nachlesen.

Die Produktgarantie zusammen mit Ihrer Rechnung bzw. Ihrem Kaufbeleg sowie die unter www.mackie.com aufgeführten Bedingungen stellen die gesamte Vereinbarung dar, die alle bisherigen Vereinbarungen zwischen LOUD und dem Kunden bezüglich des hier behandelten Gegenstands außer Kraft setzt. Alle Nachträge, Modifikationen oder Verzichtserklärungen bezüglich der Bestimmungen dieser Produktgarantie treten erst in Kraft, wenn sie schriftlich niedergelegt und von der sich verpflichtenden Partei unterschrieben wurden.

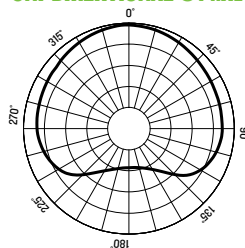
EINLEITUNG

Das dynamische EM-89D Gesangsmikrofon der Element Serie verkörpert das Maximum an Zuverlässigkeit, Performance und Nutzwert.

Es ist nicht nur eine exzellente Wahl für Sänger, sondern dank seiner tour-tauglichen, robusten Konstruktion und präzise abgestimmten Technik auch für die Instrumentenabnahme perfekt geeignet.

Dynamische Handmikrofone sind die Arbeitspferde der Audiobranche und das EM-89D der Element Serie erfüllt seine Aufgabe auf höchstem Niveau bei günstigem Anschaffungspreis.

UNI-DIREKTIONAL @1 kHz



FEATURES

PROFESSIONELLE QUALITÄT BEI GÜNSTIGEM PREIS

- Entwickelt für die Bühne, gebaut für höchste Ansprüche, kalkuliert für kleine Budgets

ROBUSTE KONSTRUKTION

- Zuverlässige Performance, immer und überall

MAXIMALE LEISTUNG AUF DER BÜHNE UND IM STUDIO

- Erste Wahl für Bühnenperformances und Studioaufnahmen
- Ideal für Gesang und Instrumente

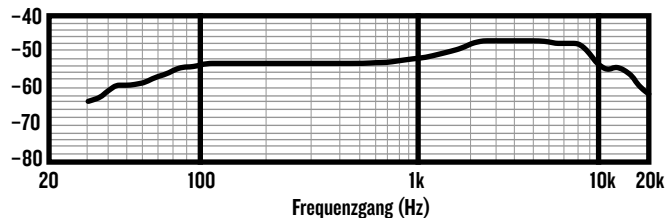
NIEREN-RICHTCHARAKTERISTIK

- Kristallklarer Klang durch Unterdrückung von Nebengeräuschen

ZUBEHÖR

- Mikrofon-Clip
- XLR-Kabel
- Beutel mit Reißverschluss

FREQUENZGANG-DIAGRAMM



Technische Daten	EM-89D
Element	Dynamisch
Richtcharakteristik	Uni-direktional
Frequenzgang	50 Hz – 16 kHz
Empfindlichkeit	-52 dB ±3 dB (0 dB = 1 V/Pa @ 1 kHz)
Impedanz	600 Ω ±30% (@ 1 kHz)
Abmessungen (H × B)	7.3" × 2.0" 185 × 51 mm
Gewicht	0.66 lb • 0.30 kg
	Technische Änderungen und Ergänzungen vorbehalten

SIE BRAUCHEN HILFE MIT DEM MIKROFON?

- Besuchen Sie auf www.mackie.com die Rubrik Support: Hier finden Sie FAQs, Handbücher und Ergänzungen.
- Unter der Telefonnummer 1-800-898-3211 erreichen Sie unseren technischen Support (Montag bis Freitag zu den üblichen Geschäftszeiten, Pacific Standard Time).



19820 North Creek Parkway #201 • Bothell, WA 98011 • USA

Phone: 425.487.4333 • Toll-free: 800.898.3211

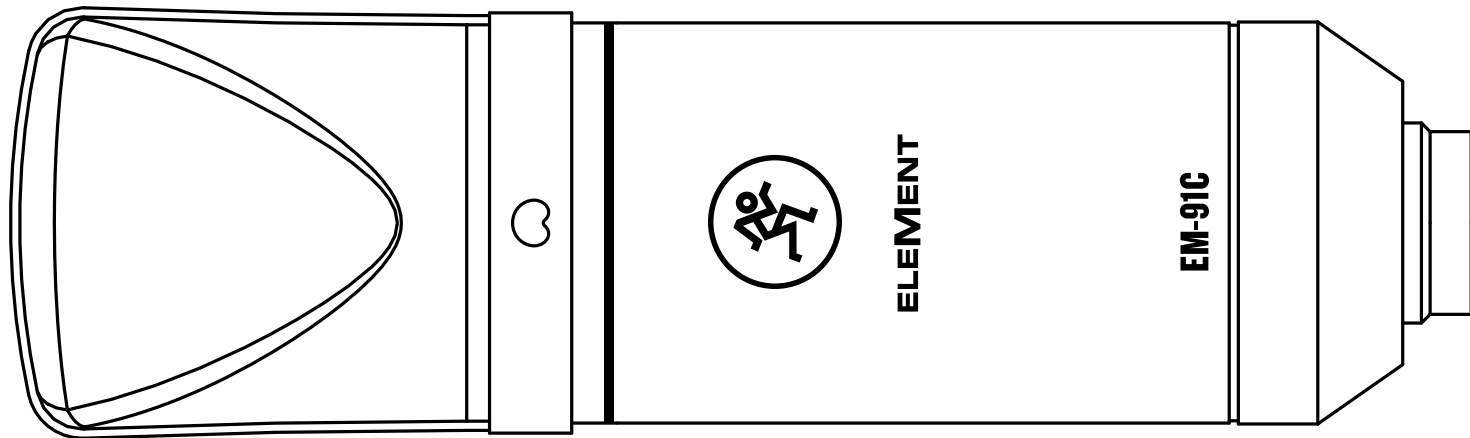
Fax: 425.487.4337 • www.mackie.com

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EM-91C

Large-Diaphragm Condenser Microphone



OWNER'S MANUAL



www.mackie.com

IMPORTANT SAFETY INSTRUCTIONS

- 1. Read, follow, and keep these instructions. Heed all warnings.
- 2. Do not expose the microphone to extreme cold or heat.
- 3. Do not expose the microphone to rain, use it in water or in damp or wet conditions.
- 4. Do not expose the microphone to any excessive dust and other foreign particles.
- 5. Keep the microphone clean by washing outside with a dry cloth.
- 6. Be sure to lower the mixer's channel and master fader when connecting and disconnecting the microphone.
- 7. Keep the microphone in the case when not in use.
- 8. Never attempt to disassemble the microphone.
- 9. Mackie cannot be held responsible for any damage caused by improper use or modifications of the microphone.
- 10. Exposure to extremely high noise levels may cause permanent hearing loss. Individuals vary considerably in susceptibility to noise-induced hearing loss, but nearly everyone will lose some hearing if exposed to sufficiently intense noise for a period of time. The U.S. Government's Occupational Safety and Health Administration (OSHA) has specified the permissible noise level exposures shown in the chart. According to OSHA, any exposure in excess of these permissible limits could result in some hearing loss:
- 11. This device complies with part 15 of the FCC rules for the U.S. and the ICES-003 for Canada. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Duration, per day in hours	Sound Level
8	90 dB
6	92 dB
4	95 dB
3	97 dB
2	100 dB
1.5	102 dB
1	105 dB
0.5	110 dB
0.25 or less	115 dB



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

LIMITED WARRANTY Please keep your sales receipt in a safe place.

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

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

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

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

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

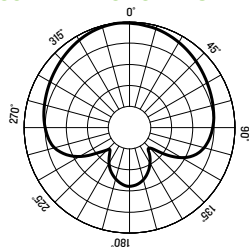
INTRODUCTION

The Element Series EM-91C Large-Diaphragm Condenser microphone delivers immaculate sound reproduction and worry-free reliability every time you hit the studio.

Whether looking for warmth and brilliance on a vocal track, capturing the nuance of stringed instruments, or adding a bit of room ambiance, this condenser delivers.

Incredible sound, sleek looks, and built-like-a-tank construction, experience the EM-91C Condenser Microphone in your next recording.

SUPER-DIRECTIONAL @1 kHz



FEATURES

PROFESSIONAL QUALITY THAT'S AFFORDABLE

- Voiced for the stage, built for the road, priced for your wallet

RUGGED CONSTRUCTION

- Built-like-a-tank™ so you can rely on it for great recordings for years to come

YOUR NEW STUDIO GO-TO

- Vocalists to instruments, voice-overs to ambiance, this mic does it all
- Great for home studios, content creation, live streaming, and more

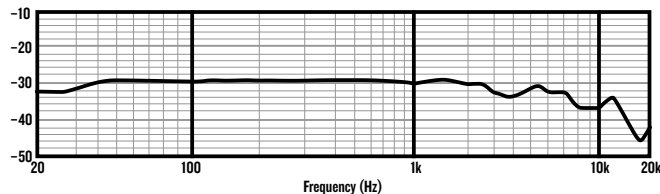
CARDIOID POLAR PATTERN

- Rejects peripheral noise to keep your performance crystal clear

INCLUDED ACCESSORIES

- Shock mount
- XLR cable

FREQUENCY RESPONSE GRAPH



Technical Specifications	EM-91C
Element	Black Electret Condenser
Polar Pattern	Uni-directional
Frequency Response	20 Hz – 18 kHz
Sensitivity	-30 dB ±3 dB (0 dB = 1 V/Pa @ 1 kHz)
Output Impedance	150 Ω ±30% (@ 1 kHz)
Max SPL	134 dB (@ 1 kHz = 1% THD)
Equivalent Noise Level	16 dB A
Signal-to-Noise Ratio	78 dB
Working Voltage	48V phantom power supply
Size (H × W)	6.1" × 1.9" 155 × 48 mm
Weight	0.46 lb • 0.21 kg
All specifications subject to change	

NEED HELP WITH THE MICROPHONE?

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

INSTRUCCIONES IMPORTANTES DE SEGURIDAD

1. Lea, cumpla y conserve estas instrucciones. Preste atención a todas las advertencias.
2. No permita que el micrófono quede expuesto a temperaturas extremas (tanto si es frío como calor excesivo).
3. No permita que el micrófono quede expuesto a la lluvia, ni lo use dentro del agua o en entornos muy húmedos.
4. No permita que el micrófono quede expuesto a niveles elevados de polvo o suciedad, ni partículas externas.
5. Mantenga el micrófono limpio frotando la superficie exterior con un trapo suave y seco.
6. Asegúrese de reducir el nivel del canal del mezclador y el fader máster a la hora de conectar y desconectar el micrófono.
7. Recoja el micrófono en su funda cuando no lo esté usando.
8. No intente nunca desmontar el micrófono.
9. Mackie no se hace responsable de posible daños provocados por un uso inadecuado o modificaciones no autorizadas del micrófono.
10. La exposición a niveles de ruido extremadamente altos puede causar problemas de sordera crónica. La susceptibilidad a esta pérdida de audición inducida por el ruido varía considerablemente de una persona a otra, pero casi cualquier persona tendrá una cierta pérdida de audición al quedar expuestos a un ruido intenso durante un determinado periodo de tiempo. El Departamento de Salud y Seguridad en el Trabajo de Estados Unidos (OSHA, por sus siglas en inglés) ha establecido unos niveles de ruido permisibles que aparecen en la siguiente tabla. De acuerdo a la OSHA, cualquier exposición que sobrepase estos límites permisibles puede dar lugar a un problema de sordera.
11. Este dispositivo cumple con la sección 15 de las normas FCC de EE.UU. y el ICES-003 de Canadá. Su funcionamiento está sujeto a las dos condiciones siguientes: (1) este dispositivo no debe producir interferencias molestas, y (2) este dispositivo debe aceptar cualquier interferencia recibida, incluyendo aquellas que puedan producir un funcionamiento no deseado.

Duration, per day in hours	Sound Level
8	90 dB
6	92 dB
4	95 dB
3	97 dB
2	100 dB
1.5	102 dB
1	105 dB
0.5	110 dB
0.25 or less	115 dB



Forma correcta de eliminar este aparato: Este símbolo indica que este producto no puede ser eliminado junto con la basura orgánica, de acuerdo a lo indicado en la Directiva de Residuos de Aparatos Eléctricos y Electrónicos (2012/19/EU) y a la legislación vigente de su país. Este producto debe ser entregado en uno de los "puntos limpios" autorizados para su reciclaje. La eliminación inadecuada de este tipo de residuos puede tener un impacto negativo en el medio ambiente y la salud humana debido a las sustancias potencialmente peligrosas asociadas generalmente con este tipo de aparatos. Al mismo tiempo, su cooperación a la hora de eliminar adecuadamente este producto contribuirá a un uso más eficaz de los recursos naturales. Para más información acerca la correcta eliminación de este tipo de aparatos, póngase en contacto con el Ayuntamiento de su ciudad, empresa local de recogida de basuras o con uno de los "puntos limpios" autorizados.

GARANTÍA LIMITADA

Conserve su factura en un lugar seguro.

Esta garantía limitada de producto ("Garantía de producto") es ofrecida por LOUD Audio, LLC. ("LOUD") y es aplicable a los productos adquiridos en los Estados Unidos o Canadá a través de un distribuidor oficial LOUD. Esta Garantía de producto no cubrirá a ninguna otra persona distinta al comprador original del producto (al que haremos referencia como "Comprador", "usted" o "tú").

Para aquellos productos adquiridos fuera de los Estados Unidos o Canadá, visite la web www.mackie.com para ver la información de su distribuidor local y sobre la cobertura en garantía ofrecida por dicho distribuidor en ese país.

LOUD garantiza al comprador que el producto está libre de defectos en materiales y mano de obra bajo condiciones de uso normales durante el Periodo de Garantía. Si el producto no cumple con lo establecido en esta garantía, LOUD o su servicio técnico autorizado, a nuestra elección, reparará o sustituirá ese aparato, siempre y cuando el comprador notifique a fábrica esa situación dentro del Periodo de Garantía a través de la web: www.mackie.com o llamando al servicio técnico de LOUD en el 1.800.898.3211 (llamada gratuita en los Estados Unidos y Canadá) en horario comercial de la Costa del Pacífico, excluyendo fines de semana o vacaciones de LOUD. Conserve la factura original sellada como prueba de la fecha de compra. Es necesaria para cualquier reclamación en periodo de garantía.

Para consultar todos los términos y condiciones, así como la duración concreta de la garantía de este producto, visite la www.mackie.com.

La Garantía de Producto, junto con su factura o recibo y los términos y condiciones que encontrará en www.mackie.com constituyen el contrato completo y sustituyen a cualquier otro contrato anterior entre LOUD y el comprador relativo al producto en cuestión. No será válida ninguna enmienda, modificación o cambio de cualquiera de las condiciones de esta Garantía de Producto salvo que aparezca previamente en un documento oficial sellado por el fabricante y/o responsable.

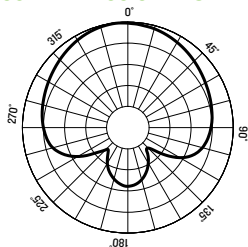
INTRODUCCIÓN

El micrófono condensador de gran diafragma Element Series EM-91C produce una reproducción sonora totalmente inmaculada y ofrece una fiabilidad a toda prueba cada vez que pise el estudio.

Tanto si lo quiere para una pista vocal cálida o una brillante, o para captar cada matiz de un instrumento de cuerda, o para añadir un toque de ambientación de sala, este condensador cumplirá a la perfección su trabajo.

Sonido increíble, aspecto liso y pulcro y construcción totalmente robusto. Disfrute del micrófono condensador EM-91C en su próxima grabación.

SUPERDIRECCIONAL @1 kHz



CARACTERÍSTICAS

CALIDAD PROFESIONAL A UN PRECIO ASEQUIBLE

- Calidad para rendir sobre el escenario, construcción para soportar la carretera y precio para alegrar su bolsillo

CONSTRUCCIÓN ROBUSTA

- Construcción Built-like-a-tank™ para que pueda confiar en él en sus grabaciones durante muchos años

SU NUEVA HERRAMIENTA INDISPENSABLE PARA EL ESTUDIO

- Vocalistas e instrumentistas, doblajes o ambientación, este micro vale para todo
- Perfecto para estudios de grabación caseros, creación de contenidos sonoros, streaming en directo y mucho más

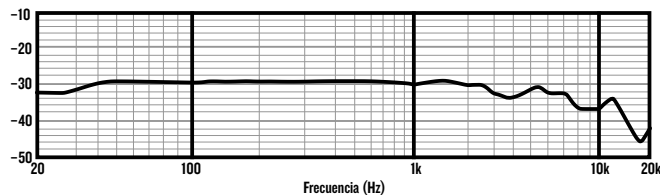
PATRÓN POLAR CARDIOIDE

- Rechaza el ruido periférico para mantener su interpretación limpia y cristalina

ACCESORIOS INCLUIDOS

- Paragolpes
- Cable con conector XLR

GRÁFICO DE RESPUESTA DE FRECUENCIA



Especificaciones técnicas	EM-91C
Elemento	Condensador electroreto trasero
Patrón polar	Unidireccional
Respuesta de frecuencia	20 Hz – 18 kHz
Sensibilidad	-30 dB ±3 dB (0 dB = 1 V/Pa @ 1 kHz)
Impedancia	150 Ω ±30% (@ 1 kHz)
SPL máximo	134 dB (@ 1 kHz = 1% THD)
Nivel de ruido equivalente	16 dB A
Relación señal-ruido	78 dB
Voltaje operativo	Fuente de alimentación fantasma de 48 V
Tamaño (A × L)	6.1" × 1.9" 155 × 48 mm
Peso	0,46 lb • 0,21 kg
	Todas estas especificaciones están sujetas a cambios sin previo aviso

¿NECESITA AYUDA CON EL MICRÓFONO?

- Visite la web www.mackie.com y haga clic en Support para encontrar: Preguntas frecuentes (FAQ), manuales y otros documentos anexos.
- Teléfono 1-800-898-3211 si quiere hablar con uno de nuestros estupendos técnicos (lunes a viernes, horario laboral clásico, hora de la Costa del Pacífico).

CONSIGNES DE SÉCURITÉ IMPORTANTES

1. Lisez, appliquez et conservez ces instructions. Tenez compte de tous les avertissements.
2. N'exposez pas le micro à une chaleur ou un froid extrême.
3. N'exposez pas le micro à la pluie, ne l'utilisez pas dans l'eau ou dans un environnement très humide.
4. N'exposez pas le micro à de la poussière excessive ou autres particules étrangères.
5. Nettoyez régulièrement l'extérieur du micro avec un chiffon sec.
6. Assurez-vous que le volume de la tranche de la console de mixage ainsi que le volume général sont bien au minimum avant de connecter ou déconnecter le micro.
7. Conservez le micro dans sa boîte lorsque vous ne l'utilisez pas.
8. Ne tentez jamais de démonter le micro.
9. Mackie ne peut pas être tenu responsable des dommages causés par une mauvaise utilisation ou par une modification du micro.
10. L'exposition à des niveaux de bruit très élevés peut entraîner une perte permanente de l'ouïe. La sensibilité à ces dommages varie d'un individu à l'autre, mais tout le monde est appelé à des dommages auditifs extrêmes en présence de niveaux sonores élevés. L'Administration de la Sécurité et de la Santé (OSHA) du Gouvernement des États-Unis a publié les niveaux de bruit indiqués dans le tableau ci-dessous. Selon l'OSHA, toute exposition au-delà de ces limites entraîne des dommages auditifs.
11. Cet appareil est conforme à la section 15 de la réglementation FCC aux États-Unis et à l'ICES-003 au Canada. Son fonctionnement est soumis aux deux conditions suivantes : (1) cet appareil ne peut pas causer d'interférences nuisibles et (2) il doit accepter toute interférence reçue, y compris celles pouvant entraîner un dysfonctionnement.

Duration, per day in hours	Sound Level
8	90 dB
6	92 dB
4	95 dB
3	97 dB
2	100 dB
1.5	102 dB
1	105 dB
0.5	110 dB
0.25 or less	115 dB



Mise au rebut appropriée de ce produit: Ce symbole indique qu'en accord avec la directive WEEE (2012/19/EU) et les lois en vigueur dans votre pays, ce produit ne doit pas être jeté avec les déchets ménagers. Ce produit doit être déposé dans un point de collecte agréé pour le recyclage des déchets d'équipements électriques et électroniques (EEE).

Une mauvaise manipulation de ce type de déchets pourrait avoir un impact négatif sur l'environnement et la santé à cause des substances potentiellement dangereuses généralement associées à ces équipements. En même temps, votre coopération dans la mise au rebut de ce produit contribuera à l'utilisation efficace des ressources naturelles. Pour plus d'informations sur l'endroit où vous pouvez déposer vos déchets d'équipements pour le recyclage, veuillez contacter votre mairie ou votre centre local de collecte des déchets.

GARANTIE LIMITÉE Conservez vos tickets de caisse dans un endroit sûr.

Cette garantie limitée du produit ("Garantie du Produit") est fournie par LOUD Audio, LLC. ("LOUD") et est applicable aux produits achetés aux États-Unis ou au Canada chez un revendeur ou fournisseur agréé par LOUD. La Garantie du Produit n'est valable que pour l'acheteur original du produit (ci-après appelé "l'Acheteur," "vous" ou "votre").

Pour les produits achetés en dehors des USA ou du Canada, consultez www.mackie.com pour trouver les informations de contact de votre distributeur local ainsi que des informations sur la couverture de la garantie fournie par le distributeur de votre marché local.

LOUD garantit à l'Acheteur que le Produit est exempt de tout défaut de matériaux et de fabrication pour une utilisation normale pendant la période de garantie. Si le Produit ne se conforme pas à la garantie mentionnée ici pendant la période de la garantie, LOUD ou son représentant agréé s'engage, à son choix, à réparer ou à remplacer le Produit défectueux, à considérer que l'Acheteur signale le défaut durant la Période de Garantie à la Société sur : www.mackie.com ou en appelant le support technique de LOUD au 1.800.898.3211 (appel gratuit aux États-Unis et au Canada) aux heures ouvrables normales, heure du Pacifique, à l'exception des week ends et pendant les vacances de LOUD. Merci de conserver le ticket de caisse original daté comme preuve de la date d'achat. Il vous sera demandé pour tout service de garantie.

Pour les termes et conditions complets, ainsi que pour la durée spécifique de la garantie pour ce Produit, consultez www.mackie.com.

La Garantie du Produit, conjointement à votre facture ou reçu, ainsi que les termes et conditions mentionnés sur www.mackie.com constituent le contrat intégral, et supplantent tout accord préalable entre LOUD et l'Acheteur sur l'objet de cet accord. Aucun avenant, modification ou désistement des dispositions de cette Garantie du Produit ne sera valide sauf mention écrite par la partie responsable par la présente.

INTRODUCTION

Le micro à condensateur large membrane EM-91C
de la série Element vous assure une reproduction
fidèle et une grande fiabilité pour toutes vos sessions
d'enregistrement.

Que vous cherchiez à donner de la chaleur et de la brillance à une prise de chant, à capturer toutes les nuances d'un instrument à cordes ou à reproduire l'ambiance d'une pièce, ce micro est fait pour vous.

Un son exceptionnel, un design élégant
et une construction ultra robuste : essayez
le micro à condensateur EM-91C pour votre
prochain enregistrement.

CARACTÉRISTIQUES

UNE QUALITÉ PROFESSIONNELLE À UN PRIX ABORDABLE

- Conçu pour la scène, à l'épreuve de la route, doux pour votre portefeuille

CONSTRUCTION ULTRA ROBUSTE

- Vous pourrez compter sur lui pour tous vos enregistrements

VOTRE NOUVELLE RÉFÉRENCE EN STUDIO

- Voix, instruments, ambiance, ce micro sait tout faire
- Idéal en home studios, pour la création de contenus, pour le streaming en direct et plus encore

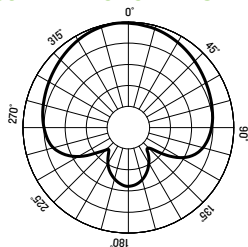
DIRECTIVITÉ CARDIOÏDE

- Ne capte pas les bruits ambiants pour des performances parfaites

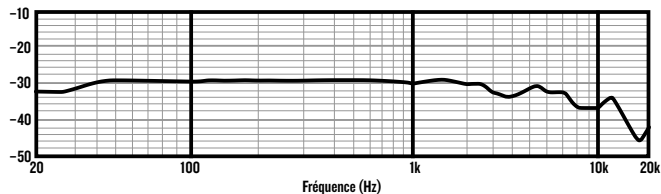
ACCESSOIRES FOURNIS

- Support antichoc
- Câble XLR

SUPER DIRECTIONNEL @1 kHz



GRAPHE DE RÉPONSE EN FRÉQUENCE



Caractéristiques techniques	EM-91C
Élément	Condensateur à électret noir
Courbe de directivité	Unidirectionnel
Réponse en fréquence	20 Hz – 18 kHz
Sensibilité	-30 dB $\pm$ 3 dB (0 dB = 1 V/Pa @ 1 kHz)
Impédance	150 Ω $\pm$ 30% (@ 1 kHz)
NPA maximum	134 dB (@ 1 kHz = 1% THD)
Niveau de bruit équivalent	16 dB A
Rapport signal-bruit	78 dB
Tension de fonctionnement	Alimentation fantôme 48 V
Dimensions (H $\times$ L)	6,1" $\times$ 1,9" 155 $\times$ 48 mm
Poids	0,46 lb • 0,21 kg
	Les caractéristiques peuvent être modifiées

BESOIN D'AIDE AVEC VOTRE MICRO ?

- Consultez www.mackie.com et cliquez sur Support pour trouver : des FAQs, les modes d'emploi et des informations supplémentaires.
- Appelez le 1-800-898-3211 pour contacter le support technique (du lundi au vendredi, aux heures ouvrables normales, heure du Pacifique).

WICHTIGE SICHERHEITSHINWEISE

1. Anleitungen lesen, befolgen und aufbewahren. Warnhinweise beachten.
2. Setzen Sie das Mikrofon nicht extremer Kälte oder Hitze aus.
3. Setzen Sie das Mikrofon nicht dem Regen aus und verwenden Sie es nicht im Wasser oder feuchten oder nassen Umgebungen.
4. Setzen Sie das Mikrofon nicht extremem Staub oder anderen Fremdpartikeln aus.
5. Halten Sie das Mikrofon sauber, indem Sie es außen mit einem trockenen Tuch reinigen.
6. Schieben Sie die Kanal- und Master-Fader des Mixers zurück, wenn Sie das Mikrofon anschließen oder trennen.
7. Bewahren Sie das Mikrofon in seinem Koffer auf, wenn es nicht benutzt wird.
8. Versuchen Sie nicht, das Mikrofon in seine Bauteile zu zerlegen.
9. Mackie ist nicht verantwortlich für Schäden, die durch unsachgemäße Verwendung oder Modifikationen des Mikrofons verursacht werden.

10. Extrem hohe Geräuschpegel können zu dauerhaftem Hörverlust führen. Lärmbedingter Hörverlust tritt von Person zu Person unterschiedlich schnell ein, aber fast jeder wird einen Teil seines Gehörs verlieren, wenn er über einen Zeitraum ausreichend hohen Lärmpegeln ausgesetzt ist. Die Occupational Safety and Health Administration (OSHA) der US-Regierung hat den zulässigen Geräuschpegel in der folgenden Tabelle festgelegt. Nach Meinung der OSHA können alle Lärmpegel, die diese zulässigen Grenzen überschreiten, zu Hörverlust führen.

Duration, per day in hours	Sound Level
8	90 dB
6	92 dB
4	95 dB
3	97 dB
2	100 dB
1.5	102 dB
1	105 dB
0.5	110 dB
0.25 or less	115 dB

11. Dieses Gerät entspricht Part 15 der FCC Vorschriften für die USA und des ICES-003 für Kanada. Der Betrieb unterliegt folgenden zwei Bedingungen: (1) Dieses Gerät darf keine schädlichen Interferenzen erzeugen und (2) dieses Gerät muss empfangene Interferenzen verkraften können, einschließlich Störungen, die möglicherweise den Betrieb auf unerwünschte Weise beeinflussen.



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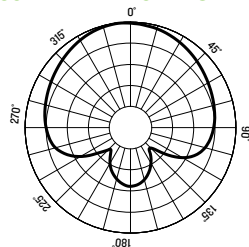
EINLEITUNG

Das EM-91C Großmembran-Kondensatormikrofon der Element Serie bietet makellose Soundreproduktion und höchste Zuverlässigkeit bei jedem Studioeinsatz.

Es liefert die gewünschte Wärme und Brillanz für Gesangsaufnahmen und erfasst feinste Nuancen von Saiteninstrumenten mit dem perfekten Anteil an Raumklang.

Erleben Sie den überragenden Sound und eleganten Look des robusten EM-91C Kondensatormikrofons bei Ihren nächsten Studioaufnahmen.

SUPER-DIREKTIONAL @1 kHz



FEATURES

PROFESSIONELLE QUALITÄT BEI GÜNSTIGEM PREIS

- Entwickelt für die Bühne, gebaut für höchste Ansprüche, kalkuliert für kleine Budgets

ROBUSTE BAUWEISE

- Roadtaugliche Mackie-Konstruktion und hohe Zuverlässigkeit für großartige Aufnahmen über Jahre hinaus

NEUER STUDIO-FAVORIT

- Multitalent: vom Gesang über Instrumente bis zum Voice-Over und Raumklang
- Ideal für Homestudios, Content Creation, Live Streaming und mehr

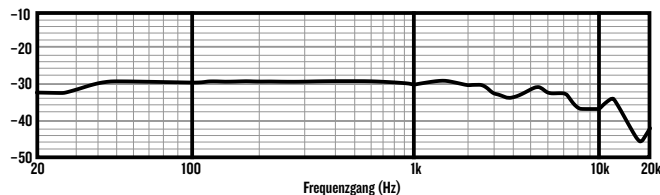
NIEREN-RICHTCHARAKTERISTIK

- Kristallklarer Klang durch Unterdrückung von Nebengeräuschen

ZUBEHÖR

- Spinne
- XLR-Kabel

FREQUENZGANG-DIAGRAMM



Technische Daten	EM-91C
Element	Schwarzer Elektret Kondensator
Richtcharakteristik	Uni-direktional
Frequenzgang	20 Hz – 18 kHz
Empfindlichkeit	-30 dB $\pm$ 3 dB (0 dB = 1 V/Pa @ 1 kHz)
Impedanz	150 Ω $\pm$ 30% (@ 1 kHz)
Max. Schalldruck	134 dB (@ 1 kHz = 1% THD)
Eigenrauschen	16 dB A
Geräuschspannungsabstand	78 dB
Arbeitsspannung	48V Phantomspannungsversorgung
Abmessungen (H $\times$ B)	6.1" $\times$ 1.9" 155 $\times$ 48 mm
Gewicht	0.46 lb • 0.21 kg
	Technische Änderungen und Ergänzungen vorbehalten

SIE BRAUCHEN HILFE MIT DEM MIKROFON?

- Besuchen Sie auf www.mackie.com die Rubrik Support: Hier finden Sie FAQs, Handbücher und Ergänzungen.
- Unter der Telefonnummer 1-800-898-3211 erreichen Sie unseren technischen Support (Montag bis Freitag zu den üblichen Geschäftszeiten, Pacific Standard Time).



19820 North Creek Parkway #201 • Bothell, WA 98011 • USA

Phone: 425.487.4333 • Toll-free: 800.898.3211

Fax: 425.487.4337 • www.mackie.com

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ONYX™ USB INTERFACES

OWNER'S MANUAL



Important Safety Instructions

1. Read these instructions.
 2. Keep these instructions.
 3. Heed all warnings.
 4. Follow all instructions.
 5. Do not use this apparatus near water.
 6. Clean only with a dry cloth.
 7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
 8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
 9. Only use attachments/accessories specified by the manufacturer.
 10. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
 11. This apparatus shall not be exposed to dripping or splashing, and no object filled with liquids, such as vases or beer glasses, shall be placed on the apparatus.
 12. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
- NOTE:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
- Reorient or relocate the receiving antenna.
 - Increase the separation between the equipment and the receiver.
 - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
 - Consult the dealer or an experienced radio/TV technician for help.

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

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

13. This device complies with FCC radiation exposure limits set forth for an uncontrolled environment. This device should be installed and operated with minimum distance 20cm between the radiator & your body.
14. This apparatus does not exceed the Class A/Class B (whichever is applicable) limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of the Canadian Department of Communications.

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

15. This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:

- (1) this device may not cause interference, and
- (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

16. Exposure to extremely high noise levels may cause permanent hearing loss. Individuals vary considerably in susceptibility to noise-induced hearing loss, but nearly everyone will lose some hearing if exposed to sufficiently intense noise for a period of time. The U.S. Government's Occupational Safety and Health Administration (OSHA) has specified the permissible noise level exposures shown in the following chart.

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

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



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

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Onyx USB Interfaces Features

- Boutique-quality Onyx™ mic preamps with class-leading fidelity and dynamic range
 - o XLR/TRS inputs with Hi-Z switch accept mic, line and instrument sources
- 48v Phantom Power for use with studio condenser mics
- High-resolution 2 in x 2 out 24-Bit/192kHz recording
- Zero-latency direct monitoring of analog inputs
- Dedicated outputs for connecting studio monitors
- MIDI I/O for connecting synths, controllers and more [Onyx Producer 2•2]
- Bus-powered for easy mobile recording with no power adapter needed
- USB 2.0 connectivity for fast transfer speed and low latency
- Built-Like-A-Tank™ design to survive day-to-day abuse
- Tracktion™ Music Production Software + DAW Essentials Collection Plug-Ins Included
 - o 16 plug-ins including Equaliser, Compressor, Reverber8, Limiter, Auto Filter, and more
 - o Plug-ins compatible with all DAWs (AAX/AU/VST/LinuxVST)
- Compatible with all major DAWs on Mac or PC
- 1.1 lbs / 0.5 kg [Onyx Artist 1•2]
1.4 lbs / 0.6 kg [Onyx Producer 2•2]

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

Purchased at:

Date of purchase:



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Introduction

Onyx Artist 1•2

Combining high-resolution 24-bit/192kHz converters with premium Mackie analog circuitry and Built-Like-A-Tank™ hardware design, the bus-powered Onyx™ Artist 1•2 is perfect for singer-songwriters, content creators, and mobile recording.

The Artist 1•2 features an Onyx mic pre with phantom power and a 1/4" line input with Hi-Z instrument switch for quick and easy recording. Plus, with zero-latency direct analog monitoring ensures you can always hear yourself in real time.

With the Onyx Artist 1•2, you have the power to capture your performance and experience media with pristine fidelity at home or on the go. Your Creativity Without Limits – Onyx Series USB Audio Interfaces.

Onyx Producer 2•2

Combining high-resolution 24-bit/192kHz converters with premium Mackie analog circuitry and Built-Like-A-Tank™ hardware design, the bus-powered Onyx™ Producer 2•2 is perfect for home studios, mobile recording, and dual mic applications.

Featuring two XLR/TRS combo inputs with Onyx mic pres, each is equipped with phantom power and Hi-Z instrument switches for maximum versatility. Plus, with zero-latency direct analog monitoring ensures you can always hear yourself in real time. It also has built-in MIDI I/O for controllers, synths, and more.

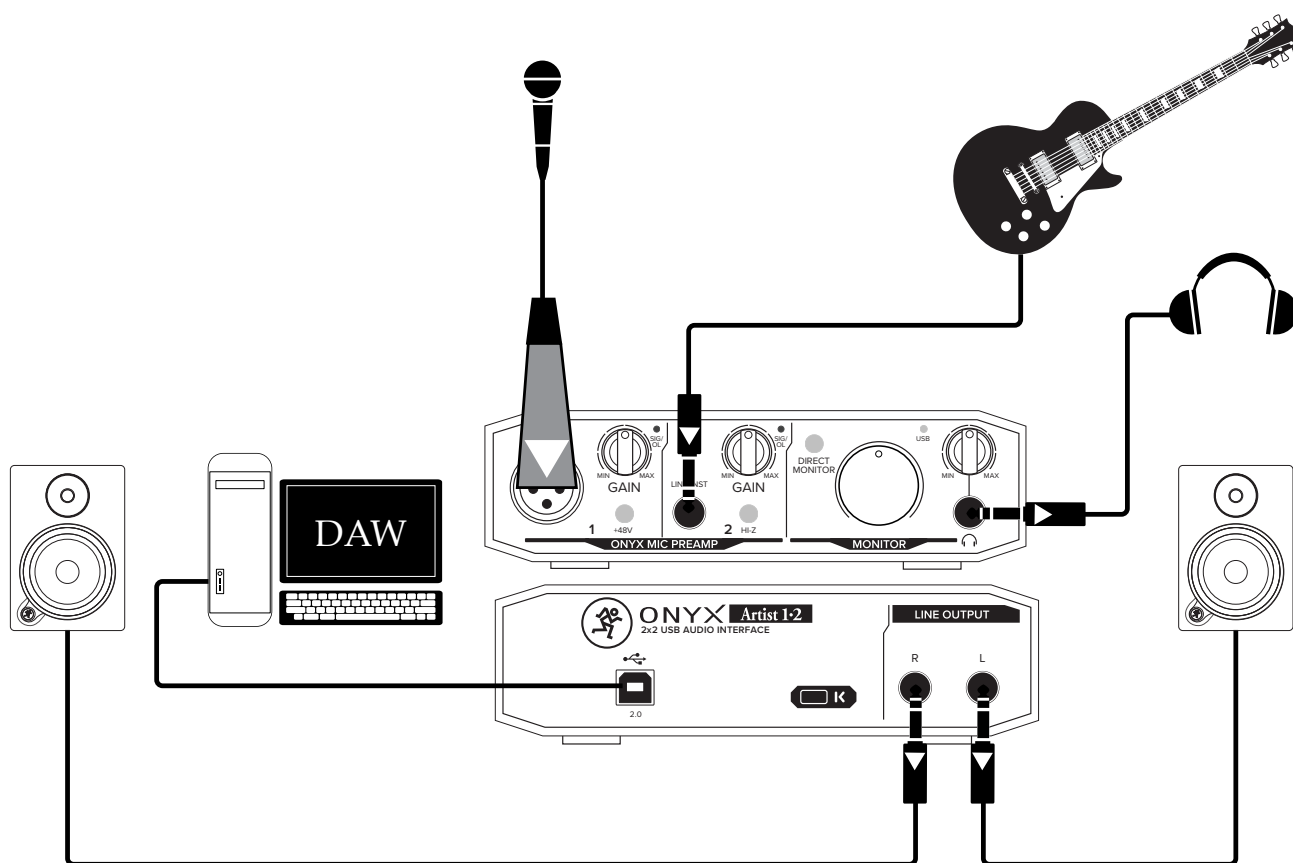
With the Onyx Producer 2•2, you have the power to capture your performance and experience media with pristine fidelity at home or on the go. Your Creativity Without Limits – Onyx Series USB Audio Interfaces.

Quick Start

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

1. PC users: install the latest driver.
Mac users: no driver required.
2. Turn down all knobs.
3. Disengage all switches.
4. Plug signal sources into the interface, such as:
 - Microphones plugged into the mic inputs. (Engage phantom power if needed.)
 - Line-level sources such as keyboards, drum machines, or MP3 players plugged into the line-level inputs.
5. Connect cords from the line outs to powered speakers (or to an amplifier connected to passive speakers).
6. Push the USB cable securely into the interface's USB connector and plug the other end into any open USB slot of the computer.
7. Turn the computer on. Make sure the interface powers up.
8. Turn the powered studio monitors (or amplifiers) on.
9. Be sure that the volume of the input is the same as it would be during normal use.
10. Slowly bring up the monitor knob to a comfortable listening level.

Onyx Artist 1•2 Hookup Diagram



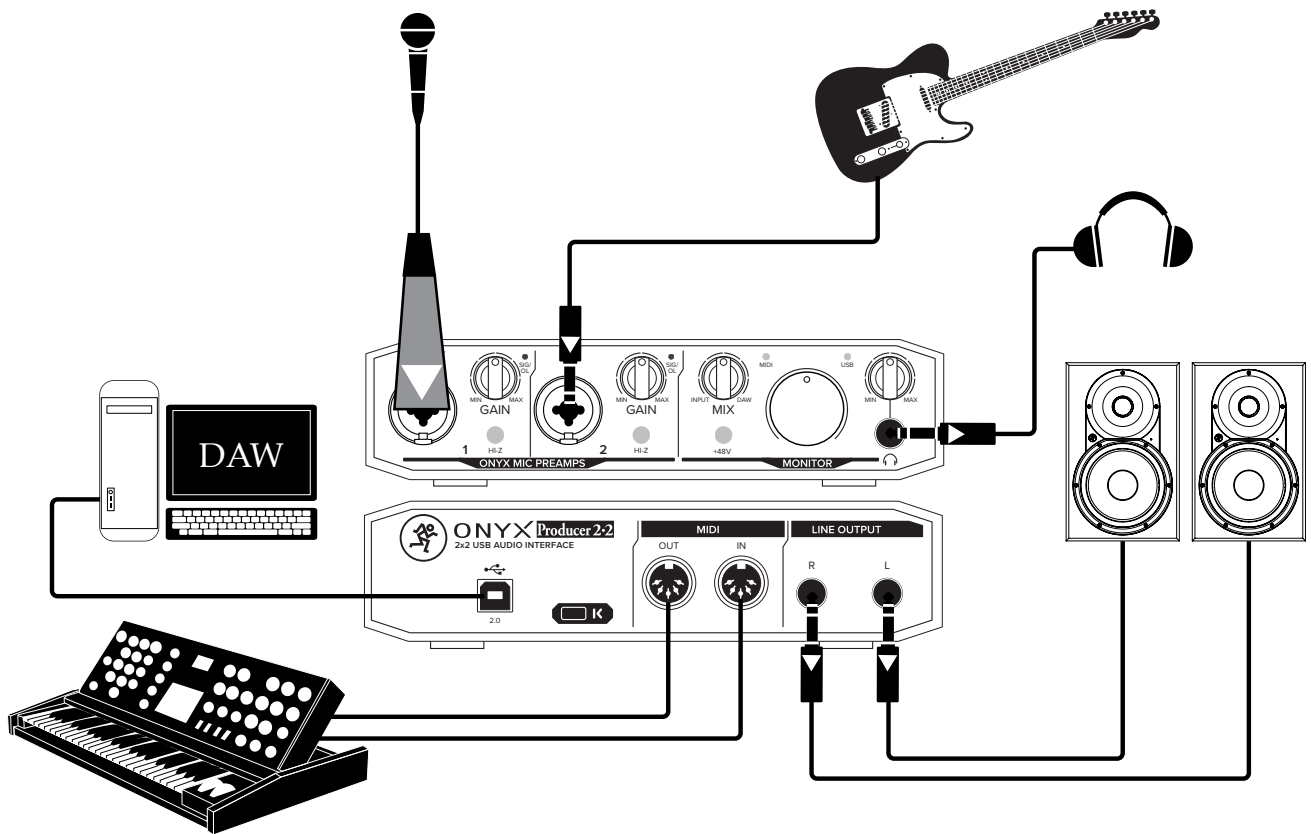
As you can see in this hookup diagram, the Onyx Artist 1•2 is the perfect tool for singer-songwriters. Let's look at the inputs first. In this example, a microphone is connected to XLR input 1 and a guitar to 1/4" input 2 (with the Hi-Z switch engaged).

The output section is as straightforward as the input section. Here we connected a pair of MR Series studio monitors to the L/R line output jacks and a pair of headphones are connected to the phones output jack. Lastly, a computer installed with your favorite DAW is connected to the USB port on the rear panel.

That was our part. The next part is up to you... writing and recording!

Typical Onyx Artist 1 • 2 Setup

Onyx Producer 2•2 Hookup Diagram



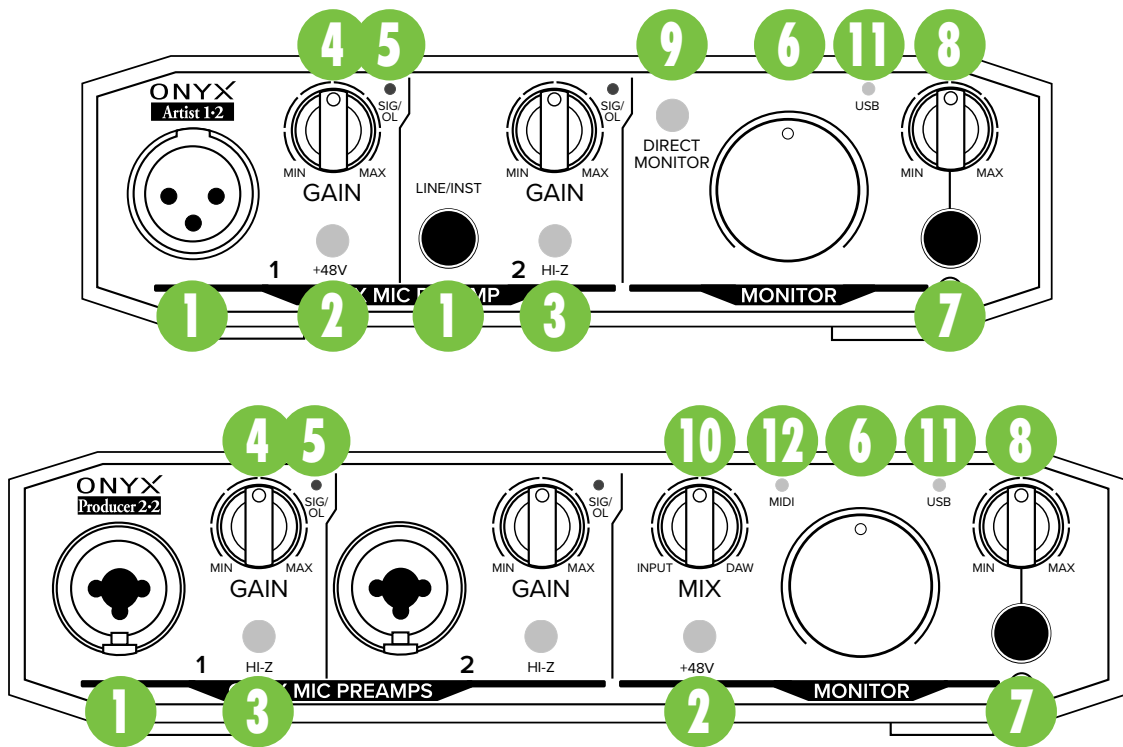
The Onyx Producer 2•2 is similar to the Onyx Artist 1•2, but with a few more bells and whistles. Here the Onyx Producer 2•2 is designed with the home studio engineer and/or mobile recording engineer in mind. Let's look at the inputs first. Just like with the Onyx Artist 1•2, a microphone is connected to XLR input 1 and a guitar to 1/4" input 2 (with the Hi-Z switch engaged).

As with the previous hookup diagram, the output section here is as straightforward as the input section. Here we connected a pair of XR Series studio monitors to the L/R line output jacks and a pair of headphones are connected to the phones output jack. Additionally, a computer installed with your favorite DAW is connected to the USB port on the rear panel.

Lastly, the only hookup difference between the two Onyx USB Interfaces. Here a synthesizer with MIDI I/O is connected to the MIDI I/O of the Onyx Producer 2•2.

That was our part. The next part is up to you... writing and recording!

Typical Onyx Producer 2•2 Setup



Front Panel Description

For the most part, the front panel is where to connect various sources feeding IN to the Onyx USB Interface. These signals are then routed through the Onyx USB Interface and released through the main OUTPUT jacks on the rear panel.

1. XLR and 1/4" Inputs

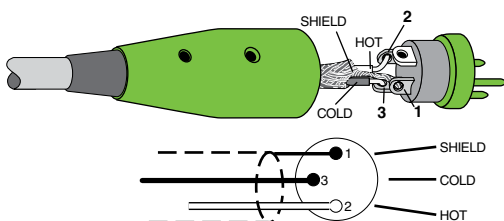
Both Onyx USB Interfaces have two input jacks. The Onyx Artist 1•2 has one XLR jack [Ch. 1] and one 1/4" jack [Ch. 2], while the Onyx Producer 2•2 provides dual combo Onyx Wide-Z preamps.

The XLR connectors accept balanced microphone inputs from XLR connectors and the 1/4" connectors accept balanced and unbalanced line-level inputs from 1/4" TRS connectors. The microphone preamps feature our Onyx design, with higher fidelity and headroom rivaling any standalone mic preamp on the market today.

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

Balanced XLR Wiring:

Shield (Ground)	Pin 1
Hot (+)	Pin 2
Cold (–)	Pin 3



The 1/4" jacks share circuitry (but not phantom power) with the mic preamps, and can be driven by balanced or unbalanced sources.

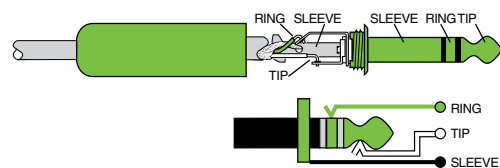
Additionally, Ch. 2 [Onyx Artist 1•2] and both channels [Onyx Producer 2•2] may accept Hi-Z sources (such as guitars) via the 1/4" input without the need for a separate DI box.

- Unbalanced TS (tip-sleeve) lines can be accommodated via the TRS jack. Make sure the cable terminates with a TS plug (like a guitar plug), or if it's a TRS plug (such as a headphone plug), make sure the ring is tied to the sleeve and that the plug is fully inserted into the jack.

The connectors are wired as follows, according to standards specified by the AES (Audio Engineering Society).

Balanced 1/4" TRS

Hot (+)	Tip
Cold (–)	Ring
Shield (Ground)	Sleeve

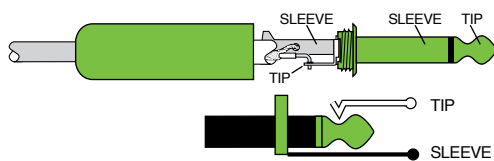


Balanced 1/4" Connectors

Unbalanced 1/4" TS

Hot (+)
Shield (Ground)

Tip
Sleeve



Unbalanced 1/4" Connectors



NEVER connect the output of an amplifier directly to a Onyx USB Interface's input jack. This could damage the input circuitry and we wouldn't want that now, would we?

2. +48V Phantom Power Switch

Most modern professional condenser mics require 48V phantom power, which lets the interface send low-current DC voltage to the mic's electronics through the same wires that carry audio. (Semi-pro condenser mics often have batteries to accomplish the same thing.) "Phantom" owes its name to an ability to be "unseen" by dynamic mics (Shure SM57/SM58, for instance), which don't need external power and aren't affected by it anyway.

Press this switch if the microphone requires phantom power. An engaged +48V switch will illuminate green to indicate that phantom power is active. (Always check the LED status before connecting microphones.) This switch affects channels 1 [Onyx Artist 1•2] and both channels [Onyx Producer 2•2].



Never plug single-ended (unbalanced) microphones, or ribbon mics into the mic input jacks if phantom power is on. Do not plug instrument outputs into the mic XLR input jacks with phantom power on, unless you know for certain it is safe to do so. Be sure the channel's gain control is turned down when connecting microphones to the mic inputs when phantom power is turned on, to prevent pops from getting through to the speakers.

3. Hi-Z Switch

To connect a guitar directly to the mixer without using a DI Box, press this switch in first; then connect the output from the guitar to the channel's 1/4" TRS input. An engaged Hi-Z switch will illuminate green to indicate that Hi-Z is active. The input impedance is optimized for direct connection and high-frequency fidelity is assured.

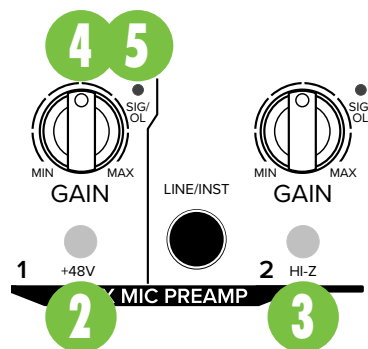
Guitars may sound dull and muddy without a DI box or if this switch is not engaged. When disengaged, the 1/4" TRS inputs become line inputs.

4. Gain Knobs

If you haven't already, please read the "Quick Start" section on page 4. Setting the gain correctly will ensure that the preamplifier's gain is not too high, where distortion could occur, and not too low, where the quieter, exquisitely-delicate passages might be lost in background noise.

The gain knobs adjust the input sensitivity of the mic and line inputs. This allows signals from the outside world to be adjusted to run through each input at optimal internal operating levels.

The gain ranges from minimum with the knob fully down, ramping to maximum with the gain knob fully up.



5. SIG/OL LED

This dual-colored LED will illuminate green when the channel's input signal (at least -20 dBu) is present, indicating signal (SIG). It will remain lit non-stop so long as there is signal above -20 dBu present in that channel.

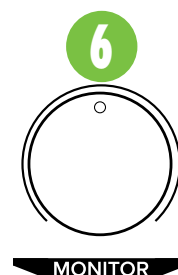
This dual-colored LED will illuminate red when the channel's input signal is too high, indicating a signal overload (OL). This should be avoided, as distortion will occur. If the OL LED comes on regularly, check that the gain knobs are set correctly.

6. Monitor Knob

The monitor knob adjusts the volume of the input source's signals going to the L/R line outputs.



WARNING: Always turn the monitor knob all the way down before making connections or trying something new. Keep it down until all changes have been made, then turn it up slowly. This saves your speakers – and more importantly, your ears – from blowing.

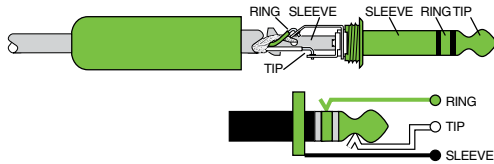


7. 1/4" Phones Jacks

This 1/4" TRS connector supplies the output to stereo headphones. The volume is controlled via the phones knob located just above the phones jack. It is the same signal that is routed to the line outputs.

The phones output follows standard conventions:

Left channel	Tip
Right channel	Ring
Ground	Sleeve

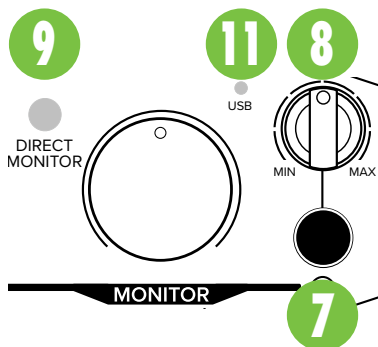


Balanced 1/4" Connectors



WARNING: The headphone amp is loud, and can cause permanent hearing damage. Even intermediate levels may be painfully loud with some headphones. BE

CAREFUL! Always turn the phones level control all the way down before connecting headphones or doing anything new that may affect the headphone volume. Then turn it up slowly as you listen carefully.



8. Phones Level

This knob is used to adjust the volume at the phones output from minimum to maximum gain. The L/R line outputs and phones share the same "mix".



WARNING: Yes, we just mentioned this exact same warning above, but that is how important this is...the headphone amp is loud, and can cause permanent hearing

damage. Even intermediate levels may be painfully loud with some headphones. BE CAREFUL! Always turn this control all the way down before connecting headphones or doing anything new that may affect the headphone volume. Then turn it up slowly as you listen carefully.

9. Direct Monitor Switch [Onyx Artist 1•2]

Engage this switch on the Onyx Artist 1•2 to monitor the input signals. When engaged, the switch illuminates green to let you know that you are now monitoring the levels of the inputs.

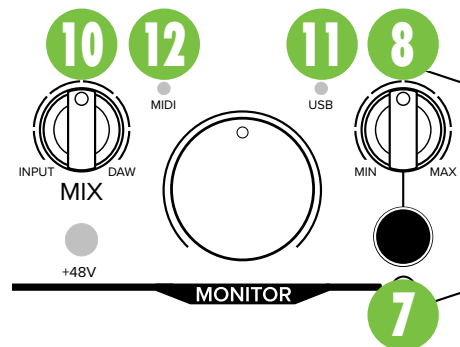
The input monitoring occurs in the analog domain, resulting in zero-latency recording.

10. Mix Knob [Onyx Producer 2•2]

The mix knob adjusts the level of inputs 1/2 and DAW playback to be delivered to the phones and line outputs. As an added bonus, this is all at zero-latency!

Knob position (L, C, R):

- Full Left – Input 1/2 = Full Volume
DAW = No Volume
- Center – Input 1/2 and DAW = Equal Volume
- Full Right – Input 1/2 = No Volume
DAW = Full Volume

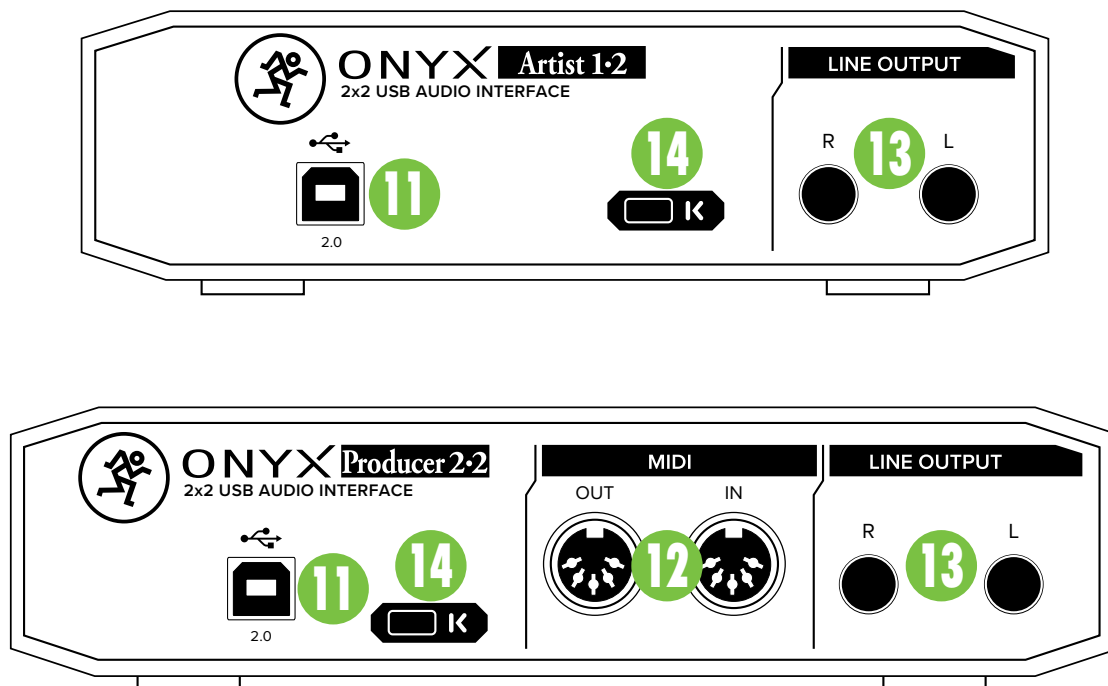


11. USB LED

The USB LED will illuminate green when the computer is powered on and connected successfully and securely (via USB) to the Onyx USB Interface. The USB light informs you that the interface is "enumerated", and in a functional and happy state.

12. MIDI LED [Onyx Producer 2•2]

The MIDI LED will illuminate green to inform you when data is received at the MIDI input jack of the Onyx Producer 2•2 interface.



Rear Panel Description

If the front panel is where inputs are connected, then it would only make sense that the rear panel is where outputs are connected!

11. USB Input / Output Jack

The built-in USB interface allows for some powerful and flexible routing by transferring digital audio to and from a computer. To use this feature with a PC, first download the PC ASIO driver from <http://mackie.com/products/onyx-series-usb-interfaces>. If connecting to a Mac, it will show up as a 1x2 device [Onyx Artist 1•2] or 2x2 device [Onyx Producer 2•2] with no driver required.

The USB routing of the Onyx USB Interface is a potent thing to behold. Input signals are always sent directly to the computer, yet also routable directly to the L/R line outputs and headphones outputs.

Similarly, stereo playback is always routed back into the interface for monitoring and overdubbing (unless you choose to mute them in software). Since the phones and L/R line outputs have separate volume controls, users are free to monitor using either, neither or both.

As mentioned on the previous page, the USB LED on the front panel will illuminate green when the computer is powered on and connected successfully and securely (via USB) to the Onyx USB Interface.

12. MIDI Input / Output Jacks [Onyx Producer 2•2]

These are standard 5-pin MIDI input and output connectors. Connect this to the MIDI IN/OUT ports on MIDI-equipped device (MIDI IN to MIDI OUT and vice-versa).

The MIDI LED on the front panel will illuminate green to inform you when data is received at the MIDI input jack of the Onyx Producer 2•2 interface.

It will appear as a 2x2 MIDI device to the computer and DAW application. The Onyx Producer 2•2 interface appears as Port 1 in the DAW application.

13. 1/4" Line Outputs

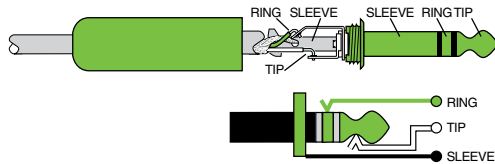
Connect the L/R monitor outputs to the inputs of powered studio monitors or to a power amplifier driving passive speakers. These outputs deliver the main balanced stereo signal.

- The L/R line output connectors accept balanced or unbalanced signals.
- Unbalanced TS (tip-sleeve) lines can be accommodated via the TRS jack. Make sure the cable terminates with a TS plug (like a guitar plug), or if it's a TRS plug (such as a headphone plug), make sure the ring is tied to the sleeve and that the plug is fully inserted into the jack.

The connectors are wired as follows, according to standards specified by the AES (Audio Engineering Society).

Balanced 1/4" TRS

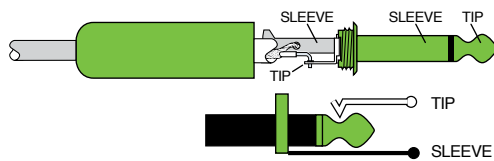
Hot (+)	Tip
Cold (–)	Ring
Shield (Ground)	Sleeve



Balanced 1/4" Connectors

Unbalanced 1/4" TS

Hot (+)	Tip
Shield (Ground)	Sleeve



Unbalanced 1/4" Connectors

14. Kensington Lock

To help prevent theft, the Onyx USB Interfaces have a security slot designed to fit the popular Kensington security locks. A variety of models are available from their website at www.kensington.com.

Appendix A: Service Information

If you think your Onyx USB Interface has a problem, please check out the following troubleshooting tips and do your best to confirm the problem. Visit the Support section of our website (www.mackie.com/support) where you will find lots of useful information such as FAQs and documentation. You may find the answer to the problem without having to send your Onyx USB Interface away.

Troubleshooting

No Power

- The USB LED should come on if the interface is connected to a computer, and the computer is powered on. Check to make sure that the computer's power cord is securely plugged in.

No Sound

- Is the USB LED on the front panel illuminated? If not, refer to “No Power” above.
- Is the signal source turned up? Make sure the signal level from the selected input source is turned up high enough.
- Make sure the gain knob for the selected input(s) are set correctly.
- Make sure the cable connecting the line outputs to the active speakers or power amplifier isn't defective and the amplifier/speaker combination is working correctly.

Bad Sound

- Are the input and output connectors plugged completely into the jacks? Make sure they are plugged all the way in.
- Is it loud and distorted? Make sure the gain knob for the selected input is set correctly. Reduce the signal level on the input source if possible.
- If possible, listen to the signal with headphones plugged into the input source device. If it sounds bad there, it's not the Onyx USB Interface causing the problem.
- Is the input gain set correctly?
- Is the input OL LED on?
- Try the same source signal in the other input, set up exactly like the suspect input.
- Is phantom power required for your microphone?

Noise/Hum/Buzz

- Check the signal cables between the source(s) and the Onyx USB Interface. Make sure all connections are secure. These problems usually produce crackling noises, hum, or buzz. Disconnect them one by one. When the noise goes away, you'll know which input source is causing the problem.
- Make sure the signal cable is not routed near AC cables, power transformers, or other EMI sources (including wall warts and line lumps!). These sources usually produce hum.
- Excessive hiss is an indication of an incorrect gain setting somewhere before the Onyx USB Interface.
- Sometimes it helps to plug all the audio equipment into the same AC circuit so they share a common ground.

Repair

For warranty service, please refer to the warranty information on page 16.

Non-warranty service is available at a factory-authorized service center. To locate the nearest service center, visit www.mackie.com, click “Support” and select “Locate a Service Center or Distributor”. Service for an Onyx USB Interface living outside the United States may be obtained through local dealers or distributors.

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

Appendix B: Technical Information

Onyx USB Interfaces Specifications

Frequency Response

At minimum gain, +4 dBu / -6 dBFS input	
All inputs:	±0.5 dB, 20 Hz – 20 kHz
All outputs:	±0.5 dB, 20 Hz – 20 kHz

Noise Characteristics (RMS, 10 Hz – 22 kHz)

Mic inputs:	<-100 dBFS
Line inputs:	<-100 dBFS
Instrument input:	<-100 dBFS
Line outputs, balanced:	<-85 dBu
Headphone outputs:	<-75 dBu

Distortion (THD)

+4 dBu / -6 dBFS, 1 kHz input, minimum gain	
Mic input:	<0.001%
Line input:	<0.005%
Instrument input:	<0.005%
Line outputs, balanced:	<0.001%
Headphone outputs:	<0.002%

Maximum Levels (0 dBFS, 1 kHz)

Mic input, gain at minimum:	+11 dBu
Line input, gain at minimum:	+24 dBu
Instrument input, gain at minimum:	+24 dBu
Line outputs, volume at maximum:	+10 dBu
Headphone outputs, volume at maximum:	+10 dBu

Input Type

Input type:	Female XLR balanced/ unbalanced Female 1/4" balanced / unbalanced MIDI [Onyx Producer 2•2]
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Output Type

Output type:	Female 1/4" balanced / unbalanced MIDI [Onyx Producer 2•2]
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USB

Format:	USB 2.0, 24-bit, 192 kHz
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Power Requirements

USB Bus Powered:	High-power device (5V, up to 500mA)
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Physical Dimensions and Weight

Onyx Artist 1•2

Height:	2.0 in / 51 mm
Width:	6.4 in / 163 mm
Depth:	4.5 in / 114 mm
Weight:	1.1 lb / 0.5 kg

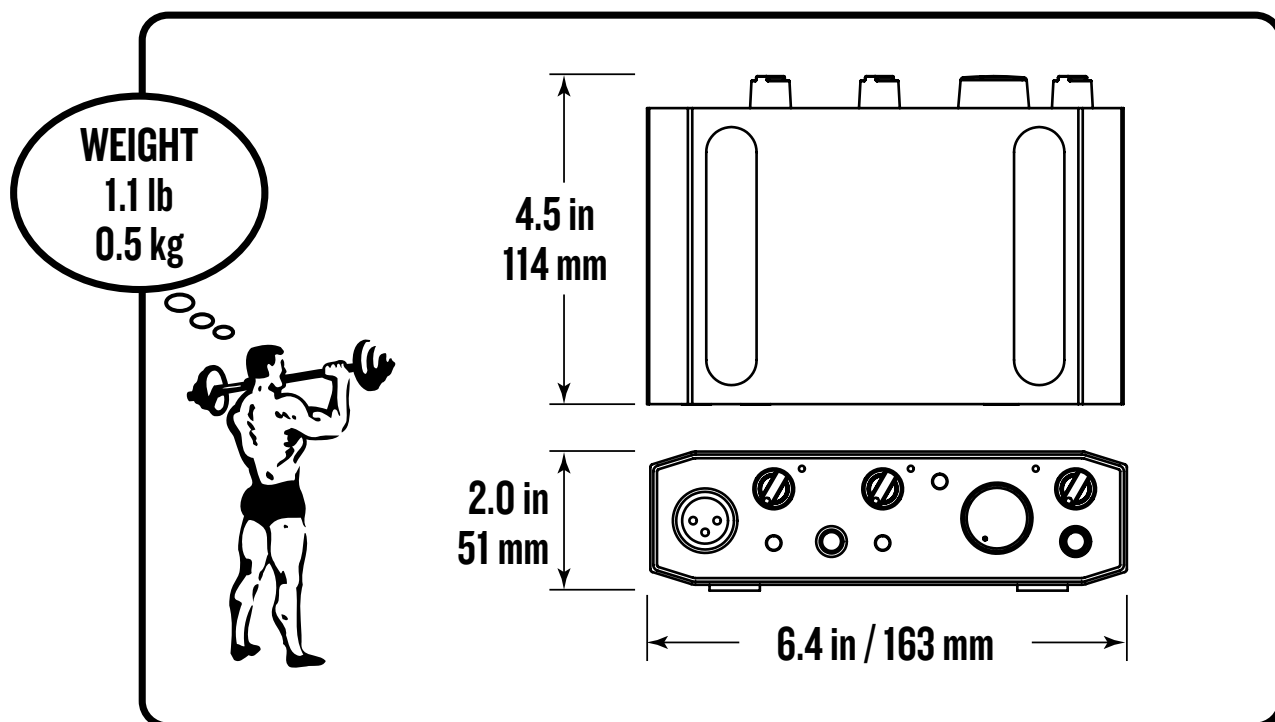
Onyx Producer 2•2

Height:	2.0 in / 51 mm
Width:	7.4 in / 188 mm
Depth:	4.5 in / 114 mm
Weight:	1.4 lb / 0.6 kg

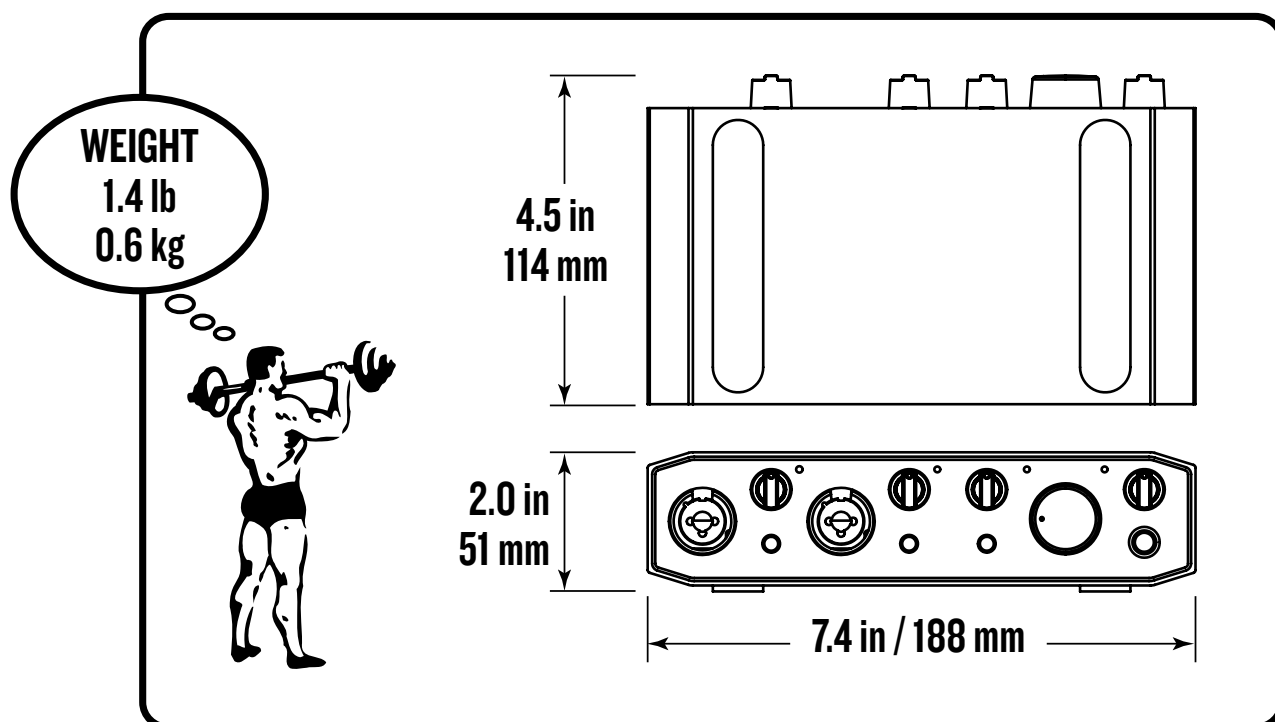
Disclaimer

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

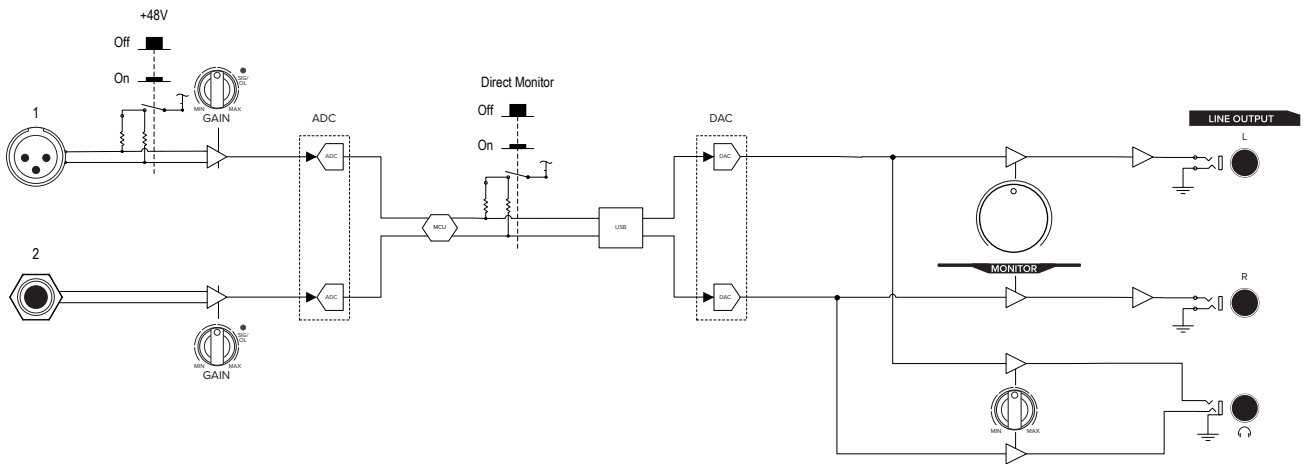
Onyx Artist 1•2 Dimensions



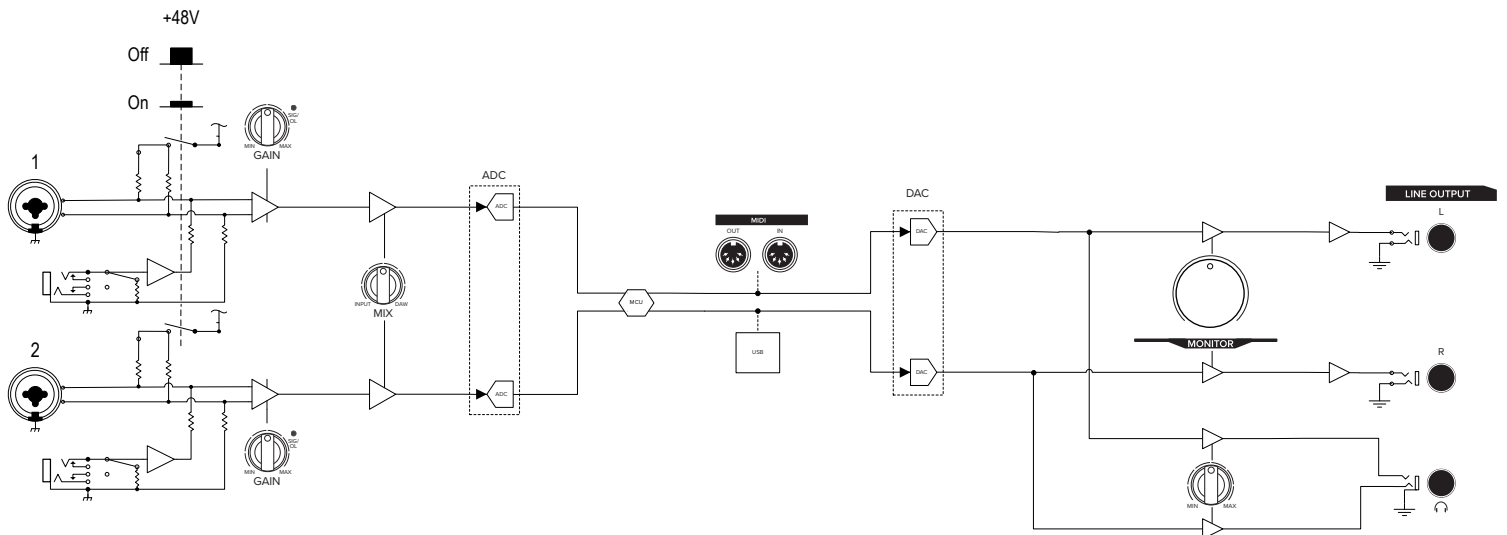
Onyx Producer 2•2 Dimensions



Onyx Artist 1•2 Block Diagram



Onyx Producer 2•2 Block Diagram



Limited Warranty

Please keep your sales receipt in a safe place.

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

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

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

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

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

Need help with the Onyx USB Interface?

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



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