Model MX692
User Guide

SHURE MX692 WIRELESS BOUNDARY MICROPHONE TRANSMITTER

- Integrated functionality of Microflex boundary microphone and UC Series wireless transmitter
- Frequency agile transmitter offers over 100 user selectable channels for UA and UB frequency bands; run up to 32 systems simultaneously
- User programmable touch-sensitive switch and status LED
- 9V battery-powered with 3-stage battery life LED indicator
- Thread mount cartridge connection for easy field replacement
- Internal antenna
- Requires Shure UC4 receiver (sold separately)

27A8828 (Rev. 2)

Printed in U.S.A.

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INTRODUCTION

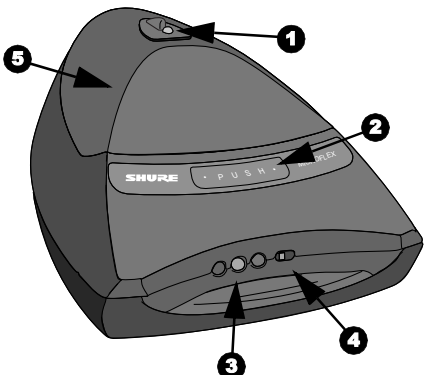
The MX692 wireless boundary microphone is for use in a variety of boardroom, education, government, and house of worship applications that require a clean, cable-free installation. Additionally, the MX692 is useful in retrofit installations where the modification of existing architecture and furnishings is unwelcome, and in facilities where a flexible, mobile audio system is required.

The user-programmable mute switch and interchangeable microphone cartridges allow customization of microphone behavior and audio response to suit many applications. The transmitter antenna is mounted internally, giving the microphone a sleek appearance.

The MX692 integrates a boundary microphone and a wireless transmitter. The transmitter broadcasts on the UA (782.125–805.750 MHz) and UB (692.500–715.625 MHz) frequency bands. These frequencies are legal for broadcast in the U.S., Canada, Central and South America, and Australia.

The Shure UC Wireless system divides frequency bands into “groups” and “channels.” Up to sixteen individual MX692 transmitter/UC4 receiver pairs, each with its own channel, may be assigned to a single group. With two frequency bands to choose from, it is possible to run up to 32 microphones simultaneously in a single sound system.

MX692 FEATURES AND CONTROLS



1. Microphone Status LED

   Microphone is active when lit.

2. Programmable Touch-sensitive Switch

   Touch to mute or activate microphone, depending on logic settings.

3. Power/Battery Life Gauge

   LED color indicates battery power status.

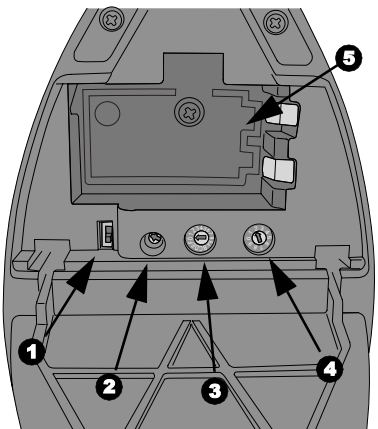
4. Power On/Off Switch

5. Protective Grille

   Grille can be removed to access microphone cartridge and DIP switches.

MX692 FEATURES AND CONTROLS CONTINUED

To access gain and channel settings, open the battery compartment door.



1. Input Attenuation Control

   This two position switch lets you select either 0 dB or 20 dB attenuation, depending on the volume of the talker's voice.

2. Transmitter Output Gain Control

   Changes the audio level to accommodate various input volumes. Use the supplied screwdriver to make adjustments.

3. Channel Setting Control (green dial)

   Rotating the Channel dial changes the Channel setting. Use the supplied screwdriver to make adjustments.

4. Group Setting Control (red dial)

   Rotating the Group dial changes the Group setting. Use the supplied screwdriver to make adjustments.

5. Battery Compartment

   Holds one 9V battery

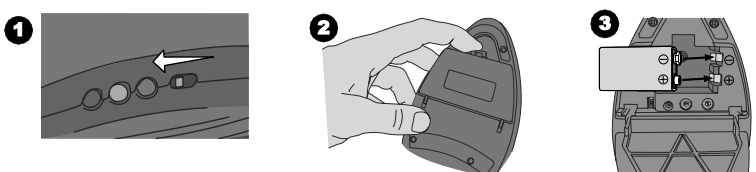
CHECKING AND REPLACING THE BATTERY

To check the battery charge:

1. Turn the transmitter switch to on
2. Verify that one of the battery power LEDs is glowing (see page 3).
3. The amount of battery life remaining is indicated by which LED is lit, as shown in the following table:

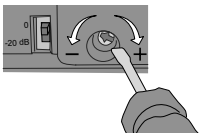
Transmitter LED Color	Remaining Operating Time
Green	2 to 8 hours
Amber	45 minutes to 2 hours
Red	45 minutes or less

Replacing the battery:



For extended performance, use a 9V lithium battery. Rechargeable, carbon-zinc, and zinc-chloride batteries are not recommended.

ADJUSTING THE TRANSMITTER GAIN LEVEL



If transmitter gain is set correctly, the audio LED meter on the UC4 receiver should reach amber during normal speech and momentarily flash red during the loudest speech. If transmitter output needs to be increased or decreased, adjust the output gain control.

Set the input attenuation control switch to 9 dB for normal use (default) or -20 dB for loud voices (this is rare).

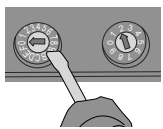
CHANGING THE TRANSMITTER GROUP/CHANNEL SETTINGS

For a wireless transmitter such as the MX692 to communicate with a receiver, the transmitter and receiver must be communicating on the same frequency. The frequency is set by changing the transmitter and receiver "group" and "channel" settings. For a MX692 transmitter to communicate with a UC4 receiver, the two must have matching group and channel settings.

See the Shure website for recommended group and channel settings for your area.

To change MX692 group and channel settings:

1. Turn the transmitter off.
2. Using the supplied screwdriver, rotate the GROUP dial (see page 4) until the desired setting is reached. Then rotate the CHANNEL dial until the desired setting is reached.

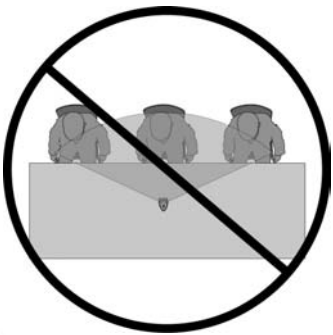


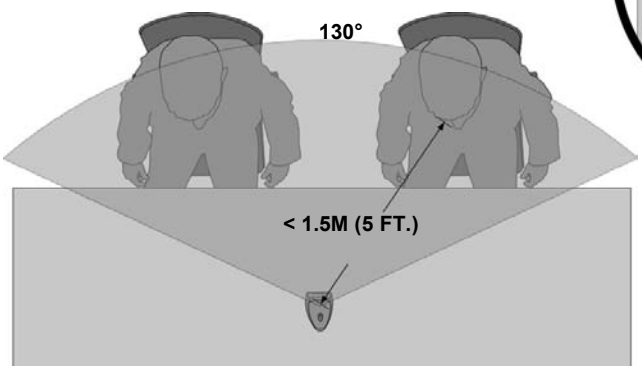
POSITIONING THE MICROPHONE

With the standard cardioid cartridge installed, the MX692 will pick up audio at conversational volume levels within 1.5 M (5 ft.) in a 130 degree range.

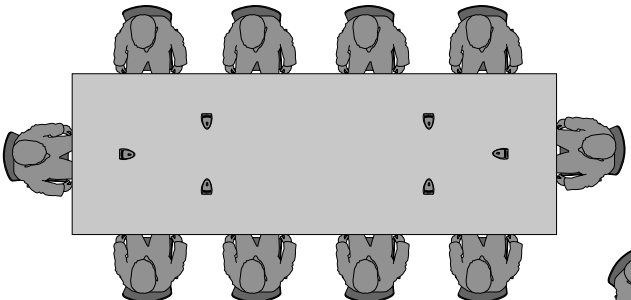
As a general rule, a single microphone should be used for every two people speaking.

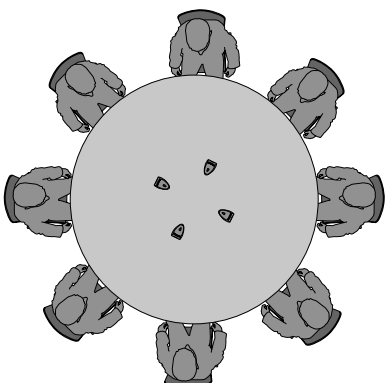
If a tighter pickup range is required, a supercardioid cartridge may be used.





POSITIONING MULTIPLE MICROPHONES

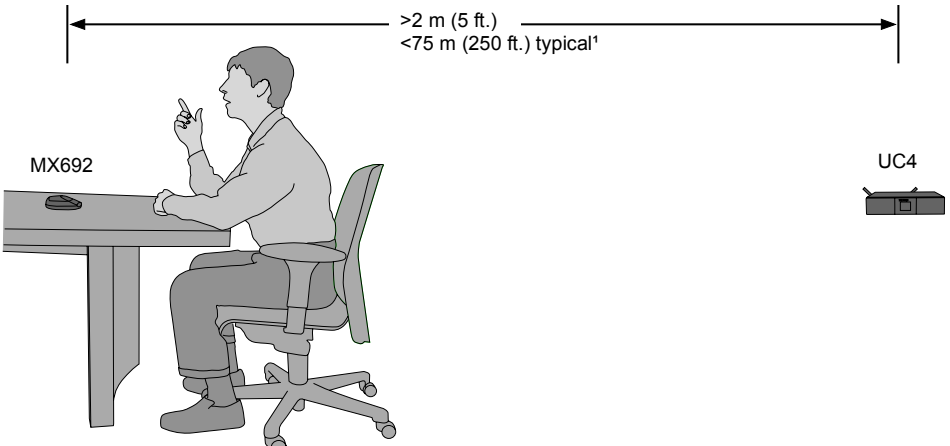




In any installation, good vocal pickup can be achieved by following the positioning rules on page 7. Maintain at least .3 m (1 ft.) separation between transmitters. If you experience transmitter interference, increase the distance between transmitters, or change the channel of one transmitter/receiver pair.

For information on receiver setup and positioning, see the UC4 Wireless System user guide.

POSITIONING THE RECEIVER

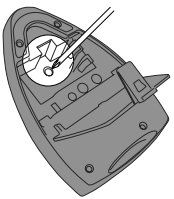


The UC4 receiver may be rack mounted. See page 14 for information on systems with multiple transmitters and receivers.

[1] Maximum distance depends on signal absorption, reflection, and interference.

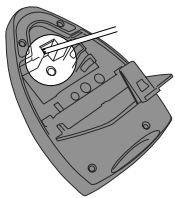
REMOVING THE GRILLE

1. Open the battery compartment
2. Remove the battery
3. Loosen and remove the screw at the base of the battery compartment

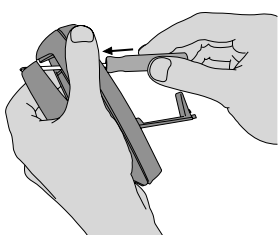


4. Remove the retainer from the top of the microphone

5. Insert the screwdriver into the opening above the battery compartment



6. Press gently on the underside of the microphone grille with the tip of the screwdriver until the grille pops out

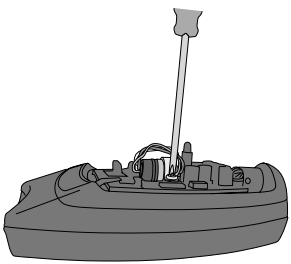


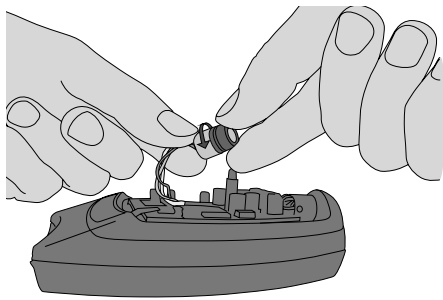
ADDITIONAL OR REPLACEMENT CARTRIDGES

Additional or replacement cartridges may be purchased for the MX692. For more information or to order cartridges, contact the Shure service department or an authorized Shure service center.

To replace the microphone cartridge:

1. Remove the grille (see page 10)
2. Loosen the screw and remove the cartridge clamp
3. Twist to remove the existing cartridge
4. Reverse procedure to install new cartridge

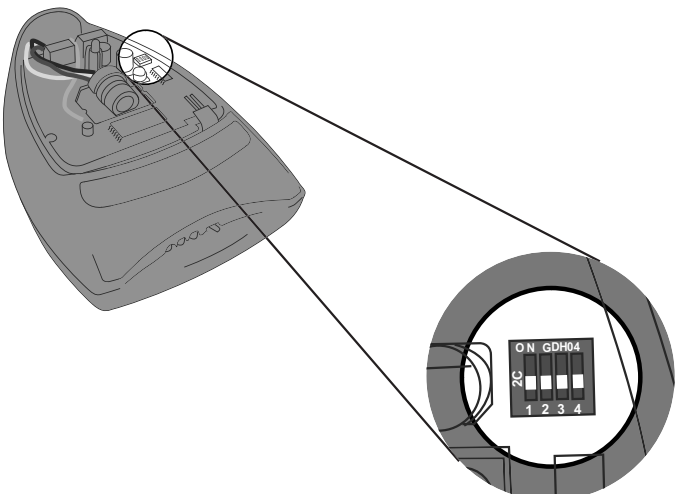




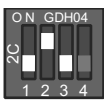
Omnidirectional Cartridge R183B
Supercardioid Cartridge R184B
Cardioid Cartridge R185B

THE INTERNAL DIP SWITCHES

The functionality of the touch-sensitive switch on the microphone's front panel (see page 3) can be customized using the internal DIP switches. See page 13 for customization options.



CUSTOMIZING MICROPHONE SWITCH FUNCTIONALITY

DESIRED SWITCH FUNCTIONALITY	DESIRED LED FUNCTIONALITY	DIP SWITCH SETTING
Push to mute, release to talk (as shipped)	LED on when microphone is active	
Push to talk release to mute	LED on when microphone is active	
Toggle: push on/push off	LED on when microphone is active	 Initially Muted  Initially Active

Note: switch 4 of the MX692 DIP switch panel is not active

TIPS FOR OPTIMUM PERFORMANCE

- Maintain a line of sight between transmitter and receiver antennas.
- Avoid using the MX692 microphone on metal surfaces.
- Avoid placing laptop computers or other obstructions in front of the microphone during use.
- The MX692 wireless microphone/transmitter must be used with the Shure UC4 wireless receiver.

USING THE MX692 IN LARGE INSTALLATIONS

- When using multiple receivers in a single location, use successive channels within the same group.
- Use the UA845 UHF Antenna Distribution System to split the signal from one pair of antennas to multiple UC4 receivers.
- To improve RF reception, use the UA500 Remote Mount Antenna Kit to mount 1/2-wave receiver antennas closer to the transmitters.
- For installations with long cable runs, use the UA830 UHF In-Line Antenna Amplifier. If a cable run exceeds 50 ft., two UA830's may be chained together.

TROUBLESHOOTING

If you experience difficulty, check the following:

- Make sure both the transmitter and the receiver are turned on.
- Check the MX692 battery gauge. Replace the battery if necessary.
- Make sure the transmitter and receiver frequency group/channel settings are identical.
- Make sure there is an unobstructed line-of-sight between the transmitter and receiver.
- If necessary, reposition the receiver, or decrease the distance between transmitter and receiver.
- Remove local sources of RF interference, such as lighting equipment.

For in-depth troubleshooting, see your UC Wireless System user guide.

SPECIFICATIONS

Frequency response (see insert)
50 to 17,000 Hz

Polar pattern (see insert)
Cardioid (supplied)

Current drain
62 ± 10 mA, typical (Vss = 6.0 to 9.6 VDC)

Battery life
7 hours (based on alkaline battery)

Dynamic range
>100 dB minimum, A-weighted

Gain Adjustment Range
-6 to 34 dBs

Modulation
+/-45 kHz deviation

Polarity
Positive pressure on the diaphragm produces a positive voltage on pin 2 of the XLR output of the UC4 receiver.

Transducer type
Electret condenser

Power Requirements
9V alkaline battery

Temperature Range
Operating: (20° to 120° F)
Storage: (-20° to 165° F)

RF Carrier Frequency Range
692–716 MHz (UB)
782–806 MHz (UA)

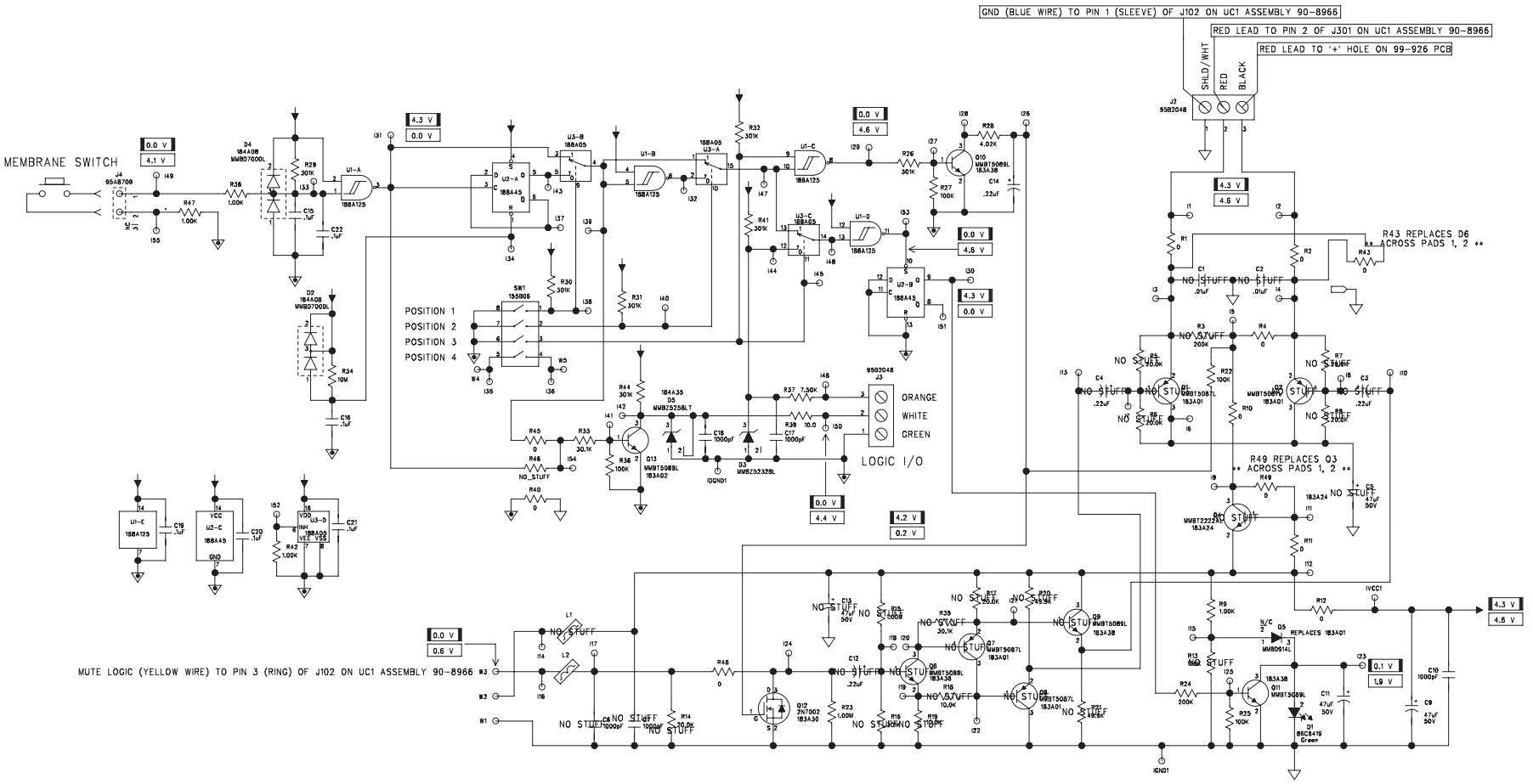
Working Ranges
75 m (250 ft.) typical
250 m (800 ft.) line-of-sight
Note: actual working range depends on RF signal absorption, reflection, and interference

Minimum Distance Between Transmitters
.3 m (1 ft.)

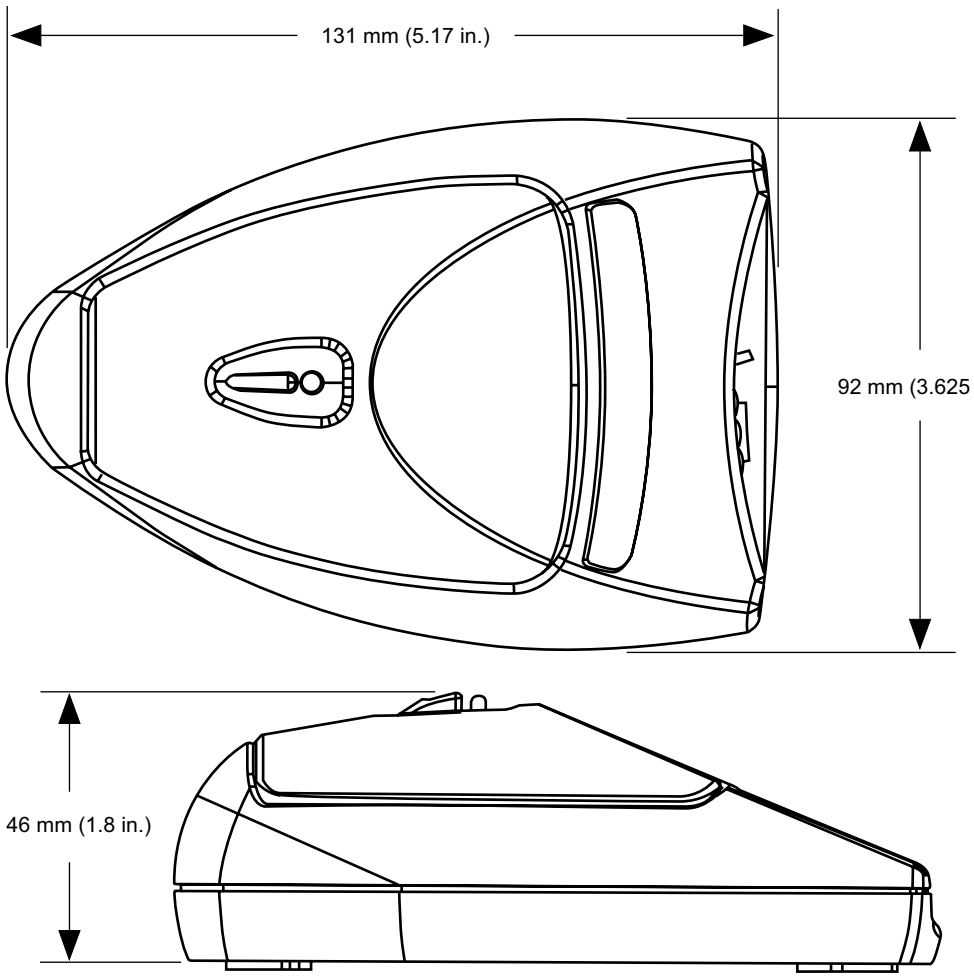
RF Power Output
50 mW Max (conducted)
30 mW Typical (radiated)

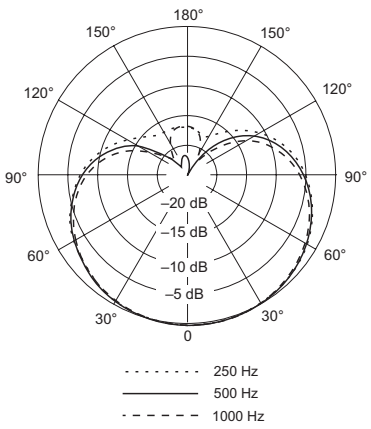
Certification
See insert

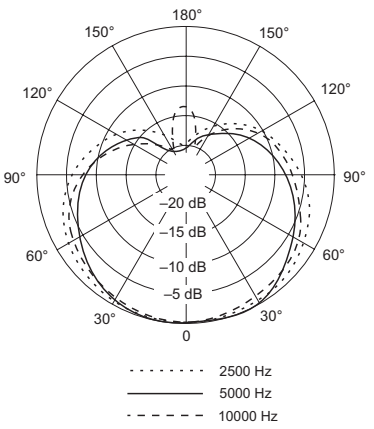
Mute Circuitry

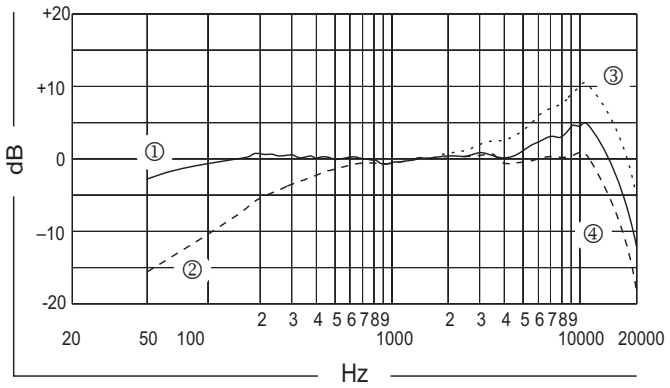


Dimensions, Polar Patterns and Frequency Response









Certifications and Licensing

Certifications

Type accepted under FCC Part 74 (FCC ID DD4MX692). Certified by IC in Canada under RSS-123 and RSS-102. (IC:616A-MX692.)

Operation of this device 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.

Licensing Information

Changes or modifications not expressly approved by Shure Incorporated could void your authority to operate this equipment.

Licensing of Shure wireless microphone equipment is the user's responsibility, and licensability depends on the user's classification and application, and on the selected frequency. Shure strongly urges the user to contact the appropriate telecommunications authority concerning proper licensing, and before choosing and ordering frequencies.

CERTIFICACIONES

T1, T1G: Aceptado por espécimen bajo las normas de la FCC, parte 74 (FCC ED DD4MX692). Homologado en Canadá por IC bajo la norma RSS-123 y RSS-102 (IC: 616A-MX692).

El uso de este dispositivo está sujeto a las dos condiciones siguientes: (1) no se permite que este dispositivo cause interferencias y (2) este dispositivo deberá aceptar interferencias, incluso las que pudieran causar su mal funcionamiento.

INFORMACION PARA OBTENCION DE LICENCIAS

Las modificaciones o los cambios efectuados sin la aprobación expresa de Shure Incorporated podrían anular la autorización concedida para usar el equipo.

La obtención de licencias de operación para equipos de micrófonos inalámbricos Shure es responsabilidad del usuario, y la otorgabilidad de licencias dependerá de la clasificación y la aplicación del usuario y de la frecuencia seleccionada. Shure recomienda enfáticamente al usuario ponerse en contacto con las autoridades de telecomunicaciones correspondientes respecto a la obtención de licencias antes de seleccionar y solicitar frecuencias.

HOMOLOGATION

Type accepté aux termes de la partie 74 (FCC ID DD4MX692) des réglementations FCC. Homologué par IC au Canada selon RSS-123 et RSS-102 (IC : 616A-MX692).

L'utilisation de ce dispositif est sujette aux deux conditions suivantes : (1) ce dispositif ne doit pas causer de parasites et (2) ce dispositif doit accepter les parasites, y compris ceux qui pourraient provoquer un fonctionnement non souhaitable du dispositif.

RENSEIGNEMENTS SUR L'OCTROI DE LICENCE

Tout changement ou modification n'ayant pas fait l'objet d'une autorisation expresse de Shure Incorporated peut entraîner la nullité du droit d'utilisation de l'équipement.

La licence d'utilisation de l'équipement du microphone sans fil Shure demeure la responsabilité de l'utilisateur, et elle dépend de la classification de l'utilisateur et de l'application prévue par lui ainsi que de la fréquence sélectionnée. Shure recommande vivement de se mettre en rapport avec les autorités compétentes des télécommunications pour l'obtention des autorisations nécessaires, ainsi qu'avant de choisir et de commander des fréquences.

CERTIFICADO

Tipo aceito conforme a FCC Parte 74 (FCC ID DD4MX692). Certificado pelo IC no Canadá sob RSS-123 e RSS-102 (IC: 616A-MX692).

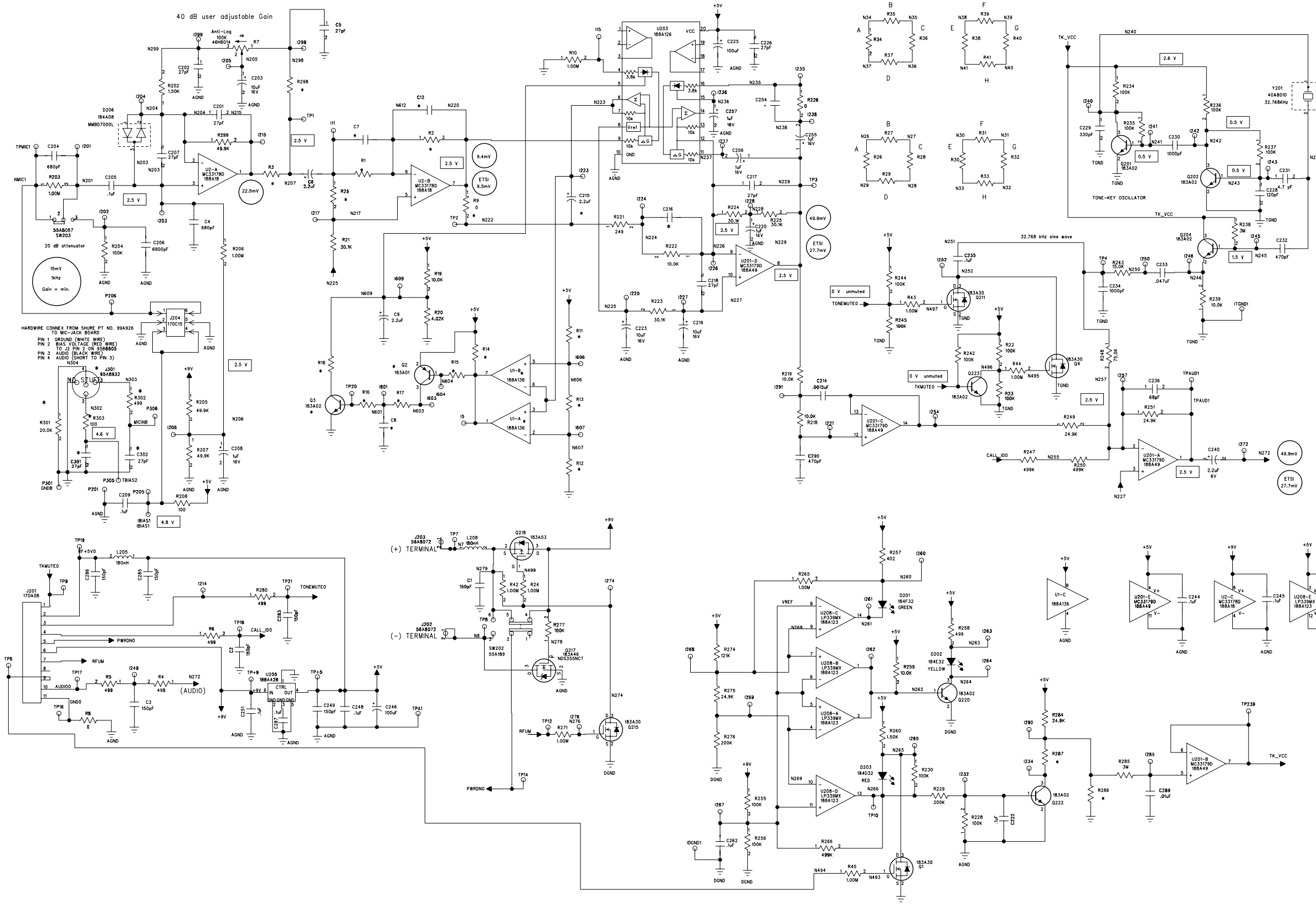
A operação deste dispositivo está sujeita às seguintes condições: (1) este dispositivo não pode causar interferência (2) este dispositivo deve aceitar interferências, incluindo algumas que possam causar operação não desejada do dispositivo.

INFORMAÇÕES SOBRE A LICENÇA

Alterações ou modificações não expressamente aprovadas pela Shure Incorporated podem anular a autorização do usuário para a operação do equipamento.

A licença do equipamento de microfone sem fio da Shure é de responsabilidade do usuário, e a capacidade de obter licença depende da classificação e da aplicação do usuário e da freqüência selecionada. A Shure recomenda enfaticamente ao usuário contatar a devida autoridade de telecomunicações com relação à devida licença antes de escolher e encomendar as freqüências.

Audio Circuitry



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