



SH
LEGEND



SAFETY PRECAUTIONS

The possible results of incorrect use are marked by one of the two symbols - "WARNING" AND "CAUTION" - depending on the imminence of the danger and the severity of the damage.

 **WARNING:** Ignoring these warnings may cause severe injury or death as a result of incorrect operation.

 **CAUTION:** Ignoring these cautions may cause moderate injury or property damage as a result of incorrect operation.

WARNING

- If water or other foreign objects enter the inside of the device, fire or electric shock may result.
- Do not attempt to modify this product. Doing so could result in personal injury and/or product failure.

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm

CAUTION

- Never disassemble or modify the device, as failures may result.
- Do not subject to extreme force and do not pull on the cable or failures may result.
- Keep the microphone dry and avoid exposure to extreme temperatures and humidity.

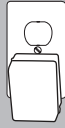
" " " "



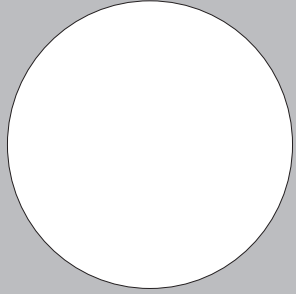
	(Pb)	(Hg)	(Cd)	Cr (VI)	PBB	PBDE
	X	O	O	O	O	O
	X	O	O	O	O	O
	X	O	O	O	O	O
O: SJ/T 11363-2006 X: SJ/T 11363-2006						



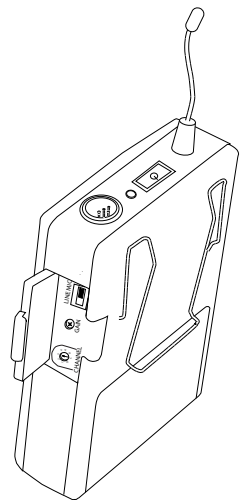
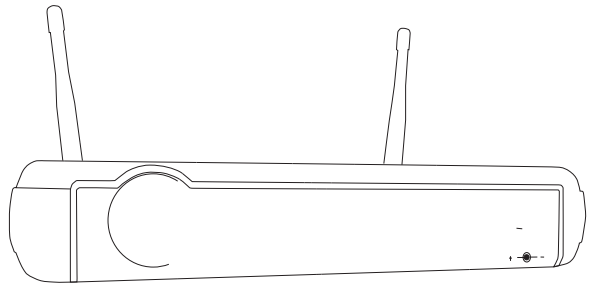
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System Components

Power

Plug in the power adapter to turn on the receiver. There is no power switch.

Insert 2 AA batteries into the transmitter. Hold the power button for two seconds to turn on.

Connecting to a Sound System

Connect the balanced XLR output on the receiver to a MIC or LINE input. Set the LINE MIC switch accordingly.

If there is no XLR input, connect the unbalanced 6.35 mm (1/4 inch) receiver output to a LINE input. Set the LINE MIC switch to LINE.

Channel

Set the transmitter and the receiver to the same frequency using the channel dial.

Note: If using a dual system (or more than one single system), assign each input to a different channel within the same group (channels 1-4 or channels A-D). This ensures the best signal quality.

Bodypack Gain

The gain dial controls the audio volume sent to the receiver.

- Turn down the gain if the audio signal sounds distorted.
- Turn up the gain if the AF LED light is faint or the audio is too low.

RF Level

This switch sets the RF level of the handheld transmitter. It does not affect the audio volume.

- Set to LO to avoid interfering with other receivers when in a building with multiple systems.
- Set to HI for transmitting over a greater distance when using a single system.

Squelch

Squelch controls the amount of RF signal that the receiver picks up.

- Turn up the squelch dial (clockwise) to remove ambient noise from unwanted RF sources.
- Turn down the squelch dial (counterclockwise) if the microphone is not transmitting clearly to the receiver.

Color ID Rings

Slide these color rings over the handle of the microphone to identify them. (Sold in a package of six as an optional accessory.)

Getting Good Sound



Wearing the Headworn Microphone

- Position the headworn microphone 13 mm (1/2 in.) from the corner of your mouth.
- Position lavalier and headworn microphones so that clothing, jewelry, or other items do not bump or rub against the microphone.

Wireless Tips to Improve System Performance

If you encounter wireless interference or dropouts, try the following suggestions:

- Replace the transmitter batteries
- Choose a different frequency channel
- Reposition the antennas so there is nothing obstructing a line of sight to the transmitter (including the audience)
- Avoid placing transmitter and receiver where metal or other dense materials may be present
- Move the receiver to the top of the equipment rack
- Remove nearby sources of wireless interference, such as cell phones, two-way radios, computers, media players, and digital signal processors
- Keep transmitters more than two meters (6 feet) apart
- Keep the transmitter and receiver more than 5 meters (16 feet) apart
- Keep them away from large metal objects
- During sound check, mark trouble spots and ask presenters or performers to avoid those areas

Troubleshooting

Problem	Solution
No sound	<ul style="list-style-type: none"> • Check the power supply of the microphone and receiver. • Ensure that the batteries are inserted correctly. • Set the transmitter and receiver to the same channel. • Check that the receiver is connected to the input on the audio mixer or amplifier. • Check that the transmitter is not too far away from the receiver. • Decrease (counterclockwise) the squelch. • Set the bodypack audio input switch to MIC. • Make sure that the receiver has a clear, line-of-sight path to the transmitter. • Keep the receiver away from metal objects.
Noise from RF interference	<ul style="list-style-type: none"> • Replace the transmitter batteries. • Check the receiver antenna location. Make sure there is a clear path between the receiver and the transmitter. • When using two or more systems simultaneously, choose different channels within the same group (channels 1-4 or channels A-D). • Turn off or relocate possible sources of interference such as cell phones, radios, or other electronic devices. • Increase squelch (clockwise) to restrict the receiver from picking up ambient noise. • Unplug any unused receivers
Audio distortion	<ul style="list-style-type: none"> • Adjust levels on the mixer board or sound system. • Make sure all cables are securely connected from the receiver to the sound system. • If using a bodypack transmitter, lower the gain settings.

ACCESSORIES AND PARTS

Optional Accessories

Color Rings (6)	WACR
Single Channel Rack Mount Kit	WASRM
Dual Channel Rack Mount Kit	WADRM

Replacement Parts

Channel Key	53A14226
Microphone Stand Adapter	95A14227
PS21 Power Supply	95A14220

PG28

PG28 Grille	95A14370
PG28 Capsule	95A14372
PG28 Handheld Transmitter Body	95A14371

PG58

PG58 Grille	95A14223
PG58 Capsule	95A14374
PG58 Handheld Transmitter Body	95A14422

See your local Shure distributor for assistance

Frequency Chart

Band	Range (MHz)
P12	698–710
P13	698–710
P14	710–726
P15	710–726
P16	726–742
P17	726–742
Q16	742–758
Q17	742–758
Q18	758–774
Q19	758–774
R23	774–787
R24	774–787

NOTE:

This Radio equipment is intended for use in musical professional entertainment and similar applications.

This Radio apparatus may be capable of operating on some frequencies not authorized in your region. Please contact your national authority to obtain information on authorized frequencies and RF power levels for wireless microphone products.

SPECIFICATIONS

Working Range (Line of Sight)

HI power mode: 75 m (250 ft)

LO power mode: 18 m (60 ft)

Note: Actual range depends on RF signal absorption, reflection and interference.

Audio Frequency Response

50 Hz to 15 kHz

Note: Dependent on microphone type

Total Harmonic Distortion (Ref. ± 48 kHz deviation, 1 kHz tone)

<1%

Dynamic Range

90 dB A-weighted, typical

Operating Temperature Range

-10° C (14° F) to 50° C (122° F)

Note: Battery characteristics may limit this range.

Transmitter Audio Polarity

Positive pressure on microphone diaphragm produces positive voltage on pin 2 (with respect to pin 3 of XLR output) and the tip of the 6.35 mm (1/4-inch) output

KCX1 Bodypack Transmitter

Audio Input Level

MIC: -7 to -15 dBV

LINE: 9 to 1 dBV

Gain Adjustment Range

8 dB

Input Impedance

MIC setting: 16 k

LINE setting: 120 k

RF Output (dependent on applicable country regulations)

10 mW maximum

Dimensions

108 mm X 64 mm X 19 mm (4.25in. X 2.50in. X 0.75in.)

Weight

90 g (without batteries)

Housing

Molded ABS

Power Requirements

2 "AA" size alkaline or rechargeable batteries

Battery Life

up to 10 hours (alkaline)

KCX2 Handheld Transmitter

Audio Input Level

-20 dBV maximum

Input Impedance

22 k

RF Output (dependent on applicable country regulations)

HI power mode: 10 mW maximum

LO power mode: 1 mW maximum

Dimensions

254 mm X 51 mm diameter (10in. X 2 in.)

Weight

270 g (10.2 oz.) (without batteries)

Housing

Molded ABS

Power Requirements

2 "AA" size alkaline or rechargeable batteries

Battery Life

up to 10 hours (alkaline)

KCX4 Receiver

Dimensions

32 mm X 168 mm X 104.5 mm (1.26 in. x 6.625 in. x 4.2 in.)

Weight

245 g (11.5 oz.)

Housing

Molded ABS

Audio Output Level (Ref. ± 48 kHz deviation with 1 kHz tone)

XLR connector into 100 k load: -19 dBV

6.35 mm (1/4") connector into 100 k load: -5 dBV

Output Impedance

XLR connector: 600

6.35 mm (1/4") connector: 600 Ref. ± 48 kHz deviation with dual-sine: 1 kHz tone + 17% 32.768 kHz pilot

Sensitivity

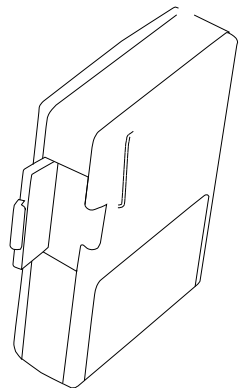
-105 dBm for 12 dB SINAD, typical

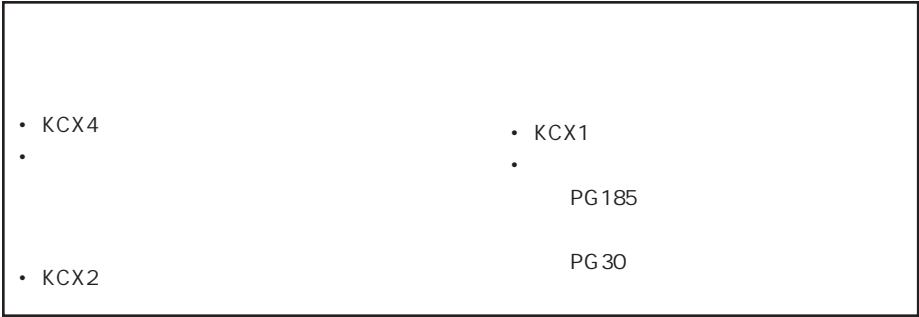
Image Rejection

>50 dBm, typical

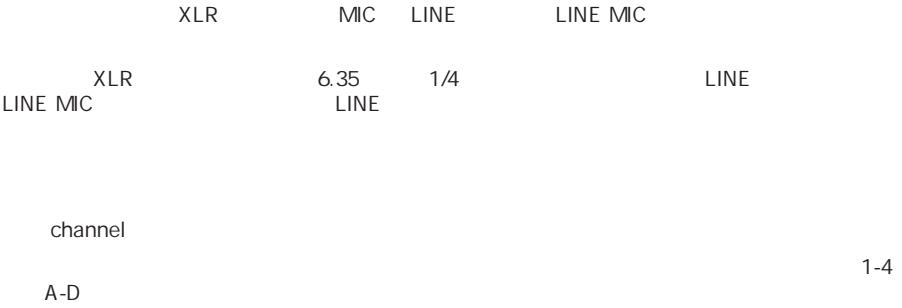
Power Requirements

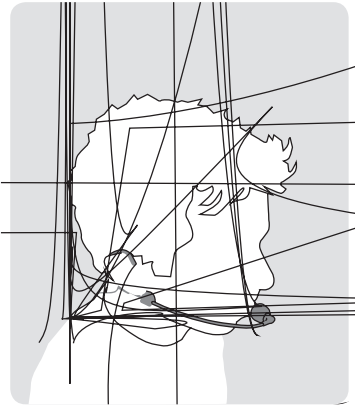
12 to 18 V DC @ 130 mA, supplied by external power supply





2 AA





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	<ul style="list-style-type: none"> • • • • • • • <p style="text-align: center;">1-4 A-D</p>
	<ul style="list-style-type: none"> • • •

WACR

WASRM

WADRM

53A14226

95A14227

95A14220

PG28

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-20 dBV

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: 10 mW

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(±48 1)

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ABS

2 6.35 1/4
XLR 3

2 "AA"

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MIC: -7 -15 dBV

32 X 168 X 104.5 (1.26 x 6.625 x
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LINE: 9 1 dBV

245 (11.5)

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108 X 64 X 19 (4.25 X 2.50 X 0.75)

6.35 1/4 : 600 ±48
1 + 17% 32.768

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-105 dBm 12 dB SINAD,

ABS

>50 dBm,

2 "AA"

12 18 V DC @ 130 mA,

10 ()

SHURE[®]

LEGENDARY
PERFORMANCE™

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