



SC

WIRELESS SYSTEMS

User Guide

READ ME FIRST!

... A quick guide to operating your Shure wireless microphone system.

RECEIVER CONNECTIONS

1. Attach the antennas to the receiver antenna connectors.
2. Connect the receiver audio output to the sound system, using an audio cable.
3. Connect the ac power adapter to the receiver power connector, then plug into an ac outlet.

TRANSMITTER CONNECTIONS

1. Open the transmitter battery compartment and insert a fresh 9-volt alkaline battery. Observe proper battery polarity (“ +/–”).
2. On a body-pack transmitter, connect the microphone or WA302 instrument cable to the 4-pin connector on the transmitter.

OPERATING THE SYSTEM

1. Press the receiver POWER switch. The green POWER indicator on the receiver will illuminate.
2. Set the transmitter POWER switch to the ON position. The green POWER indicator on the transmitter will illuminate.
3. Observe the RF level LEDs on the receiver. When the transmitter is in use, one of the LEDs will illuminate, indicating received RF signal strength (a stronger signal will illuminate a higher numbered LED). If none of the RF LEDs are lit, the transmitter may be too far from the receiver, reflective obstacles may be interfering with the signal, or the transmitter/receiver frequency selector switch settings may not match.
4. Observe the AUDIO level LEDs on the receiver while someone talks, sings, or plays a musical instrument. The green LEDs should light, with the yellow LEDs flickering occasionally to indicate audio signal peaks. Refer to the “Setting Audio Level” section if the yellow LED is always on, or never turns on.
5. Adjust the receiver VOLUME control until the output level is compatible with the mixer or amplifier input.

IMPORTANT: Every wireless microphone installation is a unique situation, and can present a variety of problems. Never attempt a live performance without first conducting a “walkthrough.” If major changes (intercoms, furniture, scenery, etc.) have been made since the walkthrough, check the wireless microphone operation again – as close to performance time as possible.

FOR ADDITIONAL INFORMATION, CONSULT THE SETUP AND INSTALLATION SECTION OF THIS GUIDE.

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SYSTEM DESCRIPTION

The Shure SC Series wireless microphone system is a frequency-selectable, diversity system operating in the VHF band between 169 and 216 MHz. Each SC Series system is capable of operating on eight different frequencies (four different frequencies for SC systems operating in the traveling band). Digital frequency control enables the system to produce a clean signal, which allows up to 12 SC Series wireless systems to be operated simultaneously in a single installation.

SYSTEM COMPONENTS

- **SC4** MARCAD® Diversity Receiver (half-rack size), with rack mounting hardware and antennas
- **PS40** Power Supply (120 Vac), or **PS40E** Power Supply (230 Vac)
- **SC1** Body-Pack transmitter with detachable lavalier microphone
or
- **SC2** hand-held transmitter with interchangeable microphone element.

SYSTEM FEATURES

Frequency Agility

An eight position switch in both the transmitter and receiver allows the system operating frequency to be changed should interference occur, preventing the need to exchange units or re-crystal existing systems in order to change frequencies.

Tone Key Squelch

A separate, inaudible signal is sent along with the transmitter carrier frequency. When this tone is not present (e.g., the transmitter is either turned off or out of range) and the tone key squelch switch on the receiver is enabled, the receiver remains muted, and unwanted noise is prevented from entering the system. In addition, by eliminating the popping sound often heard when a wireless system is turned on or off, tone key squelch allows the ON/OFF power switch on an SC transmitter to also function as a system “mute” switch.

Transmitter Battery Fuel Gauge

When activated, a multicolor, five LED array illuminates to show how much life remains in the transmitter battery. This allows the user to know, rather than guess, when to change the battery.

SC4 RECEIVER FEATURES AND CONTROLS (FIGURE 1)

1. **Control Panel Door:** Helps prevent tampering. Open by pushing down on the door and pivoting it outward. A label on the inside of the door lists the available system operating frequencies.
2. **Frequency Selector Switch:** Provides system frequency agility by allowing user to select from eight different operating frequencies at 200 kHz intervals. It is factory pre-set to position #4 and is identical to the frequency selector switch on the transmitters.
3. **Tone Key Squelch Switch:** Turns the tone key squelch on and off. During installation, set tone key squelch in the OFF (right) position in order to identify and adjust for potential interference problems. During normal operation, set this switch in the ON (left) position.
4. **Squelch Control:** Automatically quiets or “mutes” the receiver when the transmitter signal becomes weak or fails. This control is factory-preset for optimal operation in most installations. However, it can be adjusted to compensate for unusual conditions.
5. **Volume control:** Determines signal level at both receiver output connectors and lets the user adjust the receiver output level to match the input level requirements of a mixer or amplifier.
6. **Screwdriver:** Used to adjust the frequency, squelch, and volume controls. Also used to adjust transmitter frequency and audio gain. Snaps into place behind the control panel door for storage.
7. **Diversity Signal LEDs:** Illuminate to show RF signals received by antenna A, antenna B, or both. Normal operation is indicated by the steady illumination of either or both LEDs. Note that these LEDs indicate diversity mix, not signal strength.
8. **RF Level Indicators:** “Floating point” LEDs illuminate one at a time to show strength of received RF signal. A stronger signal will illuminate a higher numbered LED. The green LEDs indicate a signal of usable strength. The yellow LED indicates a signal of marginal strength. The red LED indicates an unusable signal.
9. **Audio Level Indicators:** A series of five LEDs illuminates to indicate audio level. Normal operation causes steady illumination of the green LEDs, with occasional flickering yellow LEDs. A red LED indicates approaching audio overload condition and should occur rarely (only during the loudest signals). Frequent and/or constant illumination of the red LED indicates excessive audio level and the need to lower the transmitter audio gain level.
10. **Power ON LED:** Green LED illuminates to indicate the receiver is on.
11. **Power ON/OFF rocker switch:** Applies power from the external ac adapter to the receiver.
12. **Antenna Connectors:** UHF-type connectors provide connection to 1/4-wave antennas supplied with the SC4, or to the coaxial cable in the optional WA420 Antenna cable kit for remote location of antennas, or to optional WA380 1/2-wave high-gain antennas.
13. **Output Connectors:** XLR connector provides balanced low-impedance (150 Ω) microphone or line level output; 1/4-inch phone jack provides

unbalanced auxiliary level [high- impedance (1 k Ω)] output to audio mixer or amplifier.

14. **Power jack:** Accepts power from the supplied PS40/PS40E AC adapter or from a well-filtered 12.5 – 18 Vdc (300 mA, minimum) supply. Also accepts power cord from the WA405 Antenna Power/Distribution system.
15. **Mic/line Level switch:** Controls output of balanced XLR output connector; can be set for either microphone level (–18 dBV maximum) or line level (+4 dBV maximum).

SC1 BODY-PACK TRANSMITTER FEATURES AND CONTROLS (FIGURE 2)

1. **Antenna:** A flexible antenna wire is permanently attached to the bottom of the body-pack transmitter. For best operation, the antenna must hang in the vertical position, and should not be coiled or bundled.
2. **Battery Compartment:** Hinged cover on front half of transmitter opens to provide access to battery, audio gain control, and frequency selector switch.
3. **Frequency Selector Switch:** Provides system frequency agility by allowing user to select from eight different operating frequencies at 200 kHz intervals. It is factory pre-set to position #4 and is identical to the frequency selector switch on the SC4 receiver.
4. **Audio Gain Control:** Provides audio level adjustment to accommodate different sound sources (e.g.: a person speaking or singing, or an instrument being played). Use the small screwdriver located behind the SC4 control panel door to make adjustments to the Audio Gain Control.
5. **Input Jack:** Miniature type connector which accepts microphone cable from lavalier microphones or optional WA302 instrument cable.
6. **Battery Fuel Gauge:** An array of LEDs that light to indicate level of battery life remaining when battery check switch is pressed. The transmitter must be turned on in order for the fuel gauge to function.
7. **Battery Check Switch:** Activates the Battery Fuel Gauge. Allows user to check amount of battery life remaining at any time while the transmitter power is on.
8. **Power ON/OFF Switch:** Turns transmitter power on and off. When the receiver tone-key squelch feature is enabled, the power switch also functions as a “mute” switch, allowing the receiver to reject unwanted signals when the transmitter is turned off.
9. **Power ON LED:** Green LED lights when power on/off switch is turned on and a good battery is installed. If this LED is not illuminated, the transmitter is not operational.
10. **Belt Clip (not shown):** Allows the transmitter to be worn on a belt, waistband or guitar strap. The clip can be removed or inverted.

SC2 HANDHELD TRANSMITTER FEATURES AND CONTROLS (FIGURE 3)

1. **Grille:** Protects the microphone element and helps minimize breath and wind noise. Various models have different grille styles.
2. **Battery Fuel Gauge:** An array of LEDs that light to indicate level of battery life remaining when battery check switch is pressed. The transmitter must be turned on in order for the fuel gauge to function.
3. **Battery Check Switch:** Activates the battery fuel gauge. Allows user to check amount of battery life remaining at any time while the transmitter power is on.
4. **Power ON/OFF Switch:** Turns transmitter power on and off. When the receiver tone key squelch feature is enabled, this switch also functions as a system “mute” switch, allowing the receiver to reject unwanted signals when the transmitter is turned off.
5. **Power ON LED:** Green indicator lights when power on/off switch is turned on and a good battery is installed. If this LED is not illuminated, the transmitter is not operational.
6. **Audio Gain Control:** Provides audio level adjustment to accommodate different sound sources. This control is accessed by removing the battery cover. A small screwdriver located behind the SC4 control compartment door is supplied to make adjustments.
7. **Frequency Selector Switch:** Provides system frequency agility by allowing user to select from eight different operating frequencies at 200 kHz intervals. It is factory pre-set to position #4 and is identical to the frequency selector switch on the SC4 receiver.
8. **Battery Cover:** Unscrews to provide access to the battery, audio gain control and frequency selector switch.

SYSTEM SETUP AND INSTALLATION

RECEIVER CONNECTIONS

1. Connect the supplied AC adapter to the POWER jack on the rear panel.
2. Plug the adapter into a power source (120V, 60 Hz power for the PS40; 230V, 50 Hz power for the PS40E).
3. Attach the supplied 1/4-wave antennas to the antenna connectors on the back panel. For best performance, point the tips away from each other, at an angle 45° from vertical. If the receiver is rack-mounted, both antennas must extend above the rack cabinet or be remotely located.

NOTE: For improved diversity performance, use 1/2-wave antennas and WA420 Extension Cable Kits. Install one or both antennas at a remote location within sight of the receiver.

4. Connect the SC4 output to the mixer or amplifier input, using a standard audio cable with a female XLR connector or a 1/4-inch phone plug on one end.

ADJUSTING RECEIVER SQUELCH CONTROL

The receiver squelch control is factory pre-set to accommodate most operating conditions. However, the setting may need to be changed to compensate for the effects of other equipment or RF interference. To adjust the squelch control, proceed as follows:

1. Place the system where it will be used during a performance.
2. Turn the transmitter power switch off.
3. Turn the receiver volume control full counterclockwise and turn the receiver power switch on.
4. Turn the receiver tone key squelch switch to OFF.
5. Observe the receiver LEDs. If the AUDIO or DIVERSITY lights are lit, rotate the squelch control clockwise until all the LEDs turn off. Continue turning the squelch control slightly past this point.
6. Turn the receiver tone key squelch switch On. To return to the factory setting, rotate it back to its midpoint position.

NOTE: Turning the squelch control clockwise prevents unwanted signals and noise from overriding the squelch circuit when the transmitter signal is weak. However, it also effectively decreases the system operating range.

SC1 TRANSMITTER BATTERY INSTALLATION

1. Turn the transmitter off and open the battery compartment door by sliding it down and pivoting it outward until it locks in the open position.
2. Insert a new 9V alkaline battery in the compartment. Observe proper battery polarity.
3. Close and latch the battery compartment door.

SC2 TRANSMITTER BATTERY INSTALLATION

1. Turn the transmitter off and unscrew the battery cover.
2. Insert a new 9V alkaline battery into the contacts on the handle. Observe proper battery polarity.
3. Reinstall the battery cover.

NOTE: A fully charged, heavy-duty, 8.4V NiCad battery can be used, but is not recommended, due to its significantly shorter life.

CHECKING TRANSMITTER BATTERY POWER

With the transmitter on, press and hold the BATTERY CHECK switch and observe the battery fuel gauge. Three green LEDs will light if the battery is fresh. As the battery is used up, the green indicators turn off one by one. When approximately two hours of battery life remain, a single yellow LED will light. When approximately 45 minutes of battery life remain, a single red LED will light, indicating the need to change the battery. If no indicators light, the transmitter is not operational and the battery must be replaced.

Battery Fuel Gauge	SC1 and SC2 Operating Time Available (estimated)*
3 Green LEDs	6 – 8 hours
2 Green LEDs	4 – 6 hours
1 Green LED	2 – 4 hours
1 Yellow LED	45 minutes – 2 hours
1 RED LED	0 – 45 minutes
No LEDs	none

*Estimated operating time with a fresh 9V battery

NOTE: Actual operating time varies depending on the battery in use.

CHANGING TRANSMITTER AUDIO LEVEL

The audio gain control on all SC transmitters is factory pre-set to provide a satisfactory output level for most applications. However, for high sound pressure level applications such as loud singing or loud musical instruments, the preset gain level may be too high, as indicated by the constant illumination of the red AUDIO light on the SC4. For low sound pressure level applications, such as soft-spoken presenters, the gain may need to be increased, as indicated by the failure of the yellow AUDIO light on the SC4 to light at all.

To increase gain, rotate the audio gain control counterclockwise, using the supplied screwdriver, until the yellow AUDIO light on the SC4 flickers occasionally when the vocalist is singing or an instrument is being played.

To decrease gain, rotate the audio gain control clockwise, using the supplied screwdriver, until the yellow AUDIO light on the SC4 flickers occasionally when the vocalist is singing or an instrument is being played.

SYSTEM FREQUENCY COMPATIBILITY

SC wireless systems are available in two basic frequency ranges: the Broadcast frequency range (174–216 MHz) and the Traveling frequency range (169–172 MHz).

In each Broadcast frequency group, eight frequencies are available at 200 kHz intervals. Each system is shipped with the frequency selector switches in the base frequency (#4) position. To ensure RF compatibility, all SC systems must share the same frequency selector switch settings.

An example of switch positions and corresponding frequencies for the “CC” Broadcasting frequency group is provided in the following table:

Broadcast Frequency Selection

Switch Position	Frequency
0	176.800 MHz
1	177.000 MHz
2	177.200 MHz
3	177.400 MHz
4 (base frequency)	177.600 MHz
5	177.800 MHz
6	178.000 MHz
7	178.200 MHz

In each Traveling frequency group, four frequencies are available. The factory pre-set base frequency #4 position. An example of switch positions and the corresponding frequencies for the “TA” Traveling frequency group is provided in the following table:

Traveling Frequency Selector

Switch Position	Frequency
0 or 1	169.445 MHz
2 or 3	170.245 MHz
4 (base frequency) or 5	171.045 MHz
6 or 7	171.845 MHz

A label inside the receiver control panel door identifies the operating frequencies and corresponding switch positions for each system.

CHANGING SYSTEM FREQUENCY

If one system encounters interference and its frequency switch is changed to a new position, compatibility among the other SC systems can be maintained by changing the remaining systems to the new position as follows:

1. Turn off all transmitters.
2. Open control panel door on each receiver and turn the tone key squelch switch to the OFF position (right), using the supplied screwdriver.
3. Ensure that all squelch controls are set to the full left position.
4. Turn on each receiver.
5. Move the frequency selector switch on the receiver experiencing interference to a new position (for instance, position #6).
6. Observe the receiver LEDs. If any of them are lit, interfering signals are still present. Repeat Step 5 until you locate a clean frequency.
7. Move the frequency selector switches on the other receivers to the new position.
8. Listen for interference on all systems. If any exists, repeat Step 6.
9. If no interference exists, adjust the transmitter frequency selector switches so that they match the frequencies of the receivers.
10. Return the tone key squelch switch on all receivers to ON (full left position).

INSTALLING THE WA555 GRIP/SWITCH COVER ACCESSORY ON THE SC2

The SC2 transmitter is supplied with an external sleeve accessory (WA555) that prevents accidental movement of the microphone controls, without affecting RF performance. It also provides the microphone with a “grip” feel. To install the grip/switch cover, proceed as follows:

1. Unscrew the battery cover.
2. Slide the cover over the microphone handle “lip” end downward. The cover fits snugly and requires additional pressure for the last 25.4 mm (1 in.) of travel.
3. Reinstall the battery cover.

RECEIVER MOUNTING

Table Mounting a Receiver

To mount the SC4 receiver on a flat, horizontal surface such as a table, attach the four adhesive bumpers to the bottom corners and place it on the surface.

Rack Mounting a Single Receiver (Figure 4)

1. Remove the two screws on one side of the SC4 receiver.
2. Position the WA500 mounting bracket over the holes, and secure the bracket to the receiver with the two screws. Repeat this process for the other side of the receiver with the other mounting bracket.
3. Insert the plastic plugs into the hole in the front of the rack ears.

Rack Mounting Two Receivers Side by Side (Figure 5)

1. Place the two SC4 receivers next to each other, with the front panels facing you.
2. Remove the two screws on the outer side of each receiver.
3. Position each WA502 mounting bracket over the screw holes, and secure the bracket to the receiver with the two screws.
4. Remove the screws on the inner side of each receiver.
5. Place a link bar so that its threaded vertical hole is positioned toward the front of the receiver on your left, and secure the bar with the screws. Place the other link bar so that its threaded vertical hole is positioned toward the rear of the receiver on your right, and secure it with the screws.
6. Position the receivers so that the link bars line up one on top of the other.
7. Using the two small screws supplied with the link bars, insert one screw from the top into the threaded vertical hole located at the front of the link bar. Then, insert the other screw from the bottom into the threaded vertical hole located at the rear of the link bar.

NOTE: The SC4 receiver is designed to meet the industry-recognized HR (Half-Rack) modular format. To rack mount two SC4 receivers side-by-side, use two dual unit rack mount kits. For additional information on receiver rack mounting, contact Shure Customer Service at (800) 866-2553.

TIPS FOR ACHIEVING MAXIMUM PERFORMANCE

- Maintain line-of-sight between the transmitter and the receiver antennas. Avoid obstacles made of metal or other dense materials.
- Minimize the distance from transmitter to receiver. It is much better to have the receiver near the transmitter and run the received audio signal through a long cable than to transmit over long distances or use long antenna cables.
- Use the proper receiver antenna. A 1/4-wave antenna can be used if it is mounted directly to the receiver. If the antenna is to be located at away from the receiver, use a 1/2-wave or other high-gain antenna. (This is necessary if the receiver is mounted inside a metal enclosure or placed at a great distance from the transmitter.)
- Mount 1/4-wave antennas with the tips pointing away from each other at a 45° angle from vertical, and away from large metal objects. Use the proper antenna cable for remote receiver antennas. For best performance, use 50 Ω RG-58 coaxial cable, and use only the minimum length necessary.
- Mount antennas at least quarter-wavelength apart—about 42 cm (17 inches) for VHF systems, although 1.5 m (60 inches) or more is recommended. In installations with multiple systems, use a Shure WA405 Antenna Power/Distribution system or WA470 Passive Antenna Splitter. They will help minimize the number of antennas and reduce interference.
- When using the SC1 body-pack transmitter with a musical instrument, use the WA302 instrument cable.

TROUBLESHOOTING

If a problem occurs, refer to the following troubleshooting table. If you are still unable to solve the problem, contact your dealer or the Shure Service Department at (847) 866-5733 (7:30 am – 4:00 pm Central Time). In Europe, phone 49-7131-72140. Other International users, phone:(847) 866-2200.

PROBLEM	SOLUTION
<p>No sound; RF and Audio LEDs on SC4 are not lit.</p>	<p>Make sure transmitter and receiver are turned on.</p> <p>Check transmitter battery fuel gauge. If necessary, replace battery.</p> <p>Make sure the receiver power supply is plugged into an ac outlet and into the receiver POWER jack.</p> <p>Make sure frequency selector switch settings on transmitter and receiver are identical and are not in between channels.</p> <p>Check receiver squelch setting.</p> <p>Make sure receiver antenna connections are good.</p> <p>Make sure transmitter and receiver antennas are in a line-of-sight, with no reflective obstacles between them. If necessary, reduce the distance between the transmitter and the receiver.</p>
<p>No sound; RF and Audio LEDs on SC4 are lit.</p>	<p>With the transmitter power switch ON, turn up the receiver volume control.</p> <p>Check receiver and microphone mixer connections.</p> <p>Talk into the microphone and observe the receiver audio LEDs. If they illuminate, the problem is elsewhere in the sound system.</p>
<p>Received signal is noisy or contains extraneous sounds.</p>	<p>Check battery fuel gauge and replace battery if power is low.</p> <p>Look for strong local sources of interference and remove them, if possible.</p> <p>Reposition receiver or antennas, or change SC system frequency.</p> <p>Two transmitters may be operating on the same frequency. Locate them and turn one of them off.</p> <p>Signal may be too weak. Move receiver antennas closer to the transmitter.</p> <p>Adjust receiver squelch control.</p> <p>The transmitter audio gain control may be set too low. Adjust as necessary.</p>
<p>Noise from receiver with transmitter turned off; popping sound when transmitter is turned on or off.</p>	<p>The tone key squelch switch may be set to the OFF position. Open door on receiver to access controls and return switch to ON position.</p> <p>Adjust receiver squelch control.</p> <p>Look for strong local sources of interference and remove them, if possible.</p> <p>Reposition receiver or antennas, or change SC system frequency.</p>

SPECIFICATIONS

RF Carrier Frequency Range

169.445 to 240.000 MHz (available frequencies depend on the applicable regulations in the country where the system is used)

Working Range

182.8 m (600 ft.) under typical conditions. **NOTE:** Actual working range depends on RF signal absorption, reflection and interference.

Audio Frequency Response

50 to 15,000 Hz, ± 2 dB. **NOTE:** Overall system frequency response depends on the microphone element

Audio Output Level (± 15 kHz deviation, 1 kHz tone)

XLR connector (into 600 Ω load): -2.4 dBV (line), -24 dBV (mic)

$1/4$ inch connector (into 1 k Ω load): -7.25 dBV

Gain Adjustment Range

SC1: 40 dB

SC2: 25 dB

Impedances

SC1 (input): 1 M Ω

SC4 (output): 150 Ω (XLR); 1 k Ω ($1/4$ -inch phone jack)

Modulation

± 15 kHz deviation compressor-expander system with pre- and de-emphasis

RF Power Output

SC1, SC2: 50 mW maximum (complies with FCC and IC regulations)

Dynamic Range

>102 dB, A-weighted

RF Sensitivity

0.5 μ V for 12 dB SINAD (typical)

Image Rejection

85 dB typical

Spurious Rejection

75 dB typical

Ultimate Quieting (ref. 15 kHz deviation)

>90 dB, A-weighted

Audio Polarity

Positive pressure on microphone diaphragm (or positive voltage applied to tip of WA302 phone plug) produces positive voltage on pin 2 with respect to pin 3 of low impedance output and the tip of the high impedance $1/4$ -inch output.

System Distortion (ref. ± 15 kHz deviation, 1 kHz modulation)

0.5% THD typical

Power Requirements

SC1, SC2: 9V alkaline battery; 8.4V Nicad optional

SC4: 12.5 - 18 Vdc (negative ground), 300 mA; supplied with Model PS40 120 Vac, 60 Hz external AC adapter, or PS40E adapter for 230 Vac, 50 Hz external AC adapter

Battery Life

8 hours typical (with 9V alkaline battery)

Operating Temperature Range

-20° to 50° C (-4° to 122° F). **NOTE:** Battery characteristics may limit this range.

Overall Dimensions

SC1: 90.5 mm L x 61.9 mm W x 25.4 mm H (3-9/16" L x 2-7/16" W x 1" H)

SC2: SM58 and BETA 58A[®]; 241.3 mm L (9-1/2" L) SM87 and Beta 87A; 215.9 mm L (8-1/2" L)

SC4: 39.7 mm H x 214.3 mm W x 184.1 mm D (1-9/16" H x 8-7/16" W x 7-1/4" D)

Net Weight (without battery)

SC1: 85.1 g (3 oz)

SC2: SM58 and BETA 58A[®] – 311.9 g (11 oz)

SM87 and Beta 87A – 198.5 g (7 oz)

SC4: 1.2 kg (2 lb., 11 oz.)

Certification

SC1, SC2: Type-accepted under FCC Parts 90 and 74; DOC/MDC certified under TRC-78.

SC4: Approved under Notification provision of FCC Part 15; DOC/MDC certified under TRC-78.

SC1 & SC4: Certified by BZT under FTZ 17 TR 2019 and BAPT 122 R1.

FURNISHED ACCESSORIES

Microphone Stand Adapter (SC2)	WA370A
Single Receiver HR Rack Panel Kit	WA500
Dual Receiver (Side-by-Side) HR Rack Panel Kit (SC4)	WA502
Grip/Switch Cover (SC2)	WA555
Zipper Bag (SC1)	26A13
Zipper Bag (SC2)	26A14
Screwdriver	80A498

OPTIONAL ACCESSORIES

Instrument Adapter Cable (SC1)	WA302
Microphone Adapter Cable (SC1)	WA310
4-Pin Female Miniature Connector, TA4F (SC1)	WA330
1/2-Wave Telescoping Antenna (169 - 185 MHz)	WA380A*
1/2-Wave Telescoping Antenna (185 - 200 MHz)	WA380B*
1/2-Wave Telescoping Antenna (200 - 230 MHz)	WA380C*
Antenna/Power Distribution System, 120 Vac	WA405
Antenna/Power Distribution System, 230 Vac	WA405E
1.8 Meter (6 ft.) Receiver-Mixer Cable (1/4" phone to XLR)	WA410
6.1 Meter (20 ft.) Antenna Extension Cable	WA421
Antenna Rack Mount Kit	WA440
Passive Antenna Splitter	WA470
1/2-Wave Cable Antenna (169 - 185 MHz)	WA490A
1/2-Wave Cable Antenna (185 - 200 MHz)	WA490B
1/2-Wave Cable Antenna (200 - 216 MHz)	WA490C
Single Unit/Front Mount Antenna Rack Mount Kit	WA501
Single Receiver Front-Mount Antenna Conversion Kit	WA503
Pelican Protector® Carrying Case for Single LX or SC Wireless System	WA525

*Includes wall-mount bracket.

REPLACEMENT PARTS

Universal Horn Clamp (for WM98)	A98KCS
AC Adapter (120 Vac)	PS40
AC Adapter (230 Vac)	PS40E
SM58 Cartridge with Grille (SC2/58)	R158
SM87 Cartridge with Grille (SC2/87)	R165
BETA 87A Cartridge with Grille (SC2/BETA 87A)	R166
BETA 58A® Cartridge with Grille (SC2/BETA 58A®)	R179
Matte Silver Grille (SC2/58)	RK143G
Matte Silver Grille (SC2/BETA 58A®)	RK265G
Matte Silver Grille (SC2/BETA 87A)	RK313G
Black Grille (SC2/87)	RK214G
Black Grille (SC2/BETA 58A®)	RK323G
Black Grille (SC2/BETA 87A)	RK324G
Belt Clip (SC1)	90A4356

REPLACEMENT PARTS (Cont.)

$\frac{1}{4}$ -Wave Antenna (169 - 186 MHz)	90A8380
$\frac{1}{4}$ -Wave Antenna (186 - 204 MHz)	90B8380
$\frac{1}{4}$ -Wave Antenna (204 - 216 MHz)	90C8380
$\frac{1}{4}$ -Wave Antenna (216 - 240 MHz)	90D8380

WARRANTY INFORMATION

Shure Incorporated ("Shure") hereby warrants that these products are free from defects in material and workmanship for a period of two years from the date of purchase for all microphone cartridge and housing assembly parts and, for a period of one year from the date of purchase, all transmitter and receiver parts. At its option, Shure will repair or replace a defective product and promptly return it to you, or refund the purchase price. Retain proof of purchase to validate the purchase date and return it with any warranty claim. If you believe this product is defective within the warranty period, carefully repack the unit, insure it, and return it postpaid to:

Shure Incorporated
Attention: Service Department
222 Hartrey Avenue
Evanston, IL 60202-3696 U.S.A.
Telephone: (800) 516-2525

For service outside the United States, return the product to any authorized Shure Distribution Center.

All claims of defects or shortage should be directed to the above address. Please furnish model number, operating frequency, and date, place and proof of purchase (such as a copy of your sales receipt) to establish warranty. Your letter should include all pertinent details including applicable model or part numbers and a brief description of the problem. Do not mail any units or parts to Shure unless requested to do so by Shure's Service Department. Any returned items must have prior authorization. Unauthorized returns are delayed in handling; these delays can be avoided by contacting Shure in advance and furnishing the necessary information.

Shure reserves the right to make design changes and product improvements on any previously manufactured products. Shure also reserves the right to ship new and/or improved products which are similar to the form, fit and function of the originally ordered products.

Declaration of Conformity

We of

Shure Incorporated
222 Hartrey Ave.
Evanston IL 60202-3696 U.S.A.
847-866-2200

declare under our sole responsibility that the following product,

Model: SC4 Name: SC4 Diversity Receiver

was tested and found to comply 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.

Testing was completed by the following NVLAP or A2LA accredited laboratory:

MET Laboratories, Inc.
914 West Patapsco Avenue
Baltimore, MD 21230-3432
Telephone: 410-354-3300

Shure Incorporated, Manufacturer.

Signed:



Date: June 15, 1999

Name, Title: Craig Kozokar, Senior Quality Engineer

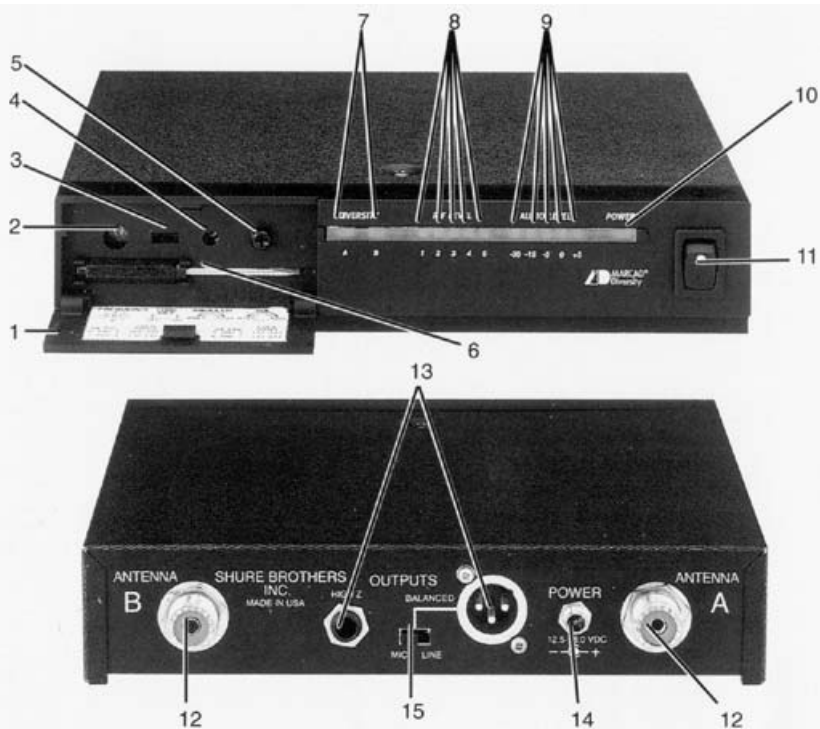
Additional Information for this Shure Wireless System

This Shure wireless transmitter is accepted under FCC Part 74 and/or Part 90.

IMPORTANT: 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 urges the user to consult the appropriate telecommunications authority before choosing and ordering frequencies.

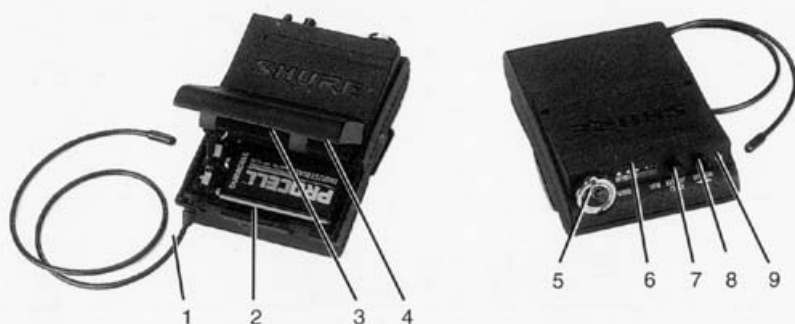
Changes or modifications not expressly approved by Shure Incorporated could void your authority to operate this equipment.

The information on this page supersedes the corresponding information in your Shure user's guide.



SC4 RECEIVER
 RÉCEPTEUR SC4
 SC4-EMPFÄNGER
 RECEPTOR SC4
 RICEVITORE SC4

FIGURE 1 ABBILDUNG 1 FIGURA 1



SC1 BODY-PACK TRANSMITTER
 MICROÉMETTEUR DE POCHE SC1
 SC1 TASCHENSENDER
 EMISOR PORTATIL SC1
 TRASMETTITORE PORTATILE SC1

FIGURE 2 ABBILDUNG 2 FIGURA 2



SC2 HANDHELD TRANSMITTER
ÉMETTEUR À MAIN SC2
SC2 HANDMIKROFON-SENDER
TRANSMISOR DE MANO SC2
MICROFONO-TRASMETTITORE SC2

FIGURE 3 ABBILDUNG 3 FIGURA 3



RACK-MOUNTING SINGLE UNIT WITH WA500
 MONTAGE D'UNE SEULE UNITÉ AVEC WA500
 EMFÄNGER EINZELMONTAGE MIT WA500
 MONTAJE DE UNIDAD ÚNICA CON WA500
 MONTAGGIO AD UNITÀ SINGOLA CON WA500

FIGURE 4 ABBILDUNG 4 FIGURA 4



RACK-MOUNTING DUAL UNITS WITH WA502
 MONTAGE CÔTE À CÔTE DE DEUX RÉCEPTEURS DANS UN SEUL EMPLACEMENT
 DE BÂTI AVEC WA502
 MONTAGE VON ZWEI EMPFÄNGERN SEITE AN SEITE MIT WA502 IN EINEM 19"-RACK
 MONTAJE LADO A LADO DE DOS RECEPTORES EN UN ESPACIO DE BASTIDOR CON WA502
 MONTAGGIO DI DUE RICEVITORI FIANCO A FIANCO SU UNA RACK CON WA502

FIGURE 5 ABBILDUNG 5 FIGURA 5



SHURE Incorporated Web Address: <http://www.shure.com>
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