

# **STAGE 55**

TRUE DIVERSITY

WIRELESS SYSTEM

AND

# **STAGE 5**

WIRELESS SYSTEM

# **Owners Manual**

**SAMSON**<sup>®</sup>  
W I R E L E S S

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Printed September 2002

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# Introduction

Congratulations on purchasing the Samson Stage 55 Series or Stage 5 Series Wireless System! Although this product is designed for easy operation, we suggest you first take some time to go through these pages so you can fully understand how we've implemented a number of unique features.

Every wireless system consists of at least two components—a transmitter and a receiver, both of which must be tuned to the same channel (that is, the same radio frequency) in order to operate correctly.\* The Samson Stage 55 Series or Stage 5 Series system you have purchased operates in the 174.6 - 213.2 MHz frequency range and contains either a SR55 or SR5 receiver as well as one of the following transmitters: a ST5 belt-pack transmitter (for lavalier microphone or headset applications); a ST5 belt-pack transmitter (for instrument applications); or a HT5 hand-held microphone transmitter. For convenience and security, the Stage 55 Series and Stage 5 Series system is packaged in a custom impact-resistant polypropylene plastic carrying case that provides room for all components (see Appendix B for more information).

The ST5L belt-pack transmitter provides a locking 3.5 mm mini-phone jack for connection to the various Stage series transmitters including:

LM5 - Lavalier condenser microphone  
HS5 - Headset condenser microphone  
GC5 - Heavy-duty Guitar/Instrument cable

The HT5 hand-held microphone transmitter is equipped with the Samson Q7 neodymium dynamic microphone element.

*\* Your receiver and transmitter have been factory preset to utilize the same channel.*

The SR5 receiver provided with the STAGE 5 Series wireless system utilizes non-diversity technology, incorporating a single antenna for ease of use and minimal cost. The SR55 receiver provided with the Stage 55 Series system utilizes an advanced technology called "Diversity," whereby a single chassis houses two antennas (called "Antenna A" and "Antenna B") and a receiver circuit. An advanced circuit design continuously scans RF signals from the two antennas and determines which one has the clearest and strongest reception, automatically (and silently) switching that signal to the receiver. This allows you to maintain the wireless communication link over a much broader area range than would be allowed by a receiver utilizing a single antenna and also virtually eliminates multipath dropouts, interference and phase cancellation problems. In addition, special sample-and-hold linking circuitry ensures that correct phase correlation is maintained at all times, with no noise or pops during antenna switching. The result is performance which exceeds that of conventional non-diversity systems and the highest quality audio fidelity available in *any* wireless system. Finally, the provision of a noise reduction circuit produces crystal-clear sound with minimized background noise and hiss.

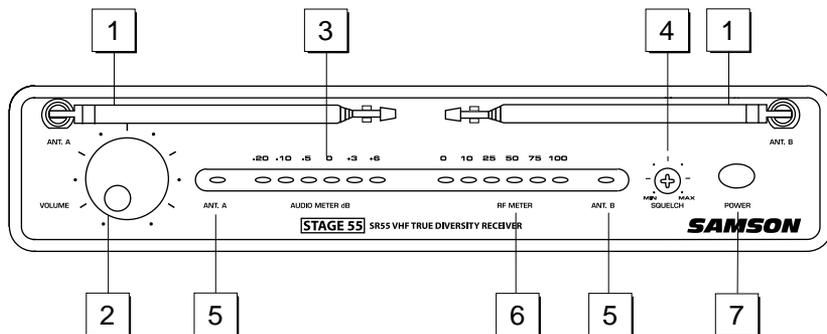
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# Introduction

In this manual, you'll find a more detailed description of the features of your Stage 55 Series or Stage 5 Series system, as well as a guided tour through all components, step-by-step instructions for setting up and using your system and full specifications. If your Stage 55 Series or Stage 5 Series system was purchased in the United States, you'll also find a warranty card enclosed—don't forget to fill it out and mail it! This will enable you to receive online technical support and will allow us to send you updated information about other Samson products in the future. If your Stage 55 Series or Stage 5 Series system was purchased outside of the United States, contact your local distributor for warranty details.

**SPECIAL NOTE for U.S. purchasers:** Should your Stage 55 Series or Stage 5 Series system ever require servicing, a *Return Authorization* number (RA) is necessary. Without this number, the unit will not be accepted. Please call Samson at 1-800-372-6766 for a Return Authorization number prior to shipping your unit. Please retain the original packing materials and, if possible, return the unit in its original carton and packing materials. If your Stage 55 Series or Stage 5 Series system was purchased outside of the United States, contact your local distributor for servicing information.

# Guided Tour - SR55 Front Panel



**1: Antennas (A and B)** - The antenna mountings allow full rotation for optimum placement. In normal operation, both Antenna A (the antenna on the left) and Antenna B (the antenna on the right) should be placed in a vertical position. Both antennas can be folded inward for convenience when transporting the SR55. See the "Setting Up and Using Your Stage 55 Series / Stage 5 Series System" section on page 12 in this manual for more information about antenna positioning.

**2: Volume control** - This knob sets the level of the audio signal being output through both the balanced and unbalanced output jacks on the rear panel. Reference level is obtained when the knob is turned fully clockwise.

**3: Audio Meter** - This "ladder" display (similar to the VU bar meter used on audio devices) indicates the strength of the incoming audio signal. When the "0" segment is lit, the incoming signal is optimized at unity gain; when the "+6" segment is lit, the signal is overloading. When only the left-most "-20" segment is lit, the incoming signal is at just 10% of optimum strength. If no segments are lit, little or no signal is being received. See the "Setting Up and Using Your Stage 55 Series / Stage 5 Series System" section on page 12 in this manual for more information.

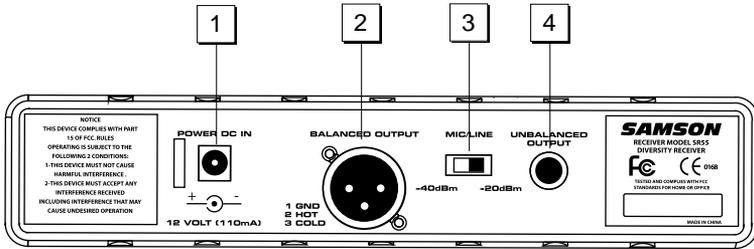
**4: Squelch control** - This control determines the maximum range of the SR55 before audio signal dropout. Although it can be adjusted using the supplied plastic screwdriver, it should normally be left at its factory setting. See the "Setting Up and Using Your Stage 55 Series / Stage 5 Series System" section on page 12 in this manual for more information.

**5: ANT A/B LEDs** - When signal is being received, one of these will be lit yellow, showing you whether the (left) "A" or (right) "B" antenna is currently being used. The SR55 constantly scans its two antennas and automatically selects whichever is receiving the strongest, clearest signal. This *Diversity* switching is completely inaudible, but it effectively increases overall range while virtually eliminating potential interference and phase cancellation problems.

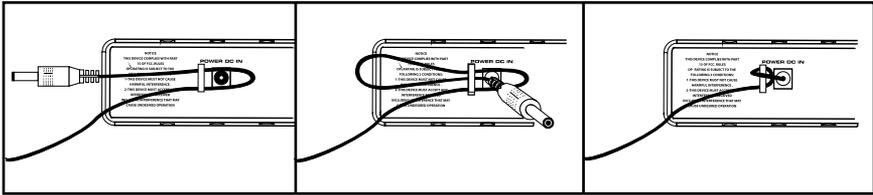
**6: RF Meter** - This "ladder" display (similar to the VU bar meter used on audio devices) indicates the strength of the incoming radio signal. When the "100%" segment is lit, the incoming RF signal is fully modulated and at optimum strength. When only the second most left-most "10%" segment is lit, the incoming signal is at just 10% of optimum strength. If no segments are lit, little or no signal is being received. See the "Setting Up and Using Your Stage 55 Series / Stage 5 Series System" section on page 12 in this manual for more information.

**7: Power switch** - Use this to turn the SR55 power on and off.

# Guided Tour - SR55 Rear Panel



**1: DC input** - Connect the supplied 12 volt, 250 mA power adapter here, using the strain relief as shown in the illustration below. **WARNING:** The substitution of any other kind of power adapter can cause severe damage to the SR55 and will void your warranty.



*Using the strain relief: Gather up a loop of wire and pass it through the strain relief, then pass the adapter plug through the loop in order to create a knot.*

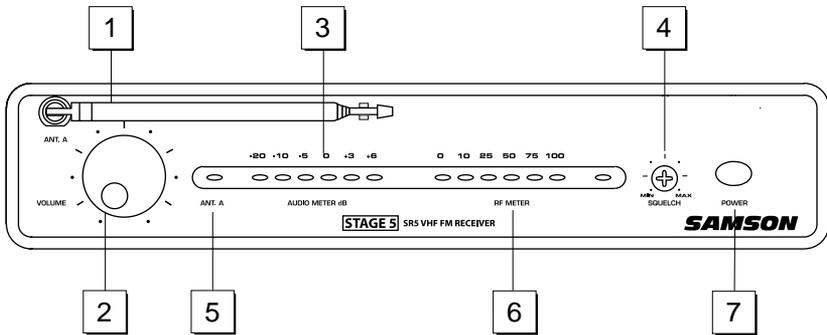
**2: Balanced output\*** - Use this electronically balanced low impedance (600 Ohm) XLR jack when connecting the SR55 to professional (+4) audio equipment. Pin wiring is as follows: Pin 1 ground (shield), Pin 2 high (hot), and Pin 3 low (cold).

**3: Audio Output Level switch** - Sets the audio output level attenuation of the balanced output (see #4 below) to -20 dBm (line level) or -40 dBm (mic level). See the "Setting Up and Using Your Stage 55 Series / Stage 5 Series System" section on page 12 in this manual for more information.

**4: Unbalanced output\*** - Use this unbalanced high impedance (5K Ohm) 1/4" jack when connecting the SR55 to consumer (-10) audio equipment. Wiring is as follows: tip hot, sleeve ground.

\* If required, both the unbalanced and balanced outputs can be used simultaneously.

# Guided Tour - SR5 Front Panel



**1: Antenna** - The antenna mounting allows full rotation for optimum placement. In normal operation, the antenna should be placed in a vertical position. It also can be folded inward for convenience when transporting the SR5. See the "Setting Up and Using Your Stage 55 Series / Stage 5 Series System" section on page 12 in this manual for more information about antenna positioning.

**2: Volume control** - This knob sets the level of the audio signal being output through both the balanced and unbalanced output jacks on the rear panel. Reference level is obtained when the knob is turned fully clockwise.

**3: Audio Meter** - This "ladder" display (similar to the VU bar meter used on audio devices) indicates the strength of the incoming audio signal. When the "0" segment is lit, the incoming signal is optimized at unity gain; when the "+6" segment is lit, the signal is overloading. When only the left-most "-20" segment is lit, the incoming signal is at just 10% of optimum strength. If no segments are lit, little or no signal is being received. See the "Setting Up and Using Your Stage 55 Series / Stage 5 Series System" section on page 12 in this manual for more information.

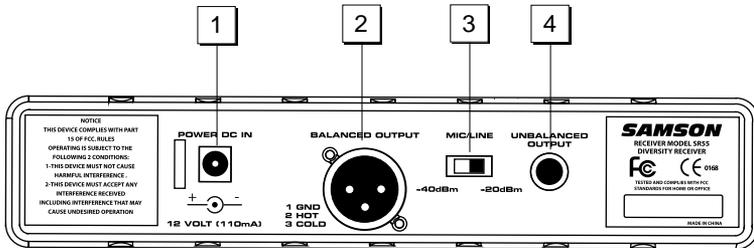
**4: Squelch control** - This control determines the maximum range of the SR5 before audio signal dropout. Although it can be adjusted using the supplied plastic screwdriver, it should normally be left at its factory setting. See the "Setting Up and Using Your Stage 55 Series / Stage 5 Series System" section on page 12 in this manual for more information.

**5: "TX" LED** - Lights when carrier signal of sufficient strength is being received by the SR5.

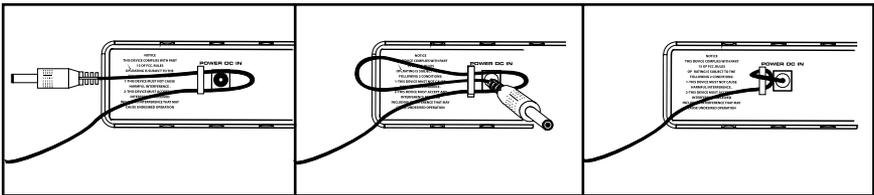
**6: RF Meter** - This "ladder" display (similar to the VU bar meter used on audio devices) indicates the strength of the incoming radio signal. When the "100%" segment is lit, the incoming RF signal is fully modulated and at optimum strength. When only the second most left-most "10%" segment is lit, the incoming signal is at just 10% of optimum strength. If no segments are lit, little or no signal is being received. See the "Setting Up and Using Your Stage 55 Series / Stage 5 Series System" section on page 12 in this manual for more information.

**7: Power switch** - Use this to turn the SR5 power on and off.

# Guided Tour - SR5 Rear Panel



**1: DC input** - Connect the supplied 12 volt, 250 mA power adapter here, using the strain relief as shown in the illustration below. **WARNING:** The substitution of any other kind of power adapter can cause severe damage to the SR5 and will void your warranty.



*Using the strain relief: Gather up a loop of wire and pass it through the strain relief, then pass the adapter plug through the loop in order to create a knot.*

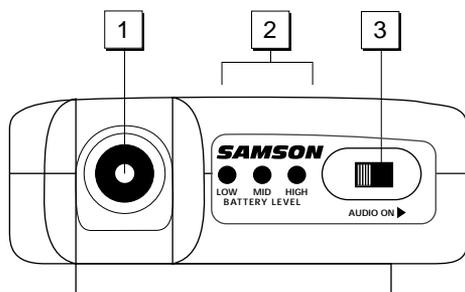
**2: Balanced output\*** - Use this electronically balanced low impedance (600 Ohm) XLR jack when connecting the SR5 to professional (+4) audio equipment. Pin wiring is as follows: Pin 1 ground (shield), Pin 2 high (hot), and Pin 3 low (cold).

**3: Audio Output Level switch** - Sets the audio output level attenuation of the balanced output (see #4 below) to -20 dBm (line level) or -40 dBm (mic level). See the "Setting Up and Using Your Stage 55 Series / Stage 5 Series System" section on page 10 in this manual for more information.

**4: Unbalanced output\*** - Use this unbalanced high impedance (5K Ohm) 1/4" jack when connecting the SR5 to consumer (-10) audio equipment. Wiring is as follows: tip hot, sleeve ground.

\* If required, both the unbalanced and balanced outputs can be used simultaneously.

# Guided Tour - SR5 / ST5

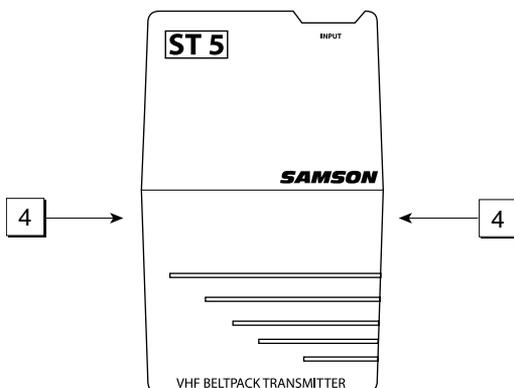


**1: Input connector** - The input device is connected here. The ST5 is supplied with either a lavalier, headset microphone or heavy-duty instrument cable terminating with a 1/4" plug, which are all connected to the transmitter via a locking 3.5mm mini-phone jack.

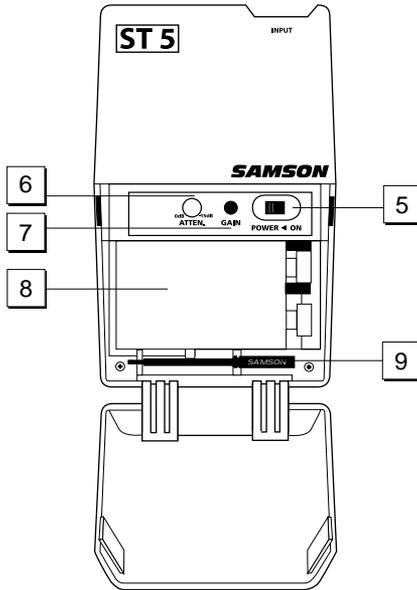
**2: Battery level meter** - This set of three multicolor LEDs indicates relative battery power, indicating whether the installed battery is at low (red), mid (yellow) or high (green) strength. One or more of these will light whenever the SR5 or ST5 is powered on (see #5 on the next page). When all three are lit, the battery is at maximum strength. When only the red "low" indicator lights, RF performance is degraded and the battery needs to be replaced.

**3: Audio on-off switch** - When set to the "on" position, audio signal is transmitted. When set to the "off" position, the audio signal is muted. Because the carrier signal remains during muting, no "pop" or "thud" will be heard. Note that turning this off does *not* turn off the transmitter power—it is simply a way to temporarily mute the transmission of audio signal. If you don't plan on using the transmitter for extended periods, turn off the transmitter power by using the power on-off switch (see #5 on the next page).

**4: Battery door release** - Press gently inwards on these two indents in order to open the battery door of the ST5L or ST5 and access the Power on-off switch (see #5 on the next page) and Gain control (see #6 on the next page).



# Guided Tour - SR5 / ST5



**5: Power on-off switch\*** - Use this to turn the ST5 on or off (to conserve battery power, be sure to leave it off when not in use).

**6: Attenuation switch** - The ST5 transmitter features a signal Attenuation switch that is used to select the input level of "0dB" or "-15dB". This Attenuation switch has been factory preset to "0dB" providing the optimum level for most microphone and instrument input signals. If you are using a microphone or instrument with a high output signal, first try to adjust the Gain control as described in the following section. If you cannot attenuate the signal low enough using the Gain control, use the supplied plastic screwdriver (see #9 below) to turn the rotary Attenuation switch to the counter-clockwise position setting the ST5 to "-15dB" level.

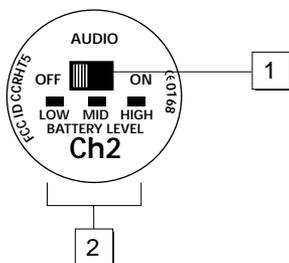
**7: Gain control (trimpot)** - This input gain control has been factory preset to a nominal level so we recommend that this be adjusted only if your signal is too high, or too low. If necessary, however, you can use the supplied plastic screwdriver (see #9 below) to raise or lower the ST5 Gain control. See the "Setting Up and Using Your Stage 55 Series / Stage 5 Series System" section on page 12 in this manual for more information.

**8: Battery holder** - Insert a standard 9-volt alkaline battery here, being sure to observe the plus and minus polarity markings shown. We recommend the Duracell MN 1604 type battery. Although rechargeable Ni-Cad batteries can be used, they do not supply adequate current for more than four hours. **WARNING:** Do not insert the battery backwards; doing so can cause severe damage to the ST5 and will void your warranty.

**9: Plastic screwdriver** - Specially designed for use in adjusting the ST5 Gain control (see #7 above) and/or receiver Squelch control (see #4 on pages 5 and 7). See the "Setting Up and Using Your Stage 55 Series / Stage 5 Series System" section on page 12 in this manual for more information.

*\* Be sure to mute the audio signal at your external mixer or amplifier before turning transmitter power on or off, or an audible pop may result.*

# Guided Tour - HT5



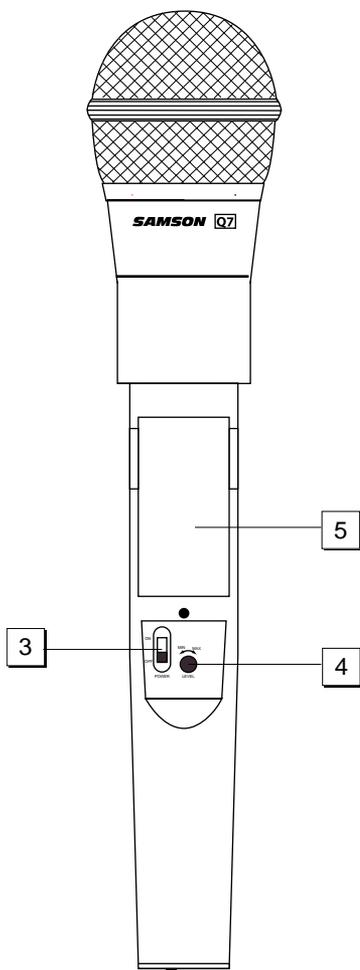
**1: Audio on-off switch** - When set to the “on” position, audio signal is transmitted. When set to the “off” position, the audio signal is muted. Because the carrier signal remains during muting, no “pop” or “thud” will be heard. Note that turning this off does *not* turn off the transmitter power—it is simply a way to temporarily mute the transmission of audio signal. If you don’t plan on using the HT5 for extended periods, turn off its power by using the power on-off switch (see #3 below).

**2: Battery level meter** - This set of three multi-color LEDs indicates relative battery power, indicating whether the installed battery is at low (red), mid (yellow) or high (green) strength. One or more of these will light whenever the HT5 is powered on (see #3 below). When all three are lit, the battery is at maximum strength. When only the red “low” indicator lights, RF performance is degraded and the battery needs to be replaced.

**3: Power on-off switch\*** - Use this to turn the HT5 on or off (to conserve battery power, be sure to leave it off when not in use).

**4: Gain control (trimpot)** - This input sensitivity control has been factory preset to provide optimum level for the particular microphone capsule provided with your Stage 55 Series or Stage 5 Series system and so we recommend that this not be adjusted manually. If necessary, however, you can use the supplied plastic screwdriver to raise or lower the input level. See the “Setting Up and Using Your Stage 55 Series / STAGE 5 Series System” section on page 12 in this manual for more information.

**5: Battery holder** - Insert a standard 9-volt alkaline battery here, being sure to observe the plus and minus polarity markings shown. We recommend the Duracell MN 1604 type battery. Although rechargeable Ni-Cad batteries can be used, they do not supply adequate current for more than four hours. **WARNING:** Do not insert the battery backwards; doing so can cause severe damage to the HT5 and will void your warranty.



\* Be sure to mute the audio signal at your external mixer or amplifier before turning transmitter power on or off, or an audible pop may result.

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# Setting Up and Using Your Stage 55 Series/Stage 5 Series System

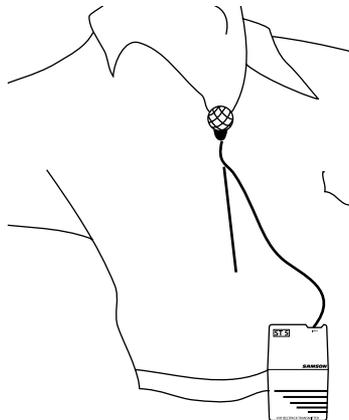
The basic procedure for setting up and using your Stage 55 Series or Stage 5 Series Wireless System takes only a few minutes:

1. For the Stage 55 Series / Stage 5 Series system to work correctly, both the receiver and transmitter must be set to the same channel. Remove all packing materials (save them in case of need for future service) and check to make sure that the supplied receiver and transmitter are set to the same channel. If these channels do not match, contact your distributor or, if purchased in the United States, Samson Technical Support at 1-800-372-6766.
2. Physically place the receiver where it will be used (the general rule of thumb is to maintain "line of sight" between the receiver and transmitter so that the person using or wearing the transmitter can see the receiver). Extend the antenna or antennas and place them in a vertical position.
3. Make sure the Power on-off switch in your ST5 belt-pack or HT5 handheld transmitter is set to "Off."
- 4a. If your system contains a ST5 belt-pack transmitter, press gently inwards on both battery cover release indents to open the battery door. Note that this door is hinged and not intended to be removed from the transmitter case. Please use care when opening this door as undue force will destroy the hinge.
- 4b. If your system contains a HT5 handheld transmitter, unscrew the bottom section of the microphone by turning it counterclockwise and then slide it off.
5. Place a fresh 9-volt alkaline battery in the transmitter battery holder, taking care to observe the polarity markings. If you are using a ST5 belt-pack transmitter, gently replace the battery door by swinging it up and pressing until it clicks. If you are using a HT5 handheld transmitter, replace the bottom section of the microphone by sliding it on and then screwing it back on. Whichever transmitter you are using, leave it off for the moment.
6. Make the physical cable connection between the SR55 or SR5 output jack and the line or mic level audio input of your amplifier or mixer. If you are using the balanced XLR jack (preferable, since it will deliver an electromagnetically cleaner signal), be sure to set the receiver rear panel Audio Output Level switch correctly. If required, both the balanced and unbalanced outputs can be used simultaneously. Leave your amplifier (and/or mixer) off at this time.
7. Turn the Volume knob on the SR55 or SR5 completely counterclockwise. Using the strain relief, connect the supplied AC adapter to the DC Input on the rear panel of the SR55 or SR5, then plug the adapter into any standard AC outlet. Press the front panel Power switch to turn on the SR55 or SR5; the green "Power" LED will light up, but all other front panel LEDs will remain unlit.
8. Turn on the power to the ST5 or HT5 transmitter (using its Power on-off switch); all three Battery strength LEDs will light if the battery is sufficiently strong. At this point, the RF Meter on the front panel of the receiver will light. If you are using an SR55 receiver, either the "A" or "B" yellow LED on the front panel will also light, depending upon which antenna is receiving the stronger signal.

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# Setting Up and Using Your Stage 55 Series/Stage 5 Series System

9. Now it's time to set the audio levels. Turn on your connected amplifier and/or mixer but keep its volume all the way down. Next, make sure that your transmitter is unmuted by setting its Audio switch to "On." Then set the Volume knob on the SR55 or SR5 fully counterclockwise. If you are using the HT5 transmitter or if you are using the ST5 transmitter with a connected lavalier microphone or headset, speak or sing into the mic at a normal performance level while observing the SR55 or SR5 front panel Audio Meter. If you are using the ST5 transmitter with a connected instrument, play the instrument at normal performance level while observing the SR55 or SR5 front panel Audio Meter. If the "0" (unity gain) segment is lighting steadily, with just occasional higher excursions, the audio level is correctly set. If not, use the supplied plastic screwdriver to slowly adjust the HT5, or ST5 Gain control (trimpot) until the SR55 or SR5 Audio Meter "0" (unity gain) segment lights steadily (with occasional higher excursions). Then slowly raise the SR55 or SR5 Volume knob to the 2 o'clock position (unity gain) and, finally, set the volume of your amplifier/mixer until the desired level is reached. If you are using a ST5 beltpack transmitter equipped with a lavalier microphone, note that correct lavalier placement is critical to sound quality. We recommend that you place it as shown in the illustration on the right—as close to your mouth as possible but off to one side (to minimize nasality) and unobstructed by clothing. Bear in mind also that *omni* microphones (mics which pick up signal from all directions) are more prone to feedback problems than *unidirectional* (*cardioid* or *supercardioid*) ones; in general, you can avoid feedback by taking care not to use any microphone directly in front of a PA speaker (if this is unavoidable, try using an equalizer to attenuate those high- or mid-range frequencies which are causing the feedback "squealing").



10. If you hear distortion at the desired volume level (or if the "+6" segment LED in the Audio Meter is lighting frequently), first check that the SR55 or SR5 rear panel Audio Output Level switch is set correctly. Next, make sure that the gain structure of your audio system is correctly set (consult the owners manual of your mixer and/or amplifier for details). If you still hear distortion, do the following:

- If you are using a HT5 handheld transmitter or an ST5 transmitter with connected lavalier microphone or headset, its Gain control has been factory preset to provide optimum level for the particular microphone model being used and so no adjustment should be necessary. Any distortion present should therefore simply be a matter of the microphone being too close to the mouth; try moving it further away. If this does not solve the problem, use the supplied plastic screwdriver to turn the Gain control (trimpot) on the HT5 or ST5 slowly counterclockwise until the distortion disappears.
- If you are using a ST5 transmitter with an instrument such as electric guitar or bass, lower the output level of the instrument until the distortion disappears. Alternatively, you can use the supplied plastic screwdriver to turn the Gain control (trimpot) on the ST5 slowly counterclockwise until the distortion disappears.

Note that, following this setup procedure, you can always lower the Volume knob of the SR55 or SR5 in order to further attenuate the output signal if necessary.

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# Setting Up and Using Your Stage 55 Series/Stage 5 Series System

11. Conversely, if you hear a weak, noisy signal at the desired volume level (and with the Volume control of the receiver turned fully clockwise), again make sure that the SR55 or SR5 rear panel Audio Output Level switch is set correctly and that the gain structure of your audio system is correctly set. If it is and the signal coming from the SR55 or SR5 is still weak and/or noisy, do the following:

- If you are using a HT5 transmitter or an ST5 transmitter with connected lavalier microphone or headset, its Gain control has been factory preset to provide optimum level for the particular microphone model being used and so no adjustment should be necessary. Any weakness of signal should therefore simply be a matter of the microphone being too far from the mouth; try moving it closer. If this does not solve the problem, use the supplied plastic screwdriver to turn the Gain control (trimpot) on the HT5 or ST5 slowly clockwise until the signal reaches an acceptable level.
- If you are using a ST5 transmitter with an instrument such as electric guitar or bass, raise the output level of the instrument until a good signal is achieved. Alternatively, you can use the supplied plastic screwdriver to turn the Gain control (trimpot) on the ST5 slowly clockwise until the signal reaches an acceptable level.

12. Temporarily turn down the level of your mixer/amplifier system and turn off the power to your transmitter, leaving the SR55 or SR5 on. Then restore the previously set level of your mixer/amplifier. With the transmitter off, the receiver output should be totally silent—if it is, skip ahead to the next step. If it isn't (that is, if you hear some noise), you may need to adjust the receiver's front panel Squelch control. When the Squelch control is at its minimum setting, the Stage 55 Series / Stage 5 Series system always provides maximum range without dropout; however, depending upon the particular environment your system is used in, you may need to reduce that range somewhat in order to eliminate band noise or interference when the transmitter is turned off. To do so, use the provided screwdriver to rotate the Squelch control completely counterclockwise (to the "Min" position), then slowly turn it clockwise until the noise disappears. If no noise is present at any position, leave it at its fully counterclockwise "Min" position (so as to have the greatest overall range available).

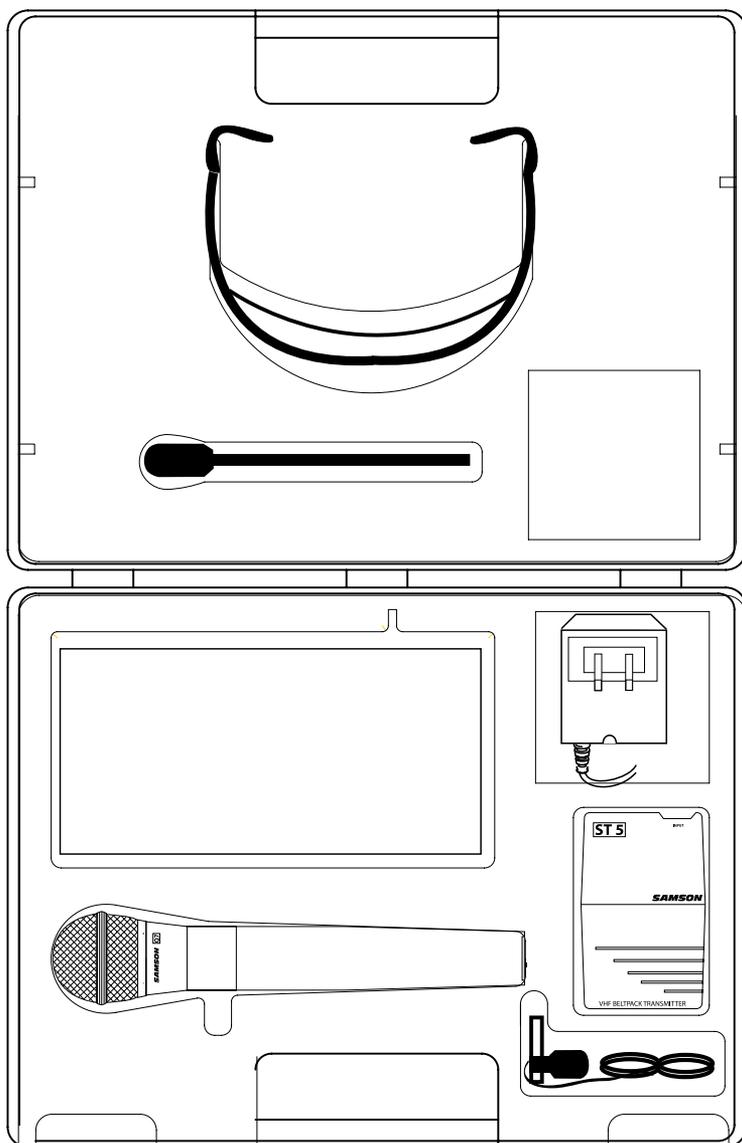
13. When first setting up the Stage 55 Series or Stage 5 Series System in a new environment, it's always a good idea to do a walkaround in order to make sure that coverage is provided for your entire performance area. Accordingly, turn down the level of your audio system and turn on both the transmitter and receiver. Then, with the transmitter unmuted, restore the level of your audio system and while speaking, singing, or playing your instrument, walk through the entire area that will need to be covered. As you do so, the "TX" LED on the front panel of the SR55 or SR5 should always remain lit. If you are using a Stage 55 Series system, one of the yellow "A" and "B" LEDs on the SR55 receiver should always be lit, though occasionally switching to show you which antenna is receiving the stronger signal. Always try to minimize the distance between transmitter and receiver as much as possible so that the strongest possible signal is received from all planned transmission points. In fixed installations such as A/V or corporate conference rooms or for extended range applications (where the transmitter and receiver are more than 150 feet apart), it may be desirable to angle the receiver antenna or antennas differently from their vertical position or to install the receiver in the same room as the transmitters (and, if necessary, to extend the wiring to remote audio equipment).

If you have followed all the steps above and are experiencing difficulties, contact your local distributor or, if purchased in the United States, call Samson Technical Support (1-800-372-6766) between 9 AM and 5 PM EST.

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# Appendix A: Carrying Case

To ensure the longevity of your Stage 55 Series / Stage 5 Series system, and for convenience when on the road, your Stage 55 Series / Stage 5 Series system includes an impact-resistant polypropylene plastic carrying case with foam rubber padding. As shown in the illustration below, custom cutouts in the interior padding provide secure placement for all components in your system.



# Specifications

## Transmitter (ST5 and HT5):

Transmission Mode	Frequency modulation, 80KF3E, 15 kHz peak deviation
Frequency Range	173.80 MHz to 213.20 MHz, 25 frequencies
Band A (European / UK models)	160.10 to 177.90 MHz
Band B (European / UK models)	189.10 to 210.10 MHz
OSC System	Crystal controlled, x12 multiplication
RF Power	20 mW (USA models), 2 mW (European / UK models)
Operating Range	300 ft.
Frequency Stability	± 10 ppm
Approvals	Complies with ETS 300 422 and FCC Part 74
Radiating Harmonic and Spurious Emission	Below limits of applicable regulations
Antenna Type	Internal
Audio Frequency Response	40 Hz to 15 kHz ±3 dB
Pre-Emphasis	50 µSec
Noise Reduction System	NE571 based compandor
Signal To Noise Ratio	> 100 dB
Maximum Input Level	0 dBv (ST5), -20 dBv (VH3)
T.H.D.	< 1% @ 1 kHz
Current Consumption	34 mA (typical)
Battery Life (MN1604 9-volt alkaline)	6 hours (typical)
Operating Temperature	-10 to +55 degrees C
Controls	
ST5	Power On/Off, Audio On/Off, Attenuation (switch), Level Control (Trimpot)
HT5	Power On/Off, Audio On/Off, Level Control (Trimpot)
LED Indicator	Battery high/medium/low
Dimensions	
ST5	65 (W) x 22 (H) x 100 (D) mm (2.6 x .87 x 4 in.)
HT5	37 (W) x 233 (H) mm (1.46 x 9.17 in.)
Weight	
ST5	100 grams • 3.55 oz.
HT5	200 grams • 7.1 oz.

## Receiver SR55 and SR5:

Receiving System	
SR55	Single conversion Superheterodyne, Diversity
SR5	Single conversion Superheterodyne, Non-Diversity
Frequency Range	173.80 MHz to 213.20 MHz, 25 frequencies
Band A (European / UK models)	160.10 to 177.90 MHz
Band B (European / UK models)	189.10 to 210.10 MHz
Receiving Mode	80KF3E
Sensitivity	< 3 µV for 20 dB SINAD, < 10 µV for 50 dB S/N
Selectivity	120 kHz BW, nominal @ -6 dB, ± 300 kHz (adj CH), -75 dB
Squelch Sensitivity	3 µV to 250 µV adjustable
Intermediate Frequency	10.7 MHz
Local Oscillator System	Crystal controlled
Noise Reduction System	NE571 based compandor
De-emphasis	50 µsec.
Signal To Noise Ratio	> 100 dB (IHF-A) line out, > 90 dB (IHF-A), mic out
Audio Frequency Response	40 Hz to 15 kHz ±3 dB
T.H.D.	< 1% @ 1 kHz
Audio Output Levels	-10dB unbalanced (1/4" phone connector), -20 dBm / -40 dBm balanced (XLR connector)
Audio Output Impedance	5 kΩ unbalanced, 600 Ω balanced
Antennas	1/4 wavelength telescopic
Operating Temperature	-10 to +55 degrees C
Controls	Volume, Squelch, Power
LED Indicators	
SR55	Antenna A or B (2 LEDs) / AF Level (6 LEDs) / RF Level (6 LEDs)
SR5	TX On / AF Level (6 LEDs) / RF Level (6 LEDs)
Power Requirement	12 Volts DC, 100 mA typical (110 mA max.), AC adapter supplied
Dimensions (W x H x D, without antennas)	216 x 44 x 116 mm (8.5 x 1.75 x 4.6 in.)
Weight (including antennas)	20 g • 0.75 lb

**FCC Rules and Regulations**

**Samson wireless systems are type accepted under  
FCC rules parts 90, 74 and 15.**

**Licensing of Samson equipment is the user's  
responsibility and licensability depends on the user's  
classification, application and frequency selected.**

**This device complies with RSS-210 of  
Industry & Science 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.**