AirLine
MICRO)))))

Owner's Manual

SAMSON®

If you want to dispose this product, do not mix it with general household waste. There is a separate collection system for used electronic products in accordance with legislation that requires proper treatment, recovery and recycling.

Private household in the 27 member states of the EU, in Switzerland and Norway may return their used electronic products free of charge to designated collection facilities or to a retailer (if you purchase a similar new one).

For Countries not mentioned above, please contact your local authorities for a correct method of disposal.

By doing so you will ensure that your disposed product undergoes the necessary treatment, recovery and recycling and thus prevent potential negative effects on the environment and human health.

Important Safety Information

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at the plugs, convenience receptacles, and at the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

Important Safety Information

13. Unplug the apparatus during lightening storms, or when unused for long periods of time.

14. Refer all servicing to qualified personnel. Service is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

15. This appliance shall not be exposed to dripping or splashing water and that no object filled with liquid such as vases shall be placed on the apparatus.

16. Caution-to prevent electrical shock, match wide blade plug wide slot fully insert.

17. Please keep a good ventilation environment around the entire unit.

18. The direct plug-in adapter is used as disconnect device, the disconnect device shall remain readily operable.

19. Batteries (battery pack or batteries installed) shall not be exposed to excessive heat such as sunshine, fire or the like.

20. CAUTION: Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type. Attention should be drawn to the environmental aspects of battery disposal

CAUTION! Electrical shock can result from removal of the receiver cover. Refer servicing to qualified service personnel.

No user-serviceable parts inside. Do not expose to rain or moisture.

The circuits inside the receiver and transmitter have been precisely adjusted for optimum performance and compliance with federal regulations. Do not attempt to open the receiver or transmitter. To do so will void the warranty, and may cause improper operation.

Power Outlet as a power device should be easy to operate

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Important Safety Information

FCC Rules and Regulations
Samson wireless receivers are certified under FCC Rules part 15 and transmitters are certified under FCC Rules part 74.
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 Part 15 of the FCC rules Class B and RSS-210 of Industry & Science Canada.
Operation is subject to the following two conditions:
(1) This device must not cause harmful interference, and
(2) This device must accept any interference received including interference that may cause undesired operation. Suitable for home or office use.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
• Reorient or relocate the receiving antenna.
• Increase the separation between the equipment and receiver.
• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
• Consult the dealer or an experienced Radio/TV technician for help.
WARNING: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Important Safety Information

This equipment is intended for use in wireless microphone applications.

Equipment is intended for sale in: AT, BE, CH, CY, CZ*, DK, EE, FI*, FR*, DE*, GR*, HU, IE, IS, IT, LV, LT*, LU, MT*, NL, NO*, PL* PT, RO, SK, SI, ES, SE, UK

*Subject to license. Please contact your national frequency authority for information on available legal use in your area. Any changes or modifications not expressly approved by Samson Technologies Corp. could void your authority to operate the equipment.

Hereby, Samson Distribution LLC. declares that this Airline Micro is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU. The declaration of conformity may be consulted at: https://storage.googleapis.com/samson-production/uploads/documents/Airline_Micro_DOC.pdf

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Introduction

Thank you for purchasing the Samson AirLine Micro Earset wireless system, a breakthrough in wireless microphone technology. Wireless systems were originally developed to eliminate cables. Samson took this one step further by creating the AH2 single earset transmitter, which provides unparalleled freedom of movement. The AirLine Micro features an integrated omnidirectional microphone and flexible gooseneck boom, which always allows you to obtain the perfect position to pick up your voice, even during active performances. The frequency response of the transmitter has been tailored for accurate and articulate vocal reproduction. The AH2 transmitter is also water resistant, and designed with extra care to ensure that no moisture can accumulate during performances. This makes the AH2 perfectly suited for aerobics instructors, and high-energy performers and presenters.

Housed in a rugged aluminum chassis with retractable antennas, the AR2 provides the ultimate in portability and flexibility. The AR2 micro receiver features an 1/8" unbalanced audio output, with microphone or line level output, USB DC-input, and RF and Battery LED indicators.

The AirLine Micro utilizes the latest in miniaturized electronic components, as well as lithium ion batteries, which result in Samson's smallest and most comfortable wireless system, while preserving the high-quality audio you expect out of a Samson wireless device. The AirLine Micro system ensures clear, interruption-free performance by incorporating tone-key with auto-mute, which only allows the transmitter's audio to pass through the receiver, and mutes the output if there is interference.

The AirLine Micro system uses fully rechargeable Lithium Ion technology. The AirLine Micro AH2 transmitter and AR2 receiver feature internal rechargeable batteries for 10 hours of battery operation. Both the AH2 and AR2 can be recharged with the included AC adaptor and USB Y-cable. The AR2 can be powered directly off of the AC adaptor, for continuous operation. The AH2 and AR2 can also be recharged by USB bus power when connected to any USB host-equipped device.

Introduction

In these pages, you'll find a detailed description of the features of the AirLine Micro Earset system, as well as step-by-step instructions for its setup and use. If your wireless system was purchased in the United States, you'll also find a registration card enclosed—don't forget to follow the instructions so that you can receive online technical support and so that we can send you updated information about this and other Samson products in the future. Also, be sure to check out our website www.samsontech.com for complete information about our full product line. If you have any questions or comments regarding the AirLine Micro Earset system or any other products from Samson, do no hesitate to contact us at **support@samsontech.com**.

We recommend you keep the following records for reference, as well as a copy of your sales receipt:

Receiver Serial number: _____ Transmitter Serial number: _____

Date of purchase: _____

With proper care and maintenance, your AirLine Micro Earset system will operate trouble-free for many years. Should your AirLine Micro Earset system ever require servicing, a Return Authorization (RA) number must be obtained before shipping your unit to Samson. Without this number, the unit will not be accepted. Please visit **www.samsontech.com/ra** for an RA number prior to shipping your unit. Please retain the original packing materials and, if possible, return the unit in its original carton. If your AirLine Micro Earset system was purchased outside of the United States, contact your local distributor for warranty details and service information.
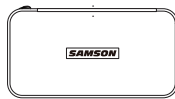
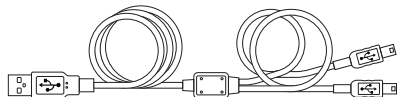**SAMSON**

System Components
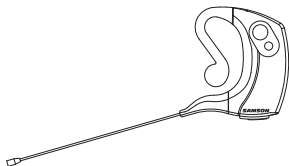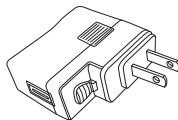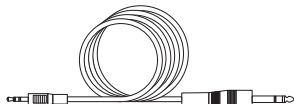
AH2 Transmitter
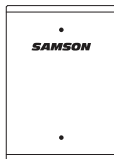
AR2 Receiver

Carry Case

Owners Manual
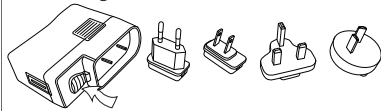
USB Y-Power Cable

Universal AC Adaptor

1/8" to 1/4" Audio Cable

3 Windscreens

Note: Universal AC Adaptor works from 100V - 240V. Plug adaptors snap into place and can be changed by sliding the button below the plug. Each system is shipped with one plug adaptor specific to the country where the system is purchased. Plug adaptors can be ordered through Samson.

Quick Start

Please follow these basic procedures for setting up and using your AirLine Micro:

1. For your AirLine Micro system to work correctly, both the receiver and transmitter must be set to the same channel. Remove all packing materials (save them in case your unit needs service in the future) and check to make sure that the supplied receiver and transmitter are set to the same channel.
Note: The channel number is laser-engraved on the back of the AR2 and AH2 chassis. If these channels do not match, please contact Samson Technical Support at 1-800-372-6766. If your unit was purchased outside of the United States, please contact your local distributor.

2. Before using your AirLine Micro system you should fully recharge the transmitter and receiver batteries. Plug the AC adaptor into a power socket. Connect the USB Y-Cable into the USB socket on the AC adaptor. Plug the two mini-USB connectors into the USB ports on the AH2 transmitter and AR2 receiver. When the transmitter and receiver are completely charged, the BLUE LED indicator will turn off.

> **Getting the most out of the rechargeable battery:**
>
> • Completely charge the batteries before first use
>
> • Fully charge the battery before it will be used.
>
> • After the battery is charged, unplug the charger from the outlet.
>
> • The optimal temperature range for using and storing the battery is 50°F - 86°F (30°C - 50°C). The battery performance and operation may decrease in temperatures below 50°F (30°C).

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Quick Start

3. Remove the USB cable and continue with setup.

4. Physically place the receiver where it will be used and fully extend the antennas vertically.

5. Turn your audio system off and connect the receiver's 1/8" unbalanced output jack to the microphone or line level audio input of your amplifier or mixer. Set the AR2 Mic/Line Level switch to match the input.

6. Turn on the receiver using the Power Switch. When on, the Status Indicator will be steady YELLOW.

7. Turn on your AH2 transmitter by pressing and holding the Multi-Function Switch, until the Status Indicator LED flashes GREEN, then release it. The AH2 Status Indicator will now light steady GREEN. The AR2 receiver Status Indicator will change from YELLOW to GREEN indicating that it is receiving a valid RF signal.

8. Position the AH2 on your head, as illustrated on page 7.

9. Turn on your connected amplifier and/or mixer, but keep its volume all the way down. Make sure the AH2 transmitter is not muted.
    Note: If the AH2 is muted, the AH2 Status Indicator LED will flash GREEN and the AR2 Status Indicator will flash GREEN. To unmute the AH2, press the Multi-Function Switch and the Status Indicator will light steady GREEN.

10. Speak or sing into the earset microphone at a normal performance level while slowly raising the audio input control of your amplifier or mixer, until the desired volume is reached.

Quick Start

11. **If you hear distortion at the desired volume level**, check to see whether the Status Indicator LED on the receiver is lighting RED. If it is not lit, make sure that the gain structure of your audio system is set correctly (consult the owners manual of your mixer and/or amplifier for details). If the Status Indicator is RED, simply move the microphone further from your mouth.

    If you hear a weak, noisy signal at the desired volume level, make sure that the gain structure of your audio system and the Audio Output Level switch are correctly set. If the Audio Output Level switch is correctly set and the signal coming from the receiver is still weak and/or noisy, simply position the microphone closer to your mouth.

    If you feel that the level of the microphone needs further adjustment, press and hold the AH2 Multi-Function Switch while the unit is powered on until the Status Indicator turns off, and release the switch. Then press and hold the Multi-Function Switch again for 5 seconds. The AH2 Status Indicator will first flash GREEN then flash YELLOW to show that you are in the Volume Adjustment mode. Press and release the Multi-Function Switch once, and the microphone volume will increase one level. To continue to adjust the microphone volume, press and release the Multi-Function Switch until the maximum level is reached. There are 5 levels. With each increasing level, the Status Indicator will flash faster. After level 5 is reached, the transmitter will cycle back down through the levels each time the Multi-Function Switch is pressed. As the levels decrease, the Status Indicator flashes slower. When the desired level is reached, release the Multi-Function Switch. The AH2 will return to normal operation after 10 seconds, and the Status Indicator will be steady GREEN.

12. Do a walk-around through the intended area of coverage while observing the AR2's Status Indicator; it should stay steadily GREEN, indicating sufficient RF reception in all areas of coverage. If the AR2's Status Indicator lights YELLOW, it designates RF dropout or muted receiver. Reposition the device (or its antennas) as necessary. If extended range coverage is required, another AR2 true diversity receiver (set to the same channel as the transmitter) should be used.

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Wearing the AH2 Transmitter

The AH2 can be re-sized to fit comfortably on your ear.

1.   Rotate the adjustment band up. (figure 1)

2.   Position the AH2 over your left ear so that the body of the transmitter is behind your ear. (figure 2)

3.   Push the adjustment band down until it fits comfortably in your ear and is secure against your head. (figure 3)

4.   Position the microphone towards the corner of your mouth, approximately 1/2" away from the lips.

5.   Position the moisture guard ring as close to the capsule as possible.

6.   For outdoor use, and to help reduce p-popping, install one of the included windscreens.
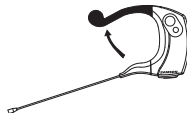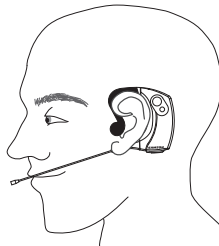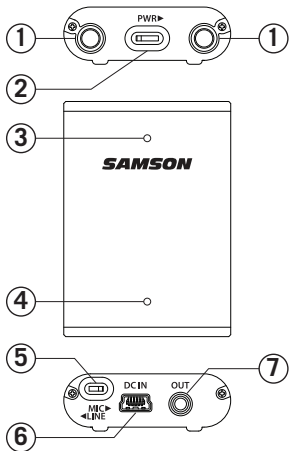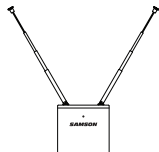
figure 1

figure 2

figure 3

Guided Tour - AR2 Receiver

1. **Antennas -** The retractable antennas allow full rotation for optimum placement. In normal operation, both antennas should be fully extended and placed in a vertical position, as shown below.

2. **POWER Switch -** Use this to turn the AR2 power on and off.

3. **Status Indicator -** This three-color LED acts as a multi-function meter, indicating power, transmitter tone-key status, transmitter mute, and transmitter peak.

YELLOW	AR2 Powered On, No Tone-Key Present
GREEN	AH2 On, Normal Operation
Flashing GREEN	AH2 Audio Muted
RED	Transmitter Input Overloaded

4. **Low Battery Indicator -** This BLUE LED displays the status of the battery. The Low Battery Indicator will flash BLUE when the unit is on, and the battery is low. When recharging the AR2, the LED will be steady BLUE until the battery is fully charged, then the indicator will turn off.

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Guided Tour - AR2 Receiver

5. **Audio Output Level Switch -** Sets the audio output level of the unbalanced output to microphone or line level.

6. **USB DC Power Input -** Connect the supplied universal adaptor to recharge the internal lithium ion rechargeable battery or to power the receiver. The USB DC input will also accept USB bus power from a computer USB port, or any 5-volt DC adaptor that has a USB output (including automotive).
    NOTE: The USB port is only used for charging purposes and cannot be used for data exchange between a PC and the AR2 receiver.

7. **1/8" Unbalanced Output -** Use this unbalanced (600 Ohm min.) 1/8" (3.5 mm) mini-phone jack when connecting the audio equipment.

Guided Tour - AH2 Transmitter
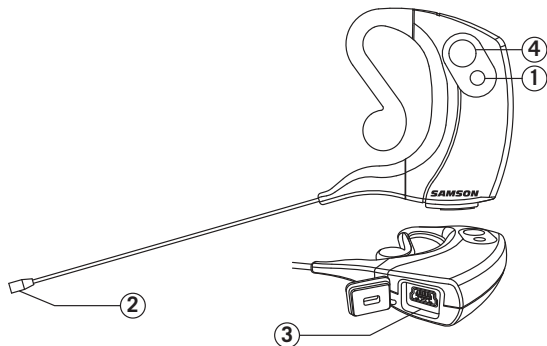
1. **Status Indicator -** This LED displays the operation mode, low battery and recharge status of the transmitter.

GREEN	Normal Operation
Flashing GREEN	Mute
Flashing YELLOW	Volume Adjustment Mode
Fastest Flashing YELLOW	Maximum Level
Slowest Flashing YELLOW	Minimum Level
Flashing BLUE	Low Battery
BLUE	Recharging (LED will turn off when fully charged)

2. **Microphone -** Micro-miniature, 3mm omni-directional microphone capsule.

3. **USB DC Power Input -** Connect the supplied universal adaptor to recharge the internal Lithium Ion battery. The USB DC input will also accept USB bus power from a computer USB port, or any 5V DC adaptor that has a USB output.
   NOTE: The Universal AC Adaptor will charge the AH2 & AR2 faster than a computer USB port.
   NOTE: The USB port is only used for charging purposes and can't be used for data exchange between a PC and the AH2.

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Guided Tour - AH2 Transmitter

4. **Multifunction Switch -** Press and hold to turn the unit on or off. Press and release to mute or unmute the transmitter. To adjust the transmitter volume, while the AH2 is powered on, press and hold until the power turns off, release the switch, then press and hold the switch for 5 seconds and the Status Indicator will first flash GREEN then flashes YELLOW.

Function	Activation	Hold Time	LED Status
Power ON/OFF	Press and Hold	> 1 sec	GREEN
Mute ON/OFF	Press	0.2 - 2 sec	Flashing GREEN
Volume Adjust	Press and Hold	> 5 sec	Flashing YELLOW
Increase Gain	Press (Total 5 steps)	> 0.2 sec	Flashing YELLOW
Decrease Gain	Press (Total 5 steps)	> 0.2 sec	Flashing YELLOW
Set Level	Don't Press	10 sec	GREEN

Specifications

System

Operating Frequency
K Band	477.525 – 492.425 MHz
E Band	863.125 – 864.875 MHz

Number of Channels
K Band	6
E Band	4
Working Range	300' (100m) line of sight
Audio Frequency Response	100Hz – 15kHz
T.H.D. (Overall)	< 1% (@AF 1kHz, RF 46dBu)
Operating Temperature	-18°C (0°F) to +40°C (+104°F)
Storage Temperature	-5°C (23°F) to +35°C (+95°F)

AR2 Receiver

Audio Output Connector	1/8" Unbalanced
Audio Output Level (Typical)	-30dBv (Mic), -10dBv (Line)
Audio Output Impedance	Unbalanced 600 Ohms
AF Frequency Response	50Hz – 15kHz
Antennas	Two 1/4 Wavelength Rod
Selectivity	±150kHz (AF Out Ratio -60dB)
S/N Ratio (Overall)	90dB (w/IHF-A Filter)
Sensitivity	18dBu (@ THD 2%)

Power Requirements	Internal lithium ion rechargeable battery or AC adaptor
Battery Life	~6 hours
Indicators	Power On, Tone Key, Transmitter Mute, Transmitter Peak, Battery Low, Recharging
Dimensions (LxWxH)	1.7" x 0.51" x 2.4" 43 mm x 13 mm x 60 mm
Weight	1.5oz / 42g

AH2 Transmitter

Audio Input Level	-110dBv ~ 0dBv
Volume Adjustment Steps	5
RF Transmitter Output	10mW ERP
Power Requirements	Internal lithium ion rechargeable battery
Battery Life	~10 hours
Dimensions (LxWxH)	6.7" x 0.6" x 2.3" 171mm x 14mm x 58mm
Weight	0.8oz / 22g

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AirLine Micro Channel Plan

K-Band			E-Band*	
Ch	Freq		Ch	Freq
K1	489.050 MHz		E1	863.125 MHz
K2	490.975 MHz		E2	863.625 MHz
K3	492.425 MHz		E3	864.500 MHz
K4	477.525 MHz		E4	864.875 MHz
K5	479.100 MHz			
K6	480.475 MHz			

*Not for use in the USA and Canada.
For questions regarding available channels in your area contact
your local Samson distributor.

AirLine Micro Function & Indicator Guide

AH2 Earset Transmitter

Status	Earset Status Indicator Light
Powering On	Steady GREEN.
Mute	Intermittent GREEN flashes.
Volume Adjust	Intermittent YELLOW flashes. The indicator flashes faster as the volume is increased. The indicator flashes slower as the volume is decreased.
Battery Low	The indicator flashes BLUE.
Charging Battery	Steady BLUE. Indicator turns off when the battery is fully charged.

AR2 Receiver

Status	Receiver Indicator Lights
Powering On (AR2: ON, AH2: OFF)	Status Indicator: Steady YELLOW.
Powering On (AR2: ON, AH2: ON)	Status Indicator: Steady GREEN.
AH2 Mute	Status Indicator: Intermittent GREEN flashes.
Peak	Status Indicator: Flashes RED.
Battery Low	Low Battery Indicator: Intermittent BLUE flashes.
Charging Battery	Low Battery Indicator: Steady BLUE. Indicator turns off when the battery is fully charged.