

AirLine

M I C R O



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 28 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.

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v4

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www.samsontech.com

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

Important Safety Information

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

This device complies with part 15 of the FCC rules. Operation is subject to the condition that this device does not cause harmful interference.

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.

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.

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 included AR2D dock provides stability for the receiver, and facilitates ease of use.

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 not hesitate to contact us at **support@samsontech.com**.

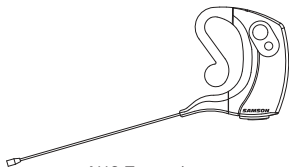
We recommend you keep the following records for reference, as well as a copy of your sales receipt:

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.

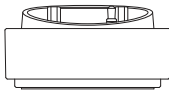
System Components



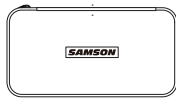
AH2 Transmitter



AR2 Receiver



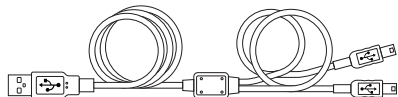
AR2D Dock



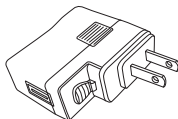
Carry Case



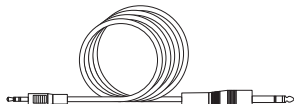
Owners Manual



USB Y-Power Cable



Universal AC Adaptor

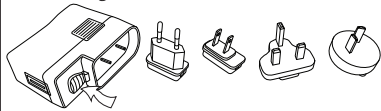


1/8" to 1/4" Audio Cable



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).

Quick Start

3. Remove the USB cable and continue with setup.
4. Physically place the receiver where it will be used (if desired, the AR2 receiver model can be used with the included AR2D dock) 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.

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.

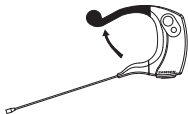


figure 1

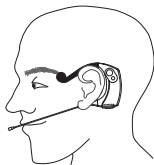


figure 2

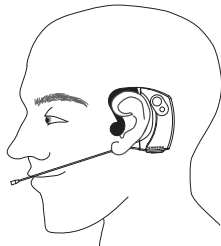
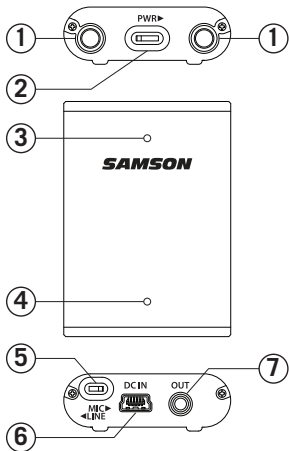
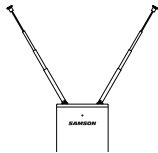


figure 3

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.

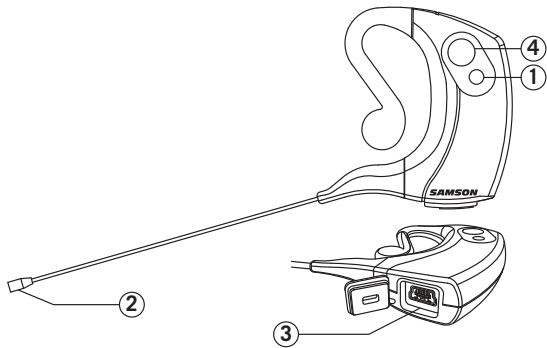
YELLOW	AR2 Powered On, No Tone-Key Present
GREEN	AH2 On, Normal Operation
Flashing GREEN	AH2 Audio Muted
RED	Transmitter Input Overloaded

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.

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.

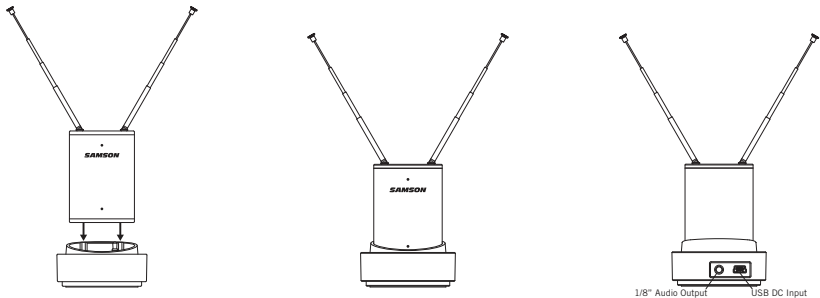
NOTE: The USB port is only used for charging purposes and can't be used for data exchange between a PC and the AH2.

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

AR2 Dock



For added convenience and easy setup, we have included the AR2D dock. To use the dock please follow these steps:

1. Slide the AR2 receiver into the AR2D dock. There are two keys on the rear of the AR2 that will match up and align with the AR2D so that the receiver will fit correctly.
2. Attach the included 1/8" to 1/4" audio cable to the audio output on the back panel of the AR2D.
3. To recharge the AR2 receiver, connect the USB Y-cable to the USB DC input on the back panel of the AR2D and connect the cable to the included Universal AC adaptor.

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

Battery Life Indicators

Dimensions (LxWxH)

Weight

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

Dimensions (LxWxH)

Weight

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

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

Powering On

Mute

Volume Adjust

Battery Low

Charging Battery

Earset Status Indicator Light

Steady **GREEN**.

Intermittent **GREEN** flashes.

Intermittent **YELLOW** flashes. The indicator flashes faster as the volume is increased. The indicator flashes slower as the volume is decreased.

The indicator flashes **BLUE**.

Steady **BLUE**. Indicator turns off when the battery is fully charged.

AR2 Receiver

Status

Powering On

(AR2: ON, AH2: OFF)

Powering On

(AR2: ON, AH2: ON)

AH2 Mute

Peak

Battery Low

Charging Battery

Receiver Indicator Lights

Status Indicator: Steady **YELLOW**.

Status Indicator: Steady **GREEN**.

Status Indicator: Intermittent **GREEN** flashes.

Status Indicator: Flashes **RED**.

Low Battery Indicator: Intermittent **BLUE** flashes.

Low Battery Indicator: Steady **BLUE**. Indicator turns off when the battery is fully charged.