ADX1

Bodypack Transmitter

User guide for the Shure ADX1 digital wireless bodypack transmitter.
Version: 12.2 (2024-H)

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Safety and Regulatory Information for Wireless Products

Explanation of Symbols

⚡	This symbol indicates that dangerous voltage constituting a risk of electric shock is present within this unit.
⚠	This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.

Important Safety Instructions

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. Allow sufficient distances for adequate ventilation and install in accordance with the manufacturer's instructions.
8. DO NOT install near any heat sources such as open flames, radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat. Do not place any open flame sources on the product.
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 wider 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 plugs, convenience receptacles, and the point where they exit from the apparatus.
11. ONLY USE attachments/accessories specified by the manufacturer.
12. USE only with a 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.

13. UNPLUG this apparatus during lightning storms or when unused for long periods of time.
14. REFER all servicing to qualified service personnel. Servicing 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, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. DO NOT expose the apparatus to dripping and splashing. DO NOT put objects filled with liquids, such as vases, on the apparatus.
16. The MAINS plug or an appliance coupler shall remain readily operable.

17. The airborne noise of the Apparatus does not exceed 70dB (A).
18. Apparatus with CLASS I construction shall be connected to a MAINS socket outlet with a protective earthing connection.
19. To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
20. Do not attempt to modify this product. Doing so could result in personal injury and/or product failure.
21. Operate this product within its specified operating temperature range.
22. Follow local regulations and consult qualified personnel if the product installation or relocation requires construction work. Choose mounting hardware and an installation location that can support the weight of the product. Avoid locations subject to constant vibration. Use the required tools to install the product properly. Inspect the product periodically.

WARNING:

- Voltages in this equipment are hazardous to life. No user-serviceable parts inside. Refer all servicing to qualified service personnel. The safety certifications do not apply when the operating voltage is changed from the factory setting.
- If water or other foreign objects enter the inside of the device, fire or electric shock may result.

ADX1 Axient Digital Bodypack Transmitter

ADX series transmitters deliver impeccable audio quality and RF performance, and are equipped with ShowLink® remote con-trol for real-time parameter adjustments and interference avoidance. This transmitter features wide tuning, High Density (HD) mode, encryption, and advanced rechargeability in a streamlined design. Light-weight aluminum construction, SB910 rechargeable power options (with lockable charging), and TA4 or LEMO3 connector options.

Features

Performance

- 184 MHz tuning range
- 20 Hz to 20 kHz range with flat frequency response
- Automatic input staging optimizes gain setting
- Diversity ShowLink-enabled for remote transmitter control and automatic interference avoidance
- AES 256-bit encryption-enabled for secure transmission
- >120 dB, A-weighted, System Gain @ +10
- Digital output: >125dB, A-weighted (Dante, AES3, AES67)
- 100 meter (300 feet) line-of-sight operating range
- Selectable modulation modes optimize performance for spectral efficiency
  ◦ Standard – optimal coverage, low latency
  ◦ High density – dramatic increase in max system channel count
- Built-in tone generator and RF markers to facilitate walk-testing
- Switchable Power Levels = 2/10/40 mW (region dependent)
- Frequency Diversity selection using two bodypacks

Design

- TA4 or LEMO3 audio connector option
- Backlit LCD with easy to navigate menu and controls
- Durable, moisture-resistant, lightweight metal case
- Flexible ¼ wave antenna
- Menu and power lockout

Power

- Shure SB910 rechargeable batteries for up to 10 hours of runtime, precision metering, and zero memory effect
- External charging contacts for docked charging

Included Components

SB910 Shure Rechargeable Battery	95A24832
¼ wave antenna	Varies by Region
Belt clip	44A32452
Zipper bag	95A2313

Optional Accessories

SB910 Shure Rechargeable Battery	95A24832
3 x AAA Battery Sled for ADX1 Transmitter	SB913
AD651FOB Talk Switch fob for bodypack transmitters	90A37348
Belt clip	44A32452
Shure Networked Docking Charger 2-Up	SBC240
Transmitter carrying case	WA610

ADX1 Transmitter Overview

① RF Antenna

For RF signal transmission.

② Display

View menu screens and settings. Press any control button to activate the backlight.

③ Control Buttons

Use to navigate through parameter menus and to change settings.

④ Battery Compartment

Requires Shure SB910 rechargeable battery.

⑤ Battery Door

Latching door to secure battery.

⑥ SMA Connector

Connection point for RF antenna.

⑦ Infrared (IR) Port

Align with the receiver IR port during an IR Sync for automated transmitter tuning and setup.

⑧ Power Switch

Powers the unit on or off.

⑨ Power LED

- Green = unit is powered on
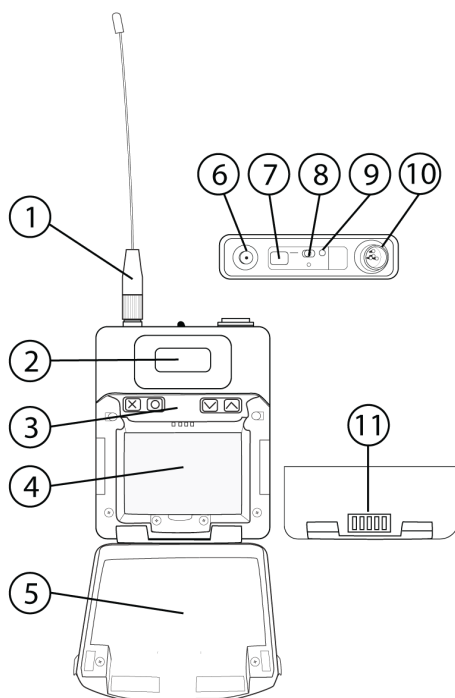- Red = low battery, Mute Mode enabled, input overload, or battery error (see Troubleshooting)

⑩ Input Jack

Connects to a 4-Pin Mini Connector (TA4F) microphone or instrument cable.

Note: A LEMO connector model variation of this transmitter is available.

⑪ Battery Charging Contacts

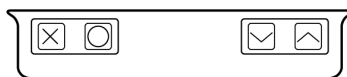Charging contacts for use with docking battery chargers.

Installing Bodypack Antennas

Hand-tighten antennas until secure. Do not use tools.

Transmitter Controls

Use the controls to navigate through parameter menus and change values.

Control	Description
X	Acts as a 'back' button to return to previous menus or parameters without confirming a value change
O	Enters menu screens and confirms parameter changes
∨∧	Use to scroll through menu screens and to change parameter values

Tip: Use the following shortcuts for quick setup:

- Hold the ∧ button while powering on to lock or unlock the transmitter.
- Hold the X button while powering on to enter the safe start menu.

Locking the Interface

Lock transmitter interface controls to prevent accidental or unauthorized changes to parameters. The lock icon appears on the home screen when the interface lock is enabled.

1. From the Utilities menu, navigate to Locks and select one of the following lock options:
    ◦ None: The controls are unlocked
    ◦ Power: The power switch is locked
    ◦ Menu: The menu parameters are locked
    ◦ All: The power switch and menu parameters are locked
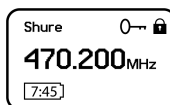2. Press O to save.

To quickly unlock a transmitter: Press O twice, select None, and press O.

Home Screen Display

The home screen shows transmitter information and status.

There are four pieces of information that you can choose to see on the home screen. Use the arrow buttons to select one of the following choices:

- Name
- Frequency Setting
- Group (G) and Channel (C)
- Device ID

The following icons indicate transmitter settings:

Icon	Setting
▥	Battery runtime in hours and minutes or bar display
⚷	Key: Displayed when encryption is enabled
🔒	Lock: Displayed when controls are locked. Icon will flash if access is attempted to a locked control (power or menu).
📶	ShowLink signal strength displays 0 to 5 bars
STD	STD: Standard Transmission Mode
HD	HD: High Density Transmission Mode
⊠	RF Mute Engaged: Displayed when RF output is muted

Shure Rechargeable Batteries

Shure lithium-ion batteries offer a rechargeable option for powering the transmitters. Batteries quickly charge to 50% capacity in one hour and reach full charge within three hours.

Single chargers and multiple bay chargers are available to recharge the Shure batteries.

Caution: Only charge Shure rechargeable batteries with a Shure battery charger.

Checking Battery Info

When using a Shure rechargeable battery, the receiver and transmitter home screens display the number of hours and minutes remaining.

Detailed information for the battery is displayed Battery menu of the transmitter: `Utilities > Battery`

- Battery: The chemistry type of for the installed battery (Shure, Alkaline, Lithium, NiMH)
- Bars: Indicates the number of bars displayed
- Time: Battery runtime
- Charge: Percentage of charge capacity
- Health: Percentage of current battery health
- Cycle Count: Total of the number of charging cycles for the installed battery
- Temperature: Battery temperature reported in Celsius and Fahrenheit
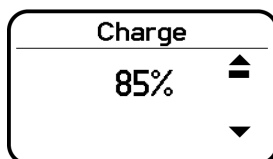
Important Tips for Care and Storage of Shure Rechargeable Batteries

Proper care and storage of Shure batteries results in reliable performance and ensures a long lifetime.

- Always store batteries and transmitters at room temperature
- Ideally, batteries should be charged to approximately 40% of capacity for long-term storage
- Regularly clean the battery contacts (at least every 6 months) with an electrical contact cleaner designed for gold contacts and safe on plastics
- During storage, check batteries every 6 months and recharge to 40% of capacity as needed

For additional rechargeable battery information, visit www.shure.com.

Battery Installation
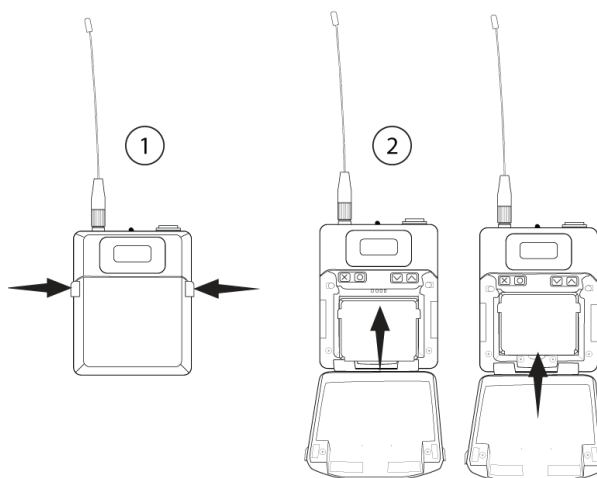
① Accessing the Battery Compartment

Press the door latches and open the battery door.

② Inserting the Battery

Insert the battery, contracts first into the battery compartment. Press down on the tab to fully seat the battery, and then close the battery door.

Tip: To remove the battery, pull up on the tab on the bottom of the battery.

ADX1 SB910 Battery Runtime

Note: Higher RF power levels decrease battery runtime. Battery runtime varies with battery age and environmental conditions.

2 mW	10 mW	40 mW
11.0 to 12.0 hours	9.0 to 11.0 hours	6.5 to 8.5 hours

Note: A Battery Hot warning indicates that transmitter battery needs to cool off. Otherwise, the transmitter will shut down. Let the device cool down and then consider swapping the transmitter battery to continue operation.

Identify any possible external heat sources to the transmitter and operate the transmitter away from those external heat sources.

All batteries should be stored and operated away from external heat sources in reasonable temperature conditions for best performance.

Menu Parameters

The Main menu organizes the available transmitter parameters into three sub-menus:

- Radio
- Audio
- Utilities

Tip: Use the arrow buttons to scroll between the sub-menus.
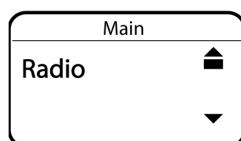
Tips for Editing Menu Parameters

- To access the menu options from the home screen, press O . Use the arrow buttons to access additional menus and parameters.
- A menu parameter will blink when editing is enabled
- To increase, decrease or change a parameter, use the arrow buttons
- To save a menu change, press O
- To exit a menu without saving a change, press X

Menu Map

```
Main Menu ─── Radio ─── Freq
                        Power
                        Output

              Audio ─── Pad
                        Offset
                        Polarity
                        Mute
                        Tone Gen

              Utilities ─── Device ID
                            Locks
                            Link Info
                            SL Test
                            Marker
                            Battery
                            Talk Sw
                            Identify
                            About
                            Reset All
```

Menu Parameter Descriptions

Radio Menu

Freq

Press the O button to enable editing of a group (G:) channel (C:) or frequency (MHz). Use the arrow buttons to adjust the values. To edit the frequency, press the O button once to edit the first 3 digits, or twice to edit the second 3 digits.

Power

Higher RF power settings can extend the range of the transmitter.

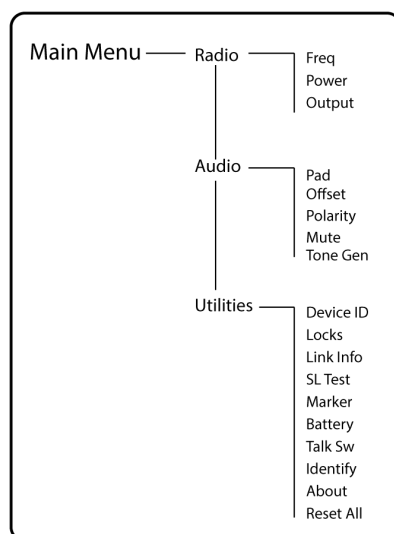Note: Higher RF power settings decrease battery runtime.

Output

Sets the RF output to On or Mute.

◦ On: RF signal is active
◦ Mute: RF signal is inactive

Audio Menu

Pad

Adjust the pad to avoid overloading the audio input. Select -12 dB or Off.

Offset

Adjust Offset level to balance mic levels when using two transmitters or when assigning multiple transmitters to receiver slots. Adjustment range: -12 dB to +21 dB.

Polarity

Selectable polarity assignment for the audio input connector:

◦ Pos: Positive pressure on microphone diaphragm produces positive voltage on pin 2 (with respect to pin 3 of XLR output) and the tip of the TRS output.
◦ Neg: Positive pressure on microphone diaphragm produces negative voltage on pin 2 (with respect to pin 3 of XLR output) and the tip of the TRS output.

Mute

When enabled, the power switch is configured as a mute switch for the audio:

◦ Power switch on: Audio signal on
◦ Power switch off: Audio signal muted

Exit mute mode to return the power switch to its normal functionality.

Tone Gen

Transmitter will generate a continuous test tone:

◦ Freq: The tone can be set to 400 Hz or 1000 Hz.
◦ Level: Adjusts the output level of the test tone.

Utilities Menu

Device ID

Assign a device ID of up to 9 letters or numbers.

Locks

Locks the transmitter controls and power switch.

◦ None: The controls are unlocked
◦ Power: The power switch is locked
◦ Menu: The menu parameters are locked
◦ All: The power switch and menu parameters are locked

Link Info

Displays the following information about the link between a transmitter and receiver:

◦ Not Linked: The transmitter is not linked to a receiver
◦ Linked: The transmitter is linked to a receiver. Select Unlink? to free the transmitter from the receiver link.
◦ Unlinked: The transmitter is not linked to a receiver

SL Test

ShowLink test tool to measure the boundaries of ShowLink coverage.

Marker

When enabled, press the enter button to drop a marker in Wireless Workbench.

Battery

Displays battery information:

- Battery Life: Runtime reported in bar display and time (hours:minutes)
- Charge: Percentage of charge capacity
- Health: Percentage of current battery health
- Cycle Count: Total of the number of charging cycles for the installed battery
- Temperature: Battery temperature reported in Celsius and Fahrenheit

Talk Sw

Press ENTER to add control from a talk switch. Press the button on the talk switch twice to complete the link.

Identify

When enabled, Identify flashes the transmitter icon in Wireless Workbench Inventory or Monitor tabs.

About

Displays the following transmitter information:

- Model: Displays the model number
- Band: Displays the tuning band of the transmitter
- FW Version: Installed firmware
- HW Version: Hardware version
- Serial Num: Serial number

Reset All

Restores all transmitter parameters to factory settings.

IR Sync

Use IR Sync to form an audio channel between the transmitter and receiver.

Note: The receiver band must match the band of the transmitter.

1. Select a receiver channel.
2. Tune the channel to an available frequency using group scan or manually turn to an open frequency.
3. Power on the transmitter.
4. Press the SYNC button on the receiver.
5. Align the IR windows between the transmitter and the receiver so that the IR LED illuminates red. When complete, Sync Success! appears. The transmitter and receiver are now tuned to the same frequency.

<15 cm (6 in.)

Sync Success!
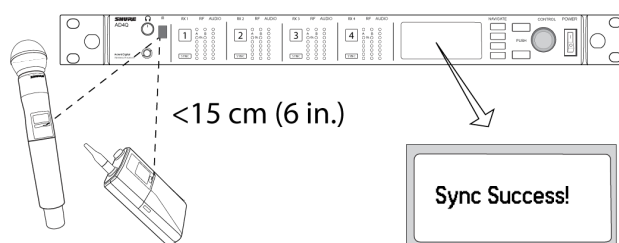
Note:

Any change to the encryption status on the receiver (enabling/disabling encryption) requires a sync to send the settings to the transmitter. New encryption keys for the transmitter and receiver channel are generated on every IR sync, so to request a new key for a transmitter, perform an IR sync with the desired receiver channel.

Setting the Frequency Manually

The transmitter can be manually tuned to a specific group, channel, or frequency.

1. Navigate to the Radio menu and select Freq.
2. Scroll to select G: and C: to edit the group and channel, or select the frequency parameter (MHz). When editing the frequency, press O once to edit the first 3 digits, or twice to edit the last 3 digits.
3. Use the ∧∨ buttons to adjust the group, channel, or frequency.
4. Press O to save, and then press X when finished.

```
          Freq
G: 1                    C:1
470.700 MHz
```
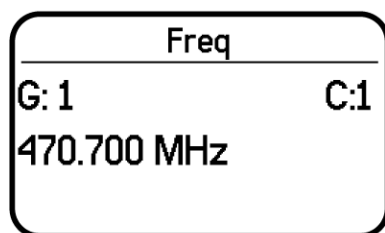
Wearing the Bodypack Transmitter

Clip the transmitter to a belt or slide a guitar strap through the transmitter clip as shown.

For best results, the belt should be pressed against the base of the clip.

Tip: The clip can removed and rotated 180 degrees to increase mounting options.

RF Mute

RF mute prevents transmission of the audio by suppressing the RF signal. The home screen displays RF MUTED in this mode.
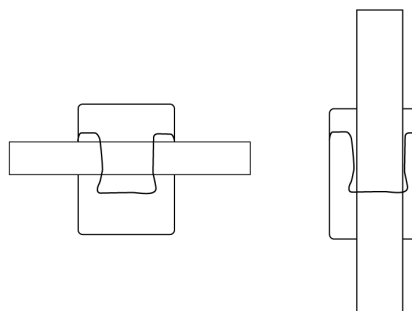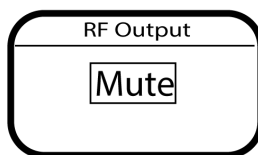
```
┌──────────────────────┐
│      RF Output        │
│     ┌──────┐          │
│     │ Mute │          │
│     └──────┘          │
└──────────────────────┘
```

1. From the Radio menu, navigate to Output.
2. Choose one of the following options:
   ◦ On: RF signal is active
   ◦ Mute: RF signal is disabled
3. Press O to save.

When a transmitter is in RF mute mode, the RF will remain muted when the power is cycled and when the battery is replaced. To restore the RF signal, return to the Output menu and select On.

Safe Start

Power on in Safe Start mode to prevent interference with other devices. Hold the X button while powering on your device until the Safe Start menu appears.

```
┌──────────────────────┐
│      Safe Start       │
│  RF: ┌──────┐         │
│      │ Mute │         │
│      └──────┘         │
│  Locks: All           │
└──────────────────────┘
```
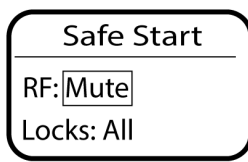
Safe Start menu options:

- RF: Mute or On
- Locks: None, Pwr, Menu, All

Use the navigation buttons to make changes.

To exit the Safe Start menu, cycle the power or momentarily remove the battery.

Previous settings for locks and RF will be retained when the transmitter is powered on in Safe Start.

Input Overload

The OVERLOAD message appears when the audio input experiences a high-level signal. The power LED turns red as an additional indicator of an overload. Reduce the input signal or enable the input pad to remove the overload condition.

Tip: To enable the input pad, navigate to `Audio` > `Pad` and select -12 dB.

```
Shure
OVERLOAD
7:45
```

Matching Audio Levels with Mic Offset

When linking two or more transmitters to a receiver, there may be a difference in volume levels between microphones or instruments. If this occurs, use the Offset function to match the audio levels and eliminate audible volume differences between transmitters. If using a single transmitter, set Offset to 0 dB.

1. Turn on the first transmitter and perform a sound check to test the audio level. Turn off the transmitter when finished.
2. Turn on the second transmitter and perform a sound check to test the audio level. Repeat for any additional transmitters.
3. If there is an audible difference in the sound level between the transmitters, navigate to the Offset menu (`Audio > Offset`) in the transmitter to increase or decrease the Offset in realtime to match the audio levels.

```
Mic Offset
+3 dB
```
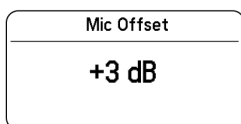
Tone Generator

The transmitter contains an internal tone generator that produces a continuous audio signal. The tone is helpful when conducting a sound check or for troubleshooting the audio signal chain. The level of the tone is adjustable from -60 dB to 0 dB and the frequency can be set to 400 Hz or 1000 Hz.

Always start with the level set to -60 dB to avoid overloading speakers or headphones.

1. From the Audio menu select Tone Gen.
2. Set the frequency to 400 Hz or 1000 Hz.
3. Select Level and use the arrow buttons adjust the value between -60 dB and 0 dB.

Turn off the tone by selecting Off from the menu or by cycling the transmitter power.

```
Tone Gen
Tone:        400Hz
Level:       -60db
```
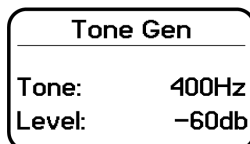
ShowLink Test

The ShowLink Test is a tool to find the boundaries of the ShowLink coverage area. When the ShowLink test is activated, a five-bar display indicating the link quality is shown on the screen. As the transmitter moves away from the access point, the number of bars will decrease. ShowLink control is maintained as long as 1 bar is displayed.

If the transmitter is beyond the coverage range, ShowLink control will not be possible. However, the audio signal will not be affected or interrupted as long as the transmitter is within range of the RF signal.

To improve coverage, adjust the location of your access points or place additional access points to extend coverage.

To activate the ShowLink Test:

1. From the Utilities menu, navigate to SL Test.
2. Press the O button to start the test and walk the transmitter around the coverage area. Monitor the number of bars displayed and the state of the ShowLink icon. Coverage boundaries are indicated by 0 bars displayed or the ShowLink icon is empty.
3. Press the X button to exit the ShowLink test.

Tip: During a ShowLink test, press O (enter) to drop a marker in Wireless Workbench.

Updating Firmware

Firmware is embedded software in each component that controls functionality. Periodically, new versions of firmware are developed to incorporate additional features and enhancements. To take advantage of design improvements, you can upload and install new versions of the firmware by using the Shure Update Utility, available on the Shure Update Utility page.

Firmware Versions

When performing an update, first download firmware to the receiver, and then update transmitters to the same firmware version to ensure consistent operation.

The firmware numbering for Shure devices uses the following format: MAJOR.MINOR.PATCH (e.g., 1.2.14). At a minimum, all devices on the network (including transmitters), must have the same MAJOR and MINOR firmware version numbers (e.g., 1.2.x).

Updating the Transmitter

1. Download the firmware to the receiver.
2. Access the following menu from the receiver: `Device Configuration` > `Tx Firmware Update`.
3. Align the IR ports between the transmitter and the receiver. IR ports must be aligned for the entire download, which can take 50 seconds or longer.

   Tip: The red alignment LED will turn on when the alignment is correct.

4. Press ENTER on the receiver to begin the download to the transmitter. The receiver will display the progress of the update as a percentage.

Troubleshooting

Issue	See Solution...
No sound	Power, Cables, Radio Frequency, or Encryption Mismatch
Faint sound or distortion	Gain, Cables
Lack of range, unwanted noise bursts, or dropouts	Radio Frequency (RF)
Cannot turn transmitter off or change frequency settings, or can't program receiver	Interface Locks
Encryption Mismatch message	Encryption Mismatch
Firmware Mismatch message	Firmware Mismatch
Transmitter Battery Hot message	Tx Battery Hot
Antenna Fault Red LED	RF
Handheld transmitter shuts down during use	Clean Battery Contacts

Power

Make sure that the receiver and transmitter are receiving sufficient voltage. Check the battery indicators and replace the transmitter batteries if necessary.

Gain

Adjust the system gain on the front of the receiver. Ensure the output level on the back of the receiver corresponds to the mic/line input setting of the mixing console, amplifier, or DSP.

Cables

Check that all cables and connectors are working correctly.

Interface Locks

The transmitter and the receiver can be locked to prevent accidental or unauthorized changes. A locked feature or button will produce the Locked screen on the LCD panel or the lock icon will flash on a transmitter.

Encryption Mismatch

Re-sync all receivers and transmitters after enabling or disabling encryption.

Firmware Mismatch

Paired transmitters and receivers must have the same firmware version installed to ensure consistent operation. See Firmware topic for firmware update procedure.

Tx Battery Hot

If the transmitter battery does not cool off, the transmitter will shut down. Let the device cool down and then consider swapping the transmitter battery to continue operation.

Identify any possible external heat sources to the transmitter and operate the transmitter away from those external heat sources.

All batteries should be stored and operated away from external heat sources in reasonable temperature conditions for best performance.

Radio Frequency (RF)

RF LEDs

If neither blue RF Diversity LED is illuminated, then the receiver is not detecting the presence of a transmitter.

The orange RF Signal Strength LEDs indicate the amount of RF power being received. This signal could be from the transmitter, **or it could be from an interfering source, such as a television broadcast**. If more than two of the orange RF LEDs are still illuminated while the transmitter is off, then that channel may be experiencing interference, and you should try a different channel.

The red RF LED indicates RF overload. Overloads have the potential to cause interference in multiple system installations. If you are experiencing an overload, turn off the receiver to see if it is causing interference with other components.

The numerical channel select button also turns red to indicate interference.

- Dim red = Channel is not selected, experiencing interference
- Bright red = Channel is selected, experiencing interference

Compatibility

- Perform a Scan and Sync to ensure the transmitter and receiver are set to the same group and channel.
- Look at the band label on the transmitter and make sure the receiver is set to the same band.

Reducing Interference

- Perform a group or channel scan to find the best open frequency. Perform a sync to transfer the setting to the transmitter.
- For multiple systems, check that all systems are set to channels in the same group (systems in different bands do not need to be set to the same group).
- Maintain a line of sight between transmitter and receiver antennas.
- Move or point receiver antennas away from metal objects or other sources of RF interference (such as LED walls, computers, digital effects, network switches, network cables and Personal Stereo Monitor (PSM) wireless systems).
- Eliminate RF overload (see below).

Increasing Range

If the transmitter is more than 6 to 60 m (20 to 200 ft) from the receiver antenna, you may be able to increase range by doing one of the following:

- Reduce interference (see above).
- Increase transmitter RF power level.
- Use Normal mode instead of High Density mode.
- Use an active directional antenna, antenna distribution system, or other antenna accessory to increase RF range.

Eliminating RF Overload

If you see the red RF LED on a receiver, try the following:

- Reduce the transmitter RF power level
- Move the transmitter further away from the receiver—at least 6 m (20 ft)
- If you are using active antennas, reduce antenna or amplifier gain.
- Use omnidirectional antennas

Antenna Faults

The Antenna Fault red LED indicates a short circuit condition or excessive load at an antenna port.

- Check antennas and cables for damage
- Ensure that antenna ports are not overloaded
- Check antenna bias voltage setting. Turn off voltage if using passive antennas.

Clean Battery Contacts

Clean the battery contacts with an electrical contact cleaner designed for gold contacts and safe on plastics.

Contact Customer Support

Didn't find what you need? Contact our customer support to get help.

Specifications

Mic Offset Range

-12 to 21 dB (in 1 dB steps)

Battery Type

Shure SB910 Rechargeable Li-Ion

Battery Runtime

@ 10 mW

Shure SB910	up to 10 hours

Dimensions

91 mm x 68 mm x 19 mm (3.6 in. x 2.7 in. x 0.8 in.) H x W x D

Weight

142 g (5.0 oz.), Without Battery

Housing

Aluminum

Operating Temperature Range
-18°C (0°F) to 45°C (113°F)

Note: Battery characteristics may limit this range.

Storage Temperature Range
-29°C (-20°F) to 74°C (165°F)

Note: Battery characteristics may limit this range.

Audio Input

Connector
4-Pin male mini connector (TA4M) or Lemo Connector

Configuration
Unbalanced

Impedance

4-Pin male mini connector (TA4M)	910 kΩ
Lemo Connector	8.2 kΩ

Maximum Input Level
1 kHz at 1% THD

Pad Off	8.5 dBV (7.5 Vpp)
Pad On	20.5 dBV (30 Vpp)

Preamplifier Equivalent Input Noise (EIN)
System Gain Setting ≥ +20

-120 dBV, A-weighted, typical

RF Output

Antenna Type
UHF 1/4 wave

Connector Type
SMA

Impedance
50 Ω

Occupied Bandwidth
<200 kHz

Channel-to-Channel Spacing

Standard Mode	350 kHz

High Density Mode	125 kHz

varies by region

Modulation Type

Shure Axient Digital Proprietary

Power

2 mW, 10 mW, 40 mW

See Frequency Range and Output Power table, varies by region

Specific Absorption Rate (SAR)

< 0.39 W/kg

ShowLink

Network Type

IEEE 802.15.4
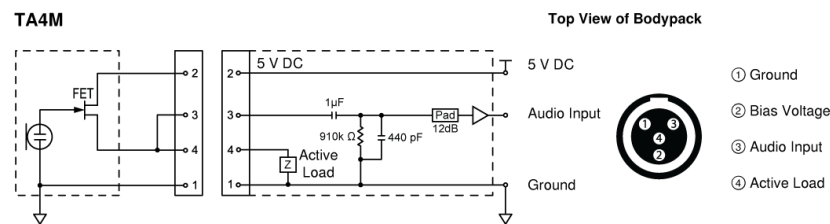
Antenna Type

Zigbee Dual Conformal

Frequency Range

2.40 to 2.4835 GHz (16 channels)

RF Output Power

10 dBm (EIRP)

varies by region

Input Connector Diagrams

TA4M

LEMO

LEMO   **Top View of Bodypack**
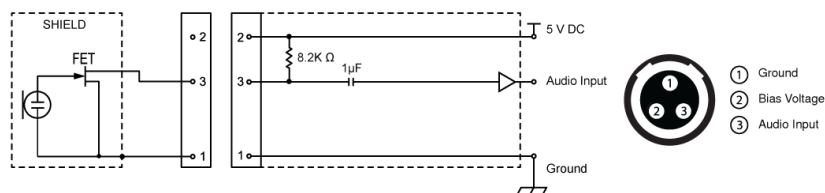
Frequency Range and Transmitter Output Level

Band	Frequency Range (MHz)	Tx RF Power (mW)***
G53	470 to 510	2/10/40
G54	479 to 565	2/10/20
G55†	470 to 636	2/10/40
G56◇	470 to 636	2/10/40
G57△	470 to 616*	2/10/40
G62	510 to 530	2/10/40
H54	520 to 636	2/10/40
K53†^	606 to 698	2/10/40
K54△	606 to 663**	2/10/40
K55	606 to 694	2/10/40
K56	606 to 714	2/10/40
K57^	606 to 790	2/10/40
K58	622 to 698	2/10/40
L54^	630 to 787	2/10/40
L60	630.125 to 697.875	2/10/40
P55	694 to 703, 748 to 758, 803 to 806	2/10/40
R52^	794 to 806	10
JB	806 to 810	2/10
X55	941 to 960	2/10/40
X56	960 to 1000	2/10/40

*With a gap between 608 to 614 MHz.

**With a gap between 608 to 614 MHz and a gap between 616 to 653 MHz.

***Power delivered to the antenna port.

†Operation mode varies according to region. In Brazil, High Density mode is used. The maximum power level for Peru is 10mW.

△Output power limited to 10 mW above 608 MHz.

◇Korea defines power as conducted (ERP) which is 1dB less then declared in table.

^No longer in production for ADX1

K55 606–694 MHz

Country Code Code de Pays Codice di paese Código de país Länder-Kürzel	Frequency Range Gamme de frequences Gamme di frequenza Gama de frequencias Frequenzbereich
A, B, BG, CH, CY, CZ, D, DK, EST, F	*
FIN, GB, GR, H, HR, I, IRL, IS, L, LT	*
M, N, NL, P, PL, RO, S, SK, SLO, TR	*
all other countries	*

* This equipment may be capable of operating on some frequencies not authorized in your region. See Licensing Information.

G53 470–510 MHz

Country Code Code de Pays Codice di paese Código de país Länder-Kürzel	Frequency Range Gamme de frequences Gamme di frequenza Gama de frequencias Frequenzbereich
A, B, BG, CH, CY, CZ, D, EST, F, GB, GR, H, I, IS, L, LT, NL, P, PL, S, SK, SLO, DK, FIN, M, N, HR, E, IRL, LV, RO, TR	*
UK	*
all other countries	*

* This equipment may be capable of operating on some frequencies not authorized in your region. See Licensing Information.

G54 479–565 MHz

Country Code Code de Pays Codice di paese Código de país Länder-Kürzel	Frequency Range Gamme de frequences Gamme di frequenza Gama de frequencias Frequenzbereich
A, B, BG, CH, CY, CZ, D, EST, F, GB, GR, H, I, IS, L, LT, NL, P, PL, S, SK, SLO, DK, FIN, M, N, HR, E, IRL, LV, RO, TR	*
UK	*
all other countries	*

* This equipment may be capable of operating on some frequencies not authorized in your region. See Licensing Information.

G56 470–636 MHz

Country Code Code de Pays Codice di paese Código de país Länder-Kürzel	Frequency Range Gamme de frequences Gamme di frequenza Gama de frequencias Frequenzbereich
A, B, BG, CH, CY, CZ, D, DK, EST, F	*
FIN, GB, GR, H, HR, I, IRL, IS, L, LT	*
M, N, NL, P, PL, RO, S, SK, SLO, TR	*
all other countries	*

* This equipment may be capable of operating on some frequencies not authorized in your region. See Licensing Information.

No user-operated control of power, frequency, or other parameters are available beyond those specified in this operating manual.

Please follow your regional recycling scheme for batteries, packaging, and electronic waste.

Important Product Regulatory Information

Regulatory Information for Class B EMC Products

CE Notice

Hereby, Shure Incorporated declares that this product with CE Marking has been determined to be in compliance with European Union requirements.

The full text of the EU declaration of conformity is available at the following site: https://www.shure.com/en-EU/support/declarations-of-conformity.

UKCA Notice

Hereby, Shure Incorporated declares that this product with UKCA Marking has been determined to be in compliance with UKCA requirements.

The full text of the UK declaration of conformity is available at the following site: https://www.shure.com/en-GB/support/declarations-of-conformity.

UK Cybersecurity

UK SI 2023 NO. 1007 STATEMENT OF COMPLIANCE

Product Type: Relevant connectable products as defined by The Product Security and Telecommunications Infrastructure (Security Requirements for Relevant Connectable Products) Regulations 2023.

Manufacturer Statement: We, Shure Incorporated, certify and declare as manufacturer under our sole responsibility, that the above mentioned product(s) conform(s) to Schedule 2 of the essential requirements of the listed applicable United Kingdom Statutory Instruments (including their amendments) and the associated norms.

Information on how to report security issues: The latest version of Shure's Disclosure policy can be found at the following link: https://www.shure.com/en-GB/about-us/security

Security update periods: Shure provides support regarding hardware and software updates that continue the integral cyber security safety of Shure products up to 24 months after end of life (AEOL). For the full statement regarding Shure's product support policy, and information regarding products end of life status information can be found at the following link: https://www.shure.com/en-GB/about-us/security

Manufacturer:
Shure Incorporated 5800 Touhy Avenue
Niles, Illinois, 60714-4608 U.S.A.
Website: www.Shure.com.

Technical documentation is kept at:
Shure Incorporated, Corporate Global Compliance Engineering Division

UK Importer/Representative:
Shure UK Limited
Unit 2, The 10 Centre, Lea Road, Waltham Abbey, Essex, EN9 1AS, U.K.

Phone: +44 (0)1992 - 703058
Email: EMEAsupport@shure.de

On behalf of Manufacturer:

Chad Ayers

01 February 2024 Niles, Illinois

Senior Director, Global Compliance

FCC Notice

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 when the equipment is operated 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 with radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference with radio or television reception, which can be determined by turning the equipment off and on, you are encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the antenna of the radio/television receiver.
- Increase the separation between this equipment and the radio/television receiver.
- Plug the equipment into a different outlet so that the equipment and the radio/television receiver are on different power mains branch circuits.
- Consult a representative of Shure or an experienced radio/television technician for additional suggestions.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Notice: The FCC regulations provide that changes or modifications not expressly approved by Shure Incorporated could void your authority to operate this equipment.

For information regarding responsible party and other matters relating to FCC compliance, please contact Shure Incorporated, 5800 W. Touhy Avenue, Niles, Illinois 60714-4608 U.S.A. shure.com/contact

Canada, ISED Notice

Notice: The Industry Canada regulations provide that changes or modifications not expressly approved by Shure Inc. could void your authority to operate this equipment.

This Class B digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Regulatory Information for Wireless Products

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End user must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End user must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The portable device is designed to meet the requirements for exposure to radio waves established by the Federal Communications Commission (USA). These requirements set a SAR limit of 1.6 W/kg averaged over one gram of tissue. The highest SAR value reported under this standard during product certification for use when properly worn on the body/head. This equipment should be installed and operated with minimum distance 0 cm between the radiator and your body/head.

Industry Canada (IC) Notices

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

1. L'appareil ne doit pas produire de brouillage;
2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment. End user must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Cet équipement est conforme aux limites d'exposition aux rayonnements ISED établies pour un environnement non contrôlé. L'utilisateur final doit suivre les instructions spécifiques pour satisfaire les normes. Cet émetteur ne doit pas être co-implanté ou fonctionner en conjonction avec toute autre antenne ou transmetteur.

This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment. This equipment could be installed and operated with minimum distance 0 cm between the radiator and your body. End user must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The portable device is designed to meet the requirements for exposure to radio waves established by the ISED. These requirements set a SAR limit of 1.6 W/kg averaged over one gram of tissue. The highest SAR value reported under this standard during product certification for use when properly worn on the body/head.

Cet équipement est conforme aux limites d'exposition aux rayonnements ISED établies pour un environnement non contrôlé. Cet équipement peut-être installé et utilisé avec une distance minimale de 0 cm entre le radiateur et votre corps. L'utilisateur final doit suivre les instructions spécifiques pour satisfaire les normes. Cet émetteur ne doit pas être co-implanté ou fonctionner en conjonction avec toute autre antenne ou transmetteur.

Le dispositif portatif est conçu pour répondre aux exigences d'exposition aux ondes radio établie par le développement énergétique DURABLE. Ces exigences un SAR limite de 1,6 W/kg enmoyenne pour un gramme de tissu. La valeur SAR la plus élevée signalée envertu de cette norme lors de la certification de produit à utiliser lorsqu'il est correctement porté sur les corps/tête.

Additional Canadian information on RF exposure also can be found at the following Web address: http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf08792.html

ANATEL Notice

Este equipamento não tem direito à proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados. Para maiores informações, consulte o site da ANATEL – http://www.anatel.gov.br.

IFETEL Notice

La operación de este equipo está sujeta a las siguientes dos condiciones: (1) es posible que este equipo o dispositivo no cause interferencia perjudicial y (2) este equipo o dispositivo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operación no deseada.

KCC Notice

해당 무선설비는 전파혼신 가능성이 있으므로 인명안전과 관련된 서비스는 할 수 없음

NBTC Notice

เครื่องโทรคมนาคมและอุปกรณ์นี้มีความสอดคล้องตามมาตรฐานหรือข้อกำหนดทางเทคนิคของ กสทช.

NCC Notice

Connection and use of this communications equipment is permitted by the Nigerian Communications Commission.

NCC Notice

低功率射頻器材技術規範

取得審驗證明之低功率射頻器材，非經核准，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。低功率射頻器材之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前述合法通信，指依電信管理法規定作業之無線電通信。低功率射頻器材須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

614MHz-703MHz: 使用頻段供其他通訊業務使用時，器材應即停止使用

SRRC Notice

（一）本产品符合"微功率短距离无线电发射设备目录和技术要求"的具体条款和使用场景；

（二）不得擅自改变使用场景或使用条件、扩大发射频率范围、加大发射功率（包括额外加装射频功率放大器），不得擅自更改发射天线；

（三）不得对其他合法的无线电台（站）产生有害干扰，也不得提出免受有害干扰保护；

（四）应当承受辐射射频能量的工业、科学及医疗（ISM）应用设备的干扰或其他合法的无线电台（站）干扰；

（五）如对其他合法的无线电台（站）产生有害干扰时，应立即停止使用，并采取措施消除干扰后方可继续使用；

（六）在航空器内和依据法律法规、国家有关规定、标准划设的射电天文台、气象雷达站、卫星地球站（含测控、测距、接收、导航站）等军民用无线电台（站）、机场等的电磁环境保护区域内使用微功率设备，应当遵守电磁环境保护及相关行业主管部门的规定。

Environmental Regulatory Information

Waste Electrical and Electronic Equipment (WEEE) Directive

In the European Union and the United Kingdom, this label indicates that this product should not be disposed of with household waste. It should be deposited at an appropriate facility to enable recovery and recycling.

Registration, Evaluation, Authorization of Chemicals (REACH) Directive

REACH (Registration, Evaluation, Authorization of Chemicals) is the European Union (EU) and the United Kingdom (UK) chemical substances regulatory framework. Information on substances of very high concern contained in Shure products in a concentration above 0.1% weight over weight (w/w) is available upon request.

Recycling Information

Please consider the environment, electric products and packaging are part of regional recycling schemes and do not belong to regular household waste.

中国 RoHS

部件名称	有害物质					
	铅	汞	镉	六价铬	多溴联苯	多溴二苯醚
电路模块	X	○	○	○	○	○
金属组件	X	○	○	○	○	○
线缆及其组件	X	○	○	○	○	○
外壳	○	○	○	○	○	○
电源适配器*	X	○	○	○	○	○
电池组*	X	○	○	○	○	○

本表格依据 SJ/T11364 的规定编制。
O：表示该有害物质在该部件所有均质材料中的含量均在 GB/T26572 规定的限量要求以下。
X：表示该有害物质至少在该部件某一均质材料中的含量超出 GB/T26572 规定的限量要求。
注：本产品大部分的部件采用无害的环保材料制造，含有有害物质的部件皆因全球技术发展水平的限制而无法实现有害物质的替代。
*:表示如果包含部分

Battery Regulatory Information

EU and UK Battery Directive

In the European Union and the United Kingdom, this label indicates that the batteries in this product should be collected separately and not be disposed of with household waste. Substances in batteries can have a potential negative impact on health and environment and you have a role in recycling waste batteries thus contributing to the protection, preservation, and improvement of the quality of the environment. You should contact your local authority or retailer for details of the collection and recycling schemes available.

Note: There is no mercury content in the product.

Certifications

FCC ID: DD4ADX1G57S, DD4ADX1K54S, DD4ADX1X55S. **IC**: 616A-ADX1K57S, 616A-ADX1X54S.