# ADPSM

## Wireless Personal Monitor System

Manual for Shure Axient Digital PSM system. Operational presets, RF coordination, ShowLink networking, firmware updates and more for ADXR, ADTQ / ADTD, AD8C, SBC441, and AD221.

Version: 0.3 (2025-B)

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# Wireless Personal Monitor System

# 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.

# Important Safety Information

## Products with AC Adapters

1. Use only AC adapter that is provided with your product.
2. If this product is powered by an AC adapter other than the AC adapter that comes with your product, it could result in personal injury and/or product failure.

## Safety Information for Batteries

1. Battery packs may explode or release toxic materials. Risk of fire or burns. Do not open, crush, modify, disassemble, heat above 140°F (60°C), or incinerate.
2. Follow instructions from manufacturer
3. Only use Shure charger to recharge Shure rechargeable batteries

   **WARNING:**

   Danger of explosion if battery incorrectly replaced. Replace only with same or equivalent type.

   Do not dispose of the battery along with household waste. Check with local vendor for proper disposal of used battery packs.

4. Never put batteries in mouth. If swallowed, contact your physician or local poison control center
5. In the event of a cell leaking, do not allow the liquid to come in contact with the skin or eyes. If contact has been made, wash the affected area with copious amounts of water and seek medical advice.
6. Do not short circuit; may cause burns or catch fire
7. Do not charge or use battery packs other than Shure rechargeable batteries
8. Batteries (battery pack or batteries installed) shall not be exposed to excessive heat such as sunshine, fire or the like
9. Do not immerse the battery in liquid such as water, beverages, or other fluids.
10. Do not attach or insert battery with polarity reversed.
11. Keep away from small children.
12. Do not use abnormal batteries.
13. Pack the battery securely for transport.

**Note:** Use only with the included power supply, batteries, or a Shure-approved equivalent.

## Storing Batteries

If batteries are to be stored for more than eight days, they should be placed into a temperature controlled storage area. Recommended battery storage temperature is 10 to 25°C (50 to 77°F).

Additional battery storage information is available at shure.com/battery-storage.

# Important Safety Instructions for Listening and IEM Products

1. If water or other foreign objects enter the inside of the device, fire or electric shock may result.
2. Do not attempt to modify this product. Doing so could result in personal injury and/or product failure.
3. Do not use when a failure to hear your surroundings could be dangerous, such as while driving, or when biking, walking, or jogging where traffic is present and accidents could occur.
4. Keep this product and its accessories out of reach of children. Handling or use by children may pose a risk of death or serious injury. Contains small parts and cords that may pose risk of choking or strangulation.
5. Prior to inserting the earphone, always recheck the sleeve to make sure it is firmly attached to the nozzle to decrease the risk of sleeves detaching from the nozzle and becoming lodged in your ear. If a sleeve becomes lodged in your ear, seek professional medical assistance to remove the sleeve.
6. Stop using the earphones/headphones and consult a medical professional if you experience irritation, excessive wax buildup, or other discomfort.

**CAUTION**

- Never disassemble or modify the device, as failures may result.
- Do not subject to extreme force and do not pull on the cable or failures may result.
- Keep the earphone dry and avoid exposure to extreme temperatures and humidity.
- If you are currently receiving ear treatment, consult your physician before using this device.

**WARNING:**

Use, clean, and maintain earphones according to manufacturer’s instructions

High sound pressure

Hearing damage risk

To prevent possible hearing damage, do not listen at high volume levels for long periods.

## WARNING FOR IN-EAR-MONITORS (IEM product_ONLY)

This device is able to produce sound volume higher than 85 dB SPL. Please check your maximum allowed continuous noise exposure level based on your national employment protection requirements.

## WARNING:

**LISTENING TO AUDIO AT EXCESSIVE VOLUMES CAN CAUSE PERMANENT HEARING DAMAGE. USE AS LOW A VOLUME AS POSSIBLE.** Over exposure to excessive sound levels can damage your ears resulting in permanent noise-induced hearing loss (NIHL). Please use the following guidelines established by the Occupational Safety Health Administration (OSHA) on maximum time exposure to sound pressure levels before hearing damage occurs.

| | | | |
|---|---|---|---|
| **90 dB SPL**<br>**at 8 hours** | **95 dB SPL**<br>at 4 hours | **100 dB SPL**<br>at 2 hours | **105 dB SPL**<br>at 1 hour |
| **110 dB SPL**<br>**at ½ hour** | **115 dB SPL**<br>at 15 minutes | **120 dB SPL**<br>Avoid or damage may occur | |

# What is Axient® Digital PSM®?

Axient Digital PSM portable wireless monitor systems provide pristine RF signal and audio quality, ideally suited for the demands of professional touring and live sound applications. Pair your ADXR portable wireless receiver with an ADTQ or ADTD quad or dual transmitter; connect your devices to your ShowLink™ network via an AD610 access point; expand your system using AD8C or AD221 antenna combiners.

# Features

## RF

- Selectable transmission modes that include multi-channel wideband, narrowband, and Analog FM mode
  - **Multi-Channel Wideband** - Achieve greater spectral efficiency with Shure WMAS innovation[1]
  - **Narrowband** - Access more RF output power for even better range performance with traditional narrowband wireless technology
  - **Analog FM** - Achieve ultra-low latency performance with updated hybrid technology that combines high quality digital audio with traditional analog RF
- Optional spatial diversity available for enhanced coverage
- Optional internal antenna combining at reduced RF output power
- Wide tuning bandwidth[2]

[1] Software enabled availability of WMAS is region dependent

[2] Tuning bandwidth specifications are region dependent

## Audio

- Analog and digital audio inputs (Analog, AES3, Dante™, AES67)
- Front panel connection for headphones with adjustable volume

### I/O

- XLR and 1/4" combo connectors (switchable analog/AES)
- Two Dante-enabled Ethernet ports, two network control Ethernet ports with PoE
  - Split-Redundant mode: two ports of Ethernet, two ports of Dante
  - Switched mode: four ports of Ethernet, Four ports of Dante

  **Note:** The transmitter can only power 1 PoE device at a time.

- Locking AC power connection
- AC power cascade to additional components
- Optional DC module available to support redundant power

## ADXR Bodypack Receiver Overview

### ① RF Antenna

For RF signal.

### ② OLED 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, or SB913A battery sled.

### ⑤ Battery Door

Latching door to secure battery.

### ⑥ Infrared (IR) Port

Align with the transmitter IR port during an IR Sync.

### ⑦ Battery Charging Contacts

Charging contacts for use with docking battery chargers.

### ⑧ SMA Connector

Connection point for RF antenna.

### ⑨ Power / Volume Control

When the receiver is off, turn the knob clockwise until it clicks to power on. Use knob to adjust the headphone volume. Turn and click counterclockwise to power off.

### ⑩ RF LED

Blue LED indicates RF connection.

### ⑪ Power Status LED

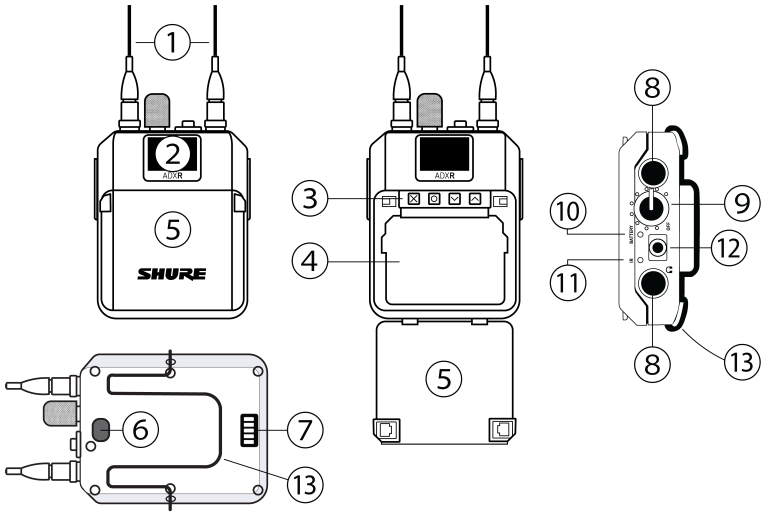
- Off = unit is powered off
- Green = unit is powered on with sufficient battery
- Red = unit is powered on, battery is low, or battery error

### ⑫ Headphone Jack

⅛" jack with locking thread and headphone detection.

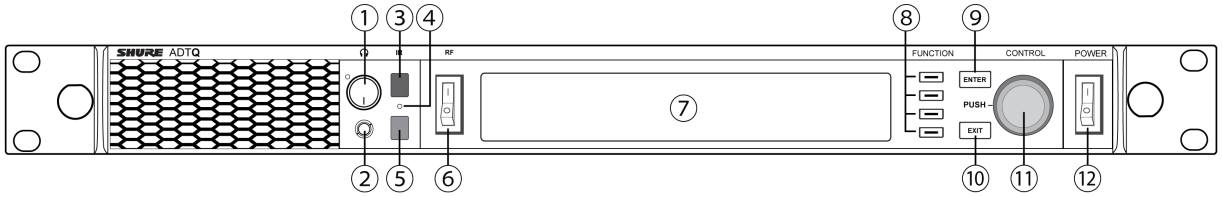
### ⑬ Belt Clip

Removable belt clip, reversible for inverted orientation.




# ADTQ Quad and ADTD Dual Transmitter Overview

## Transmitter Front Panel




### ① Headphone Volume Knob

Controls headphone volume for the selected channel. Clip indicator warns of signal overload or limiter engagement.

### ② Monitor Jack

⅛" (3.5 mm) output jack.

### ③ Infrared (IR) Sync Window

Align with IR window on the bodypack to sync.

### ④ Infrared (IR) Sync LED

The LED will turn red when the transmitter and receiver are correctly aligned for IR sync.

### ⑤ Ambient Light Sensor

Automatically detects external lighting conditions.

### ⑥ RF  Switch

Toggles RF mute to prevent transmission of audio by suppressing the RF signal.

### ⑦ Display

Displays settings and status.

### ⑧ Function Buttons

Press to access editing and configuration options. The buttons are named F1, F2, F3, F4 (from top to bottom) and illuminate to when editing options are available.

### ⑨ ENTER Button

Press to save changes.

### ⑩ EXIT Button

Press to cancel changes and return to main menus.

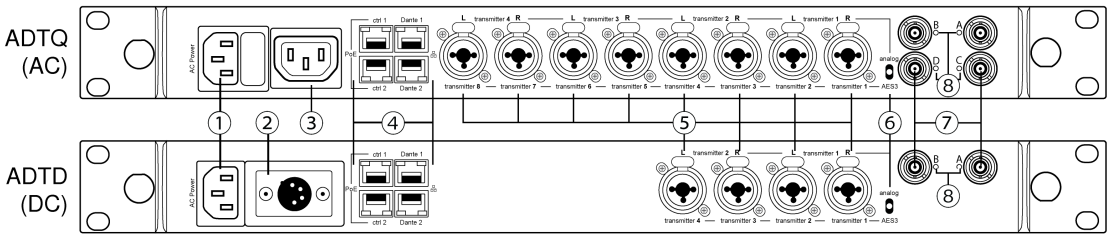
### ⑪ Control Wheel

- Push to enter a menu
- Push to select a channel or menu item
- Turn to scroll through menu items or to edit a parameter value

### ⑫ Power Switch

Powers the unit on or off.

## Transmitter Back Panel




### ① AC Power Input

IEC locking connector, 100 - 240 V AC.

### ② DC Power Input

DC module version available to support redundant power supplies.

### ③ AC Power Cascade

AC module version uses IEC extension cables to loop power through multiple devices.

### ④ Ethernet Ports

Four Ethernet ports carry the following signals:

- ctrl 1: Network control
- ctrl 2: Network control
- Dante Primary: Dante digital audio
- Dante Secondary: Dante digital audio

Network Status LEDs:

- Off: no network link
- On green: network link active
- Flashing green: network link active, rate corresponds to traffic volume
- Flashing amber: indicates the connection is 1 Gbps, rate corresponds to traffic volume

### ⑤ Audio Inputs

Connect to balanced or unbalanced outputs. Use either jack for mono input. Accepts male XLR or 6.35 mm (¼") TRS plugs.

### ⑥ Rear Input Switch

Analog or AES3 digital transmission.

### ⑦ Coaxial inputs

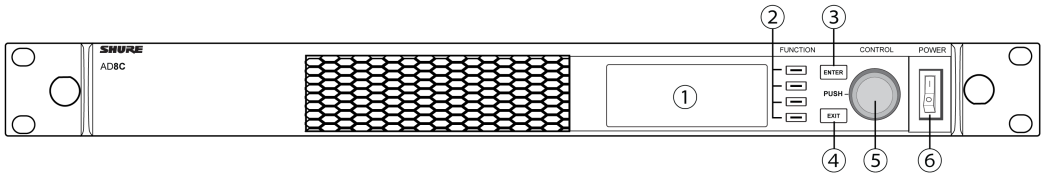
RF connection for antennas.

### ⑧ Status LED

Green LED indicates the antenna is configured for transmitting.

# AD8C Antenna Combiner Overview

## Front Panels




### ① Display

View and configure device settings.

### ② Function Buttons

Press to access editing and configuration options. The buttons are named F1, F2, F3, F4 (from top to bottom) and illuminate to when editing options are available.

### ③ ENTER Button

Press to save changes.

### ④ EXIT Button

Press to cancel changes and return to main menus.

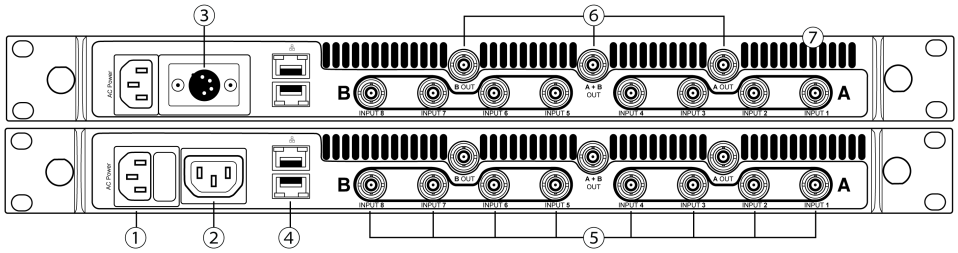
### ⑤ Control Wheel

- Push to enter a menu
- Push to select a menu item
- Turn to scroll through menu items or to edit a parameter value

### ⑥ Power Switch

Powers the unit on or off.

## Rear Panels




### ① AC Power Input

IEC locking connector, 100 - 240 V AC.

### ② AC Power Cascade

AC module version uses IEC extension cables to loop power through multiple devices.

### ③ DC Power Input

DC module version available to support redundant power supplies.

### ④ Ethernet Ports

Two RJ45 ports carry network control signals.

Network Status LEDs:

- Off: no network link
- On green: network link active
- Flashing green: network link active, rate corresponds to traffic volume
- Flashing amber: indicates the connection is 1 Gbps, rate corresponds to traffic volume

### ⑤ RF Inputs

Connect up to 8 transmitter outputs.

### ⑥ Antenna Outputs

Connect any Shure passive antenna that matches the RF operating range of the transmitter.

### ⑦ Exhaust Air Vents

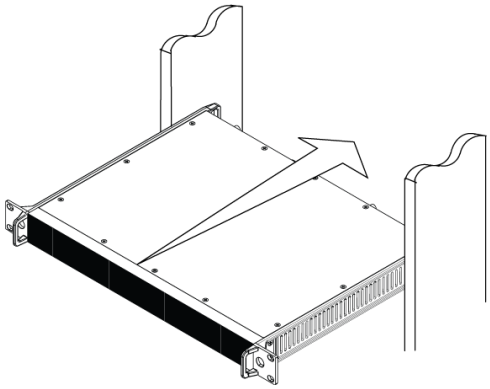
For system cooling.

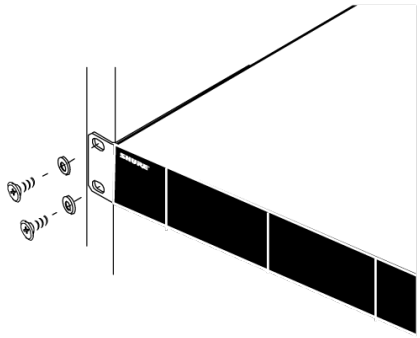
# System Set Up

## Mounting Instructions

This component is designed to fit into an audio rack.

Warning: To prevent injury this apparatus must be securely attached to the rack.



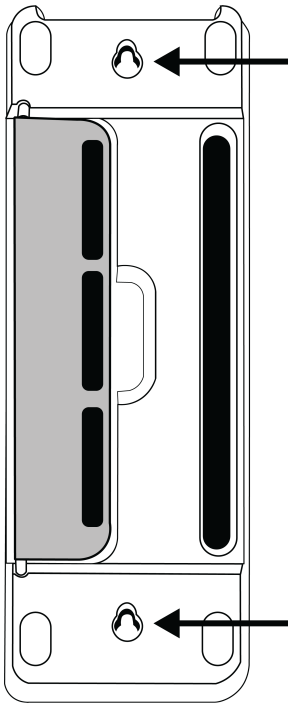


### Rack Mount Instructions

- If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Keep the rack environment temperature at or below the maximum ambient temperature (Tma) specified by the manufacturer of the installed equipment.
- Provide the proper amount of air flow inside the rack as required for safe operation of the equipment.
- Do not create a hazardous condition by mounting the equipment in the rack with an uneven mechanical load.
- When connecting the equipment to the supply circuit, consider the effect that overloading of the circuits might have on over-current protection and supply wiring. Consider all equipment nameplate ratings when addressing this concern.
- Maintain reliable earthing of rack-mounted equipment. Give particular attention to indirect supply connections to the branch circuit (e.g., power strips).

## Vertical Mounting

Two keyhole mounting points on the bottom of the charger fit #6 round or pan head screws. Mount to a hard surface using 2 screws that are long enough to secure the charger.



**Warning:** Only charge SB910 batteries in charger when charger is mounted vertically. Do not charge receivers in vertical installations.

# Firmware Updates

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, new versions of the firmware can be uploaded and installed using the Shure Update Utility (SUU). Download the SUU from https://www.shure.com/en-US/products/software/shure_update_utility.

Perform the following steps to update the firmware:

**CAUTION!** Ensure the device has a stable network connection during the update. Do not turn off the device until the update is complete.

1. Connect the device and computer to the same network (set to the same subnet).
2. Open the SUU application.
3. Click the Updates button at the top of the window to open the Download Manager.

   ***Note:*** *This button will be labeled either* "Check for updates..." *or* "[#] updates available"

4. From the Download Manager, select the desired firmware versions.

   **Tip:** The dropdown in the upper right allows you to quickly Select: All or Select: None.

5. Click Download, and then Close the Download Manager. Downloaded firmware is listed and can be viewed and managed in the Firmware tab.
6. From the Update Devices tab, select the new firmware and press Send Updates to begin the firmware update, which overwrites the existing firmware on the device.

To update portable device firmware, download and install the latest firmware version on the rack device, including the hosted firmware for ADXR. Open the Device menu, select Rx Firmware Update, and align the RF windows on the transmitter and receiver to transfer the firmware update to the bodypack.

## Firmware Versions and Compatibility

The firmware of all Shure devices has the form of MAJOR.MINOR.PATCH.BUILD (e.g., 1.2.14.0). To ensure interoperability, all rack and portable components from the same model family should be updated to the same MAJOR and MINOR firmware version numbers (e.g., 1.2.x.x).

# Radio Frequency (RF) Settings

## Groups & Channels

A wireless audio channel is formed when a receiver and transmitter are tuned to the same frequency. To minimize interference, Shure wireless systems organize RF bands into predefined **groups** and **channels**. A group is a set of compatible frequencies within a frequency band. A single frequency within a group is a channel. Tune a receiver and transmitter to the best available channel within its group to set up your system.

Use a frequency scan to analyze the RF environment for interference and identify available frequencies. There are three types of scan:

- **Spectrum Scan:** Scan the full RF spectrum for potential sources of interference. From the bodypack menu, select `RADIO` > `SPECTRUM SCAN`. Press RUN SCAN to initiate a full scan. Press SPECTRUM to view full results in a graphical display.
- **Channel Scan:** Find the best available groups and channels in your RF envrionment. After deploying spectrum scan data, initiate a channel scan from the transmitter.
- **Group Scan:** Finds the group with the greatest number of available channels. (Each group contains a set of frequencies that are compatible when operating multiple systems in the same environment.) After deploying spectrum scan data, initiate a group scan from the transmitter.

When performing a frequency scan:

- **Turn off** the RF on the transmitters for the systems you are setting up. (This prevents them from interfering with the frequency scan.)
- **Turn on** potential sources of interference such as other wireless systems or devices, computers, CD players, large LED panels, effects processors, and digital rack equipment so they are operating as they would be during the presentation or performance (so the scan will detect and avoid any interference they generate).

### Spectrum Scan

An ADXR can scan the available wireless spectrum, identifying available frequencies and providing a visual overview. To view the results of the spectrum scan on the transmitter, and determine and deploy the best Group and Channel options for your configuration, open the transmitter's Channel or Carrier menu and select `Spectrum Scan` > `Group Scan` > `Sync Scan from ADXR`.

# Viewing Spectrum Data

## From the Bodypack Receiver

MAIN MENU > RADIO > SPECTRUM SCAN > RECALL

- Adjust the cursor position using the ▼▲ keys.
- Press O to open the Functions menu and set the zoom or run a new scan.
- Press X exit the spectrum scan.

## From the Rack Transmitter

After performing a spectrum scan on the receiver, open the transmitter's Radio menu and select Spectrum Scan > Sync Scan from ADXR. Align the IR windows between the transmitter and the receiver so that the IR LED illuminates.

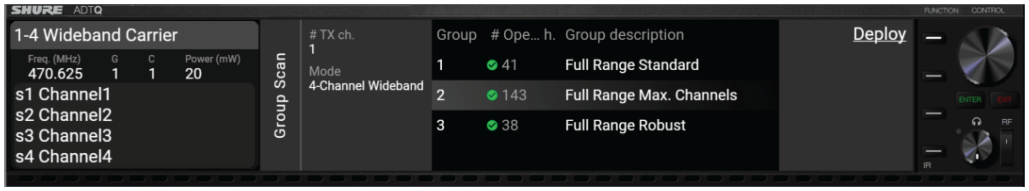
Use Spectrum Scan > View Scan to view the results in more detail:

- Push the control knob to open Scan Tools and select Cursor. Move the cursor using the control wheel.
- Frequency and power of signal at the cursor position is displayed at the top of the screen.
- Push the control knob to open Scan Tools and select Zoom. Use the control wheel to zoom in and out.

# Group Scan

Group scan automatically finds all available frequencies within a group. Available frequencies can be automatically deployed to transmitter channels and other networked components.

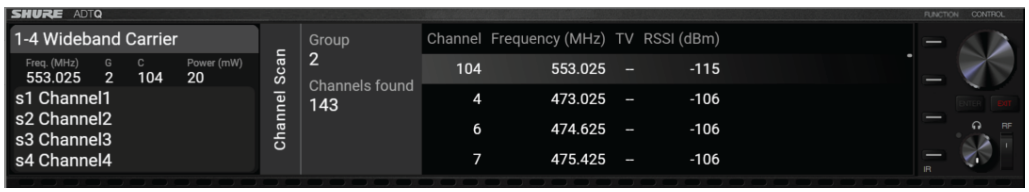
1. From the Channel or Carrier menu: Spectrum Scan > Group Scan.
2. Press Scan to analyze the available spectrum.
3. When the scan is complete, use the control wheel to select the group that best meets your needs.
4. Press Deploy to assign the frequencies in the selected group to components on the network.




# Channel Scan

Channel scan automatically scans a group to find available frequencies.

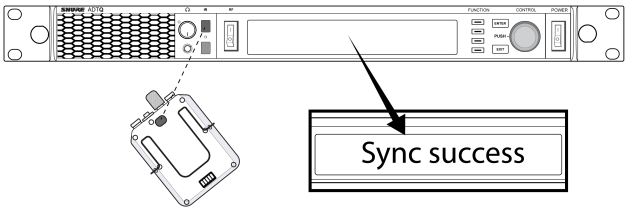
1. From the Channel or Carrier menu: Spectrum Scan > Channel Scan.
2. Use the control wheel to select a group, and press Scan to start.
3. When the scan is complete, use the control wheel to select a channel and press ENTER to confirm your frequency selection.



# Sync

Syncing establishes a link between a compatible transmitter and receiver to allow sharing of key data and RF audio.

Open the transmitter's Channel Settings menu and press the Sync function button. Align the IR windows between the transmitter and the receiver so that the IR LED illuminates. When complete, Sync Success appears on the transmitter.




Additional sync options are available on the transmitter under `Channel Settings` > `Sync Presets`.

## Programming Receivers Using Sync Presets

Configuring sync presets allow all receiver parameters to be automatically set from the transmitter during an IR sync.

Individual parameters can be configured in the Sync Presets menu. Each preset has the default value of No Change, which leave that setting unchanged by an IR sync.

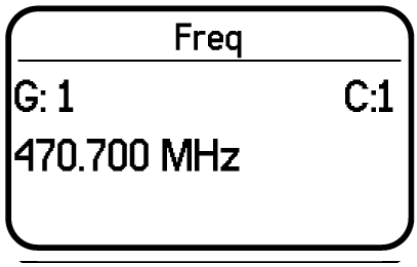
1. Select from the channel menu: Sync Presets
2. Use the control wheel to select and edit parameters from the preset list. Select No Change to keep existing settings.
3. Press ENTER to save.

# Setting the Frequency Manually on the ADXR

The ADXR can be manually tuned to a specific group, channel, or frequency. In wideband transmission modes, the subchannel index can also be set manually.

**Note:** When an ADXR is linked, manual frequency updates must be made on the transmitter.

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.



# Requesting a New Frequency from a Spectrum Manager

When you have assigned a Spectrum Manager as a frequency server for the transmitter, you can use the New Frequency menu option to quickly change to a clear frequency. The New Frequency option is only available when you have assigned a Spectrum Manager as a frequency server for the transmitter.

**Note:** The new frequency is automatically shared to any linked, active portable devices. All others must be manually updated or synched.

1. Navigate to a channel menu, and then select New Frequency.
2. Select ENTER to get a new frequency from the Spectrum Manager.

# Assigning Receivers to Receiver Slots

Each transmitter contains 8 slots where receivers can be linked. The transmitter will keep key settings, such as frequency, channel name, and device ID, for each linked receiver. Use the ADTD/Q menu to view detailed status and make changes to the receiver settings remotely.

From the Channel menu, select Receivers and use the control wheel to select a slot.

- Unlink: Remove the assigned receiver from the selected slot.
- Browse: Scan available devices on the ShowLink network to assign to the selected slot.
- Sync (No Link): IR sync channel name, frequency, sync presets and encryption key without assigning to a receiver slot.
- Sync: IR sync and assign the receiver to the selected slot.

# Channel Quality Meter

The home screen displays a channel quality meter, providing a visual indicator of the signal-to-noise ratio of the RF signal. When the RF signal is strong with a low level of noise, all five segments of the meter are filled.

If the noise ratio increases, the fewer segments are displayed. Low levels of channel quality provide an early warning of potential problems, allowing you to switch to a clear frequency.

# RF System Gain

The RF System Gain monitor displays the calculated RF output power, post external combiners, as RF power and connections to external combiners are adjusted. Transmitters provide additional power based on the RF power level and operational preset to compensate for passive combiner loss.

# RF Mute

RF mute prevents transmission of the audio by suppressing the RF signal. Set this using the RF switch on the transmitter's front panel:

- I: RF signal is active
- O: RF signal is disabled

# Squelch

In Analog FM transmission modes, Squelch mutes audio output from the bodypack when the RF signal becomes noisy. While squelch is activated, the blue LED on the bodypack turns off.

For most installations, squelch does not need adjustment, and it keeps the performer from hearing hiss or noise bursts if the RF signal becomes compromised. However, in congested RF environments or in close proximity to sources of RF interference (such as large LED video panels), the squelch may need to be lowered to prevent excessive audio dropouts. With lower squelch settings, the performer may hear more noise or hiss, but will experience fewer audio dropouts.

**Important:** Before lowering squelch, first try to eliminate the problem by finding the best set of frequencies for your installation and removing potential sources of interference.

**Caution:** Turning off or lowering the squelch setting can increase the noise level and cause discomfort to the performer:

- Do not lower the squelch setting unless absolutely necessary.
- Turn earphone volume to the lowest setting before adjusting squelch.
- Do not change the squelch setting during a performance.
- Turn up the transmitter level setting to make noise or hiss less noticeable.

### Squelch Settings

| | |
|---|---|
| **HIGH (NORMAL)** | Default factory setting. |
| **MID** | Moderately decreases the signal-to-noise ratio required to squelch the receiver. |
| **LOW** | Greatly decreases the noise squelch threshold. |
| **PILOT ONLY** | Turns off noise squelch leaving only pilot squelch on. |
| **NO SQUELCH** | Turns off noise and pilot tone squelch. (Sometimes used as a debugging tool by monitor engineers or RF coordinators to "listen" to the RF environment.) |

# Operational Presets

Axient Digital PSM transmitters offer different presets for RF transmission, spatial diversity, and internal antenna combining to provide the best configuration for your use case.

Operational presets are a device-level setting, meaning the transmitter uses the same parameters for all channels. However, you can combine different operational presets across multiple transmitter devices—for example, configuring one transmitter to use Narrowband, spatial diversity for optimal RF performance, and another transmitter in Multi-channel wideband to maximize overall channel count.

**Note:** Operational preset availability for Axient Digital PSM varies by region.

## Transmission Modes

### Multi-Channel Wideband

Digital transmission, where multiple stereo audio channels are supported on a single frequency for optimal spectral efficiency. Fewer active RF antenna ports per transmitter reduces external combiner needs, while fewer frequencies simplifies RF coordination and reduces intermodulation, improving the noise floor for the entire wireless configuration. Combine with spatial diversity for the best balance of RF signal quality and spectral efficiency.

Frequency updates affect all associated stereo audio channels, and RF output power is divided across each stereo subchannel.

### Narrowband

Digital transmission, where each stereo audio channel is supported by its own dedicated frequency. This allows carriers to squeeze into tight parts of available spectrum, and can increase overall broadcast distance. Combine with spatial diversity for the best RF performance.

Frequency updates only affect a single stereo audio channel.

## Analog FM

Analog transmission, where each stereo audio channel is supported by its own dedicated frequency. Analog FM offers comparable broadcast distance and lower latency compared to Narrowband, but also less spectral efficiency.

Frequency updates only affect a single stereo audio channel.

| | Multi-Channel Wideband | Narrowband | Analog FM |
|---|---|---|---|
| **Spectral Efficiency** | 28 channels per 6 MHz | 17 channels per 6 MHz | 9 channels per 6 MHz |
| **Latency** | 2.8 ms | 2.8 ms | 1.29 ms |
| **Spatial Diversity** | Yes | Yes | No |
| **Encryption** | Yes | Yes | No |

# Spatial Diversity

Spatial diversity improves overall RF performance, even when operating at lower RF output power. By employing two transmit antennas per audio channel, spatial diversity provides advance protection against multipath interference and RF noise for digital transmission modes.

In Narrowband transmission mode, spatial diversity reduces the number of available channels by half. Spatial diversity has no impact to the channel count density per transmitter in Multi-Channel Wideband transmission mode.

**Note:** Spatial diversity is intended only for systems using 2 transmit antennas. Single-antenna systems will experience a loss in RF output power at no benefit the overall RF performance.

# Internal Antenna Combining

Internal antenna combining allows multiple RF signals to be combined within the transmitter. For transmission modes with multiple RF frequencies per transmitter, such as narrowband or analog FM, choosing an operational preset that includes internal antenna combining consolidates all frequencies to a single RF output, reducing or eliminating the need for external combiners.

**Note:** Depending on region, transmitters with internal antenna combining enabled may operate at lower RF output power.

# Preset Diagrams

**Multi-channel wideband, spatial diversity**

*Provides the best balance between RF signal quality and spectral efficiency.*

**ADTQ:** 4 audio mixes on 1 carrier frequency output simultaneously across antennas: A, D

**ADTD:** 2 audio mixes on 1 carrier frequency output simultaneously across antennas: A, B


**Multi-channel wideband**

**ADTQ:** 4 audio mixes on 1 carrier frequency output on 1 antenna: A

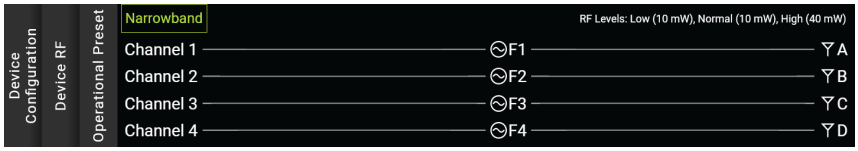
**ADTD:** 2 audio mixes on 1 carrier frequency output on 1 antenna: A


### Narrowband

*Offers increased broadcast distance.*

**ADTQ:** 4 audio mixes on 4 carrier frequencies output on antennas: F1 on A, F2 on B, F3 on C, F4 on D

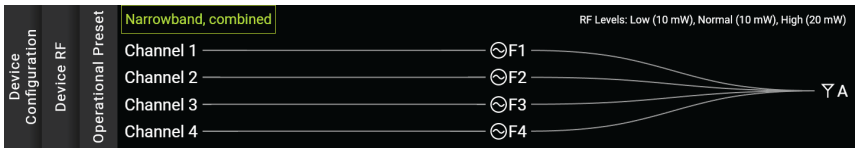
**ADTD:** 2 audio mixes on 2 carrier frequencies output on antennas: F1 on A, F2 on B




### Narrowband, combined

**ADTQ:** 4 audio mixes on 4 carrier frequencies output on antenna: A

**ADTD:** 2 audio mixes on 2 carrier frequencies output on antenna: A




### Narrowband, spatial diversity

*Allows best-quality RF performance, at the cost of half the total channel channel count per transmitter.*

**ADTQ:** 2 audio mixes on 2 carrier frequencies output simultaneously across 2 antennas: F1 on A, C, F2 on B, D

**ADTD:** 1 audio mix on 1 carrier frequencies output simultaneously across 2 antennas: A, B


### Narrowband, spatial diversity, combined

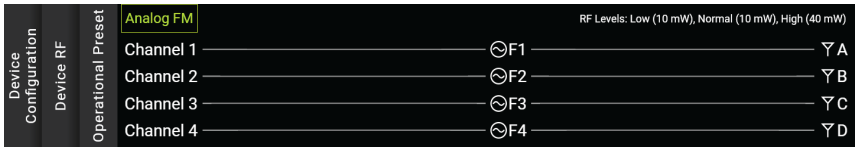
**ADTQ:** 2 audio mixes on 2 carrier frequencies output simultaneously across 2 antennas: A, D


### Analog FM

*Lower latency than Narrowband, but at the cost of spectral efficiency.*

**ADTQ:** 4 audio mixes on 4 carrier frequencies output on antennas: F1 on A, F2 on B, F3 on C, F4 on D

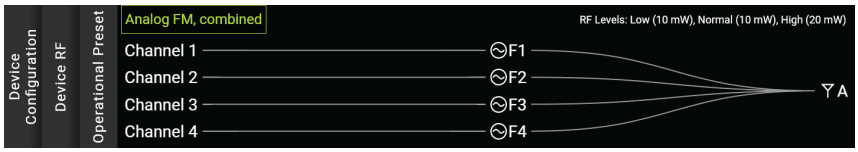
**ADTD:** 2 audio mixes on 2 carrier frequencies output on antennas: F1 on A, F2 on B




### Analog FM, combined

**ADTQ:** 4 audio mixes on 4 carrier frequencies output on antenna: A

**ADTD:** 2 audio mixes on 2 carrier frequencies output on antenna: A




# Combined System Diagrams

The AD8C antenna combiner passively combines RF outputs from multiple wireless IEM transmitters. It features selectable 1× (8:1) or 2× (4:1) combining, and automatically compensates for combiner loss by increasing power from ADTQ/ADTD transmitters.

**Note:** Digital wireless technology naturally minimizes intermods from multiple transmit antennas, compared to analog FM hardware. To optimize RF output power, use the AD8C's 4:1 mode when logistically possible.

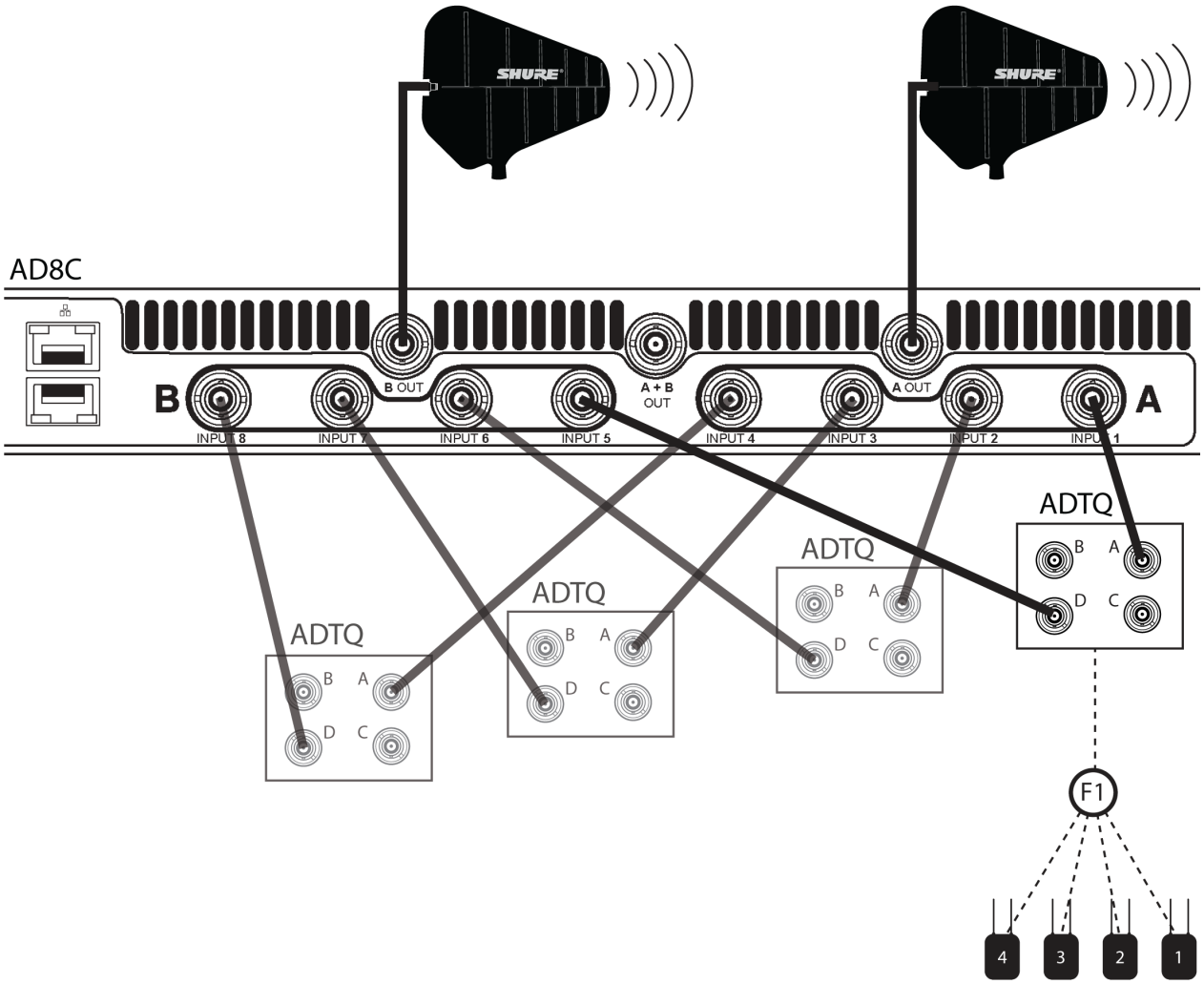
The following system diagrams illustrate potential use-cases for connecting your Axient Digital PSM system using an AD8C antenna combiner. For best results, we recommend the following guidelines:

- Maximum combiner level of 4:1 for digital transmission modes, and 8:1 for analog transmission.
- Antennas transmitting different RF carriers should be placed close together, to ensure similar coverage areas.

For more help on system configuration, please contact your local service representative.

## Wideband, Spatial Diversity

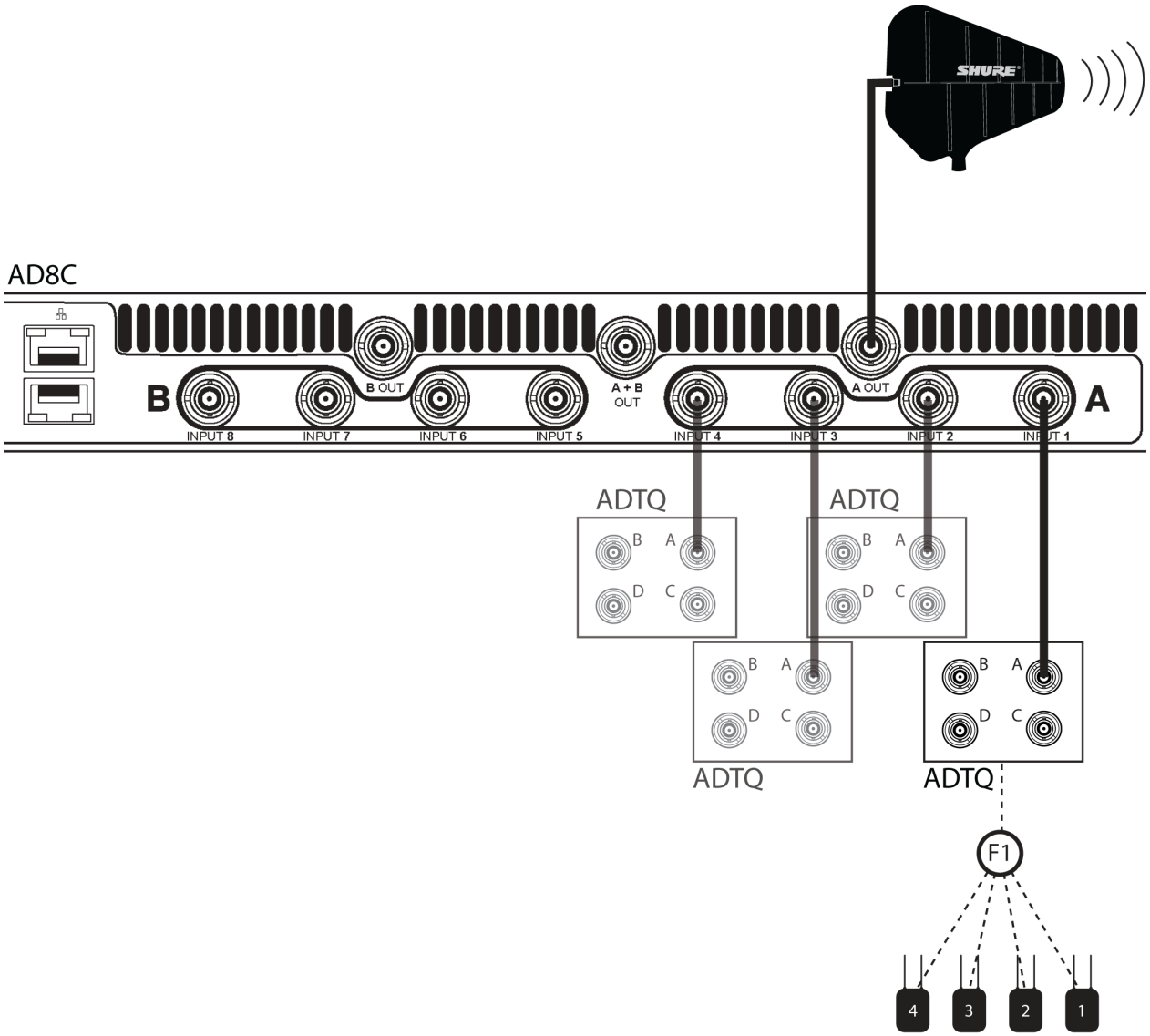
### Two Antennas




| | |
|---|---|
| **Max. Channel Count** | 32 (4× ADTQ), 16 (4× ADTD) |
| **Combiners** | 1× AD8C @ 4:1 (-8 dB) |

## Wideband

### One Antenna

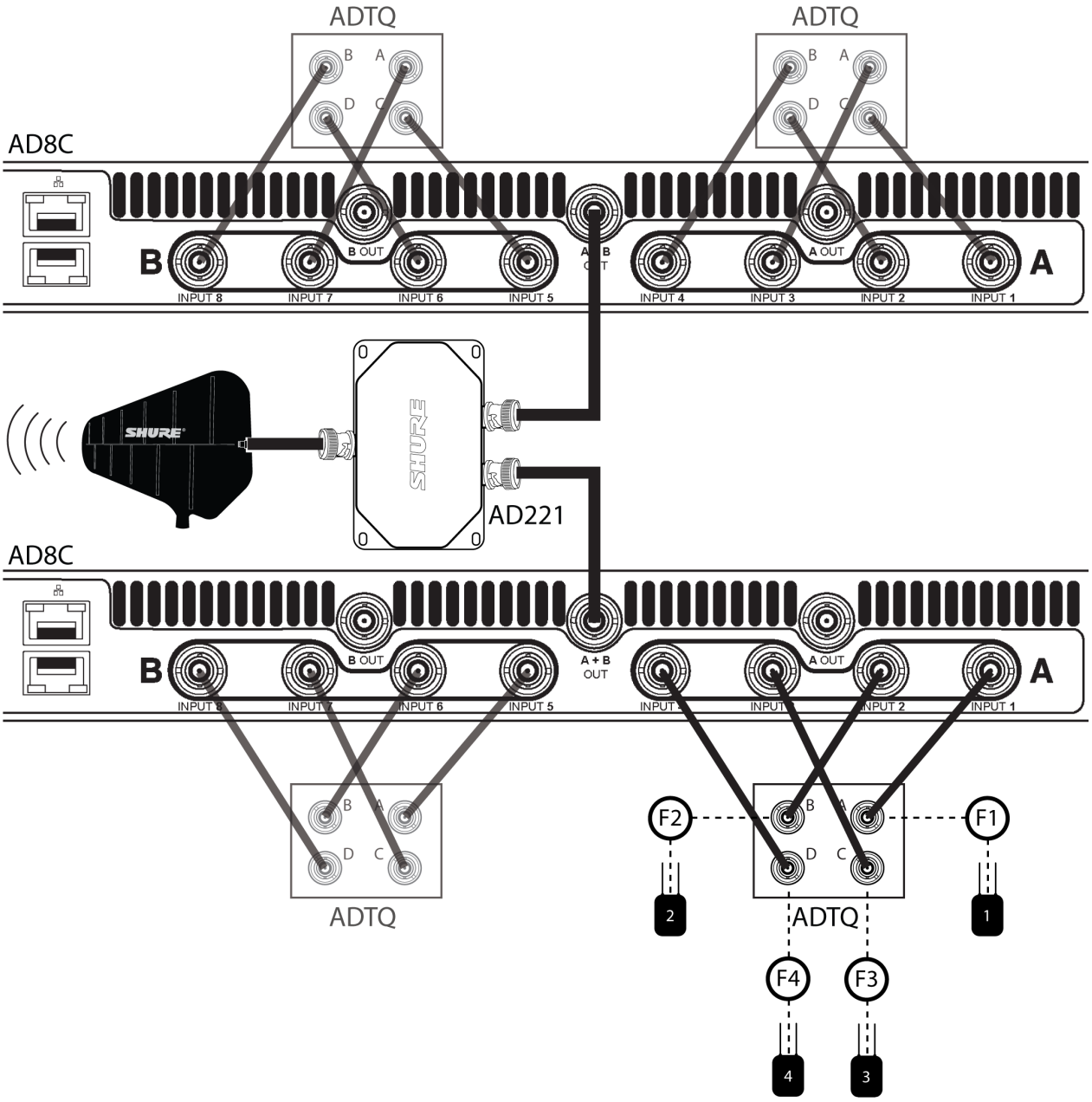



| | |
|---|---|
| **Max. Channel Count** | 16 (4× ADTQ), 16 (4× ADTD) |
| **Combiners** | 1× AD8C @ 4:1 (-8 dB) |

**Note:** Channel count can be doubled by utilizing the remaining AD8C 4:1 RF inputs and adding a second transmit antenna.

## Narrowband

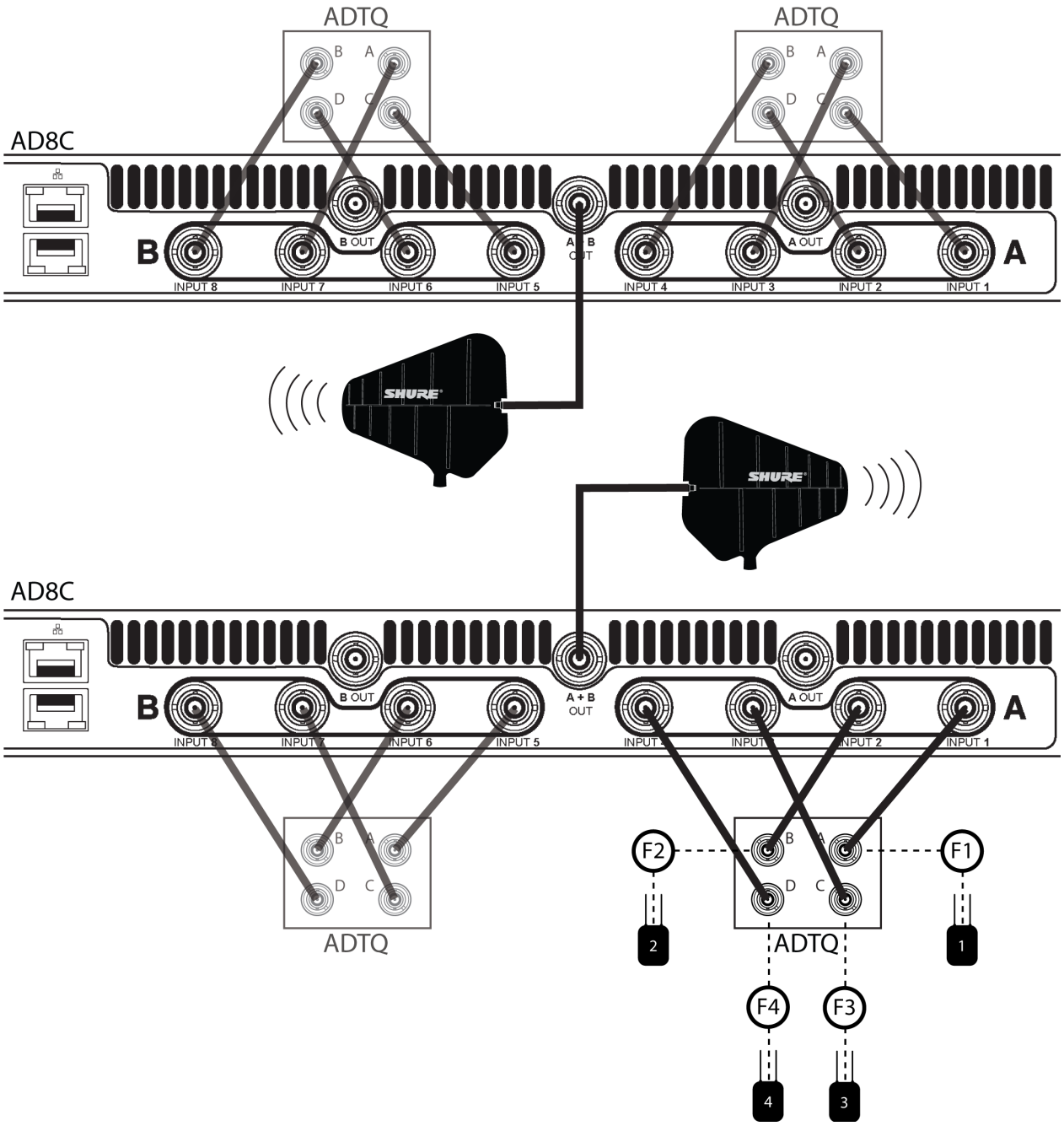
# One Antenna




| | |
|---|---|
| **Max. Channel Count** | 16 (4× ADTQ), 16 (8× ADTD) |
| **Combiners** | 2× AD8C @ 8:1, 1× AD221 @ 2:1 |
| **Combiner Level** | 16:1 (-15 dB) |

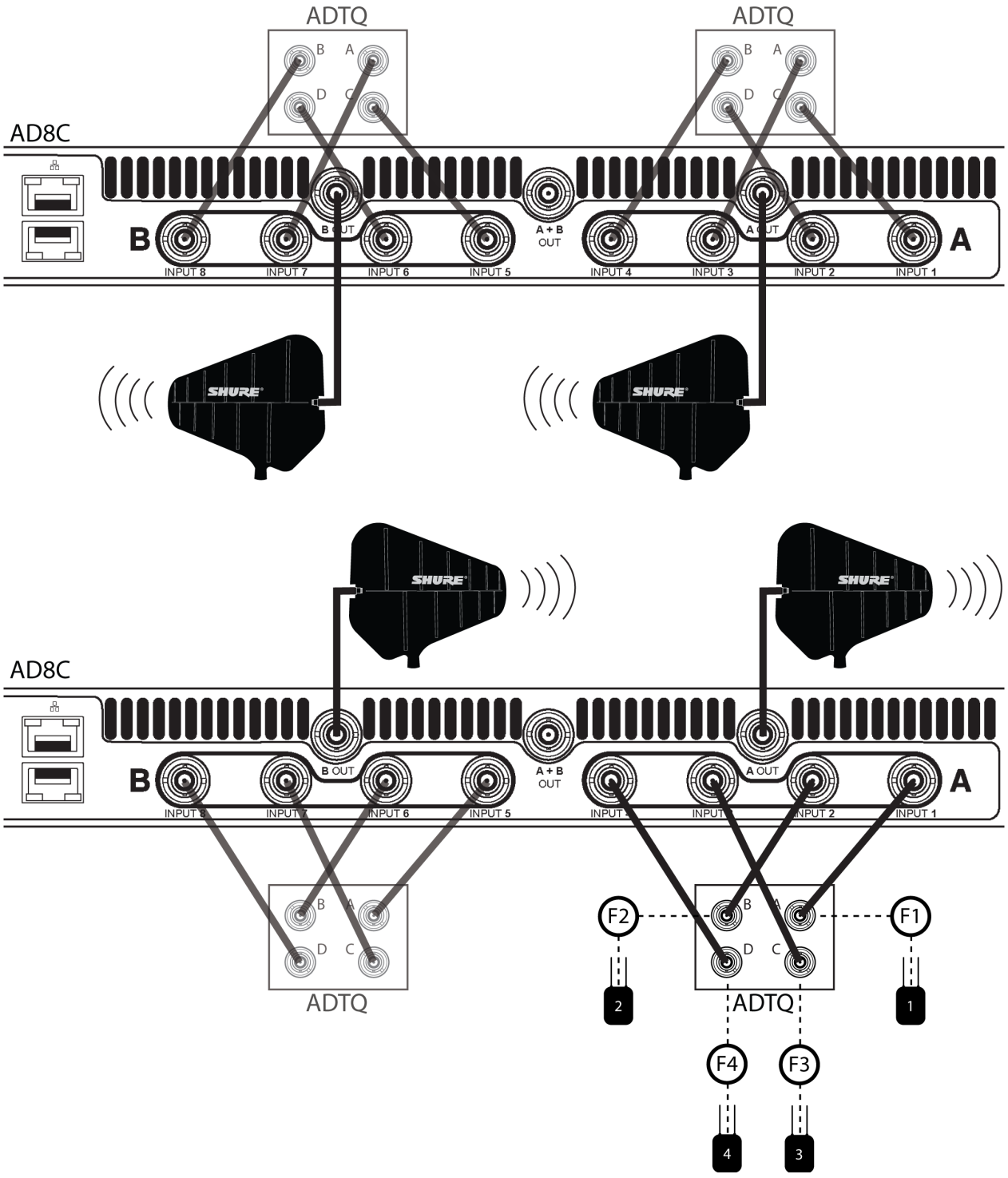
**Note:** Due to passive combiner loss, this configuration is only recommended when operating at low RF output power.

## Two Antennas




| | |
|---|---|
| **Max. Channel Count** | 16 (4× ADTQ), 16 (8× ADTD) |
| **Combiners** | 1× AD8C @ 8:1 (-11 dB) |

# Four Antennas

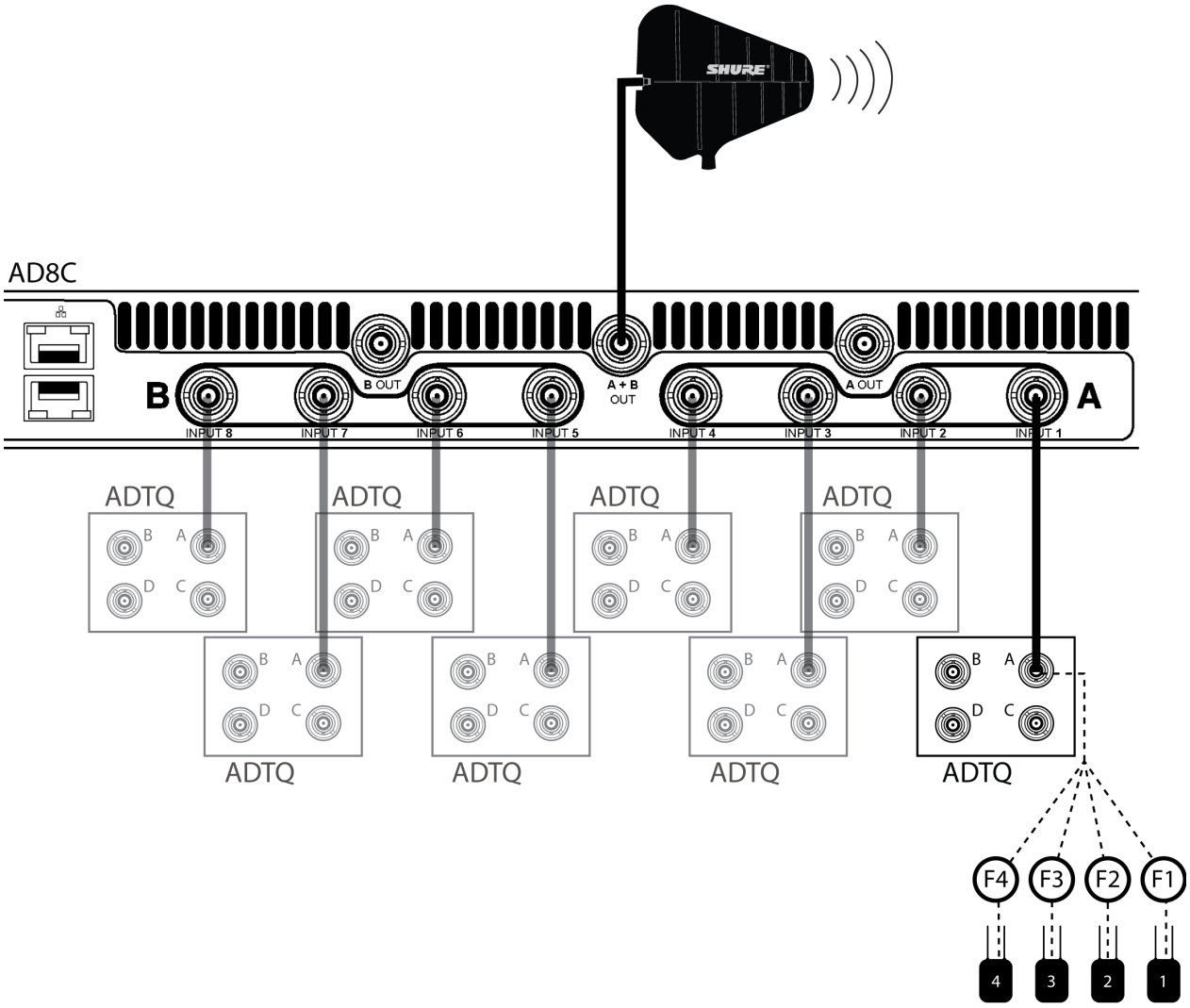



| | |
|---|---|
| **Transmitters** | 4× ADTQ |
| **Combiners** | 2× AD8C @ 4:1 (-8 dB) |

**Note:** Recommended for access to greater RF power.

## Narrowband, Combined

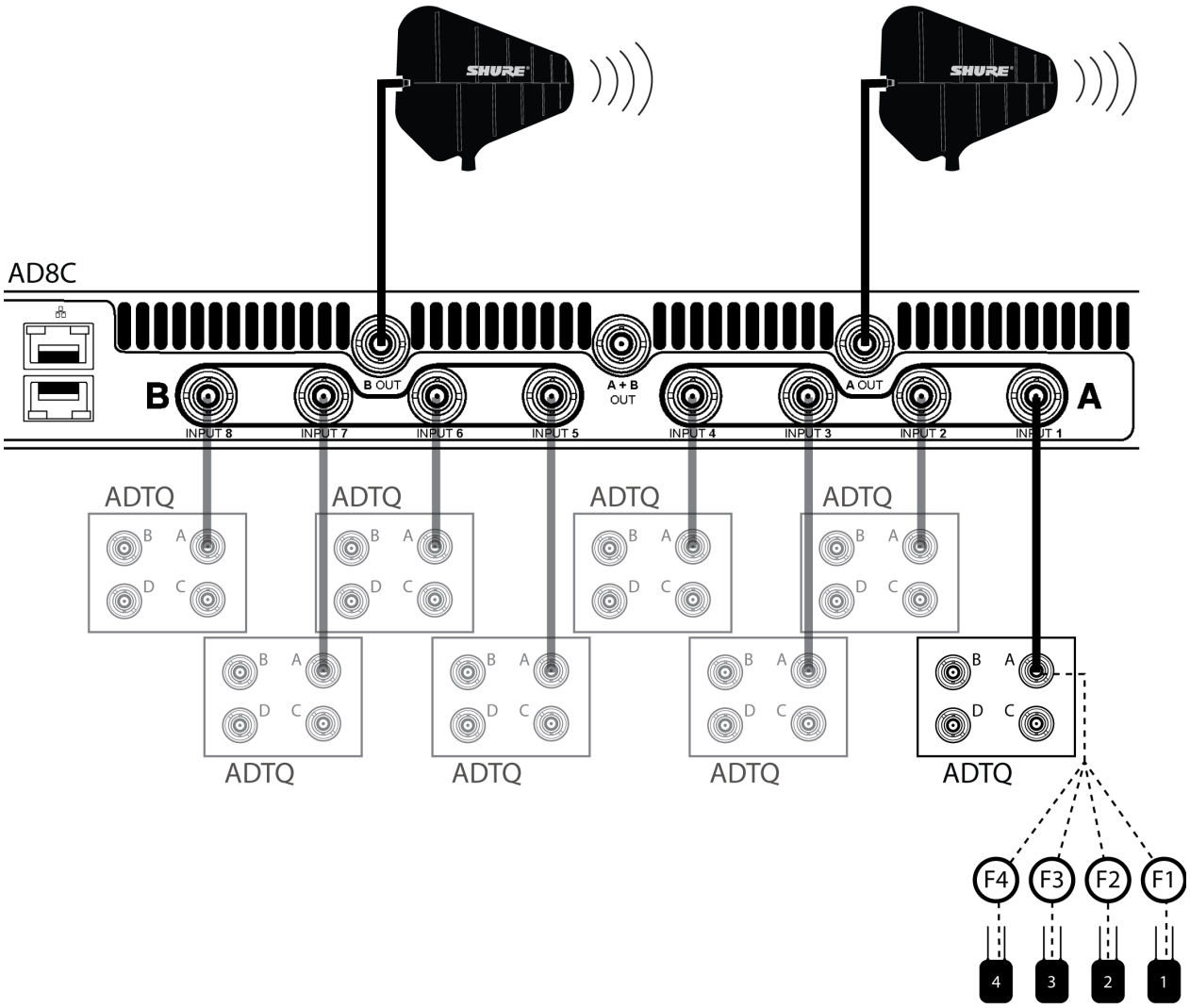
### One Antenna




| | |
|---|---|
| **Max. Channel Count** | 32 (8× ADTQ), 16 (8× ADTD) |
| **Combiners** | 1× AD8C @ 8:1 (-11 dB) |

**Note:** Due to passive combiner loss, this configuration is only recommended when operating at low RF output power.

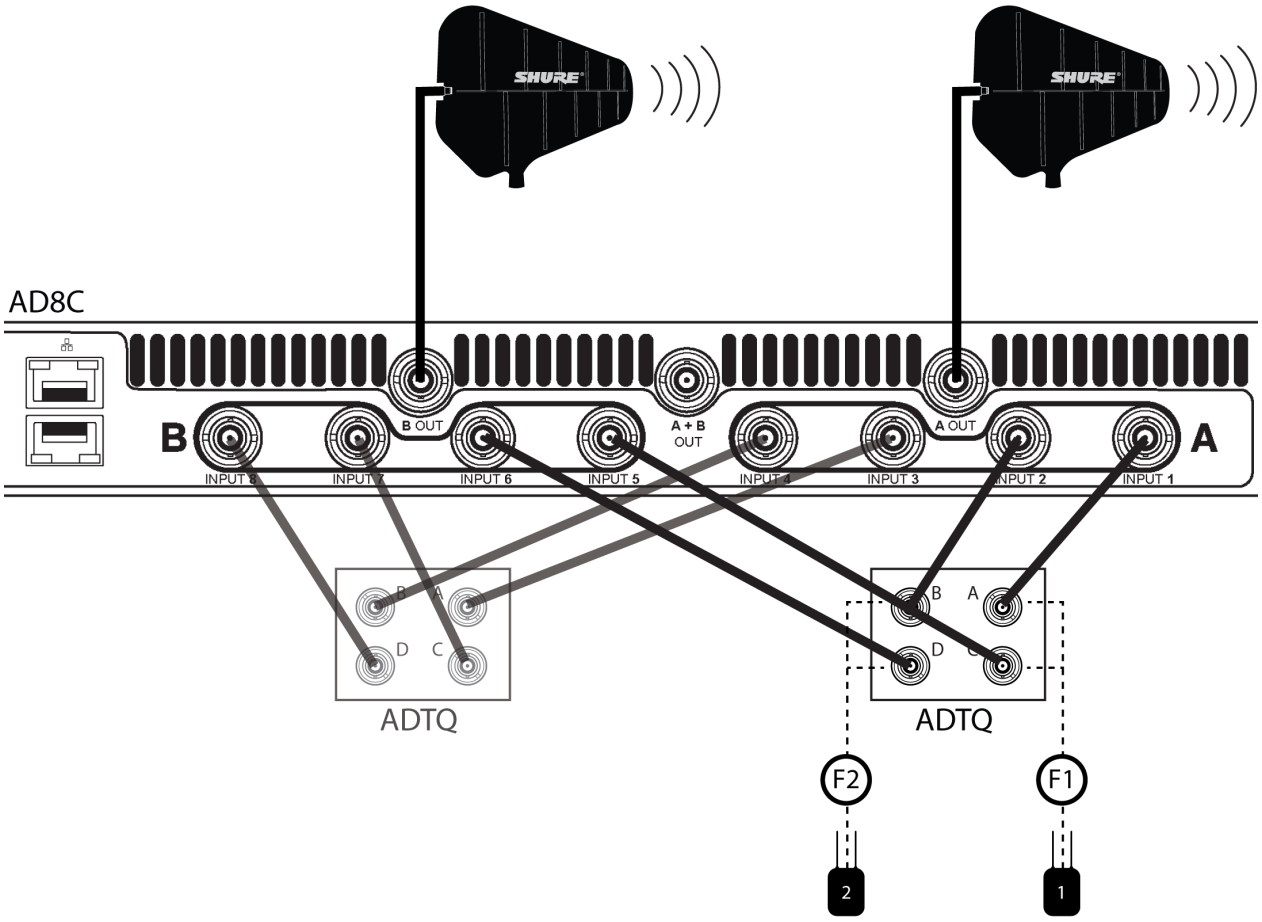
## Two Antennas




| | |
|---|---|
| **Max. Channel Count** | 32 (8× ADTQ), 16 (8× ADTD) |
| **Combiners** | 1× AD8C @ 4:1 (-8 dB) |

## Narrowband, Spatial Diversity

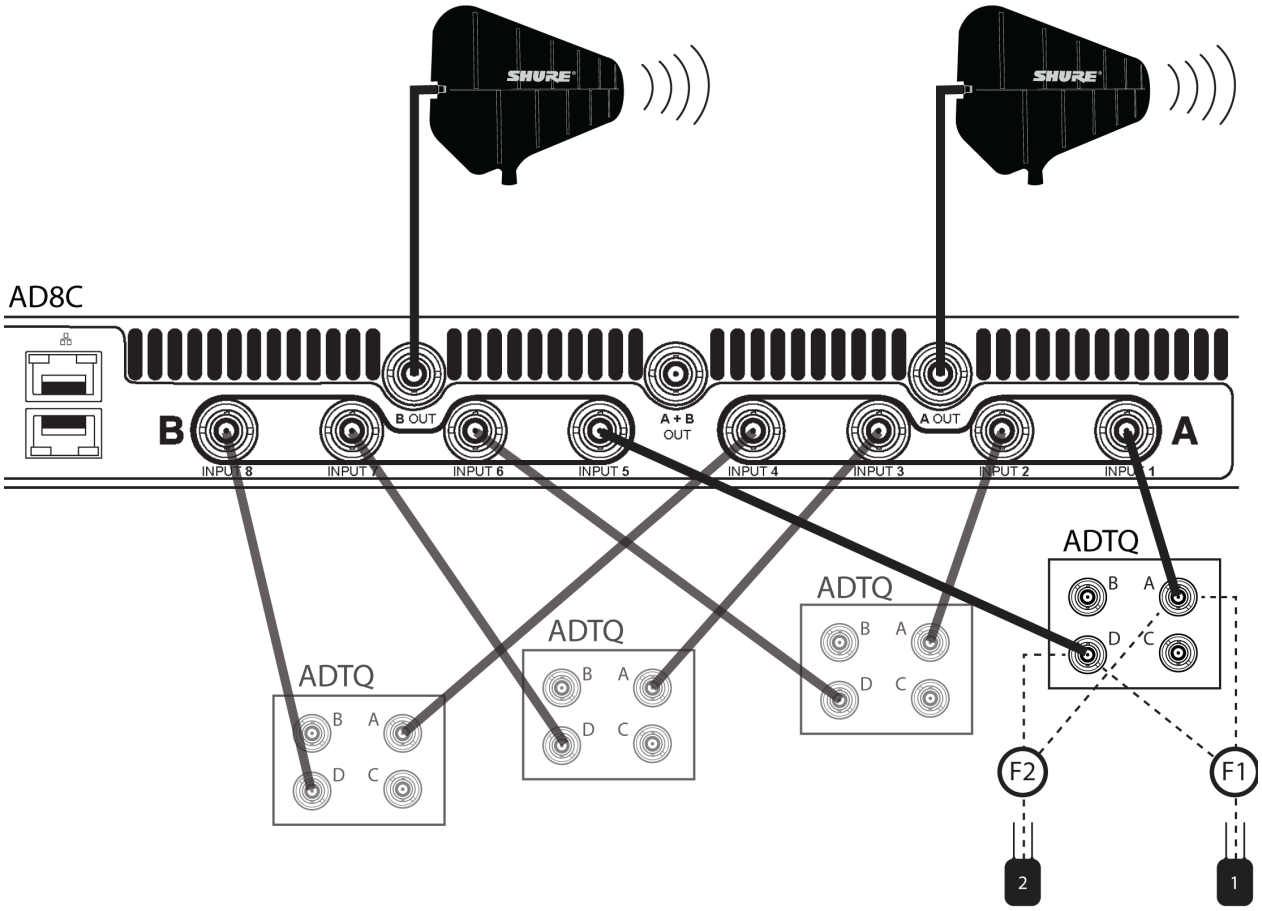
### Two Antennas




| | |
|---|---|
| **Max. Channel Count** | 4 (2× ADTQ), 4 (4× ADTD) |
| **Combiners** | 1× AD8C @ 4:1 (-8 dB) |

## Narrowband, Spatial Diversity, Combined

### Two Antennas




| | |
|---|---|
| **Max. Channel Count** | 8 (4× ADTQ), 8 (4× ADTD) |
| **Combiners** | 1× AD8C @ 4:1 (-8 dB) |

**Note:** Internal antenna combining increases channel count, but decreases RF output power.

# ShowLink Remote Control

A ShowLink network allows you to remotely monitor and adjust settings for portable devices. For devices with ShowLink, you can monitor the battery percentage, channel quality, frequency assignments and audio settings, in real time, without ever leaving the control booth.

## What is ShowLink?

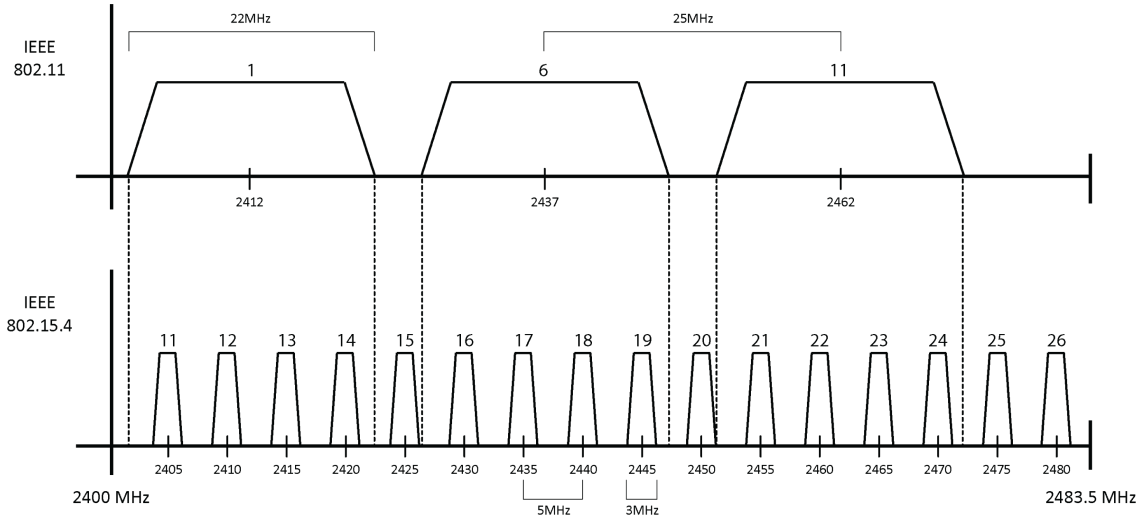
ShowLink is a network that carries wireless signals that enable remote control of certain Shure wireless transmitters and receivers.

ShowLink operates in the 2.4 GHz portion of the RF spectrum and transmits parameter data such as RF frequency data, gain settings, and device names. ShowLink does not transmit audio, and you don't need a ShowLink network in order to connect a transmitter and receiver. Any loss of ShowLink control will not affect the audio signal in any way.

To use ShowLink, you need a ShowLink access point and ShowLink-enabled wireless devices. Map the boundaries of a ShowLink coverage area using ShowLink Test in the device menu.

# How ShowLink Works

ShowLink channels operate in the 2.40 to 2.484 GHz portion of the RF spectrum in accordance with the IEEE 802.15.4 protocol. Devices that share the 2.4 GHZ spectrum, including Wi-Fi, are manufactured to efficiently share the spectrum and cause minimal interference. Both ShowLink and Wi-Fi use "listen before talk" technology to transmit short message packets only when needed to conserve bandwidth. Available spectrum, low interference, and global availability make the 2.4 GHz spectrum an ideal choice for hosting ShowLink channels.




# 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 bodypack 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 bodypack 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 bodypack 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 bodypack 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®.

## Create a ShowLink Network

Connect a ShowLink access point to your transmitter's network using a Cat 5e Ethernet cable. See the AD610 user guide for specifications, menu paths, and other information about the AD610 access point.

When a ShowLink-enabled portable has connected to the ShowLink network, the ShowLink icon appears to indicate the signal strength of that connection.

The ShowLink icon also appears on the display of a linked transmitter and receiver to indicate that the bodypack is within range of an access point. If a device is beyond the range of the access point, or if the transmitter is offline, the icon will disappear, indicating a loss of ShowLink control.

## ShowLink Network ID

Unlinked ADXR receivers can connect to AD610 ShowLink access points when set to the same ShowLink Network Host ID. (Linked receivers are connected to the same ShowLink network as their transmitter.) This allows remote management of unlinked ADXR receivers, without requiring an IR sync between receiver and transmitter.

Update your AD610 to the latest firmware and download the latest version of Wireless Workbench before connecting your ADXR to the network. Set the 4-character network ID on your AD610, then enter the same network ID on your ADXR under `Utilities` > `SL Network ID Client`.

To quickly enter the network ID on multiple ADXR receivers, you can enter the network ID on the ADTQ/ADTD transmitter under `Device Config` > `RX ShowLink Network ID Update`, and then Transfer the network ID to bodypacks via IR.

**Note:** Only the ShowLink Network ID info is transferred to the ADXR receiver. No other data or program changes are sent during IR sync initiated from the transmitter menu.

# Operation

## ADTQ/ADTD Wireless Transmitter

The ADTQ quad and ADTD dual transmitters set a new standard in transparent digital audio and maximum spectral efficiency. Groundbreaking performance features include wide tuning, multi-channel wideband transmission, and spatial diversity, ensuring solid performance in the most challenging RF environments. Network control, AES3, AES67, Dante inputs, and internal antenna combining options bring in a new level of management and flexibility to your entire workflow. Compatible with ADXR ShowLink-enabled bodypack receivers.

### Menus and Configuration

The Axient Digital PSM transmitter uses an at-a-glance home screen to support multiple channels in a single rack space, as well as three sub-menus for device configuration:

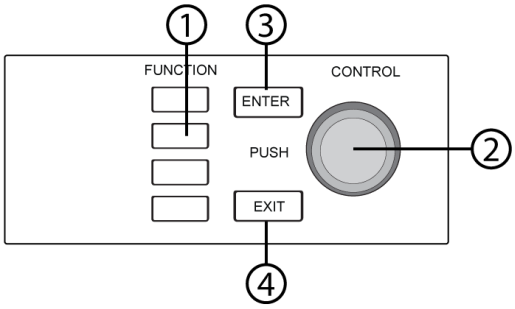
- **Device Menu:** Items in this menu affect the overall performance of the transmitter and apply to all channels globally.
- **Channel Menu:** Select audio input and adjust parameters for each channel, allowing for independent channel configuration. Available options vary based on transmitter configuration.

  ***Note:*** *Check the rear input (Analog/AES3) switch on the back panel when rear inputs are selected.*

- **Carrier Menu:** Available in wideband transmission modes only, items in this menu are specific to the selected carrier.
- **Headphone Menu:** Set up headphone channel selection and limiter thresholds.

### Navigation and Controls

Use the function buttons, control wheel, ENTER, and EXIT to navigate to menu choices and to set parameters.




### ① Function buttons

Press to access editing and configuration options. The buttons are named F1, F2, F3, F4 (from top to bottom) and illuminate when editing options are available.

### ② Control wheel

- Push to enter a menu
- Push to select a menu item
- Turn to scroll through menu options or to edit a parameter

### ③ ENTER

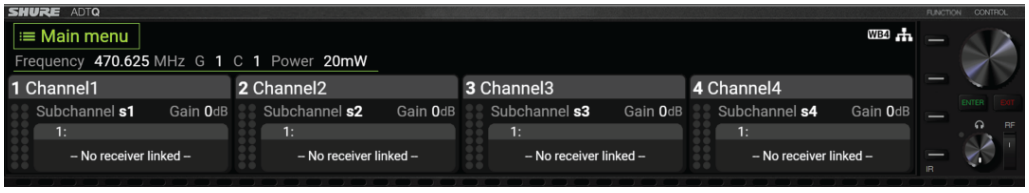
Press to confirm or save changes.

### ④ EXIT

Press to cancel changes and return to the previous menu.

## Home Screen

From the home screen you can view the status of all channels. Rotate the control wheel to highlight the Main menu or any of the available channel menus, and press the control wheel to enter the selected menu.




From the Main menu, you can access Device Configuration, Carrier settings (when in wideband), or individual channel menus.

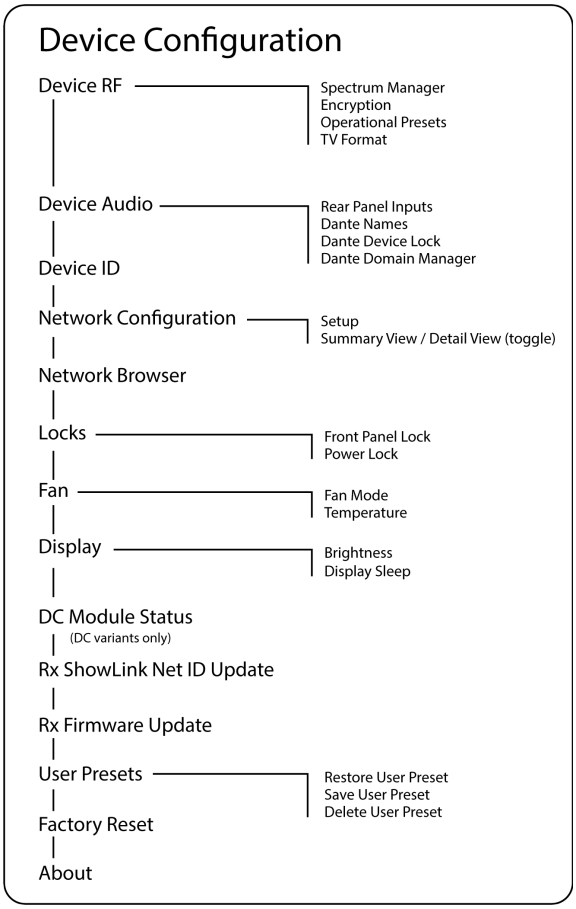
# Device Configuration Menu and Parameters

Use the following menu items and parameter settings to configure the transmitter at the device level.

Tip: Use the ENTER button to save changes or press EXIT to cancel without saving.

## Device Configuration Menu

From the home screen, press the control wheel to access the Device Configuration menu.


## Device Menu Parameters

### Device RF

**Spectrum Manager**

View and select the optional spectrum manager used by this device.

**Encryption**

Enables encryption of the RF signal.

**Operational Presets**

Display and configure the transmission mode, frequency diversity, and spatial diversity.

**TV Format**

Adjust TV bandwidth to match regional standards.

## Device Audio

**Rear Panel Inputs**

View and configure device-level audio settings.

**Dante Names**

View, edit, and copy names for networked Dante components.

**Dante Device Lock**

See the status of the Dante device lock.

**Dante Domain Manager**

See the status of Dante Domain Manager settings.

## Device ID

Use the control wheel to assign or edit an ID.

## Network Configuration

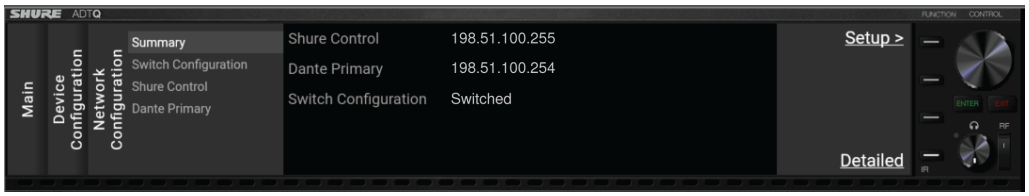
Configure IP, network, and Dante settings.

**Setup**

Configure Ethernet ports and IP settings.

**Summary View / Detail View (toggle)**

Switch between summary and detail views




## Network Browser

Use the Network Browser utility to view Shure devices on the network.

**Show**

Display all devices on the network.

**Flash All**

Flash the front panel LED of all devices on the network to verify connectivity.

**F.W. Version**

Displays a list of all networked devices, which can be sorted either by firmware version or by model name.

### Locks

**Front Panel Lock**

- Locked
- Unlocked

**Power Lock**

- Locked
- Unlocked

### Fan

**Fan Mode**

- Auto: The fan will automatically turn on if the device temperature rises
- On: The fan will run continuously to offer maximum cooling in warm environments

**Temperature**

Displays the device's internal temperature.

### Display

**Brightness**

Adjust the brightness of the display.

**Display Sleep**

Offers options to turn off display and front panel illumination after 10, 30, or 60 seconds.

### DC Module Status

Displays the operational status of the DC Module (if installed).

### Rx ShowLink Network ID Update

Set the ShowLink network ID, and copy to an ADXR bodypack via IR.

**Note:** This does not sync audio settings, link the ADXR to a receiver slot, or change any other setting on the receiver.

### Rx Firmware Update

Align receiver IR window and select to update receiver firmware.

### User Presets

Create and manage user presets.

- Restore User Preset: Load existing preset
- Save User Preset: Save the current settings as a preset
- Delete User Preset: Delete a preset

### Factory Reset

Restores all device parameters to factory settings.

### About

Provides a detailed list of build specifications and vital statistics for the device.

# Channel Menu and Parameters

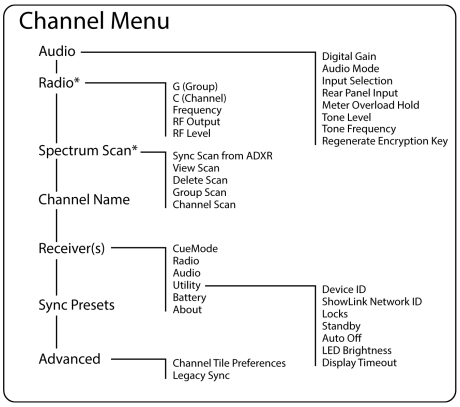
Use the following menus and parameters to configure the channel settings.

Tip: Use the NEXT / PREVIOUS function buttons to navigate between adjacent channels when configuring menu parameters. Use the ENTER button to save changes or press EXIT to cancel without saving.

## Channel Menu Home Screen

The Channel Menu Home Screen allows you to view the settings for a selected channel and details of transmitters linked to that channel. Select a channel number to access the menu.

You can adjust gain, group, channel, and frequency by using the EDIT function button.


***** Located under Carrier Settings when operating in Multi-Channel Wideband mode.

## Carrier Settings

In Multi-Channel Wideband transmission mode, Radio and Spectrum Scan are moved to a dedicated Carrier Settings menu. These settings affect the wireless carrier functionality for each group of channels sharing the same carrier.


## Channel Menu Parameters

### Audio

**Digital Gain**

Adjusts the digital gain in 1 dB increments.

**Audio Mode**

- Stereo
- Summed to mono

**Input Selection**

**Rear Panel** (default) enables:

- Rear Panel Input (indicates which input is routed to the selected channel)
- Analog Sensitivity (when input switch is set to analog)
- AES3 Status / Lock Status / Rate (when input switch is set to AES3)

**Dante** enables:

- Dante Left / Dante Right (displays channel labels corresponding to L and R inputs)

**Meter Overload Hold**

When ON, use the function buttons CLEAR and CLEAR ALL to clear any retained overload indications.

**Tone Level**

Tone generator level, for testing and troubleshooting.

- Off (default)
- -60 dB to 0 dB, in 6 dB increments

**Tone Frequency**

Tone generator frequency, 400 Hz (default) to 1000 Hz

**Regenerate Encryption Key**

When Encryption is enabled, create a new encryption key for this channel.

***Note:*** *Linked receivers will receive the new key, re-sync any other receivers to be used on this channel.*

## Radio

**G (Group)**

Assign a frequency group.

**C (Channel)**

Assign a channel.

**Frequency**

Manually select a frequency.

**RF Output**

Enable or mute the carrier-level RF output.

**RF Level**

The current RF power is shown. May vary based on the selected operational preset.

## Spectrum Scan

**Sync Scan from ADXR**

Transfer scan data from a bodypack receiver via IR.

**View Scan**

View saved scan data.

**Delete Scan**

Delete saved scan data.

**Group Scan**

Performs a Group Scan using the imported spectrum scan data.

**Channel Scan**

Performs a Channel Scan using the imported spectrum scan data.

## Channel Name

Use the control wheel to assign or edit the channel name.

## Receivers

Assign and view receiver slots, link or unlink receivers from the selected slots, and edit parameters for linked receivers.


**Unlink**

Removes a receiver from the selected slot.

**Browse**

Browse the list of connected receivers, and sync/link the selected receiver to the selected slot.

**Sync (no link)**

Syncs RF and audio settings *without* assigning a receiver to the selected slot.

**Sync**

Syncs RF and audio settings, and assigns a receiver to the selected slot.

## Sync Presets

Select and edit parameters to be set on the receiver when performing a sync.

## Advanced

**Channel Tile Preferences**

Determine the properties/status information to display on each channel's home page.

**Legacy Sync**

When operating in Analog FM, use this menu to Sync with legacy receivers such as the P10R and P10R+.

## Headphone Monitor

Use the headphone monitor menu to view and adjust parameters for the transmitter's headphone monitor input.


**Channel**

Select which audio channel is routed to the headphone monitor.

**Gain Trim**

Pad or boost the headphone gain from -20 dB to +20 dB, in 1 dB steps (default is 0 dB).

**Limiter Threshold**

Set the limiter to avoid overdriving the headphone amp. Adjustable between 0 dBFS and -30 dBFS.

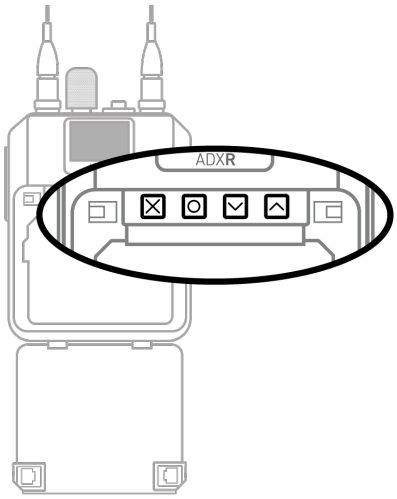
# ADXR Portable Wireless Receiver

Axient Digital PSM portable wireless receivers provide pristine RF signal and audio quality, ideally suited for the demands of professional touring and live sound applications.

- True digital diversity reception
- Diversity ShowLink-enabled for remote receiver control
- Durable, moisture resistant, slim, lightweight design
- Advanced headphone jack protects against sweat and moisture ingress
- External contacts for docked charging
- Includes 2× SB910 rechargeable batteries

## Receiver Controls

Open the battery door to access the control buttons. 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 |
| **V^** | Use to scroll through menu screens and to change parameter values |

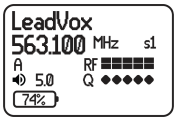
## Home Screen Display

The home screen shows receiver information and status.

There are four pieces of information that you can choose to see on the home screen. Set your preference under `Utilities` > `Home Option`:

- Name
- Frequency
- G/C (group and channel)
- Device ID

By default, the home screen displays Name and Frequency.




The following icons indicate receiver settings:

| Icon | Setting |
|---|---|
| | Battery charge percent, or bar display. |
| | Key: Displayed when encryption is enabled. ! indicates an encryption error. |

| Icon | Setting |
|---|---|
|  | 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. |
|  | Link Status: Indicates whether the ADXR is linked to a transmitter. |
|  | Volume: Indicates the level and lock status of the volume knob. An asterisk (*) indicates volume safety is engaged. |
|  | Audio Meter (stereo): Provides real-time audio metering. |
|  | RF Meter: Radio signal strength indicator (RSSI) metering for antenna A (top) and antenna B (bottom). |
|  | Channel Quality: Indicates the channel quality when operating in digital transmission modes. |
|  | CueMode Index: When operating in CueMode, the index number displays in the upper right of the display. |

## 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.

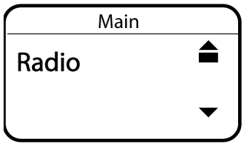
Tip: To quickly unlock the menu: Press O twice, select None, and press O.

## Menu Parameters

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

- Radio
- Audio
- Utilities

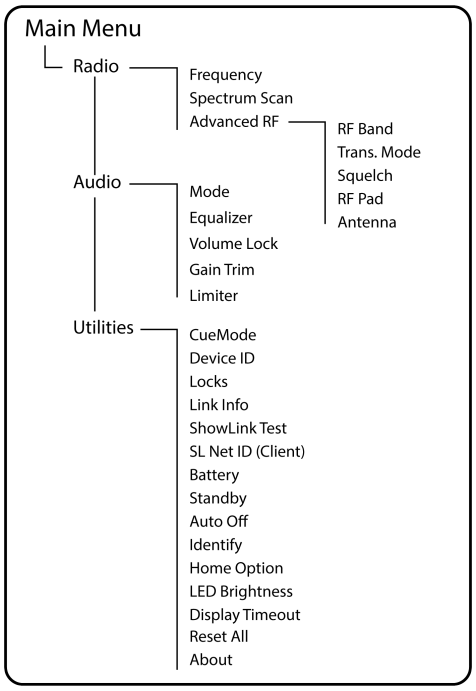
Tip: Use the arrow buttons to scroll between the sub-menus.



## 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




## Menu Parameter Descriptions

### Radio Menu

**Frequency**

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.

**Spectrum Scan**

Performs spectrum scan and displays the scan results in a graphical interface, with options to scroll, zoom, and see additional details.

- **Scan Now:** Perform a new spectrum scan
- **Recall:** Display the results of a previously-saved scan (if available)

**Advanced RF**

Displays advanced RF menu options.

- **RF Band:** Change the operating band

  Available frequencies will change, devices may be unlinked

- **Trans. Mode:** Change between available digital (D) and analog (FM) operating modes

  Devices will be unlinked and reboot

- **Squelch:** Adjusts the squelch setting (FM operating mode only)
- **RF Pad:** Attenuates antenna signals in 3 dB increments
- **Antenna:** Selection for single- or dual-antenna operation

## Audio Menu

**Mode**

Audio output mode (Stereo, Left, Right)

**Equalizer**

The parametric equalizer is divided into four frequency bands: LOW, LOW MID, HIGH MID, and HIGH.

- **EQ**: Turn the equalizer on or off
- **Edit**: Adjust the following parameters for each band:
  **Freq:** Select the center frequency of the band to boost/cut
  **Q:** Adjust the width and slope of the frequency band (measured in octaves)
  **GAIN:** Adjustable in 2 dB increments from -12 dB (cut) to +12 dB (boost)

  **Note:** HIGH and LOW are shelf filters, and therefore do not have adjustable Q widths. The HIGH shelf is fixed at 10 kHz; the LOW shelf is fixed at 100 Hz.

- **Reset EQ**: Resets EQ to default values

**Volume Lock**

The volume is locked to the physical position of the volume knob.

**Gain Trim**

Pad or boost the headphone gain from -20 dB to +20 dB, in 1 dB steps (default is 0 dB).

**Limiter**

Set a value (OFF to -48 dB, adjustable in 3 dB increments) to attenuate the highest possible volume level. Turning the volume knob through its entire range of motion still affects volume; the limit simply narrows the range of dB adjustment.

***Note:*** *The volume limit does not compress the audio signal*

## Utilities Menu

**CueMode**

Enters CueMode and confirms whether device is currently linked.

**Device ID**

Assign a device ID of up to 31 characters.

**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 (does not affect volume)
- **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 and confirm Unlink? to unlink the portable.

**ShowLink Test**

ShowLink test tool to measure the boundaries of ShowLink coverage.

**SL Net ID (Client)**

Display and configure the ShowLink Network Client ID

**Battery**

Displays battery information:

**Standby**

Turns the Audio and RF to standby without powering down the device.

**Auto Off**

Set the Auto Off timer

**Identify**

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

**Home Option**

Determine what information displays on the Home screen:

- Name = channel name
- Freq = operating frequency
- G/C = Group and Channel numbers

**LED Brightness**

Set the brightness for Power/Battery Status and RF Status LEDs

***Note:*** *Does not affect screen brightness*

**Display Timeout**

Set the OLED display timeout.

**Reset All**

Restores all user settings to factory default values.

**About**

Displays information about the device.

## Installing Bodypack Antennas

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

## Shure Rechargeable Batteries

Shure lithium-ion batteries offer a rechargeable option for powering portable devices. 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.

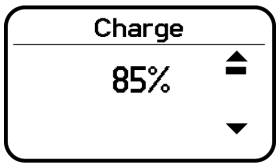
**Caution:** Only charge Shure rechargeable batteries with a Shure battery charger.

# Checking Battery Info

When using a Shure rechargeable battery, the receiver and transmitter home screens display the battery percentage remaining.

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

- Battery: The chemistry type of for the installed battery (Shure, Alkaline, Lithium, NiMH)
- Bars: Indicates the number of bars displayed
- 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



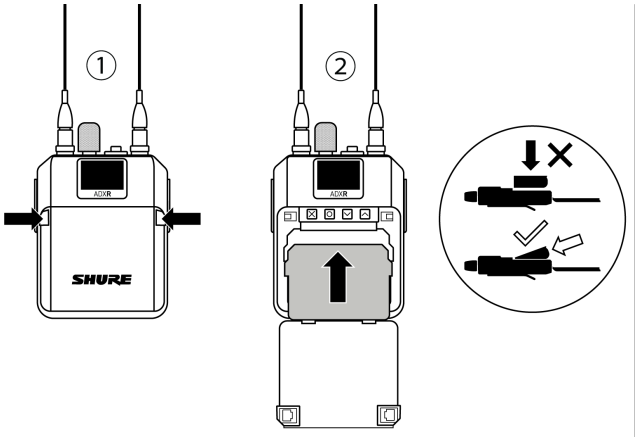

# Important Tips for Care and Storage of Shure Rechargeable Batteries

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

- Always store batteries and portable devices 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.

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

Identify any possible external heat sources to the portable device, and operate the device 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.

# CueMode

CueMode allows you to upload the name and frequency settings from multiple rack units and store them as a list on a single bodypack. You can then, at any time, scroll through that list to hear the audio mix from each transmitter, just as each performer does during a show.

CueMode lists are retained even if CueMode is exited, the bodypack is turned off, or batteries are removed.

**Note:** Set the channel frequency and assign display names for each transmitter **before** creating your CueMode list.

## Adding Channels to the CueMode List

**Note:** The transmitter must be from the same frequency band as the bodypack.

1. Open the battery door and press the enter button.
2. From the main menu, scroll to UTILITIES and press enter. Select CueMode and press enter again.
3. Sync the transmitter and receiver.

   The OLED displays SYNC SUCCESS after frequency and name data are uploaded to the CueMode list. It also displays the CueMode number for that transmitter and the total number of transmitters.

4. Repeat the above step for each transmitter.

**Note:** Syncing while in CueMode does not change any of the settings on the bodypack.

## Auditioning CueMode Mixes

1. Enter CueMode from the UTILITIES menu.
2. Use the ▼▲ buttons to scroll through your CueMode list to hear the mixes.

## Managing CueMode Mixes

While in CueMode, you can access the following menu by pressing enter:

**REPLACE MIX**

Select and press sync on a rack unit to upload new data for the current mix (for example, if you have changed the transmitter frequency).

**COPY CUES**

Use IR sync to copy all mixes to another ADXR. The "target" ADXR must also be in CueMode.

**DELETE MIX**

Removes the selected mix.

**DELETE ALL**

Removes all mixes.

**EXIT CUEMODE**

Exits CueMode. The bodypack remains on the settings associated with the last activated Cue.

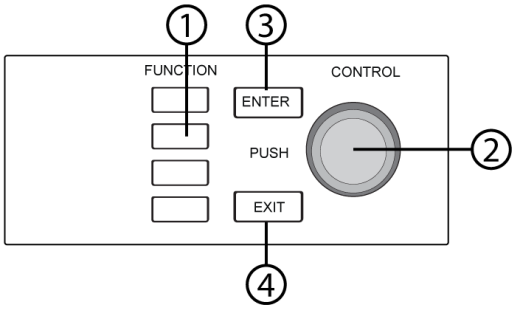
# AD8C Antenna Combiner

## Menus and Configuration

Combiner settings relate to RF combining and input port termination for specific channels. Device settings affect the overall performance of the combiner, and apply to all channels globally.

## Navigation and Controls

Use the function buttons, control wheel, ENTER, and EXIT to navigate to menu choices and to set parameters.




### ① Function buttons

Press to access editing and configuration options. The buttons are named F1, F2, F3, F4 (from top to bottom) and illuminate when editing options are available.

### ② Control wheel

- Push to enter a menu
- Push to select a menu item
- Turn to scroll through menu options or to edit a parameter

### ③ ENTER

Press to confirm or save changes.

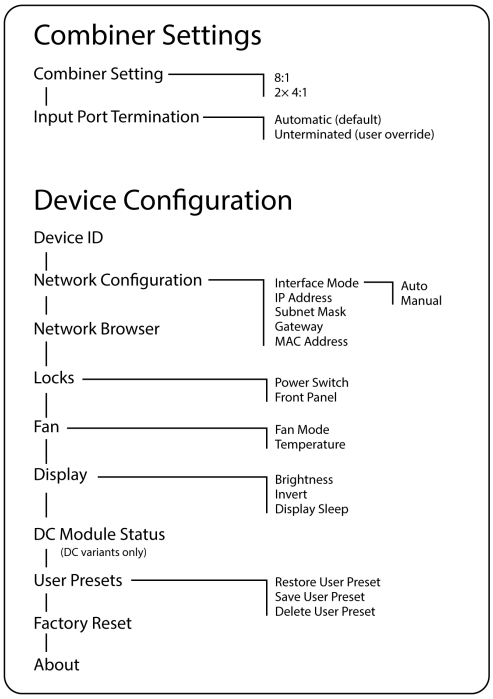
### ④ EXIT

Press to cancel changes and return to the previous menu.

## Home Screen

The home screen displays at-a-glance critical information, including RF input status, network status, hardware lock status, and combiner setting. Use the control wheel to access menus and parameters to configure the combiner.

Tip: Use the channel selection buttons to navigate between adjacent channels when configuring menu parameters. Use the ENTER button to save changes or press EXIT to cancel without saving.




## Menu Parameters

### Combiner Settings

**Combiner Setting**

Choose whether the device operates as an 8:1 combiner, or a 2× 4:1 combiner.

**Input Port Termination**

Port termination is handled automatically by default.

## Device Configuration Settings

Device ID

Use the control wheel to assign or edit an ID.

Network Configuration

Choose the interface mode and configure IP and network settings.

**Interface Mode: Auto**

IP address, subnet mask, gateway and MAC address are automatically configured and view-only.

**Interface Mode: Manual**

Manually set the IP address, subnet mask and gateway, and view the MAC address.

Network Browser

Use the Network Browser utility to view Shure devices on the network.

**Show**

Display all devices on the network.

**Refresh**

Re-scan the network and refresh the onscreen info.

**Flash All**

Flash the front panel LED of all devices on the network to verify connectivity.

**F.W. Version**

Displays the installed firmware version of the selected network component.

Locks

**Front Panel Lock**

- Locked
- Unlocked

**Power Lock**

- Locked
- Unlocked

Fan

**Fan Mode**

- Auto: The fan will automatically turn on if the combiner temperature rises
- On: The fan will run continuously to offer maximum cooling in warm environments

**Temperature**

Displays internal combiner temperature.

Display

**Brightness**

Adjust the brightness of the display.

**Display Sleep**

Offers options to turn off display and front panel illumination after 10, 30, or 60 seconds.

Tip:

Press any front panel control to interrupt Display Sleep.

DC Module Status

Displays the operational status of the DC Module (if installed).

User Presets

Create and manage user presets.

- Restore User Preset: Load existing preset
- Save User Preset: Save the current settings as a preset
- Delete User Preset: Delete a preset

Factory Reset

Restores all user settings to factory default values.

About

Provides a detailed list of build specifications and vital statistics for the device.

# 4-Bay Networked Charger

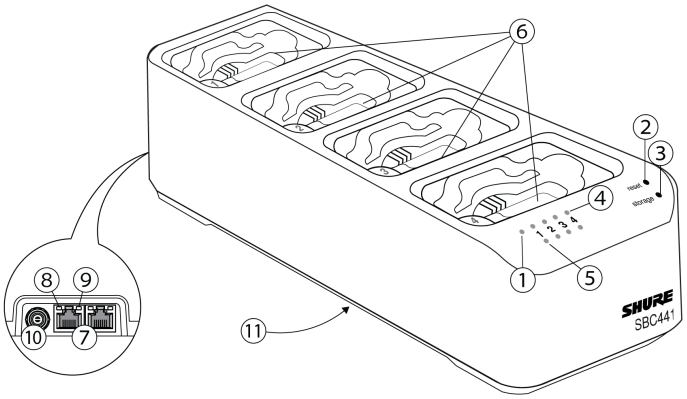
## General Description

The SBC441 networked docking charger provides a compact charging and storage solution for any combination of 4 SB910 batteries or ADXR wireless receivers using Shure rechargeable batteries. The charger is network-enabled to allow for remote monitoring of charger and battery parameters using Shure Wireless Workbench software.

## Features

- Charging for any combination of up to 4 SB910 batteries or ADXR receivers using Shure rechargeable batteries
- LEDs indicate charge status and battery errors
- Storage mode to prepare batteries for long-term storage
- Two network ports for remote monitoring and network pass-through
- Patented magnetic desktop alignment assembly

# Controls and Connectors




## ① Power LED

- White = Power is on
- Red = Charger is in storage mode

## ② Reset Button

Press and hold to restore charger factory settings, including network settings.

## ③ Storage Mode Button

Press and hold to activate storage mode, which charges or discharges batteries to the optimal voltage for long-term storage.

## ④ Charging Status LEDs

- Red = Charging
- Green = Charging complete
- Amber = Battery is in storage mode

## ⑤ Error LEDs

Flashes amber to indicate a problem charging batteries. Errors are also displayed in Wireless Workbench. See LED Indicators for details.

## ⑥ Charging Slots

Charges any combination of 4 SB910 batteries or ADXR bodypacks.

## ⑦ Ethernet Ports

Connect to a network to remotely monitor batteries and control charger settings using Wireless Workbench.

## ⑧ Ethernet Link Speed LED (Amber)

- Off = 10 Mbps
- On = 100 Mbps

### ⑨ Ethernet Status LED (Green)

- Off = No network link
- On = Network link established
- Flashing = Network link active

### ⑩ Power Input

Connect to power supply.

### ⑪ Charger Connector

Fold-out magnetic plate provides physical connection between chargers.

## Power

1. Connect DC power cable to input jack. Finger tighten lock nut for a secure connection.
2. Connect power supply to AC power outlet.

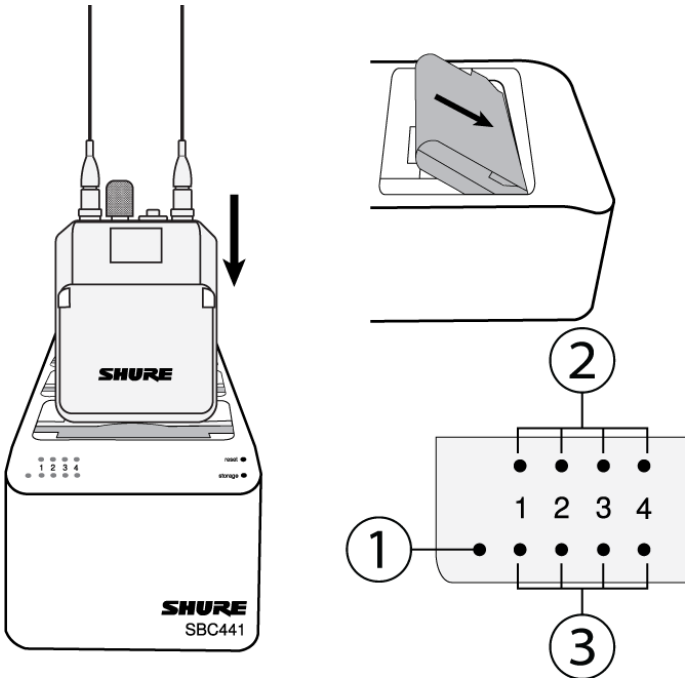
**WARNING:**

- Do not use pliers or any other tools to tighten lock nut. DC power cable must be attached before charger unit is installed.
- Do not plug in power supply unit until DC connection and charger are in place.
- After securing the charger, plug the power cable into a properly grounded outlet.

The charger has no power switch. When plugged in, the power LED illuminates. The charging LEDs illuminate after batteries are inserted.

## Charging

To charge, place batteries and receivers into the charging bays as shown. The LEDs illuminate to indicate battery status.




①

Power

②

Charge status

③

Error

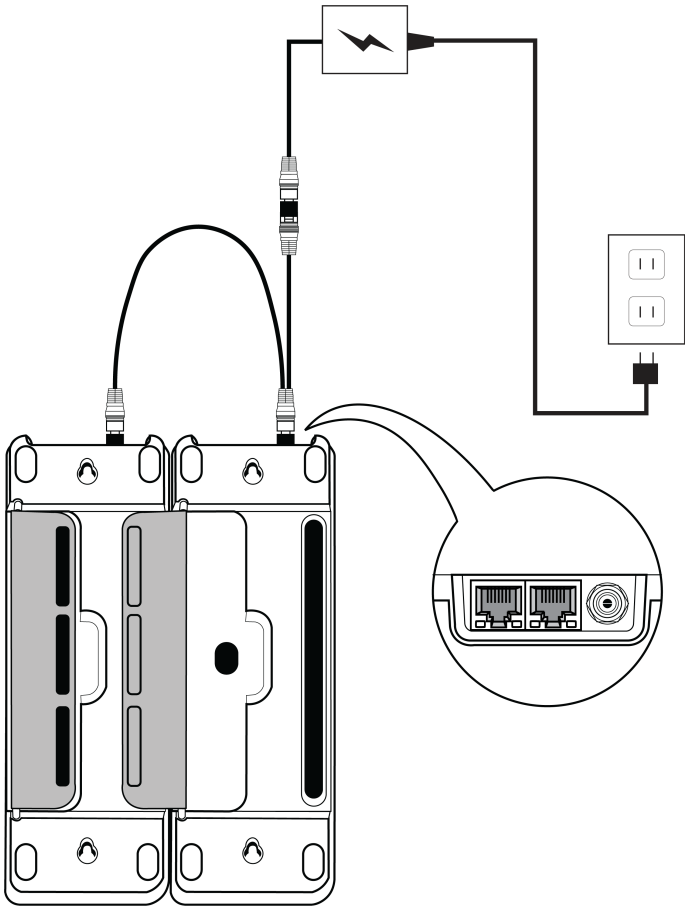
## LED Indicators

| Color | State |
|---|---|
| **Charge status LED red** | Charging |
| **Charge status LED green** | Charging complete |
| **Error LED amber flashing** | Charging stopped. To resume charging, try these solutions:<br>1. Check that the battery contacts are clean and undamaged. If contacts are dirty or damaged, the charger might not detect the batteries.<br>2. Check the temperature. If the battery temperature is above 60°C or below 0°C, the error LED flashes.<br>3. Contact Shure service. Battery may be discharged beyond recovery or have internal problems. Replace battery. |
| **Error LED amber steady on 4 chargers**<br>**Error LED amber flashing on 5th charger** | Too many chargers (more than 4) are connected to each other. Remove additional chargers. |
| **Charge status LED red**<br>**Error LED amber flashing** | Battery too warm. Charging stops at 80% of full capacity. Allow battery to cool below 45°C to resume charging to full capacity. |
| **Charge status LED green**<br>**Error LED amber flashing** | Charging complete, but battery temperature is too warm or cold (over 60°C or below 0°C). |
| **Power LED red** | Charger is in storage mode. Batteries are charging or discharging to storage voltage. |
| **Power LED red**<br>**Charge status LED amber** | Batteries are ready for storage. |
| **Power LED red**<br>**Charge status LED red flashing** | Batteries are approaching storage voltage. |
| **Power LED white flashing** | Charger firmware is being updated. |
| **All LEDs flashing** | Hardware identification. |

**Tip:** Wireless Workbench provides more detailed battery status information.

## Adding a Charger

To save space and reduce clutter, chargers can be physically linked together using the magnetic linking plates on the bottom. The included power supply splitter can provide power to two chargers from a single power supply.



# Operation

## Power Save Mode

Use power save mode to charge batteries with the charger's network functionality off.

1. Disconnect the power cable from the AC power outlet.
2. Press and hold storage while reconnecting to the AC power outlet.
3. When the charge status and error LEDs flash amber, release the button.

The charger remains in power save mode until you power off the charger.

**Note:** Receivers docked with the power switch in the ON position will power on when fully charged. To avoid unwanted audio and unnecessary battery drain, ensure all receivers are switched OFF before charging.

This product is tested and certified to be compliant with the requirements of CAN/CSA-C381.2-17 in power save mode with battery charging.

### Storage Mode

To store batteries for longer than 8 days, use the charger's storage mode. Each battery will be charged or discharged to 3.8 volts, which is ideal for long-term storage.

To enter storage mode, press and hold storage for 3 seconds until the power LED turns red. The batteries will begin charging or discharging to 3.8 volts, which may take several hours. The LEDs indicate when the battery is approaching storage voltage or at storage voltage.

To exit storage mode, press and hold storage. The power LED changes to white and batteries resume charging normally.

When batteries are ready for storage, remove them from the charger and place in a temperature-controlled area. Recommended battery storage temperature is 10°C (50°F) to 25°C (77°F).

**Note:** Run storage mode once every 6 months to maintain the storage voltage.

### Restoring Factory Settings

Press and hold reset to restore factory settings. All LEDs will flash and turn off as the charger reboots.

IP addressing will be set to automatic, and charger will be in charging mode.

# Networking

The Axient Digital PSM transmitter features a 4-port network interface. Dante technology provides an integrated solution to monitor digital audio. Dante uses standard IP over Ethernet and safely coexists on the same network as IT and control data. Selectable networking modes route port signals for flexible network setup.

### Network Signal Types

The following signal types are supported on the network:

- Shure control: Shure Wireless Workbench software provides comprehensive control for wireless audio systems
- Dante primary: Dante digital audio signals
- Dante secondary: Second copy (redundant) of the Dante primary audio, often used for additional routing options

## Guided Network Configuration

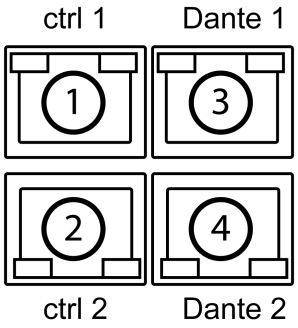
Axient Digital PSM offers a guided setup to simplify networking of your gear.

Setup includes the following:

- Switch mode
- Shure control
- Dante primary
- Dante secondary

### Networking Modes

The networking mode determines the type of signals that are routed to the ports.




**Switched Mode Port Signals**

① Shure control and Dante primary

② Shure control and Dante primary

③ Shure control and Dante primary

④ Shure control and Dante primary

**Split/Redundant Mode Port Signals**

① Shure control

② Shure control

③ Dante primary

④ Dante secondary

## Setting the Switch Mode

1. From the main menu: `Device Configuration` > `Network Settings` > `Setup`.
2. Use the control wheel to set the switch mode to Switched or Split Redundant.
3. Press ENTER to save and reboot.

## Setting the Interface Mode (IP Address)

An IP address must be assigned to each device in the network to ensure communication and control between components. Valid IP addresses can be assigned automatically using a DHCP server or manually from a list of valid IP addresses. If using Dante audio, a separate Dante IP address must also be assigned to each Dante device.

**Automatic**

1. If using a DHCP capable Ethernet switch, set the DHCP switch to ON.
2. From the Device Configuration menu: `Network Settings` > `Setup` > `Next`
3. Use the control wheel to set the Interface Mode to Automatic for Shure Control, Dante Primary, and Dante Secondary (if applicable).
4. When finished, use the Back button to return to the home screen.

**Manual**

1. From the Device Configuration menu: `Network` `Settings` > `Setup` > `Next`
2. Use the control wheel to set the Interface Mode to Manual.
3. Set valid IP addresses, subnet values, and gateways, for Shure Control, Dante Primary, and Dante Secondary (if applicable).
4. When finished, use the Back button to return to the home screen.

# Accessing the Network with a Computer

You can control and monitor all networked transmitters through a computer running Shure Wireless Workbench software, Version 6 or later. If using the default automatic network setting, make sure your computer is configured for DHCP.

**Note:** Some security software or firewall settings on your computer can prevent you from connecting to the transmitter. If using firewall software, allow connections on port 2201.

# Static IP Addressing

Static IP addressing is also supported. An IP address can be assigned through the network menu (`Util` > `Network` > `Mode` > `Manual`).

# Network Browser

Use the network browser tool to view Shure devices on the network. Access the tool from `Main menu` > `Device Configuration` > `Network Browser` and use the control wheel to select a device.


**Identify All**

Flashes the front panel LED of all devices on the network to verify connectivity.

**Refresh**

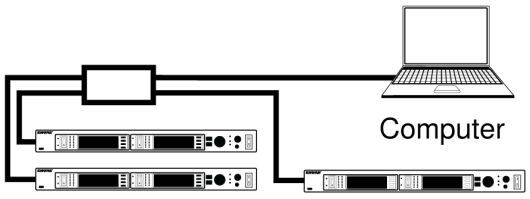
Updates the device list.

**FW Version**

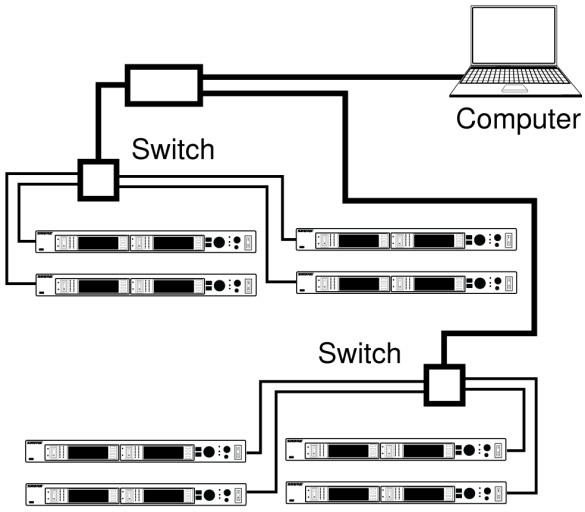
Displays the firmware versions of devices found on the network. Select Model to view the device model.

**Tip:** Press the control wheel to view the device IDs and IP addresses of these devices.

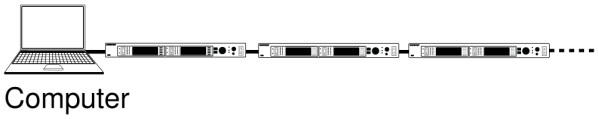
# Connecting Transmitters




**Router with DHCP**




**Extended Network**




**Direct Connection to Computer**

# Charger Network Settings

To adjust charger network settings, open the charger properties panel in Wireless Workbench. Click the gear icon to set the IP mode and IP address, view the MAC address, and view firmware version.

## Connecting to an External Control System

The SBC441 networked charger connects to external control systems such as AMX or Crestron via the Ethernet. For a comprehensive list of command strings, visit the product page at https://www.shure.com.

- Connection: Ethernet (TCP/IP; SBC441 is the client)
- Port: 2202

# Specifications

## System Specifications

### RF Carrier Frequency Range

470 to 1260 MHz, varies by region (see frequency tables)

### Working Range

100 m (330 ft)

**Note:** Actual range depends on RF signal absorption, reflection and interference.

### RF Tuning Step Size

25 kHz (typical)

### Sensitivity

| | |
|---|---|
| **Analog FM** | -94 dBm (typical) at 27 dB SINAD |
| **Digital** | -93 dBm (typical) at 10e-5 BER |

### Latency (Analog Input)

| | |
|---|---|
| **Analog FM** | 1.29 ms |
| **Digital** | ≤2.8 ms |

### Audio Frequency Response

20 Hz – 15 kHz (±1 dB)

### Signal-to-Noise Ratio

| | |
|---|---|
| **Digital** | 110 dB (typical) |

### Total Harmonic Distortion

| | | |
|---|---|---|
| **Analog FM** | < 0.5% (typical)Ref. at ±34 kHz deviation @1 kHz | Ref. at ±34 kHz deviation @1 kHz |
| **Digital** | < 0.01% (typical)Ref. at ±18 dBv, 1 kHz, digital gain @ 0 dB | Ref. at ±18 dBv, 1 kHz, digital gain @ 0 dB |

### MPX Pilot Tone (Analog FM)

19 kHz

### System Audio Polarity

Not inverted

## ADXR Wireless Bodypack Receiver

### Dimensions

102 mm × 68 mm × 21.5 mm (4.0 in. x 2.7 in. x 0.85 in.) H x W x D

### Weight

124 g (4.4 oz.), without battery

### Housing

Aluminum 6061-T6, PC/ABS

### Battery Type

Shure SB910  Rechargeable Li-Ion, or ×3 AAA batteries via SB913A battery sled

### Operating Temperature Range

-18°C (0°F) to 50°C (122°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.

### Battery Runtime

Up to 5.25 hours in True Digital Diversity

## Audio

### Connector

Locking 3.5mm (⅛") TRS

### Minimum Load Impedance

2 Ω

### Output Impedance

<1 Ω

### Audio Output Power

100 mW @ 32 Ω

### L/R Stereo Separation

| | |
|---|---|
| **300 Ω** | >75 dB |
| **600 Ω** | >90 dB |

| | |
|---|---|
| **1 kΩ** | >100 dB |

### Dynamic Range
110 dB, A-weighted

## RF Input

### Antenna Type
¼ wave

Varies by hardware variant

### Connector Type
SMA

### Impedance
50 Ω

### Spurious Rejection
>80 dB (typical)

### Image Rejection
>80 dB

### Squelch Threshold
22 dB SINAD (±3 dB) in Analog FM mode

## 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 (ERP)

varies by region

### Receiver Frequency Bands

| ADXR | Band | Frequency Range ( MHz) |
|---|---|---|
| **A (470 to 636 MHz)** | G53 | 470 to 510 |

| ADXR | Band | Frequency Range ( MHz) |
|---|---|---|
| | **G54** | 479 to 565 |
| | **G55** | 470 to 636* |
| | **G56/G56J/G56K** | 470 to 636 |
| | **G57** | 470 to 608 |
| | **G63** | 487 to 636 |
| | **H54** | 520 to 636 |
| **B (606 to 810 MHz)** | K54 | 606 to 663** |
| | **K55** | 606 to 694 |
| | **K56** | 606 to 714 |
| | **K58** | 622 to 698 |
| | **K60** | 614 to 703 |
| | **L60** | 630 to 698 |
| **C (925 to 960 MHz)** | X51 | 925 to 937.5 |
| | **X55** | 941 to 960 |
| **P55 (694 to 806 MHz)** | P55 | 694 to 703, 748 to 758, 803 to 806 |
| **X57 (961 to 1154 MHz)** | X57 | 961 to 1154 |
| **Z16† (1240 to 1260 MHz)** | Z16 | 1240 to 1260 |

*With a gap between 608 to 614 MHz.

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

†Z16 for Japan only

## K55 606-694 MHz

| **Country Code**<br>**Code de Pays**<br>**Codice di paese**<br>**Código de país**<br>**Länder-Kürzel** | **Frequency Range**<br>**Gamme de frequences**<br>**Gamme di frequenza**<br>**Gama de frequencias**<br>**Frequenzbereich** |
|---|---|
| **A, B, BG, CH, CY, CZ, D, DK, EST, F** | * |

| Country Code<br>Code de Pays<br>Codice di paese<br>Código de país<br>Länder-Kürzel | Frequency Range<br>Gamme de frequences<br>Gamme di frequenza<br>Gama de frequencias<br>Frequenzbereich |
|---|---|
| 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.

## G56 470-636 MHz

CE

| Country Code<br>Code de Pays<br>Codice di paese<br>Código de país<br>Länder-Kürzel | Frequency Range<br>Gamme de frequences<br>Gamme di frequenza<br>Gama de frequencias<br>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.

### K57 606-790 MHz

| Country Code<br>Code de Pays<br>Codice di paese<br>Código de país<br>Länder-Kürzel | Frequency Range<br>Gamme de frequences<br>Gamme di frequenza<br>Gama de frequencias<br>Frequenzbereich |
|---|---|
| A, B, BG, CH, CY, CZ, D, DK, EST, F | * |
| FIN, GB, GR, H, HR, I, IRL, IS, L, LT | * |

| Country Code<br>Code de Pays<br>Codice di paese<br>Código de país<br>Länder-Kürzel | Frequency Range<br>Gamme de frequences<br>Gamme di frequenza<br>Gama de frequencias<br>Frequenzbereich |
|---|---|
| **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.

# ADTQ (Quad) and ADTD (Dual) Transmitters

## Dimensions

44 mm × 482 mm × 385 mm (1.7" × 19.0" × 15.2") H × W × D

## Weight

| | |
|---|---|
| **ADTQ** | 4.7 kg (10.4 lb) |
| **ADTQDC** | 5.0 kg (11.1 lb) |
| **ADTD** | 4.7 kg (10.1 lb) |
| **ADTDDC** | 4.9 kg (10.8 lb) |

## Housing

Steel; Extruded aluminum

## AC Power Requirements

| | |
|---|---|
| **AC Input** | 100 to 240 V AC, 50-60 Hz, 1.2 A max (6.2 A max outlet loaded) |
| **AC Output** | 100-240 V AC, 5A max, 50/60 Hz UNSW |
| **DC Input*** | 12-48 V DC, 10.1 A max |

* ADTQDC and ADTDDC only

## RF Connector Type

BNC

## RF Output Impedance

50 Ω

### Network Interface
10/100 Mbps, 1Gbps, Dante Digital Audio

### Fuse
T5A

### Operating Temperature Range
-18°C (0°F) to 50°C (122°F)

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

## Audio Input

### Polarity
Positive

### Nominal Input Level
Switchable +4 dB u, -10 dBV

### Maximum Input Level

| | |
|---|---|
| **+4 dBV** | 28 dBV |
| **-10 dBV** | 16 dBV |

### Connector Types and Pin Assignments

| | |
|---|---|
| **Analog XLR** | 1 = ground, 2 = hot, 3 = cold |
| **6.35mm (¼") TRS** | Tip = hot, Ring = cold, Sleeve = ground) |
| **AES3 XLR** | 1 = ground, 2 = hot, 3 = cold dig audio |

### Impedance
32.59 K Ω

### Gain Adjustment Range

| | |
|---|---|
| **Analog** | 12 dB analog (auxiliary mode) |
| **Digital** | −16 to +20 dB |

### Phantom Power Protection

| | |
|---|---|
| **Analog** | 50 V DC |
| **AES3** | 100 V DC |

### AES3
48, 96 and 192 KHz sample rates

### Dante Digital Audio

| | |
|---|---|
| **Min. Latency** | 250 µs |

| | |
|---|---|
| **Supported Sample Rates** | 48K, 96K |
| **Bit Depth** | 24bit |

## Audio Output (Headphone)

### Connector Type

Locking 3.5mm (⅛") TRS

### Minimum Load Impedance

2 Ω

### Output Impedance

<1 Ω

### Audio Output Power

100 mW @ 32 Ω

### L/R Stereo Separation

| | |
|---|---|
| **300 Ω** | >75 dB |
| **600 Ω** | >90 dB |
| **1 kΩ** | >100 dB |

### Dynamic Range

110 dB, A-weighted

## Transmitter Frequency Bands

| Band | Frequency Range ( MHz) |
|---|---|
| **G53** | 470 to 510 |
| **G54** | 479 to 565 |
| **G55†** | 470 to 636* |
| **G56/G56J/G56K** | 470 to 636 |
| **G57** | 470 to 608 |
| **G63** | 487 to 636 |
| **H54** | 520 to 636 |
| **K54** | 606 to 663** |
| **K55** | 606 to 694 |
| **K56** | 606 to 714 |
| **K58** | 622 to 698 |

| Band | Frequency Range ( MHz) |
|---|---|
| **K60** | 614 to 703 |
| **L60** | 630 to 698 |
| **P55** | 694 to 703, 748 to 758, 803 to 806 |
| **X51** | 925 to 937.5 |
| **X55** | 941 to 960 |
| **X57** | 961 to 1154 |
| **Z16††** | 1240 to 1260 |

*With a gap between 608 to 614 MHz.

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

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

††Z16 for Japan only

## K55 606-694 MHz

| Country Code<br>Code de Pays<br>Codice di paese<br>Código de país<br>Länder-Kürzel | Frequency Range<br>Gamme de frequences<br>Gamme di frequenza<br>Gama de frequencias<br>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.

## G56 470-636 MHz

| Country Code<br>Code de Pays<br>Codice di paese<br>Código de país<br>Länder-Kürzel | Frequency Range<br>Gamme de frequences<br>Gamme di frequenza<br>Gama de frequencias<br>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.

### K57 606-790 MHz

| Country Code<br>Code de Pays<br>Codice di paese<br>Código de país<br>Länder-Kürzel | Frequency Range<br>Gamme de frequences<br>Gamme di frequenza<br>Gama de frequencias<br>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.

# AD8C Antenna Combiner

## Dimensions

44 mm × 482 mm × 385 mm (1.7" × 19.0" × 15.2") H × W × D

## Weight

| | |
|---|---|
| **AD8C** | 3.8 kg (8.3 lb) |
| **AD8CDC** | 3.9 kg (8.7 lb) |

## Housing

Low Carbon Steel (Chassis); Aluminum (Front panel & cover)

## Power Requirements

| | |
|---|---|
| **AC Input** | 100 to 240 V AC, 50-60 Hz, 0.68 A max (5.68 A max outlet loaded) |
| **AC Output** | 100 to 240 V AC, 5A max, 50/60 Hz UNSW |
| **DC Input*** | 10.9-14.8 V DC, 3.3 A max |

* AD8CDC only

## Fuse

T5A

## Operating Temperature Range

-18°C (0°F) to 63°C (145.4°F)

## Storage Temperature Range

-29°C (-20°F) to 74°C (165°F)

## Network Interface

10/100 Mbps, 1Gbps, Dante Digital Audio

## Frequency Range

| | |
|---|---|
| **AD8C** | 470 - 960 MHz |
| **AD8CX** | 960 - 1260 MHz |

## RF Connector Type

| | |
|---|---|
| **Input** | BNC (×8) |
| **Output** | BNC (×3) |

## RF Input/Output Configuration

Passive

## Impedance

50 Ω

## Insertion Loss

| | |
|---|---|
| **4:1** | -8 dB (typical) |
| **8:1** | -12 dB (typical) |

## RF Port to Port Isolation

>20 dB (25 dB typical)

## RF Input

| | |
|---|---|
| **Peak** | 36 dBm (4W) |

| | |
|---|---|
| **Average** | 27 dBm (0.5W) |

# AD221 Antenna Combiner

## Dimensions

34 mm × 101.4 mm × 92 mm (1.3" × 4.0" × 3.6") H × W × D

## Weight

251 g (0.55 lb)

## Housing

Cast aluminum

## Operating Temperature Range

-18°C (0°F) to 63°C (145.4°F)

## Storage Temperature Range

-29°C (-20°F) to 74°C (165°F)

## Connector Type

BNC (×3)

## Frequency Range

| | |
|---|---|
| **AD221** | 470 - 960 MHz |
| **AD221X** | 960 - 1260 MHz |

## Impedance

50 Ω

## RF Input/Output Configuration

Passive

## Insertion Loss

4 dB (typical)

## RF Port to Port Isolation

> 20 dB (25 dB typical)

25 dB typical

## RF Input

| | |
|---|---|
| **Peak** | 36 dBm (4W) |
| **Average** | 27 dBm (0.5 W) |

# SBC441 4-Bay Networked Charger

## Dimensions

60.3 mm × 78.8 mm × 216.5 mm (2.4" × 3.1" × 8.5") H × W × D

## Weight

531 g (1.17 lb)

## Housing

Molded PC/ABS plastic, cast aluminum

## Operating Temperature Range

-18°C (0°F) to 50°C (122°F)

Note: Battery characteristics may limit this range.

## Storage Temperature Range

-29°C (-20°F) to 74°C (165°F)

## Compatible Devices

| | |
|---|---|
| **Batteries** | Up to 4 SB910 |
| **Receivers** | Up to 4 ADXR |

## Network Interface

10/100 Mbps Ethernet (2x)

## Network Addressing Capability

DHCP or manual IP address

## Charge Time

3 hours

## Charge Current

1.25 A (maximum)

## External Power Supply

PS60

## Power Requirement (input rating)

15 V, 4.0 A (maximum)

# Important Product Regulatory Information

EMC conformance testing is based on the use of supplied and recommended cable types. The use of other cable types may degrade EMC performance.

# Introduction to EMC

Electromagnetic Interference (EMI) is any signal or emission, radiated in free space or conducted along power or signal leads, that endangers the functioning of radio navigation or other safety service or seriously degrades, obstructs, or repeatedly interrupts a licensed radio communications service. Radio communications services include but are not limited to AM/FM commercial broadcast, television, cellular services, radar, air-traffic control, pager, and Personal Communication Services (PCS). These licensed radio services, and unlicensed radio services, such as WLAN, ZIGBEE or Bluetooth, along with unintentional radiators such as digital devices contribute to the electromagnetic environment.

Electromagnetic Compatibility (EMC) is the ability of items of electronic equipment to function properly together in the electronic environment. While this equipment has been designed and determined to be compliant with regulatory agency limits for EMI, there is no guarantee that interference will not occur in a particular installation.

Shure products are designed, tested, and classified for their intended electromagnetic environment. These electromagnetic environment classifications generally refer to the following harmonized definitions:

- Class B products are intended for use in residential/domestic environments but may also be used in non-residential/non-domestic environments.

  ***Note:*** *The residential/domestic environment is an environment where the use of broadcast radio and television receivers may be expected within a distance of 10 m from where this product is used.*

- Class A products are intended for use in non-residential/non-domestic environments. Class A products may also be utilized in residential/domestic environments but may cause interference and require the user to take adequate corrective measures.

# 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 IO 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. This equipment should be installed and operated with minimum distance 20 cm between the radiator & your body.

## 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. 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 antenna(s) must be installed such that a minimum separation distance of 20 cm is maintained between the radiator (antenna) and all persons at all times.

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. La ou les antennes doivent être installées de telle façon qu'une distance de séparation minimum de 20 cm soit maintenue entre le radiateur (antenne) et toute personne à tout moment.

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。

本器材須經專業工程人員安裝及設定，始得使用，且不得使用非型式認證證明所列天線或直接販售給一般消費者。

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。

# Regulatory Information for Wireless Products Utilizing TV Frequency Bands

## EU/UK Non-Harmonized Frequency Information

| **Country Code**<br>**Code de Pays**<br>**Codice di paese**<br>**Código de país**<br>**Länder-Kürzel** | **Frequency Range**<br>**Gamme de frequences**<br>**Gamme di frequenza**<br>**Gama de frequencias**<br>**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** | xxx - xxx MHz* |
| **UK** | xxx - xxx MHz* |
| **all other countries** | * |

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

## Canada Warning for Wireless

This device operates on a no-protection, no-interference basis. Should the user seek to obtain protection from other radio services operating in the same TV bands, a radio licence is required. For further details, consult Innovation, Science and Economic Development Canada's document Client Procedures Circular CPC-2-1-28, Voluntary Licensing of Licence-Exempt Low-Power Radio Apparatus in the TV Bands.

Ce dispositif fonctionne selon un régime de non_brouillage et de non_protection. Si l'utilisateur devait chercher à obtenir une certaine protection contre d'autres services radio fonctionnant dans les mêmes bandes de télévision, une licence radio serait requise. Pour en savoir plus, veuillez consulter la Circulaire des procédures concernant les clients CPC_2_1_28, Délivrance de licences sur une base volontaire pour les appareils radio de faible puissance exempts de licence et exploités dans les bandes de télévision d'Innovation, Sciences et Développement économique Canada.

## ACMA Notice

WARNING: This device operates under an ACMA class license and must comply with all conditions of that license including operating frequencies.

# Regulatory Information for Wireless ZIGBEE Devices

## MIC Notice

運用に際しての注意

この機器の使用周波数帯では、電子レンジ等の産業·科学·医療用機器のほか工場の製造ライン等で使用されている移動体識別用の構内無線局（免許を要する無線局）及び特定小電力無線局（免許を要しない無線局）並びにアマチュア無線局（免許を要する無線局）が運用されています。

1. この機器を使用する前に、近くで移動体識別用の構内無線局及び特定小電力無線局並びにアマ　チュア無線局が運用されていないことを確認して下さい。
2. 万一、この機器から移動体識別用の構内無線局に対して有害な電波干渉の事例が発生した場合には、 速やかに使用周波数を変更するか又は電波の発射を停止した上、下記連絡先にご連絡頂き、混　信回避のための処置等（例えば、パーティションの設置など）についてご相談して下さい。
3. その他、この機器から移動体識別用の特定小電力無線局あるいはアマチュア無線局に対して有害な電波干渉の事例が発生した場合など何かお困りのことが起きたときは、保証書に記載の販売代　理店または購入店へお問い合わせください。代理店および販売店情報は Shure 日本語ウェブサイト　http://www.shure.co.jp でもご覧いただけます。

現品表示記号について


現品表示記号は、以下のことを表しています。 この無線機器は 2.4GHz 帯の電波を使用し、変調方式は「 DS 」方式、想定与干渉距離は 40m です。 2,400MHz ～ 2,483.5MHz の全帯域を使用し、移動体識別装置の帯域を回避することはできません 。

# 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 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Pb | Cd | Hg | Cr(VI) | PBB | PBDE | DBP | BBP | DIBP | DEHP |
| 电路模块 | X | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 金属模块 | X | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 线缆及其组件 | X | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 电源适配器* | X | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| 锂电池组* | 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 1：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。

注 2：以上未列出的部分,表明其有害物质含量均满足电器电子产品有害物质限制使用国家标准要求

*:表示如果包含部分

| 部件名称 | 电池有害物质 | | | | | |
|---|---|---|---|---|---|---|
| | 铅 | 汞 | 镉 | 六价铬 | 多溴联苯 | 多溴二苯醚 |
| 线路板 | ○ | ○ | ○ | ○ | ○ | ○ |
| 线路板上电阻中陶瓷 | x | ○ | ○ | ○ | ○ | ○ |
| 线路板上电子元件 | ○ | ○ | ○ | ○ | ○ | ○ |
| 塑料外壳 | ○ | ○ | ○ | ○ | ○ | ○ |

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。

## 臺灣 RoHS

**Notice:** Taiwan RoHS tables are provided by GC on a per-product basis.

# Battery Regulatory Information

## 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.

## 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 im-

provement 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 / IC ID

**FCC IDs:** DD4ADTQG57, DD4ADTQK54, DD4ADTQX55, DD4ADTDG57, DD4ADTDK54, DD4ADTDX55

**IC IDs:** 616A-ADTQG57, 616A-ADTDG57

## Certification and Compliance Markings