# ADX5D

## Portable Receiver



The Shure user guide for ADX5D.
Version: 0.1 (2020-L)

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## 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.

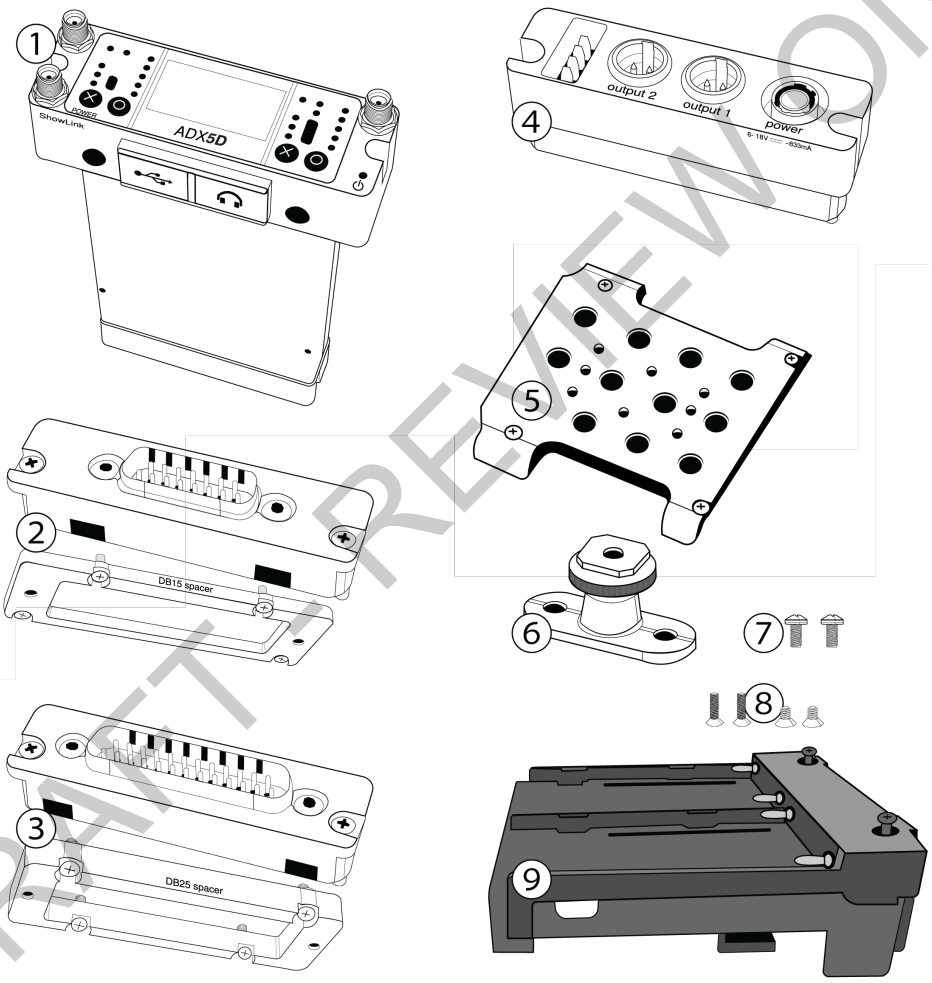
13. UNPLUG this apparatus during lightning storms or when unused for long periods of time.
14. REFER all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have 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.

**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.

# ADX5D Portable Slot-In Receiver

To high-tier broadcast audio professionals, ADX5 is the dual-channel slot-in receiver that provides unparalleled RF performance in a portable Axient Digital receiver format, due to its high-performance radio, spectral efficiency and operating range, true digital diversity, wide tuning bandwidth, frequency diversity, and interference detection and avoidance technology.

## System Components






### ① ADX5D

Digital wireless receiver

### ② ADX5BP-DB15

DB15 backplate and spacer plate

### ③ ADX5BP-DB25

DB25 backplate and spacer plate

### ④ ADX5BP-TA3

Standalone backplate

### ⑤ ADX5D-AD-MPK

Mounting plate

### ⑥ ADX5D-AD-CSMK

Cold shoe mount

### ⑦ M3 screws (x2)

To attach cold shoe to mounting plate

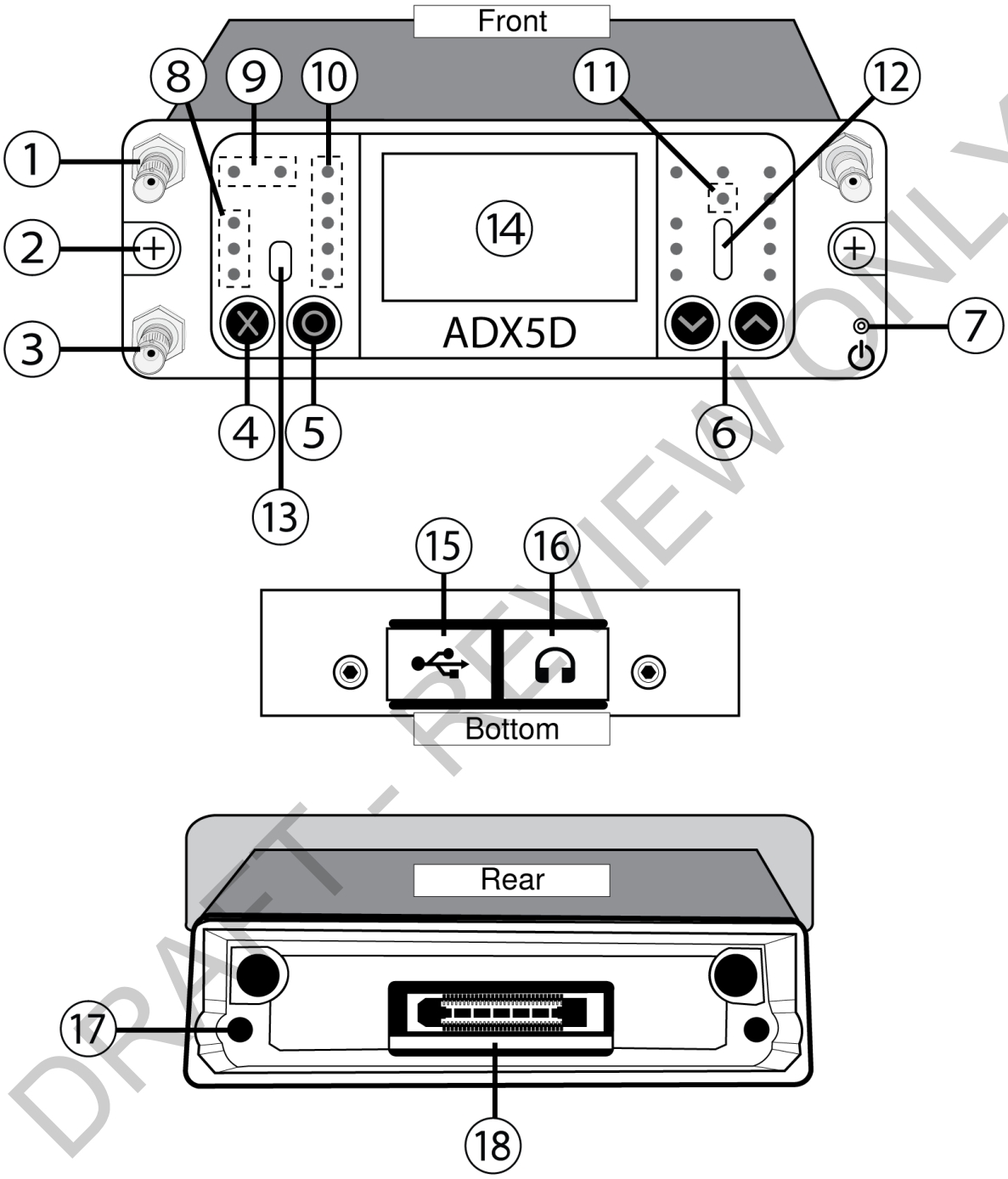
### ⑧ ¼-20 screws (x2) and M2.5 screws (x2)

To attach mounting plate to third-party mounts

### ⑨ ADX5D-SB952LM

Battery sled attachment

# Hardware Callouts






### ① Coaxial inputs from Antenna A and Antenna B

RF connection for Antenna A and Antenna B.

### ② Battery sled attachment screws

Captive screws for securing the ADX5BS-L battery sled.

### ③ Coaxial input from ShowLink antenna

ZigBee connection for networking via ShowLink.

### ④ "Exit" (X) button

Push to return to the previous menu screen, hold to power the unit on or off.

### ⑤ "Enter" (O) button

Press to enter menu screens and confirm menu changes.

### ⑥ Control buttons

Use to navigate through parameter menus and to change settings.

### ⑦ Power LED

- Green = Unit is powered on
- Red = Unit is powered off
- Off = Unit is not connected to a valid power supply

### ⑧ Antenna status LEDs

Blue indicates when the channel receives from one or both antennas; red indicates interference in one or both antennas.

### ⑨ Audio level LEDs

Green/yellow/red indicator for at-a-glance audio monitoring; for more specific readings, use the in-display audio monitor.

### ⑩ Channel quality LEDs

Indicates RF signal strength.

### ⑪ IR Sync LED

Indicates the receiver's IR port is aligned with a transmitter and is passing data.

### ⑫ Infrared (IR) port

Align with a compatible transmitter's IR port during an IR Sync for automated tuning and setup.

### ⑬ Mystery Window

A window into mystery! DO NOT GAZE DIRECTLY INTO WINDOW

### ⑭ Display

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

### ⑮ USB-C port

Connect to a computer to update firmware or configure the device using Wireless Workbench™.

### ⑯ 3.5mm output port

User-assignable audio output.

### ⑰ Backplate screw holes

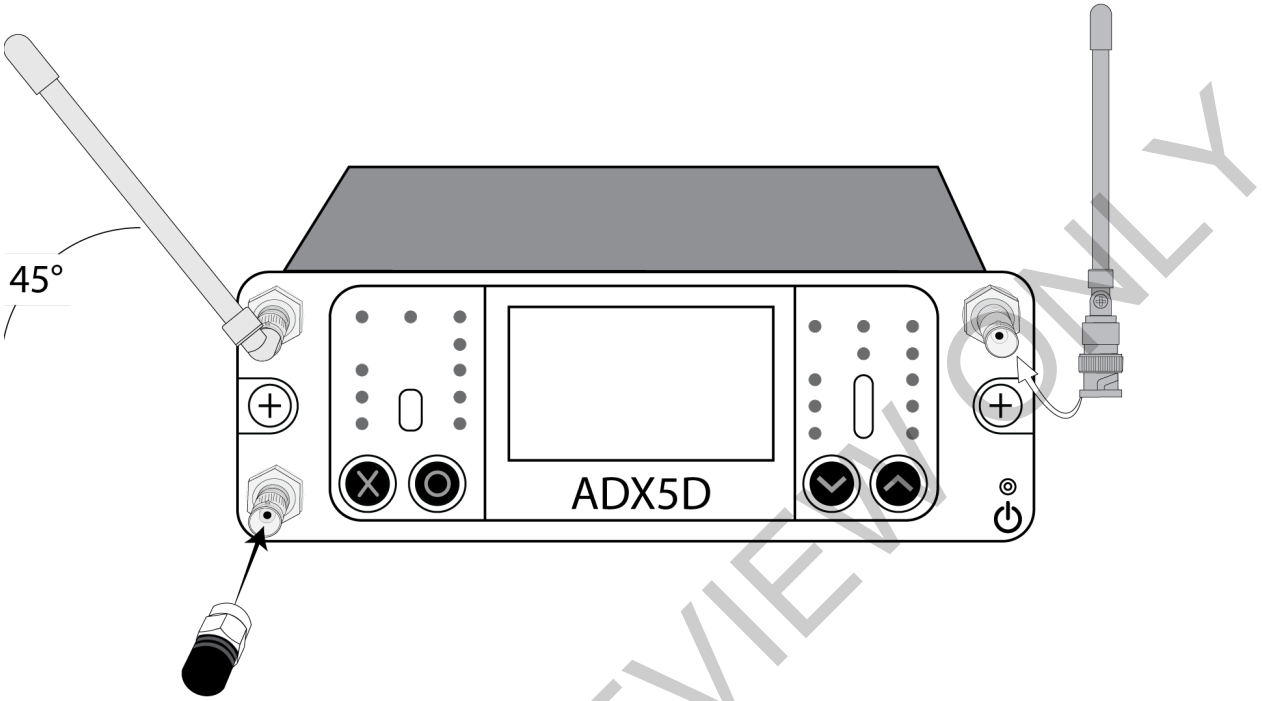
Internally-threaded screw holes for securing interchangeable backplates.

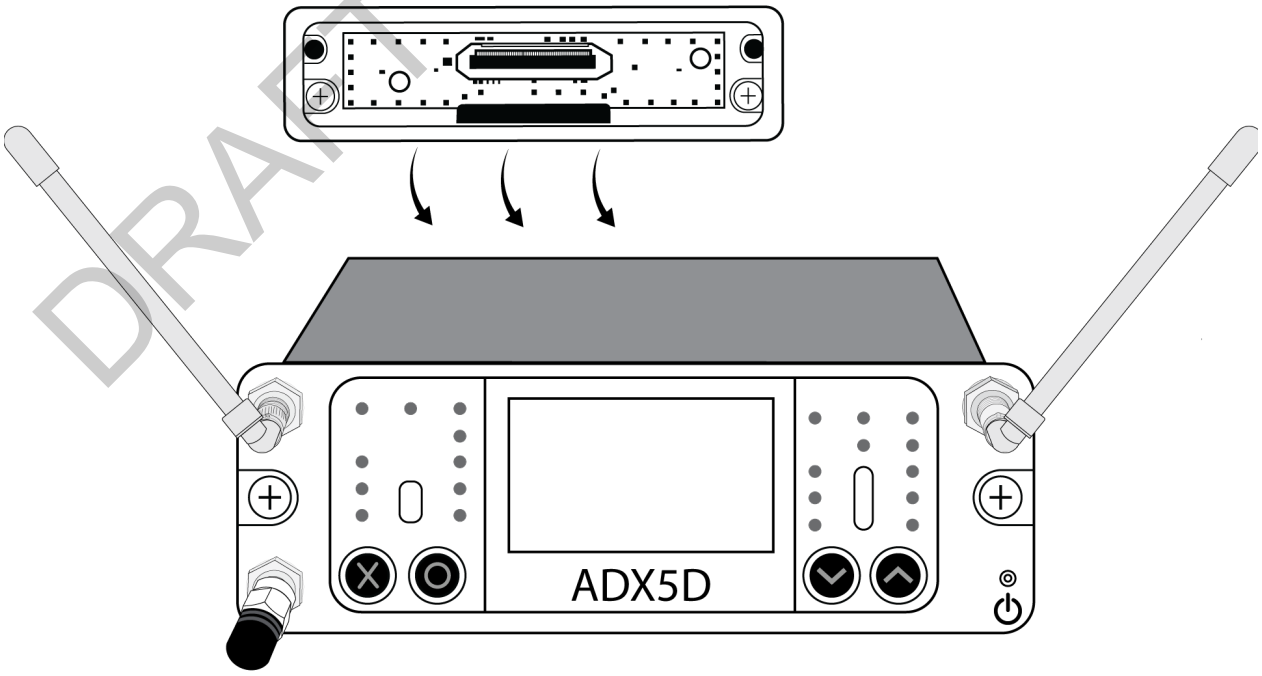
### ⑱ Rear panel connector

Transfers data and power from compatible backplates.

# Hardware Setup

## Antenna Attachment



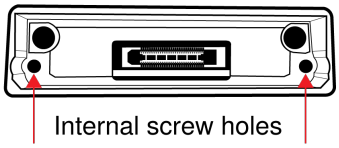



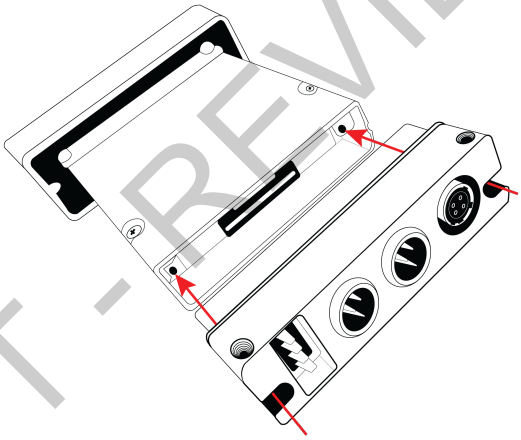
# Rear Panel Kits

One of the major advantages of the slot-in receiver form factor is that they can be configured for multiple applications, including insertion into a camera or SuperSlot device, or for standalone use where power is provided by a battery distribution system (BDS) or battery sled. The rear panels manage power input, audio output, and data transfer between mating devices (e.g. cameras, multi-couplers, etc.). The spacer plates facilitate mounting in cameras, SuperSlot and UniSlot multi-couplers, and audio bag organizer plates, as each of these devices have different dimensions and clearances for slot-in receivers.

# Attaching the Backplate

Align the captive Phillips screws with the threaded holes on the back of the ADX5D receiver and slide the backplate into place. Tighten screws to ensure a solid connection.



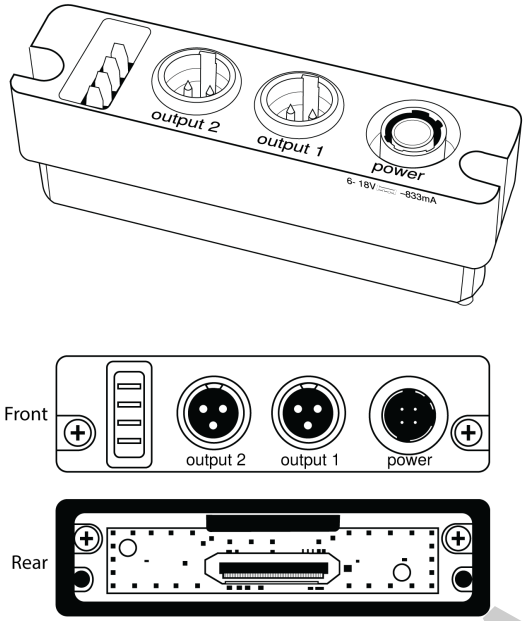





# TA3 Standalone Backplate

The standalone rear panel for ADX5D is designed to accommodate power input from an external source, audio output for the receiver, and optional interfacing with the included battery sled. The panel includes a 6-pin connector for mating with the battery sled, two TA3 (mini 3-pin XLR) audio output connectors that can be configured via a menu item for analog or AES3 output, a 4-pin locking Hirose power input connector, and captive Phillips-head screws to mount/unmount the rear panel.

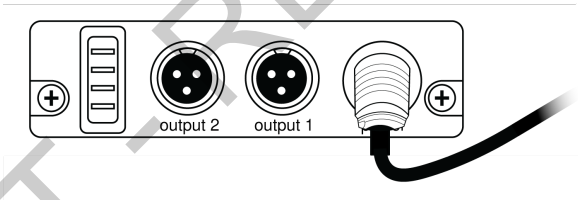
Since the receiver doesn't need to mate with an external device while being used with the standalone rear panel, a spacer plate is not required or included with the rear panel.




*Connectors are (from left to right): 6-pin battery sled power input, two TA3 audio outputs, and Hirose 4-pin power input.*

## Connecting a Power Supply

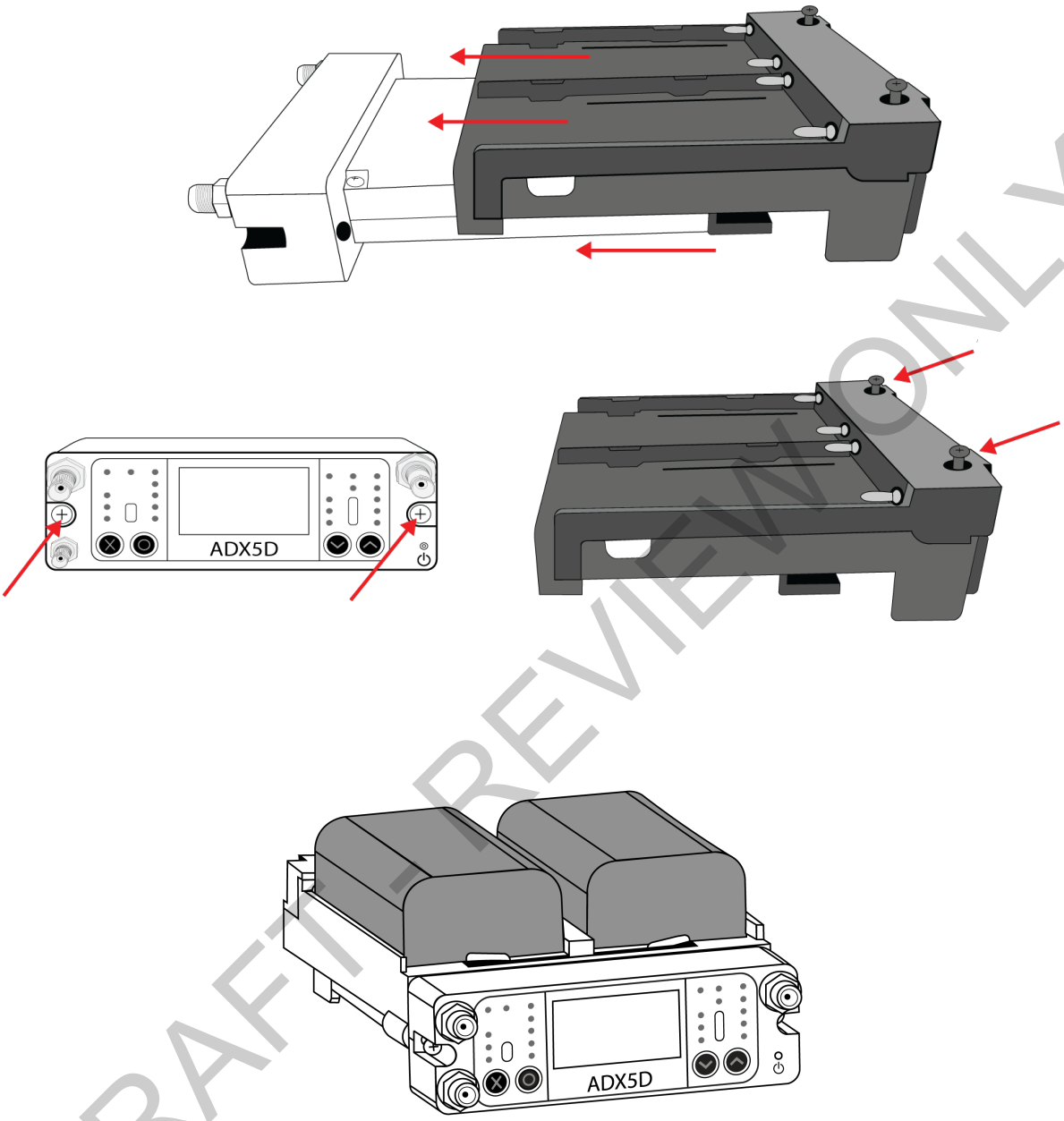
Connect a compatible power supply to the power input.




## Battery Sled

The battery sled must be used with the standalone rear panel, as this panel includes the 6-pin connector required for the two components to mate and pass power. The battery sled is then secured to the receiver using one screw on the rear of the sled, which ensures that the sled cannot fall off or be removed, and two screws from the front panel to stabilize the sled while on the receiver.

Insert the battery so that the contact points on the front face connect with the contacts at the rear of the battery sled bay until the latch moves into place. To remove the battery, push the latch down and pull the battery back and up.





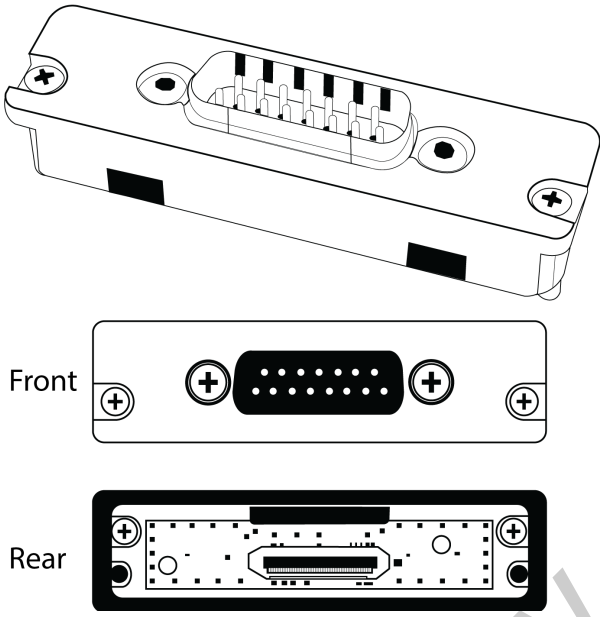

## DB15 Backplate

DB15 rear panels are available for exclusive use in Sony ENG cameras. Only one audio channel is available by default; to account for this, the 3.5mm connector on the bottom of the front plate can be used to output audio from channel 1, channel 2, channel 1+2 stereo, or channel 1+2 summed mono.

**Note:** Automatic interference avoidance when using the DB15 backplate is not available in the United States.

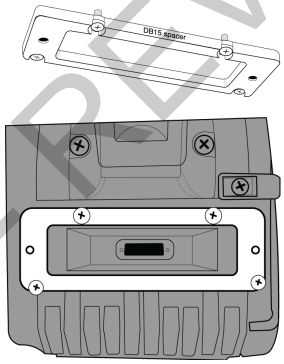
The DB15 rear panel kit for ADX5D includes:

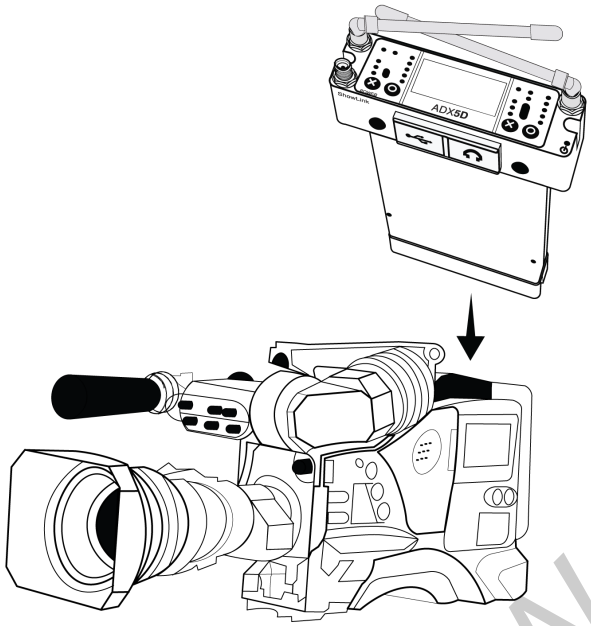
- A DB15 rear panel, with captive Phillips-head screws that make it easy to mount/unmount the rear panel without losing screws
- A DB15 spacer plate




## Connecting to External Hardware

Attach the backplate and slot the ADX5D receiver into a compatible DB15 video camera. If needed, attach the included spacer plate to provide a proper fit.






# DB25 Backplate

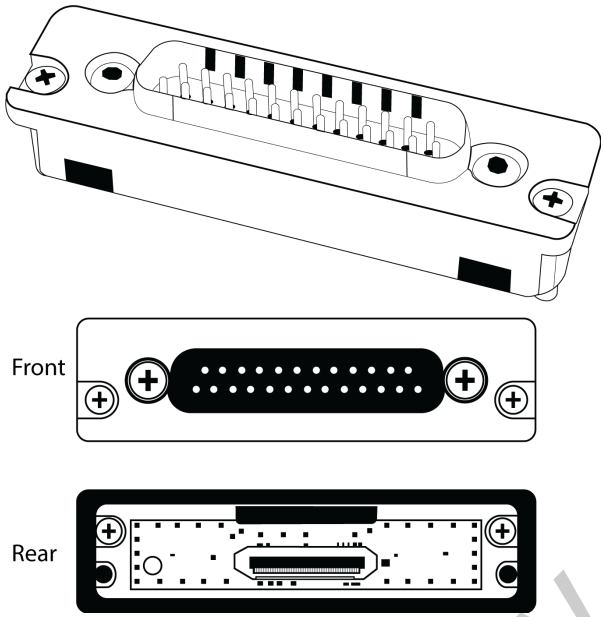
DB25 rear panels utilize a (e.g. audio, video, data, power). 25-pin D-Sub connector commonly used on components that require multiple interfacing paths in a small form factor, including SuperSlot/UniSlot devices (e.g. Sound Devices SL-6 or A10-Rack, Panasonic ENG cameras).

**Note:**

- Automatic interference avoidance when using the DB25 backplate is not available in the United States.
- When serial communication is detected over the DB25 connection on United States hardware, ShowLink is disabled.

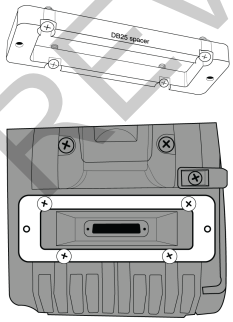
The DB25 rear panel kit for ADX5D includes:

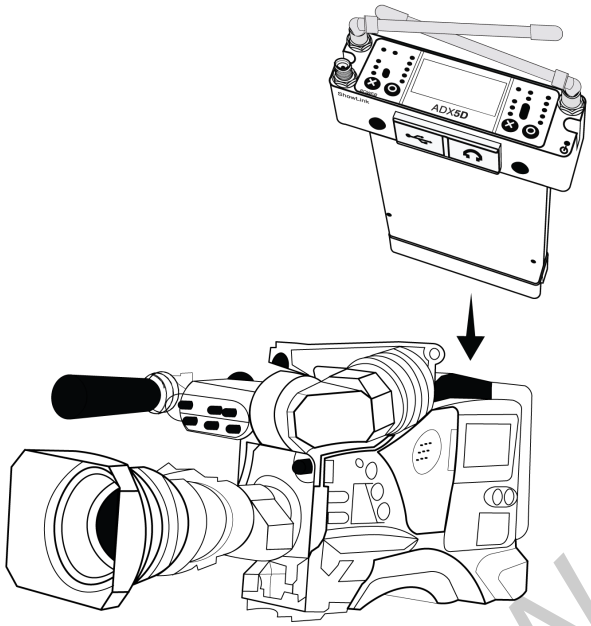
- A DB25 rear panel, with captive Phillips-head screws that make it easy to mount/unmount the rear panel without losing screws
- A DB25 spacer plate




## Connecting to External Hardware

Attach the backplate and slot the ADX5D receiver into compatible DB25 equipment, such as a video camera or multi-coupler. If needed, attach the included spacer plate to provide a proper fit.



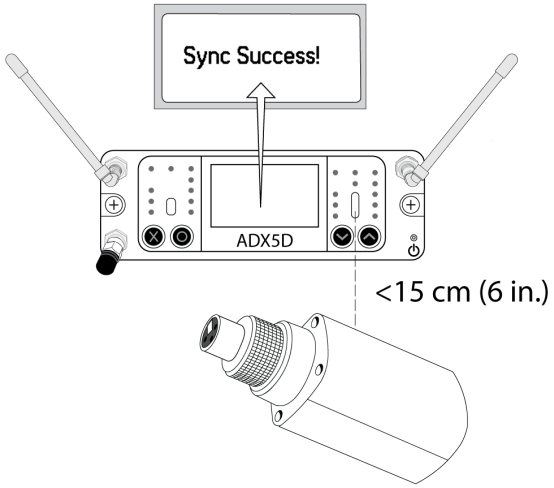



# IR Sync

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

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

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



Note:

Any change to the encryption status on the receiver such as enabling/ disabling encryption or requesting a new encryption key, requires a sync to send the settings to the transmitter.

# Home Screen

The home screen displays the most critical device and channel properties and statuses. From the main home screen, use the arrow buttons to navigate to the channel home screens. Press O to open the menu selection screen.

To change the information that appears on the device or channel home screens, go to `Device Configuration` > `Display` > `Dev Home Options` or `Ch Home Options`.

# Icons

| | |
|---|---|
|  | Battery runtime in hours and minutes or bar display |
|  | Displayed when encryption is enabled |
|  | Displayed when controls are locked. Icon will flash if access is attempted to a locked control (power or menu). |
|  | ShowLink signal strength displays 0 to 5 bars |
| STD | Indicates standard transmission mode |
| HD | Indicates high density transmission mode |
|  | Displayed when RF output is muted |

# Menus and Configuration

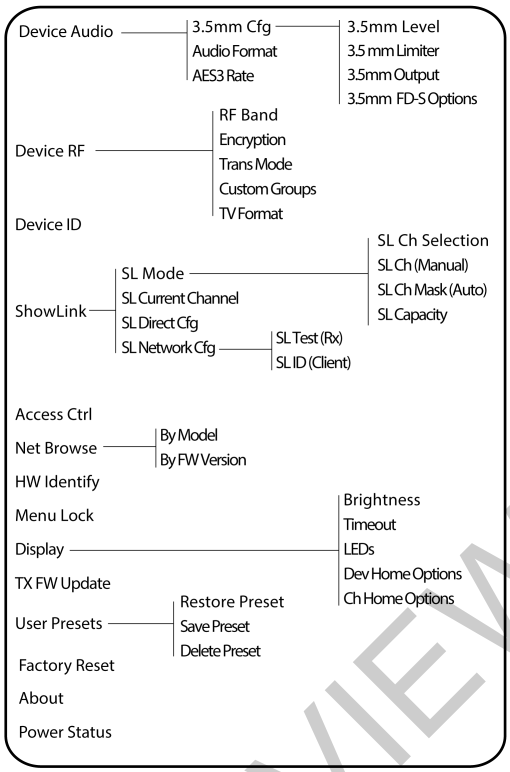
The receiver uses a two-tier menu structure to support multiple channels:

- Device configuration menu: Items in this menu affect the overall performance of the receiver and apply to all channels globally.
- Channel menus: Each channel has its own menu allowing for independent channel configuration.

## Device Configuration Menu

Use the following menu items and parameter settings to configure the receiver at the device level. From the home screen, press O to see your menu options. Use the arrows to select the menu of your choice, and press O to open that menu.

# Device configuration menu map




# Device Audio

**3.5mm Cfg**

- 3.5mm Level: Adjust the headphone level from 0-100%.
- 3.5mm Limiter: Adjust the limiter threshold to prevent overdriving the headphone amp. 0 to -30 dB.
- 3.5mm Output: Choose an output.
- 3.5mm FD-S Options: When FD-S mode is engaged, select whether the headphone monitoring point is before or after FD-S selection.

**Audio Format**

Choose an audio format.

**AES3 Rate**

Configure AES3 audio parameters.

# Device RF

**RF Band**

Select the tuning band for the receiver.

**Encryption**

The receiver features Advanced Encryption Standard (AES-256) to ensure that only the receiver that is keyed to the transmitter can monitor the audio content. Use the control wheel to select whether to encrypt the audio content and perform an IR sync to enable or disable the encryption.

*The encryption key icon ( ) will appear on the display of both the receiver and the transmitter when encryption is enabled.*

**Trans Mode**

Choose between standard and high density transmitter spacing.

**Custom Groups**

Configure, edit, or load custom frequency groups.

**TV Format**

Adjust TV bandwidth to match regional standards.

## Device ID

Assigning custom names or IDs helps with monitoring and organizing when the receiver is part of a large system. Use the arrow buttons to select or edit an ID.

## ShowLink

**SL Mode**

Select a ShowLink mode.

**SL Current Channel**

When ShowLink mode is on, displays the current channel.

**SL Direct Config**

- SL Ch Selection: When in direct mode, choose whether channel selection is automatic or manual.
- SL Ch (Manual): Select a ShowLink channel.
- SL Ch Mask (Auto): Set automatic channel selection to use or avoid individual channels.
- SL Capacity: Displays the number of devices connected to the ShowLink network as well as the total capacity of the network.

**SL Network Config**

- SL Test (Rx): See the current ShowLink status as you move around an area.
- SL Net ID (Client): See and configure the ShowLink network host ID.

## Access Ctrl

View the status of access control (enabled or disabled). If access control is enabled, the access control PIN appears in this menu. Use Wireless Workbench or other Shure control software to enable or disable access control.

## Net Browse

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

**By Model**

Displays all devices on the network.

**By FW Version**

Displays the installed firmware version of the selected network component.

## HW Identify

Send a hardware identification message to control applications, like Wireless Workbench, so you can locate your device in the application.

## Menu Lock

Use the locking feature to prevent accidental or unauthorized changes to controls and settings. Use the arrow buttons to change the lock status of the menu.

## Display

**Brightness**

Adjust the brightness of the display.

**Timeout**

Offers options to turn off display and front panel illumination after 30 seconds, 1 minute (default), 2 minutes, 3 minutes, or 5 minutes.

**LEDs**

- Always On (default): All LEDs function normally.
- Always Off: Antenna status, audio, and channel quality LEDs dimmed. Power status and IR alignment LEDs continue to function normally.
- Follow Display: Antenna status, audio, and channel quality LEDs follow the on/off behavior of the OLED display. Power status and IR alignment LEDs continue to function normally.

**Dev Home Options**

Select a device home screen.

**Ch Home Options**

Select a channel home screen.

## Tx Fw Update

Align transmitter IR window and select to update transmitter firmware.

## User Presets

Presets store all receiver settings to provide a quick way to configure a receiver or switch between several different setups. Up to 4 presets can be stored in receiver memory. Manage and load presets by adjusting the control wheel.

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

## Factory Reset

Resets all receiver parameters to factory settings.

All current settings will be cleared during the reset and the receiver will reboot.

## About

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

## Power Status

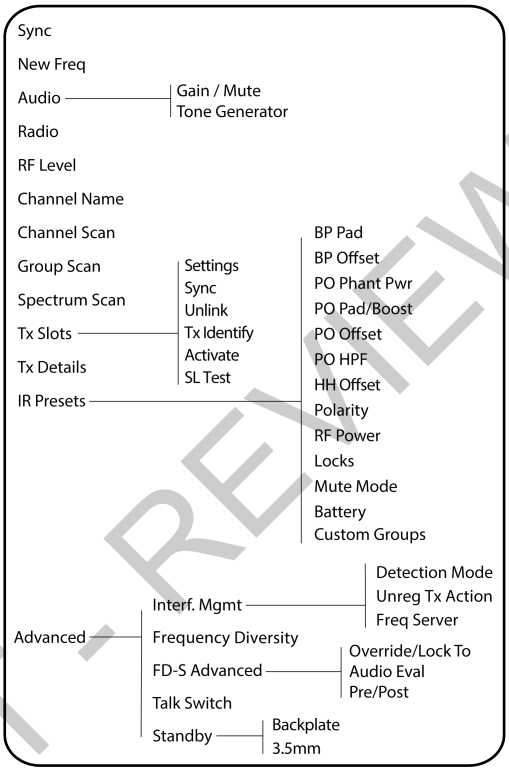
View the power status of the receiver.

# Channel Menu

Use the following menus and parameters to configure the receiver channels. From the home screen, press O to see your menu options. Use the arrows to select the menu of your choice, and press O to open that menu.

As you edit menu values, press O to save changes or press X to cancel without saving.

## Channel menu map




## Sync

See information about the IR sync process, including when a sync is in progress, whether a sync was successful, and some helpful tips if it failed.

## New Freq

Press O to deploy a new frequency when using a spectrum manager as a frequency server.

You won't see this menu option if you don't have a frequency server assigned to the receiver.

## Audio

**Gain/Mute**

You can individually control the gain and audio output in real time for each channel.

- Gain: Adjust the gain in 1dB increments while performing a sound check using typical audio input signal levels and monitor the audio meter LEDs. Reduce the gain if the red LED triggers repeatedly.
- Output: Select On or Mute for the receiver audio output.

**Tone Generator**

Provides a continuous audio signal tone for testing and troubleshooting. Use the arrow buttons to select a level and frequency for the tone, and set the level to Off to stop the generator.

## Radio

Set a group, channel, and frequency.

## RF Level

See finer-resolution details about the RF.

## Channel Name

Assigning unique names to each channel helps with identification and organization when the receiver is part of a large system. Use the arrow keys to assign or edit the channel name.

## Channel Scan

Finds available channels within the selected group:

- Find Next: Selects the nearest available channel
- Find Best: Selects the channels with the best RF noise floor

## Group Scan

Scans the selected group to find all available channels.

## Spectrum Scan

Choose to perform a scan or recall a previously saved scan, if one is available.

## Tx Slots

View and configure transmitter properties. Press O to select a slot and see further actions for that slot.

-  Indicates a ShowLink capable transmitter
-  ShowLink status (ShowLink transmitters only)
-  RF status. If the icon appears, RF output is on (ShowLink transmitters only)
-  Battery information (ShowLink transmitters only)

**Sync**

Assign a transmitter to the selected slot.

**Unlink**

Remove a transmitter from the selected slot.

**Flash (ADX transmitters linked to ShowLink access point)**

Flashes the display of a transmitter linked to the receiver.

**Activate (ADX transmitters linked to ShowLink access point)**

Press O to send RF mute to all other slots.

**SL Test**

Press O to measure the boundaries of ShowLink coverage.

### Tx Details

Displays build details and vital statistics for the selected transmitter.

### IR Presets

Configuring IR presets allows all transmitter parameters to be automatically set from the receiver during an IR sync. Use the control wheel to select and edit transmitter parameters from the preset list. Select No Change to keep existing settings.

### Advanced

**Interference Mgmt**

Select interference detection setting for the channel.

**Frequency Diversity**

Configure frequency diversity for handheld or bodypack transmitters. Choose between:

- Combining: For use with a single ADX2FD handheld transmitter
- Selection: For use with a pair of AD1 or ADX1 series transmitters

**FD-S Advanced**

Configure frequency diversity for handheld or bodypack transmitters.

**Talk Switch**

Set receiver output signal routing options for talk switch control from a transmitter. For more information about using a talk switch with an Axient Digital transmitter, see the talk switch user guide.

**Standby**

Put this channel on standby to conserve power when you aren't using it.

## ShowLink Remote Control

ShowLink remote control enables real-time remote adjustments of all transmitter parameters using a wireless network connection between linked Axient transmitters and receivers. Whether performers are in the middle of a presentation or off stage waiting for their cue, ShowLink lets you make crucial changes to transmitter settings without interrupting the performers.

Within the 2.4 GHz spectrum, 16 channels are available for ShowLink communication. To ensure reliable communication, any device that can act as a ShowLink access point contains an internal scanning radio that analyzes the 2.4 GHz spectrum hundreds of times per second. If interference is detected, the device uses channel agility to automatically switch to a clear channel within the spectrum. All transmitters associated with the access point will continue to communicate uninterrupted on the new ShowLink channel. If ShowLink goes offline for any reason, audio transmission will not be interrupted.

# Setting Up a ShowLink Network

Use the following steps to set up a ShowLink network:

1. Connect the Ethernet cable. Connect an Ethernet cable to a Class 1 Power over Ethernet (PoE) port. The PoE port supplies operating power and carries network communication for the access point.
2. Perform an IR sync to link the transmitter and receiver.

# ADX5D ShowLink Modes

To update the ShowLink mode, go to Device Configuration > ShowLink > SL Mode. For ADX5D, you have the following ShowLink options:

- Direct (default)
- Network
- Off

## Direct Mode

In direct mode, you can use ADX5D to directly control parameters of registered ADX transmitters. When ADX5D is in direct mode, you can control up to 16 Axient Digital ADX-series transmitters from a single ADX5D receiver.

## Automatic or Manual ShowLink Channel Selection

When your device is in direct mode, you can choose to have channel selection happen automatically or give yourself control over what ShowLink channel your devices use. Go to Device Configuration > ShowLink > SL Direct Config > SL Ch Selection to choose one of the following modes:

- Automatic (default)
- Manual

## ShowLink Channel Mask

If your transmitter is in automatic channel selection mode, you can set a ShowLink channel mask to dictate channels to use or avoid. Go to Device Configuration > ShowLink > SL Direct Config > SL Ch Mask (Auto) to select "Use" or "Avoid" for each individual ShowLink channel.

## Network Mode

Turn on network mode to to connect to an existing installation of Axient Digital via an access point, such as AD610. Control up to 24 Axient Digital transmitters per access point. The access point connects to your user network via Ethernet.

1. Use Wireless Workbench to set the AD610's ShowLink Network Host ID. (e.g. A.B.C.D).
2. Repeat this for all AD610's you want to link to the ADX5D.
3. In the ADX5D Device Configuration menu, go to ShowLink > SL Mode and select Network mode.
4. Choose the matching client ID (e.g. A.B.C.D).
5. The ADX5D reboots to apply the new settings.

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

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

To activate the ShowLink Test:

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

During a ShowLink test, press O to drop a marker in Wireless Workbench.

# Assigning Transmitters to Transmitter Slots

Each receiver channel contains 8 transmitter slots to control the RF signals passed by the receiver. Transmitters can be assigned to the channel slots or "registered" with the receiver.

For added protection from interference, the receiver will issue a warning or block signals from any transmitters that aren't registered.

To assign a transmitter to a receiver channel:

1. From the Channel menu, go to Tx Slots.
2. Use the arrow buttons to scroll to an available transmitter slot. If the slot is occupied, syncing will overwrite the existing transmitter.
3. Use the arrow buttons to select Sync and press O.

When the sync is complete, the transmitter will be assigned to the slot. The transmitter will remain assigned to the slot until it is unlinked. To remove a transmitter from a slot, use the arrow buttons to select the slot. Then, use the arrow buttons to select Unlink and press O.

# Frequency Diversity

Frequency diversity enables seamless, uninterrupted audio for mission-critical applications. Frequency diversity works by transmitting the audio on two independent frequencies from an ADX2FD handheld transmitter or from two AD/ADX series transmitters.

When operated in Frequency Diversity mode, the receiver uses two frequencies to provide a single channel of audio. If one frequency experiences interference, the audio from the other frequency is used to prevent dropouts or interruption of the audio.

Using frequency diversity in conjunction with interference detection provides an additional layer of protection for the audio signal.

1. From the channel menu: `Advanced` > `Frequency Diversity`.
2. Choose one of the following frequency diversity modes:
   - Combining: For use with a single ADX2FD handheld transmitter
   - Selection: For use with a pair of AD1 or ADX1 series transmitters
3. Press O to save.
4. Perform an IR sync between the receiver and the transmitters.

# Headphone Settings

Choose a mode for your 3.5 mm. output depending on which equipment you use with the receiver.

## 3.5mm Output Settings

| | Tip | Ring | Sleeve | Balanced/Unbalanced | Max Out | Stereo Separation |
|---|---|---|---|---|---|---|
| **Balanced Sum** | audio+ (Rx1-12dB & Rx2-12dB) | audio- (Rx1-12dB & Rx2-12dB) | Ground | Balanced | ~ +8.5 dBV | N/A |
| **Balanced Rx2** | audio+ (Rx2-6dB) | audio- (Rx2-6dB) | Ground | Balanced | ~ +8.5 dBV | N/A |
| **Balanced Rx1*** | audio+ (Rx1-6dB) | audio- (Rx1-6dB) | Ground | Balanced | ~ +8.5 dBV | N/A |
| **Sum Rx1 + Rx2** | audio+ (Rx1-6dB and Rx2-6dB) | audio+ (Rx1-6dB and Rx2-6dB) | Ground | Unbalanced | +8.5 dBV per channel | N/A |
| **Solo Rx2** | audio+ (Rx2) | audio+ (Rx2) | Ground | Unbalanced | +8.5 dBV per channel | N/A |
| **Solo Rx1** | audio+ (Rx1) | audio+ (Rx1) | Ground | Unbalanced | +8.5 dBV per channel | N/A |
| **Stereo Rx1/ Rx2* (default)** | audio+ (Rx1) | audio+ (Rx2) | Ground | Unbalanced | +8.5 dBV per channel | 60 dB (TO BE CONFIRMED) |

*When ADX5D is operating in FD-S with Pre selection chosen, the sum will continue to output the Post FD-S audio.

# Firmware

Firmware is embedded software in each component that controls functionality. Installing the latest version of firmware updates the receiver to incorporate additional features and enhancements. New versions of the firmware can be uploaded and installed using the Shure Update Utility tool available in Shure Wireless Workbench 6 (WWB6) software. Software is available for download from http://www.shure.com.

# Firmware Versioning

When you update receiver firmware, update your transmitters to the same firmware version to ensure consistent operation.

The firmware of all devices has the form of MAJOR.MINOR.PATCH (e.g., 1.2.14). At a minimum, all devices on the network (including transmitters), must have the same MAJOR and MINOR firmware version numbers (e.g., 1.2.x).

## Updating the Receiver Firmware

**CAUTION!** Ensure that receiver power and network connections are maintained during a firmware update. Do not turn off the receiver until the update is complete.

1. From Wireless Workbench, open the Firmware Update Manager: `Tools` > `Shure Update Utility`.
2. Click Check Now to view new versions available for download.
3. Select the updates and click download.
4. Connect the receiver and computer to the same network.
5. Download the latest firmware to the receiver.

## Updating the Transmitter Firmware

1. From the Device Configuration menu of the receiver: Tx Firmware Update.
2. Turn on the transmitter and align the IR sync windows on the transmitter and receiver. The red alignment LED will illuminate when alignment is correct.
3. Maintain alignment and press ENTER on the receiver to begin the update.

   Alignment must be maintained during the entire update cycle. Percentage of update progress appears on the receiver display. The receiver display will show the message Complete! when finished.

## Contact Customer Support

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

## Receiver Frequency Bands

| Band | Frequency Range ( MHz) |
|---|---|
| **G53** | 470 to 510 |
| **G54** | 479 to 565 |
| **G55†** | 470 to 636* |
| **G56** | 470 to 636 |
| **G57 (G57+)** | 470 to 616* (614 to 616*** ) |
| **G62** | 510 to 530 |
| **G63** | 487 to 636 |
| **H54** | 520 to 636 |
| **K53** | 606 to 698* |
| **K54** | 606 to 663** |
| **K55** | 606 to 694 |

| Band | Frequency Range ( MHz) |
|---|---|
| **K56** | 606 to 714 |
| **K57** | 606 to 790 |
| **K58** | 622 to 698 |
| **L54** | 630 to 787 |
| **L60** | 630 to 698 |
| **P55** | 694 to 703, 748 to 758, 803 to 806 |
| **R52** | 794 to 806 |
| **JB** | 806 to 810 |
| **X51** | 925 to 937.5 |
| **X55** | 941 to 960 |
| **X56** | 960 to 1000 |

*With a gap between 608 to 614 MHz.

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

***Selecting the G57+ band extends the G57 band with 2 MHz of additional spectrum between 614 to 616 MHz. Maximum transmitter power is limited to 10mW between 614 to 616 MHz.

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

# Specifications

## System Specifications

### RF Carrier Frequency Range

470–1000 MHz, varies by region (See frequency table)

### Working Range

100 m (330 ft)

### RF Tuning Step Size

25 kHz, varies by region

### Channel-to-Channel Spacing

| | |
|---|---|
| **Standard Mode** | 350 kHz |
| **High Density Mode** | 125 kHz |

### Channel-to-Channel Spacing

| | |
|---|---|
| **Standard Mode** | 350 kHz |

| | |
|---|---|
| **High Density Mode** | 125 kHz |

## Image Rejection

>70 dB, typical

## RF Sensitivity

−98 dBm at $10^{-5}$ BER

## Latency Analog Output

| | |
|---|---|
| **STD** | 2.08 ms |
| **HD** | 2.96 ms |

## Audio Frequency Response

| | |
|---|---|
| **AD1** | 20 – 20 kHz (±1 dB) |
| **AD2** | Note: Dependent on microphone type |
| **AD3** | ADD FREQ RESPONSE? |
| **ADX1** | ADD FREQ RESPONSE? |
| **ADX2** | ADD FREQ RESPONSE? |

## Signal-to-Noise Ratio(Dynamic Range)

*typical, 20 Hz to 20 kHz, receiver gain setting = -12 dB*

| | A-Weighted | Unweighted |
|---|---|---|
| **MTQG** | *TO BE ADDED* dB | *TO BE ADDED* dB |
| **Digital (AES3/Dante)** | 130 dB | 126 dB |

## Total Harmonic Distortion

*-6 dBFS, 1 kHz, System Gain @ +10*

<0.01%

## System Audio Polarity

*CREATE TERM WHEN THIS PHRASING IS CORRECT* Positive pressure on microphone diaphragm produces positive voltage on pin 2 (with respect to pin 3 of TQG output) and the tip of the 3.5 mm (1/8-inch) output.

| | |
|---|---|
| ***CREATE TERM WHEN THIS PHRASING IS CORRECT* Positive pressure on microphone diaphragm produces positive voltage on pin 2 (with respect to pin 3 of TQG output) and the tip of the 3.5 mm (1/8-inch) output.** | |
| **Mode A** | Mode A |
| **Mode B** | Mode B |

## Operating Temperature Range

-18°C (0°F) to 50°C (122°F)

### Storage Temperature Range

-29°C (-20°F) to 65°C (149°F)

### Dimensions

29 x 88 x 108 mm H x W x D

### Weight

0.24 kg (0.53 lbs), without antennas and backplate

### Housing

Machined aluminum

### Power Requirements

100 to 240 V AC, 50-60 Hz, 0.55 A max.

### Thermal Power Dissipation

| | |
|---|---|
| **Maximum** | 23 W (78 BTU/hr) |
| **Idle** | 15 W (51 BTU/hr) |

### DC Power Requirements

6 to 18V DC , 4.8W max.(18 V in, full brightness, all audio full scale out, and RF channels active),2.3W min (6.5V in, both channels stby). Nominal 4W (12V in, no outputs, no linked tx)

## Audio Output

### Gain Adjustment Range

−18 to +42 dB in 1 dB steps (plus Mute setting)

### Configuration

| | |
|---|---|
| **TQG** | Balanced (1=ground, 2=audio +, 3=audio −) |
| **TRS** | Varies by output |

### Impedance

100 Ω, Typical, TQG Line Out

### Full Scale Output (200K Ω load)

+9 dBV

### Phantom Power Protection

Yes

## RF Input

### Spurious Rejection

>80 dB, typical

### Connector Type

SMA

### Impedance

50 Ω

### RF Carrier Frequency Range model dependent

| | |
|---|---|
| **ADX5D=A** | 470–636 MHz |
| **ADX5D=B** | 606–810 MHz |
| **ADX5D=C** | 925–1000 MHz |

## Certifications

This product meets the Essential Requirements of all relevant European directives and is eligible for CE marking.

Approved under the Declaration of Conformity (DoC) provision of FCC Part 15.

**FCC ID:** DD4XXXXXX, DD4XXXXXX, DD4ADXXXX. **IC:** 616A-XXXXXX, 616A-XXXXXX, 616A-XXXXXX.

Conforms to electrical safety requirements based on IEC 60065.

Meets essential requirements of the following European Directives:

This product meets the Essential Requirements of all relevant European directives and is eligible for CE marking.

Hereby, Shure Incorporated declares that the radio equipment is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: http://www.shure.com/europe/compliance

Authorized European representative:
Shure Europe GmbH
Headquarters Europe, Middle East & Africa
Department: EMEA Approval
Jakob-Dieffenbacher-Str. 12
75031 Eppingen, Germany
Phone: +49-7262-92 49 0
Fax: +49-7262-92 49 11 4
Email: EMEAsupport@shure.de

เครื่องโทรคมนาคมและอุปกรณ์นี้มีความสอดคล้องตามมาตรฐานหรือข้อกำหนดทางเทคนิคของ กสทช.

（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；

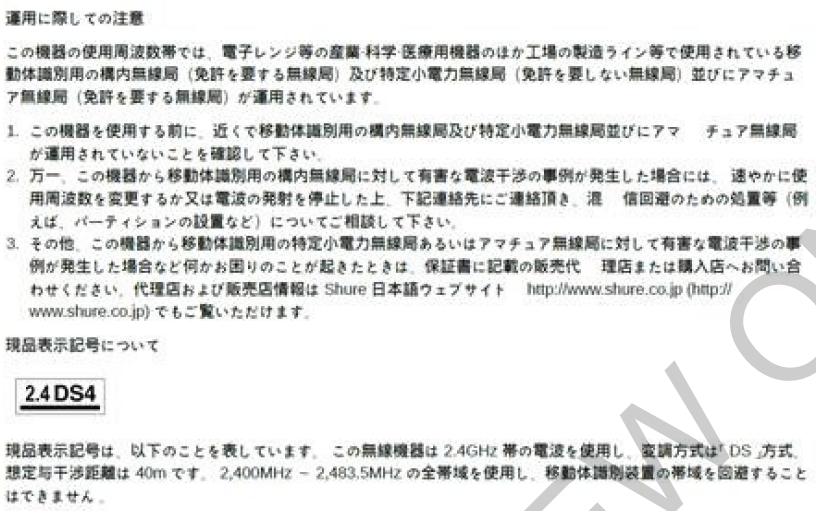
（六）在航空器内和依据法律法规、国家有关规定、标准划设的射电天文台、气象雷达站、卫星地球站（含测控、测距、接收、导航站）等军民用无线电台（站）、机场等的电磁环境保护区域内使用微功率设备，应当遵守电磁环境保护及相关行业主管部门的规定。

低功率電波輻射性電機管理辦法

第十二條

經型式認證合格之低功率射頻電機，非經許可，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。 第十四條

低功率射頻電機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。前項合法通信，指依電信法規定作業之無線電通信。低功率射頻電機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。



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 (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

2.4 DS4

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。

# Information to the user

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.

**Note:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This radio transmitter 616A-ADX5D has been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

## 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.

CAN ICES-3 (B)/NMB-3 (B)

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.

## Australia Warning for Wireless

This device operates under an ACMA class licence and must comply with all the conditions of that licence including operating frequencies. Before 31 December 2014, this device will comply if it is operated in the 520-820 MHz frequency band.
**WARNING:** After 31 December 2014, in order to comply, this device must not be operated in the 694-820 MHz band.