Incorporating the most innovative wireless audio technology in the world, Axient Digital was engineered from the ground up for professional productions that demand flawless execution.

With an unprecedented level of signal stability and audio clarity, plus flexible hardware options, advanced connectivity, and comprehensive control, it’s a wireless system built to take on the challenges of today—and tomorrow.

**RF PROTECTION**
With outstanding signal quality in even the most complex, congested environments, Axient Digital ensures maximum stability, range, and clarity for uncompromising audio—anywhere, every time.

**AUDIO QUALITY**
Axient Digital defies limitations for both RF and audio quality. With industry-leading low latency, transparent frequency response, and wide dynamic range, nothing gets in the way of true, pure sound. No matter the setting, it’s Shure audio quality you can count on.

**COMMAND & CONTROL**
ShowLink® remote control, Wireless Workbench®, the ShurePlus™ Channels app, and networked battery monitoring provide unmatched control and insight, for seamless performance.

**HARDWARE & SCALABILITY**
With two transmitter series to choose from—both compatible with a shared receiver platform—Axient Digital is a scalable wireless system that provides incomparable sound for a wide range of applications and settings.
System Specifications

**RF Carrier Range**
470–960 MHz
- Note: Varies by region (See Frequency Range and Output Power table)

**Working Range**
100 m (330 ft)
- Note: Actual range depends on RF signal absorption, reflection and interference.

**RF Tuning Step Size**
25 kHz, varies by region

**Image Rejection**
>70 dB, typical

**RF Sensitivity**
−98 dBm at 10−5 BER

**Latency**
- Standard mode: 2.0 ms
- High Density mode: 2.9 ms

**Audio Frequency Response**
- AD1: 20 Hz – 20 kHz (±1 dB)
- AD2: 20 Hz – 20 kHz (±1 dB)
- Note: Dependent on microphone type

**Audio Dynamic Range**
- A-weighted, typical, System Gain @ +10 dBm
  - XLR Analog Output: 120 dB (A-weighted); 117 (unweighted)
  - Dante Digital Output: 130 dB (A-weighted); 126 (unweighted)

**Total Harmonic Distortion**
<0.01%

**System Audio Polarity**
Positive pressure on microphone diaphragm produces positive voltage on pin 2 (with respect to pin 3 of XLR output) and the tip of the 6.35 mm (1/4-inch) output.

**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 65 °C (149 °F)
- Note: Battery characteristics may limit this range.

**Frequency Range**

<table>
<thead>
<tr>
<th>Band</th>
<th>Range (MHz)</th>
<th>Transmitter Output (mW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>G53</td>
<td>470 to 510</td>
<td>2/10/35</td>
</tr>
<tr>
<td>G54</td>
<td>479 to 565</td>
<td>2/10/20</td>
</tr>
<tr>
<td>G55</td>
<td>470 to 636*</td>
<td>2/10/35</td>
</tr>
<tr>
<td>G56</td>
<td>470 to 636</td>
<td>2/10/35</td>
</tr>
<tr>
<td>G57</td>
<td>470 to 615*</td>
<td>2/10/35</td>
</tr>
<tr>
<td>G62</td>
<td>510 to 530</td>
<td>2/10/35</td>
</tr>
<tr>
<td>H54</td>
<td>520 to 636</td>
<td>2/10/35</td>
</tr>
<tr>
<td>K53</td>
<td>606 to 698*</td>
<td>2/10/35</td>
</tr>
<tr>
<td>K54</td>
<td>606 to 663**</td>
<td>2/10/35</td>
</tr>
<tr>
<td>K55</td>
<td>606 to 694</td>
<td>2/10/35</td>
</tr>
<tr>
<td>K56</td>
<td>606 to 714</td>
<td>2/10/35</td>
</tr>
<tr>
<td>K57</td>
<td>606 to 790</td>
<td>2/10/35</td>
</tr>
<tr>
<td>K58</td>
<td>623 to 698</td>
<td>2/10/35</td>
</tr>
<tr>
<td>L54</td>
<td>630 to 787</td>
<td>2/10/35</td>
</tr>
<tr>
<td>R52</td>
<td>794 to 806</td>
<td>2/10/35</td>
</tr>
<tr>
<td>JB</td>
<td>806 to 810</td>
<td>2/10/35</td>
</tr>
<tr>
<td>X51</td>
<td>925 to 937.5</td>
<td>2/10/35</td>
</tr>
<tr>
<td>X55</td>
<td>941 to 960</td>
<td>2/10/35</td>
</tr>
</tbody>
</table>

* with a gap between 608 to 614 MHz
** with a gap between 608 to 614 MHz and a gap between 616 to 653 MHz

**Furnished Accessories**

**Receivers**
90XN1371 Hardware Kit
95A8994 BNC Bulkhead Adapter
Var. by region ¼ Wave Receiver Antenna (2)
9589023 BNC-BNC Cable (short)
95C9023 BNC-BNC Cable (long)
90N2035 Coaxial RF Cascade Cable
Var. by region AC Power Cable, Vlock
Var. by region AC Power Jumper Cable
95A33402 Ethernet Cable, 3 ft.
95833402 Ethernet Jumper Cable

**Handheld Systems**
9582313 Zipper Bag
31B1856 Euro-threaded Adapter
90F4046 Swivel Adapter, black
8069201 AA Alkaline Batteries (2)

**Bodypack Systems**
8068201 AA Alkaline Batteries (2)
Var. by region ¼ Wave Antenna
95A33401 Threaded TA4F Adapter
906610 Transmitter Carrying Case
20A13 Zipper Bag
44A12547 Belt Clip

**NOTE:**
This Radio equipment is intended for use in musical professional entertainment and similar applications. This Radio apparatus may be capable of operating on some frequencies not authorized in your region. Please contact your national authority to obtain information on authorized frequencies and RF power levels for wireless microphone products.

**Rechargeable Power Management (sold separately)**

**SB900A Rechargeable Battery**
AD series transmitters are compatible with the SB900A lithium-ion rechargeable battery, which provides over 11 hours of continuous use and precise tracking of remaining life and charge cycle details.

**SBC200 Dual Docking Recharging Station**
This compact and portable unit charges batteries while in transmitters or out. Up to 4 SBC200s can be chained together to run off one power supply.

**SBC800 Eight Battery Recharging Station**
This compact and portable unit charges up to 8 SB900A batteries to full capacity within 3 hours, with status LEDs to indicate power levels. SB900A batteries fit securely in the charger for easy, efficient storage and transport.

**Battery Runtimes**

<table>
<thead>
<tr>
<th>Battery Type</th>
<th>(Note: Frequency Band Dependent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SB900A</td>
<td>10 mW</td>
</tr>
<tr>
<td>Alkaline</td>
<td>&gt;11 hours</td>
</tr>
<tr>
<td>NiMH</td>
<td>&lt;11 hours</td>
</tr>
<tr>
<td>Li-primary</td>
<td>&lt;14 hours</td>
</tr>
</tbody>
</table>

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Component Specifications

AD4Q Four-Channel Wireless Receiver

Overview

The AD4Q Axient Digital Quad Receiver sets a new standard in transparent digital audio and maximum spectral efficiency. Groundbreaking performance features include wide tuning, low latency, High Density (HD) mode, and Quadversity™, ensuring solid performance in the most challenging RF environments. Networked control, AES3 + Dante output, and signal routing options bring a new level of management and flexibility to your entire workflow. Compatible with all Axient Digital transmitters.

Features

- Wide tuning range up to 184 MHz
- True digital diversity reception per channel for drop-out resistance
- Networked control with Wireless Workbench® and ShurePlus™ Channels app
- Quadversity™ mode for extended antenna coverage and improved RF signal-to-noise
- Front panel headphone jack enables Dante Cue and Dante Browse monitoring
- Configurable Ethernet switch for redundant Dante digital output
- Switchable XLR/AES3 outputs
- Channel Quality meter displays RF signal-to-noise
- Locking AC connectors
- Optional DC module available to support redundant power

Specifications

Dimensions: 44 mm x 483 mm x 333 mm (1.7 in. x 19.0 in. x 13.1 in.), H x W x D
Weight: 4.8 kg (10.6 lbs), without antennas
Housing: Steel, Extruded aluminum
Power Requirements: 100 to 240 V AC, 50–60 Hz; 0.68 A max.
Thermal Dissipation: Maximum: 31 W (106 BTU/hr)
Idle: 21 W (72 BTU/hr)
Audio Output
Gain Adjustment Range: -18 to +42 dB in 1 dB steps (plus Mute setting)
Configuration: 1/4" (6.35 mm): Transformer-coupled Balanced (Tip=audio, Ring=no audio, Sleeve=ground)
XLR: Transformer-coupled Balanced (1=ground, 2=audio +, 3=audio -)
Impedance: Typical, XLR Line out: 1000 Ω
Full Scale Output: 1/4" (6.35 mm): +8 dBV
XLR: LINE setting= +18 dBV, MIC setting= –12 dBV
Mic/Line Switch: 30 dB pad
Phantom Power Protection: Yes
Networking
Network Interface: 10/100 Mbps, 1 Gbps, Dante Digital Audio
Network Addressing Capability: DHCP or Manual IP address
Maximum Ethernet Cable Length: 100 m (328 ft)
Cascade output
Connector Type: BNC
Notes: For connection of one additional receiver in the same band
Configuration: Unbalanced, passive
Impedance: 50 Ω
Insertion Loss: 0 dB, typical
RF Input
Spurious Rejection: >80 dB, typical
Connector Type: BNC
Impedance: 50 Ω
Bias Voltage: 12–13.5 V DC, 150 mA maximum, per antenna, switchable on/off
RF Carrier Frequency Range: Model-dependent
Model A: 470–636 MHz
Model B: 606–810 MHz
Model C: 750–960 MHz

AD4Q Four-Channel Receiver Front Panel

AD4Q Four-Channel Receiver Rear Panel
Component Specifications

AD4D Two-Channel Wireless Receiver

Overview
The AD4D Axient Digital Dual Receiver sets a new standard in transparent digital audio and maximum spectral efficiency. Groundbreaking performance features include wide tuning, low latency, and High Density (HD) mode, ensuring solid performance in the most challenging RF environments. Networked control and signal routing options bring a new level of management and flexibility to your entire workflow. Compatible with all Axient Digital transmitters.

Features
- Wide tuning range up to 184MHz
- True digital diversity reception per channel for drop-out resistance
- Networked control with Wireless Workbench® and ShurePlus™ Channels app
- Front panel headphone jack enables Dante Cue and Dante Browse monitoring
- Configurable Ethernet switch for redundant Dante digital output
- AES3 output
- Channel Quality meter displays RF signal-to-noise
- Locking AC connectors
- Optional DC module available to support redundant power

Specifications

Dimensions
44 mm x 483 mm x 333 mm (1.7 in. x 19.0 in. x 13.1 in.), H x W x D

Weight
4.6 kg (10.1 lbs), without antennas

Housing
Steel; Extruded aluminum

Power Requirements
100 to 240 V AC, 50–60 Hz; 0.26 A max.

Thermal Dissipation
Maximum: 23 W (78 BTU/hr)
Idle: 15 W (52 BTU/hr)

Audio Output
Gain Adjustment Range
–18 to +42 dB in 1 dB steps (plus Mute setting)

Configuration
1/4" (6.35 mm): Transformer-coupled Balanced (Tip=audio, Ring=no audio, Sleeve=ground)
XLR: Transformer-coupled Balanced (1=ground, 2=audio +, 3=audio –)

Impedance
Typical, XLR Line out
100Ω

Full Scale Output
1/4" (6.35 mm): +8 dBV
XLR: LINE setting= +18 dBV, MIC setting= –12 dBV

Mic/Line Switch
30 dB pad

Phantom Power Protection
Yes

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

Network Addressing Capability
DHCP or Manual IP address

Maximum Ethernet Cable Length
100 m (328 ft)

Cascade output
Connector Type
BNC

Configuration
Unbalanced, passive

Impedance
50 Ω

Insertion Loss
0 dB, typical

RF Input
Spurious Rejection
>80 dB, typical

Connector Type
BNC

Impedance
50 Ω

Bias Voltage
12–13.5 V DC, 150 mA maximum, per antenna, switchable on/off

RF Carrier Frequency Range
Model-dependent
AD4D=A: 470-636 MHz
AD4D=B: 606-810 MHz
AD4D=C: 750-960 MHz
Component Specifications

AD1 Bodypack Transmitter

Overview
AD series bodypack transmitters deliver impeccable audio quality and RF performance with wide-tuning, High Density (HD) mode, and encryption. Features durable metal construction, AA or SB900A rechargeable power (with dockable charging), and TA4 or LEMO3 connector options.

Features
- Two transmission modes:
  - Standard for optimal coverage
  - New High Density mode for maximum system channel count and robust coverage
- Encryption-enabled, secure transmission
- External contacts for docked charging
- AA or SB900A Li-ion rechargeable batteries
- Detachable ¼ wave antenna
- LEMO3 and TA4 connector options

Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gain Offset Range</td>
<td>-12 to 21 dB (in 1 dB steps)</td>
</tr>
<tr>
<td>Battery Type</td>
<td>Shure SB900A Rechargeable Li-Ion or LR6 AA batteries 1.5 V</td>
</tr>
<tr>
<td>Battery Runtime @ 10 mW</td>
<td>Shure SB900A, up to 9 hours</td>
</tr>
<tr>
<td></td>
<td>Alkaline: up to 8 hours</td>
</tr>
<tr>
<td>Dimensions</td>
<td>86 mm × 66 mm × 23 mm (3.4 in. × 2.6 in. × 0.9 in.) H × W × D</td>
</tr>
<tr>
<td>Weight</td>
<td>142 g (5.0 oz.), without batteries</td>
</tr>
<tr>
<td>Housing</td>
<td>Cast Aluminum</td>
</tr>
</tbody>
</table>

Audio Input
- Connector: 4-pin male mini connector (TA4M)
- Configuration: Unbalanced
- Impedance: 1 MΩ
- Maximum Input Level: Pad Off: 8.5 dBV (7.5 Vpp), Pad On: 20.5 dBV (30 Vpp)
- Preamplifier Equivalent Input Noise (EIN): System Gain Setting ≥ +20 dBV, A-weighted, typical
- 120 dBV, A-weighted, typical

RF Output
- Connector: SMA
- Impedance: 50 Ω
- Occupied Bandwidth: <200 kHz
- Modulation Type: Shure Axient Digital Proprietary
- Power: 2 mW, 10 mW, 35 mW
  - See Frequency Range and Output Power table, varied by region

Microphone Options (see catalog for more)

- WL93: WL93 condenser capsule, omnidirectional lavalier mic
- WL183: WL183 condenser capsule, omnidirectional lavalier mic
- WL184: WL184 condenser capsule, supercardioid lavalier mic
- WL185: WL185 condenser capsule, cardioid lavalier mic
- MX150-C: MX150 condenser capsule, cardioid lavalier mic
- MX150-O: MX150 condenser capsule, omnidirectional lavalier mic
- MX153: MX153 condenser capsule, omnidirectional earset headset mic
- MX155: MX155 condenser capsule, cardioid instrument clip mic
- WBH53: WBH53 condenser capsule, omnidirectional headworn mic
- WBH54: WBH54 condenser capsule, supercardioid headworn mic
- WB98H-VC: WB98H-VC condenser capsule, cardioid instrument clip mic
Component Specifications

AD2 Handheld Transmitter

Overview
AD series hand-held transmitters deliver impeccable audio quality and RF performance with wide-tuning, High Density (HD) mode, and encryption. Features durable metal construction, AA or SB900A rechargeable power (with dockable charging), and black or nickel finish options.

Features
- Two transmission modes:
  - Standard for optimal coverage
  - New High Density mode for maximum system channel count and robust coverage
- Encryption-enabled, secure transmission
- Frequency and power lockout
- Rugged metal construction in black or nickel finish
- External contacts for docked charging
- AA or SB900A Li-ion rechargeable batteries
- Backlit LCD with easy-to-navigate menu and controls
- Low-profile, lockable power switch
- Available cartridges: KSM8, KSM9HS, Beta® 87A/B/C, Beta® 58, SM58® , VP68

Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mic Offset Range</td>
<td>-12 to 21 dB (in 3 dB steps)</td>
</tr>
<tr>
<td>Battery Type</td>
<td>Shure SB900A Rechargeable Li-Ion or LR6 AA batteries 1.5 V</td>
</tr>
<tr>
<td>Battery Runtime @ 10 mW</td>
<td>Shure SB900A: &gt;11 hours, Alkaline: 8 hours See Battery Runtime Chart</td>
</tr>
<tr>
<td>Dimensions</td>
<td>256 mm x 51 mm (10.1 in. x 2.0 in.) L x D</td>
</tr>
<tr>
<td>Weight</td>
<td>340 g (12.0 oz.), without batteries</td>
</tr>
<tr>
<td>Housing</td>
<td>Cast aluminum</td>
</tr>
</tbody>
</table>

Audio Input
- Configuration: Unbalanced
- Maximum Input Level: 145 dB SPL, typical (SM58) Note: dependent on microphone type

RF Output
- Antenna Type: Integrated Single-Band Helical
- Occupied Bandwidth: <200 kHz
- Modulation Type: Shure Axient Digital Proprietary
- Power: 2 mW, 10 mW, 35 mW See Frequency Range and Output Power table, varies by region

Microphone Options (see catalog for more)

<table>
<thead>
<tr>
<th>Microphone Options</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>RPW112</td>
<td>SM58® Cardioid Dynamic Vocal Wireless Microphone Capsule</td>
</tr>
<tr>
<td>RPW118</td>
<td>Beta® 58A Supercardioid Dynamic Vocal Wireless Microphone Capsule</td>
</tr>
<tr>
<td>RPW120</td>
<td>Beta® 87A Supercardioid Condenser Vocal Wireless Microphone Capsule</td>
</tr>
<tr>
<td>RPW122</td>
<td>Beta® 87C Cardioid Condenser Vocal Wireless Microphone Capsule</td>
</tr>
<tr>
<td>RPW124</td>
<td>VP68 Omnidirectional Condenser Wireless Microphone Capsule</td>
</tr>
<tr>
<td>RPW170</td>
<td>KSM8 Dualdyne™ Cardioid Dynamic Wireless Microphone Capsule (Nickel)</td>
</tr>
<tr>
<td>RPW174</td>
<td>KSM8 Dualdyne™ Cardioid Dynamic Wireless Microphone Capsule (Black)</td>
</tr>
<tr>
<td>RPW184</td>
<td>KSM9 Dual-Pattern Condenser Wireless Microphone Capsule (Black)</td>
</tr>
<tr>
<td>RPW186</td>
<td>KSM9HS Multi-Pattern Dual Diaphragm Condenser Wireless Microphone Capsule (Black)</td>
</tr>
<tr>
<td>RPW190</td>
<td>KSM9HS Multi-Pattern Dual Diaphragm Condenser Wireless Microphone Capsule (Nickel)</td>
</tr>
</tbody>
</table>