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AXIENT® DIGITAL WIRELESS SYSTEMS

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 & SCALABILTY
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 Ouput 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*	XLR Analog Output: 120 dB (A-weighted); 117 (unweighted) Dante Digital Output: 130 dB (A-weighted); 126 (unweighted)
Total Harmonic Distortion *–6 dBFS input, 1 kHz, System Gain @ +10*	<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

Band	Range (MHz)	Transmitter Output (mW)
G53	470 to 510	2/10/35
G54	479 to 565	2/10/20
G55	470 to 636*	2/10/35
G56	470 to 636	2/10/35
G57	470 to 616*	2/10/35
G62	510 to 530	2/10/35
H54	520 to 636	2/10/35
K53	606 to 698*	2/10/35
K54	606 to 663**	2/10/35
K55	606 to 694	2/10/35
K56	606 to 714	2/10/35
K57	606 to 790	2/10/35
K58	622 to 698	2/10/35
L54	630 to 787	2/10/35
R52	794 to 806	2/10/35
JB	806 to 810	2/10
X51	925 to 937.5	2/10
X55	941 to 960	2/10/35

Note: Not all frequencies available in all regions. Contact your authorized Shure dealer for availability.
** 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	½ Wave Receiver Antenna (2)
95B9023	BNC-BNC Cable (short)
95C9023	BNC-BNC Cable (long)
95N2035	Coaxial RF Cascade Cable
Var. by region	AC Power Cable, VLock
Var. by region	AC Power Jumper Cable
95A33402	Ethernet Cable, 3 ft.
95B33402	Ethernet Jumper Cable

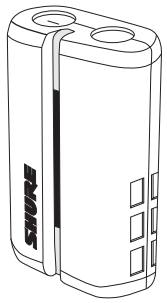
Handheld Systems	
95B2313	Zipper Bag
31B1856	Euro-threaded Adapter
90F4046	Swivel Adapter, black
80B8201	AA Alkaline Batteries (2)

Bodypack Systems	
80B8201	AA Alkaline Batteries (2)
Var. by region	¼ Wave Antenna
WA340	Threaded TA4F Adapter
WA610	Transmitter Carrying Case
26A13	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 up to 9 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.

SBRC Networked Shure Battery Rack Charger
This tour-ready modular battery charging station charges a variety of Shure Li-Ion batteries, with support for up to eight SB900A, AXT910 and AXT920, all in a single rack-unit space. Wireless Workbench networkability and ShurePlus Channels compatibilty provides convenient remote monitoring of charge status, and an easy-to-read front panel display that provides key battery charging and health metrics, including time-to-full, temperature and charge cycle count.

Battery Runtimes *(Note: Frequency Band Dependent)*

Battery Type	10 mW
SB900A	up to 9 hours
Alkaline	up to 8 hours
NiMH	up to 11 hours
Li-primary	up to 14 hours

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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 184MHz
- 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 × 483 mm × 333 mm (1.7 in. × 19.0 in. × 13.1 in.), H × W × 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*	100Ω
Full Scale Output *200 kΩ load*	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

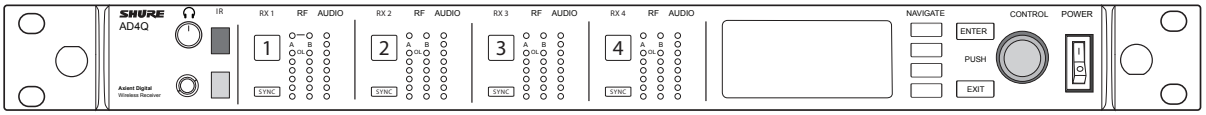
Network Interface	10/100 Mbps, 1 Gbps, Dante Digital Audio
Network Addressing Capability	DHCP or Manual IP address
Maximum Ethernet Cable Length	100 m (328 ft)

Cascade output

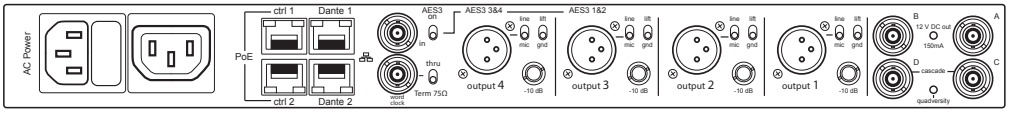
Connector Type	BNC *Note: For connection of one additional receiver in the same band*
Configuration	Unbalanced, passive
Impedance	50 Ω
Insertion Loss	0 dB, typical

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*	AD4Q=A: 470–636 MHz AD4Q=B: 606–810 MHz AD4Q=C: 750–960 MHz



AD4Q Four-Channel Receiver Front Panel



AD4Q Four-Channel Receiver Rear Panel

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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 × 483 mm × 333 mm (1.7 in. × 19.0 in. × 13.1 in.), H × W × 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 *200 kΩ load*	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)

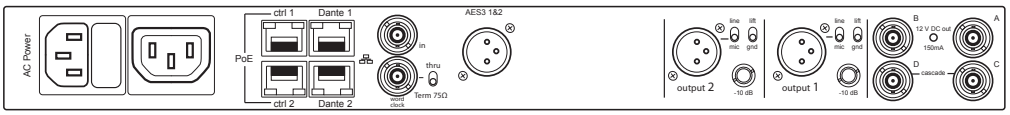
Cascade output

Connector Type	BNC *Note: 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*	AD4D=A: 470–636 MHz AD4D=B: 606–810 MHz AD4D=C: 750–960 MHz

AD4D Dual-Channel Receiver Front Panel



AD4D Dual-Channel Receiver Rear Panel

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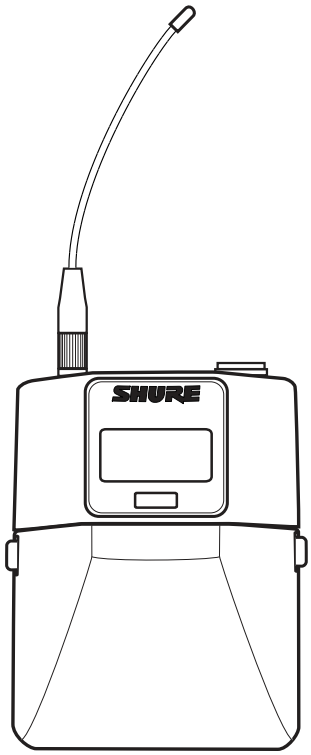
Component Specifications

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.



AD1 Bodypack Transmitter

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

Gain Offset Range	–12 to 21 dB (in 1 dB steps)
Battery Type	Shure SB900A Rechargeable Li-Ion or LR6 AA batteries 1.5 V
Battery Runtime @ 10 mW	Shure SB900A: up to 9 hours Alkaline: up to 8 hours *See Battery Runtime Chart*
Dimensions	86 mm × 66 mm × 23 mm (3.4 in. × 2.6 in. × 0.9 in.) H × W × D
Weight	155 g (5.47 oz.), without batteries
Housing	Cast Aluminum

Audio Input

Connector *See drawing for details*	4-Pin male mini connector (TA4M) LEM03 connector
Configuration	Unbalanced
Impedance *See drawing for details*	1 MΩ
Maximum Input Level *1 kHz at 1% THD*	Pad Off: 8.5 dBV (7.5 Vpp) Pad On: 20.5 dBV (30 Vpp)
Preamplifier Equivalent Input Noise (EIN) *System Gain Setting ≥ +20*	–120 dBV, A-weighted, typical

RF Output

Connector	SMA
Antenna Type	1/4 wave
Impedance	50 Ω
Occupied Bandwidth	<200 kHz
Modulation Type	Shure Axient Digital Proprietary
Power	2 mW, 10 mW, 35 mW *See Frequency Range and Ouput Power table, varies 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 headworn mic
SM35	SM35 condenser capsule, cardioid headset mic
WBH53	WBH53 condenser capsule, omnidirectional headworn mic
WBH54	WBH54 condenser capsule, supercardioid headworn mic
WB98H/C	WB98H/C condenser capsule, cardioid instrument clip mic

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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/87C, Beta® 58, SM58®, VP68

Specifications

Mic Offset Range	–12 to 21 dB (in 3 dB steps)
Battery Type	Shure SB900A Rechargeable Li-Ion or LR6 AA batteries 1.5 V
Battery Runtime @ 10 mW	Shure SB900A: up to 9 hours Alkaline: 8 hours *See Battery Runtime Chart*
Dimensions	256 mm × 51 mm (10.1 in. × 2.0 in.) L × D
Weight	340 g (12.0 oz.), without batteries
Housing	Cast aluminum

Audio Input

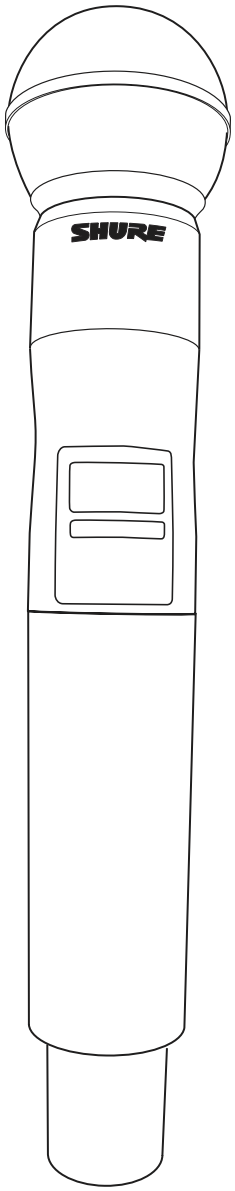
Configuration	Unbalanced
Maximum Input Level *1 kHz at 1% THD,*	145 dB SPL, typical (SM58) *Note: dependent on microphone type*

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 Ouput Power table, varies by region*

Microphone Options (see catalog for more)

RPW112	SM58® Cardioid Dynamic Vocal Wireless Microphone Capsule
RPW118	Beta® 58A Supercardioid Dynamic Vocal Wireless Microphone Capsule
RPW120	Beta® 87A Supercardioid Condenser Vocal Wireless Microphone Capsule
RPW122	Beta® 87C Cardioid Condenser Vocal Wireless Microphone Capsule
RPW124	VP68 Omnidirectional Condenser Wireless Microphone Capsule
RPW170	KSM8 Dualdyne™ Cardioid Dynamic Wireless Microphone Capsule (Nickel)
RPW174	KSM8 Dualdyne™ Cardioid Dynamic Wireless Microphone Capsule (Black)
RPW184	KSM9 Dual-Pattern Condenser Wireless Microphone Capsule (Black)
RPW186	KSM9HS Multi-Pattern Dual Diaphragm Condenser Wireless Microphone Capsule (Black)
RPW188	KSM9 Dual-Pattern Condenser Wireless Microphone Capsule (Nickel)
RPW190	KSM9HS Multi-Pattern Dual Diaphragm Condenser Wireless Microphone Capsule (Nickel)



AD2 Handheld Transmitter

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