audio-technica

Wireless Systems

Wireless Systems

/ Interchangeable Microphone Capsules (IMC)

/ Handheld Transmitter Body
ATW-T5202

/ Handheld Transmitter Body
ATW-T3202

/ Cardioid Condenser
ATW-C5400

/ Cardioid Condenser
ATW-C3300

/ Hypercardioid Dynamic
ATW-C6100

/ Cardioid Dynamic
ATW-C4100

/ Cardioid Condenser
ATW-C710

/ Cardioid Dynamic
ATW-C510

Interchangeable Microphone Capsules compatible with last generation 3000 and 5000 Series wireless handheld transmitters

All interchangeable microphone capsules can be used with **ATW-T5202** and **ATW-T3202** handheld transmitters. Its industry-standard thread allows use with other compatible handheld transmitters.

Condenser microphones capsules **ATW-C5400** and **ATW-C3300** an heritage from the world acclaimed Studio microphones **AT4050** and **AT4033.**

Same sound characteristics as the renowned **AT4050** studio microphone offering extreme clarity and realism.

/ Interchangeable Cardioid Condenser Microphone Capsule
ATW-C5400

Same element as the classic **AT4033a** studio microphone offering extreme clarity and realism.

/ Interchangeable Cardioid Condenser Microphone Capsule
ATW-C3300

Clean, Crisp and Accurate

Transparent uppers/mids and rich low-end qualities are combined with advanced acoustic engineering for extensive performance abilities and a clean, crisp and accurate sound reproduction, even at high SPLs.

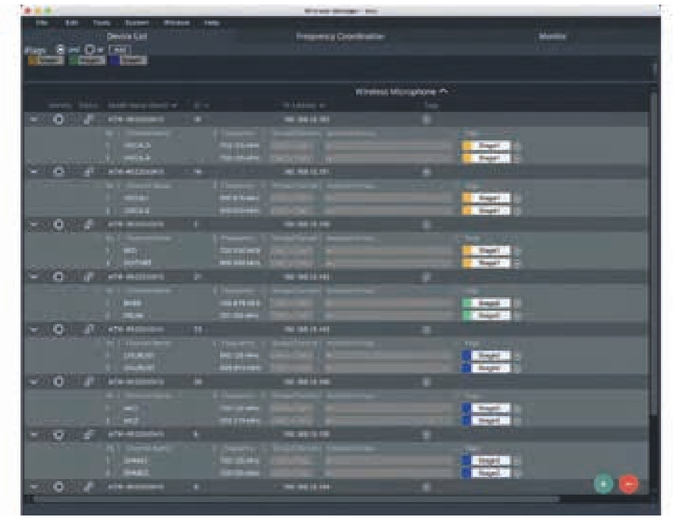
Warm and Flattering Sound

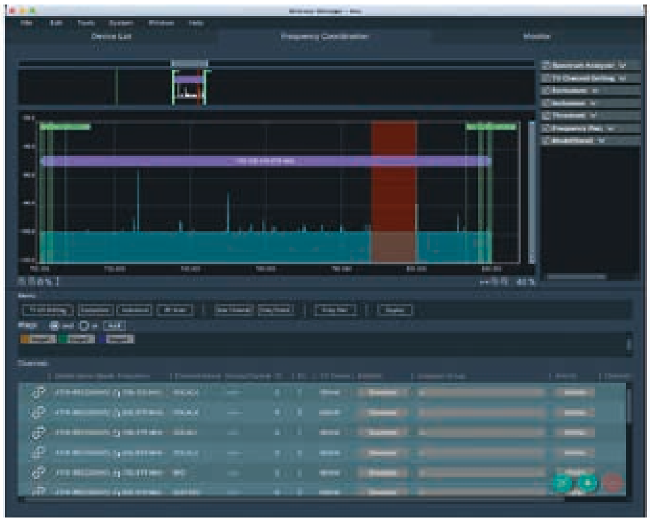
The AT4033a produces a warm and flattering sound that brings the versatility of a dynamic microphone, as well as the transparency and detail of a high-end capacitor model for a vintage effect.


ATW-C710
ATW-C4100
ATW-C510
ATW-C3300
ATW-C5400
ATW-C6100

Everything under control

The Wireless Manager software supports the setup, control, and monitoring of compatible Audio-Technica wireless devices. The software allows you to determine device settings, make and coordinate frequency plans while offline, and configure import settings whilst connected to wireless systems via network connection. When linked to a compatible receiver, you can scan the RF environment, monitor connected devices, and view the system log.





WIRELESS SYSTEMS / FREQUENCY

Audio-Technica - Frequency bands versus wireless series

Frequency from	to	TV Channel
470	478	21
478	486	22
486	494	23
494	502	24
502	510	25
510	518	26
518	526	27
526	534	28
534	542	29
542	550	30
550	558	31
558	566	32
566	574	33
574	582	34
582	590	35
590	598	36
598	606	37
606	614	38
614	622	39
622	630	40
630	638	41
638	646	42
646	654	43
654	662	44
662	670	45
670	678	46
678	686	47
686	694	48
694	702	49
702	710	50
710	718	51
718	726	52
726	734	53
734	742	54
742	750	55
750	758	56
758	766	57
766	774	58
774	782	59
782	790	60
790	791	X
791	821	LTE
821	823	X
823	832	Duplex gap
832	862	LTE
862	863	X
863	865	70
2400	2483	ISM

Series	Band	Frequency range
5000-Series Receiver	**DG1**	470.125 to 699.875 MHz
	GH1	700.125 to 819.875 MHz
5000-Series Transmitter	**DE1**	470.125 to 590.000 MHz
	GH1	700.125 to 819.875 MHz
	EG1	580.000 to 699.875 MHz
3000-Series	**DE2**	470.125 - 529.975 MHz
	EE1	530.000 - 589.975 MHz
	EF1	590.000 - 649.975 MHz
	FG1	650.000 - 699.875 MHz
	GH2	794.100 - 805.900 MHz
	HH2	821.100 - 831.900 MHz 863.100 - 864.900 MHz
3000-Series Network receiver	**DE2**	470.125 - 529.975 MHz
	EE1	530.000 - 589.975 MHz
	EF1	590.000 - 649.975 MHz
	FG1	650.000 - 699.875 MHz
2000-Series	**I-band**	487.125 - 506.500 MHz
	U-band	606.500 - 631.000 MHz
	D-band	656.125 - 678.500 MHz
	F-band	854.900 - 864.900 MHz
AT-One	**DE3**	482.625 - 511.375 MHz
	HH2	824.400 - 830.850 MHz 863.300 - 864.700 MHz
System 10 **System 10 Pro**		**2.4** GHz

Note that some frequency bands might not be available in country or region in which you live, or could come with a limited tuning bandwidth/transmitting power due to local regulations.

/ Frequency-Agile
True Diversity UHF

5000 Series

Designed for use on professional tours, in stadiums, concert halls and festivals with incredible audio quality and proven, critically acclaimed performance for artists, broadcasters and presenters.

/ Frequency-Agile
True Diversity UHF

3000 Series

3000 Series systems have an operating range of 100m and are available in several frequency bands that provide a wide tuning range.

/ Frequency-Agile
True Diversity UHF

2000 Series

Easy to use, flexible to setup, medium - large channel counts, rock solid RF.

/ Antenna Switching Diversity
UHF Wireless Systems

AT-One

Easy to use, for small channel counts, medium operating range, case and rackmount, fairly easy setup.

/ Rack-Mount
Digital Wireless Systems

System 10 Pro

Easy to use, easy to setup remote receiver unit allows professional fixed installations, license-free, no frequency coordination needed.

/ Rack-Mount
Digital Wireless Systems

System 10

Easy to use, easy to setup, license-free, no frequency coordination needed. Short range allows usage of another System 10 setup in an adjacent room.

	Performance					Live Sound				Install			Broadcast & Production			
	Operating range	Indoor range	Outdoor range	Rec. Channel Count	Analog / Digital	Hobby music	Prof. music	Rental company	Theater	School / house of worship /	Corporate / hotel conference room	Large venues / Stadium	Broadcast studio	ENG	Live sport	Film & Location sound
5000 Series	100 m	●●●●	●●●●	> 40	A	○	○○○	○○○	○○○	○	○○○	○○○	○○○		○○○	○○
3000 Series	100 m	●●●●	●●●●	40	A	○○	○○○	○○○	○○○	○○	○○○	○○○	○		○○○	○○
System10 Pro	60 m	●●●	●	10	D	○○	○○	○		○○	○○○					
System10	30 m	●●	●	8	D	○○○	○○	○		○○○	○			○○		○
2000 Series	100 m	●●●●	●●●●	30	A	○○	○	○○	○○	○○○	○○○	○				
AT-One	60 m	●●●	●●●	4	A	○○○	○	○	○	○○○	○○○					

5000 Series

Frequency-Agile True Diversity UHF Wireless Systems

Comprehensive tuning bandwith

For maximum versatility in ever-congested RF environment, the dual-channel receiver provides a tuning bandwidth of 230 MHz or 120 MHz (depending on frequency band). Both transmitters (ATW-T5202 and ATW-T5201) feature a tuning bandwidth of 120 MHz and are available in different frequency ranges to provide complete coverage of the receiver's bandwidth. This allows the user to set up systems with high channel counts, whilst offering the flexibility to tune to open spectrum wherever you travel.

Dual compander for incredible audio quality

Designed for use on professional tours, in stadiums, concert halls, festivals and other demanding audio environments, the Audio-Technica 5000 Series offers the highest-quality wireless live sound, with dual-compander circuitry that processes high and low frequencies separately for unparalleled frequency response and dynamic range.

Designed for professionals

The body-pack transmitter provides highest possible wearing comfort due to its small size - 64 mm × 70 mm × 17 mm, robust and ergonomic full metal body with concealed soft-touch controls, rugged cH-style connector for secure connection - just to name a few features that meet the needs of professional users.

High channel count

The antenna cascade output connects up to 8 receivers, allowing a single pair of antennas to feed 16 channels of wireless.

Dante®


Network


Interchangeable Capsules


cH-Connector

back

/ Dante® Receiver
ATW-R5220DAN

back

/ Receiver
ATW-R5220

cH-style screw-down 4-pin connector for secure connection to A-T's cH-style lavalier and headworn microphones, or cables.

/ Body-Pack Transmitter
ATW-T5201

/ Interchangeable Microphone Capsules (IMC)
(see page 4)

/ Handheld Transmitter Body
ATW-T5202

5000 Series

Operating Frequencies	Receiver: Band DG1: 470.125 to 699.875 MHz Band GH1: 700.125 to 819.875 MHz Transmitter: Band DE1: 470.125 to 590.000 MHz Band EG1: 580.000 to 699.875 MHz Band GH1: 700.125 to 819.875 MHz
Minimum Frequency Step	25 kHz
Modulation Mode	FM
Operating Range	100 m

ATW-R5220/ATW-R5220DAN

Receiving System	True diversity
Image Rejection	80 dB nominal
Sensitivity	18 dBuV at 60 dBA S/N ratio (50 ohms termination)
Maximum Output Level	XLR, balanced, +18 dBV
Headphone Output	6.3 mm (1/4") TRS stereo 180 mW, typical
Antenna Input	BNC-type, 50 ohms 12 V DC, 150 mA (combined)

ATW-T5201

Frequency Response	23 to 16,300 Hz
Dynamic Range	Mic input: 120 dB or higher (A-weighted), typical Inst input: 107 dB or higher (A-weighted), typical
Input Connection	cH-style screw-down 4-pin connector
Spurious Emissions	Following federal and national regulations
Maximum Deviation	±40 kHz (THD:10%)
Total Harmonic Distortion	1.0 % or less (at 1 kHz, ±17.5 kHz deviation)
RF Power Output	High: 50 mW, Mid: 10 mW, Low: 2 mW (switchable), at 50 ohms
Battery Life	High: 7 hours, Mid: 9 hours, Low: 10.5 hours (alkaline)
Dimensions	64 mm × 70 mm × 17 mm (W × D × H)
Net Weight	Approx. 92 g

ATW-T5202

Frequency Response	33 to 16,300 Hz Depending on attached microphone element
Dynamic Range	116 dB or higher (A-weighted), typical
Microphone Element	Interchangeable industry standard thread
Spurious Emissions	Following federal and national regulations
Maximum Deviation	±40 kHz (THD:10%)
Total Harmonic Distortion	1.0 % or less (at 1 kHz, ±17.5 kHz deviation)
RF Power Output	High: 50 mW, Mid: 10 mW, Low: 2 mW (switchable), at 50 ohms
Battery Life	High: 6.5 hours, Mid: 8 hours, Low: 9.5 hours (alkaline)
Dimensions	193 mm long, 37 mm maximum diameter
Net Weight	200 g

3000 Series

Frequency-Agile True Diversity UHF Wireless Systems

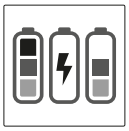
60 MHz tuning bandwidth

The 3000 Series systems are available in several different frequency bands, and each features a wide 60 MHz tuning range. This allows the user to set up systems with high channel counts, whilst offering the flexibility to tune to open spectrum wherever you travel. Frequencies can be easily scanned and selected on the receiver and then synced with the transmitter via IR sync functionality.

Backup frequency button

Unique multifunction button on the handheld and body-pack transmitters can be used to switch to a backup frequency (on both transmitter and receiver) should interference be encountered.


Network


Charging contacts


Interchangeable Capsules


cH-Connector

front

back

/ Receiver
ATW-R3210

back

/ Network-Enabled Receiver
ATW-R3210N

cH-style screw-down 4-pin connector for secure connection to A-T's cH-style lavalier and headworn microphones, or cables.

/ Body-Pack Transmitter
ATW-T3201

/ Interchangeable Microphone Capsules (IMC)
(see page 4)

/ Handheld Transmitter Body
ATW-T3202

One power supply feeds up to five chargers

Up to five docks can be connected to one power supply (AD-SA1230XA - available separately) to charge a maximum of ten transmitters (per link one AT8687 is required - available separately).

Monitoring and controlling

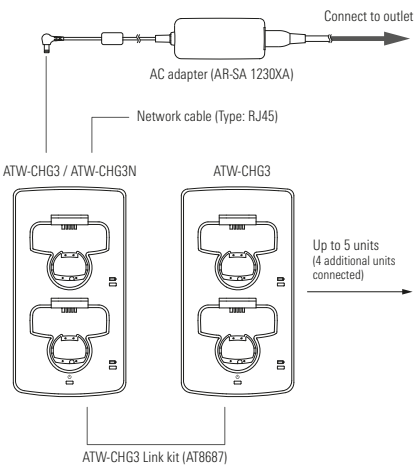
The ATW-CHG3N networked version of the charging dock allows users to monitor the charging status of all transmitters in the linked docks (per link one AT8687 is required - available separately). Only the first dock must be an ATW-CHG3N, all linked docks (up to four) must be ATW-CHG3.

Protection against misuse

The dock automatically shuts off if alkaline or damaged batteries are detected in the transmitters.

/ Two-Bay Charging Station
ATW-CHG3

/ Two-Bay Networked Charging Station
ATW-CHG3N



/ Power Supply Unit for ATW-CHG3
AD-SA1230XA

/ Link Kit for ATW-CHG3
AT8687

ATW-CHG3 Charging Station

Charging Time	Approx. 6.5 hours (1,900 mAh rechargeable battery)*
Power Supply	DC12V 3.0A
Power Consumption	4.9W (when 2 transmitters are charging) 27.4W (CHG3×5) (5 units are connected and 10 transmitters are charging)
Weight	400 g
Accessories	Separately available - AC adapter (AD-SA1230XA), ATW-CHG3 Link kit (AT8687)

/ 3000 Series -
Body-pack System
ATW-3211

/ 3000 Series -
Body-pack System with AT831cH
ATW-3211/831

/ 3000 Series -
Body-pack System with BP892xcH
ATW-3211/892x

/ 3000 Series -
Body-pack System with BP892xcH-TH
ATW-3211/892x-TH

/ 3000 Series -
Body-pack System with AT899cH
ATW-3211/899

/ 3000 Series -
Handheld System with ATW-C510
ATW-3212/C510

/ 3000 Series -
Handheld System with ATW-C710
ATW-3212/C710

3000 Series

Operating Frequencies	Band DE2: 470.125 to 529.975 MHz Band EE1: 530.000 to 589.975 MHz Band EF1: 590.000 to 649.975 MHz Band FG1: 650.000 to 699.875 MHz Band GH2: 794.100 to 805.900 MHz Band HH2: 821.100 to 831.900 MHz and 863.100 to 864.900 MHz
Minimum Frequency Step	25 kHz
Modulation Mode	FM
Operating Range	100 m

ATW-R3210/ATW-R3210N

Receiving System	True diversity
Image Rejection	60 dB nominal
Sensitivity	20 dBuV at 60 dBA S/N ratio (50 ohms termination)
Maximum Output Level	XLR, balanced, +14 dBV 6.3 mm (1/4), unbalanced: +8 dBV (ATW-R3210 only)
Antenna Input	BNC-type, 50 ohms 12 V DC, 160 mA (combined)

ATW-T3201

Frequency Response	31 to 15,500 Hz
Dynamic Range	Mic input: 115 dB or higher (A-weighted), typical Inst input: 112 dB or higher (A-weighted), typical
Input Connection	cH-style screw-down 4-pin connector
Spurious Emissions	Following federal and national regulations
Maximum Deviation	±38 kHz (THD:10%)
Total Harmonic Distortion	1.0 % or less (at 1 kHz, ±17.5 kHz deviation)
RF Power Output	High: 30 mW, Low: 10 mW (switchable), at 50 ohms
Battery Life	High: 8 hours, Low: 9 hours (alkaline) High: 9 hours, Low: 9.5 hours (Ni-MH 1900mAh)
Dimensions	64 mm × 82 mm × 23 mm (W × D × H)
Net Weight	Approx. 102 g

ATW-T3202

Frequency Response	25 to 16,700 Hz Depending on attached microphone element
Dynamic Range	115 dB or higher (A-weighted), typical
Microphone Element	Interchangeable industry standard thread
Spurious Emissions	Following federal and national regulations
Maximum Deviation	±36 kHz (THD:10%)
Total Harmonic Distortion	1.0 % or less (at 1 kHz, ±17.5 kHz deviation)
RF Power Output	High: 30 mW, Low: 10 mW (switchable), at 50 ohms
Battery Life	High: 8 hours, Low: 9 hours (alkaline) High: 9 hours, Low: 9.5 hours (Ni-MH 1900mAh)
Dimensions	193 mm long, 37 mm maximum diameter
Net Weight	200 g

2000 Series

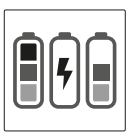
Frequency-Agile True Diversity UHF Wireless Systems

Easy to use

Easy setup, automatic scanning and other advanced wireless features - affordable as never before.
Though the 2000b system is designed for professional use, the user does not need special training to operate it. Once unboxed, it's ready to roll! Standard automatic frequency scanning finds and sets the best available channel at the touch of a button. Using multiple wireless systems simultaneously, as any of its 10 preset channels can be used together.

12V antenna power

The ATW-R2100b receiver delivers a bias voltage of 12V / 60mA from each BNC antenna input, enabling the use of antenna boosters or other active components.



Charging contacts

cW-Connector

front

back

/ Receiver
ATW-R2100b

Locking 4-pin microphone connector for use with Audio-Technica cW-style wireless body-pack transmitters.

/ Body-pack Transmitter
ATW-T210a

/ Handheld Transmitter
ATW-T220a

/ Two-Bay Recharging Station
ATW-CHG2

/ 2000 Series - Body-pack System
ATW-2110b

/ 2000 Series - Body-pack System with AT-GcW
ATW-2110b/G

/ 2000 Series - Body-pack System with PRO8HEcW
ATW-2110b/H

/ 2000 Series - Body-pack System with ATM75cW
ATW-2110b/HC1

/ 2000 Series - Body-pack System with ATM73cW
ATW-2110b/HC2

/ 2000 Series - Body-pack System with AT829cW
ATW-2110b/P

/ 2000 Series - Body-pack System with AT899cW
ATW-2110b/P1

/ 2000 Series - Body-pack System with AT831cW
ATW-2110b/P2

/ 2000 Series - Body-pack System with MT838cW
ATW-2110b/P3

/ 2000 Series - Handheld System
ATW-2120b

2000 Series

Operating Frequencies	I Band: 487.125 to 506.500 MHz U Band: 606.500 to 631.000 MHz D Band: 656.125 to 678.500 MHz F Band: 854.900 to 864.900 MHz
Max. Number of Channels	10
Modulation Mode	FM
Operating Range	100 m

ATW-R2100b

Receiving System	True diversity
Image Rejection	55 dB nominal, 50 dB minimum
Sensitivity	20dBµV (S/N 60dB at 5 kHz deviation, IEC-weighted)
Maximum Output Level	XLR, balanced, +14 dBV - 6.3 mm (1/4), unbalanced: +8 dBV
Antenna Input	BNC-type, 50 ohms 12 V DC, 60 mA (each)

ATW-T210a

Frequency Response	100 to 15,500 Hz
Dynamic Range	110 dB or higher (A-weighted), typical
Input Connection	cH-style screw-down 4-pin connector
Spurious Emissions	Following federal and national regulations
Maximum Deviation	±40 kHz (THD:10%)
Total Harmonic Distortion	1.0 % or less (at 1 kHz, ±17.5 kHz deviation)
RF Power Output	High: 30 mW, Low: 10 mW (switchable)
Battery Life	High: 7 hours, Low: 9 hours (alkaline)
Dimensions	66 mm × 92 mm × 23 mm (W × D × H)
Net Weight	Approx. 81 g

ATW-T220a

Frequency Response	100 to 15,000 Hz
Dynamic Range	110 dB or higher (A-weighted), typical
Microphone Element	Cardioid, dynamic
Spurious Emissions	Following federal and national regulations
Maximum Deviation	±40 kHz (THD:10%)
Total Harmonic Distortion	1.0 % or less (at 1 kHz, ±20 kHz deviation)
RF Power Output	High: 30 mW, Low: 10 mW (switchable)
Battery Life	High: 7 hours, Low: 9 hours (alkaline)
Dimensions	232 mm long, 48 mm maximum diameter
Net Weight	252 g

AT-One

Wireless System

Easy to use

AT-One is designed with simplicity and ease-of-use in mind. Equipped with a practical carrying case, rack-mount kit and detachable antenna, AT-One is the perfect balance of price and performance, ideal for those looking for accurate, reliable performance at an entry-level price.
The AT-One's frequency plan is divided into two groups with four available channels in each group. All four channels in a group can be used simultaneously.

Cardioid condenser capsule – induction loop ready

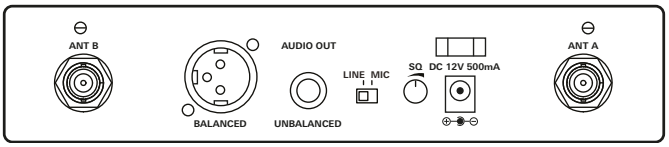
The condenser microphone capsule in the ATW-T1 handheld transmitter prevents inductive feedback from nearby hearing loops.

12V antenna power

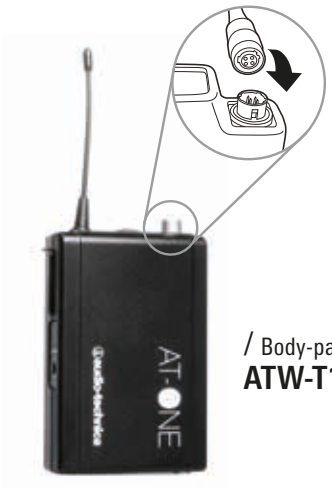
The ATW-R1 receiver delivers a bias voltage of 12V / 100mA from each BNC antenna input, enabling the use of antenna boosters or other active components.

cW-Connector

front



back



Locking 4-pin microphone connector for use with Audio-Technica cW-style wireless body-pack transmitters.

/ Body-pack Transmitter
ATW-T1

/ Receiver
ATW-R1

/ Handheld Transmitter
ATW-T3

/ AT-One -
Body-pack System
ATW-11

/ AT-One -
Body-pack System with AT-GcW
ATW-11/G

/ AT-One -
Body-pack System with PRO9cW
ATW-11/H

/ AT-One -
Body-pack System with ATR35cW
ATW-11/P

/ AT-One -
Handheld System
ATW-13

AT-One

Operating Frequencies	Band DE3: 482.625 to 511.375 MHz Band HH2: 824.400 to 830.850 MHz & 863.300 to 864.700 MHz
Max. Number of Channels	2 x 4
Modulation Mode	FM
Operating Range	60 m

ATW-R1

Receiving System	Antenna switching diversity
Image Rejection	55 dB minimum
Sensitivity	10 dBµV (S/N 60 dB @ 20 kHz deviation)
Maximum Output Level	XLR, balanced, +4 dBV - 6.3 mm (1/4), unbalanced: –2 dBV
Antenna Input	BNC-type, 50 ohms 12 V DC, 100 mA (each)

ATW-T1

Frequency Response	60 to 16,000 Hz
Dynamic Range	103 dB or higher (A-weighted), typical
Input Connection	cW-style lock-down 4-pin connector
Spurious Emissions	Following federal and national regulations
Maximum Deviation	±40 kHz (THD:10%)
Total Harmonic Distortion	1.0 % or less (at 1 kHz, –20 kHz deviation)
RF Power Output	10 mW
Battery Life	10 hours (alkaline)
Dimensions	66 mm × 98 mm × 22 mm (W × D × H)
Net Weight	Approx. 71 g

ATW-T3

Frequency Response	60 to 16,000 Hz
Dynamic Range	108 dB or higher (A-weighted), typical
Microphone Element	Cardioid, condenser
Spurious Emissions	Following federal and national regulations
Maximum Deviation	±40 kHz (THD:10%)
Total Harmonic Distortion	1.0 % or less (at 1 kHz, -20 kHz deviation)
RF Power Output	10 mW
Battery Life	10 hours (alkaline)
Dimensions	268 mm long, 52 mm maximum diameter
Net Weight	277 g

System 10

Digital Wireless Systems

Easy to use

System 10 is a digital high-fidelity wireless system designed to provide 24-bit operation, easy setup and clear, natural sound quality. Operating in the 2.4 GHz range, far from TV and DTV interference, System 10 offers extremely easy operation and instantaneous channel selection. Up to eight channels may be used together without any frequency coordination problems or group selection issues. System 10 receivers and transmitters offer an easy-to-read digital ID display.

Three levels of diversity assurance

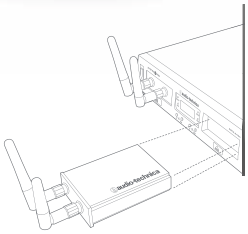
System 10 provides three levels of diversity: frequency, time and space. Frequency diversity transmits the signal on two frequencies simultaneously for better protection against frequency interference. Time diversity sends the signal twice to maximise signal integrity. Finally, space diversity uses two antennas on each transmitter and receiver to optimize immunity against multipath interference.

Frequency


cW-Connector

System 10 PRO

Digital Wireless Systems



Featuring
Remote-Mountable
Receiver Units

A compact and expandable system

With an RJ12 cable supplied with each system, it is possible to connect up to 5 frames (10 receivers). While many systems can operate without being connected, this is not recommended. Indeed, linking the systems to create a more stable environment in which receivers are coordinated for the reception, transmission and frequency allocation avoids signal loss and optimizes the simultaneous use of the 10 channels.

front

/ Single Channel Receiver
ATW-R1310

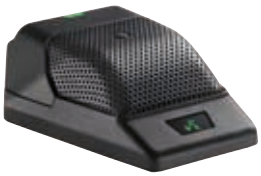
front

/ Dual Channel Receiver
ATW-R1320

Locking 4-pin microphone connector for use with Audio-Technica cW-style wireless body-pack transmitters.

/ Body-Pack Transmitter
ATW-T1001
(specifications, see page 20)

back



/ Boundary Microphone Transmitter
ATW-T1006

/ Microphone Desk Stand Transmitter
ATW-T1007

/ Handheld Transmitter-
ATW-T1002
(specifications, see page 20)

/ System 10 PRO -
Rack-Mount Digital Wireless System
ATW-1301

/ System 10 PRO -
Rack-Mount Digital Wireless System
ATW-1311

/ System 10 PRO -
Rack-Mount Digital Wireless System
ATW-1312

/ System 10 PRO -
Rack-Mount Digital Wireless System
ATW-1302

/ System 10 PRO -
Rack-Mount Digital Wireless System
ATW-1322

System 10 PRO

Operating Frequencies	2.4 GHz ISM Band
Max. Number of Channels	10
Audio Sampling	24 bit / 48 kHz
Operating Range	60 m

ATW-R1310 & ATW-R1320

Receiving System	Diversity (frequency / time / space)
Maximum Output Level	XLR, balanced, +6 dBV - 6.3 mm (1/4), unbalanced: 0 dBV

ATW-T1006

Maximum Input Sound Level	139 dB SPL
RF Power Output	10 mW
Spurious Emissions	Following federal and national regulations
Internal Battery	3.7 V Rechargeable Li-ion Battery
Battery Rating	5.5 Wh; 1,460 mAh
Battery Life	9 hours (Battery charging time: 4 hours 30 minutes)
Dimensions	96.1 mm W × 38.0 mm H × 122.8 mm D
Net Weight	408 grams

ATW-T1007

RF Power Output	10 mW
Spurious Emissions	Following federal and national regulations
Phantom Power	12V DC
Internal Battery	3.7 V Rechargeable Li-ion Battery
Battery Rating	5.5 Wh; 1,460 mAh
Battery Life	9 hours (Battery charging time: 4 hours 30 minutes)
Dimensions	96.1 mm W × 44.2 mm H × 122.8 mm D
Net Weight	392 grams

ATW-T1001 & ATW-T1002 (specifications, see page 20)

System 10

Digital Wireless Systems

Automatic frequency selection

The System 10 automatically changes its frequency. Unlike other systems on the market that attach to 2 or 4 frequency, the System 10 will constantly "monitor" the frequencies and switch if necessary. Thus, there are always a good 2 frequencies in the system, and the user does not need to manually intervene.

/ Receiver
ATW-R1100

Locking 4-pin microphone connector for use with Audio-Technica cW-style wireless body-pack transmitters.

/ Body-Pack Transmitter
ATW-T1001

Handheld Transmitter /
ATW-T1002

/ System 10 -
Body-pack System
ATW-1101

/ System 10 -
Handheld System
ATW-1102

System 10 - Stack-Mount	
Operating Frequencies	2.4 GHz ISM Band
Max. Number of Channels	8
Audio Sampling	24 bit / 48 kHz
Operating Range	30 m

ATW-R1100	
Receiving System	Diversity (frequency / time / space)
Maximum Output Level	XLR, balanced, +6 dBV - 6.3 mm (1/4), unbalanced: 0 dBV

ATW-T1001	
Frequency Response	20 to 20,000 Hz
Dynamic Range	109 dB or higher (A-weighted), typical
Input Connection	cW-style lock-down 4-pin connector
Spurious Emissions	Following federal and national regulations
Total Harmonic Distortion	0.05 % or less
RF Power Output	10 mW
Battery Life	7 hours (alkaline)
Dimensions	72 mm × 107 mm × 25 mm (W × D × H)
Net Weight	Approx. 100 g

ATW-T1002	
Frequency Response	20 to 20,000 Hz
Dynamic Range	109 dB or higher (A-weighted), typical
Microphone Element	Unidirectionnal, dynamic
Spurious Emissions	Following federal and national regulations
Total Harmonic Distortion	0.05 % or less
RF Power Output	10 mW
Battery Life	7 hours (alkaline)
Dimensions	255 mm long, 50 mm maximum diameter
Net Weight	280 g

System 10 Camera-Mount

Portable Camera-Mount Digital Wireless Systems

Small and compact design

With its compact and portable design, the System 10 Digital Wireless Camera System is ideal for video production, reporting and all intermediate mobile applications, the receiver offers several mounting options to suit a wide variety of cameras and recording devices. Each System 10 camera mount wireless system includes a camera mounting spigot in addition to the receiver and the transmitter.

System 10 -
Camera-mount Body-pack System
ATW-1701

/ System 10 -
Camera-mount Body-pack System
with AT8350
ATW-1701x3M

/ System 10 PRO -
Camera-mount Body-pack System
with AT829cW
ATW-1701/P1

/ System 10 -
Camera-mount Handheld System
ATW-1702

/ System 10 -
Camera-mount Handheld System
with AT8350
ATW-1702x3M

/ Camera-Mount Receiver
ATW-R1700

/ Body-Pack Transmitter
ATW-T1001 (see page 20)

/ Handheld Transmitter
ATW-T1002 (see page 20)

System 10 - Camera-Mount

Operating Frequencies	2.4 GHz ISM Band
Max. Number of Channels	8
Audio Sampling	24 bit / 48 kHz
Operating Range	30 m

ATW-R1700

Receiving System	Diversity (frequency / time / space)
Maximum Output Level	3.5 mm, TRS balanced, +6 dBV 3.5 mm, TRS unbalanced: 0 dBV
Battery Type	Internal Battery: 3.7V rechargeable Li-ion battery
Battery Life	12 hours (Battery charging time: 4 hours 30 minutes)
Dimensions	56 mm × 91 mm × 28 mm (W × D × H)
Weight	Approx 105 g

ATW-T1001 & ATW-T1002 (specifications, see page 20)

Connected Accessory			ATW-A49	ATW-A410P	ATW-B80WB	ATW-49CB	ATW-49SP	ATW-DA49a
Current Requirement			0 mA	60mA	60mA	30mA	30mA	0 mA
Used wireless system		Current per antenna input @12V						
AT-One	**ATW-R1**	100 mA	+	1 pair	1 pair	2 pair	1 pair (*)	+
2000 Series	**ATW-R2100**	60 mA	+	1 pair	1 pair	2 pair	1 pair (*)	+
3000 Series	**ATW-R3210**	80 mA	+	1 pair	1 pair	2 pair	1 pair (*)	+
5000 Series	**ATW-R5220**	75 mA	+	1 pair	1 pair	2 pair	1 pair (*)	+
System 10	All receiver	-	-	-	-	-	-	-
Distribution amplifier	**ATW-DA49A**	250 mA	+	2 pair (**)	4 pair	2 pair (***)	1 pair (*)	See application 6

(*) Although possible to power more than 1 pair it is recommended to use an ATW-DA49a instead.
(**) You would require to use a pair of ATW-49CB to connect 2 pairs of antennas.
(***) 2 pairs would allow to connect 4 pairs of passive antennas (A49) - no active antennas.
Please use the above table to determine the maximum numbers of active componets in the antenna cable run.
Example: AT-One (100 mA per antenna cable run) could drive 1 pair of ATW-B80WB boosters and 1 pair of ATW-49SP splitter. (60 mA + 30 mA = 90 mA).
Example: ATW-DA49a (250 mA per antenna cable run) could drive 2 pairs of ATW-A49 (0 mA), 2 pairs of ATW-B80WB boosters (2x 60mA per antenna run) and 1 pair of ATW-49CB (30 mA): Total: 2x 150 mA.

ATW-DA49a

UHF Antenna Distribution Systems

Durability

The ATW-DA49a provides a high OIP3 (+ 32 dBm) for maximum protection against intermodulation.

Specifications	ATW-DA49a
Antenna Power (optional)	12V DC, 250 mA (combined)
Current Consumption	200 mA ± 50 mA at 12 V DC
Gain	+1.0dB typical (within specified bandwidth)
Input	2 x 1 inputs
OIP3	+32dBm typical (within specified bandwidth)
Output	2 x 4 outputs + 1 cascade output - BNC Female
Operating Bandwidth	470-990 MHz
Power Supply	100-240V AC (50/60 Hz) to 12V DC 1A (centre positive) switched mode external power supply

/ Active Antenna Combiner Kit (pair)

ATW-49CB

/ Active Antenna Splitter Kit (pair)

ATW-49SP

Specifications	ATW-49SP	ATW-49CB
Description	2-Way Active Antenna Splitter	2-Input Active Combiner
Bandwidth	440 MHz to 900 MHz	440 MHz to 900 MHz
VSWR	< 1.7:1 (within specified bandwidth)	< 1.7:1 (within specified bandwidth)
Gain	0 dB typical (within specified bandwidth)	0 dB typical (within specified bandwidth)
Impedance	50 ohms, typical (within specified bandwidth)	50 ohms, typical (within specified bandwidth)
Termination Type	3-BNC Female	3-BNC Female
Weight	51 g	51 g
Dimensions	61 mm W x 47 mm L x 23 mm H	61 mm W x 47 mm L x 23 mm H
DC Input	5-14V DC	5-14V DC
Current	30 mA @ 12V DC	30 mA @ 12V DC
Pass-through Current	100 mA	120 mA (maximum to both inputs combined)

/ UHF Wide-Band Directional LPDA Antennas (pair)

ATW-A49

Specifications	ATW-A49
Antenna Type	Log Periodic Dipole Array (LPDA)
Operating Bandwidth	440 – 900 MHz
Gain	6 dB typical*
Impedance	50 ohms typical*
VSWR	≤ 1.7:1*
Polar Pattern	Elliptical, 90° acceptance, typical
Polarization	Vertical (when mounted vertically)
Number of Elements	9
Maximum Power Input	Not specified (intended as receive antenna only)
Termination Type	Fixed right-angle BNC female Connector is positioned to minimize cable strain
Weight	326 g each
Dimensions	268 mm L x 285 mm H x 25 mm D
Material	Copper-clad epoxy fiberglass

/ UHF Powered Wideband Antenna (single)

ATW-A410P

Specifications	ATW-A410P
Gain	-10 dB / 0 dB / +6 dB / +12 dB
OIP3	> 30 dBm typical (within specified bandwidth)
Termination Type	BNC-J
Operating Bandwidth	470-990 MHz
Operating Temperature Range	-10°C to 50°C
Dimensions	175 x 175 x 50 mm (without bracket)
Weight	390 g (without bracket)
Accessories	Mounting bracket, screws
Impedance	50 ohms typical (within specified bandwidth)
Power Consumption	60mA

/ In-Line RF booster 470-990MHz 6dB / 12dB (pair)

ATW-B80WB

Specifications	ATW-B80WB
Connections	BNC-J (IN), BNC-J (OUT)
Power Supply	DC 12 V
Frequency Range	470 - 990 MHz
Impedance	50 ohms
Power Consumption	60mA
Gain High	+12 dB Red, +6 dB Green
Connections	BNC-J (IN), BNC-J (OUT)
Power Supply	DC 12 V

/ 0.9m RF Antenna Cable

AC3

/ 4m RF Antenna Cable

AC12

/ 8m RF Antenna Cable

AC25

/ 15m RF Antenna Cable

AC50

/ Antenna Front-Mount Kit
ATW-AF1

For ATW-DA49a

/ Universal Joining Plate for AT 9.5" devices
AT8631

For ATW-R3210, ATW-R3210N, ATW-R2100b, ATW-R1300, ATW-R1310, ATW-R1320 and other AT 9.5" devices

/ Receiver Unit Wall-Mount Holder
AT8690

For System 10 PRO, ATW-RU13

/ Camera Shoe Dual Mount
AT8691

For System 10, ATW-R1700

/ 3.5 mm - XLR Cable (ATW-R1700)
AT8350

/ 3.5 mm - 3.5 mm Cable (ATW-R1700)
AT8349

/ Dual Rack-Mount Kit
AT8677

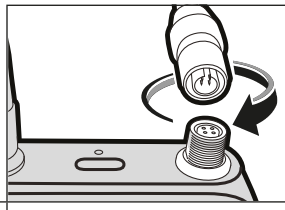
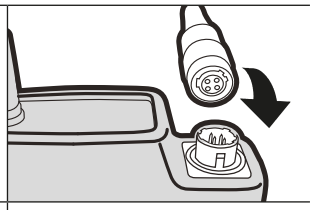
For AT-One, ATW-R1

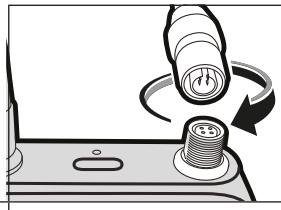
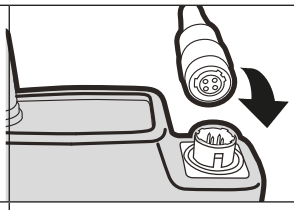
/ Rack-Mount Tray
AT8674

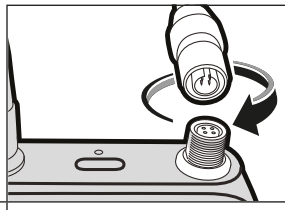
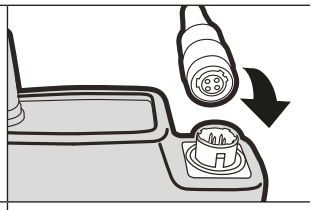
For System 10, ATW-R1100

/ Blanking Plate
AT8675

For AT8674

		cH-Version	cW-Version
			
	/ Subminiature Omnidirectional Condenser Headworn Microphone	**BP892xcH & BP892xcH-TH**	**BP892xcW & BP892xcW-TH**
	/ Subminiature Omnidirectional Condenser Headworn Microphone	**BP893xcH & BP893xcH-TH**	**BP893xcW & BP893xcW-TH**
	/ Subminiature Cardioid Condenser Headworn Microphone	**BP894xcH & BP894xcH-TH**	**BP894xcW & BP894xcW-TH**
	/ Cardioid Condenser Headworn Microphone	**ATM73cH**	**ATM73cW**
	/ Cardioid Condenser Headworn Microphone	**ATM75cH**	**ATM75cW**
	/ Hypercardioid Dynamic Headworn Microphone	**PRO8HEcH**	**PRO8HEcW**
	/ Cardioid Condenser Headworn Microphone	**PRO9cH**	**PRO9cW**
	/ Omnidirectional Condenser Headworn Microphone	**PRO92cH & PRO92cH-TH**	**PRO92cW & PRO92cW-TH**

		cH-Version	cW-Version
			
	/ Subminiature Cardioid Condenser Lavalier Microphone	**AT898cH**	**AT898cW**
	/ Subminiature Omnidirectional Condenser Lavalier Microphone	**AT899cH** & **AT899cH-TH**	**AT899cW** & **AT899cW-TH**
	/ Miniature Cardioid Condenser Lavalier Microphone	**AT831cH**	**AT831cW**
	/ Miniature Omnidirectional Condenser Lavalier Microphone	**AT803cH**	**AT803cW**
	/ Cardioid Condenser Lavalier Microphone	**AT829cH**	**AT829cW**
	/ Omnidirectional Condenser Lavalier Microphone		**MT838cW**
	/ Omnidirectional Condenser Lavalier Microphone	**MT830cH**	**MT830cW**
	/ Omnidirectional Condenser Lavalier Microphone		**ATR35cW**

		cH-Version	cW-Version
			
	/ Cardioid Condenser Instrument Microphone w/ Universal Clip-on Mounting System	**ATM350UcH**	**ATM350UcW**
	/ Cardioid Condenser Clip-on Instrument Microphone	**PRO35cH**	**PRO35cW**
	/ Professional Guitar Input Cable	**AT-GcH PRO**	**AT-GcW PRO**
	/ Professional Guitar Input Cable Angled	**AT-GRcH PRO**	**AT-GRcW PRO**
	/ Guitar Input Cable	**AT-GcH**	**AT-GcW**
	/ Microphone Input Cable	**XLRcH**	**XLRW**
	/ Adapter Cable	**AT-cWcH**	

Dual-channel wireless system

When more than one wireless microphone system is required, you may find that in certain circumstances using two receivers side-by-side with individual antennas is unsuitable. For example, where the receiver needs to be placed out of sight or in a different room, such as installation for a multi-purpose venue, house of worship or a small live music performance.

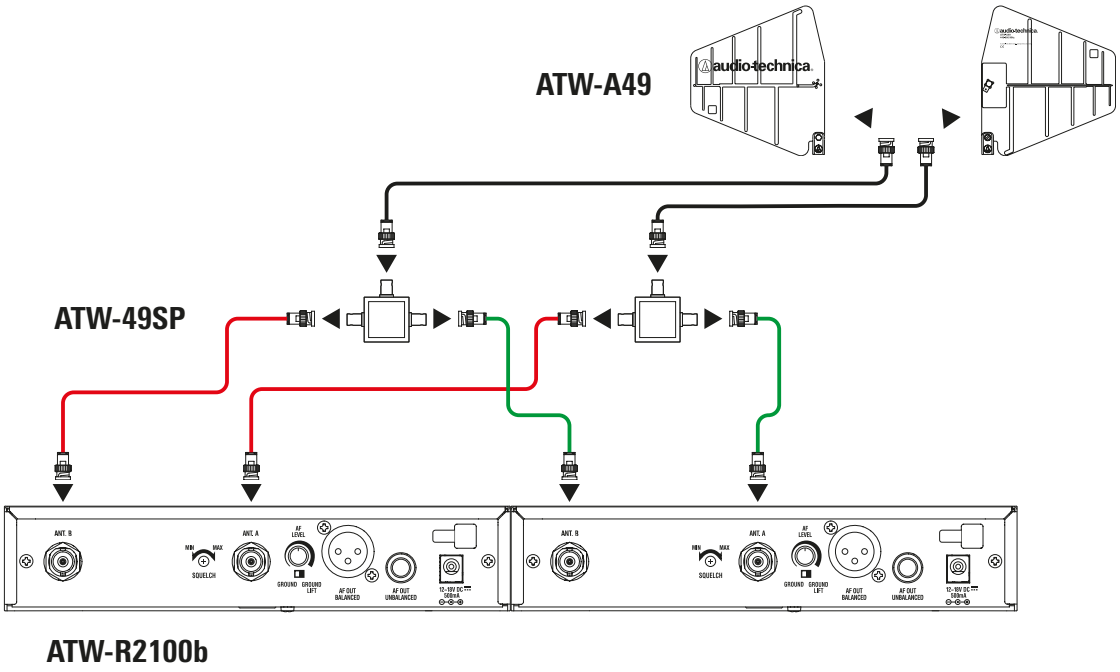
The solution is to utilise one pair of antennas placed in the room to feed both the receivers. The signal is passed from the room over two 50 Ohm RF cables to the receivers' location, where the antenna signals are split into each receiver using the ATW-49SP Active Antenna Splitter Kit.

Check the signal loss of the antenna cable, based on the frequency range of your system and the specified antenna cable length and type. Audio-Technica's wireless manager software offers a "cable loss calculation tool" to do so. If the dB loss exceeds 7 dB, you should consider including the ATW-B80WB In-Line RF Booster as each 6dB of loss across the signal chain will reduce your systems operating distance by 50%.

The ATW-A49SP is powered by the receivers across the antenna cable – no external power source is required. Though our example includes the ATW-A49 LPDA Antenna, any passive antennas can be used provided they support the frequency range of your wireless systems.

If you require an active antenna like our ATW-A410P, or other active components such as the ATW-B80WB, then check the total current consumption of the individual products (simply add their stated mA together per RF cable run) to make certain that your receiver delivers the necessary power.

Compatible Audio-Technica wireless systems for this solution include the AT-One, 2000 Series and 3000 Series.



Product table

Quantity	Code	Description	Alternative
2	**ATW-R2100b**	Frequency-agile True Diversity UHF Wireless Receiver	
2	**ATW-T210a**	2000a Series UniPak™ Transmitter	ATW-T220a Handheld Transmitter
1	**ATW-A49**	Pair of UHF Wide-band Directional LPDA Antennas	
1	**ATW-49SP**	Active Antenna Splitter Kit	
2	**AC25**	25'/7.6m RF Antenna Cable	AC12, AC50

Single-channel wireless system covering two zones

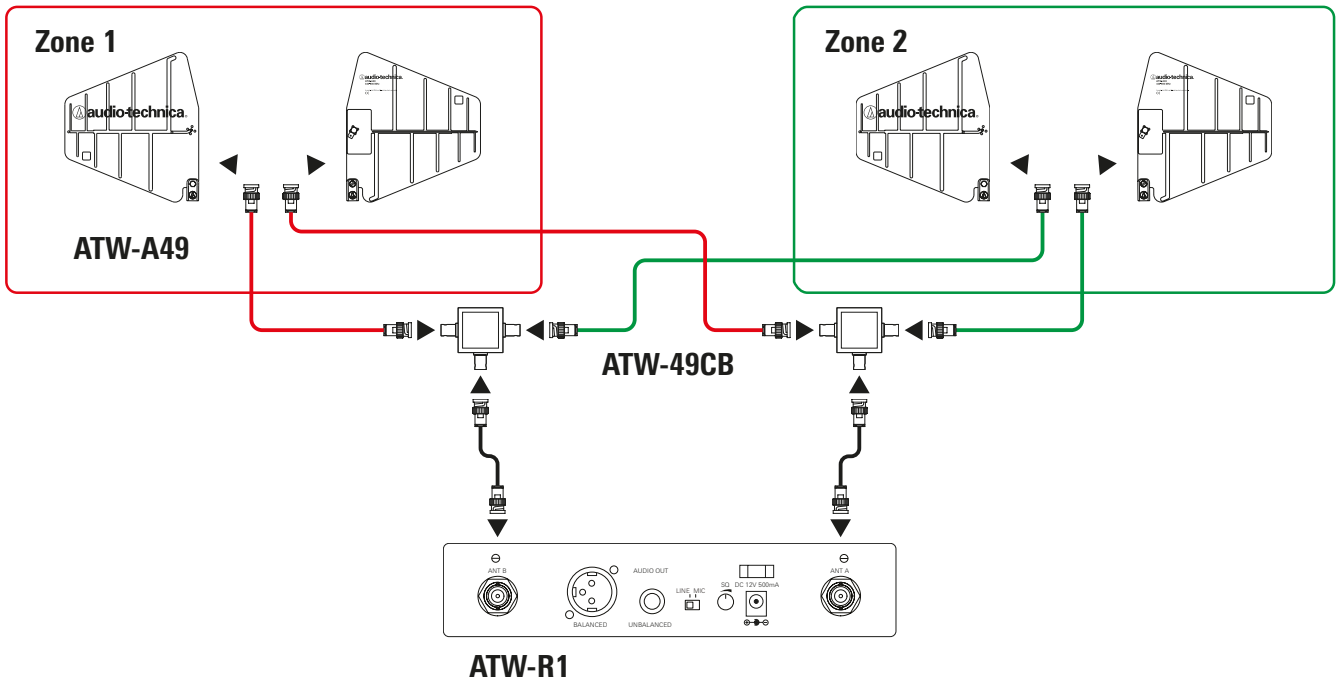
In some situations, only one wireless system is required, but there is the need to guarantee coverage over two separate areas. This, in most cases, is simply not achievable using one pair of antennas. An example of this would be when needing to cover an indoor area and its associated outdoor space, such as you may find in a restaurant, bar, or house of worship setting. Alternatively, a client may have a hotel ballroom which also divides into two multi-function areas, resulting in the need to cover the sections individually.

To achieve this solution, you will need two pairs of antennas – one pair per area requiring coverage. Then, the four antenna cables run to the receiver location, and they are combined using the ATW-49CB Active Antenna Combiner Kit. The resulting two antenna cables can then connect directly to the wireless receiver. Take care to position the ATW-49CB as close to the antennas as possible, to minimise the quantity of antenna cable required in the installation – this will improve signal integrity and reduce cost for the customer.

Refer to the notes in Application 1 for advice on specifying cable length, active antennas and boosters in the cable run.

If the receiver in use can provide adequate current, it is possible to combine Application 1 and Application 2 to create a dual-channel wireless solution with the ability to cover two zones – simply add the ATW-49SP between the ATW-49CB and the receiver.

Compatible Audio-Technica wireless systems for this solution include the AT-One, 2000 Series, 3000 Series and 5000 Series.



Product table

Quantity	Code	Description	Alternative
1	**ATW-R1**	Frequency-agile True Diversity UHF Wireless Receiver	
1	**ATW-T1**	AT-One Beltpack Transmitter	ATW-T3 Handheld Transmitter
2	**ATW-A49**	Pair of UHF Wide-band Directional LPDA Antennas	
1	**ATW-49CB**	Active Antenna Combiner Kit	
4	**AC25**	25'/7.6m RG8 Antenna Cable	AC12, AC50

Multiple zones wireless system

If you need to cover more than two areas which are in proximity of one another, or you simply need to cover one very large area, then this solution may suit your requirements. Consider the need for a wireless microphone which needs to operate throughout the areas of a shopping mall, or over the very wide area of a sports venue – such as a golf course.

Initially, you may consider using multiple pairs of antennas, combining them with multiple ATW-49CB. However, this is not usually the best approach, as you will either run into power issues or the total cable runs will become too long to compensate for incurred RF loss with signal boosters.

This application offers a more elegant solution. The concept begins with placing a wireless receiver of the same type, tuned to the same frequency, in each area with a local pair of antennas.

If you were to use these receivers alone, you could operate the transmitter in each room, provided you activate only one receiver at a time. Then, the audio signal can be sent from the active receiver to the local speaker system as needed. In this scenario, you must manually switch off or mute the unused receivers in order to avoid erratic audio signals being output whilst the wireless transmitter is out of range.

In most cases, this option is not practical. It may not be possible to continually ensure unused receivers are switched off between uses, or a project may demand that the wireless transmitter must work across all areas freely – without continual adjustment by a technician.

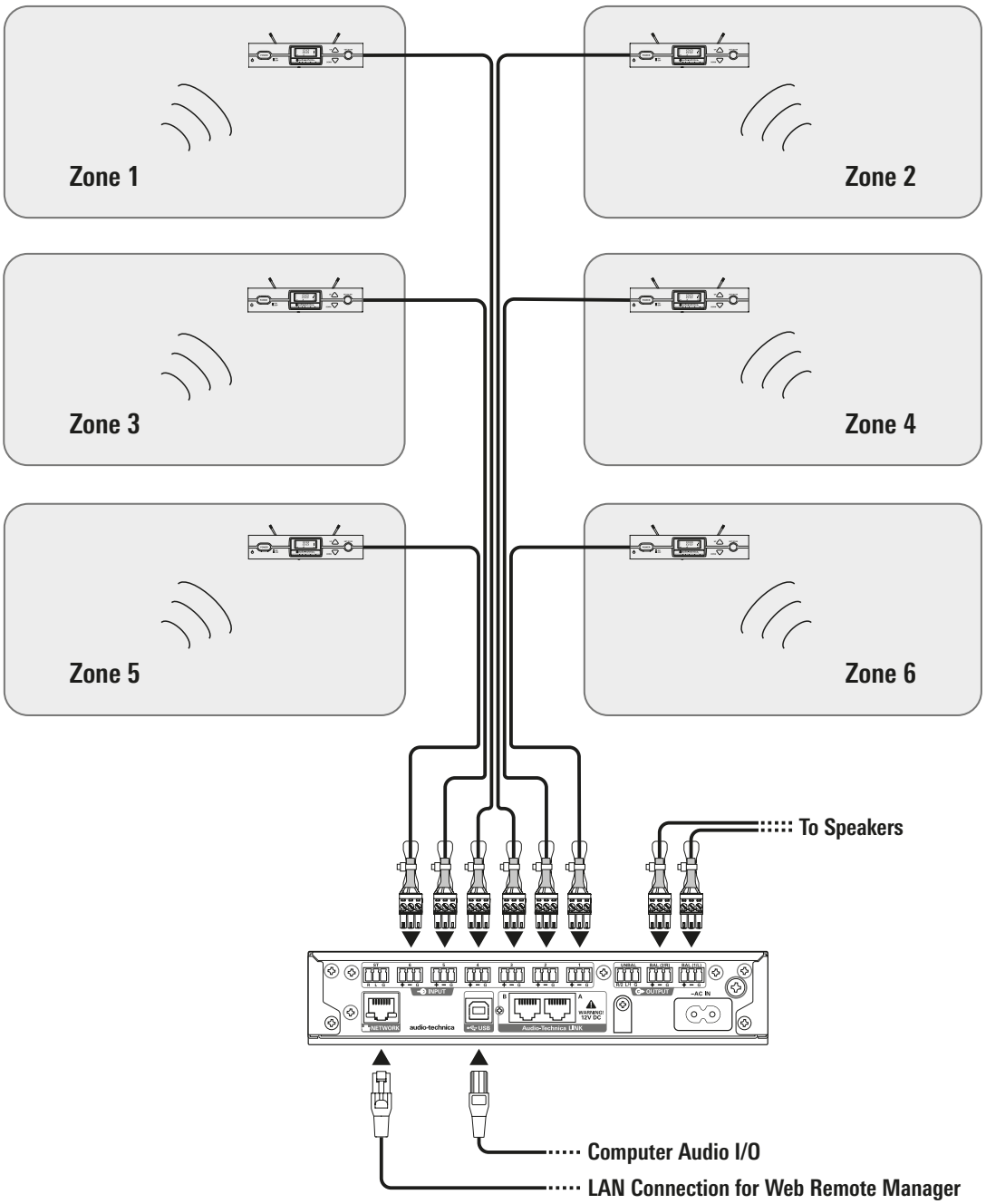
The solution is to add the ATDM-0604 Digital SmartMixer. Simply connect the audio signals from each receiver to the ATDM-0604 and set the unit to Smart Mix mode, making sure to allow only one open microphone at a time. This way, a receiver remains active in the mixer until an audio drop out occurs, which will trigger the mixer to automatically switch to the receiver featuring the most reliable signal. With this solution, you can combine up to six areas, whilst creating one reliable output signal.

Check Application 1 for important information on total cable length, active antennas or using boosters in your antenna cable run. It is possible to combine Application 3 with Application 2 in some or all zones to increase the area of coverage even further. Also, it is possible to combine Application 3 with Application 4. In this case, you will require one ATDM mixer for each wireless microphone you want to use.

Compatible Audio-Technica wireless systems for this solution include the AT-One, 2000 Series and 3000 Series.

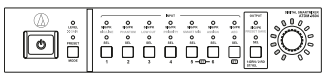
Product table

Quantity	Code	Description	Alternative
6	**ATW-R2100b**	Frequency-Agile True Diversity UHF Wireless Receiver	
1	**ATW-T210a**	2000 Series Beltpack Transmitter	ATW-T220a Handheld Transmitter
1	**ATDM-0604**	Digital SmartMixer	



Equipment used

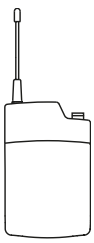
ATDM-0604



6 x ATW-R2100b

ATW-T210a

1 x



or

ATW-T220a

Four-channel wireless system

A four-channel wireless system is often required by live music acts, podium discussions, or in fixed installations for multi-purpose rooms. Rental companies may also design their wireless systems in blocks of four channels for small to medium sized events, as these racks are easy to handle whilst being easily scaled up to a larger system when required (see Application 6).

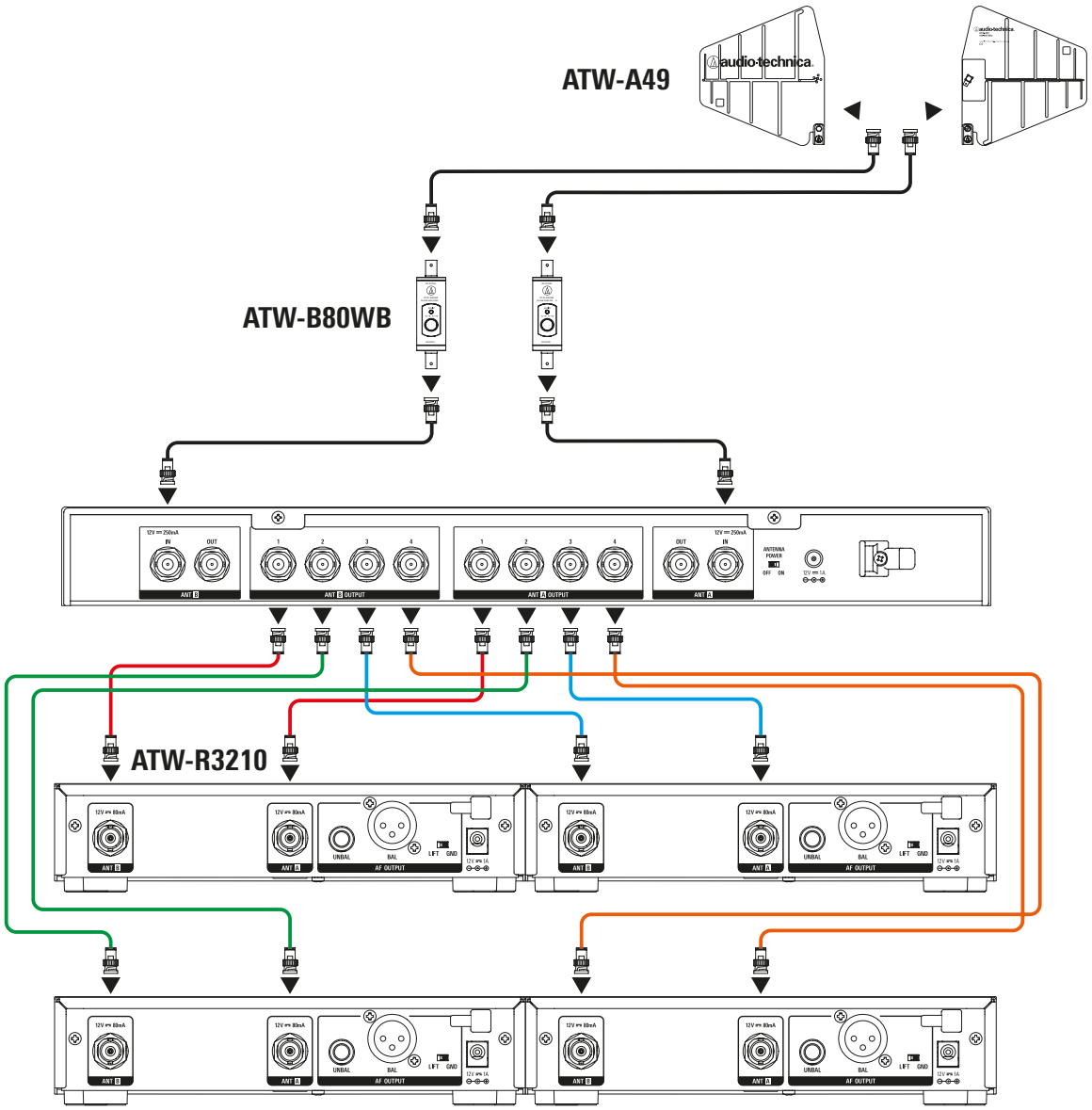
This solution is similar in design to Application 1. The primary difference is the inclusion of the ATW-DA49a, which can divide the incoming pair of antenna signals into four individual signal pairs to feed each receiver. However, this change does not only offer more outputs. In Application 1, the ATW-49SP is powered by the receiver, while in this setup the ATW-DA49a is powered by mains voltage. As a result, the ATW-DA49a distribution amplifier can provide significantly more antenna power for active components in the cable run. Due to the higher current this unit can deliver, it is possible to realise much longer cable runs, with more than one ATW-B80WB booster, as well as drive antenna combiners and active antennas before reaching a power limitation.

Check Application 1 for important information on total cable length, active antennas or using boosters in your antenna cable run. This application can be combined with Application 2 and is the core design for achieving Application 6.

Compatible Audio-Technica wireless systems for this solution include the AT-One, 2000 Series and 3000 Series.

Product table

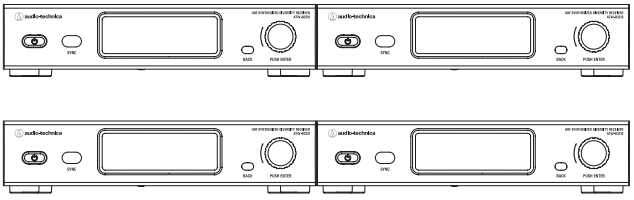
Quantity	Code	Description	Alternative
4	**ATW-R3210**	Frequency-Agile True Diversity UHF Wireless Receiver	ATW-R3210N
4	**ATW-T3201**	3000 Series Beltpack Transmitter	ATW-T3202 Handheld Transmitter
1	**ATW-DA49a**	UHF Antenna Distribution System	
1	**ATW-A49**	Pair of UHF Wide-band Directional LPDA Antennas	ATW-A410P
1	**ATW-B80WB**	Pair of In-Line RF boosters 470-990MHz	
4	**AC25**	25'/7.6m RG8 Antenna Cable	AC12, AC50, AC100



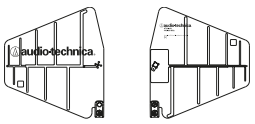
Equipment used

ATW-DA49a

4 x ATW-R3210



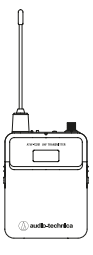
ATW-A49



ATW-B80WB

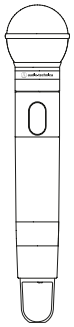
ATW-T3201

4 x



or

ATW-T3202



Multi-channel wireless system for install

This solution is aimed at fixed installations where the use of UHF TV bands is not preferred, such as in locations with a restricted RF environment or where the customer wishes to avoid licensing costs and the need for frequency coordination. Typical applications for this include educational facilities such as schools or universities, multi-function rooms, or conference centres.

This application is based around our System 10 Pro wireless system. System 10 does not use the UHF TV band frequency spectrum (470 - 865 MHz) associated with our other wireless products but operates on the 2.4GHz spectrum, most used for WLAN and Bluetooth® transmission. 2.4GHz offers many benefits, but you must also consider its limitations when using it for wireless audio.

The immediate advantage is that System 10 Pro is completely license free in almost all countries and requires no frequency planning by the installer or operator. However, due to the small wavelength of the 2.4GHz signal (around 12cm), the operating range is shorter than our other wireless systems which use the lower UHF range. This solution is not ideal for open-air scenarios, where long operating distance is required.

However, reduced operating range can also have benefits. For example, if multiple rooms located side-by-side all require a dedicated wireless system, you can reuse the same spectrum by using System 10 Pro in adjacent rooms – very little physical separation between rooms is required.

Another challenge with the 2.4GHz range is the parallel use of Wi-Fi alongside our wireless system. In this case, it is recommended to utilise 5.8GHz for Wi-Fi connectivity in place of 2.4GHz. If this is not possible, the placement of your wireless microphone receiver becomes very important. Here is why System 10 Pro offers the right solution.

2.4GHz antenna cables suffer from higher power losses over their cable run than UHF frequencies. At the same time, many installers do not wish to locate audio racks of receivers in the meeting room, but instead place them in a separate A/V room with the audio mixer and other equipment.

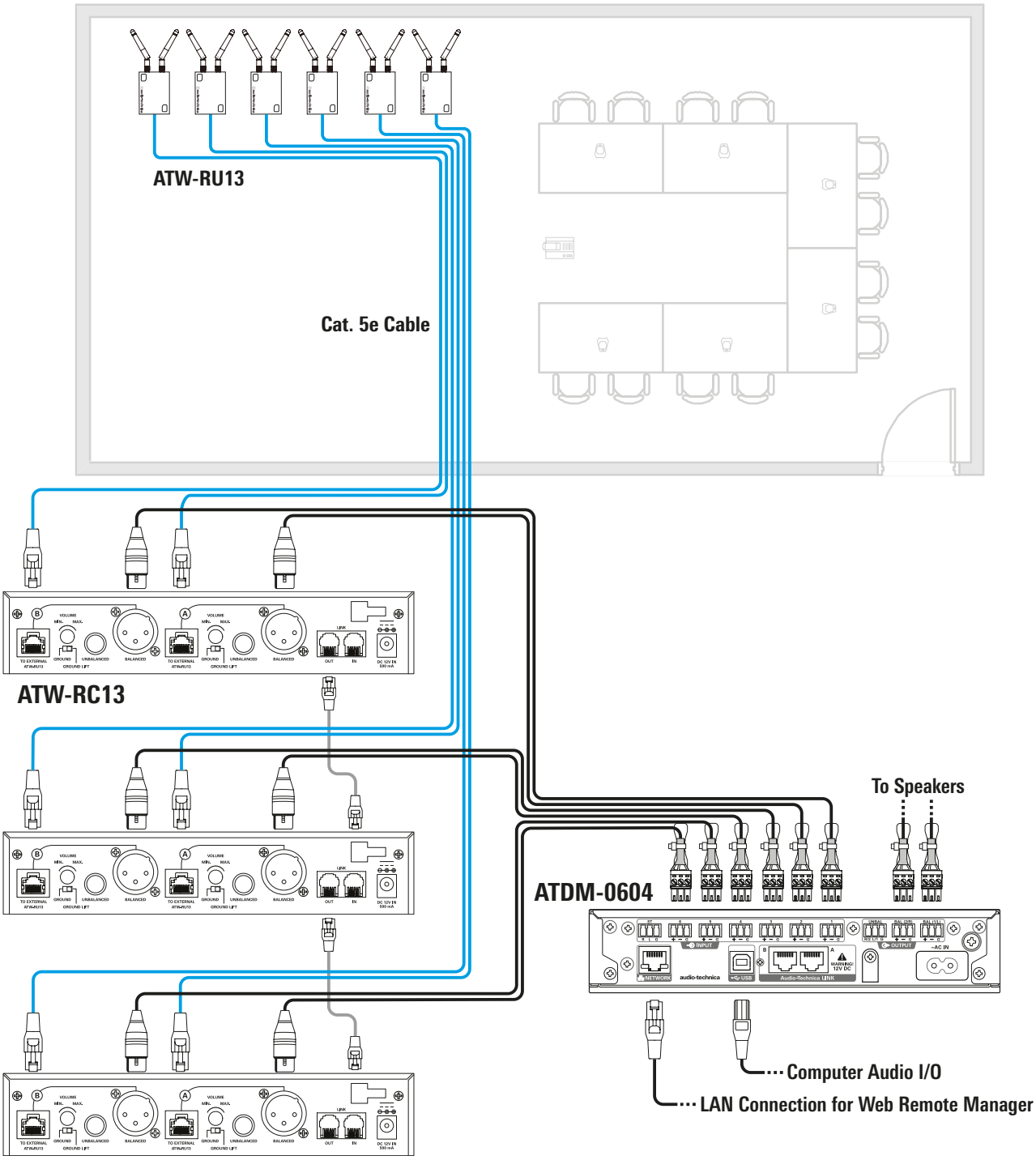
With System 10 Pro, the ATW-RU13 receiver unit can be removed and mounted remotely, connecting to the ATW-RC13 via standard ethernet cable. The ATW-RC13 can stay in the audio rack, whilst the ATW-RU13 can be mounted up to 100m away – on a wall, in the presenter podium, or hidden above the false ceiling in the room. The ATW-RU13 receiver unit is compact in size, and its included wall-mount housing can be painted in any colour to conceal it further.

Ensure to mount ATW-RU13 units as close as possible to the area where the wireless microphones will be used and aim to position any Wi-Fi access points at the opposite side of the room for maximum signal stability.

The compatible Audio-Technica wireless system for this solution is the System 10 Pro.

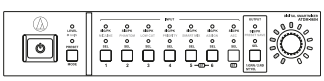
Product table

Quantity	Code	Description	Alternative
3	**ATW-R1320**	System 10 Pro Dual Channel Receiver	
6	**ATW-T1006**	System 10 Boundary Microphone Transmitter	ATW-T1001, ATW-T1002, ATW-T1007
1	**ATDM-0604**	Digital SmartMixer	

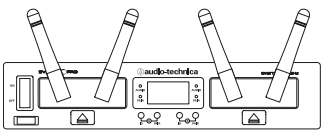


Equipment used

ATDM-0604

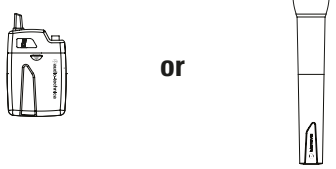


3 x ATW-R1320

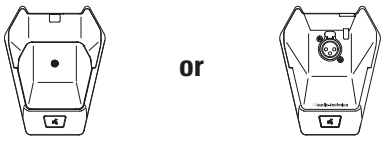


6x

ATW-T1001 or **ATW-T1002**



ATW-T1006 or **ATW-T1007**



16-channel wireless system using ATW-DA49a

Where more than four wireless systems are required, this solution may be the answer. Typical applications include larger live bands, music festivals featuring multiple acts, theatre productions, larger conferences, and in sports broadcast where wireless microphones are used to collect sounds of the event.

This solution begins with the 4-channel system from Application 4. In this scenario, up to four of the 4-channel racks are used and then they are linked together using one ATW-DA49a UHF Antenna Distribution System, achieving 16 channels of wireless audio.

Note: pay special attention to the "star" topology wiring of this example: the top ATW-DA49a feeds the antenna inputs of the following four ATW-DA49a. This means that each antenna signal is passing through no more than two antenna distribution units before reaching the receiver.

Also, that the ATW-DA49a's link output have not been used in this scenario. If only eight channels are required, it is acceptable to use the ATW-DA49a's link output to pass the signal along to a second ATW-DA49a – the eight receivers then connect via each distributor's antenna outputs. However, once more wireless systems are needed, it is best practice to implement the star topology given in this example to avoid unnecessary RF signal degradation.

This concept is easily scalable, making it ideal for rental companies, or businesses with flexible technical requirements. Several self-contained modules of four-channel systems can be used and then quickly combined using one additional ATW-DA49a, as and when required.

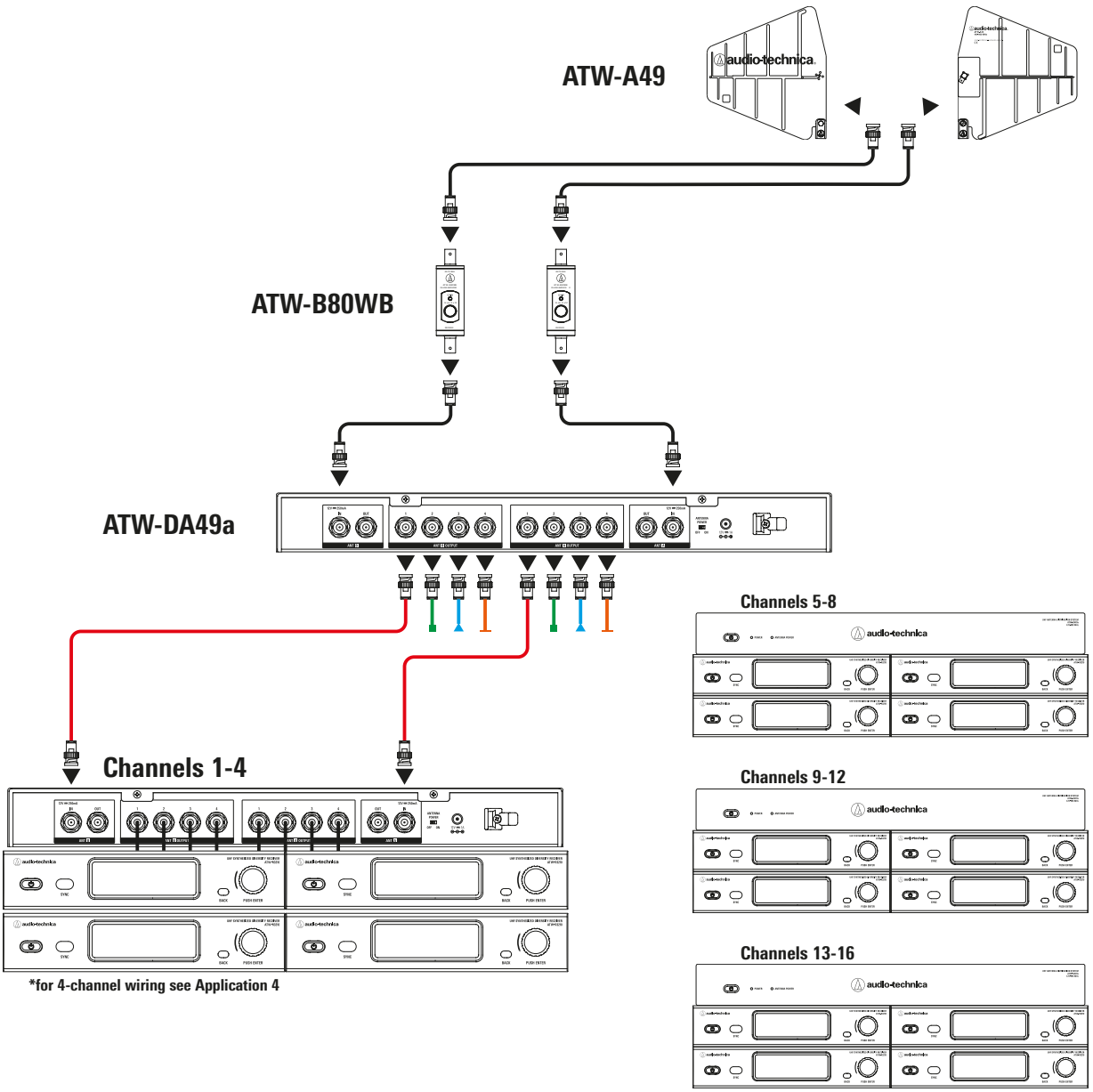
Refer to the notes in Application. 1 for advice on specifying cable length, active antennas and boosters in the cable run.

This application can be combined with Application 2 and relies on Application 4.

Compatible Audio-Technica wireless systems for this solution include the 2000 Series and 3000 Series.

Product table

Quantity	Code	Description	Alternative
16	**ATW-R3210N**	Frequency-Agile True Diversity UHF Wireless Receiver	ATW-R3210
16	**ATW-T3201**	3000 Series Beltpack Transmitter	ATW-T3202 Handheld Transmitter
5	**ATW-DA49a**	UHF Antenna Distribution System	
1	**ATW-A49**	Pair of UHF Wide-band Directional LPDA Antennas	ATW-A410P
1	**ATW-B80WB**	Pair of In-Line RF boosters 470-990MHz	
4	**AC25**	25'/7.6m RG8 Antenna Cable	AC12, AC50, AC100

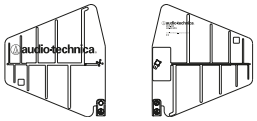


Equipment used

5 x ATW-DA49a

16 x ATW-R3210

ATW-A49



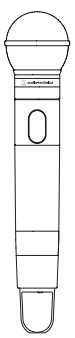
ATW-B80WB

ATW-T3201

16 x

ATW-T3202

or



16-channel wireless system using daisy chain

If you require significant UHF flexibility for touring or are simply in need of a reliable wireless system with exceptional audio quality, the 5000 Series is ideal. Here the 5000 Series is used to achieve a 16-way system. This type of setup is commonly found in music festivals, touring rigs, or in smaller installations for theatre, sports and conferencing.

This is an alternative option to Application 6, consider both systems to determine which better suits the requirements.

Based around the 5000 Series, the key to this solution is the powerful antenna distribution amplifier built into the ATW-R5220 Dual Receiver. As seen in the diagram, the ATW-A49 antennas connect directly to the receivers without the need to pass through any external distribution units. Each ATW-R5220 then passes the RF signal along to the next receiver in a daisy-chain configuration. With this, up to eight dual-channel receivers can be combined in a simple and efficient way, providing 16 channels of wireless audio.

Pay special attention to the cable run in the diagram. The first antenna signal has been connected to the first receiver, passing down to the eighth receiver; meanwhile, the second antenna signal starts at the eighth receiver and works upwards. This method affords a degree of redundancy, as should any one receiver lose power the remaining units will continue to receive RF signal from at least one antenna.

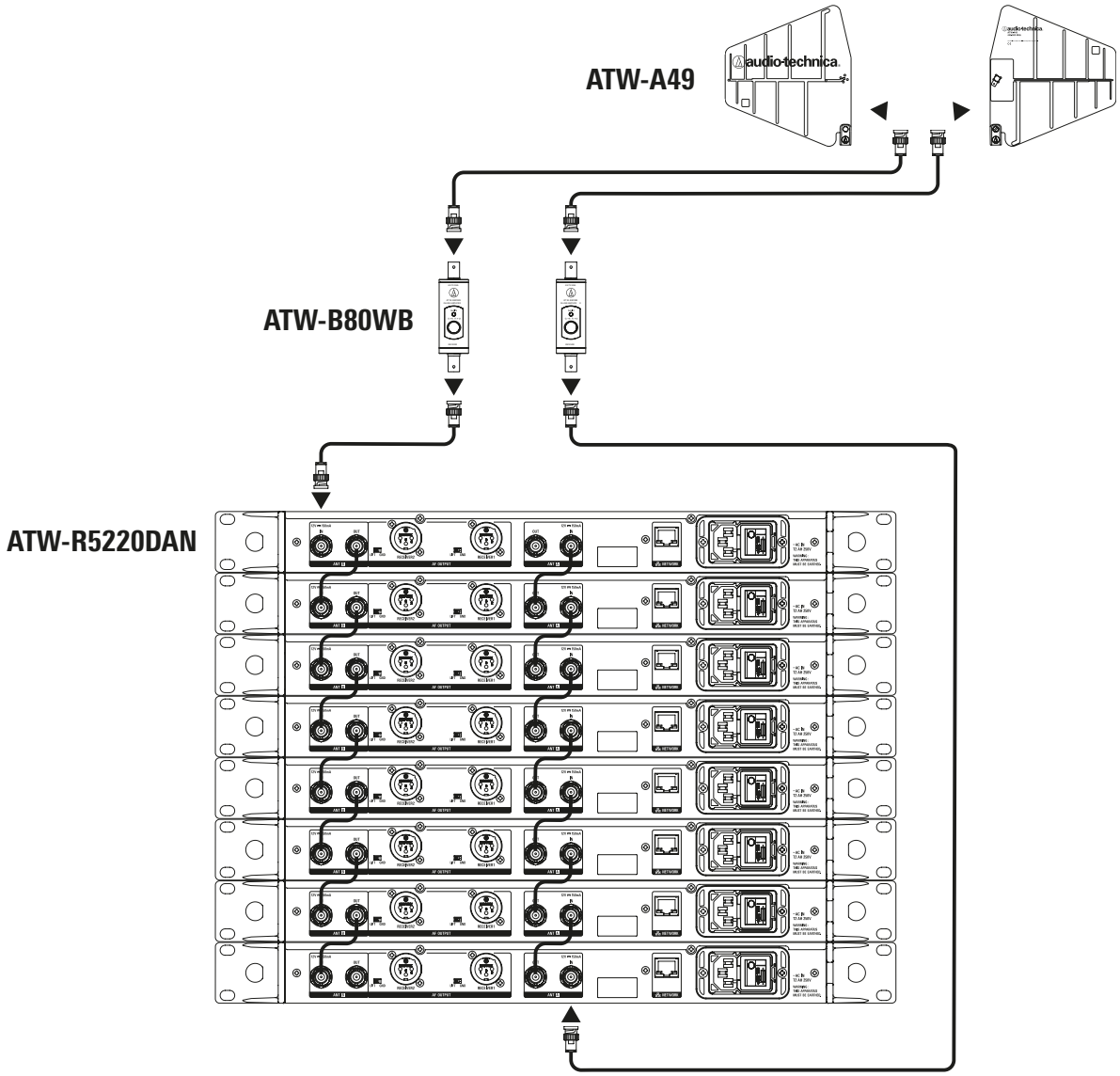
Refer to the notes in Application 1 for advice on specifying cable length, active antennas and boosters in the cable run.

This Application can be combined with Application 2 and is essential to Application 8.

The compatible Audio-Technica wireless system for this solution is the 5000 Series.

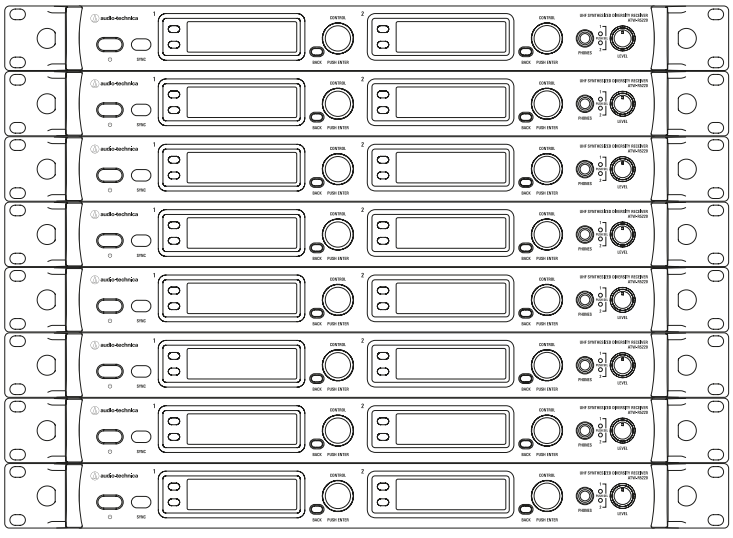
Product table

Quantity	Code	Description	Alternative
8	**ATW-R5220DAN**	5000 Series Dual Channel Receiver with Dante®	ATW-R5220
16	**ATW-T5201**	5000 Series Beltpack Transmitter	ATW-T5202 Handheld Transmitter
1	**ATW-A49**	Pair of UHF Wide-band Directional LPDA Antennas	
1	**ATW-B80WB**	Pair of In-Line RF boosters 470-990MHz	
4	**AC25**	25'/7.6m RG8 Antenna Cable	AC12, AC50, AC100

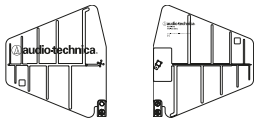


Equipment used

8 x ATW-R5220 / ATW-R5220DAN



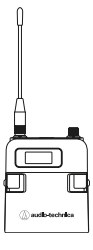
ATW-A49



ATW-B80WB

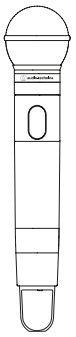
ATW-T5201

16 x



or

ATW-T5202



64-channel wireless system / 256-channel wireless system

This system is designed for large scale wireless audio projects, as found in theatre, opera, TV & sports broadcasting, music festivals or any application where high numbers of wireless systems are essential requirements.

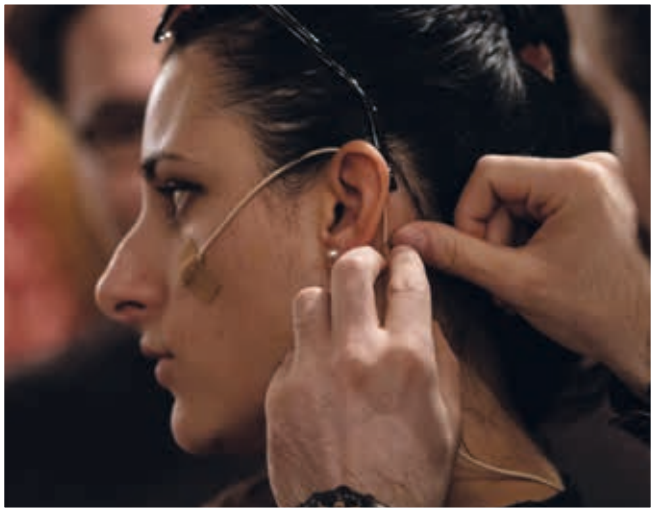
This solution begins with the 16-way system shown in Application 7. Having constructed racks of eight dual receivers, one ATW-DA49a UHF Antenna Distribution System can be added. This should be placed after the antennas and linked to up to four of the 16-way racks, allowing for 64 simultaneous wireless audio channels.

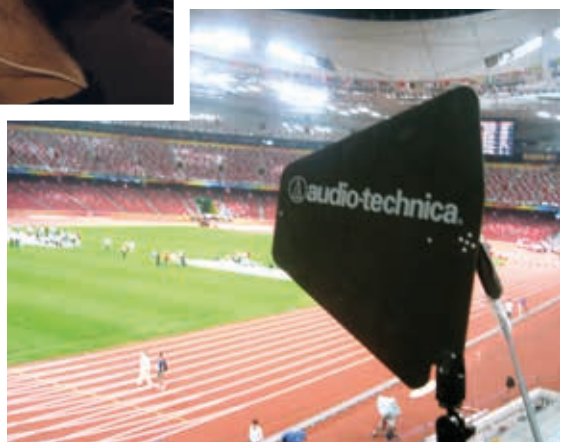
Is 64-channels the limit? If more than 64-channels are required, the system can be considered as one "module", and more can be added. Up to four 64-channel modules can then connect to one final ATW-DA49a, opening the possibility for a 256-channel wireless solution – all operating with just one pair of antennas.

Refer to the notes in Application 1 for advice on specifying cable length, active antennas and boosters in the cable run.

This Application can also combine with Application 2 and relies on Application 7.

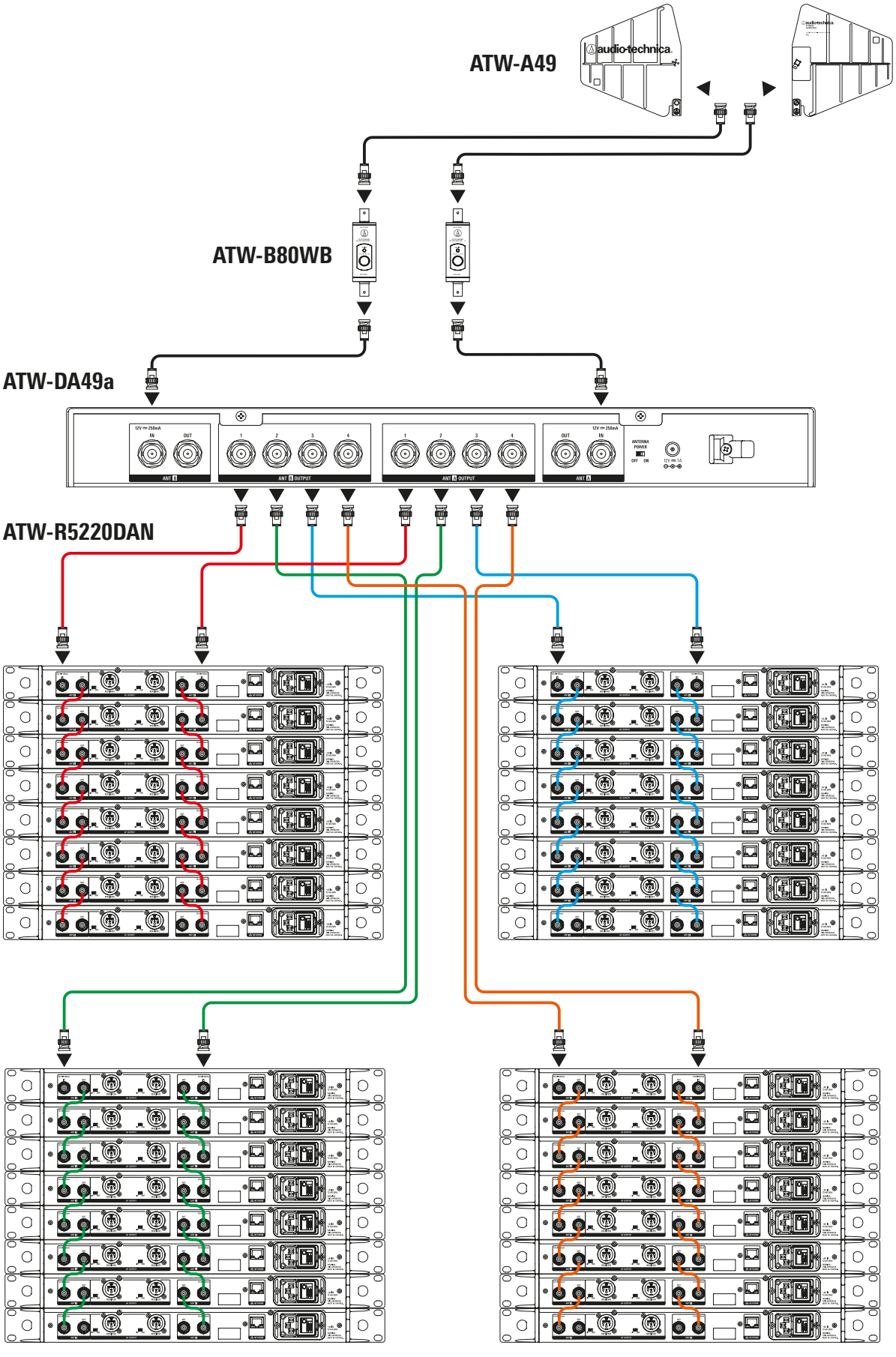
The compatible Audio-Technica wireless system for this solution is the 5000 Series.





Product table

Quantity	Code	Description	Alternative
32	**ATW-R5220DAN**	5000 Series Dual Channel Receiver with Dante®	ATW-R5220
64	**ATW-T5201**	5000 Series Beltpack Transmitter	ATW-T5202 Handheld Transmitter
1	**ATW-DA49a**	UHF Antenna Distribution System	
1	**ATW-A49**	Pair of UHF Wide-band Directional LPDA Antennas	
1	**ATW-B80WB**	Pair of In-Line RF boosters 470-990MHz	
4	**AC25**	25'/7.6m RG8 Antenna Cable	AC12, AC50, AC100


ATW-A49
ATW-B80WB
ATW-DA49a
ATW-R5220DAN

Frequency range		478	486	494	502	510	518	526	534	542	550	558	566	574	582	590	598	606	614	622	630	638	646	654	662	670	678	686	694	702	710	718	726	734	742	750	758	766	774	782	786	789	791	821	823	826	832	862	863	865
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		470	478	486	494	502	510	518	526	534	542	550	558	566	574	582	590	598	606	614	622	630	638	646	654	662	670	678	686	694	702	710	718	726	734	742	750	758	766	774	782	786	789	791	821	823	826	832	862	863
Country																																																		
Austria	AT	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	LP2c	L	-	-	P1
Belgium	BE	L	L	L	L	L	L	+	L	+	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P2d	+	-	-	P1
Bulgaria	BG	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-	-	-	+	+	-	-	P1
Croatia	HR	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-	-	-	P2a	+	-	-	P1
Cyprus	CY	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-	-	-	P2d	+	-	-	P1
Czech Republic	CZ	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	P12	-	-	-	P2a	+	-	-	P1
Denmark	DK	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	P1	-	-	-	P1	P1	-	-	P1
Estonia	EE	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	P12	-	-	-	P2d	+	-	-	P1
Finland	FI	-	+	-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	P1
France	FR	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P1	+	-	-	P1
Germany	DE	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	-	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	-	-	-	-	+	+	-	-	P1
Greece	GR	x2	x2	x2	x2	x2	x2	x2	x2	x2	x2	x2	x2	x2	x2	x2	x2	x2	x2	x2	x2	x2	x2	x2	x2	x2	x2	x2	x2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P2d	+	-	-	P1
Hungary	HU	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	P12	-	-	-	P2a	+	-	-	P1
Ireland	IE	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	-	-	-	-	LP2c	L	-	-	P1
Italy	IT	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	P12	-	-	-	+	+	-	-	P1
Latvia	LV	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	-	-	-	-	L	L	-	-	P1
Lithuania	LT	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	-	-	-	-	LP2a	L	-	-	P1
Luxembourg	LU	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	L	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-	-	-	P2d	+	-	-	P1
Malta	MT	x3	x3	x3	x3	x3	x3	x3	x3	x3	x3	x3	x3	x3	x3	x3	x3	x3	x3	x3	x3	x3	x3	x3	x3	x3	x3	x3	x3	x3	x3	x3	x3	x3	x3	x3	x3	x3	x3	x3	-	-	-	-	x3	x3	-	-	P1
Netherlands	NL	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	L	+	+	+	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	P1
Poland	PL	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	P12	-	-	-		+	-	-	P1
Portugal	PT	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	-	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	-	-	-	-	+	+	-	-	P1
Romania	RO	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-	-	-	P2a	+	-	-	P1
Slovakia	SK	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-	-	-	P2a	+	-	-	P1
Slovenia	SI	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	P12	-	-	-	P2a	+	-	-	P1
Spain	ES	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-	-	-	+	+	-	-	inP1
Sweden	SE	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P1a	P1a	-	-	P1
United Kingdom	GB	LP1a	LP1a	LP1a	LP1a	LP1a	LP1a	LP1a	LP1a	LP1a	LP1a	LP1a	LP1a	LP1a	LP1a	LP1a	LP1a	LP1a	LP1a	LP1a	LP1a	LP1a	LP1a	LP1a	LP1a	LP1a	LP1a	LP1a	LP1a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	LP1a	LP1a	-	-	P1
Iceland	IS	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	P1
Norway	NO	-	-	-	-	-	x1	x1	x1	x1	x1	x1	x1	x1	x1	x1	x1	x1	x1	x1	x1	x1	x1	x1	x1	x1	x1	x1	x1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	P1
Liechtenstein	LI	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P12	+	-	-	P1
Switzerland	CH	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P12	+	-	-	P1

01.01.2020

Please check local regulations for the latest information about usage of wireless microphones, Моля проверете местните разпоредби за последната актуална информация относно използването на безжични микрофони., Za najnovije informacije o korištenju bežičnih mikrofona provjerite lokalne propise, Zkontroluj místní nařízení týkající se nejnovějších informací o použití bezdrátových mikrofonů, prosím, Undersøg venligst lokale regulativer for nyeste information omkring brug af trådløse mikrofoner., Palun kontrollige kohalikke tingimusi uusima informatsiooni saamiseks raadiomikrofonide kasutamise kohta, Tarkista aina paikallisista määräyksistä uusimmat tiedot langattomien mikrofonien käytöstä., Merci de consulter les dernières informations sur l'usage des microphones sans fil dans votre région., Bitte überprüfen Sie vor dem Einschalten die aktuellen Richtlinien zur Nutzung von Funkmikrofonen., Παρακαλώ οπως συμβουλευτειτε την τοπική αρχή διαχείρισης (η τους εκαστοτε κανονισμούς) οσον αφορά την τελευταία πληροφόρηση για την χρήση των ασυρμάτων μικροφώνων, Kérjük tájékozódjon a rádiómikrofonok használatára vonatkozó legfrissebb helyi rendelkezésekről, Seiceáil le do thoil rialáil áitiúil don eolas is déanaí faoi úsáid na micreafóin gan sreang, Controllate i regolamenti locali per le informazioni aggiornate sull'uso dei radiomicrofoni., Lūdzu pārbaudiet vietējos noteikumus par jaunako informāciju sakarā ar radio mikrofonu izmantošanu, Prašome pasitikrinti vietinius teisės aktus dėl naujausios informacijos apie belaidžių mikrofonų naudojimą., Jekk joghgbok iccekkja r-regolamenti lokali dwar l-ahhar informazjoni fuq l-uzu ta' "wireless microphones", Raadpleeg, alstublieft, de meest actuele lokale informatie over het gebruik van draadloze microfoons., Proszę o sprawdzenie najnowszych informacji dotyczących lokalnych przepisów użytkowania mikrofonów bezprzewodowych, Por gentileza, consulte a regulamentação local para obter as informações mais recentes sobre o uso de microfones sem fio, Vă rugăm să verificați reglementările în vigoare din zona dumneavoastră pentru a fi la curent cu cele mai recente informații cu privire la folosirea microfoanelor wireless, Skontrolujte prosím miestne nariadenie týkajúce sa najnovších informácií o použitie bezdrotových mikrofónov., Za najnovejše informacije o uporabi brezžičnih mikrofonov preverite lokalne uredbe , Consulte su normativa local para obtener la información más reciente sobre el uso de micrófonos inalámbricos., Vänligen kontrollera lokala föreskrifter för den senaste informationen om användning av trådlösa mikrofoner, Vinsamlegast kynnið ykkur nýjustu reglur um notkun þráðlausra hljóðnema, Vær vennlig å sjekke lokalt regelverk for informasjon om bruk av trådløse mikrofoner.

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in	Indoor only, Само за вътрешно използване, Samo u zatvorenom prostoru, Pouze pro indoor, Kun indendørs, Ainult siseruumides, Vain sisäkäyttöön , Intérieur uniquement, Nur in geschlossenen Räumen, Χρήση ΜΟΝΟ σε Εσωτερικούς Χώρους, Csak beltérben, Dhíon ach, Solo uso al chiuso, Tikai iekštelpās, Naudojimui tik patalpoje, Gewwa biss, Alleen in gesloten ruimte, tylko w pomieszczeniach, Somente uso interior, Doar pentru interior, Iba pre indoor, Samo v zaprtem prostoru, Sólo en interiores, Endast inomhus, Aðeins innandyra notkun, Kun innendørs
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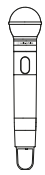
	P1	P1a	P1b	P12	P2	P2a	P2b	P2c	P2d
	Power limit, Лимит на мощността, Granice snage, Max. výstupní výkon, Sendestyrke maksimalt, Võimsuse limiit, Lähetystehorajoitus, Puissance limitée à, Max. Sendeleistung, Επιτρεπτό Οριο ισχύος μεχρι, Teljesítmény korlát, Teorainn power, Limite di potenza , Jaudas robežvērtība, Galios apribojimas, Sahha limitata sa, Maximaal zendvermogen, limit mocy , Limite de potência , Limita puterii, Max. výstupný výkon, Jakostna omejitev, Potencia limitada a, MAX, Afl takmörkun , Maksimalt tillatt utstrålt effekt								
	10 mW ERP	10 mW ERP	10 mW EIRP	12 mW ERP	20 mW ERP	20 mW ERP	20 mW EIRP	20 mW ERP	20 mW EIRP
		50 mW ERP	50 mW EIRP			50 mW ERP	50 mW EIRP	100 mW ERP	100 mW EIRP

x1	NO	Vær vennlig å sjekke på http://www.finnsenderen.no/traadlos hvilke frekvenser som kan benyttes i ditt område. Please check on http://www.finnsenderen.no/traadlos which frequencies can be used in your area.
x2	GR	Εξαίρεση για μεμονωμένη/ανεξάρτητη άδεια χρήσης, και για συσκευές ισχύος εκπομπής μεχρι 10 mW. Εξαίρεση για μεμονωμένη/ανεξάρτητη άδεια χρήσης, και για συσκευές ισχύος εκπομπής μεγαλύτερης απο 10 mW Exemption for individual licensing for devices with power of up to 10mW. Individual licensing required for devices with power over 10mW.
x3	MT	Jekk joghgbok iccekkja r-regolamenti lokali dwar l-ahhar informazjoni fuq l-uzu ta' "wireless microphones" Please check local regulations for the latest information about usage of wireless microphones.

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L00096ENG - V1.0