

7000 Series Professional UHF Wireless Systems

ATW-7373 Handheld Condenser Microphone System

ATW-7375 UniPak™ Transmitter System

ATW-7376 Handheld Dynamic Microphone System

Installation and Operation



audio·technica®

Professional UHF Wireless Systems

Installation and Operation

This device complies with part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference.

This device complies with INDUSTRY CANADA R.S.S. 210, en conformité avec IC: RSS-210/CNR210. Operation is subject to the following conditions: 1) This device may not cause harmful interference and 2) this device must accept any interference received, including interference which may cause undesired operation.

Individuals with implanted cardiac pacemakers or AICD devices: Please see notice on back cover.

CAUTION! The circuits inside the receiver and transmitter have been precisely adjusted for optimum performance and compliance with federal regulations. Do not attempt to open the receiver or transmitter. To do so will void the warranty, and may cause improper operation.

Introduction

Thank you for choosing an Audio-Technica professional wireless system. You have joined thousands of other satisfied customers who have chosen our products because of their quality, performance and reliability. This Audio-Technica wireless microphone system is the successful result of years of design and manufacturing experience.

This professional wireless system provides a choice of 100 PLL-synthesized UHF frequencies. Each system includes a receiver and either a body-pack or handheld transmitter.

The receiver features true diversity reception. Two antennas feed two completely independent RF sections on the same frequency; automatic logic circuitry continuously compares and selects the superior received signal, providing better sound quality and reducing the possibility of interference and dropouts. The receiver is half-width for a standard 19" (1U) rack mount. Two receivers (on different frequencies) can be mounted side by side, using an AT8628 joining plate kit.

The versatile ATW-T75 UniPak™ body-pack transmitter has both low- and high-impedance inputs plus a bias connection, for use with dynamic and electret condenser microphones, as well as Hi-Z instrument pickups. The ATW-T73 handheld condenser microphone/transmitter features the same element as the legendary AT4033 studio condenser microphone. The ATW-T76 handheld dynamic microphone/transmitter features a Hi-ENERGY® neodymium dynamic element. The UniPak and handheld transmitters use internal 9-volt batteries and have Off/Standby/On switches and battery condition indicators.

Please note that in multiple-system applications there must be a transmitter-receiver combination set to a **separate** frequency for each input desired (only one transmitter for each receiver). Because some of the wireless frequencies are in or near UHF TV frequencies, only certain wireless frequencies are useable in a particular geographic area. Also, only certain of the available operating frequencies may be used together. (Suggestions for multiple-system frequency grouping will be found on page 7.)



Warning: To prevent fire or shock hazard, do not expose this appliance to rain or moisture.
Attention: Pour prévenir feu ou choc électrique, ne pas exposer l'appareil à la pluie ou à l'humidité.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

AVIS
RISQUE DE CHOC ÉLECTRIQUE
NE PAS OUVRIR



To prevent electric shock, do not remove the cover. There are no user-serviceable parts inside. Internal adjustments are for qualified professionals only. Refer all servicing to qualified service personnel.



Pour prévenir un choc électrique, ne pas ouvrir le couvercle. Il n'y a aucune pièces de rechanges à l'intérieur. Tout ajustement interne doit être fait par une personne qualifiée seulement. Référez tout réparation au personnel qualifié.

Receiver Installation

Location

For best operation the receiver should be at least 3 ft. above the ground and at least 3 ft. away from a wall or metal surface to minimize reflections. The transmitter should be at least 3 ft. from the receiver, as shown in Figure A.

Keep antennas away from noise sources such as digital equipment, motors, automobiles and neon lights, as well as large metal objects.

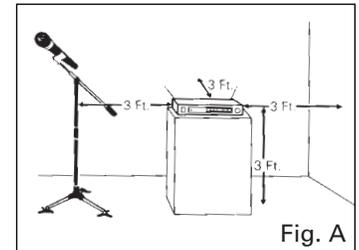


Fig. A

Output Connections

There are two audio outputs on the back of the receiver: balanced (15.8 mV) and unbalanced (50 mV). Use shielded audio cable for the connection between the receiver and the mixer. If the input of the mixer is a 1/4" jack, connect a cable from the 1/4" unbalanced audio output on the back of the receiver to the mixer. If the input of the mixer is an XLR-type input, connect a cable from the balanced XLR-type audio output on the back of the receiver to the mixer.

The two isolated audio outputs permit simultaneous feeds to both unbalanced and balanced inputs. For example, both a guitar amp and a mixer can be driven by the receiver.

Antennas

Attach the antennas to the antenna input jacks. The antennas are normally positioned in the shape of a "V" (45° from vertical) for best reception.

Power Connections

Connect to a standard 120 volt 60 Hz AC power outlet. If there is no AC power available, the back panel is equipped with a jack for an external 12-18 volt DC source. The jack takes a standard 2.5 mm I.D. coaxial DC power plug, center **negative**. Power from the DC input jack is switched by the front-panel Power switch.

Receiver Controls And Functions

Fig. B Receiver Front Panel

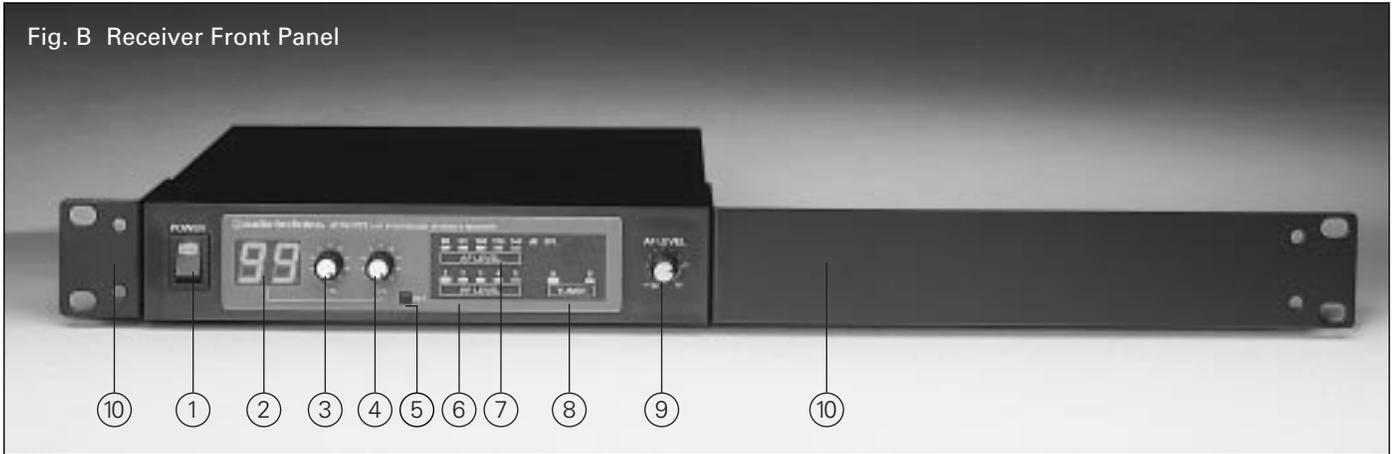


Fig. C Receiver Rear Panel



Front Panel Controls and Functions (Fig. B)

- ① POWER SWITCH/INDICATOR: Press switch on, and the "power" indicator will light.
- ② CHANNEL NUMBER DISPLAY: Indicates the current channel setting.
- ③ X10 CHANNEL SELECTOR SWITCH: Selects the number shown in the left column of the Channel Number Display.
- ④ X1 CHANNEL SELECTOR SWITCH: Selects the number shown in the right column of the Channel Number Display.
- ⑤ CHANNEL SET BUTTON: Press this button to input the channel shown in the Channel Number Display.
- ⑥ RF SIGNAL LEVEL INDICATOR: Indicates the strength of the RF signal received from the transmitter. The LEDs will light up from left to right.
- ⑦ AF LEVEL INDICATOR: Indicates the audio modulation level of the received signal. (Not affected by the setting of the AF Level control.)
- ⑧ TUNER OPERATION INDICATOR: Indicates which tuner has the better reception and is in operation.
- ⑨ AF LEVEL CONTROL: Adjusts the level at both audio output jacks.
- ⑩ MOUNTING ADAPTERS: For mounting the receiver in any standard 19" rack. Attach to receiver with screws supplied. (Use optional AT8628 joining plate kit to mount two receivers side-by-side.)

Rear Panel Controls and Functions (Fig. C)

- ⑪ TUNER "B" ANTENNA JACK: Antenna connector for tuner "B." Attach the antenna directly, or extend it with an antenna cable.
- ⑫ SQUELCH CONTROL: Adjusts level of noise-muting circuit (preset at factory but can be adjusted as circumstances warrant).
- ⑬ BALANCED AUDIO OUTPUT JACK: XLRM-type connector. A standard 2-conductor shielded cable can be used to connect the receiver output to a balanced microphone level input on a mixer.
- ⑭ GROUND LIFT SWITCH: Disconnects the ground pin of the balanced output (13) from ground. Normally, the switch should be to the left (ground connected). If hum caused by a ground loop occurs, slide switch to the right.
- ⑮ UNBALANCED AUDIO OUTPUT JACK: ¼" phone jack. Can be connected to an unbalanced aux-level input of a mixer or tape recorder.
- ⑯ DC POWER INPUT: For an external 12-18V DC source (requires 350 mA). Center pin of jack is *negative*.
- ⑰ AC POWER: Power cord for 120V AC power input.
- ⑱ TUNER "A" ANTENNA JACK: Antenna connector for tuner "A." Attach the antenna directly, or extend it with an antenna cable.

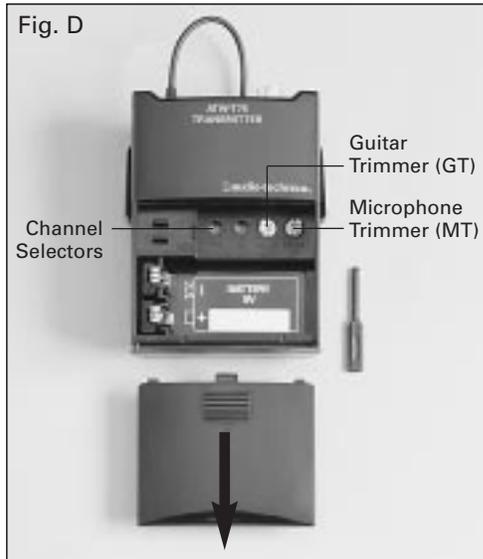
Transmitter Setup

Battery Selection

An alkaline 9-volt battery is recommended.

UniPak™ Transmitter Battery Installation

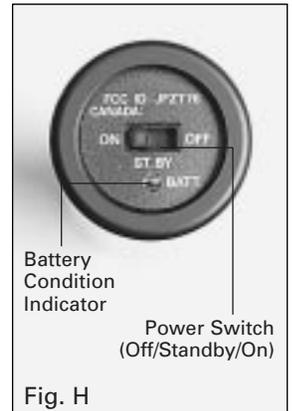
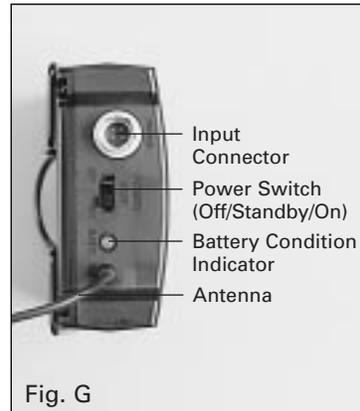
1. Slide off the battery cover as shown in Figure D.
2. Carefully insert a fresh 9V alkaline battery, observing correct polarity as marked inside the battery compartment. The transmitter housing is designed to prevent incorrect installation of the battery. **Do not force the battery in.**
3. Replace the battery cover.



Battery Condition Indicator

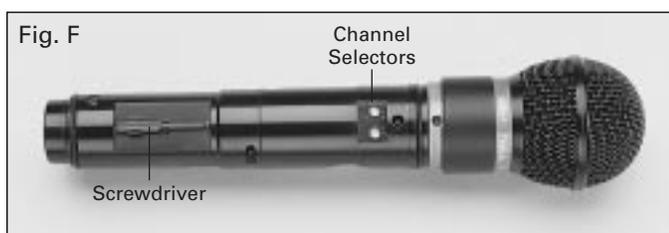
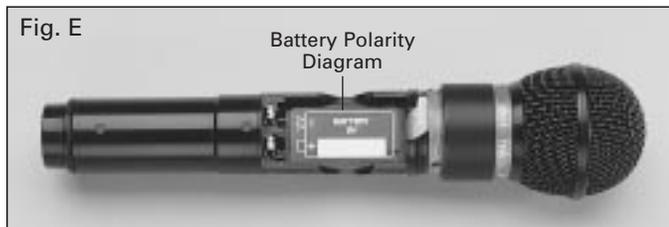
After the battery is installed, turn the power on. The battery condition indicator LED (Fig. G/H) should flash momentarily. If it does not, the battery is installed incorrectly or it is dead.

If the indicator LED **stays** on (does not flash), the battery voltage is low and the battery should be replaced. If this happens during use, replace the battery immediately to ensure continued operation.



Handheld Transmitter Battery Installation

1. While holding the upper part of the transmitter body just below the ball-screen, unscrew the lower body cover and slide it downward to expose the battery compartment.
2. Lift the white "battery keeper" arm, and insert a 9V alkaline battery. Be certain to observe correct polarity as marked inside the battery compartment (Fig. E). The transmitter housing is designed to prevent incorrect installation of the battery. **Do not force the battery in.**
3. Replace the lower body cover. **Do not overtighten.**



UniPak Transmitter Input Connection

Connect an audio input device (microphone or guitar cable) to the audio input connector on the bottom of the transmitter. A number of Audio-Technica professional microphones and cables are available separately, pre-terminated with a UniPak input connector (see "Optional System Accessories" on page 6).

UniPak Transmitter Antenna

The UniPak transmitter includes a permanently-attached flexible antenna. For best results, allow the antenna to hang freely and full length from the bottom of the transmitter. If the received signal is marginal, experiment with different transmitter positions on your body or instrument; or try repositioning the receiver. **Do not attempt to remove, replace or change the length of the transmitting antenna.**

ATW-T73 Handheld Transmitter Pad

The ATW-T73 offers a pad switch which increases the maximum SPL capability of the microphone by 6 dB. The switch is located under the wire-mesh grille near the base of the element.

Handheld Transmitter Switch Cover

The handheld systems include two switch cover labels that fit into the grooved recess on the bottom of the transmitter's lower body cover. The switch cover label may be used to limit access to the power switch, or to hide the switch and battery condition indicator from view.

System Operation

Turn down the AF Level of the receiver as well as the mixer. Switch on the receiver. Do *not* switch on the transmitter yet.

Receiver On...

The power indicator will light up and one of the tuner operation indicator LEDs (A or B) will light, even though the transmitter is not on. If any of the RF LEDs light up at this point, there may be RF interference in the area. If this occurs, select another frequency using the front-panel channel selectors. The channel display numbers will begin to flash alternately while changing channels. Once the desired numbers are displayed, press the "Set" button to engage the channel.

Transmitter On...

Before turning on the transmitter, use the provided screwdriver to set the transmitter channel selector switches (Fig. D/F) to the same numbers as those displayed on the receiver. The transmitter channel selector switch marked "X10" corresponds to the receiver's left-column channel display number, and the selector switch marked "X1" corresponds to the receiver's right-column channel display number. Always turn the transmitter off when changing frequencies.

When the transmitter is switched on and in normal operation, the receiver's RF signal level indicators will light up from left to right. For optimum performance at least four, and preferably five, of the signal strength indicators should light up when the transmitter is switched on. The transmitters have a three-position power switch. When the switch is set to "Standby," the transmitter produces RF with no audio signal. When the switch is "On," the transmitter produces both RF and audio.

Setting Levels

Correct adjustment of transmitter audio input, receiver audio output, and mixer/amplifier input and output levels is important for optimum system performance.

• ATW-T73 and ATW-T76 Handheld Transmitters

The 7000 Series handheld transmitters have factory pre-set audio input levels.

1. Set the receiver's AF Level control to "0."
2. Turn the transmitter on and power up the system.
3. Turn down the mixer's input trim control (if provided) on the selected channel; make an initial adjustment of the mixer channel and output level controls that will allow audio through the system.
4. While speaking/singing into the microphone at typically-loud levels, adjust the mixer's input trim control so the highest sound pressure level going into the microphone causes no input overload in the mixer, and yet permits the mixer's level controls to operate in their "normal" range (not set too high or too low).
NOTE: With the receiver's AF Level set at "0," its balanced output voltage will be similar to that of a typical wired microphone. However, the AF Level may need to be adjusted to accommodate some microphone inputs.

• ATW-T75 UniPak Transmitter

Trimmer adjustments in the UniPak transmitter (Fig. D) will enable you to use microphones or instruments with different output levels.

1. Set both the transmitter Mic Level (MT) and Guitar Level (GT) controls to their full counter-clockwise position (minimum). (The level control not being used should be set to minimum.)
2. Set the receiver's AF Level control to "0."
3. Plug the mic or instrument into the transmitter and power up the system.
4. *For MIC:* Make an initial adjustment of the mixer's level controls that will allow audio through the system as you increase the transmitter's Mic Level.

For INSTRUMENT: Make an initial adjustment of the instrument amplifier input level control that will allow audio through the system as you increase the transmitter's Guitar Level.

5. *For MIC:* While speaking/singing into the microphone at typically-loud levels, turn up the transmitter's Mic Level (MT) control until the maximum audio output of the mic lights about three or four green LED segments on the receiver's AF Level indicator.

For INSTRUMENT: While playing the instrument at typically-loud levels, turn up the transmitter's Guitar Level (GT) control until the maximum audio output of the instrument lights about three or four green LED segments on the receiver's AF Level indicator.

NOTE: Do not set the transmitter level too high (as indicated by lighting of the red LED) – doing so will cause the system to overload and distort.

6. *For MIC:* Next, while again speaking/singing into the microphone at typically-loud levels, adjust the mixer's input trim control so the highest sound pressure level going into the microphone causes no input overload in the mixer, and yet permits the mixer's channel and output level controls to operate in their "normal" range (not set too high or too low).

NOTE: With the receiver's AF Level control set at "0," the balanced output voltage will be similar to that of a typical wired microphone. However, the AF Level control may be adjusted to accommodate some microphone inputs – for example, those with limited-range or no input trim controls.

For INSTRUMENT: Next, while again playing the instrument at typically-loud levels, adjust the receiver's AF Level control so the highest signal level causes no input overload in the instrument amplifier, and yet permits the amplifier's input level controls to operate in their "normal" range (not set too high or too low).

NOTE: With some instrument amplifiers, the receiver's AF Level control may need to be adjusted to between "0" and "+6" to better drive the amplifier.

CAUTION! The small trimmer controls are *delicate*; use only a small screwdriver or alignment tool with a maximum $\frac{3}{32}$ "-wide blade. Do *not* force the trimmers beyond their normal 260° range of rotation.

Receiver Squelch

The squelch control on the back panel of the receiver is preset at the factory, but can be adjusted if you must use the system in an area with considerable RF interference. If there is interference in the audio, and changing the channel is not an option, adjust the squelch control so the system will receive the signal from *your* transmitter but will "squelch" or eliminate the unwanted background RF noise. This adjustment can cause a reduction in useable range of the wireless transmitter, so set the control to the *lowest* position that reliably mutes the unwanted RF signals.

RF Interference

Please note that wireless frequencies are shared with other radio services. According to Federal Communications Commission regulations, "Wireless microphone operations are unprotected from interference from other licensed operations in the band. If any interference is received by any Government or non-Government operation, the wireless microphone must cease operation..."

If you need assistance with operation or frequency selection, please contact your dealer or the Audio-Technica professional division. Extensive wireless information also is available on the Audio-Technica Web site at www.audio-technica.com.

Specifications†

OVERALL SYSTEM

Operating Frequency	UHF band, 728.125 to 740.500 MHz
Number of Channels	100 total
Frequency Stability	±0.005%, Phase Lock Loop frequency control
Modulation Mode	FM
Normal Deviation	±10 kHz
Operating Range	300' typical
Operating Temperature Range	41° F (5° C) to 113° F (45° C)
Frequency Response	100 Hz to 15 kHz

RECEIVER

Receiving System	Dual independent receivers, automatic switching diversity
Image Rejection	50 dB nominal, 45 dB minimum
Signal-to-noise Ratio	110 dB at 30 kHz deviation (IEC-weighted), maximum modulation 75 kHz
Total Harmonic Distortion	≤1% (10 kHz deviation at 1 kHz)
Sensitivity	26 dBµV (S/N 60 dB at 5 kHz deviation, IEC-weighted)
Intermediate Frequency	45 MHz, 10.7 MHz
Audio Output (AF Level set at "0")	
Unbalanced:	50 mV (at 1 kHz, ±5 kHz deviation, 10k ohm load)
Balanced:	15.8 mV (at 1 kHz, ±5 kHz deviation, 10k ohm load)
Output Connectors	Unbalanced: 1/4" phone jack Balanced: XLRM-type
Power Supply	120V AC 60 Hz; or 12-18V DC, 350 mA, with external supply
Dimensions	8.27" (210.0 mm) W x 1.93" (49.0 mm) H x 8.86" (225.0 mm) D
Weight	3.9 lbs (1.8 kgs)
Accessories Included	Two flexible UHF antennas, rack-mount adapters

UNIPAK™ TRANSMITTER

RF Power Output	50 mW Max
Spurious Emissions	Under federal regulations
Input Connections	High impedance, low impedance, bias
Battery	9V (NEDA type 1604) alkaline, not included
Current Consumption	50 mA typical
Battery Life	Approximately 8-10 hours (depending on battery type and use pattern)
Dimensions	2.44" (62.0 mm) W x 3.35" (85.0 mm) H x 1.02" (26.0 mm) D
Net Weight (without battery)	2.8 oz (80 grams)

HANDHELD TRANSMITTERS

RF Power Output	50 mW Max
Spurious Emissions	Under federal regulations
Microphone Element	
ATW-T73	A-T condenser, unidirectional
ATW-T76	A-T Hi-ENERGY® dynamic, unidirectional
Battery	9V (NEDA type 1604) alkaline, not included
Current Consumption	
ATW-T73	55 mA typical
ATW-T76	50 mA typical
Battery Life	Approximately 8 hours (depending on battery type and use pattern)
Dimensions	
ATW-T73	9.63" (244.5 mm) long
ATW-T76	9.17" (233.0 mm) long
Both	1.49" (37.9 mm) body diameter
Net Weight (without battery)	
ATW-T73	12.2 oz (345 grams)
ATW-T76	8.5 oz (240 grams)
Accessories Included	Stand clamp, switch cover labels

Optional System Accessories

MICROPHONES AND CABLES

AT829cW	AT829 miniature cardioid condenser microphone only, terminated for use with UniPak transmitter. Includes clothing clip and windscreen.
MT830cW	MT830R subminiature omnidirectional condenser microphone only, terminated for use with UniPak transmitter. Includes clothing clip and windscreen.
MT830cW-TH	"Theater" model, same as MT830cW except beige color mic and cable for concealment.
AT831cW	AT831b miniature cardioid condenser microphone only, terminated for use with UniPak transmitter. Includes clothing clip and windscreen.
AT851cW	AT851a surface-mount wide-range hemi-cardioid condenser microphone only, terminated for use with UniPak transmitter.
AT857AMLcW	AT857AMLa 19" gooseneck cardioid condenser microphone only, terminated for use with UniPak transmitter. Mounts to 5/8"-27 thread. Includes windscreen.
AT889cW	Headworn noise-canceling condenser microphone only, terminated for use with UniPak transmitter. Includes windscreen and cable clip.
ATM35cW	ATM35 high-intensity miniature cardioid condenser microphone only, terminated for use with UniPak transmitter. Includes AT8418 clip-on instrument mount.
ATM73cW	ATM73a headworn cardioid condenser microphone only, terminated for use with UniPak transmitter.
ATM75cW	ATM75 headworn cardioid condenser microphone only, terminated for use with UniPak transmitter. Includes windscreens and cable clip.
PRO 8HEcW	PRO 8HEX headworn hypercardioid dynamic microphone, terminated for use with UniPak transmitter. Includes windscreen and cable clip.
PRO 35xcW	PRO 35x cardioid condenser microphone only, terminated for use with UniPak transmitter. Includes AT8418 clip-on instrument mount.
AT-GCW	Hi-Z instrument/guitar cable with 1/4" phone plug, terminated for use with UniPak transmitter.
XLRW	Connecting cable for UniPak transmitter with an XLRF-type input connector, for Lo-Z microphones with XLRM-type output terminations.

TRANSMITTER ACCESSORIES

ATW-VP10	Vinyl pouch with belt clip to hold UniPak transmitter.
AT8114	Foam windscreen for handheld transmitter.
AT8141	Water-resistant pouch for UniPak transmitter.
AT8456	Stand clamp for handheld transmitter, 5/8"-27 threads.
AT8431	Stand clamp for handheld transmitter, 5/8"-27 threads.

RECEIVER ACCESSORIES

AT8628	Mounting plate adapter allows rack-mounting two ATW-R73 receivers side-by-side in a single 19" rack space.
ATW-A20	Pair of UHF ground-plane antennas with 5/8"-27 thread for mounting to microphone stands, etc. Takes RF cables with BNC connectors, not included.
ATW-D70	UHF (728-750 MHz) active unity-gain antenna distribution system provides two "1-in, 4-out" RF channels; connects a pair of antennas to as many as four diversity receivers. Includes four DC interconnect cables to power up to four receivers, eight RF output cables and two rack-mount adapters. Mounts in a single 19" rack space. Requires ATW-RDCP cables for use with ATW-R73 receivers (available separately).
ATW-RA1	Rack-mount antenna kit brings antenna inputs to the front of receiver for ease of setup, or when receiver is enclosed in a metal rack. Includes a pair of extendible antennas. NOTE: Two adapter kits are required when mounting two receivers side-by-side in a single 19" rack space.
ATW-RDCP	Polarity-inverting DC interconnect cables (set of four) for use in conjunction with ATW-R73 (or like-powered) receivers.

† In the interest of standards development, A.T.U.S. offers full details on its test methods to other industry professionals on request.

Audio-Technica 7000 Series UHF Wireless Operating Frequencies

7000 Series Frequency and Channel Designator List

Designator	Frequency (MHz)	TV Channel	Designator	Frequency (MHz)	TV Channel
00	728.125	57	50	734.375	58
01	728.250	57	51	734.500	58
02	728.375	57	52	734.625	58
03	728.500	57	53	734.750	58
04	728.625	57	54	734.875	58
05	728.750	57	55	735.000	58
06	728.875	57	56	735.125	58
07	729.000	57	57	735.250	58
08	729.125	57	58	735.375	58
09	729.250	57	59	735.500	58
10	729.375	57	60	735.625	58
11	729.500	57	61	735.750	58
12	729.625	57	62	735.875	58
13	729.750	57	63	736.000	58
14	729.875	57	64	736.125	58
15	730.000	57	65	736.250	58
16	730.125	57	66	736.375	58
17	730.250	57	67	736.500	58
18	730.375	57	68	736.625	58
19	730.500	57	69	736.750	58
20	730.625	57	70	736.875	58
21	730.750	57	71	737.000	58
22	730.875	57	72	737.125	58
23	731.000	57	73	737.250	58
24	731.125	57	74	737.375	58
25	731.250	57	75	737.500	58
26	731.375	57	76	737.625	58
27	731.500	57	77	737.750	58
28	731.625	57	78	737.875	58
29	731.750	57	79	738.000	58
30	731.875	57	80	738.125	58
31	732.000	57	81	738.250	58
32	732.125	57	82	738.375	58
33	732.250	57	83	738.500	58
34	732.375	57	84	738.625	58
35	732.500	57	85	738.750	58
36	732.625	57	86	738.875	58
37	732.750	57	87	739.000	58
38	732.875	57	88	739.125	58
39	733.000	57	89	739.250	58
40	733.125	57	90	739.375	58
41	733.250	57	91	739.500	58
42	733.375	57	92	739.625	58
43	733.500	57	93	739.750	58
44	733.625	57	94	739.875	58
45	733.750	57	95	740.000	59
46	733.875	57	96	740.125	59
47	734.000	58	97	740.250	59
48	734.125	58	98	740.375	59
49	734.250	58	99	740.500	59

Multi-channel Systems

Following are groupings of frequencies suggested for multi-channel wireless systems.

Group A: Channels 00, 02, 08, 15, 46, 50, 60 (or 62), 71, 76, 80, 93, 99 -or-

Group B: Channels 01, 03, 07, 25, 30, 41, 44, 56, 69, 76, 77, 86

For use where TV Channel 57 is operating:

Channels 50, 60 (or 62), 71, 76, 80, 93, 99 (from Group A) -or-

Channels 56, 69, 76, 77, 86 (from Group B)

For use where TV Channel 58 is operating:

Channels 00, 02, 08, 15, 46, 99 (from Group A) -or-

Channels 01, 03, 07, 25, 30, 41, 44 (from Group B)

For use where TV Channel 59 is operating:

Channels 00, 02, 08, 15, 46, 50, 60 (or 62), 71, 76, 80, 93 (from Group A) -or-

Channels 01, 03, 07, 25, 30, 41, 44, 56, 69, 76, 77, 86 (All of Group B)

Twelve Tips To Obtain The Best Results

1. Use only fresh alkaline batteries. Do not use "general purpose" (carbon-zinc) batteries.
2. Position the receiver so that it has the fewest possible obstructions between it and the normal location of the transmitter. Line-of-sight is best.
3. The transmitter and the receiver should be as close together as conveniently possible, but no closer together than three feet.
4. The receiver antennas should be in the open and away from any metal. If mounted in a rack, have the unit on top, or use an ATW-RA1 kit to front-mount the antennas.
5. The transmitter and receiver must be set to the same channel number.
6. A receiver cannot receive signals from two transmitters at the same time.
7. The power switch on the transmitter has three positions: "Off," "Standby" and "On." In the middle "Standby" position, the transmitter sends only RF to the receiver; the audio source is turned off.
8. For best operation, all the RF Level LEDs should be lit (maximize RF input); but only the first two or three AF Level LEDs should be lit (don't overmodulate).
9. If the AF Level control of the receiver is set too high, it may over-drive the input of the mixer or clip the output of the receiver, causing distortion. Conversely, if the receiver output is set too low, the overall signal-to-noise ratio of the system may be reduced.
10. You need to change channels 1) when a strong interference signal is received, 2) when the channel breaks down, or 3) during multiple-system operation in order to select an interference-free channel.
11. In the UniPak transmitter, the "MT" or "GT" input control not in use should be set to minimum.
12. Turn the transmitter off when not in use. Remove the battery if the transmitter is not to be used for a period of time.

For future reference, please record your system information here (the serial numbers appear inside the battery compartment of each transmitter, and on the bottom of each receiver):

Receiver	ATW-R73	Serial Number	_____	_____	_____	_____	_____
Transmitter	ATW-T73	Serial Number	_____	_____	_____	_____	_____
	ATW-T75	Serial Number	_____	_____	_____	_____	_____
	ATW-T76	Serial Number	_____	_____	_____	_____	_____

Notice to individuals *with implanted cardiac pacemakers or AICD devices:*

Any source of RF (radio frequency) energy *may* interfere with normal functioning of the implanted device. All wireless microphones have low-power transmitters (less than 0.05 watts output) which are unlikely to cause difficulty, especially if they are at least a few inches away. However, since a "body-pack" mic transmitter typically is placed against the body, we suggest attaching it at the belt, rather than in a shirt pocket where it may be immediately adjacent to the medical device. Note also that *any medical-device disruption will cease when the RF transmitting source is turned off.* Please contact your physician or medical-device provider if you have any questions, or experience any problems with the use of this or any other RF equipment.

One-Year Limited Warranty

Audio-Technica professional wireless systems purchased in the U.S.A. are warranted for one year from date of purchase by Audio-Technica U.S., Inc. (A.T.U.S.) to be free of defects in materials and workmanship. In event of such defect, product will be repaired promptly without charge or, at our option, replaced with a new product of equal or superior value if delivered to A.T.U.S. or an Authorized Service Center, prepaid, together with the sales slip or other proof of purchase date. **Prior approval from A.T.U.S. is required for return.** This warranty excludes defects due to normal wear, abuse, shipping damage, or failure to use product in accordance with the instructions. This warranty is void in the event of unauthorized repair or modification, or removal or defacing of the product labeling.

For return approval and shipping information, contact the Service Dept., Audio-Technica U.S., Inc., 1221 Commerce Drive, Stow, Ohio 44224. Except to the extent precluded by applicable state law, **A.T.U.S. will have no liability for any consequential, incidental, or special damages; any warranty of merchantability or fitness for particular purpose expires when this warranty expires.**

This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

Outside the U.S.A., please contact your local dealer for warranty details.

