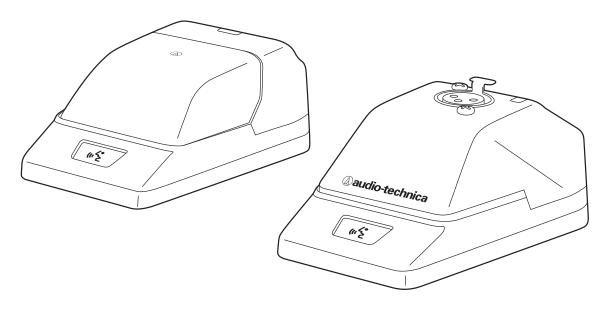
# System 10 and System 10 PRO Components

Digital Wireless Installation and Operation



**ATW-T1006** Boundary Microphone Transmitter

# **ATW-T1007** Microphone Desk Stand Transmitter

**audio-technica**.



CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN



WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT REMOVE SCREWS. NO USER-SERVICEABLE PARTS INSIDE.REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THE APPLIANCE TO RAIN OR MOISTURE.

**CERTIFICATION:** THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. THIS DEVICE COMPLIES WITH INDUSTRY CANADA LICENSE-EXEMPT RSS STANDARD(S), OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.

Cet appareil est conforme à la/aux norme(s) CNR exempte(s) de licence d'Industrie Canada. Son fonctionnement est soumis aux deux conditions suivantes : (1) cet appareil ne doit pas causer d'interférence et (2) cet appareil doit accepter toutes les interférences, y compris celles susceptibles de provoquer un fonctionnement non souhaité.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

WARNING: Changes or modifications not expressly approved in writing by Audio-Technica may void the user's authority to operate this equipment.

**RF Exposure Statement:** This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter used in other systems.

The ATW-T1006 and ATW-T1007 comply with FCC/IC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines and RSS-102 of the IC radio frequency (RF) Exposure rules. This equipment has very low levels of RF energy that it deemed to comply without maximum permissive exposure evaluation. (MPE). But it is desirable that it should be installed and operated keeping the radiator at least 20cm or more away from person's body.

Le ATW-T1006 et ATW-T1007 conformes aux limites d'exposition aux rayonnements énoncées pour un environnement non contrôlé et respecte les règles d'exposition aux fréquences radioélectriques (RF) CNR-102 de l'IC. Cet équipement émet une énergie RF très faible qui est considérée conforme sans évaluation de l'exposition maximale autorisée. Cependant, il est souhaitable qu'il devrait être installé et utilisé en gardant une distance de 20 cm ou plus entre le dispositif rayonnant et le corps.

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

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

This Class B digital apparatus complies with Canadian ICES-003. Cet appareil umerique de la classe B est conforme a la norme NIMB-003 du Canada.

**CAUTION!** Electrical shock can result from removal of the transmitter chassis cover. Refer servicing to qualified service personnel. No user-serviceable parts inside. Do not expose to rain or moisture. The circuits inside the transmitter have been precisely adjusted for optimum performance and compliance with federal regulations. Do not attempt to open the transmitters. To do so will void the warranty, and may cause improper operation.

Danger of explosion if battery is replaced incorrectly. If battery dies, send transmitter to Audio-Technica so battery can be replaced with same or equivalent type. Likewise, send damaged, inoperable transmitters to Audio-Technica or other qualified service center for recycling—do not throw away transmitter as its battery contains toxic materials.

Avoid leaving the transmitter in the open sun or in areas where temperatures exceed 110° F (43° C) for extended periods. Extremely high humidity should also be avoided. Note: Placing any object on a surface (such as a conference table) before its finish is fully cured may result in damage to the finish.

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

#### Important Safety Instructions

- 1. Read these instructions.
- 2. Keep these instructions.
- 3. Heed all warnings.
- 4. Follow all instructions.5. Do not use this apparatus near water.
- 6 Clean only with a dry cloth
- Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9. Unplug this apparatus during lightning storms or when unused for long periods of time.
- 10. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

## **CAUTION** on handling receiver battery

- Battery packs may explode or release toxic materials. Risk of fire or burns. Do not open, crush, modify, disassemble, heat above 140°F (60°C) or incinerate.
- Battery must be replaced and recycled by qualified service personnel.
  If the battery leaks and the liquid contacts your skin or clothing, immediately flush with
- If the battery leaks and the liquid contacts your eyes, immediately wash thoroughly with
- clean water and seek medical assistance.
- Do no short circuit; may cause burns or catch fire.
- Charge battery only with the supplied AC adapter and USB cable.

Thank you for choosing an Audio-Technica System 10 digital wireless transmitter. You have joined thousands of other satisfied customers who have chosen our products because of their quality, performance and reliability. This wireless microphone system is the successful result of years of design and manufacturing experience.

The ATW-T1006 System 10 Boundary Microphone Transmitter and ATW-T1007 System 10 Microphone Desk Stand Transmitter are designed to provide rock-solid performance along with easy setup and clear, natural sound quality. Featuring two LED indicators, a user switch for talk/mute toggling, gain control, low-cut filter and a rechargeable 3.7V lithium-ion battery, the boundary and desk stand transmitters are both designed to work with any System 10 receiver. Operating in the 2.4 GHz range, far from TV and DTV interference, System 10 digital wireless systems offer extremely easy operation and instantaneous channel selection. Eight to ten transmitters may be used together without any frequency coordination problems or group selection issues (consult the operator's manual for the System 10 receiver used to determine the maximum number of transmitters that can be paired with a receiver and the maximum number of channels that can be used simultaneously).

System 10 wireless ensures clear communications by providing three levels of diversity assurance: frequency, time, and space. Frequency Diversity sends the signal on two dynamically allocated frequencies for interference-free communication. Time Diversity sends the signal in multiple time slots to maximize immunity to multi-path interference. Finally, Space Diversity uses two antennas on each transmitter and receiver to maximize signal integrity.

The ATW-T1006 boundary microphone transmitter features a cardioid condenser microphone element. The ATW-T1007 microphone desk stand transmitter works with dynamic gooseneck or phantom-powered condenser gooseneck microphones with an integral 3-pin XLRM-type output connector.

connect the Micro-USB B port to the USB Power Input on the rear of

the transmitter. Next, plug the adapter into a standard 120 V 60 Hz or 230 V 50 Hz (depending on global location) AC power outlet. The AC

adapter and USB cable also charges the transmitter's internal battery.

Charge battery in an environment with moderate temperature (41°F -

95°F). The system will not charge in temperatures below 32°F or above

104°F in order to prevent potential damage to battery. For safety and to

conserve energy, unplug the AC adapter from the AC outlet when the

system is not in use. Store transmitter in a cool place.

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# Installation

## **Transmitter Location**

For best operation the ATW-T1006 boundary microphone transmitter or ATW-T1007 microphone desk stand transmitter should be kept at least 6' (2 m) from the System 10 receiver to help assure maximum RF performance

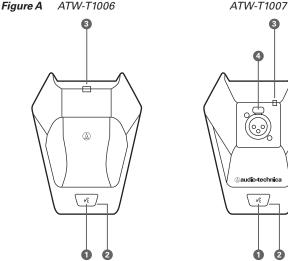
# **Power Connection**

NOTE: Use only the supplied AC adapter and power cord to power or charge the boundary and desk stand transmitters. To use AC power, connect the power cord's USB A-type male port to the AC adapter and

# ATW-T1006 Boundary Microphone Transmitter and ATW-T1007 Microphone Desk Stand Transmitter **Controls and Functions**

# Figure A – ATW-T1006 and ATW-T1007 (Top)

- 1. User Switch: Depending on switch function setting, press to toggle talk/mute, press to talk or press to mute.
- 2. LED 1: Indicates transmitter status: power on/off, mute/talk, battery low/charging. See LED chart on page 4.
- 3. LED 2: Indicates transmitter status: power on/off, mute/talk, battery low/charging. See LED chart on page 4.
- 4. 3-Pin XLRF-type Input (ATW-T1007 only): Use to mount any gooseneck microphone with an XLRM-type output

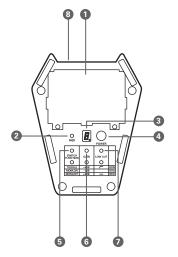


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# Figure B-ATW-T1006 and ATW-T1007 (Bottom)

- 1. Battery Compartment
- 2. Pairing Switch: Press to complete pairing sequence. See page 5.
- 3. System ID Display: Shows System ID. See page 5.
- 4. Power Switch: Press and hold to turn receiver on or off.
- 5. Switch Function: Press to change functioning of User Switch
- 6. Gain Control: Press to change input gain level.
- 7. Low-Cut Switch: Press to turn low-cut filter on or off.
- 8. Power Input: Connect the AC Power Supply adapter included in the system to charge/operate the transmitter.

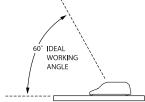
Figure B



# **Transmitter Operation**

Press and hold the Power switch on the bottom of the transmitter. (The electronics in the transmitter take up to 30 seconds to stabilize after power is applied.)

Both the ATW-T1006 boundary microphone transmitter and the ATW-T1007 microphone desk stand transmitter should be placed on a flat, unobstructed mounting surface. The ATW-T1006 should be positioned so the front of the microphone faces the sound source. The sound source should not be below, or higher than 60° above, the plane of the mounting surface.



#### Figure C-LED Function

The boundary and desk stand transmitters both feature a touchsensitive user switch and two red/green LED status indicators – one integrated into the user switch on the front on the unit, the other bent in an L-shape to display on both the top and rear of the unit. This dual LED configuration allows the transmitter status to be viewed by the user and by those seated opposite the user.

The boundary and desk stand transmitters operate in two different modes: Standard and Conference. In Standard mode, which is the default, both LEDs will illuminate green when the transmitter microphone is on and will illuminate red when the microphone is muted. In Conference mode, both LEDs will illuminate red when the transmitter microphone is on and will not illuminate at all when the microphone is muted. (An exception for both modes is when the transmitter power is off and charging cable is plugged into the transmitter. In this case LED 1 will not illuminate, while LED 2 will illuminate red while the battery is charging and illuminate green once the battery is fully charged.)

To switch between Standard and Conference modes, press and hold the recessed Switch Function button and, while continuing to hold it, press and hold the Power button. After a few seconds, the mode will change and the system ID will briefly display A for Standard mode and C for Conference mode.

#### Locking the Mute Function

- 1. Turn the transmitter off.
- Press and hold the recessed Pair button and, while continuing to hold it, press and hold the Power button until the transmitter powers on. The dot that usually appears next to the System ID will not be lit, indicating that the mute lock has been activated. The LED below the Switch Function button will also not light when the mute lock is on.
- 3. To deactivate the mute lock, turn the transmitter off again, then press and hold the Pair and Power buttons as before until the transmitter powers on. The dot will once again display next to the System ID and the Switch Function LED will light, indicating that the mute lock has been deactivated.

#### **Adjusting Settings**

The settings for the user switch, input gain level and low-cut filter can all be adjusted by pressing the appropriate recessed button on the bottom of the transmitter.

#### Standard Mode

**Conference Mode** 

Condition	Transmitter Power	LED 1	LED 2	LED 1	LED 2
Not linked with Receiver	On	Red/Green Alternate	Green/Red Alternate	Red/Green Alternate	Green/Red Alternate
Initialize/Toggle Mode	On	Green	Green	Red	Red
Initialize/Press to Talk	On	Red	Red	Off	Off
Initialize/Press to Mute	On	Green	Green	Red	Red
Mic Mute	On	Red	Red	Off	Off
Mic Talk	On	Green	Green	Red	Red
Charging/Mic Mute	On	Red	Red	Off	Off
Charging/Mic Talk	On	Green	Green	Red	Red
Fully Charged/Mic Mute	On	Red	Red	Off	Off
Fully Charged/Mic Talk	On	Green	Green	Red	Red
Low Battery/Mic Mute	On	Red Blink	Red Blink	Off	Red Blink
Low Battery/Mic Talk	On	Green Blink	Green Blink	Red Blink	Red Blink
Charging	Off	Off	Red	Off	Red
Fully Charged	Off	Off	Green	Off	Green

#### Figure C



#### **Setting the Switch Function**

- 1. The default Switch Function setting is TOGGLE ON/OFF (with audio on at power up). The LED below the Switch Function button illuminates green for this setting.
- Press the Switch Function button once to select MOM. ON (momentary on), wherein the audio will be on only while the user switch is being pressed (press to talk). The LED below the Switch Function button illuminates orange for this setting.
- Press the button a second time to select MOM. OFF (momentary off), wherein the audio will be muted while the user switch is being pressed (press to mute). The LED below the Switch Function button illuminates red for this setting.
- 4. Press the button a third time to cycle the setting back to the default.

#### Selecting the Input Gain Level

- There are three input gain levels that can be selected: -6 dB (for loudest voices), 0 dB and +6 dB (for softest voices). The default setting is 0 dB, which the Gain LED indicates by illuminating orange.
- 2. Press the recessed Gain button once to change the level from 0 dB to +6 dB. The LED will illuminate red.
- 3. Press the Gain button again to change the level to -6 dB. The LED will illuminate green.
- 4. Press the button a third time to return the level to 0 dB. The LED will illuminate orange.

# **Engaging the Low-Cut Filter**

- 1. The low-cut filter is off by default. The corresponding LED indicates this by illuminating red.
- 2. Press the recessed Low Cut button to turn the low-cut filter on. The LED will illuminate green.
- 3. Press the button again to turn the filter off. The LED will illuminate red.

#### Setting System ID Number and Pairing Transmitter with a Receiver

**NOTE:** System ID is an identical number assigned to a paired receiver and transmitter for identification purposes. The System ID number is not related to transmitting frequency. Due to the dynamic nature of System 10's automatic frequency selection, the actual transmitting frequencies may change during power-up or performance. These frequency changes are seamless and imperceptible to the ear.

**NOTE:** Up to ten transmitters may be paired with a System 10 PRO receiver. Up to eight transmitters may be paired with other System 10 receiver models.

- 1. Turn on the receiver and transmitter.
- 2. Press the System ID button on the receiver to select a System ID number from 0 to 9 (1 to 8 if not using System 10 PRO receiver).
- 3. Within 15 seconds, press and hold the Pair button on the receiver for about one second. The receiver's Pairing Indicator will begin to blink green. Your receiver is now in Pair Mode.

**NOTE:** If the receiver's Pair button is not pressed within 15 seconds, the System ID number will revert to its previous setting.

- 4. Within 30 seconds of entering Pair Mode, press and hold the recessed Pair button on the bottom of the transmitter. The transmitter display will show the System ID number you have chosen on the receiver. The receiver's Pairing Indicator will glow steady, indicating you have successfully paired your system.
- 5. To pair an additional transmitter, you must switch off the first transmitter by pressing and holding its Power button. Turn the second transmitter on and follow instructions 2-4 above, making sure to assign a different System ID number to the new transmitter.
- 6. Repeat for each additional transmitter you wish to pair with this receiver. Remember to switch off all transmitters already paired before adding a new one and to use a unique ID number for each transmitter.

**NOTE:** With all transmitters turned off, the receiver's System ID Display will cycle through all currently paired ID numbers. Turn on a transmitter to activate its pairing with the receiver. The receiver recognizes only one transmitter at a time. That transmitter must be turned off before the receiver will recognize another paired transmitter. If that transmitter is turned off out of range, the receiver will not recognize another paired transmitter until the receiver is powered off and turned on again.

## **Clearing Individual ID Pairings**

- 1. Press the receiver's System ID button to select the ID number you wish to clear. The number will begin to blink.
- Press and hold the Pair button and, while continuing to hold it, press and hold the ID button until the display shows a blinking "o." This indicates that your selected ID number has been cleared.
- Release the Pair and ID buttons and, after a few seconds, the display will stop blinking and return to normal operation.
- 4. Repeat to clear additional ID pairings.

#### **Clearing All ID Pairings**

- 1. Press and hold the receiver's Pair button and, while continuing to hold it, press and hold the ID button until the display shows a blinking "o."
- Release the Pair and ID buttons. Then, within three seconds, press and hold the Pair and ID buttons again, until the display shows a blinking "A." This indicates that all your paired ID numbers have been cleared.
- 3. After blinking for three seconds, the "A" will change to "-" to indicate that there are no paired transmitters.

## **Restoring Factory Default Settings**

The factory default settings for the boundary and desk stand transmitters are as follows:

- System ID Number: 1
- Switch Function: Toggle mode (LED: Green)
- Gain: 0 dB (LED: Orange)
- Low-cut: Off (LED: Red)
- Mode: Standard mode
- Mute lock: Off

To restore the settings to the factory default, push and hold the Low Cut button and, while holding it, push and hold the Power button. The three LEDs on the bottom of the transmitter will rapidly blink green for two seconds and then illuminate according to default settings once the defaults have been restored.

**NOTE:** All settings will be restored except for the System ID number. This number and pairing with the receiver will be retained. See above for instructions on setting and clearing System ID numbers and pairings.

#### System Operating Frequencies Automatic Frequency Selection

System 10 wireless systems operate in automatically selected frequencies in the 2.4 GHz range, far from TV and DTV interference. Up to ten channels (eight channels if not using System 10 PRO receiver) may be used together without any frequency coordination problems or group selection issues. Every time a receiver/transmitter pair is powered on, it automatically selects clear frequencies. Due to the dynamic nature of System 10 automatic frequency selection, these transmitting frequencies may change during power-up or performance if interference is encountered. These frequency changes occur at both the receiver and transmitter; they are seamless and imperceptible to the ear.

# **System Frequencies**

For future reference, please record your system information here (the serial number appears on each transmitter).

#### Transmitter

Model ATW-T100

6 or 7

Serial Number

# **Specifications**

# **OVERALL SYSTEM**

Operating Frequencies	2.4 GHz ISM band
Total Harmonic Distortion	<0.1% typical
Operating Temperature Range	0° C to +40° C (32° F to 104° F)
	Battery performance may be reduced at
	very low temperatures
Charging Temperature Range	5°C to + 35°C
Frequency Response	20 Hz to 20 kHz
	Depending on microphone type
Audio Sampling	24 bit / 48 kHz

#### ATW-T1006

Maximum Input Sound Level	139 dB SPL
RF Power Output	10 mW
Spurious Emissions	Following federal and national regulations
Power Supply	100-240V AC (50/60 Hz) to 5V DC 0.5A switched mode external USB-type power supply
Internal Battery	3.7 V Rechargeable Li-ion Battery
Battery Rating	5.4 Wh 1,460 mAh
Battery Life	9 hours Depending on environmental conditions
Battery Charging Time	4 hours 30 minutes Depending on environmental conditions An empty battery will recharge 90% in 2 hours.
Dimensions	96.1mm (3.78'') W × 38.0mm (1.50'') H × 122.8mm (4.83'') D
Net Weight	408 grams (14.4 oz)
Accessory Included	AC adapter (USB-type), USB cable

#### ATW-T1007

RF Power Output	10 mW
Spurious Emissions	Following federal and national regulations
Power Supply	100-240V AC (50/60 Hz) to 5V DC 0.5A switched mode external USB-type power supply
Phantom Power	12V DC
Internal Battery	3.7 V Rechargeable Li-ion Battery
Battery Rating	5.4 Wh 1,460 mAh
Battery Life	9 hours Depending on environmental conditions
Battery Charging Time	4 hours 30 minutes Depending on environmental conditions An empty battery will recharge 90% in 2 hours.
Dimensions	96.1mm (3.78'') W × 44.2mm (1.74'') H × 122.8mm (4.83'') D
Net Weight	392 grams (13.8 oz)
Accessory Included	AC adapter (USB-type), USB cable

<sup>1</sup> In the interest of standards development, A.T.U.S. offers full details on its test methods to other industry professionals on request.

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