ATW-T1006

audio-technica

System 10 Boundary Microphone/Transmitter

Features

- **Cardioid condenser boundary microphone/transmitter pairs with any System 10 or System 10 PRO digital wireless receiver**
- **Digital 24-bit/48 kHz wireless operation for ultimate sound quality and dependable performance**
- **Operates in the 2.4 GHz range—completely free from TV interference**
- **User switch can be set to toggle between talk and mute modes, or function as a press-to-talk or press-to-mute button**
- **Gain Control switch allows selection of three input gain levels: -6 dB (for loudest voices), 0 dB and +6 dB (for softest voices)**
- **Two red/green LEDs—one visible from the front of the unit, the other from the rear—indicate toggle/talk/mute mode, battery level, and charging status**
- **Switchable low-cut filter**
- **System ID Display located on bottom of unit**
- **Automatic frequency selection for seamless, interference-free operation**

Description

The ATW-T1006 is a digital wireless condenser microphone/transmitter with a cardioid polar pattern. It is designed for surface-mount applications such as high-quality sound reinforcement, conferencing, distance learning and other demanding sound pickup applications.

The transmitter features a touch-sensitive user switch and two red/green LED status indicators—one integrated into the user switch on the front of the unit (LED 1), the other configured to display on both the top and rear of the unit (LED 2), allowing the transmitter status to be viewed by those seated opposite the user. The user switch mutes and unmutes the transmitter. It can be set to toggle between live and muted audio (toggle on/off), to permit live audio only while the switch is pressed (press to talk), or to mute the audio while the switch is pressed (press to mute).

A power button is located on the bottom of the unit, along with four recessed control buttons and a System ID Display. The recessed buttons allow user to pair the transmitter with a System 10 receiver, switch between Standard and Conference modes, lock and unlock the mute function, and configure the gain and low-cut filter. The System ID Display shows the System ID number, mode (Standard or Conference) and mute lock status.

The integral 80 Hz low-cut filter provides easy switching from a flat frequency response to a low-end roll-off. The roll-off position reduces the pickup of low-frequency ambient noise (such as traffic, air-handling systems, etc.), room reverberation and mechanically coupled vibrations. The three-position input gain level selector permits trim adjustment to accommodate louder and softer voices.

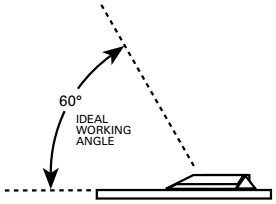
The transmitter's cardioid polar pattern provides a 120° angle of acceptance (cardioid in hemisphere above mounting surface).

The transmitter features a low-reflectance black finish. Its heavy die-cast case and non-slip silicone foam bottom pads minimize coupling of surface vibration to the transmitter.

Operation and Maintenance

The ATW-T1006 is powered by a 3.7V rechargeable lithium-ion battery. The transmitter is turned on by pressing and holding the Power button on the bottom of the unit. The electronics in the transmitter take up to 30 seconds to stabilize after power is applied.

The transmitter should be placed on a flat, unobstructed mounting surface, with the front of the transmitter facing the sound source. The sound source should not be below, or higher than 60° above, the plane of the mounting surface.



The transmitter operates in two different modes: Standard and Conference. In Standard mode, which is the default, both of the transmitter's LEDs will illuminate green when the transmitter is on and will illuminate red when the transmitter is muted. In Conference mode, both LEDs will illuminate red when the transmitter is on and will not illuminate at all when the transmitter is muted. In both modes, when the transmitter power is off and the charging cable is plugged into the transmitter, LED 1 will not illuminate, and LED 2 will illuminate red while the battery is charging and illuminate green once the battery is fully charged. (See LED Function chart below for complete LED lighting scheme.)

The transmitter can be switched between Standard and Conference modes by pressing and holding the recessed Switch Function button and, while continuing to hold it, pressing and holding the Power button. After a few seconds, the mode will change and the System ID Display will briefly show an "A" for Standard mode or a "C" for Conference mode.

The transmitter's mute function can be locked and unlocked by pressing the Pair and Power buttons on a transmitter that has been turned off. When locked, a dot that normally appears on the System ID Display will not appear and the LED below the Switch Function button will not be lit.

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

The user switch has three settings that can be chosen by pressing the recessed Switch Function button. The default setting is TOGGLE ON/OFF (with audio on at power up). Pressing the Switch Function button once selects MOM. ON (momentary on), wherein the audio will be on only while the user switch is being pressed (press to talk). Pressing the button a second time selects MOM. OFF (momentary off), wherein the audio will be muted while the user switch is being pressed (press to mute). Pressing the button a third time cycles the setting back to the default. The LED below the Switch Function button illuminates green for TOGGLE, orange for MOM. ON and red for MOM. OFF.

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. Pressing the recessed Gain button on the bottom of the transmitter adjusts the gain level. Pressing the button once changes the level from 0 dB to +6 dB, pressing it again changes the level to -6 dB and pressing it a third time returns the level to 0 dB. The LED below the Gain button illuminates green for -6 dB, orange for 0 dB and red for +6 dB.

The low-cut filter can be turned on and off by pressing the recessed Low Cut button on the bottom of the transmitter. The filter is off by default. The LED below the Low Cut button illuminates red when the filter is off, green when it is on.

All LEDs on the bottom of the transmitter will turn off seven seconds after the last button is pressed. Pressing any button will cause the LEDs to relight.

The settings can be restored to the factory default by pushing and holding the Low Cut button and, while holding it, pushing and holding 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.

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.

Architect's and Engineer's Specifications

The ATW-T1006 microphone/transmitter shall be a fixed-charge condenser designed for use in surface-mount boundary applications as part of a digital wireless microphone system operating in the 2.4 GHz range. It shall be capable of automatically adjusting its frequency to avoid interference. It shall have a frequency response of 20 Hz to 20,000 Hz and a cardioid polar pattern. The transmitter shall be capable of handling sound input levels up to 139 dB.

The transmitter shall be equipped with a touch-sensitive user switch and a corresponding Switch Function button. The Switch Function button shall allow selection of user switch settings: toggle between live and muted audio (toggle on/off); permit live audio only while the switch is pressed (press to talk); mute the audio while the switch is pressed (press to mute). Two red/green LED status indicators shall be provided – one integrated into the user switch on the front of the unit (LED 1), the other bent in an L-shape to display on both the top and rear of the unit (LED 2). A pairing switch shall allow the transmitter to be paired with any System 10 receiver. An 80 Hz "low cut" switch shall be provided to tailor the low-frequency response to minimize pickup of unwanted sounds. And there shall be three selectable gain levels: -6 dB, 0 dB, and +6 dB.

The transmitter shall operate in two different modes: Standard and Conference. In Standard mode, which is the default, both of the transmitter's LEDs shall illuminate green when the transmitter is on and shall illuminate red when the transmitter is muted. In Conference mode, both LEDs shall illuminate red when the transmitter is on and shall not illuminate at all when the transmitter is muted. When the transmitter power is off and the charging cable is plugged into the transmitter, LED 1 shall not illuminate, and LED 2 shall illuminate red while the battery is charging and illuminate green once the battery is fully charged.

It shall be possible to electrically lock the transmitter mute function. A backlit LCD display shall be provided to show System ID number and mute lock status.

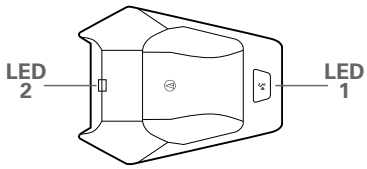
The transmitter shall be powered by a 3.7 V rechargeable lithium-ion battery. An AC adapter (USB-type) and USB cable shall be included to recharge the battery.

The transmitter shall have a maximum width of 96.1 mm (3.78"), a maximum length of 122.8 mm (4.83") and a maximum height of 38.0 mm (1.50"). Weight shall be 408 g (14.4 oz). The transmitter shall be housed in a die-cast case with a perforated steel grille. Finish shall be low-reflectance black.

The Audio-Technica ATW-T1006 is specified.

LED Function

		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



Specifications

RF Power output	10 mW
Element	Fixed-charge back plate, permanently polarized condenser
Polar pattern	Half-cardioid (cardioid in hemisphere above mounting surface)
Frequency response	20-20,000 Hz
Low frequency roll-off	80 Hz, 18 dB/octave
Maximum input sound level	139 dB SPL, 1 kHz at 1% T.H.D.
Switches	Touch-sensitive user switch function: toggle (mute on power up), momentary on, momentary off; Low-cut filter: flat, roll-off; Gain: -6 dB, 0 dB, +6 dB
Internal battery	3.7 V rechargeable Li-ion battery
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
Weight	408 grams (14.4 oz)
Accessory included	AC adapter (USB-type), USB cable

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

1 Pascal = 10 dynes/cm^2 = 10 microbars = 94 dB SPL

[1] Typical, A-weighted, using Audio Precision System One.

Specifications are subject to change without notice.

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