

ATW-R2100b

Frequency-agile True Diversity UHF Receiver

2000 series wireless systems



Features

- **High sensitivity dual IF receiving design for dropout-free performance**
- **Automatic frequency scanning finds open channel**
- **High efficiency compander for flawless audio**
- **10 compatible user-switchable channels in one of two UHF frequency ranges**
- **Antenna power available for powered antennas & other in-line RF devices**
- **Receiver internal function menu with soft-touch controls**
- **Straightforward channel selection process**
- **Digital Tone Lock™ squelch**
- **Adjustable receiver squelch**
- **True Diversity receiver with silent, automatic switching**
- **Tuner operation indicator displays tuner with strongest reception**
- **Receiver front panel displays for RF and AF signal levels**
- **AC or 12–18V DC operation**
- **Rear panel or front panel antenna mount options**
- **Balanced and unbalanced outputs**
- **Output level control on the rear panel**
- **Ground lift switch on balanced output**
- **Rugged metal receiver construction**
- **Mounts in a single rack space (1 or 2 units)**
- **Clear sound quality, rock solid, dependable performance**

Description

The ATW-R2100b is a True Diversity UHF wireless receiver operating in the UHF bands of 656.125–678.500 or 487.125–506.500 MHz. The automatic frequency scanning eliminates the need for searching for clear channels and automatically selects the most appropriate frequency for the area in which the wireless is operating. A pre-coordinated integral channel plan allows for simultaneous operation of any of the ten channels in a given location. The flexibility in programming both the receiver and transmitters eliminates confusing frequency groups and other frequency coordination problems. A two-position switch turns on/off 12V AC antenna power for use with powered antennas or accessories. Advanced Tone Lock™ adjustable squelch system fights interference. High sensitivity dual IF design using true diversity operation with silent automatic switching provides dropout-free performance. Front panel LCD receiver display provides continuous indication of transmitter RF signal strength, selection of internal dual (True Diversity) receiving sections (A&B), along with the audio modulation level of the received signal. Both balanced XLR-type and unbalanced 1/4" output connections with output gain adjustments are located on the rear panel. The XLR-type output includes a ground lift switch to prevent ground loops. Features not often found in other receivers include metal receiver construction, detachable wave receiver antennas, AC or 12–18V DC operation, front panel power switch, and included rack mount kit.

Architect's and Engineer's Specifications

The frequency-agile FM wireless receiver shall be part of a wireless microphone system offered in two UHF bands, 656.125–678.500 and 487.125–506.500 MHz. It shall be capable of operating on any of 10 PLL-synthesized channels. Simultaneous operation of any of the ten channels shall be possible without the need for frequency groups or presets.

The all-metal receiver shall provide an automatic scanning function to select appropriate local usable channels for proper wireless system operation. All receiver functions shall be controlled by soft-touch controls on the receiver front panel. It shall be a True Diversity receiver with two independent internal receiver sections, automatically selecting the highest quality signal for the receiver's output. A two-position switch shall turn on/off the 12V AC antenna power for use with powered antennas or accessories. The system will be equipped with a Tone Lock™ digital identification system to ensure that only the desired wireless microphone transmitter allows the receiver to be un-muted. Visual indication of the channel selected shall be provided on the front panel. The receiver shall continuously monitor and display the RF signal strength and the selection of internal dual (True Diversity) receiver sections along with the audio modulation level of the received signal. A front panel power switch shall be provided along with illuminated display indicating receiver is active.

The receiver shall have a rear panel selector to lift the ground connection from pin 1 of the XLR-type output connector to prevent ground loops. Both XLR-type and 1/4" audio output connections shall be provided. Output gain and squelch level adjustments shall be provided on the rear panel of the receiver. The receiver shall be able to be powered by 120V AC 60 Hz or 12–18V DC at 500 mA.

The receiver as supplied can be rack-mounted singly or in pairs in a single rack space. The receiver's design shall provide totally silent audio output mute when the wireless transmitter is turned off or signal is lost. The wireless receiver and the supplied metal rack-mounting brackets shall be industrial black.

The FM wireless receiver shall be an Audio-Technica ATW-R2100b or equivalent.

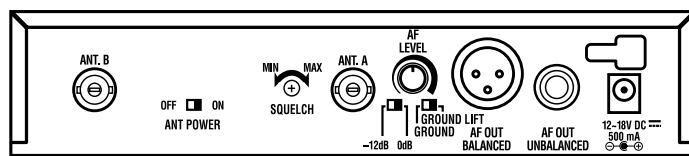
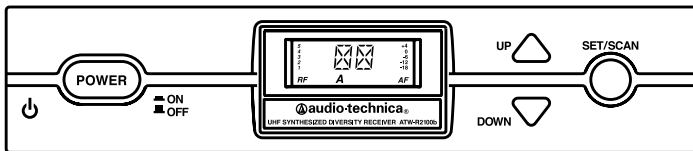
Specifications

Receiving system	True diversity
Image rejection	60 dB nominal, 55 dB minimum
RF Sensitivity	20 dBuV at 60 dB S/N ratio (50 ohms termination)
Maximum output level	
XLR, balanced:	+9 dBV
1/4" (6.3 mm), unbalanced:	+4 dBV
Balanced audio output attenuator	Two position switch: 0/-12 dB
Antenna input	BNC-type, 50 ohms Bias voltage 12V DC, 60 mA, each
Power requirements	12-18V DC, 500 mA
Dimensions	210.0 mm (8.27") W x 162.2 mm (6.39") D x 44.0 mm (1.73") H (not including BNC connectors or feet)
Net weight	1.0 kg (35.3 oz), without accessories
Accessories included	Two flexible UHF antennas; AC adapter (country dependent); rack-mount adapters

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

Specifications are subject to change without notice.

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