

AEW-R5200

Frequency-agile True Diversity UHF Receiver

 audio-technica

5000 series artist elite® wireless systems



Features

- **Dual receiver configuration with integral antenna distribution and power supply**
- **IntelliScan™ automatic frequency scanning and selection on all linked receivers**
- **Ethernet 10 base T data/control connection to an external computer**
- **Two compatible frequency bands with 996 selectable frequencies each**
- **25 kHz frequency spacing makes it easier to find a clear, open frequency in crowded RF environments**
- **True diversity receivers with dual IF design for dropout free and silent automatic switching**
- **Up to 40 systems compatible using both bands**
- **High-efficiency dual companding system for flawless audio**
- **Digital Tone Lock™ squelch that communicates transmitter data to the receiver**
- **Adjustable receiver squelch**
- **Receiver internal function menu with soft-touch controls**
- **High visibility white-on-blue LCD receiver status display**
- **All components store up to five preset user configurations, including names**
- **Operator alert indicators**
- **Rear panel or external antenna mount options with 12-volt antenna power**
- **Balanced XLR-type and TRS outputs with three-position attenuator and ground lift switch**
- **Headphone output with independent level control, selectable between receiver one and two**
- **Flexible 1/2 wave antennas supplied for superior range**
- **Dual receiver mounts in a single rack space with included metal front and rear rack mounts**
- **External control of channel mute via a switch closure input on the rear panel**
- **Auxiliary AC pass-through outlet powers other receivers with only one AC input**
- **Transmitter battery life gauge on the front panel of receiver**

Description

The AEW-R5200 dual receiver offers a choice of 996 frequencies on each of two UHF bands. 25 kHz frequency spacing enables the systems to easily find an open frequency in crowded RF environments. It is equipped with IntelliScan™ automatic channel assignment system, which greatly simplifies the selection of useable frequencies in a multi-channel wireless system and eliminates the need for searching for clear channels. The built-in antenna distribution network allows for a single set of antennas to feed both receivers. Each receiver features true diversity reception with RF inputs feeding two completely independent RF sections. Automatic

logic circuitry continuously compares and selects the superior received signal providing better sound quality and reducing the potential for dropouts. A unique Dual Componder design extends the audio bandwidth of the system and an advanced digital Tone Lock™ squelch helps minimize interference. In addition, the Tone Lock signal from the transmitter also conveys information on the transmitter's battery condition, mute status, and transmitter name back to the receiver for display. All receiver functions are accessed via front panel soft-touch controls with lock-out capability to prevent unauthorized access. The receiver's front panel display provides continuous indication of RF signal strength along with the audio modulation level of the received signal.

A standard Ethernet connection is provided to interface the receiver with an external computer control and monitoring package. Designed around an interactive graphical user interface, the Mac-compatible or Windows-compatible software provides remote control and monitoring functions for all networked receivers. Features not often found on other receivers include high pass filter, meter hold function, adjustable squelch, alert indicators on the front panel and 12V DC power on the antenna connections for powered RF accessories. A front panel headphone connection with level control is provided for audio confidence monitoring. Four user-selectable presets allow the ability to store and recall commonly used settings increasing the flexibility of the receiver in multi-use venues.

Designed to operate from mains AC, the dual receiver incorporates a single universal self-selecting internal power supply with standard IEC power connector, eliminating the need for a wall wart. An AC pass-through connector is provided to cascade multiple receivers from a single mains source. Transformer isolated XLR balanced and line outputs with adjustable gain allow the receiver to function with a wide variety of mixers and control equipment. Rear panel BNC-type connectors are provided for the detachable BNC 1/2 wave antennas. The receiver is designed for a standard 1U 19" rack space and includes rack-mount adapters. An external contact-closure provides a control input to mute the receiver's audio output independently from the transmitter mute function.

Architect's and Engineer's Specifications

The frequency-agile automatic scanning FM wireless receiver shall consist of two independent receivers with a common power supply and built-in antenna distribution network. It shall be capable of operating in the bands of either 541.500–566.375 MHz or 655.500–680.375 MHz and shall be capable of operating on any of 996 PLL-synthesized frequencies per band.

The all-metal dual receiver shall provide an intelligent automatic scanning and frequency plan building function to select and coordinate appropriate local usable channels for proper wireless system operation for all linked receivers. In addition, it shall be possible to set up, control and monitor all pertinent receiver functions using a standard 10 base T Ethernet network and the supplied control software. The control software shall have an easy-to-read graphical user interface and be capable of operating on a Mac or PC computer. All receiver functions of the dual receiver shall be controlled by soft-touch controls on each individual receiver front panel. Each section of the dual receiver shall be a true diversity receiver with two independent internal tuner sections, automatically selecting the highest quality signal for the receiver's output. The receiver shall incorporate a dual compander system for processing high and low audio frequencies separately. The system will be equipped with an advanced Tone Lock™ digital identification system to ensure that only the desired wireless microphone transmitter allows the receiver to be un-muted. The receiver shall have four operator indicators on the front panel: transmitter low battery warning, signal loss, input overload and transmitter power setting. The receiver shall continuously monitor and display the battery life indicator of the wireless transmitter, RF signal strength and selection of internal tuner sections (A&B). A high-visibility white-on-blue receiver display shall be provided to monitor receiver functions and shall be visible in both bright and low light conditions. The display in conjunction with front panel soft-touch controls shall be used to configure and set up the receiver's operating parameters. It shall be possible to

show the receiver or transmitter name on the display in alphanumeric characters. Four selectable, namable user presets shall be provided to store and recall receiver parameters. It shall be possible to lockout all receiver front panel controls to prevent unauthorized operation, either via the hardware or software control application. A front panel headphone connection with receiver selection and independent output level control shall be provided for audio confidence monitoring. 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. A three-position audio output attenuator shall be located on the rear panel to match the receiver output to ancillary equipment. All receiver audio outputs shall be transformer balanced and isolated. The receiver shall be able to be powered by 100–240V 50 – 60 Hz AC and incorporate a detachable power cable assembly using standard IEC connections along with an integral AC pass-through connector to extend AC power to additional units. Antennas shall be located on the rear of the receiver and shall incorporate standard BNC-type connectors to allow them to be detached from the receiver to facilitate the receiver being used with external antennas or antenna distribution devices. Switchable 12V DC antenna power shall be provided to power external active antenna system equipment. 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 receiver as supplied can be rack-mounted in a single rack space. The extra heavy duty rack-mount shall allow for front and rear attachment for maximum stability.

The wireless receiver shall be an Audio-Technica AEW-R5200 or equivalent.

Specifications

	Overall system
UHF operating frequencies	Band C: 541.500–566.375 MHz; Band D: 655.500–680.375 MHz
Number of frequencies	996 total per band (25 kHz increments)
Frequency stability	±0.005%, Phase Lock Loop frequency control
Modulation mode	FM
Normal deviation	±5 kHz
Operating range	300' typical
Operating temperature range	5° C (41° F) to 45° C (113° F)
Frequency response	70 Hz to 15 kHz

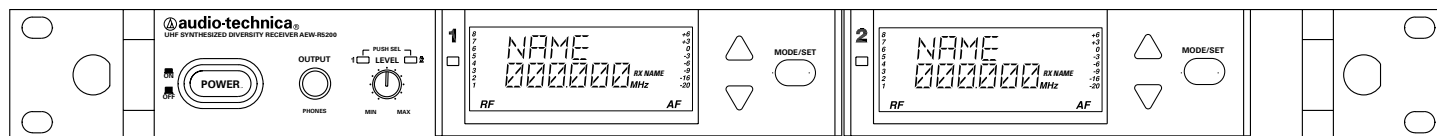
AEW-R5200 dual receiver

Receiving system	Dual independent RF sections, automatic-switching diversity
Image rejection	60 dB typical
Signal-to-noise ratio	115 dB at 40 kHz deviation (IEC-weighted), 75 kHz maximum modulation
Total harmonic distortion	≤1% (10 kHz deviation at 1 kHz)
Sensitivity	20 dBµV (S/N 70 dB at 5 kHz deviation, IEC-weighted)
Intermediate frequency	65.75 MHz, 10.7 MHz
Audio output (attn switch at "0")	Microphone: 25 mV, Instrument: 50 mV (at 1 kHz, ±5 kHz deviation, 10k ohm load) Both outputs are transformer isolated and balanced
Audio output attenuator (ATTN)	Three-position switch: 0 / -6 / -12 dB
Output connectors	Microphone: XLRM-type, balanced; Instrument: 6.3 mm (1/4") TRS balanced phone jack
Headphone output	Connector: 6.3 mm (1/4") TRS ("stereo") phone jack, Power output: 10 mW + 10 mW into 32 ohms (at 1 kHz, ±5 kHz deviation); maximum output: 220 mW + 220 mW into 32 ohms. Headphones switchable between Channel 1 and Channel 2.
External mute	6.3 mm (1/4") TS unbalanced phone jack, each channel
Antenna power	DC 10V-12V, 20 mA (BNC-type jack)
Computer interface	Type: Ethernet, 10BaseT mode Connector: RJ-45 Proprietary Software: supplied on CD-ROM
Power supply	100-240V AC 50/60 Hz, 15W
Pass-through AC power outlet	100-240V AC 50/60 Hz, 5A maximum
Dimensions	482.0 mm (18.98") W x 275.5 mm (10.85") D x 44.0 mm (1.74") H
Net weight	4.0 kg (8.8 lbs) (without accessories)
Accessories included	Detachable IEC-type AC power cable; two flexible UHF half-wave antennas; link cable; IEC-type AC pass-through cable; front-mount antenna cables and connectors; CD-ROM with computer control interface software

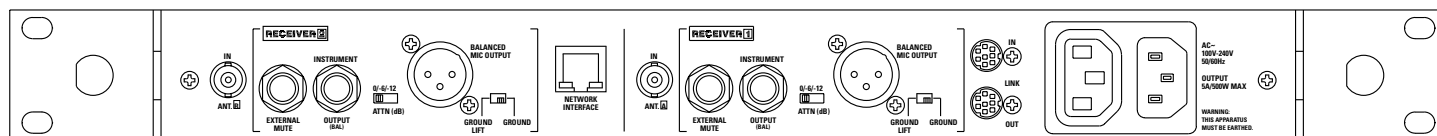
In the interest of standards development, A.T.U.S. offers full details on its test methods to other industry professionals on request.

Specifications are subject to change without notice.

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