AKG.WIRELESS.UHF

WIRELESS MICROPHONE SYSTEM

SR **4000**

Description

a) Hardware

The SR 4000 UHF receiver is one standard EIA rack unit high and one-half rack unit wide with a full metal chassis. Thus, two receivers can be placed side-by-side in one rack space (rack-mount hardware included). The SR 4000 has a 30 MHz wide UHF band containing presets with intermodulation-free frequencies as well as a tuning mode with access to up to 1,200 switchable frequencies. The SR 4000 utilizes operates as a true diversity receiver, in which two completely separate antenna, receiver and demodulator sections are operational at all times. The receiver includes a Pilot Tone Decoder Unit that decodes transmitter data out of the Pilot Tone's data stream. This enables the SR 4000 to show battery charge status and mute status of the transmitter on the integrated, back-lit color display. This data is also available at the **Logic Output Connector** on the rear panel. The HT4000 & PT4000´s Pilot Tone allows automatic muting of the SR´s audio output in case of invalid or corrupted signal **(Tone Code Squelch TCSQ)**. If necessary this automatic squelch option can be overruled by a manual squelch setting. For **PC control** and monitoring of the SR unit a special **data port** is available on the rear panel of the SR 4000.

The True Diversity receiver concept offers maximum dynamic range, greater freedom from interference and noiseless switching from one receiver to the other. Both balanced 3-pin XLR and unbalanced 1/4-inch output connectors are available. An output level switch allows the adjustment of 3 output levels (-30, 0, +6 dB) for optimum system gain structure. Also available on the rear panel are a data port connector, a logic output, 2 x BNC antenna Connectors and a lockable DC input jack.

Controls on the SR 4000 include a backlit display and a Jog wheel to adjust various receiver settings such as squelch threshold, carrier frequency selection, user's name, scan & rehearsal mode selection and many more. Indicators on the unit include mute, audio level bargraph, RF level bargraph, 6x14 segment alphanumeric display and menu control. A unique, programmable Status **Control Ring** shows the most important system data at one glance.

Each SR 4000 can accommodate a pair of diversity antennas; however, when a number of receivers are used in a single system, a master antenna pair (with or without antenna booster, directional and omnidirectional antennas) can be used to feed all receivers. A wide range of accessories such as an antenna splitter, antenna combiner and antenna booster are provided for operational flexibility and ease of installation.

b) Software

The internal software of the SR 4000 offers a wide range of control features for an easy setup even in complex multi-channel systems under difficult rf conditions. Most helpful are features like **AutoSetup** (automatic intermodulation free channel selection), **EnvironmentScan** (scanning of the unit's RF range), **and RehearsalMode** (recording of important system data during rehearsal helps optimize the system setup). Important settings like frequency, squelch, unit name, etc. can be edited and stored via an easy menu structure. Even more control & monitoring features are available via the optional **MCS 4000** (MissionControl Software) **PC Control Software**.

AutoSetup

RehearsalMode

EnvironmentScan

Battery Status / TX Mute

Features

- Wideband true-diversity frequency-agile UHF receiver with 1,200 channels and all-metal chassis
- Factory-selected, pre-matched frequency groups for quick system setup
- Backlit color LCD allows easy monitoring of operating parameters at a glance
- Jog wheel control allows quick, easy parameter adjustments
- AutoSetup, EnvironmentScan and Rehearsal Modes for quick, easy system setup
- Bodypack and handheld transmitters available with a wide selection of AKG microphones
- Up to 24 intermodulation-free frequencies per frequency group
- Wide range of optional accessories available for system customization

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Specifications

SR 4000 Receiver

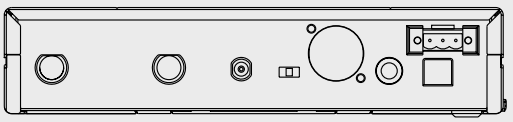
RF Carrier Frequency Ranges: 650 – 680, 680 – 710, 720 – 750, 760 – 790, 790 – 820, 835 - 863 MHz
Carrier Frequencies: up to 1,200 per range (dependent on local conditions)
Modulation Method: FM
Rated Deviation: 20 kHz at 1 kHz (sine wave)
Squelch Threshold: Adjustable between -70 and -100 dBm
Audio Bandwidth: 35–20,000 Hz
THD at 1 kHz: < 0.3% at rated deviation
Signal-to-noise: typ. 120 dBA
Audio Output: Balanced 3-pin XLR-M, switchable from -30 to +6 dB; unbalanced 6.5 mm (1/4-in.) jack
Current Consumption: 150 mA typical
Power Requirement: 11 to 15 V dc or ac from external power supply
Size: 7.8 x 7.4 x 1.7 in. (200 x 190 x 44 mm)
Net Weight: 34 oz. (972 g)

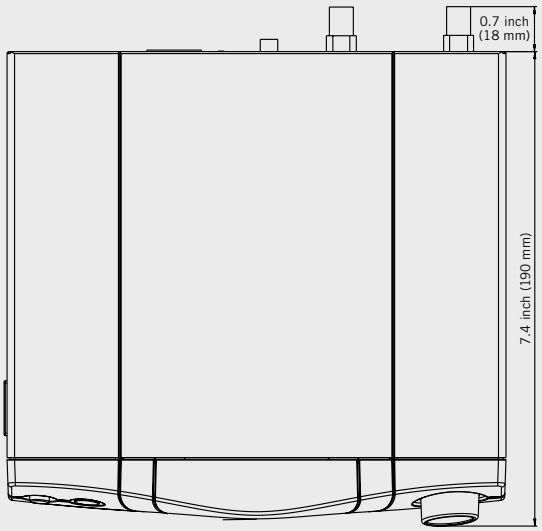
Architects and Engineers Specifications

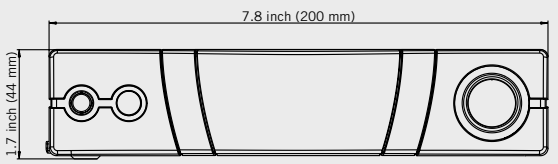
The wireless receiver shall operate over a 30 MHz UHF frequency range in one of 6 bands from 680 MHz to 863 MHz, with a wide range of possible frequency settings. The wireless microphone system shall incorporate factory-optimized sets of both sending and receiving frequency modules that are built into both transmitters and receivers. Each frequency set shall comprise a 30 MHz UHF band and offer up to 1,200 discrete operating frequencies within that band. The receiver shall operate on the true diversity principle, and the switching circuit shall be inaudible. Total harmonic distortion at 1 kHz for rated deviation shall be no greater than 0.3%. The receiver shall provide for a manual squelch adjustment as well as an automatic squelch option (tone code squelch) for optimum system operation. Audio output shall include a balanced XLR connector as well as an unbalanced 6.3 mm / 1/4-inch jack connectors. The output from the 3-pin XLR-type connector shall be adjustable in 3 steps (-30, 0, +6 dB). A data port for connecting a pc-controlled network and logic out connector shall be provided. The receiver shall be controlled by a jog wheel and shall provide a backlit color display as well as a programmable LED ring (red/green) showing the overall system status.
The wireless receiver shall be the AKG Acoustics Model SR 4000.

Line Drawings

(us standard and metric measures)







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For detailed information on WMS 4000 and other products from AKG contact your dealer or visit **www.akg.com**
Specifications subject to change without notice.

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WIRELESS MICROPHONE SYSTEM

HT 4000 / PT 4000

Description

The AKG PT 4000 bodypack and HT 4000 handheld transmitters have identical transmission characteristics, with a **maximum radiated output power of 50 milliwatts**. Through special signal companding circuits (compression and expansion), dynamic range capability greater than 120 dB is delivered at the receiver's output. Audio bandwidth of the system is uniform from 35 Hz to 20 kHz. The usable distances between the receiver and transmitter can be 100 meters (330 ft) or more. Individual handheld microphone and bodypack transmitters are factory-matched to each receiver. Each system operates on a **30 MHz-wide UHF channel** and includes a set of **Presets** containing Intermodulation Free frequencies as well as a search tuning mode with access to up to 1,200 switchable **frequencies**. In the U. S., a total of three bands of 30 MHz channels may be selected. The user may expect a maximum of approximately 50 usable channels in a given locale (depending on the local TV channels and wireless frequencies used). In addition to the modulated audio signal, the transmitters send out a **data-encrypted PilotTone** (at 32,768 Hz) to send important information such as battery status, mute status and more to the system´s receiver.

The HT 4000 handheld and PT 4000 bodypack transmitters can be powered by 2 AA batteries and normal **battery life of up to 15 hours** can be expected from standard 1.5-volt alkaline cells. An optional **BP 4000 rechargeable battery pack** is available, featuring Smart Battery Management System Software, and can provide battery life of up to 12 hours plus the remaining battery life can be monitored on the transmitter's & receiver's displays.

Both transmitters come with a **backlit display** and a **jog element** for easy setup and full status control. The display features information on selected frequency, gain setting, and remaining battery life in hrs. as well as LOCK and MUTE status. Beside the display and the jog element, the controls on the HT 4000 & PT4000 include **lockable ON/OFF** button and a separate **MUTE switch** whose position is easily distinguishable as well as a status indication LED. An **inscribable color code** facility helps easy channel recognition in multi-channel systems.

The PT 4000 bodypack accepts both **microphone and line-level input signals**, and the input sensitivity can be adjusted from 0 – 25 dB for optimum gain matching. The antenna is a quarter-wavelength type that affords easy concealment and comfortable wearing. A **lockable TA-3F Mini-XLR connector** is available for easy connection of a broad range of AKG headset, lavalier or instrument mics (e.g. MicroMic Series microphones) as well as instrument cables. The PT 4000 also comes with a 2.5-mm jack connector suitable for the optional **RemoteMuteSwitch** device RMS 4000.

The HT 4000 handheld transmitter comes with a rugged mechanical solution for **interchangeable microphone modules**. Six of AKG's most popular handheld "vocal" microphone head units are available for the handheld transmitter model. The microphones are the dynamic models D 880 WL1, D 3700WL 1, D 3800 WL 1 as well as the condenser models C 900 WL1, C 5900 WL 1, and C 535 WL 1.

Battery Status

Auto Gain


Preset Frequencies

DATASHEET

Features

- Wideband UHF handheld transmitters with interchangeable acoustics Wideband UHF pocket transmitters with die-cast metal housings
- Pre-matched, optimized frequency groups for quick, easy frequency selection (Presets)
- Backlit LCD Displays for easy status monitoring
- Simple, fool-proof setup procedure using Jog element for quick navigation
- Integrated charging contacts for convenient recharging of optional battery pack
- Continuous operation of >15 hrs. with 2 x AA alkaline batteries or > 12 hrs. with optional BP 4000 rechargeable battery pack
- Up to 24 intermodulation-free preset groups available on each frequency band
- Wide range of optional accessories available for system customization

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WIRELESS MICROPHONE SYSTEM

Specifications

PT 4000 Bodypack

Audio Bandwidth: 35 –20,000 Hz
Carrier Frequency Range: 650 – 680, 680 – 710, 720 – 750, 760 – 790, 790 – 820, 835 – 863 MHz
Carrier Frequencies: up to 1,200
Modulation Method: FM
Rated Deviation: ±20 kHz nominal
S/N Ratio (A-weighted): > 120 dB(A)
Radiated RF Power: 50 mW ERP
Audio Input: Mini XLR, 3 pin
Current Consumption: < 135 mA
Power Requirement: 2 AA 1.5-V batteries or BP 4000 rechargeable pack
Typical Battery Life: Alkaline batteries, 15 hours; BP 4000: 12 hrs.
Size: 2.8 x 3.5 x 1 in. (70 x 90 x 25 mm)
Net Weight: 11.3 oz. (320g) without batteries

HT 4000 Handheld

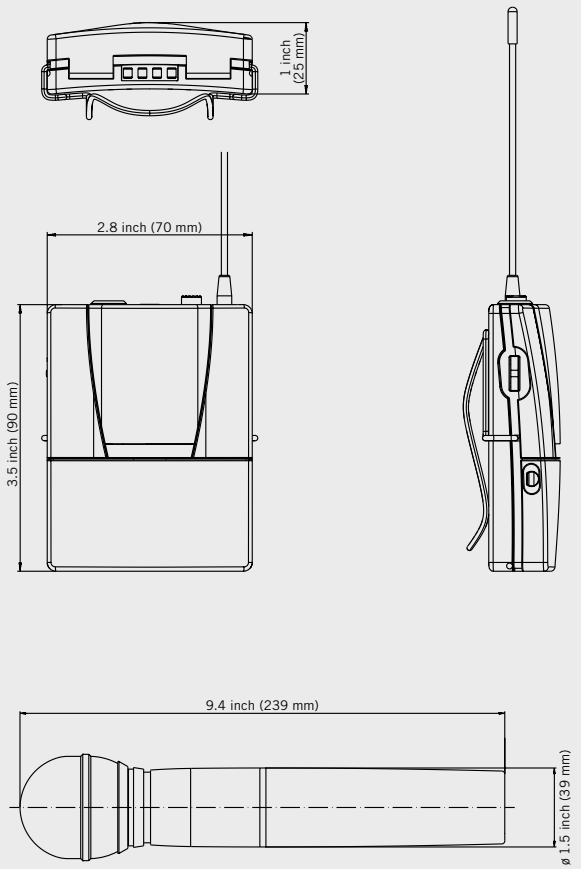
Audio Bandwidth: 35 –20,000 Hz
Carrier Frequency Range: 650 – 680, 680 – 710, 720 – 750, 760 – 790, 790 – 820, 835 – 863 MHz
Carrier Frequencies: up to 1,200
Modulation Method: FM
Rated Deviation: ±20 kHz nominal
S/N Ratio (A-weighted): > 120 dBA
Radiated RF Power: 50 mW ERP
Input Level: 140 dB-SPL @ nominal deviation
Current Consumption: <125 mA
Power Requirement: 2AA 1.5-V batteries or rechargeable pack BP 4000
Battery Life: Dry batteries, 15 hours, BP 4000: 12 hrs.
Size: lenght: 9.4 in. (239 mm); diameter: 1.5 in. (39 mm)
Net Weight: 11.3 oz. (320g) without batteries

Architects and Engineers Specifications

The wireless system shall operate over a 30 MHz UHF frequency range in one of 6 bands from 680 to 863 MHz, with a wide range of possible frequency settings. The wireless microphone system shall incorporate factory-optimized sets of both transmission and receiving frequency modules that are programmed into both transmitters and receivers. Each frequency set shall comprise a 30 MHz UHF band and offer up to 1,200 discrete operating frequencies within that band, with transmitter power not exceeding 50 milliwatts. Both handheld and bodypack type transmitters shall be provided. The bodypack transmitter shall accommodate both microphone and line level inputs. The transmitters shall operate with a companding system that is complemented by the receiver, providing an A-weighted system dynamic range in excess of 120 dB. The transmitters shall indicate input overload via an LED indicator and on a backlit display battery lifetime shall be displayed in hours as well as the transmitting frequency. Handheld transmitters shall have a maximum diameter of 39 mm and a length, including antenna, no greater that 239 mm. The wireless microphone system shall be the AKG Acoustics Model WMS 4000.

Line Drawings

(us standard and metric measures)



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For detailed information on WMS 4000 and other products from AKG contact your dealer or visit **www.akg.com**
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