



H A Harman International Company

# WMS 300

## Microphone System

### Description

The WMS 300 wireless microphone comprises a transmitter bodypack, four transmitter handheld microphone models, and a receiver. The bodypack and handheld transmitters have the same transmission characteristics, with a maximum radiated power of 10 milliwatts. Through signal companding (compression and expansion), a dynamic range greater than 100 dB is attained at the receiver's output. Audio bandwidth of the system is uniform over a wide range in typical performance spaces, extending up to distances of 100 meters (330 feet). Individual handheld microphone and bodypack transmitters are factory matched to a given receiver. Each set provides a 20 MHz-wide UHF send-receive channel, each with 16 sets of sub-channels for microphone use. In the U. S., a total of eight sets of 20 MHz channels may be chosen from. Because of some channel overlap, and the recommendation that adjacent sub-channels not be used in a given installation, the user may expect 32 usable channels in a given installation. The model PT 300 bodypack is powered by 3 AA batteries, and normal battery life of 10 to 12 hours can be expected from standard 1.5 volt cells.

### Features

- **Factory matched and optimized transmitter/receiver frequency group**
- **True diversity reception**
- **Dynamic range > 100 dB**
- **Simple, foolproof setup procedure**
- **Both bodypack and handheld microphone transmitters available**
- **32 channels available for U. S. usage**



# Description

The PT 300 accepts both microphone and line level input signals, and four values of input sensitivity can be selected for optimum transmission. The antenna is a quarter-wavelength wire, affording easy concealment and comfortable wearing. Four of AKG's most popular handheld "vocal" microphone head units are incorporated into the handheld transmitting models. The microphones are the models D 3700, D 3800, C 5900, and C 535 EB. The transmitter versions of these microphones are respectively, D 3700 WL, D 3800 WL, C 5900 WL, and C 535 WL. The handheld transmitters have the following controls: power on/off, microphone mute, and input sensitivity control. In addition, a DIP switch provides for simple setting of the desired transmitting frequency, and LEDs indicate low battery and signal overload. Powering of the handheld transmitters is the same as for the bodypack.

The SR 300 receiving unit is one standard rack unit high and one-half rack unit wide. Thus, two receiving units can be placed side by side. Each SR 300 comes from the factory with a 20 MHz-wide UHF channel containing a set of 16 preset operating frequencies.

The SR 300 operates as a true diversity receiver, in which two completely separate receiver-demodulator sections are operating at all times. The output of the system is the receiver that has the widest dynamic range, and the switching from one receiver to the other is absolutely noiseless.

Controls on the SR 300 include: squelch threshold adjust, carrier frequency selection, and output level control. Indicators on the unit include: mute, audio overload, RF, and diversity LEDs. Each SR 300 can accommodate a pair of diversity antennas: however, when a number of receivers are used in a single installation, a master antenna pair (with booster) can be used and fed to all receivers.

A wide range of accessories is provided for operational flexibility and ease of installation.

## Specifications PT 300 Bodypack

<b>Audio Bandwidth:</b>	70–20,000 Hz
<b>Carrier Frequency Range:</b>	798 MHz to 955 MHz
<b>Modulation Method:</b>	FM
<b>Rated Deviation:</b>	±50 kHz at 1 kHz (sinewave)
<b>S/N Ratio (A-weighted):</b>	> 100 dB
<b>Audio Input:</b>	minijack Lemo/Fischer socket optional
<b>Current Consumption:</b>	< 150 mA
<b>Power Requirement:</b>	3 AA 1.5-V batteries
<b>Battery Life:</b>	dry batteries, 10 to 12 hours 700-mAh NiCd (rechargeable), > 4.5 h, 1100-mAh NiMH (rechargeable) , <7.5 h
<b>Size:</b>	70 x 18 x 94 mm (2.7 x 0.7 x 3.7 in.)
<b>Net Weight:</b>	230 g (8.1 oz.) without batteries

## Specifications SR 300 Receiver

<b>Carrier Frequency Range:</b>	798 MHz to 955 MHz
<b>Carrier Frequencies:</b>	16
<b>Modulation Method:</b>	FM
<b>Rated Deviation:</b>	±50 kHz at 1 kHz (sinewave)
<b>Squelch Threshold:</b>	adjustable between -95 and -80 dBm
<b>Audio Bandwidth:</b>	70–20,000 Hz
<b>THD at 1 kHz:</b>	> 0.8% at rated deviation Signal-to-noise at ±50 kHz
<b>Dynamic Range:</b>	110 dB typical
<b>Audio Output:</b>	balanced XLR-M, adjustable from -30 to +6 dBm; unbalanced 6.5 mm (0.25 in.) jack, adjustable from -36 to 0 dBm
<b>Current Consumption:</b>	150 mA typical
<b>Power Requirement:</b>	11 to 15 V dc or ac from external power supply
<b>Size:</b>	210 x 45 x 180 mm (8.3 x 1.8 x 7 in.)
<b>Net Weight:</b>	650 g (23 oz.) without batteries

# Specifications

## WT 300 Handheld

	D 3700 WL	D 3800 WL	C 5900 WL
<b>Transducer Principle:</b>	dynamic	dynamic	condenser
<b>Frequency Range:</b>	70–18,000 Hz	70–20,000 Hz	70–20,000 Hz
<b>Polar Pattern:</b>	hypercardioid	hypercardioid	hypercardioid
<b>Sound Pressure Level for 1 %/3 % THD:</b>	147/156 dB	147/> 150 dB	147/> 150 dB
<b>S/N Ratio (A-weighted):</b>		> 100 dB-A	
<b>Carrier Frequency Range:</b>		798 MHz to 955 MHz	
<b>Channel Bandwidth:</b>		up to 20 MHz	
<b>Carrier Frequencies:</b>		16	
<b>Modulation Method:</b>		FM	
<b>Radiated RF Power:</b>		10 mW (50 ohms)	
<b>Antenna:</b>		flexible, quarter-wave wire	
<b>Rated Deviation:</b>		± 50 kHz at 1 kHz (sinewave)	
<b>Companer System:</b>		2-to-1, rms; 50 µsec pre-emphasis >100 dB-A	
<b>Input Level:</b>		four settings (110/120/130/140 dB-SPL)	
<b>Current Consumption:</b>		<150 mA	
<b>Power Requirement:</b>		3AA 1.5-V batteries	
<b>Battery Life:</b>		dry batteries, 10 to 12 hours < 4.5 h (NiCd): > 7.5 h (NiMH)	
<b>Size:</b>		dia. 53 mm (2.1 in.), length 245 mm (9.6 in.)	
<b>Net Weight:</b>		305 g (10.76 oz.) without batteries	

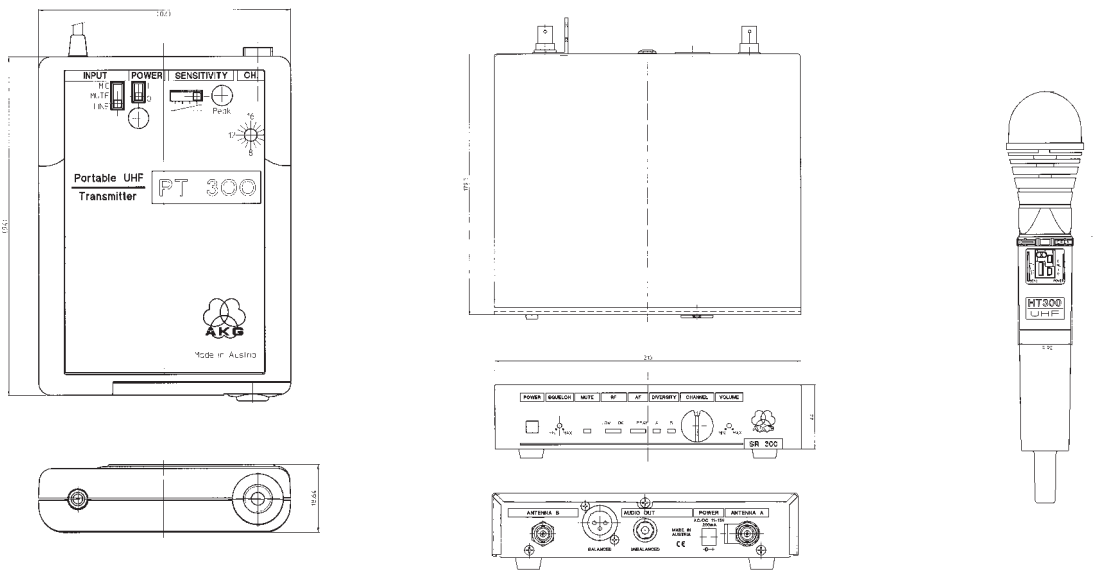
# Architect's and Engineer's Specifications

The wireless microphone system shall operate over the UHF frequency range from 766 to 805 MHz range, with transmitter power not exceeding 10 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 100 dB. The transmitters shall indicate input overload and low battery power. Handheld transmitters shall have a maximum diameter of 53 mm and a length, including antenna, no greater than 282 mm. The receiver shall operate on the true diversity principle, and that action shall be inaudible as such. Adjacent channel selection shall be at

least 60 dB, and total harmonic distortion at 1 kHz for rated deviation shall be no greater than 0.8 %. The receiver shall provide for a manual squelch adjustment for optimum system operation. An output level adjustment shall be provided, and there shall be both balanced XLR-M output and unbalanced 6.5 mm (0.25 in.) jack.

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 20 MHz UHF band and offer at least 16 discrete operating frequencies within that band. The wireless microphone system shall be the AKG Acoustics WMS 300.

## Graphical Data



- Accessories:**
- RMU 2A 2-Unit rack mount mainframe with passive splitter
  - RMU 2 1-Unit rack mount mainframe
  - PS 300 8 System antenna splitter
  - RA 300 B Remote antenna for antenna splitter

## Limited Warranty

Valid only in the United States. AKG Acoustics warrants AKG products against defects in material or workmanship for a period of one year from the date of original purchase for use, and agrees to repair or, at our option, replace any defective unit without charge for either parts or labor. Important: This warranty does not cover damage resulting from accident, misuse or abuse, lack of reasonable care, the affixing of any attachment not provided with the product, loss of parts or connecting the product to any but the specified receptacles. This warranty is void unless service or repairs are performed by an authorized service center.

No responsibility is assumed for any special, incidental or consequential damages. However, the limitation of any right or remedy shall not be effective where such is prohibited or restricted by law. Simply take or ship you AKG product prepaid to our service department. Be sure to include your sales slip as proof of purchase date. (We will not repair transit damage under the no-charge terms of this warranty.) Note: No other warranty, written or oral is authorized by AKG Acoustics, Inc. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow the exclusion or limitation of incidental or consequential damages or limitation on how long an implied warranty lasts, so the above exclusions and limitation may not apply to you.

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