



WMS40 MP40

microtools micro pen

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DRAFT

FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Parts 74, 15, and 90 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Shielded cables and I/O cords must be used for this equipment to comply with the relevant FCC regulations.

Changes or modifications not expressly approved in writing by AKG Acoustics may void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.



1 Safety and Environment

1.1 Safety

1. Do not expose the equipment to direct sunlight, excessive dust, moisture, rain, mechanical vibrations, or shock.

1.2 Environment

1. Be sure to dispose of used batteries as required by local waste disposal rules. Never throw batteries into a fire (risk of explosion) or garbage bin.
2. When scrapping the equipment, remove the batteries, separate the case, circuit boards, and cables, and dispose of all components in accordance with local waste disposal rules.



2 Description

2.1 Introduction

Dear Customer:

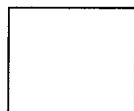
Thank you for purchasing an AKG product. This Manual contains important instructions for setting up and operating your equipment. Please take a few minutes to read the instructions below carefully **before operating the equipment**. Please keep the Manual for future reference. Have fun and impress your audience!

2.2 Unpacking

1 MP 40 micropen	1 neck-lace cord	1 replacement clip (black)	1 AAA size battery

Check that the package contains all the parts listed above. If anything is missing, please contact your AKG dealer.

2.3 Optional Accessories



CU 40 charger

2.4 Description

The **MP 40 micropen** is a miniature transmitter with a detachable C 407 omnidirectional condenser microphone. The transmitter has been specifically designed for speech reinforcement use in conjunction with **WMS 40** Series receivers from AKG.

The **MP 40 micropen** operates on a single fixed, quartz stabilized carrier frequency in the 710 MHz to 865 MHz UHF band and uses a dipole antenna integrated in the transmitter body.

The microphone is nested in a compartment at the upper end of the transmitter. The microphone is fitted with a fixing clamp and connected to the transmitter by a cable approx. 8 inches (20 cm) long. You can detach the microphone from the transmitter and clamp the microphone to the talker's clothes.

The pen-style clip on the rear of the transmitter allows you to secure the transmitter, e.g., in a shirt pocket. The color of the clip indicates the carrier frequency of your transmitter. You can replace the color code clip with the supplied black replacement clip.

The supplied necklace cord allows you to wear the transmitter around your neck.

2.5 Controls (Refer to fig. 1)

1 ON/MUTE/OFF: This slide switch provides three positions:

ON: Power to the transmitter is on.

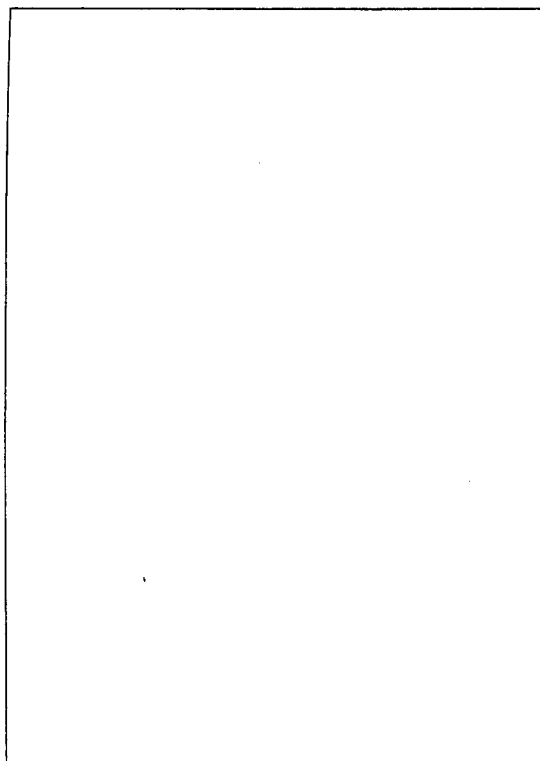


Fig. 1: MP 40 controls.

M: The signal delivered by the microphone is muted while power and the RF carrier frequency remain on. This prevents the receiver from responding to interference from other transmitters.

OFF: Power to the transmitter is off.

- 2 **Status LED:** Indicates battery status. LED flashes momentarily upon switching ON and extinguishes: battery is OK.

LED lights constantly: battery will be dead in about 60 minutes.

- 3 **Input Gain:** This rotary pot sets the sensitivity of the transmitter's audio section.

- 4 **Battery compartment** for one 1.5-V AAA size battery (supplied).

- 5 **Charging contacts** for charging a rechargeable battery inside the battery compartment using the optional CU 40 charger.

- 6 **Clip** for securing the transmitter

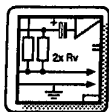
inside a shirt pocket or in an outside breast pocket of a jacket.

The color of the clip indicates the carrier frequency of your transmitter:

Frequency	Color
US54: 710.400 MHz	reddish brown
US58: 734.600 MHz	purple
KR3: 745.650 MHz	mint green
KR4: 750.900 MHz	dark gray
EU62: 802.525 MHz	Bordeaux red
EU63: 812.800 MHz	yellow
SP1: 848.750 MHz	light blue
SP2: 851.750 MHz	yellowish green
UK69A: 854.900 MHz	violet
UK69B: 858.200 MHz	green
ISM1: 863.100 MHz	melon yellow
ISM2: 864.375 MHz	gray

- 7 **Microphone**

- 8 **Cable compartment lid:** The cable compartment beneath the lid holds the microphone cable (approx. 8 inches/20 cm long).



3 Setting Up

3.1 Inserting/Replacing and Testing the Battery

Refer to fig. 2:

1. Depress the snap hook on the battery compartment lid (1).
2. Pull the battery compartment lid (1) down to remove it from the transmitter.

Important: The foam pad on the inside of the battery compartment lid (1) holds the battery in place. Do not remove the foam pad. If you do, the battery will not be held in place properly and may cause a rattling noise.

3. If there is a dead or defective battery inside the battery compartment, remove the battery.
4. Insert the supplied or new battery (2) into the battery compartment as shown in fig. 2.
5. Set the ON/MUTE/OFF switch (3) to ON.

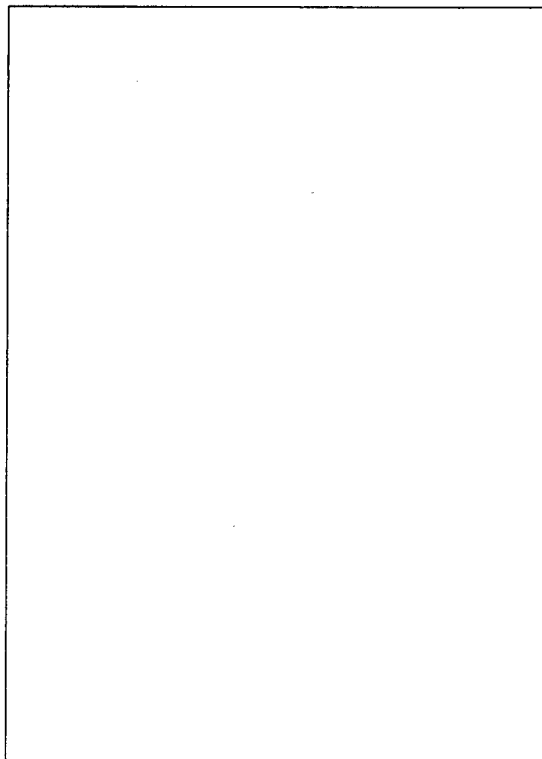


Fig. 2: Inserting the battery.

The status LED (4) will flash momentarily. If the battery is in good condition, the status LED (4) will extinguish.

If the status LED (4) lights constantly the battery will be dead within about 60 minutes. Replace the battery with a new one as soon as possible.

If the status LED (4) fails to flash momentarily the battery is dead. Insert a new battery.

6. Slide the battery compartment lid (1) onto the transmitter against the direction of the arrow to the point that the lid (1) will click shut.

3.2 Using Rechargeable Batteries

Refer to fig. 3:

Instead of dry batteries, you can also use a 1.5-V rechargeable battery to power the transmitter. We recommend SANYO HR-4U (650 mAh) or Panasonic Rechargeable PRO+ (550 mAh) NiMH rechargeable batteries.

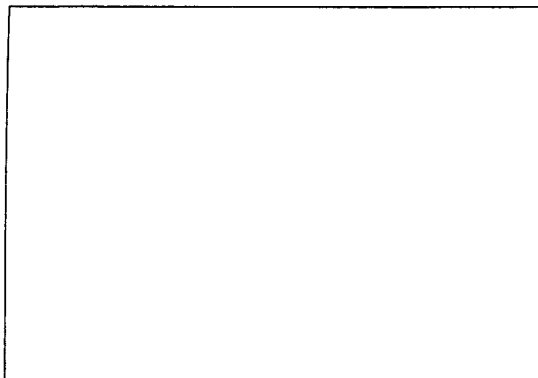


Fig. 3: Using the CU 40 optional charger.

To charge the battery, insert the transmitter (1) into the optional CU 40 charger (2) as shown in fig. 3.

For details, refer to the CU 40 charger manual.



4 Operating Notes

4.1 Attaching the Transmitter

Refer to fig. 4:

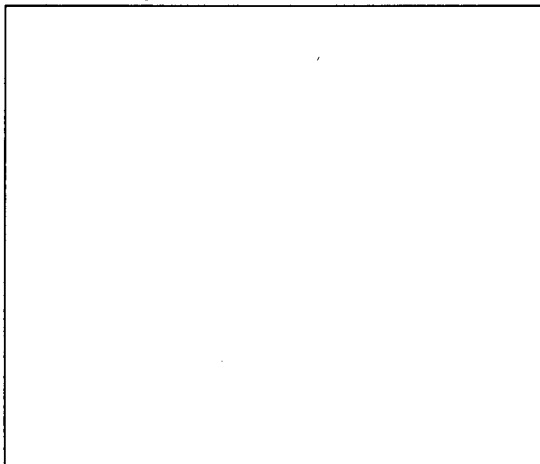


Fig. 4: Attaching the transmitter.

Slide the transmitter (1) into a shirt pocket or an outside breast pocket of

the talker's jacket, making sure the clip (2) will be on the outside of the pocket and the microphone (3) will point upward.

If no suitable pocket is available, slip the supplied necklace cord (4) under the clip (2) and place the necklace cord (4) around the talker's neck.

4.2 Setting Levels (Refer to fig. 1)

1. Check that the receiver is marked with the same color code as the transmitter.
2. Use a small screwdriver to turn the input gain control (3) on the transmitter to a position halfway between the left and right stops.
3. Set the ON/MUTE/OFF switch (1) to ON to switch power to the transmitter on.
4. Switch power to your sound system or amplifier on.
5. Speak a few sentences in your normal voice.

6. If your voice sounds distorted on the loudspeakers turn the input gain control (3) down CCW to the point that you will hear no more distortion.

If your voice sounds too quiet on the loudspeakers, turn the input gain control (3) up CW. If the loudspeakers start howling due to acoustic feedback, immediately turn the input gain control (3) back down to the point that the howling will stop.

4.3 Detaching the Microphone

Refer to fig. 5):

If feedback occurs even at low volume levels, you can detach the microphone from the transmitter and position it closer to the talker's mouth to reduce the risk of acoustic feedback.

1. Unlock and remove the cable compartment lid (1).
2. Place your fingernail against the

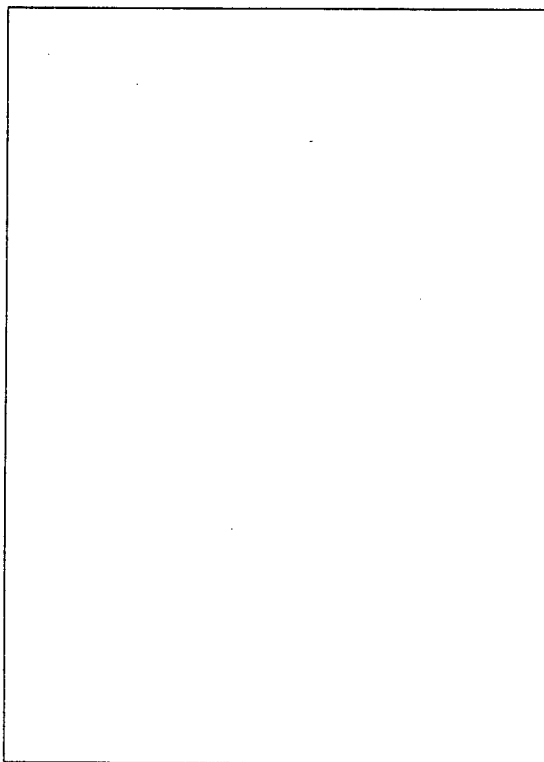


Fig. 5: Detaching the microphone.

microphone body and pull the microphone (3) out of the microphone compartment.

3. Pull the microphone (3) away from the transmitter.
4. Replace the cable compartment lid (1) on the cable compartment and press the lid (1) down to make it snap shut.
5. Put the transmitter in the shirt pocket or outside breast pocket or hang it around the talker's neck with the necklace cord.
6. Clamp the microphone (3) on the sel-vage or the collar as close as possible to the talker's mouth.
7. Turn the microphone (3) to aim it at the talker's mouth.

4.4 Mounting the Microphone on the Transmitter

Refer to fig. 6:

1. Unlock and remove the cable compartment lid (1).

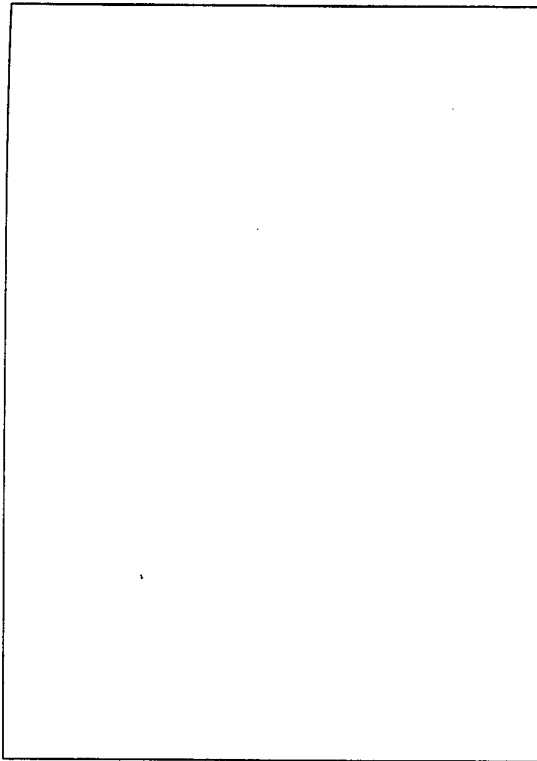


Fig. 6: Mounting the microphone.

2. Use the cable compartment lid (1) to pull the microphone cable (2) down to the point that the microphone (3) will rest against the microphone compartment (4).
3. Set the microphone clamp (5) parallel to the microphone (3).
4. Press the microphone (3) into the microphone compartment (4) to the point that the microphone (3) snaps into place.
5. Stow the microphone cable (2) in the cable compartment and replace the cable compartment lid (1) on the cable compartment.

4.5 Handheld Use

For interviews and similar applications, you can hold the transmitter in your hand like a normal microphone.

Talk into the microphone from approx. 1 foot (30 cm) away.

4.6 Replacing the Clip (Fig. 7)

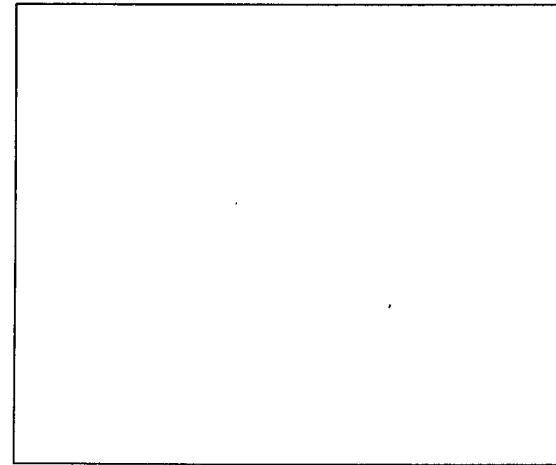


Abb. 7: Halteclip austauschen

If the color code clip looks too garish you can replace it with the supplied black clip.

1. Use a screwdriver to lever the clip (1) away from the front end of the transmitter (2).

2. Press down on the clip (1) and pull the clip (1) away from the transmitter (2) in the direction of the arrow.
3. Nest the hook (3) on the black replacement clip into the matching opening (4) in the transmitter (2).
4. Press the bent end of the replacement clip against the transmitter (2) to make it snap into place.

4.7 Troubleshooting

For troubleshooting hints, refer to your receiver manual.



5 Cleaning

To clean the transmitter case, use a soft cloth moistened with water.



6 Specifications

Carrier frequency range	710 to 865 MHz
Modulation	FM
Audio bandwidth	40 to 20,000 Hz
Frequency stability (-10°C to +50°C)	±15 kHz
Rated deviation	15 kHz (SP1, SP2: 13.5 kHz)
T.H.D. at 1 kHz	typ. 0.8%
Companer	integrated
Signal/noise ratio	typ. 103 dB(A)
RF output	typ. 5 mW
Current consumption	typ. 75 mA
Power requirement	single 1.5-V AAA size battery
Battery life	>10 hours (dry battery) >5 hours (rechargeable battery)
Audio input level for rated deviation	300 mV/1 kHz
Size (WxDxH)	20 x 25 x 145 mm (0.8 x 1 x 5.7 in.)
Net weight	36 g (1.3 oz.)

CHARLES DIT4 EN60065:1998, EN301482-9 V1.1.1 (09-2000)
AND EN300422-2 V1.1.1. (07-2000)

Hiermit erklärt AKG Acoustics GmbH, dass das Produkt **WMS 40** die wesentlichen Anforderungen und sonstigen einschlägigen Bestimmungen der Richtlinie **1999/5/EG** erfüllt.

AKG Acoustics GmbH hereby declares that the product **WMS 40** complies with the essential requirements and other relevant provisions of Directive **1999/5/EC**.

AKG Acoustics GmbH déclare que le produit **WMS 40** satisfait aux exigences essentielles et autres dispositions y relatives de la Directive **1999/5/CE**.

Con la presente AKG Acoustics GmbH dichiara che il prodotto **WMS 40** è conforme alle richieste essenziali e alle altre disposizioni pertinenti della Direttiva **1999/5/CE**.

AKG Acoustics GmbH declara que el producto **WMS 40** cumple los requisitos esenciales y otras disposiciones aplicables de la Directiva **1999/5/CE**.

A AKG Acoustics GmbH declara que o produto **WMS 40** cumpre os requisitos

essenciais e as outras disposições relevantes da Directiva **1999/5/CE**.

AKG Acoustics GmbH verklaart hiermee dat het product **WMS 40** aan de essentiële eisen en overige desbetreffende bepalingen van de richtlijn **1999/5/EG** voldoet.

AKG Acoustics GmbH erklærer hermed at produktet **WMS 40** overholde de væsentliga krav samt andre relevante bestemmelser fra Direktiv **1999/5/EF**.

AKG Acoustics GmbH erklærer med dette, at produktet **WMS 40** oppfyller de vesentlige krav og andre relevante bestemmelser som fremgår av Direktiv **1999/5/EF**.

Härmed förklarar AKG Acoustics GmbH att produkten **WMS 40** uppfyller de väsentliga krav och andra relevanta bestämmelser som framgår av Direktiv **1999/5/EC**.

AKG Acoustics GmbH vakuuttaa, että tuotteemme **WMS 40** täyttää tarvittavat **1999/5/EC** direktiivin mukaiset vaatimukset.

DECLARATION OF CONFORMITY

Document No. 177 / 6 - 2000
replace No. 177 / 3 - 2000

Type of Product: Wireless Microphone System, Handheld Transmitter
Brand, Model No.: ET48

Manufacturer: AKG Acoustics GmbH
A-1230 Wien, Leopoldsdorfergasse 21 - 23
Austria

We declare that the above mentioned product is in conformity with European Directive:

No. 90/269/EEC;
Radio Equipment and
Telecommunications Terminal Equip

The conformity is achieved by reference to European Standard(s):
ETS 300445:1995, ETS 300447
ETS 300445:1995, ETS 300447

Product identification no:
Manufacturer: Service Centre
Address:
A-1040 Strossmayerstrasse, Germany

City, Date: 06.2000

Manufacturer's Signature: *H. Lohndorfer*
Managing Director
Dr. Hugo Lohndorfer

This declaration certifies the accordance with the above mentioned EC-Directive but does not assure certain attributes of the product.

EG-Konformitätsklärung 7600.CE1
07-09-2000 / Bn

CE01230

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↑
Stat WMS 40 → "S040" bzw.
"G840" bzw.
"MP40"

↑
AKTUELLE
CE-ERKLÄRUNG

Zur Verwendung in:
For use in:
Pour l'usage en:

Per l'uso in:
Para el uso en:
Para o uso em:

Voor het gebruik in:
Må anvendes i:
Får användas i:

Må anvendes i:
Käyttöön seuraavissa maissa:

		R&TTed Countries																		
Set	MHz	AT	BE	CH	DE	DK	ES	FR	LI	GB	GR	IE	IS	IT	LU	NO	NL	PT	SE	FI
US54	710.4	✓	✓	✓	✓	-	-	✓	✓	-	-	✓	✓	✓	✓	-	-	-	✓	-
US58	734.6	✓	✓	✓	✓	-	-	✓	✓	-	-	✓	✓	✓	✓	-	-	-	✓	-
EU62	802.525	-	-	✓	✓	✓	-	✓	✓	-	-	✓	✓	✓	✓	✓	-	-	✓	✓
EU63	812.8	-	-	✓	✓	✓	-	✓	✓	-	-	✓	✓	✓	✓	✓	-	-	✓	✓
UK69A	854.9	-	✓	✓	✓	-	-	-	✓	✓	-	✓	✓	-	✓	-	-	-	✓	-
UK69B	858.2	-	✓	✓	✓	-	-	-	✓	✓	-	✓	✓	-	✓	-	-	-	✓	-
ISM1	863.1	✓	✓	✓	✓	✓	-	✓	✓	✓	-	✓	✓	-	✓	✓	✓	-	✓	✓
ISM2	864.375	✓	✓	✓	✓	✓	-	✓	✓	✓	-	✓	✓	-	✓	✓	✓	-	✓	✓
SP1	848.750	-	-	-	-	-	✓	-	-	-	-	-	-	-	-	-	-	-	-	--
SP2	851.750	-	-	-	-	-	✓	-	-	-	-	-	-	-	-	-	-	-	-	--
KR3	745.650																			
KR4	750.900																			



DIE LISTE WIRD
 BEZÜGLICH
 SP1, SP2, KR3, KR4 ergänzt