



AKG.WIRELESS

WIRELESS
MICROPHONE
SYSTEM

WMS40 microtools

User Instructions

Please read the manual before using the equipment!

PR 40

portablereceiver



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.



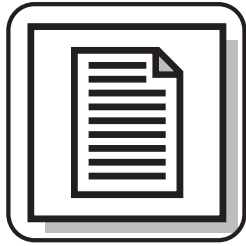
1 Safety and Environment

1.1 Safety

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

1.2 Environment

1. The AC adapter will draw a small amount of current even when the equipment is switched off. To save energy, disconnect the AC adapter from the power outlet if you will leave the equipment unused for a long period of time.
 2. When scrapping the equipment, separate the case, circuit boards, and cables, and dispose of all components in accordance with local waste disposal rules.
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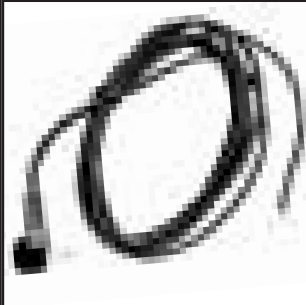
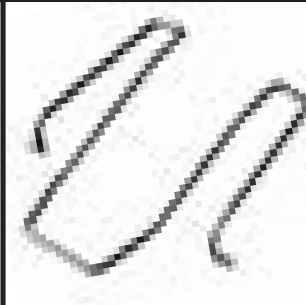



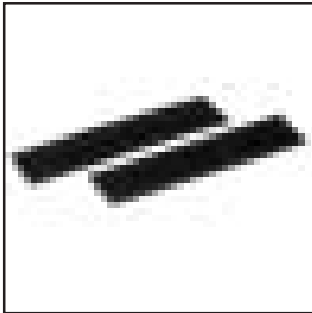
2 Description

2.1 Introduction

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

			
PR 40 receiver	1 connecting cable with unterminated leads	1 belt clip	2 AAA size 1.5 V batteries



Velcro
strip

Check that the packaging contains all of the components listed above. Should anything be missing, please contact your AKG dealer.

2.3 Optional Accessories



- **CU 40** charger



- Custom versions of AKG headphones with .1-in. jack plug. (On request – K 10 shown.)

2.4 Description

The **PR 40** is a portable diversity receiver for use with all AKG **WMS 40 Series**

transmitters (HT 40, PT 40, GB 40, MP 40, SO 40). The supplied Velcro strip allows you to mount the receiver on a mixer, pedalboard (to give effect-loving guitarists more room to move), or a video camera for ENG use.

Thanks to its compact dimensions and convenient belt clip, the **PR 40** is an excellent receiver for tour guide and small interpretation systems.

A preset squelch will mute the receiver if the received signal is too weak so the related noise or the self-noise of the receiver will not become audible when the transmitter is switched OFF.

The **PR 40** operates on one fixed, quartz stabilized frequency in the 710 MHz to 865 MHz UHF carrier frequency range and uses two folding UHF antennas. The color of the volume control indicates the receiving frequency. The type plate on the receiver rear panel provides detailed frequency information.

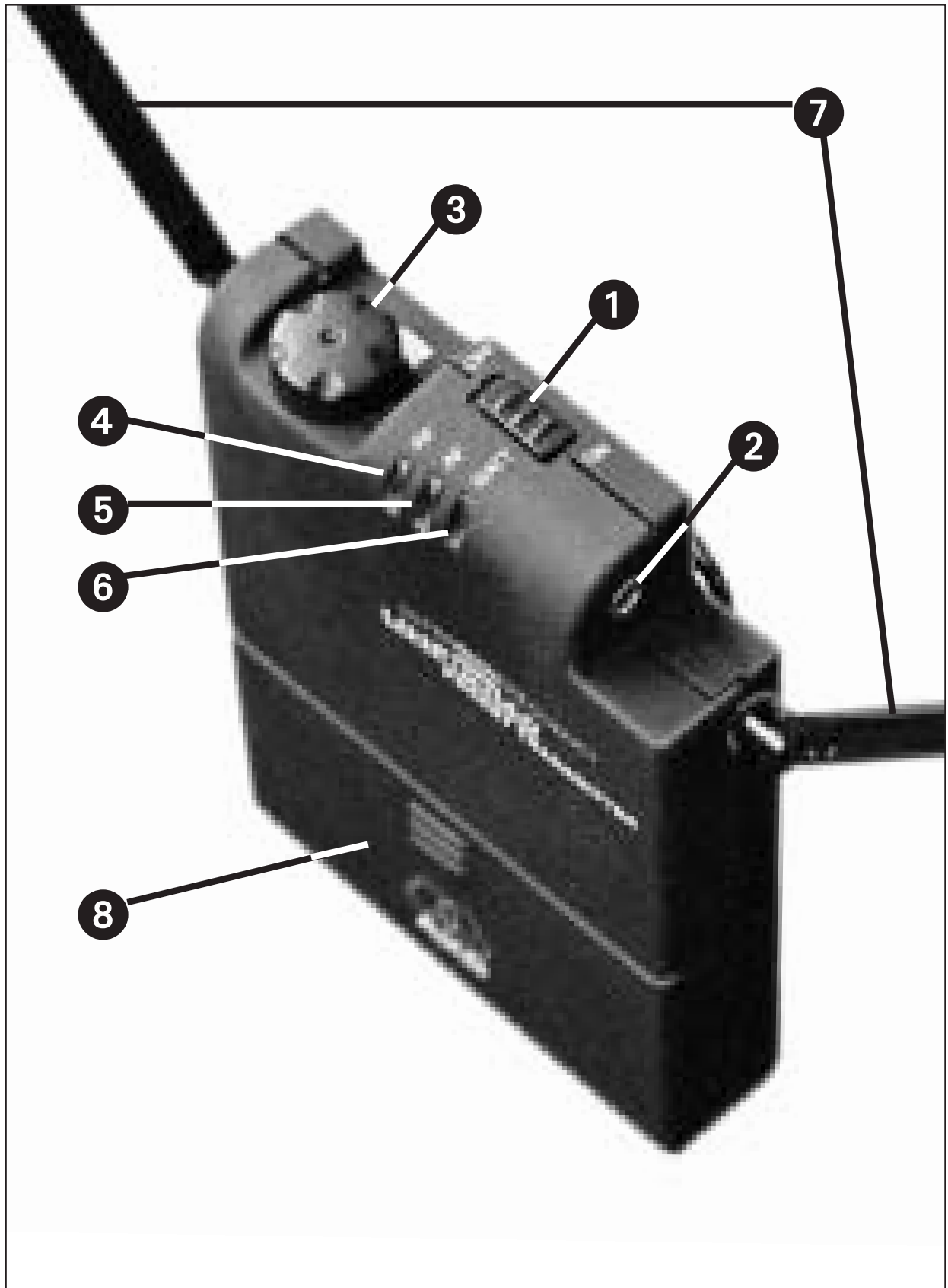


Fig. 1: Top panel controls.

2.5 Controls

2.5.1 Top Panel (Fig. 1)

- ➊ **ON/OFF:** On/off switch.
- ➋ **Output jack:** This .1-in. TRS jack on the receiver top panel provides a fixed-level line output and an adjustable mono headphone output. The volume control (3) lets you adjust the volume level of the headphone output.

The output jack is wired as follows:

Tip: line output (fixed level)

Ring: headphone output (adjustable)

Sleeve: ground

Important: To avoid overloading the headphone amplifier, do not connect headphones with an impedance lower than 16 Ω to the headphone output.

- 3 Volume control:** Sets the volume level of the headphone output (2).
The color of the volume control knob indicates the receiving frequency of your receiver.
- 4 RF LED:** Indicates the field strength of the received signal:
LED lighting green: optimum field strength.
LED lighting red: field strength is zero (the transmitter is OFF or the receiver has been set to a different channel than the transmitter) or the received signal is muted because the squelch is engaged.
LED does not light: power to the receiver is OFF, no batteries are in the battery compartment, or the batteries are dead.
- 5 AF LED:** Indicates the received audio level:
LED lighting green and flashing red on peaks: optimum audio level.

LED lighting red: audio section is overloaded.

LED does not light: audio level is too low.

6 BATT: Indicates battery status:

LED lights green: batteries are O.K.

LED does not illuminate on switching the power ON: no or dead batteries in the battery compartment.

LED lights red: batteries will be dead in about 60 minutes.

7 Antennas: Being a diversity receiver, the PR 40 uses two antennas to receive the transmitter signals at two different spots. The diversity circuit will automatically activate the antenna that provides the better signal.

8 Battery compartment: Accepts the supplied 1.5 V dry batteries or rechargeable batteries of the same size (not supplied).

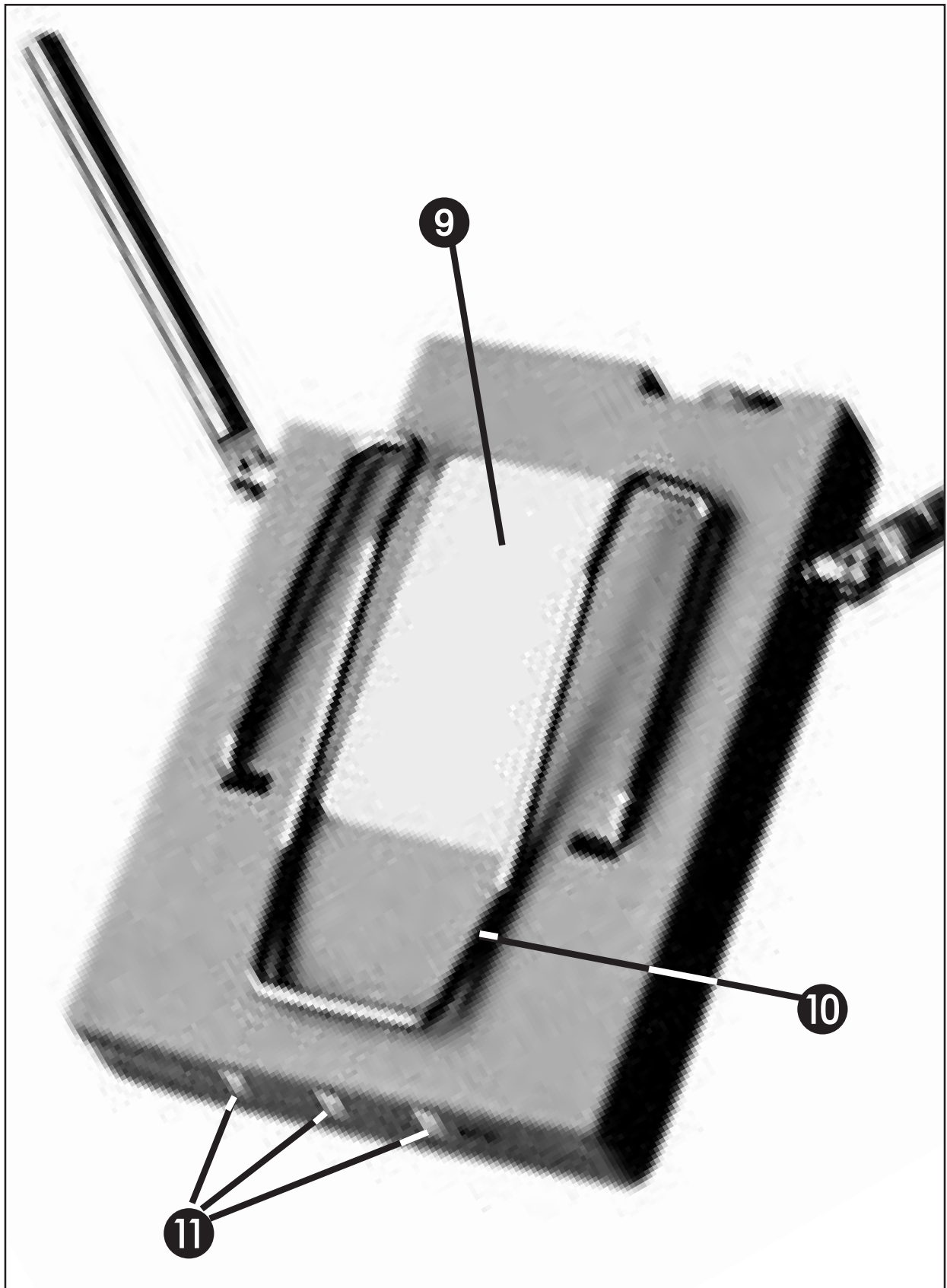


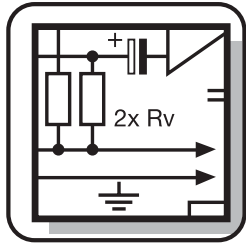
Fig. 2: Bottom and rear panels.

2.5.2 Rear Panel (Fig. 2)

- ⑨ **Type plate** with approval marks and frequency information (frequencies, frequency sets, color code).
- ⑩ **Belt clip** for fixing the receiver on your belt.

2.5.3 Bottom Panel (Fig. 2)

- ⑪ **Charging contacts** for charging rechargeable batteries inside the battery compartment using the optional CU 40 charger.
-



3 Setting Up

3.1 Powering

To power the PR 40 portable receiver you can use the supplied 1.5 V AAA size dry batteries or 1.5 V AAA size rechargeable batteries (not supplied).

3.2 Inserting/Replacing and Testing Batteries (Fig. 3)

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

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

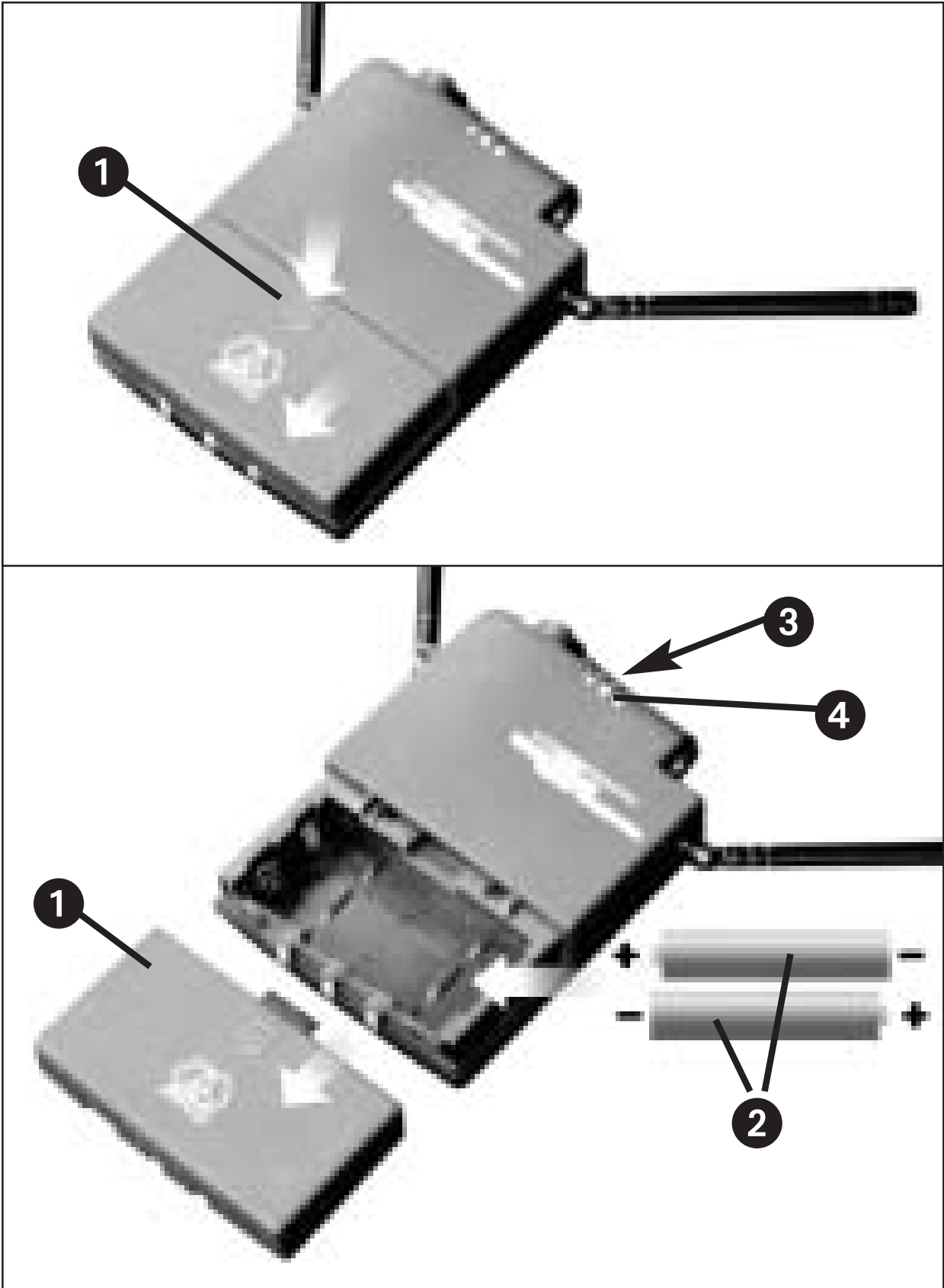


Fig. 3: Inserting batteries.

3. If there are dead or defective batteries inside the battery compartment, remove the batteries.
4. Insert the supplied or new batteries (2) into the battery compartment as shown in fig. 3.
5. Set the ON/ OFF switch (3) to ON.
If the batteries are in good condition, the BATT LED (4) will light green. If the BATT LED (4) illuminates red, the batteries will be dead within about 60 minutes. Replace the batteries with new ones as soon as possible.
If the BATT LED (4) fails to illuminate the batteries are dead. Insert new batteries.
6. Slide the battery compartment lid (1) onto the receiver against the direction of the arrow to the point that the lid (1) will click shut.

3.3 Using Rechargeable Batteries

(Fig. 4)



Fig. 4: Using the optional CU 40 charger.

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

To charge the batteries, insert the receiv-

er (1) into the optional CU 40 charger (2) as shown in fig. 4.

Important: Before placing the receiver in the charger, switch the receiver OFF and fold the antennas all the way down, against the side panels of the receiver. With the antennas folded down, it will be easier to center the receiver inside the charging compartment and the charger will be less prone to be knocked over.

For details on charging batteries, refer to the CU 40 charger manual.



4 Applications

4.1 Mounting the Receiver on a Mixer, Pedalboard, or Video Camera

1. Press the ends of the belt clip inward as shown in fig. 5 and remove the belt clip.
2. Cut two 2-inch lengths off the supplied Velcro strip.
3. Remove the backing from one of the

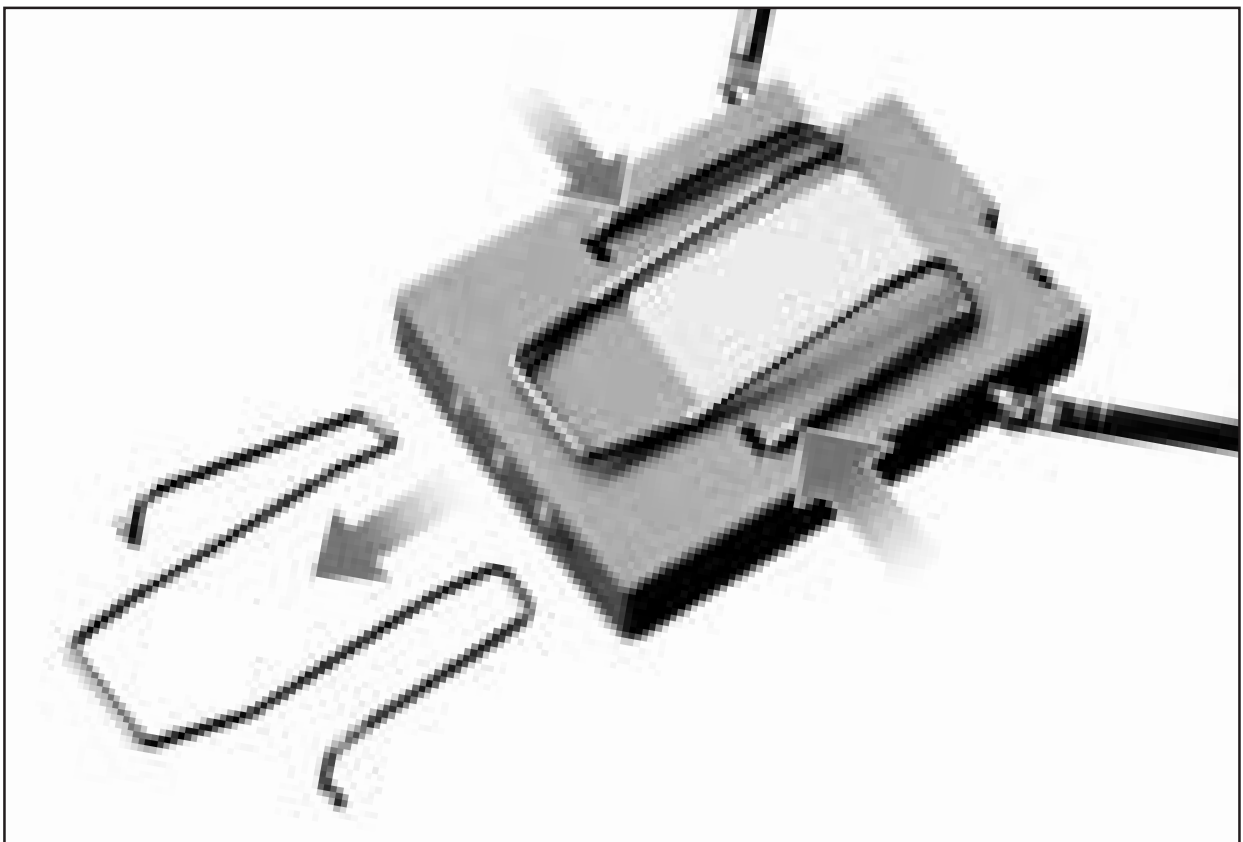


Fig. 5: Removing the belt clip.

strips and attach it to the receiver rear panel.

4. Remove the backing from the other strip and attach it to the mixer, pedalboard, or camera.

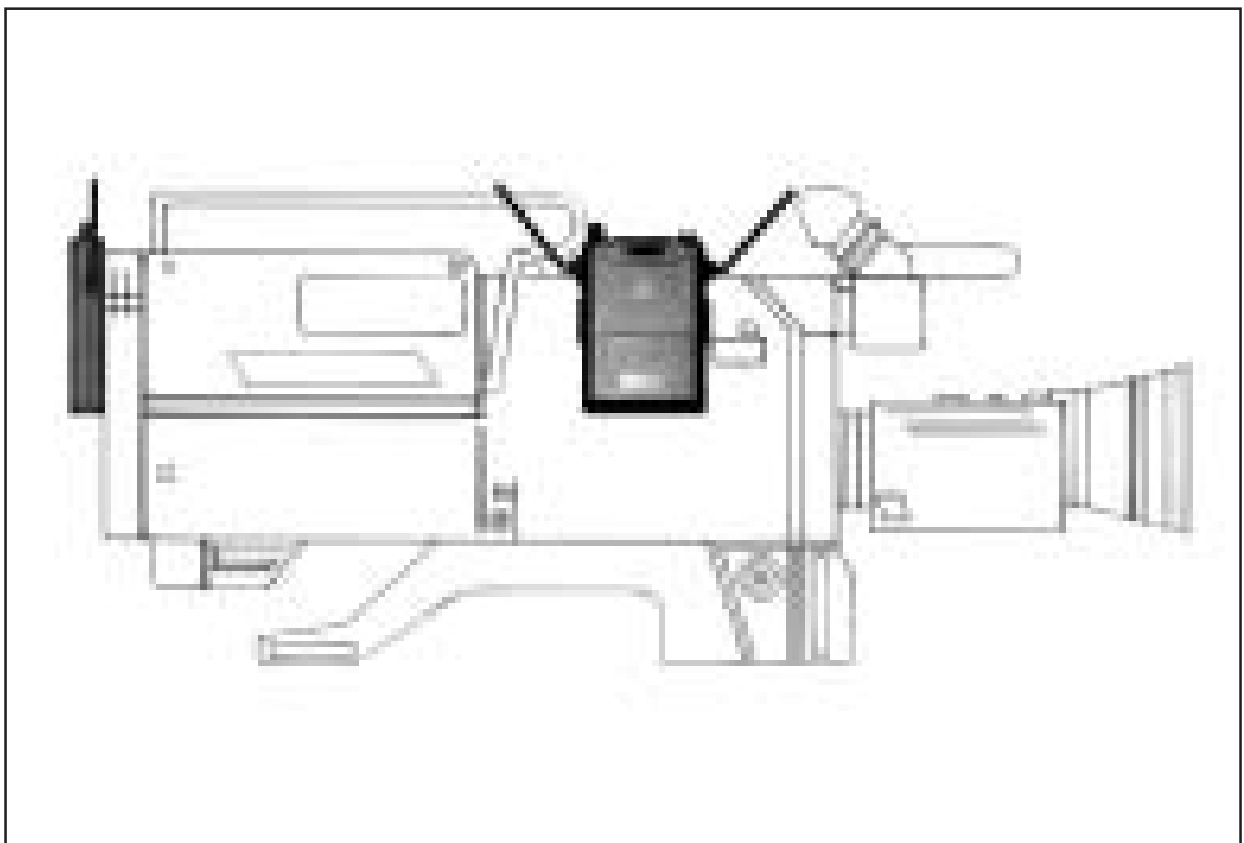


Fig. 6: Optimum antenna position.

To ensure perfect reception, position the Velcro strip so that the antennas on the receiver will protrude above the mixer, pedalboard, or camera. (Refer to fig. 6).

4.1.1 Audio Connection (Fig. 7)

The supplied connecting cable lets you connect the line output on the receiver to an audio input on a mixing console, pedalboard, or video camera.

1. Check what connector type you will need for your equipment and solder the connector to the cable.

Cable pinout:

Red wire: line level

White wire: headphone signal

Shield: ground

Important: Please refer to the instruction manual of the equipment to which you will connect the receiver to check which wire you should connect to which pin on the connector.

2. If the selected input provides phantom power, switch the phantom

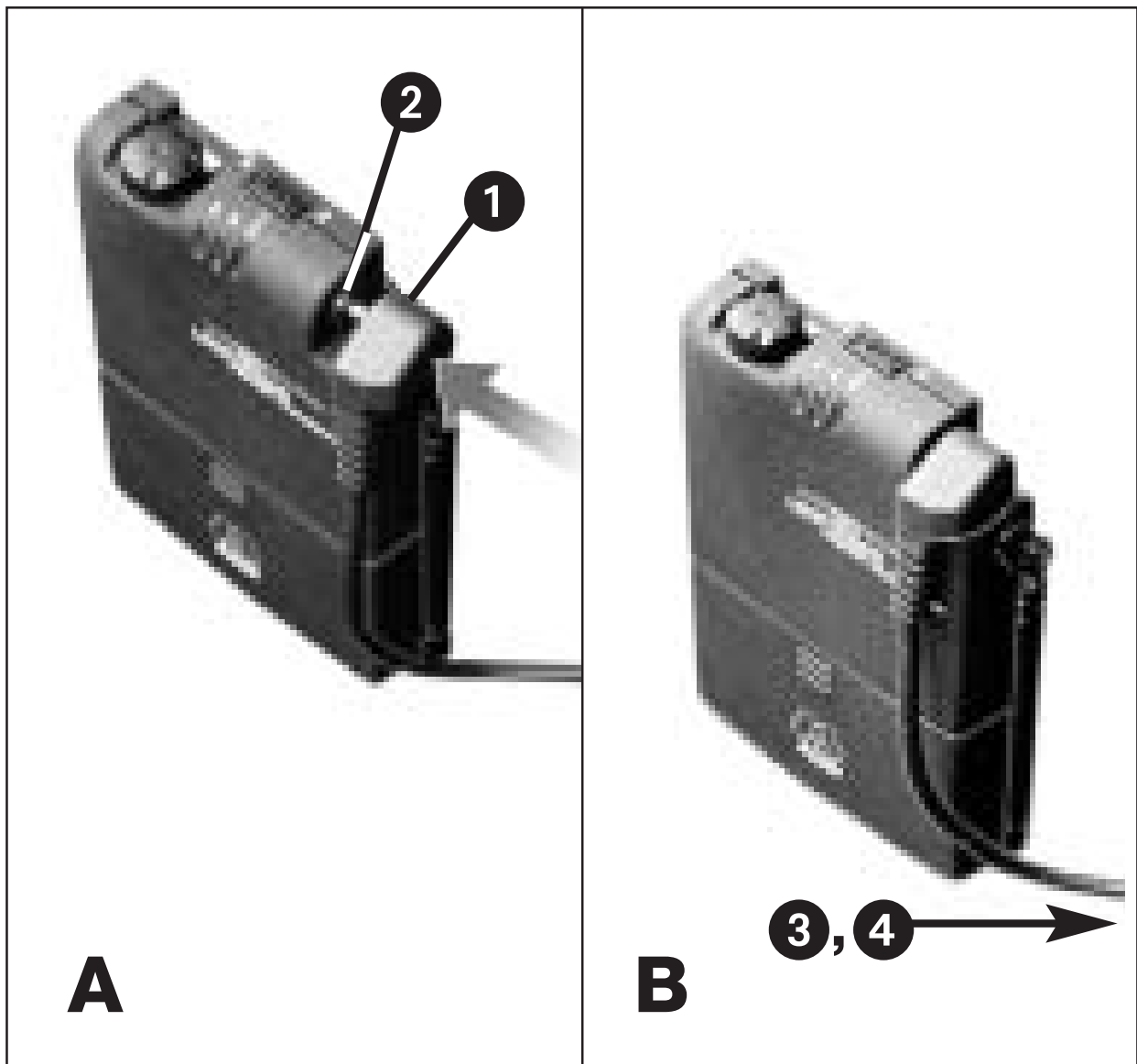


Fig. 7: Audio connection

power OFF.

Refer to the manual of your equipment.

3. Plug the .1-in. jack plug (1) on the connecting cable into the output jack (2) on the receiver.

The connecting cable has a rotatable .1-in. jack plug so you can route the cable to rest snugly against the receiver.

4. Plug the other connector (3) on the connecting cable into the desired input jack (4).

4.2 Tour Guide and Interpretation Systems

Contact your local AKG Distributor to order your preferred AKG headphones in a custom version with a 0.1-in. TRS jack plug.

Important: Do not connect headphones with an impedance of less than 16 Ω to the PR 40 receiver. Headphones with a lower impedance would overload the receiver output stage.

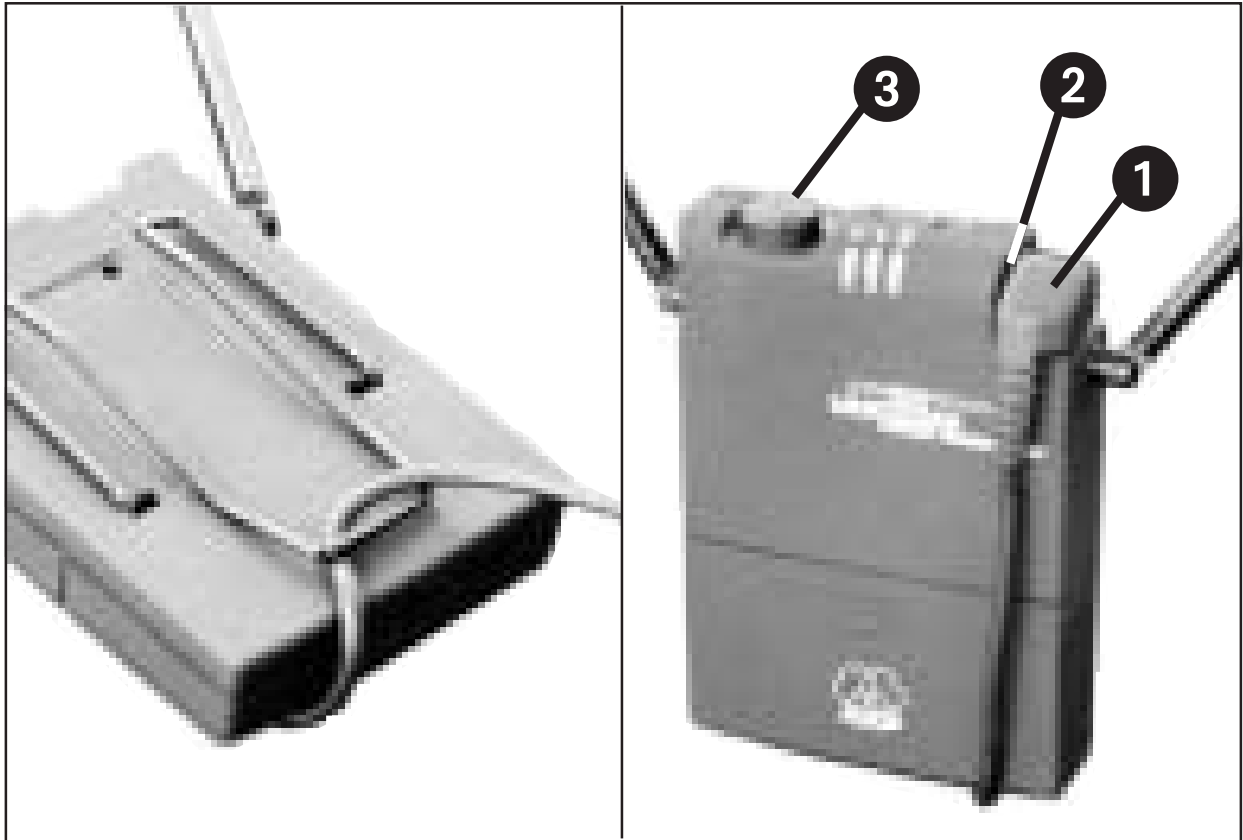


Fig. 8: connecting headphones.

1. To relieve the connection of the strain of the headphone cable, pass the headphone cable under the belt clip as shown in fig. 8 (left).
2. Plug the .1-in. jack plug (1) on the headphone cable into the output jack (2) on the receiver.
3. Use the volume control (3) to set the desired volume level for the headphones.

4.3 Aligning the Antennas (Fig. 9)

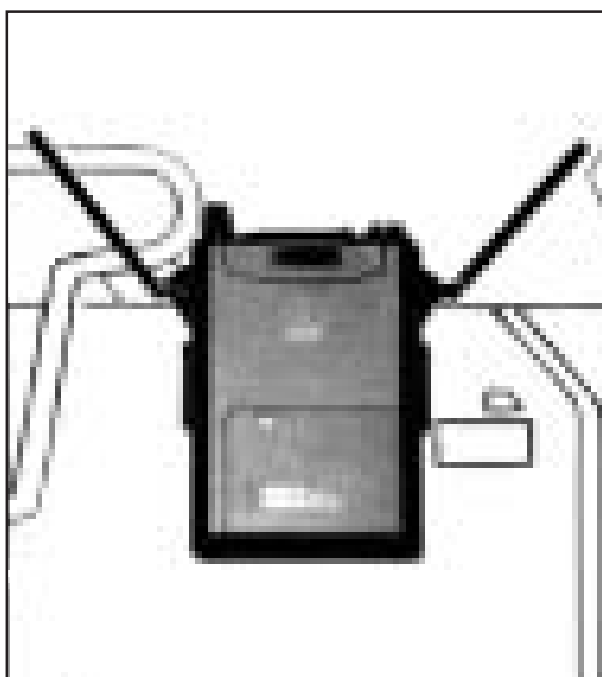


Fig. 9: Optimum antenna alignment

For optimum reception, point each antenna away from the receiver at an angle of 45 degrees. With the antennas aligned like this, the diversity function will operate optimally and prevent disturbances such as noise or dropouts most efficiently.

If you wear the receiver on the belt it makes no difference whether you point the antennas up or down as long as you align them in a "V" as described above.

If you mount the receiver on a mixer or other equipment, align the antennas in a "V" and make sure the antennas will

protrude above the equipment case. This will prevent dropouts due to shadow effects of the case.



5 Cleaning

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



6 Specifications

Receiving frequency range: 710 to 865 MHz

Modulation:	FM
Audio bandwidth:	40 to 20,000 Hz
T.H.D.:	<0.8%
Signal/noise ratio:	108 dB(A) typ.
Current consumption:	120 mA typ.
Battery life:	>6 hours (2 x 1.5 V AAA size batteries)
Audio outputs:	Unbal. line (tip): -6 dBm (10 kΩ) Headphone output (ring): 18 mW typ. into 15 Ω; 13 mW typ. into 100 Ω
Size:	77 x 55 x 15 mm (3 x 2.2 x 0.6 in.)
Weight:	approx. 60 g (2.1 oz.)

This product complies with the following standards: EN60065:1998, EN301 489-9 v.1.1.1 (09-2000) and EN300 422-2 v.1.1.1 (07-2000).

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