AKG.WIRELESS

WIRELESS
MICROPHONE
SYSTEM

PR 81
HT 81
PT 81

User Instructions
Please read the manual before using the equipment!

Table of Contents

I PART I: GENERAL

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. Spill no liquids on the equipment and do not drop any objects through the ventilation slots in the equipment.
2. Do not place the equipment near heat sources such as radiators, heating ducts, or amplifiers, etc. and do not expose it 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!

The PR 81 portable receiver is available separately or as a complete system with an HT 81 handheld transmitter or PT 81 bodypack transmitter.

2.2 Unpacking

2.2.1 PR 81 Receiver

1 PR 81 receiver

1 screwdriver

1 mini XLR to XLR connecting cable

2 AA size 1.5 V batteries

1 belt clip

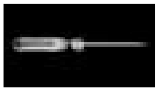
Velcro tape for camera mounting

2.2.2 Handheld System

1 PR 81 receiver with accessories

1 SA 43 stand adapter

1 HT 81 handheld transmitter



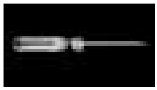
1 screwdriver

2 AA size 1.5 V batteries for the handheld transmitter

1 carrying case

2.2.3 Bodypack System

1 PR 81 receiver with accessories



1 screwdriver

1 PT 81 bodypack transmitter

1 carrying case

2 AA size 1.5 V batteries for the bodypack transmitter

Please check that the package contains all the components listed above for your system. If anything is missing contact your AKG dealer immediately.

2.3 Optional Accessories

2.3.1 PR 81

PA 81 supply adapter for supply voltages between 5 V DC and 18 V DC
MK HP connecting cable for headphones
MK HP/C connecting cable for cameras and headphones

2.3.2 HT 81

W 880 foam windscreen for D 880 WL1
W 3001 foam windscreen for D 3700 WL1 and C 5900 WL1
W 23 foam windscreen for C 535 WL1
CC 60 Color Coding Kit

I PART I: GENERAL

2.3.3 PT 81 **CB 40 bag**
Color Coding Kit

2.4 Frequencies The PR 81 portable receiver, HT 81 handheld transmitter, and PT 81 bodypack transmitter have been factory programmed for up to 15 selectable carrier frequencies. A carrier frequency label on the receiver, on the handheld transmitter, or on the bodypack transmitter indicates the Frequency Set the unit uses and all available carrier frequencies.

For currently available Frequency Sets and frequencies suited for intermodulation-free simultaneous operation, refer to the Frequency Lists in Part VI.

2.5 Ordering Transmitters and Receivers If you wish to order additional transmitters or receivers operating on the same set of frequencies as your original equipment, be sure to state the designation of your original Frequency Set and the serial number of the original device. We need this information to make sure your new equipment will be compatible with the original units.

II PART II: PR 81 RECEIVER

1 Description

1.1 General The PR 81 is a portable diversity receiver you can wear on the belt or in a shirt or jacket pocket. You may also use the supplied Velcro fastener to mount the receiver on a camcorder. The PR 81 operates in a UHF band from 710 MHz to 860.9 MHz using a switching subband that is up to 3 MHz wide. Subject to local frequency allocations, you can switch the PR 81 to one of up to 15 different carrier frequencies.

1.2 Controls
1.2.1 Top Panel

1a POWER I/O: on/off switch.

1b POWER LED: indicates battery status:
LED flashes momentarily on switching power ON and extinguishes: batteries are O.K.
LED does not illuminate on switching power ON: no or dead batteries are in the battery compartment.
LED constantly lights brightly: batteries will be dead in about 60 minutes.

1c RF LED: Indicates the field strength of the received signal and the squelch status:
LED lighting green: optimum signal strength.
LED lighting red: the received signal is muted because the squelch is engaged or the receiver has been set to a different channel than the transmitter.
LED does not light: power to the receiver is OFF, no batteries are in the battery compartment, or the batteries are dead.

1d 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.

Refer to section 1.3 Audio Output.

1e Rotary control: Sets the volume level of the headphone output.

1f Security cover: This rotatable cover prevents the POWER switch (1a) from being actuated unintentionally. The indicator LEDs will remain visible even if the security cover is closed.

1g Antennas: Being a diversity receiver, the PR 81 uses two antennas in order to receive the transmitter signal at two different points in space. The diversity circuit will automatically activate the antenna that provides the better signal.

1.2.2 Front Panel

1h Color code platelet: If you use the receiver within a multichannel system, you can remove the black plastic platelet and replace it with a different color platelet from the optional Color Coding Kit. This allows you to identify the various channels clearly and easily.

1i Battery compartment: Accepts the supplied 1.5 V dry batteries, rechargeable batteries of the same size (not supplied), or the optional PA 81 supply adapter.

1j SQUELCH: The 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. Set the SQUELCH control to minimum before switching power to the receiver ON for the first time. (For details, refer to Part V, section 1.)

1k CHANNEL: This rotary switch selects the desired receiving frequency.

1l Battery compartment cover.

1m Screwdriver: A detachable screwdriver is provided on the inside of the battery compartment cover (1l) for adjusting the SQUELCH and CHANNEL controls.

1.2.3 Rear Panel

1n Carrier frequency table: Sticker indicating the available carrier frequencies and the frequency set for which your receiver has been programmed.

1o Approval marks.

1p Belt clip for fixing the receiver on your belt.

1.3 Audio Output

The AUDIO OUT 3-pin mini XLR connector (1r) on the receiver top panel provides a fixed-level line output and an adjustable mono headphone output. The rotary control (1e) lets you adjust the volume level of the headphones output.
The AUDIO OUT connector (1c) is wired as follows:
Pin 1: ground
Pin 2: line output (fixed level)
Pin 3: headphone output (adjustable)

Important:

In order to avoid overloading the headphone amplifier, do not connect headphones with an impedance of less than 16 Ω to the headphone output.

2 Setting Up

2.1 Selecting the Receiving Frequency

Prior to inserting batteries into the receiver, set the transmitter and the receiver to the same carrier frequency. The carrier frequency tables on the transmitter (2h, 3k) and receiver (1l) indicate the channel numbers corresponding to the various carrier frequencies.

1. If the belt clip (1p) is attached to the receiver, remove the belt clip (1p) first so you can open the battery compartment (1l):
   Use a screwdriver as a lever to lift both ends of the belt clip (1p) out of the fixing holes in the receiver side panels.
2. To open the battery compartment (1l), press down on the arrow symbol on the battery compartment cover (1l) and push the battery compartment cover (1l) in the direction of the arrow away from the receiver.
3. Remove the screwdriver (1m) from the battery compartment cover (1l).
4. Use the screwdriver (1m) to set the CHANNEL selector (1k) to the desired channel.
5. Set the transmitter to the same channel referring to section 2.1 in Part III: HT 81 Handheld Transmitter or Part IV: PT 81 Bodypack Transmitter.

II PART II: PR 81 RECEIVER

Important: **If you wish to set up a multichannel system, read section 1.1 Multichannel Systems in Part V first.**

2.2 Powering

To power the PR 81 portable receiver you can use the supplied 1.5 V AA size dry batteries, 1.5 V AA size rechargeable batteries (not supplied), or the optional PA 81 supply adapter for direct powering from a camcorder.

2.2.1 Inserting Dry or Rechargeable Batteries

1. If the belt clip (1p) is attached to the receiver, remove the belt clip (1p) first so you can open the battery compartment (1l):
   Use a screwdriver as a lever to lift both ends of the belt clip (1p) out of the fixing holes in the receiver side panels.
2. To open the battery compartment (1l), press down on the arrow symbol on the battery compartment cover (1l) and push the battery compartment cover (1l) in the direction of the arrow away from the receiver.
3. Insert the supplied batteries into the battery compartment (1l) making sure to align them with the polarity marks inside the battery compartment (1l).
   If you insert the batteries incorrectly, the receiver will not be powered.

Note: You may use 1.5 V AA size rechargeable batteries instead of the supplied dry batteries.

4. Set the POWER switch (1a) to "I" to switch power to the receiver ON.
   The POWER LED (1b) will flash momentarily. If the batteries are fully charged the POWER LED (1b) will extinguish.
   If the POWER LED (1b) begins to light constantly the batteries will be dead in approximately 60 minutes. Replace the batteries with new or fully charged ones as soon as possible.
   If the POWER LED (1b) does not flash the batteries are dead. Insert new batteries.
5. Use the supplied screwdriver (1m) to set the SQUELCH control (1j) fully CCW (minimum). For details on setting the SQUELCH control (1j) refer to section 1 in Part V.
6. Align the battery compartment cover (1l) with the guide grooves on the battery compartment (1i) and push the battery compartment cover (1l) against the direction of the arrow to the point that the battery compartment cover (1l) clicks shut.

2.2.2 Replacing Batteries

If the POWER LED (1b) begins to light constantly and brightly the batteries will be dead in approximately 60 minutes.
If the POWER LED (1b) does not flash on switching power ON or the RF LED (1c) extinguishes, the batteries are dead.
Replace the batteries with new or fully charged ones.

1. If the belt clip (1p) is attached to the receiver, remove the belt clip (1p) first so you can open the battery compartment (1l):
   Use a screwdriver as a lever to lift both ends of the belt clip (1p) out of the fixing holes in the receiver side panels.
2. To open the battery compartment (1l), press down on the arrow symbol on the battery compartment cover (1l) and push the battery compartment cover (1l) in the direction of the arrow away from the receiver.
3. Remove the batteries from the battery compartment (1i).
4. Insert the new batteries into the battery compartment (1i) making sure to align them with the polarity marks inside the battery compartment (1l).
   If you insert the batteries incorrectly, the receiver will not be powered.
5. Align the battery compartment cover (1l) with the guide grooves on the battery compartment (1i) and push the battery compartment cover (1l) against the direction of the arrow to the point that the battery compartment cover (1l) clicks shut.

2.2.3 PA 81 Optional Supply Adapter

The optional PA 81 supply adapter allows you to power the PR 81 receiver directly from an external power supply such as a DC supply output on a camcorder. The PR 81 supply adapter has been designed for supply voltages from 5 V DC to

18 V DC and has a fixed 20-in. (50-cm) connecting cable with stripped and tinned leads.
An automatic fuse switches the PA 81 OFF if the supply voltage is shorted.
The PA 81 requires a maximum power of 1 watt.

1. Check that the voltage source on your camcorder provides a voltage between 5 V DC and 18 V DC and sufficient current to satisfy the 1-watt power requirement of the PA 81. Also check what type of connector you will need. — Refer to your camcorder manual.
2. Fix a connector of the type matching your camcorder DC output to the connecting cable of the supply adapter.
3. Open the battery compartment (1i). — Refer to section 2.2.2 above.
4. Insert the supply adapter into the battery compartment (1i) so that the connectng cable will pass through the opening in the bottom panel of the receiver.
   If you insert the supply adapter in a different orientation the receiver will not be powered and you will not be able to close the battery compartment (1i).
5. Align the battery compartment cover (1l) with the guide grooves on the battery compartment (1i) and push the battery compartment cover (1l) against the direction of the arrow to the point that the battery compartment cover (1l) clicks shut.
6. Plug the connecting cable into the appropriate jack on your camcorder. — Refer to your camcorder manual.

If the automatic fuse has switched the supply adapter OFF because the supply voltage has been shorted: — **Important:**
1. Unplug the connecting cable from the camcorder.
2. Correct the problem.
3. Plug the connecting cable into the camcorder jack again.

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1. Remove the backing from the supplied Velcro strips. — **2.3 Mounting the Receiver on a Camera (1s)**
2. Attach one of the Velcro strips to the rear panel of the receiver.
3. Attach the other Velcro strip to the camera. In order to ensure perfect reception, position the Velcro strip so that the antennas (1g) on the receiver will protrude above the camera.

You can fix the belt clip (1p) to the receiver in four different ways: — **2.4 Using the Belt Clip**

a) On the rear panel, pointing down. The antennas (1g) will be pointing up.
b) On the rear panel, pointing up. The antennas (1g) will be pointing down.
c) On the front panel, pointing down. The antennas (1g) will be pointing up.
d) On the front panel, pointing up. The antennas (1g) will be pointing down.

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1. Insert the ends of the belt clip (1p) into the fixing holes in the side panels of the receiver. — 2.4.1 Attaching the Belt Clip
   The belt clip (1p) will lock the battery compartment cover (1l).
2. Clamp the receiver to the belt or a shirt or jacket pocket.
3. Point each antenna (1g) away from the receiver at an angle of approximately 45 degrees.

Use a screwdriver as a lever to lift both ends of the belt clip (1p) out of the fixing holes in the receiver side panels. — 2.4.2 Removing the Belt Clip

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The supplied connecting cable lets you connect the line output on pin 2 of the mini XLR jack (1r) on the receiver to an XLR input on a camcorder or mixing console. — **2.5 Audio Connection**

1. If the selected input provides phantom power, switch the phantom power OFF. Refer to the manual of your camcorder or mixing console.
2. Plug the mini XLR connector on the connecting cable into the AUDIO OUT jack (1r) on the receiver.
3. Plug the XLR connector on the connecting cable into the desired XLR input jack.

II PART II: PR 81 RECEIVER

2.6 Connecting Headphones

To connect a pair of headphones to the receiver, you will need an optional MK HP adapter cable from AKG. This cable provides a mini XLR connector and a TS mini jack for connecting headphones with a mini jack plug.

Important: **In order to avoid overloading the headphone amplifier, do not connect headphones with an impedance of less than 16 Ω to the headphone output.**

1. Plug the mini XLR connector on the adapter cable into the AUDIO OUT jack (1r) on the receiver.
2. Connect the headphones to the mini jack on the adapter cable.
3. Use the rotary control (1e) to set the volume level for the headphones.

2.7 Connecting to a Camera and Headphones

The optional MK HP/C Y cable from AKG lets you connect the receiver to a camcorder or mixing console and monitor the received signal using headphones with a mini jack plug.

Important: **In order to avoid overloading the headphone amplifier, do not connect headphones with an impedance of less than 16 Ω to the headphone output.**

1. Plug the mini XLR connector on the Y cable into the AUDIO OUT jack (1r) on the receiver.
2. Plug the XLR connector on the Y cable into the desired XLR input jack on the camcorder or mixing console.
3. Connect the headphones to the mini jack on the Y cable.
4. Use the rotary control (1e) to set the volume level for the headphones. The line output level is not adjustable.

2.8 Aligning the Antennas

For optimum reception, point each antenna (1g) 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 (1g) up or down as long as you align them in a "V" as described above. If you mount the receiver on a camcorder, align the antennas in the same way and make sure the antennas (1g) will protrude above the camera case. This will prevent dropouts due to shadow effects of the camera case.

2.9 Color Code

To replace the black color code platelet (1) on the receiver with a different-color platelet from the optional CC 60 Color Coding Kit,

1. Lift the end of the black color code platelet (1h) on the top panel of the receiver and remove the color code platelet (1h).
2. Select a color code platelet of the desired color from the CC 60 Color Coding Kit and snap the selected platelet onto the receiver.

PART III: HT 81 HANDHELD TRANSMITTER III

1 Description

The HT 81 handheld transmitter and matching microphone elements (optional) provide the same acoustic performance as the equivalent hardwire microphone versions. The microphone elements available for the HT 81 have been specifically designed for vocal use.
The HT 81 operates in a subband up to 3 MHz wide within the 710 MHz to 860.9 MHz UHF carrier frequency range. The HT 81 can be switched to a maximum of 15 different carrier frequencies depending on local frequency allocations. The transmitter uses a dipole antenna integrated in the body.
The controls can be protected against accidental misadjustment collectively (2d) or individually with the supplied adjustable protective ring (2j).

1.1 Controls

2a PWR: Switches the transmitter power ON ("I") and OFF ("0").
2b Status LED: Indicates battery status and audio input overload.
LED glowing dimly: batteries are OK.
LED constantly lighting brightly: batteries will be dead in about 60 minutes.
LED illuminating brightly: audio input is overloaded.
2c MIC: Mutes the audio signal (position "0") while power and carrier frequency remain ON.
2d Color Code: If you use the transmitter in a multichannel system you can remove the black plastic ring and replace it with a colored ring from the optional Color Coding kit to identify each wireless channel by a different color.
2e GAIN: This rotary pot allows you to match the microphone level to the transmitter's audio section.
2f Battery Compartment: Refer to Section 2 Setting Up.
2g CHANNEL: This rotary switch selects the desired carrier frequency (depending on local allocations) or switches between the carrier frequency and its alternative frequencies.

Important:

Prior to selecting frequencies, switch the transmitter OFF.

2h Carrier Frequency Table: A label listing the available frequencies is affixed to the battery compartment.
2i Frequency Set Designation: The label inside the battery compartment also indicates the designation of the Frequency Set.
2j Adjustable protective ring: Protects the controls from being misadjusted accidentally.

1.2 Interchangeable Microphone Elements (not supplied)

The interchangeable microphone elements (2k) D 880 WL1, D 3700 WL1, D 3800 WL1, C 5900 WL1, and C 535 WL1 are acoustically and mechanically identical to the equivalent hardwire versions. They feature the same transducer capsules and mechanical construction.
Extremely high gain before feedback, optimum handling noise rejection, ultimate protection from damage, and an integrated wind and pop screen are only the most impressive features of these microphones. For more details, refer to the respective AKG brochures.

III PART III: HT 81 HANDHELD TRANSMITTER

2 Setting Up

2.1 Selecting the Carrier Frequency

1. Unscrew the battery compartment cover CCW and remove the color code ring (2d or 2j) from the transmitter.
   All controls are now accessible.
2. Use the supplied screwdriver (1m) to set the CHANNEL control (2g) to the desired channel.
3. Set the CHANNEL control (1k) on the receiver to the same channel as the transmitter.

Important: **Be sure to switch power to the transmitter OFF every time before changing the carrier frequency. The new carrier frequency will not be activated before you switch the transmitter back ON. (If you change the carrier frequency while the transmitter is ON, the transmitter will remain tuned to the old carrier frequency.)**

Important: **If you wish to set up a multichannel system, read section 1.2 Multichannel Systems in Part V first.**

2.2 Microphone Element

Prior to switching the transmitter on, screw the microphone element CW onto the thread on the transmitter. All electrical connections will be made automatically.

2.3 Inserting, Testing, and Removing Batteries

1. Make sure that the end of the ribbon fixed inside the battery compartment (2f) will stick out of the battery compartment (2f). (The ribbon is needed for removing the batteries.)
2. Insert the supplied batteries into the battery compartment (2f) conforming to the polarity marks.
   The transmitter will not function with incorrectly inserted batteries.
3. Set the PWR switch to "I" to switch the power to the transmitter on.
   The status LED (2b) will flash momentarily. If the batteries are in good condition, the status LED (2b) will continue glowing dimly.
   When the status LED (2b) illuminates brightly the batteries will be dead within about 90 minutes. Replace the batteries with new ones as soon as possible.
   If the status LED (2b) fails to illuminate the batteries are dead. Insert new batteries.
4. Replace the supplied protective ring (2j) and screw the battery compartment cover back onto the transmitter CW.

Note: If you prefer to cover all controls permanently, reinstall the original unadjustable black plastic ring (2d) after adjusting the system as described in Part V, section 1.

5. Removing batteries: Pull the ribbon outward to release the batteries from the battery compartment (2f) and remove the batteries.

2.4 Color Code

If you use the transmitter in a multichannel system you can install a colored protective ring from the optional CC 60 Color Coding Kit to identify each wireless channel by a different color. These security rings are also adjustable.

1. Unscrew the battery compartment cover CCW.
2. Remove the protective ring (2j) from the transmitter.
3. Slide a protective ring of the desired color onto the transmitter.
4. Screw the battery compartment cover back onto the transmitter CW.

PART IV: PT 81 BODYPACK TRANSMITTER IV

1 Description

You can use the PT 81 bodypack transmitter with both dynamic microphones and condenser microphones operating on a supply voltage of approx. 7 V.
The PT 81 operates in a subband up to 3 MHz wide of the 710 MHz to 869 MHz UHF carrier frequency range. The PT 81 can be switched to a maximum of 15 different carrier frequencies depending on local frequency allocations.

1.1 Controls

3a POWER: Switches the transmitter power ON ("I") and OFF ("0").
3b MIC: Mutes the audio signal (position "0") while power and carrier frequency remain ON.
3c Status LED: Indicates battery status and audio input overload.
LED glowing dimly: batteries are OK.
LED constantly lighting brightly: batteries will be dead in about 60 minutes.
LED illuminating brightly: audio input is overloaded.
3d Audio Input: 3-pin mini XLR connector with both mic and line level pins that automatically match the connector pinout of the recommended microphones (see Part IV, section 1.2).
3e Color Code: If you use the transmitter within a multichannel system, you may remove the black plastic platelet and replace it with a colored platelet included in the optional Color Coding Kit to identify each channel by a different color.
3f CHANNEL: This rotary switch selects the desired carrier frequency.

Important:

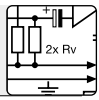
Prior to selecting frequencies, switch the transmitter OFF.

3g Belt Clip for fixing the transmitter to your belt.
3h Battery Compartment: Refer to Section 2 Setting Up.
3i Antenna: Permanently connected, flexible antenna.
3j GAIN: This rotary pot allows you to match the microphone or instrument level to the transmitter's audio section.
3k Carrier Frequency Table: A label listing the available frequencies is affixed to the transmitter rear panel.
3l Frequency Set Designation: The label on the rear panel also indicates the designation of the Frequency Set.
3m Security Cover: Protects the POWER and MIC switches from being actuated unintentionally.

1.2 Microphones (optional)

The following AKG microphones have been designed specifically for direct connection to the audio input of the PT 81:
C 417 L
C 420 L
C 444 L
CK 77 L

2 Setting Up



2.1 Selecting the Carrier Frequency

1. Open the battery compartment (3h).
   All controls are now accessible.
2. Use the supplied screwdriver (1m) to set the CHANNEL control (3f) to the desired channel.
3. Set the CHANNEL control (1k) on the receiver to the same channel as the transmitter.

IV PART IV: PT 81 BODYPACK TRANSMITTER

Important: **Be sure to switch power to the transmitter OFF every time before changing the carrier frequency. The new carrier frequency will not be activated before you switch the transmitter back ON. (If you change the carrier frequency while the transmitter is ON, the transmitter will remain tuned to the old carrier frequency.)**

Important: **If you wish to set up a multichannel system, read section 1.2 Multichannel Systems in Part V first.**

2.2 Inserting and Testing Batteries

1. Open the battery compartment (3h).
2. Insert the supplied batteries into the battery compartment (3h) conforming to the polarity marks.
   The transmitter will not function with incorrectly inserted batteries.
3. Close the battery compartment (3h). The GAIN control (3j) remains accessible through an opening in the battery compartment cover.
4. Rotate the security cover (3m) CW to uncover the switches.
5. Set the POWER switch (3a) to "I" to switch the power to the transmitter on. The status LED (3c) will flash momentarily. If the batteries are in good condition, the status LED (3c) will continue glowing dimly.
   When the status LED (3c) illuminates brightly the batteries will be dead within about 90 minutes. Replace the batteries with new ones as soon as possible.
   If the status LED (3c) fails to illuminate the batteries are dead. Insert new batteries.
6. Snap the security cover (3m) back over the switches CCW.
   You can wear the transmitter inside a shirt or jacket pocket, fix it to your belt with the belt clip (3g).

Important: **Make sure the antenna will hang down freely, without being covered by the body.**

2.3 Connecting and Using Microphones

1. Connect your microphone to the audio input (3d).
2. For details on how to use your microphone for best results, refer to the microphone instruction manual.

2.4 Color Code

To replace the black color code platelet (3e) on the transmitter with a different-color platelet from the optional CC 60 Color Coding Kit,

1. Lift the end of the black color code platelet (3e) on the top panel of the transmitter and remove the color code platelet (3e).
2. Select a color code platelet of the desired color from the CC 60 Color Coding Kit and snap the selected platelet onto the transmitter.

V PART V: OPERATING NOTES

1 Adjusting the Transmitter and Receiver

1.1 Adjustments

1. **Handheld transmitter:** Using the supplied screwdriver (1m), set the GAIN control (2e) so that on the receiver the AF LEDs (1h) will light green and the AF LED (1d) on the receiver as well as the status LED (2b) on the transmitter will only flash on the loudest signal peaks.
   Bodypack transmitter: Using the supplied screwdriver (1m), set the GAIN control (3j) so that on the receiver the AF LEDs (1h) will light green and the AF LED (1d) on the receiver as well as the status LED (3c) on the transmitter will only flash on the loudest signal peaks.

2. The red AF LED (1hd on the receiver constantly lighting red and/or the status LED (2b, 3c) on the transmitter lighting constantly means the transmitter is overloaded. Turn the GAIN control (2e) or (3j) on the transmitter CCW to the point that the above LEDs will only flash occasionally.
3. Set the audio input level on your camcorder or on the mixer channel to which the receiver is connected.
   If the selected input provides phantom power, switch the phantom power OFF.
4. If unwanted noise becomes audible, turn the SQUELCH control (1j) CW just enough to suppress the noise.
   The RF LED (1c) will light red every time the squelch mutes the audio output of the receiver.

Refer to the manual of your camcorder or mixing console.

Never set the squelch threshold higher than absolutely necessary. The higher the squelch threshold, the lower the sensitivity of the receiver and thus the usable range between transmitter and receiver.

Important:

5. Check the field strength of the received signal. If the RF LED (1c) is dark, reposition the receiver and/or transmitter such that the RF LED (1c) will light green.
6. The RF LED (1c) on the receiver illuminating means no signal is received or the squelch is active.
   Switch the transmitter ON, move closer to the receiver, or turn the SQUELCH control (1j) CCW to the point that the RF LED (1c) will light green constantly.

1.2 Multichannel Systems

1. Be sure to assign a separate carrier frequency to each transmission channel (transmitter + receiver).
2. Set the transmitter and receiver to one of the frequencies marked with * in the carrier frequency tables (1n, 2h, 3k).

If reception on the selected carrier frequency is disturbed, set the carrier frequencies for all channels up or down one or two notches using the respective CHANNEL controls (1k, 2g, 3f) on each transmitter and receiver.
This is necessary to provide the minimum frequency spacing required for intermodulation-free multichannel operation.

Important:

Do not operate two or more channels on the same frequency at the same time and location. This would cause unwanted noise due to radio interference.

Important:

2 Cleaning

Use a soft cloth moistened with water to clean the receiver and transmitter surfaces.

VI PART VI: APPENDIX

1 Troubleshooting

Problem	Possible Cause	Remedy
No sound.	1. Receiver is OFF. 2. No batteries inside the transmitter and/or receiver. 3. Receiver is not connected to mixer or camcorder. 4. Audio level control on camcorder or channel fader on mixer is at zero. 5. Microphone is not connected to bodypack transmitter. 6. Transmitter operates on different frequency than receiver. 7. Transmitter on/off switch is at "OFF" or "MUTE". 8. Transmitter and/or receiver batteries are not inserted properly. 9. Transmitter and/or receiver batteries are dead. 10. Transmitter is too far away from receiver or SQUELCH control set too high. 11. Obstructions between transmitter and receiver. 12. Receiver is invisible from transmitter location. 13. Receiver is too close to metal objects.	1. Set POWER switch on receiver to "I". 2. insert batteries into transmitter and/or receiver. 3. Connect receiver output to mixer or camcorder input. 4. Turn up audio level control on camcorder or channel fader on mixer. 5. Connect microphone to audio input on bodypack. 6. Set transmitter and receiver to the same frequency. 7. Set transmitter on/off switch to "ON". 8. Insert batteries conforming to "+" and "-" marks. 9. Insert new batteries into transmitter and/or receiver. 10. Move closer to receiver or turn down SQUELCH control. 11. Remove obstructions from between transmitter and receiver. 12. Avoid spots where you cannot see receiver. 13. Move receiver away from or remove interfering objects.
Noise, crackling, unwanted signals.	1. Antenna location. 2. Interference from other wireless systems, TV, radio, CB radios, or defective electrical appliances or installations.	1. Relocate receiver. 2. Set transmitter and receiver to a different frequency; switch interfering or defective appliances of or have electrical installation checked.
Distortion.	1. GAIN control is set too high or too low. 2. Interference from other wireless systems, TV, radio, CB radios, or defective electrical appliances or installations.	1. Turn GAIN control down or up just enough to stop the distortion. 2. Set transmitter and receiver to a different frequency; switch interfering or defective appliances of or have electrical installation checked.
Momentary loss of sound ("drop-outs") at some locations within performance area.	1. Antenna location.	1. Relocate receiver. If dead spots persist, mark and avoid them.

PART VI - APPENDIX VI

2 Specifications

	HT 81	PT 81	PR 81
Carrier frequency range	710 to 860.9 MHz	710 to 860.9 MHz	710 to 860.9 MHz
Modulation	FM	FM	FM
Audio bandwidth	50 to 20,000 Hz	50 to 20,000 Hz	50 to 20,000 Hz
Frequency stability (-10°C to +50°C)	±10 ppm	±10 ppm	±10 ppm
Rated deviation	30 kHz	30 kHz	-
T.H.D. at 1 kHz	<0.5%	<0.5%	<0.8%
Compander	Yes	Yes	Yes
Signal/noise ratio	typ. 50 dB(A)	typ. 50 dB(A)	>108 dB(A)
RF output	10 mW	10 mW	-
Current consumption	150 mA typ.	180 mA typ.	-
Power requirement	2 x 1.5 V AA size batteries	2 x 1.5 V AA size batteries	2 x 1.5 V AA size batteries
Battery life	>12 hours	>10 hours	>6 hours
Audio input level for rated deviation	350 mV/1 kHz	1400 mV/1 kHz	-
Input impedance	220 kΩ	220 kΩ//320 pF	-
Condenser mic power supply	-	6 V/6.8 kΩ (pin 3)	-
Audio outputs	-	-	Unbal. LINE (pin 2): -6 dBm (600 Ω)
Headphone output:			Pin 3: 30 mW typ. (16 to 100 Ω)
Size (WxDxH)	length: 240 mm (9.4 in.) dia.: 36 mm (1.4 in.)	92 x 65 x 20 mm (3.6 x 2.6 x 0.8 in.)	92 x 65 x 20 mm (3.6 x 2.6 x 0.8 in.)
Net weight	245 g (8.7 oz.)	76 g (2.7 oz.)	80 g (2.8 oz.)

3 Frequenzliste - Frequency List - Liste des fréquences - Elenco delle frequenze - Lista de las frecuencias - Lista de frequências

Set: UK69B (UKSpot)	
CHANNEL	**FREQ.**
0	OFF
1	**858.200MHz***
2	**860.400MHz***
3	**860.900MHz***
4	860.900MHz
5	860.900MHz
6	860.900MHz
7	860.900MHz
8	860.900MHz
9	860.900MHz
A	860.900MHz
B	860.900MHz
C	860.900MHz
D	860.900MHz
E	860.900MHz
F	860.900MHz

Set: US58	
CHANNEL	**FREQ.**
0	OFF
1	734.400MHz
2	**734.600MHz***
3	734.800MHz
4	735.000MHz
5	**735.200MHz**
6	735.400MHz
7	735.600MHz
8	735.800MHz
9	**736.000MHz***
A	736.200MHz
B	736.400MHz
C	736.600MHz
D	736.800MHz
E	**737.000MHz***
F	737.200MHz

Set: EU59	
CHANNEL	**FREQ.**
0	OFF
1	777.600MHz
2	**777.800MHz***
3	778.000MHz
4	778.200MHz
5	**778.400MHz***
6	778.600MHz
7	778.800MHz
8	779.000MHz
9	**779.200MHz***
A	779.400MHz
B	779.600MHz
C	779.800MHz
D	780.000MHz
E	**780.200MHz***
F	780.400MHz

Set: EU62	
CHANNEL	**FREQ.**
0	OFF
1	**802,525MHz**
2	803,025MHz
3	803,100 MHz
4	803,550 MHz
5	**803,575 MHz**
6	803,625 MHz
7	803,675 MHz
8	804,775 MHz
9	804,800MHz
A	**804,850 MHz**
B	805,175 MHz
C	805,200 MHz
D	**805,275 MHz**
E	805,300 MHz
F	805,800 MHz

Set: EU63	
CHANNEL	**FREQ.**
0	OFF
1	812,775 MHz
2	**812,800 MHz**
3	812,825 MHz
4	813,050 MHz
5	813,075 MHz
6	813,100 MHz
7	813,125 MHz
8	813,150 MHz
9	813,175 MHz
A	**813,200 MHz**
B	813,250 MHz
C	813,275 MHz
D	813,300 MHz
E	813,750 MHz
F	**813,800 MHz**

DECLARATION OF CONFORMITY

Document Nr.180/ 6 - 2000

Type of Product: Wireless Microphone System, Pocket Receiver

Brand, Model No.: **PR81**

Manufacturer: AKG Acoustics GmbH
A-1230 Wien, Lemböckgasse 21 - 25
Austria

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

No. 99/5 EC;
Radio Equipment and
Telecommunications Terminal Equipment

The conformity is achieved by fulfilling the following European Standard(s):

ETS 300445:1996, ETS 300445:1997 A1:1995,
EN 60950:1992 +A1:1993 +A3:1995+ A4:1997+A11:1997, ÖVE EN 60950+A11 (A1+A2+A3+A4 eingearbeitet):1997-11

Product examination was carried out by:

TÜV-Österreich, Notified Body 0408

Deutschstraße 10

A-1230 Wien

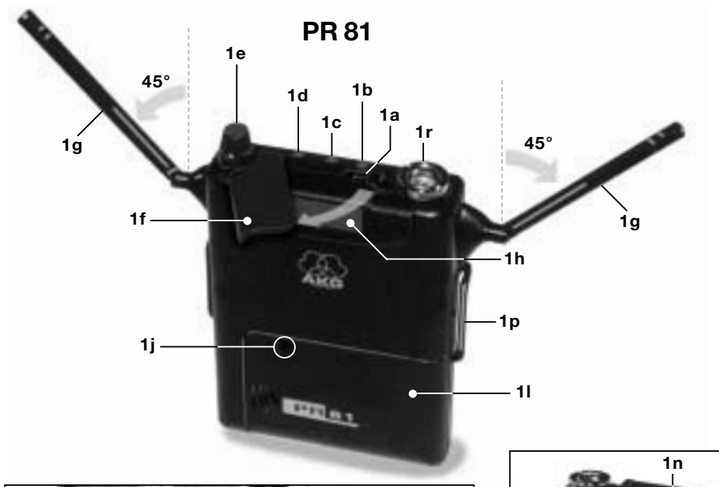
City, Date: Wien, 3.07.2000

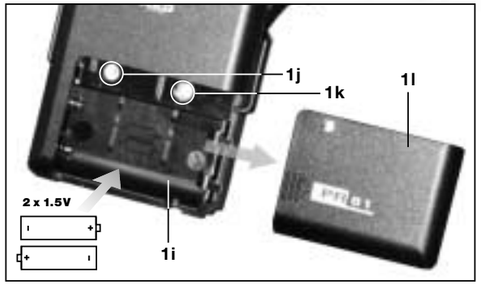
Manufacturer's Signature:

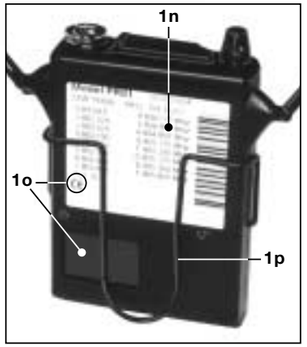
Managing Director
Dr. Hugo Lenhard-Backhaus

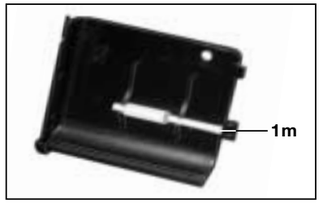
This declaration certifies the accordance with the above mentioned EC-Directive but does not assure certain attributes of the product.

issued:


PR 81
45°
1e
1d
1b
1c
1a
1r
45°
1g
1g
1f
1h
1p
1j
1l


1j
1k
1l
2 x 1.5V
1i


1n
1o
1p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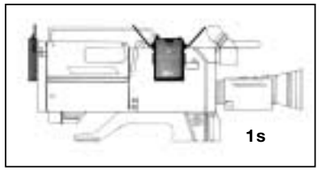
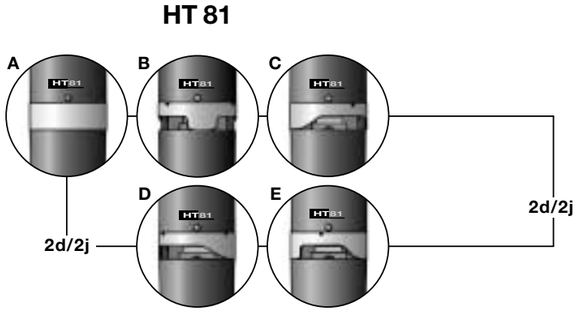
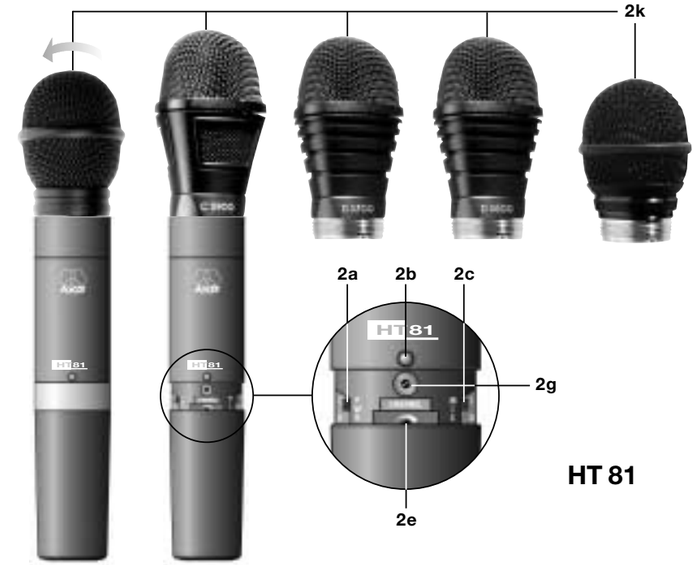
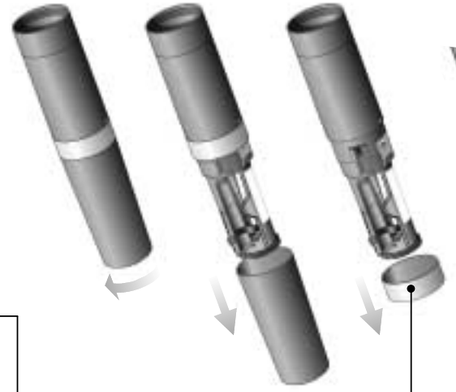
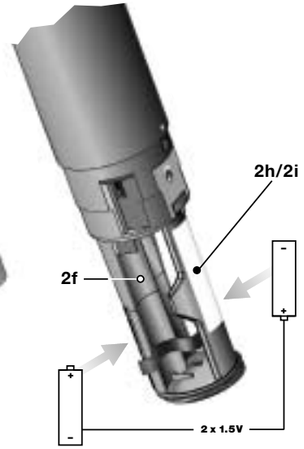

1s

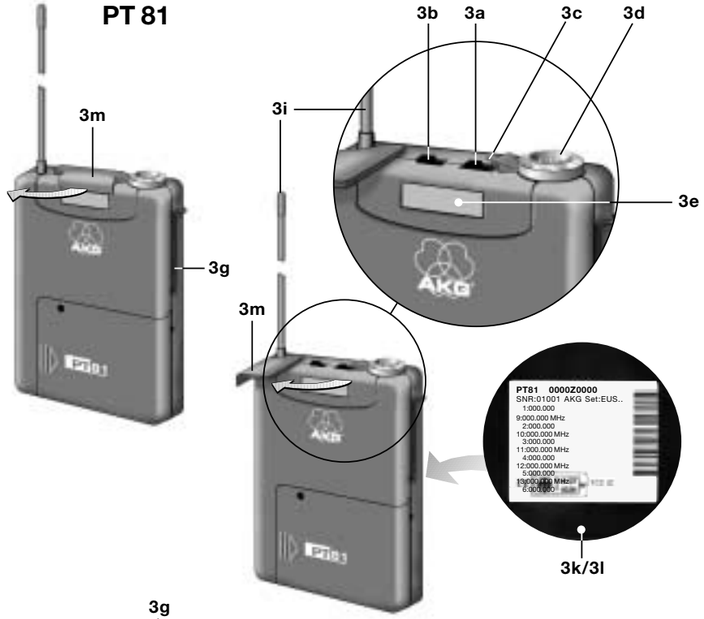

HT 81
A
B
C
D
E
2d/2j
2d/2j

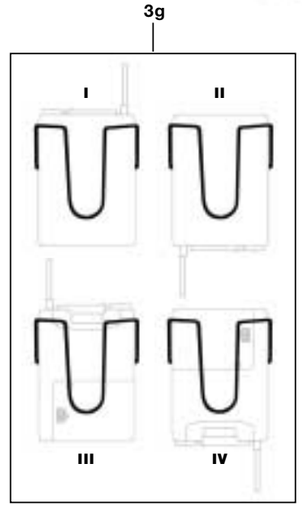

2k
2a
2b
2c
HT 81
2g
2e

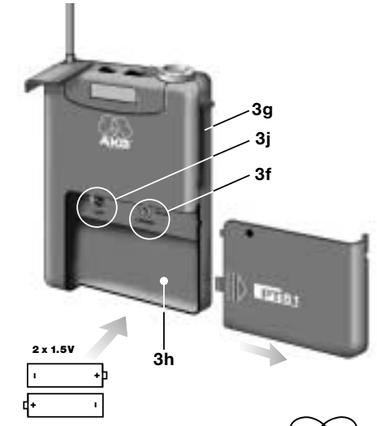
HT 81




2h/2i
2f
2 x 1.5V


PT 81
3b
3a
3c
3d
3i
3m
3e
3g
3m
PT81 0000Z0000
SNR:01001 AKG Set:EUS..
1:000.000
9:000.000 MHz
2:000.000
10:000.000 MHz
3:000.000
11:000.000 MHz
4:000.000
12:000.000 MHz
5:000.000
13:000.000 MHz
6:000.000
3k/3l


3g
I
II
III
IV


3g
3j
3f
3h
2 x 1.5V