

Tourguide 1039



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Important safety instructions

- Read this instruction manual.
- Keep this instruction manual. Always include this instruction manual when passing the product on to third parties.
- Heed all warnings and follow all instructions.
- Only clean the product with a dry cloth.
- Do not place the product near any heat sources such as radiators, stoves, or other devices (including amplifiers) that produce heat.
- Only use attachments/accessories specified by Sennheiser.
- Refer all servicing to qualified service personnel.
Servicing is required if the device has been damaged in any way, liquid has been spilled, objects have fallen inside, the product has been exposed to rain or moisture, does not operate properly or has been dropped.
- **WARNING:** To reduce the risk of short circuits, do not use the product near water and do not expose it to rain or moisture.

Danger of hearing damage due to high volumes

This is a professional receiver. Commercial use is subject to the rules and regulations of the trade association responsible. Sennheiser, as the manufacturer, is therefore obliged to expressly point out possible health risks arising from use.

The EK 1039 receiver is capable of producing sound pressure levels exceeding 85 dB (A). 85 dB (A) is the sound pressure corresponding to the maximum permissible volume which is by law (in some countries) allowed to affect your hearing for the duration of a working day. It is used as a basis according to the specifications of industrial medicine. Higher volumes or longer durations can damage your hearing. At higher volumes, the duration must be shortened in order to prevent hearing damage. The following are sure signs that you have been subjected to excessive noise for too long a time:

- You can hear ringing or whistling sounds in your ears.
- You have the impression (even for a short time only) that you can no longer hear high notes.

Inform the users of your Tourguide application about these facts and, if necessary, ask them to set the volume to a medium level.

Safety instructions for NiMH rechargeable batteries

If abused or misused, rechargeable batteries may leak. In extreme cases, they may even present



- a heat hazard,
- a fire hazard,
- an explosion hazard,
- a smoke or gas hazard.

Sennheiser does not accept any liability for damage arising from abuse or misuse.

	Keep away from children.		Only use rechargeable batteries recommended by Sennheiser.
	Observe correct polarity.		Do not short-circuit.
	Do not expose to moisture.		Switch rechargeable battery-powered products off after use.
	Do not pack charged batteries loose – danger of shorting out/fire hazard.		When not using rechargeable batteries for extended periods of time, charge them regularly (about every three months).
	Only charge rechargeable batteries at ambient temperatures between 10°C/50°F and 40°C/104°F.		Do not heat above 70°C/158°F, e.g. do not expose to sunlight or throw into a fire.
	Do not mutilate or dismantle.		Do not continue to use defective rechargeable batteries.
	Immediately remove rechargeable batteries from an obviously defective product.		Dispose of rechargeable batteries at special collection points or return them to your specialist dealer.
	Store the product in a cool and dry place at room temperature (approx. 20°C/68°F).		Only charge rechargeable batteries with a charger recommended by Sennheiser.
	Remove the rechargeable batteries if the product will not be used for extended periods of time.		

Intended use

Intended use includes:

- using the products for professional purposes,
- having read and understood this instruction manual, especially the chapter “Important safety instructions” on page 2,
- using the products within the operating conditions and limitations described in this instruction manual.

“Improper use” means using the products other than as described in this instruction manual, or under operating conditions which differ from those described herein.

The Tourguide 1039 system

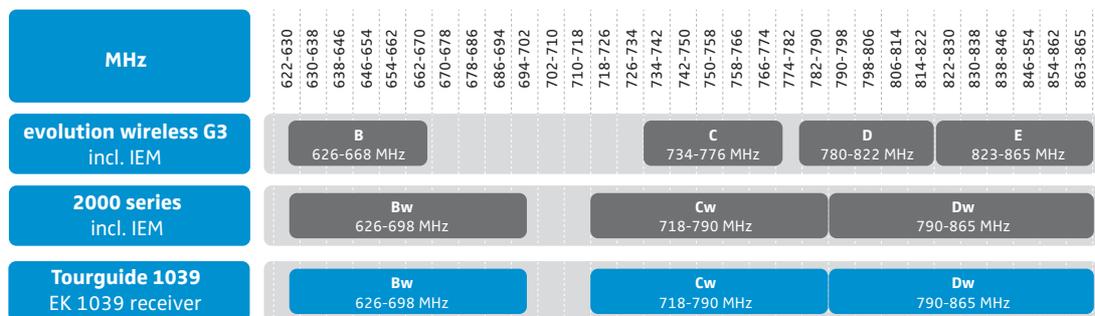
The Tourguide 1039 system consists of the EK 1039 receiver and a suitable transmitter of the evolution wireless G3 or 2000 series.

The system offers optimum speech transmission for guided tours, small conferences and interpretation applications with one or several speakers.

The use of RF transmission allows freedom of movement for all members of the group. Due to the possibility of combining the EK 1039 receiver with different transmitters, the system can be optimally adapted to your individual needs.

Frequency ranges

The EK 1039 receiver is available in the frequency ranges Bw, Cw and Dw. The following diagram shows an overview of compatible frequency ranges. For setting up a transmission link, the evolution wireless G3 or 2000 (including IEM) series transmitter used must operate in a matching frequency range and must be set to the same frequency as the receiver.



32 factory-preset frequencies that are intermodulation-free allow you to operate up to 32 transmission links simultaneously.

You can change the factory-preset frequencies to suit your needs. In this case, however, it might be that the frequencies are not intermodulation-free.

Features of the EK 1039 receiver



EK 1039

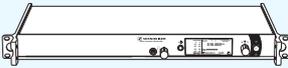
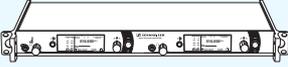
The EK 1039 is a small, rugged bodypack receiver that can easily be attached to clothing by means of a belt clip. The receiver allows you to connect any headphones (min. 8 Ω) and to individually adjust the volume. 32 UHF receiving frequencies (preset but changeable) offer high flexibility and adaptability.

Features of the receiver:

- Easy and comfortable use
- Channel indication with individual channel name via display
- Channel adjustment via rocker button
- Operation and reception indication via LED
- “LowBattery” indication via LED and display

Suitable transmitters for your Tourguide application

The following table will help you to select a suitable transmitter for your Tourguide application.

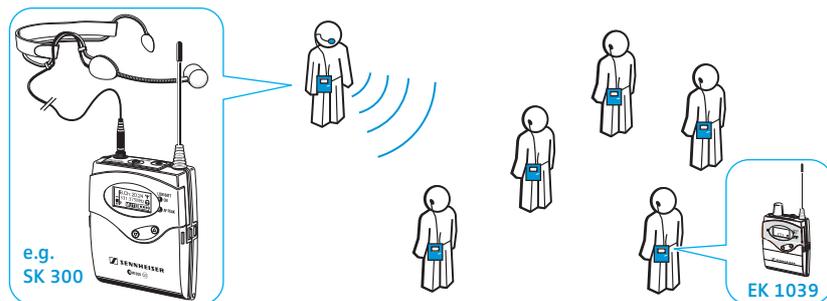
Receiver	Transmitters	
	Mobile use	Stationary use
Tourguide 1039: • EK 1039	evolution wireless G3 series: • SK 100/300/500 • SKM 100/300 • SKP 100/300 2000 series: • SK 2000 • SKM 2000 • SKP 2000	evolution wireless G3 series: • SR 300 IEM G3 2000 series: • SR 2000 IEM • SR 2050 IEM
 <p>EK 1039</p>	 <p>SKM</p>  <p>SKP</p>  <p>SK</p>	 <p>SR</p>  

All mentioned transmitters of the evolution wireless G3 or 2000 series are available in frequency ranges that are compatible with the frequency ranges of the EK 1039 receivers (see page 4).

Mobile use of the transmitters

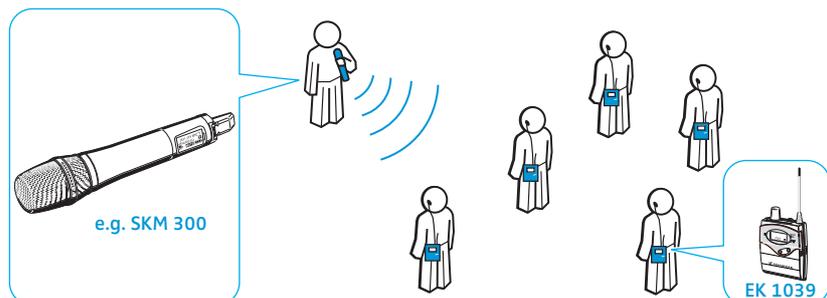
SK bodypack transmitter

A portable bodypack transmitter allows the connection of a clip-on microphone or a headmic so that the tour guide has both hands free and complete freedom of movement while guiding the group.



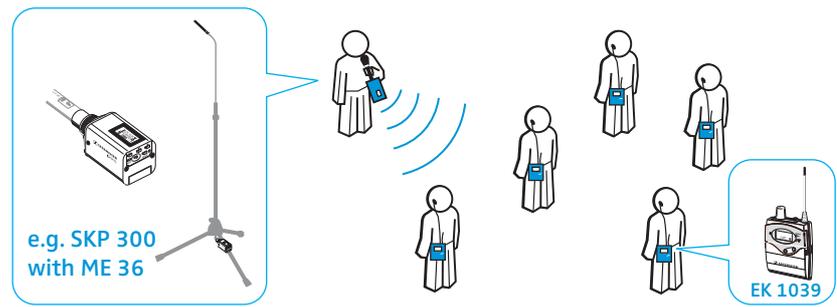
SKM radio microphone

A radio microphone can be passed on from the tour guide to members of the group, e.g. when questions arise during the guided tour.



SKP plug-on transmitter

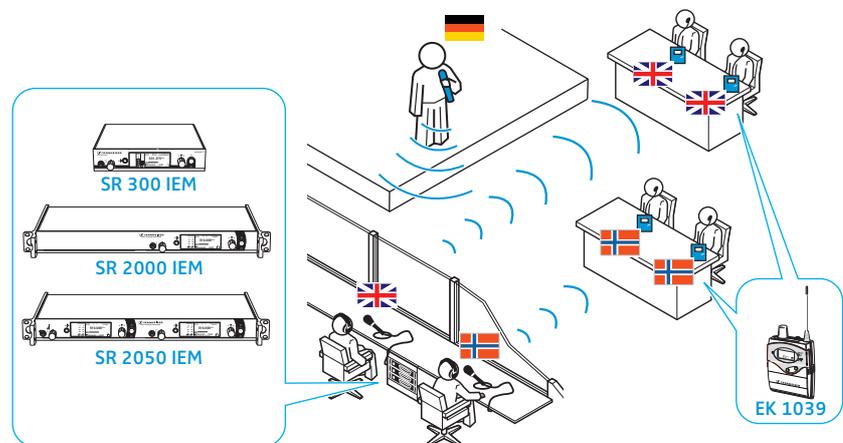
A plug-on transmitter converts a wired microphone into a radio microphone, allowing e.g. to use an existing microphone for your mobile Tourguide application.



Stationary use of the transmitters

SR monitoring transmitter

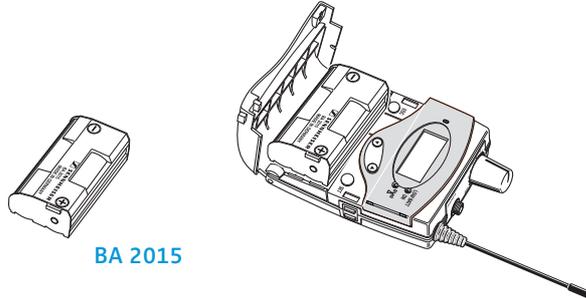
You can use a stationary transmitter for e.g. running a small conference or for offering a translation of the audio channel. The transmitter can be connected to a mixing console and to other audio sources.



Charger for your Tourguide application

BA 2015 accupack

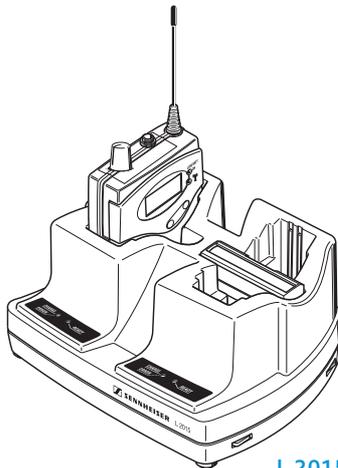
For daily use, we recommend using the supplied BA 2015 accupack. The accupack can be charged in the L 2015 charger without having to be removed from the device.



BA 2015

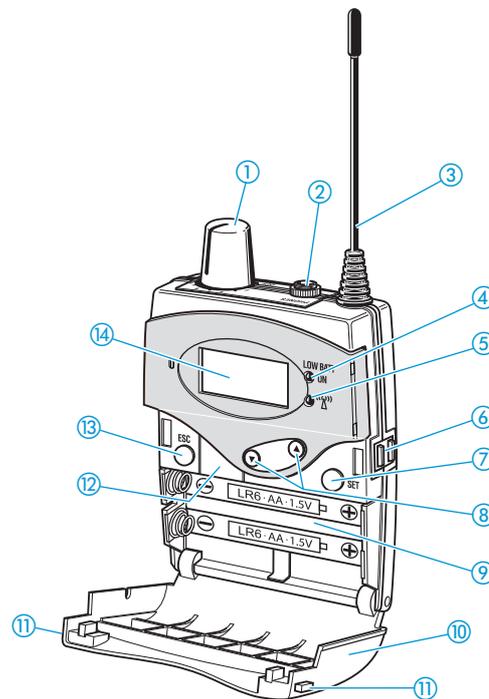
L 2015 charger

The L 2015 charger can charge up to two BA 2015 accupacks. The accupacks can be charged separately or when installed in the receiver.



L 2015

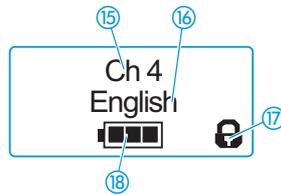
Product overview of the EK 1039 receiver



- ① On/off/volume control
- ② 3.5 mm jack socket for headphones, lockable
- ③ Receiving antenna
- ④ Operation and battery status indicator "LOW BATT/ON",
red LED:
lit = ON
flashing = LOW BATT
- ⑤ RF signal indication, green LED
- ⑥ Charging contacts
- ⑦ SET button
- ⑧ ▲/▼ button (UP/DOWN)
- ⑨ Battery compartment
- ⑩ Battery compartment cover (metal)
- ⑪ Battery compartment catches
- ⑫ Infra-red interface
- ⑬ ESC button
- ⑭ Display panel, backlit in orange

Overview of the displays

After switch-on, the receiver displays the standard display:



The display backlighting is automatically reduced after approx. 20 seconds.

Display	Meaning
15 Receiving channel	Current receiving channel "Ch 1" ... "Ch 32"
16 Channel name	Name of the receiving channel, individually adjustable; can consist of 8 characters max., e.g. "English"
17 Lock mode icon	Lock mode is activated (see page 12)
18 Charge status of the BA 2015 accupack/batteries	<p>Charge status:</p> <ul style="list-style-type: none"> approx. 100% approx. 70% approx. 30% critical charge status, the red LOW BATT LED 4 is flashing:

When you call up the menu for configuring the receiver (see page 14), the receiver's display panel shows the Setup display:



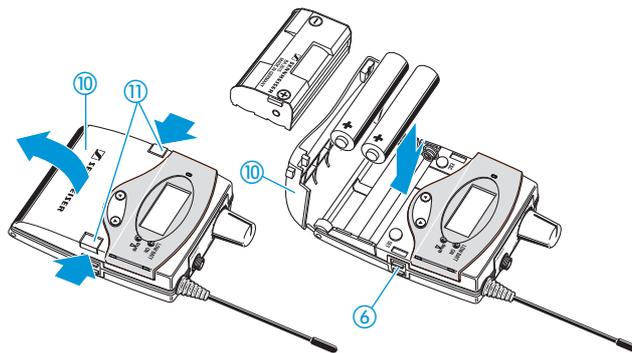
Putting the receiver into operation

Inserting the batteries or the accupack

For powering the diversity receiver, you can either use two 1.5 V AA size batteries or the rechargeable Sennheiser BA 2015 accupack.

For daily use, we recommend using the supplied BA 2015 accupack. The accupack can be charged in the L 2015 charger without having to be removed from the device.

- ▶ Open the battery compartment by pushing the two catches (11) in the direction of the arrows and open the cover (10).



- ▶ Insert the BA 2015 accupack or the two batteries as shown above. Please observe correct polarity when inserting the accupack/batteries.
- ▶ Close the battery compartment by pressing on the center of the cover (10). The battery compartment cover (10) locks into place with an audible click.

Charging the accupack

To charge the BA 2015 accupack installed in the receiver:

- ▶ Insert the diversity receiver into the L 2015 charger. The receiver switches off and the accupack is being charged.

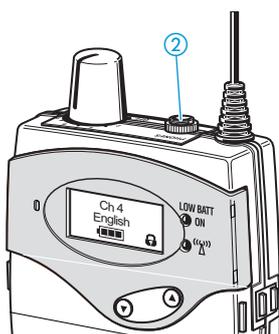
For more information on charging the BA 2015 accupack, refer to the instruction manual for the L 2015 charger.

i Never switch on the receiver during charging because otherwise the accupack will not be charged correctly.

The L 2015 charger can only charge the BA 2015 accupack. Standard batteries (primary cells) installed in the receiver or individual rechargeable battery cells cannot be charged.

Connecting headphones

- ▶ Connect headphones with an impedance of at least 8 Ω to the 3.5 mm jack socket (2).



Using the receiver

To establish a transmission link between the configured transmitter and receiver, proceed as follows:

1. Switch the receiver on (see next section).
2. Switch the transmitter on (see the instruction manual for the transmitter).
The transmission link is established and the receiver's RF signal indication ⑤ lights up green.



For information on how to configure the receiver, read the chapter "Configuring the receiver" on page 14.

For information on how to configure the transmitter, read the chapter "Configuring the transmitters for your Tourguide application" on page 22 and the instruction manual for the transmitter used.

If you cannot establish a transmission link between transmitter and receiver, read the chapter "If a problem occurs ..." on page 23.

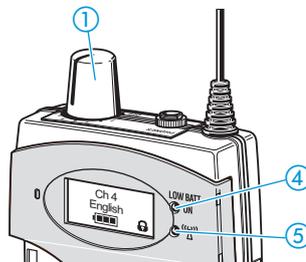
Switching the diversity receiver on/off and adjusting the volume

After switch-on, the receiver displays the standard display which allows the user to switch between the receiving channels (see page 12).

You can configure the receiver via the Setup menu which you can access using a special key combination during switch-on (see page 14).

To switch the receiver **on**:

- ▶ Turn the volume control ① clockwise until it clicks.
The red LED ON ④ lights up. The standard display appears on the display panel.



To switch the receiver **off**:

- ▶ Turn the volume control ① counterclockwise until it clicks.
The red LED ON ④ goes off and the receiver switches off.



When not using the receiver for extended periods of time, remove the accupack/batteries.

When you insert a switched-on receiver into the L 2015 charger, the receiver automatically switches off. The receiver remains switched off when you take it from the charger after charging. You first have to turn the volume control ① counterclockwise until it clicks to be able to switch the receiver on (turn the volume control ① clockwise until it clicks).

To adjust the **volume**:



WARNING

Hearing damage due to high volumes!

Listening at high volume levels for long periods can lead to permanent hearing defects.

- ▶ Set the volume to a low level before using the product.
- ▶ Do **not** continuously expose yourself to high volumes.

- ▶ Turn the volume control ①
 - clockwise to increase the volume
 - counterclockwise to reduce the volume.



Using the “**Limiter**” function, you can reduce the audio level of the headphone output (see page 18).

Deactivating the lock mode temporarily



If the automatic lock mode “**Auto Lock**” is activated (see page 17), you have to temporarily deactivate it in order to be able to operate the receiver:

- ▶ Press the **SET** button. “**Locked**” appears on the display pane.
- ▶ Press the rocker button. “**Unlock?**” appears on the display panel.
- ▶ Press the **SET** button. The lock mode is deactivated.

The lock mode icon ⑰ flashes prior to the lock mode being activated again (if no button has been pressed for approx. 10 seconds).

Setting the receiving channel

If several guided tours take place within a building at the same time, i.e. several transmission links are operated simultaneously, the user can switch the channel of the receiver to the channel that is stated by the tour guide.

To switch between the receiving channels:

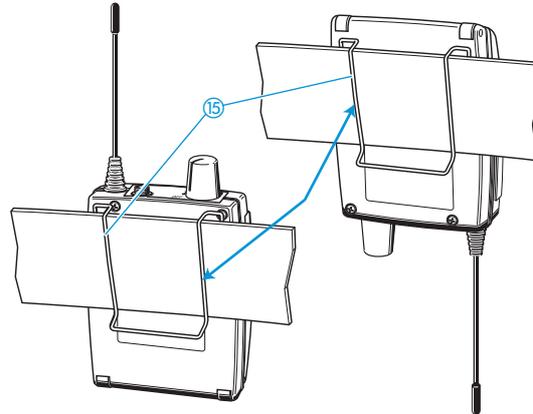
- ▶ Press the rocker button. The receiver immediately switches to the new receiving channel. If the receiver receives a transmitter on the new channel, the green LED ⑤ lights up.



The “**Active**” function allows you to show or hide the receiving channels from the standard display (see page 20).

Attaching the receiver to clothing

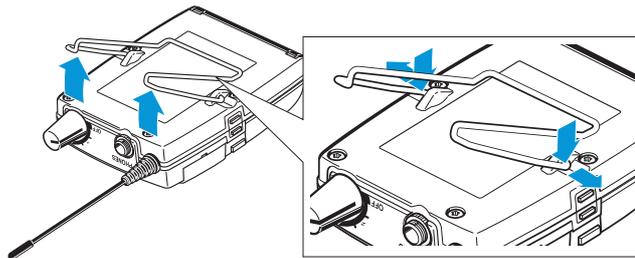
You can use the belt clip 15 to attach the diversity receiver to clothing (e.g. belt, waistband).



The belt clip is detachable so that you can also attach the receiver with the antenna pointing downwards. To do so, withdraw the belt clip from its fixing points and attach it the other way round. The belt clip is secured so that it cannot slide out of its fixing points accidentally.

To detach the belt clip:

- ▶ Lift one side of the belt clip as shown in the diagram.



- ▶ Press down the belt clip at one fixing point and pull it out of the receiver housing.
- ▶ Repeat for the other side.

Configuring the receiver

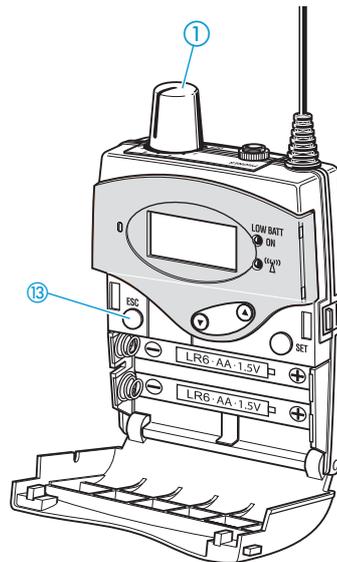
Calling up/ending the menu

You can only call up the menu when the receiver is switched off.

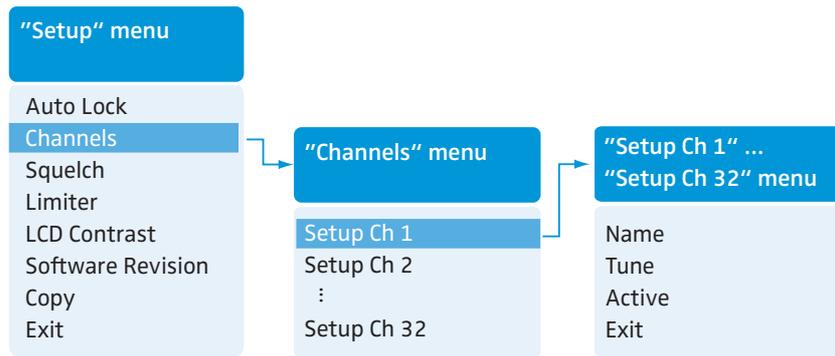
- ▶ Press the **ESC** button (13) and keep it pressed.
- ▶ Turn the volume control (1) clockwise until it clicks to switch the receiver on. The Setup display appears on the display panel.

To end the menu:

- ▶ Switch the receiver off (see page 11).
When switching the receiver on again, the standard display will be shown.



Overview of the menu



Display	Function of the menu item	Page
'Setup' menu		
Auto Lock	Activates the automatic lock mode	17
Channels	Call up the "Channels" menu	19
Squelch	Adjusts the squelch threshold	17
Limiter	Activating the limiter of the headphone output	18
LCD Contrast	Adjusts the contrast of the display panel	18
Software Revision	Displays the current software version	18
Copy	Copies receiver settings to additional receivers	18
Exit	Exits the menu and returns to the Setup display	–
'Channels' menu		
Setup Ch 1 ... Setup Ch 32	Calls up the "Setup Ch 1" ... "Setup Ch 32" menu	19
'Setup Ch 1' ... 'Setup Ch 32' menu		
Name	Enters a freely selectable name for the channel	19
Tune	Changes the receiving frequencies of the channels	20
Active	Hides the receiving channel for the user	20
Exit	Exits the "Setup Ch 1" ... "Setup Ch 32" menu and returns to the "Channels" menu	–

The buttons

Button	Function of the button
Press the ESC button 	<ul style="list-style-type: none"> • Cancels the entry and returns to the Setup display (ESC function)
Press the SET button 	<ul style="list-style-type: none"> • Changes from the Setup display to the menu • Calls up a menu item • Enters a submenu • Stores the settings
Press the rocker button 	<ul style="list-style-type: none"> • Changes to the next/previous menu item • Changes the setting of a menu item

Working with the menu

By way of example of the “**Limit**er” menu item, this section describes how to use the menu.

Calling up the menu

- ▶ Press the **SET** button. You call up the menu.

Selecting a menu item

- ▶ Press the rocker button to change to the “**Limit**er” menu item. The current setting of the menu item is displayed:



Calling up a menu item and adjusting and storing it



- ▶ Press the **SET** button to call up the menu item.
- ▶ Press the rocker button to adjust the “**Limit**er” setting.
- ▶ Press the **SET** button to store the setting.

Canceling an entry

- ▶ Press the **ESC** button to cancel the entry. The Setup display appears on the display panel.

To subsequently return to the last edited menu item:

- ▶ Press the **SET** button repeatedly until the last edited menu item appears.

Returning to the next higher menu level or exiting the menu

To return to the next higher menu level:

- ▶ Change to the “**Exit**” menu item.



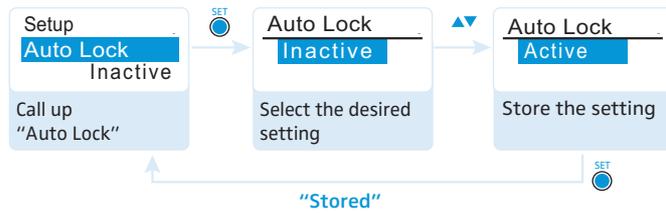
- ▶ Confirm your selection. You return to the next higher menu level or exit the menu.

To directly return to the Setup display:

- ▶ Press the **ESC** button.

The "Setup" menu

Activating the automatic lock mode – "Auto Lock"



Possible settings: "Active", "Inactive"

The automatic lock mode prevents that the receiving channel is accidentally changed on the receiver. The lock mode icon 17  on the standard display indicates that the lock mode is activated.

For information on how to deactivate the lock mode, refer to page 12.



Adjusting the squelch threshold – "Squelch"



Possible settings: "Low", "Middle", "High", "Off"

The squelch eliminates annoying noise when the transmitter is switched off or when there is no longer sufficient transmitter power received by the receiver.



WARNING

Danger of hearing damage!

If you switch the squelch off or adjust the squelch threshold to a very low value, loud hissing noise can occur in the receiver. The hissing noise can be loud enough to cause hearing damage!

- ▶ Always make sure that the squelch is switched on.
- ▶ Before adjusting the squelch threshold, set the volume of the headphone output to the minimum (see page 11).
- ▶ Never change the squelch threshold during a guided tour.
- ▶ Only switch off the squelch for servicing or test purposes.

- ▶ Adjust the squelch threshold – with the transmitter switched off – to the lowest possible setting that suppresses hissing noise.



A high squelch threshold reduces the transmission range.

The squelch should only be switched off for servicing or test purposes. With the squelch threshold set to "Low", you switch the squelch off by keeping the DOWN rocker button pressed for 3 seconds.

Activating the limiter of the headphone output – “Limiter”



Possible settings: “On”, “Off”

The limiter reduces the maximum volume at the headphone output by –12 dB.

i Upon delivery, the “Limiter” function is switched on. We recommend to keep this function switched on at all times.

Adjusting the contrast of the display panel – “LCD Contrast”



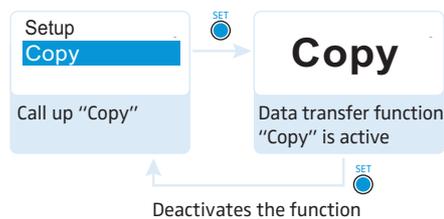
You can adjust the contrast of the display panel in 16 steps.

Displaying the software version – “Software Revision”

You can display the current software version of the receiver.

► For information on software updates, visit the EK 1039 product page at www.sennheiser.com.

Copying the receiver settings to additional receivers – “Copy”



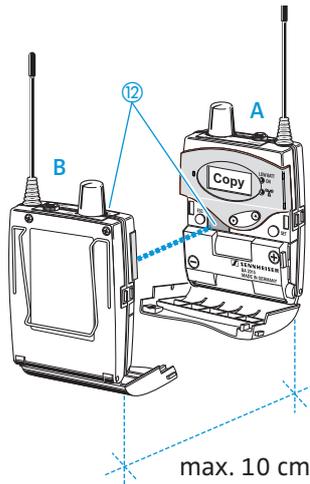
Via the “Copy” menu item, you can copy all settings of one receiver (A) to an arbitrary number of other EK 1039 receivers (B). This allows you to quickly and easily transfer e.g. a new receiving channel to all other receivers in the system.

To prepare the receiver (A) to transfer the settings:

- Select a receiver.
- Set the desired receiving channel, the name, the squelch threshold, etc.
- Change to the “Copy” menu item.
All settings of this receiver (A) will be transferred to the other receivers (B).

To prepare the receivers (B) to receive the settings:

- Open the battery compartment cover of all receivers (B) to which you want to transfer the settings.
- Switch on all receivers.



To copy the settings:

- ▶ Place the receiver (A) above the infra-red interfaces ⑫ of the other receivers (B), one after the other. The distance between the infra-red interfaces must not exceed 10 cm. The settings are copied and “Copy” briefly appears on the display panels of the receivers (B). If data transfer was successful, the receiver (B) switches off automatically.



Strong extraneous light may interfere with the data transfer via the infra-red interface. Therefore, position the receivers so that any possible interference caused by extraneous light is avoided. The blue line between the infra-red interfaces ⑫ in the diagram on the left indicates the direction from which the IR radiation must impinge upon the receiver.

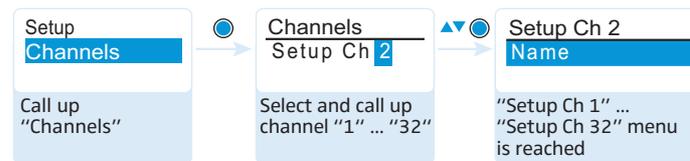


If you are using receivers from different frequency ranges and if you have set a frequency that is not available in the frequency range of the receiver (B), “Incompatible Frequency” appears on the display panel.

- ▶ Use receivers from the same frequency range or set a frequency that is available in both frequency ranges.

The “Channels” menu

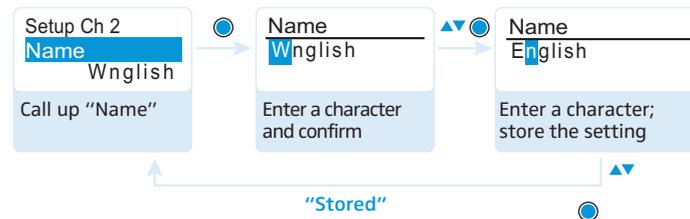
Calling up the “Setup Ch 1” ... “Setup Ch 32” menu



Via the “Channels” menu, you can call up the “Setup Ch 1” ... “Setup Ch 32” submenu.

The “Setup Ch 1” ... “Setup Ch 32” menu

Entering a name – “Name”



Via the “Name” menu, you can enter a freely selectable name for the receiving channel (e.g. the language of the guided tour). The name is displayed on the standard display and can consist of up to 8 characters such as:

- letters (without pronunciation marks),
- numbers from 0 to 9,
- special characters and spaces.

To enter a name, proceed as follows:

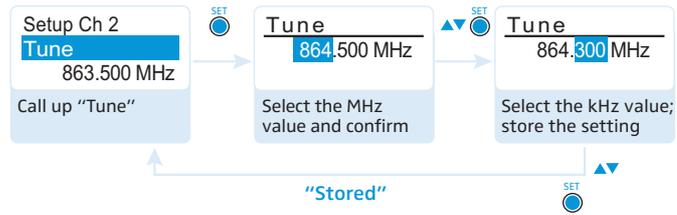


- ▶ Press the rocker button to select a character.



- ▶ Press the SET button to change to the next segment/character or to store the complete entry.

Changing the receiving frequencies of the channels – “Tune”



It is vital to observe the notes on frequency selection in the chapter “Matching the transmitter to the receiver” on page 22.

Via the “Tune” menu item, you can change the receiving frequency of a channel. The receiver’s channels have been factory-preset to receiving frequencies that are intermodulation-free. However, you can change the factory-preset frequencies. Within one frequency range, up to 32 transmission links can be operated simultaneously.

To change the receiving frequency of the channel:

- ▼▲ ▶ Press the rocker button to adjust the frequency in MHz steps.
- SET ▶ Press the SET button to confirm the MHz setting of the frequency. The kHz section of the frequency is highlighted.
- ▼▲ ▶ Press the rocker button to adjust the frequency in 25 kHz steps.
- SET ▶ Press the SET button to store the setting. “Stored” appears on the display panel.

Adjusting the visibility of the receiving channel – “Active”



Possible settings: activated and visible “On”, deactivated and hidden “Off”

Via the “Active” menu item, you can show or hide the receiving channel. An activated channel is visible on the standard display and can be selected. A deactivated channel is invisible on the standard display and cannot be selected.

Cleaning and maintaining the receiver

CAUTION

Liquids can damage the electronics of the product!

Liquids entering the housing of the product can cause a short-circuit and damage the electronics. Solvents or cleansing agents can damage the surface of the product.

- ▶ Keep all liquids away from the product.
 - ▶ Do not use any solvents or cleansing agents.
-
- ▶ Use a dry cloth to clean the product from time to time.

Configuring the transmitters for your Tourguide application



Please also read the instruction manual for your transmitter. It provides important information that ensures safe and optimum operation of the transmitter in your Tourguide application.

Matching the transmitter to the receiver



To be able to establish a transmission link, the transmitter and receiver used must operate in compatible frequency ranges (see page 4) and must be set to the same frequency.

Make sure that the desired frequencies are approved and legal in your country and, if necessary, apply for an operating license.

You can contact your Sennheiser partner who will be pleased to calculate intermodulation-free frequencies for you or to help you apply for an operating license.

The receiver's channels have been factory-preset to receiving frequencies that are intermodulation-free (see frequency table on page 27). However, you can change the factory-preset frequencies. Within one frequency range, up to 32 transmission links can be operated simultaneously.

- ▶ Make sure to set the transmitter of the evolution wireless G3 or 2000 series to the same frequency as the receiver.

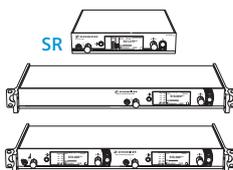
If you still cannot establish a transmission link between transmitter and receiver, read the chapter "If a problem occurs ..." on page 23.

Configuring the mobile SK, SKM and SKP transmitters



1. Set the frequency that you want to use for your Tourguide application ("Tune" menu item).
2. Adjust the input sensitivity of the microphone ("Sensitivity" menu item; for presentation applications, the guide values range from approx. -21 dB to 0 dB).

Configuring the stationary SR monitoring transmitter



1. Set the frequency that you want to use for your Tourguide application ("Tune" menu item).
2. Set the transmitter to mono operation to avoid interference during RF transmission ("Mode" menu item).
3. Adjust the input sensitivity of the transmitter ("Sensitivity" menu item; for presentation applications, the guide values range from approx. -21 dB to 0 dB).

If a problem occurs ...

Problem	Possible cause	Possible solution
Receiver cannot be operated, "Locked" appears on the display panel	Lock mode is activated	Deactivate the lock mode (see page 12).
No operation indication	Batteries are flat or accupack is flat	Replace the batteries or recharge the accupack (see page 10).
	Batteries are inserted the wrong way round	Observe correct polarity when inserting the batteries (see page 10).
No RF signal	Transmitter and receiver are not on the same channel	Set the receiver and transmitter to the same channel.
	Transmission range is exceeded	Reduce the distance between receiver and transmitter.
		Check the squelch threshold setting and, if necessary, reduce it (see page 17).
		Increase the transmitter's transmission power (see the instruction manual for the transmitter).
Transmitter's RF signal is deactivated ("RF Mute")	Activate the RF signal (see the instruction manual for the transmitter).	
RF signal available, no audio signal	Transmitter is muted (MUTE)	Cancel the muting (see the instruction manual for the transmitter).
	Receiver's squelch threshold is adjusted too high	Reduce the squelch threshold setting (see page 17).
	Microphone is defective	Replace the microphone.
	Headphones are defective	Replace the headphones.
Audio signal has a high level of background noise	Transmitter sensitivity is adjusted too low	Adjust the transmitter sensitivity correctly (see the instruction manual for the transmitter).
Audio signal is distorted	Transmitter sensitivity is adjusted too high	Adjust the transmitter sensitivity correctly (see the instruction manual for the transmitter).
	Receiver's audio output level is adjusted too high	Reduce the audio output level (see page 18).
No access to a certain receiving channel	Receiving channel is hidden for the user	Activate the visibility of the receiving channel ("Active", see page 20).
During copying, "Incompatible Frequency" appears on the display panel	You are using receivers from different frequency ranges and you have set a frequency that is not available in the frequency range of one of the receivers.	Use a receiver from the same frequency range.
		Set a frequency that is available in both frequency ranges.

Please also read the chapter "If a problem occurs ..." in the instruction manual for your transmitter.

If a problem occurs that is not listed in the above table or if the problem cannot be solved with the proposed solutions, please contact your local Sennheiser partner for assistance.

To find a Sennheiser partner in your country, search at www.sennheiser.com under "Service & Support".

Recommendations and tips

General information

- Transmission range depends to a large extent on location and can vary from about 10 m to about 150 m. There should be a “free line of sight” between transmitter and receiver.
- For best sound quality, make sure that the transmitter sensitivity is correctly adjusted (see the instruction manual for the transmitter).

... for SKM radio microphones and SKP plug-on transmitters

- Hold the radio microphone in the middle of the microphone body. Holding it close to the sound inlet basket will influence the radio microphone’s pick-up pattern, holding it at the lower part of the microphone body will reduce the radiated transmission power and thus the transmission range.
- You can vary the bass reproduction by increasing/decreasing the talking distance.
- For best sound quality, make sure that the transmitter sensitivity is correctly adjusted (see the instruction manual for the transmitter).
- The plug-on transmitter uses the microphone body as an antenna – therefore microphones with a metal casing should be used for best signal transmission.

... for SK bodypack transmitters

- Make sure that the antenna and the microphone cable do not cross.
- The antenna should hang or stand freely and be at least 1 cm away from the body. The antenna must not be in direct contact with the skin.
- For best sound quality, make sure that the transmitter sensitivity is correctly adjusted (see the instruction manual for the transmitter).

... for stationary SR monitoring transmitters

- Only use the monitoring transmitter in mono operation.
- For optimum RF operation, use suitable antennas from the Sennheiser accessory range. For more information on suitable accessories, visit the corresponding product pages at www.sennheiser.com.

Specifications



The specifications of the transmitter can be found in the instruction manual for the transmitter.

EK 1039 receiver

RF characteristics

Modulation	wideband FM
Frequency ranges	626-698, 718-790, 790-865 MHz (Bw, Cw, Dw see page 4)
Receiving frequencies	max. 32, tuneable in steps of 25 kHz
Switching bandwidth	≤ 75 MHz
Nominal/peak deviation	±24 kHz / ±48 kHz
Receiver principle	adaptive diversity
Sensitivity (with HDX, peak deviation)	< 4 μV, typ. < 1.6 μV for 52 dBA _{rms} S/N
Adjacent channel rejection	typ. 80 dB
Intermodulation attenuation	typ. 78 dB
Blocking	≥ 80 dB
Squelch	Low: 5 dBμV, Middle: 15 dBμV, High: 25 dBμV

AF characteristics for headphone output

Compander system	Sennheiser HDX
AF frequency response	40–15,000 Hz
S/N ratio (1 mV _{RF} , peak deviation)	approx. 90 dBA _{rms}
THD	≤ 0.9%
Headphone output	3.5 mm jack socket (mono, 2-pin, for headphones with at least 8 Ω)
Output power at 2.4 V, 5% THD and nominal deviation	100 mW at 32 Ω
Adjustment range	42 dB (6 dB steps) via potentiometer (+17 dBu reserve)

Overall device

Temperature range	–10°C to +55°C
Power supply	2 AA size batteries, 1.5 V or BA 2015 accupack
Nominal voltage	2.4 V ===
Power consumption: at nominal voltage with switched-off receiver	typ. 140 mA (±5%) ≤ 25 μA
Operating time with BA 2015 or batteries	approx. 8 hrs (depending on the volume set)
Dimensions	approx. 81 x 65 x 23 mm
Weight (incl. batteries)	approx. 200 g

In compliance with

Europe

CE EMC: EN 301489-1/-9
Radio: EN 300422-1/-2
Safety: EN 60065

Canada

Industry Canada RSS-123
IC 2099A-EK1039
limited to 698 MHz

Appendix

Radio frequencies

Channel	Frequency range		
	Bw (MHz)	Cw (MHz)	Dw (MHz)
1	630.100	718.100	863.100
2	630.500	718.500	863.500
3	633.600	721.600	864.300
4	635.900	723.900	864.900
5	636.500	724.500	823.000
6	637.700	725.700	823.450
7	631.000	719.000	824.000
8	632.000	720.000	824.700
9	646.100	734.100	825.550
10	646.500	734.500	826.050
11	649.600	737.600	827.550
12	651.900	739.900	828.450
13	652.500	740.500	829.200
14	653.700	741.700	830.300
15	647.000	735.000	830.950
16	648.000	736.000	831.900
17	662.200	750.200	...
18	662.600	750.600	...
19	665.700	753.700	...
20	668.000	756.000	...
21	668.600	756.600	...
22	669.800	757.800	...
23	663.100	751.100	...
24	664.100	752.100	...
25	678.100	766.100	...
26	678.500	766.500	...
27	681.600	769.600	...
28	683.900	771.900	...
29	684.500	772.500	...
30	685.700	773.700	...
31	679.000	767.000	...
32	680.000	768.000	...

Manufacturer Declarations

Warranty

Sennheiser electronic GmbH & Co. KG gives a warranty of 24 months on this product. For the current warranty conditions, please visit our website at www.sennheiser.com or contact your Sennheiser partner.

In compliance with the following requirements

- RoHS Directive (2002/95/EC)
- WEEE Directive (2002/96/EC)
Please dispose of the receiver at the end of its operational lifetime by taking it to your local collection point or recycling center for such equipment.
- Battery Directive (2006/66/EC)
In order to protect the environment, the supplied batteries or rechargeable batteries can be recycled. Please dispose of them as special waste or return them to your specialist dealer.



CE Declaration of Conformity

- **CE 0682**
- R&TTE Directive (1999/5/EC)
- EMC Directive (2004/108/EC)
- Low Voltage Directive (2006/95/EC)

The declaration is available at www.sennheiser.com.

Before putting the product into operation, please observe the respective country-specific regulations.

Statements regarding FCC and Industry Canada

This device complies with Part 15 of the FCC Rules and with RSS-123 of Industry Canada. 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.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 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 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.

This class B digital device complies with the Canadian ICES-003.

Changes or modifications made to this equipment not expressly approved by Sennheiser electronic Corp. may void the FCC authorization to operate this equipment.



Sennheiser electronic GmbH & Co. KG

Am Labor 1, 30900 Wedemark, Germany
www.sennheiser.com

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