EK 6042

Instruction manual

Contents

The EK 6042 portable camera receiver

The EK 6042 is a miniature two-channel true diversity receiver. It can be inserted into the receiver slot of professional video cameras or portable mixing consoles with UniSlot/SuperSlot™ interface (e.g. Panasonic, Ikegami, ARRI, Sound Devices) or Sony interface. Together with a high-performance Sennheiser bodypack, plug-on or handheld transmitter, a highly reliable radio link can be set up.

The EK 6042 has the following features:

- Simultaneous reception from two transmitters
- Compatibility with almost all Sennheiser transmitters and microphones such as e.g.
  - digital transmitters of the Digital 9000 series that are operated in LR mode
  - analog transmitters of the 5000, 3000 and 2000 series that are operated in FM mode and feature the HDX or HiDyn plus companders
- Choice of analog or digital audio output
- Great ease-of-use due to
  - quick and easy One Touch Easy Setup
  - menu-assisted operation via display panel
  - configuration possibility via web browser
- Adapters for professional video cameras with UniSlot/SuperSlot™ interface (e.g. Panasonic, Ikegami, ARRI, Sound Devices) and Sony interface
- Power supply either via the video camera, an external power supply or the Sennheiser GA 6042 BA accupack adapter
- High operational reliability due to true diversity reception
- Wide range of accessories to suit every application (see ''Accessories'' on page 22)
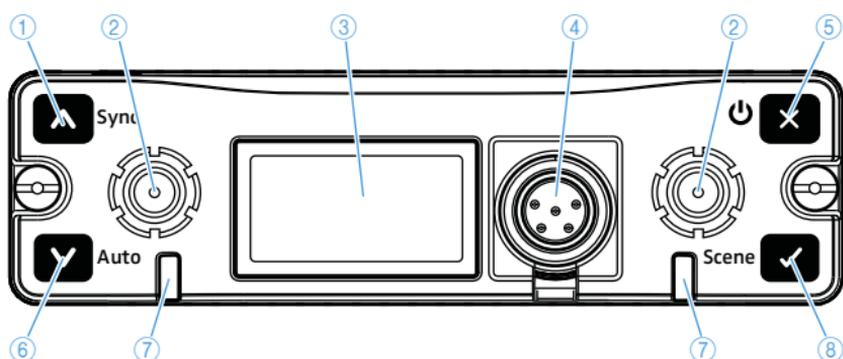
Package contents

1   EK 6042 camera receiver

2   antennas

1   USB cable

1   transport case

1   instruction manual

Information on accessories (e.g. power supply, cables and adapters) can be found on page 22.

Product overviews

Top

①	Button ⌃	Short-press: Navigates up in the menu or returns you to the standard display
		Long-press: See ''Performing a synchronization (Sync)'' on page 17
②	SMA sockets	for the detachable antennas (diversity section A and B)
③	Display panel	For details, see page 9
④	5-pin mini XLR socket (Top) AUX 1/2	Audio socket of the secondary audio outputs AUX 1 and AUX 2 (underneath a cover)
		can only output analog audio signals
		outputs the same audio signal as the audio socket AUX 1/2
⑤	Button ✕	Short-press: Exits the menu item
		Long-press: See ''Switching the EK 6042 on or off'' on page 15
⑥	Button ⌄	Short-press: Navigates down in the menu or returns you to the standard display
		Long-press: See ''Performing a synchronization (Sync)'' on page 17
⑦	LED CH1 and CH2	Status LEDs for receiving channel CH1 or CH2
		For details, see page 8
⑧	Button ✓	Short-press: Confirms the selection
		Long-press: See ''Changing scenes'' on page 19

## Functions of the buttons

Button	Function
☒ Short-press:	• Navigates to the next higher level in the menu • Exits the menu item without storing changes to the settings
☒ Long-press:	• Switches the EK 6042 on (see page 15) • Switches the EK 6042 off
☑ Short-press:	• Changes from the current standard display, the CH1 display or the CH2 display to the operating menu • Calls up the selected menu item
☑ (Scene) Long-press:	• Calls up a stored scene (see page 20)
⏶ Short-press:	• Switches between the standard display, the CH1 display and the CH2 display • Returns you to the previous menu item • Increases the set value
⏶ (Sync) Long-press:	• Synchronizes a transmitter with the EK 6042 (see page 17)
⏷ Short-press:	• Switches between the standard display, the CH1 display and the CH2 display • Changes to the next menu item • Reduces the set value
⏷ (Auto) Long-press:	• Starts the automatic configuration (see page 17)

Front
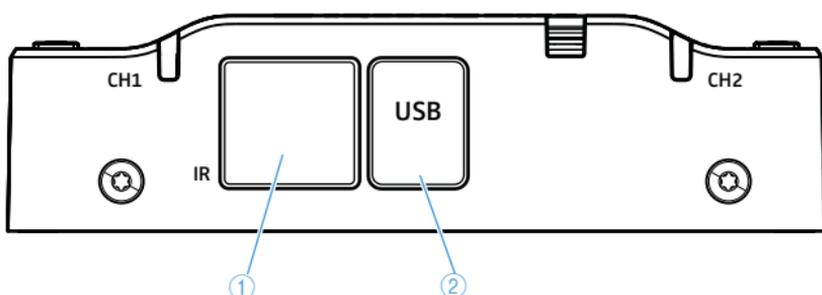
① Infra-red interface   for synchronization with transmitters (see Sync on page 17 and Auto on page 18)

② USB port   for connecting a computer for configuration via a web browser (see page 20)

Bottom
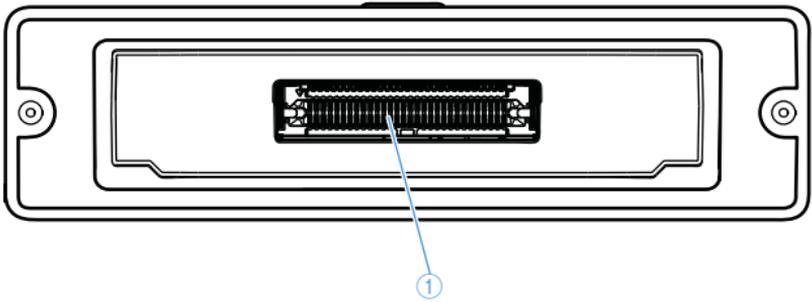
① Multi-pin interface | for connecting accessories

LED indicators
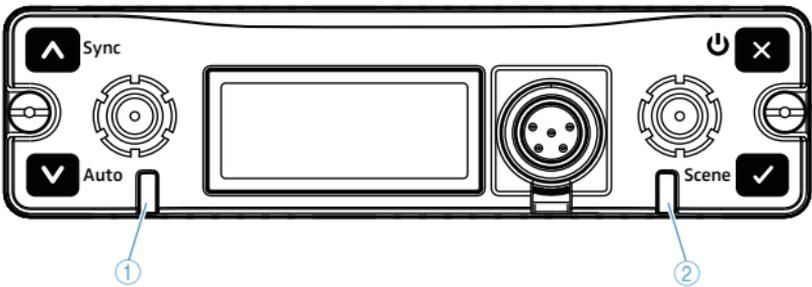
① LED CH1 | Status LED for receiving channel CH1
② LED CH2 | Status LED for receiving channel CH2

LED	Meaning
off	The receiving channel is deactivated, e.g. to safe battery life. "Inactive" appears on the display panel. For how to activate/deactivate a receiving channel, refer to "**Channel Power**" on page 16.
green	The receiving channel is activated and receives a transmitter. The accupacks of the transmitter and the receiver are sufficiently charged.
yellow	A status message is shown on the display panel.
red	The receiving channel does not receive a transmitter.

Display panel

The display panel provides various status information and displays the operating menu. For how to call up the following displays, refer to page 15. For information on the operating menu, refer to page 15.

Standard display

The standard display is shown after switch-on.
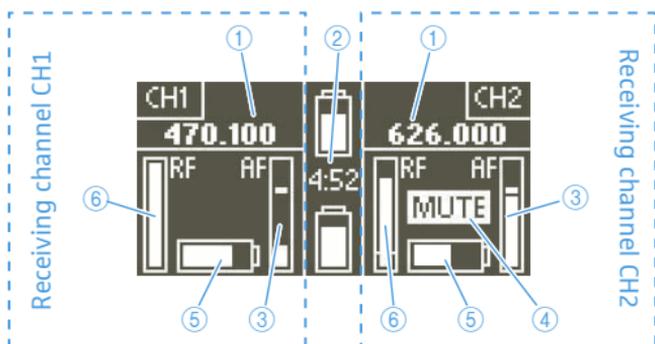
① Receiving frequency

② Source and status of the power supply:

If the GA 6042 BA accupack adapter is used, the charge status and the remaining operating time of the inserted BA 61 accupacks is displayed.

If an external power supply is connected, a plug icon is displayed.

If the EK 6042 is inserted into the receiver slot of a video camera, a video camera icon is displayed.

If the EK 6042 is inserted into a SuperSlot™-compatible receiver slot, the logo shown on the left is displayed.

③ Audio level of the transmitter with peak hold function

④ Mute display: Either the EK 6042 has muted the audio output due to too weak or noisy signal or the received transmitter has been muted via its MUTE switch.

⑤ Battery charge status of the received transmitter

⑥ Signal strength of the received signal on the receiving channel

CH1 and CH2 display
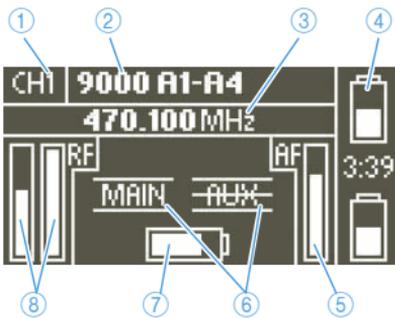
Digital reception   Analog reception
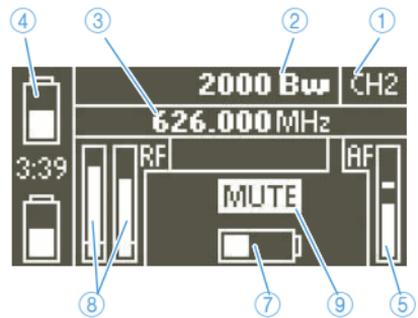
①	Receiving channel
②	Name of the received transmitter
③	Receiving frequency
④	Source and status of the power supply (see also ② on page 9)
⑤	Audio level of the transmitter (deviation/modulation) with peak hold function
⑥	Audio output display

 If an audio output is active, its icon appears as shown on the left.

 If an audio output is muted via the command function, its icon is crossed out.

 If the receiving channel has been deactivated via the **Channel Power** menu, "inactive" is displayed.

⑦	Battery charge status of the received transmitter
⑧	Signal strength of the received signal of both diversity sections with display of the squelch threshold
⑨	Mute display (see also ④ on page 9)

Backpanel adapter

The GA 6042 BP backpanel adapter is available as an accessory. The backpanel adapter is required if you want to use the EK 6042 remotely from the video camera.
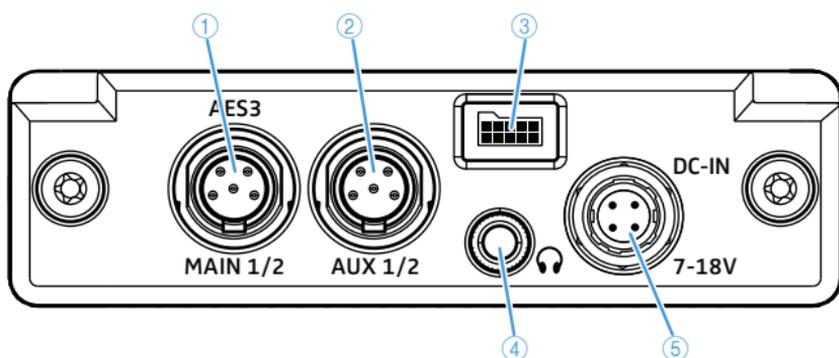
①	5-pin mini XLR socket AES3 MAIN 1/2	Audio socket of the primary audio outputs
		can output analog or digital audio signal
②	5-pin mini XLR socket AUX 1/2	Audio socket of the secondary audio outputs AUX 1 and AUX 2
		can only output analog audio signals
		outputs the same audio signal as the audio socket (Top) AUX 1/2
③	Socket for accupack	for connecting the GA 6042 BA accupack adapter
④	3,5 mm jack socket PHONES	for connecting a pair of headphones
⑤	DC-IN socket	for connecting an external power supply

Putting the EK 6042 into operating

Mounting the EK 6042 into a video camera

You can mount the EK 6042 into the receiver slot of a video camera. In order to mount the EK 6042 into video cameras with UniSlot/SuperSlot™ interface (e.g. Panasonic, Ikegami, ARRI, Sound Devices), you require the GA 6042-25 mounting kit. In order to mount the receiver into Sony video cameras, you require the GA 6042-15 mounting kit. Each mounting kit consists of an adapter plate ④ and a D-sub adapter ⑤.
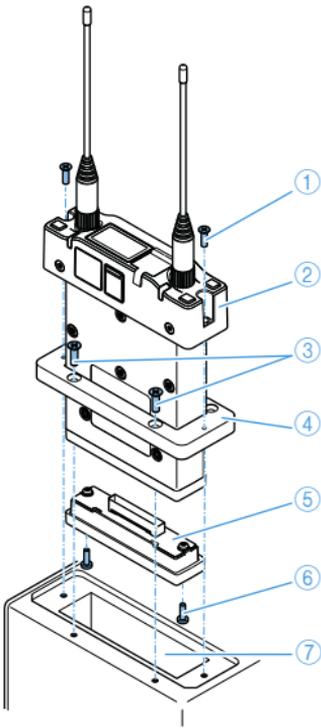
▶ Secure the adapter plate onto the receiver slot ⑦ of your video camera using the four supplied screws ③.

▶ Carefully connect the D-sub adapter to the multi-pin interface of the EK 6042 ②. Secure the D-sub adapter to the EK 6042 using the two supplied screws ⑥.

▶ Slide the EK 6042 with the mounted D-sub adapter through the adapter plate into the receiver slot.

▶ Secure the EK 6042 to the video camera using the two supplied screws ①.
The EK 6042 is connected via its multi-pin interface to the video camera and is powered via the video camera's rechargeable battery.

> If you use the EK 6042 in the receiver slot of a video camera with UniSlot/SuperSlot™ interface (e.g. Panasonic, Ikegami, ARRI), the audio signals of both receiving channels are transmitted to the camera via the receiver's multi-pin interface.
>
> If you use the EK 6042 in the receiver slot of a Sony video camera, it might be that the camera only accepts the audio signal of receiving channel CH1. If you also want to transmit receiving channel CH2 to the video camera:
> ▶ Use the Y-adapter cable to connect the 5-pin mini XLR socket (Top) AUX 1/2 to a second audio input of your Sony video camera.

Connecting the backpanel adapter

In order to use the EK 6042 remotely from your video camera (e.g. on a portable mixing console), you require the GA 6042 BP backpanel adapter as well as an external power supply.
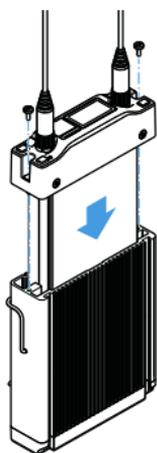
▶ Carefully slide the EK 6042 completely into the backpanel adapter.

▶ Secure the EK 6042 to the backpanel adapter using the two supplied screws.

▶ Use two Y-adapter cables to connect the primary and – if desired – the secondary audio outputs to your mixing console (see page 14).

▶ Use the CA 6042 DC DC-IN cable to connect an external power supply to the DC-IN socket or mount the GA 6042 BA accupack adapter (see below).

ℹ You can remove the belt clip of the backpanel adapter.

Connecting the accupack adapter

In order to power the EK 6042 with accupacks, you require the GA 6042 BA accupack adapter, two BA 61 accupacks and the L 60 charger:
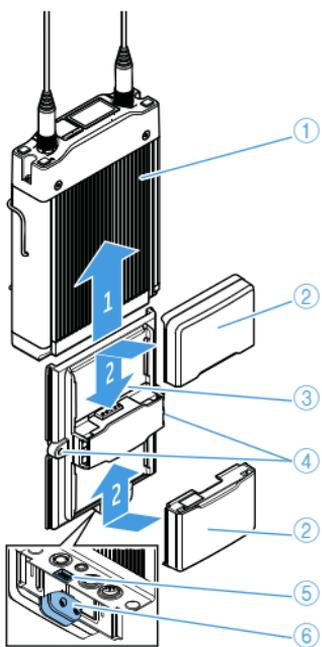
▶ Mount the backpanel adapter ① (see above).

▶ Slide the accupack adapter ③ to the correct side of the backpanel adapter so that the connector of the accupack adapter ⑥ connects to the socket for accupack ⑤.

▶ Secure the accupack adapter to the backpanel adapter using the two supplied screws ④.

▶ Slide the two BA 61 ② onto the accupack adapter until they lock into place with an audible click.

ℹ You can replace one of the accupacks at any time, even during operation. If one accupack is replaced, the second accupack takes over the power supply.

Connecting the EK 6042 to a sound recording device or a mixing console

The EK 6042 can receive two transmitters simultaneously. In order to connect the EK 6042 to the sound recording device or the mixing console, you require at least one Y-adapter cable.

▶ Connect a Y-adapter cable to each of the desired audio outputs (MAIN 1/2 and/or AUX 1/2).

▶ Set the desired audio format via the **MAIN Format** menu item: **digital AES-3** or **analog**.
The primary audio outputs MAIN 1/2 can output the audio signals of both receiving channels either in analog form or digitally. The secondary audio outputs AUX 1/2 and (Top) AUX 1/2 can only output analog audio signals.

Connecting headphones

CAUTION

Hearing damage due to high volumes

The headphones connected to the headphone output are capable of producing high sound pressure levels. Higher volumes or longer durations can damage your hearing.
▶ Set the volume to a medium level.
▶ Reduce the volume level before changing a transmitter or a frequency.

▶ Mount the backpanel adapter (see page 13).

▶ Connect the headphones to the 3.5 mm jack socket PHONES of the backpanel adapter.

Using the EK 6042

Switching the EK 6042 on or off

To switch the EK 6042 on:

▶ Long-press the ⊗ button.
The standard display appears. The volume of the headphone output is automatically adjusted to a low level.

To switch the EK 6042 off:

▶ If a submenu is open (see also page 16), press the ⊗ button repeatedly until the standard display, the CH1 display or the CH2 display is shown on the display panel.

▶ Long-press the ⊗ button.
An animation is shown. The EK 6042 then switches off.

Calling up the standard display, the CH1 display or the CH2 display

After switch-on, the standard display ① is shown on the display panel. To change to the CH1 display ② or to the CH2 display ③:

▶ Press the ⋀ button or the ⋁ button.

To change from the operating menu (see page 16) back to the standard display:

▶ Press the ⊗ button repeatedly until the standard display is shown.
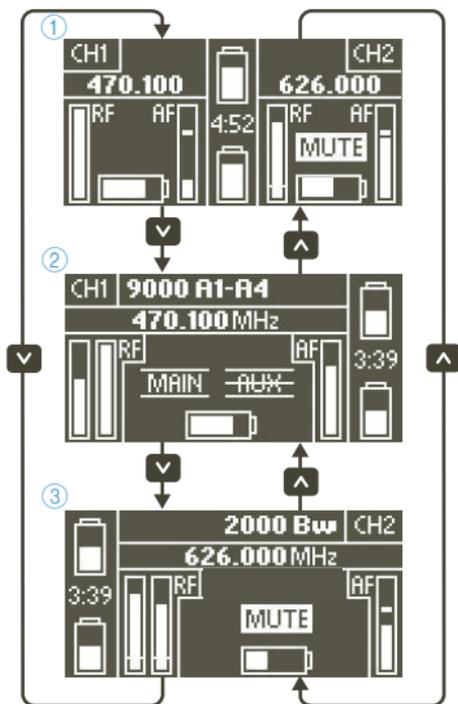
Using the operating menu

▶ Short-press the ✓ button when the standard display, the CH1 display or the CH2 display is shown.

- If you call up the operating menu from the standard display, the **MAIN Format** menu item is displayed.
- If you call up the operating menu from the CH1 display, the **CH1 Settings** menu item is displayed.
- If you call up the operating menu from the CH2 display, the **CH2 Settings** menu item is displayed.

Overview of the operating menu

Main menu	Submenu	Possible settings
CH1 Settings **CH2 Settings**	**Trans- mitter**	**Search via IR**: Detects the transmitter via the infra-red interface
		List: Selects a transmitter from the list
	Frequency	**Scan to next**: Automatically searches a suitable frequency on the basis of the **Squelch** setting
		Tune: Manually sets the frequency
		License: Selects a frequency preset
	Sync	Transfers the frequency to the transmitter using the infra-red interface; see ''Performing a syn- chronization (Sync)'' on page 17
	Pilot Squelch	**inactive**: Pilot tone evaluation is deactivated
		active: Pilot tone evaluation is activated
		not supported: Transmitter does not support the pilot tone function
	Squelch	Analog reception: Adjusts the squelch threshold
		Digital reception: **inactive**
	MAIN Out **AUX Out**	**always ON**: Audio output is always activated
		ON by command: Audio output can be activated via the command function
		MUTE by command: Audio output can be muted via the command function
	Channel Power	**inactive**: Audio signal is muted at all output sockets and only active at the headphone output
		active: Audio signal is active at all output sockets
MAIN Format		**digital AES-3** or **analog**
Level MAIN 1		Digital reception: **digital**
Level MAIN 2		Analog reception: Adjusts the audio level

Main menu	Submenu	Possible settings
Level AUX 1 **Level AUX 2**		Adjusts the audio level
Test tone		**on** or **off**
PHONES Volume		Adjusts the headphone volume
PHONES Listen to		Routes the signal of the receiving channel **CH1** or **CH2** or **CH1+CH2** to the headphone output
Store Scene		Stores the current settings as a scene
Network		Changes the IP address of the receiver
Info		Displays the firmware version and the word clock status
Licence List		Displays licensed frequencies
Spectrum Scan		Performs a frequency scan

Performing a synchronization (Sync)

Suitable settings for the transmitter must have been made in the **Transmitter**, **Frequency** and **Squelch** submenus in the **CH1 Settings** or **CH2 Settings** menu.

There are two options to start a synchronization.

Option one:

▶ Long-press the ⌃ button.
The receiving channel selection appears.

▶ Select the receiving channel (**CH1** or **CH2**) with which the transmitter is to be synchronized and press the ☑ button to start the synchronization.
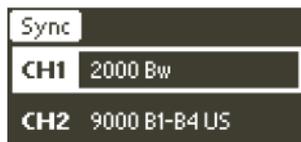
Option two:

▶ Call up the **Sync** submenu (in the **CH1 Settings** or **CH2 Settings** menu) and use the ☑ button to start the synchronization.
By selecting either **CH1 Settings** or **CH2 Settings**, you already preselect the receiving channel with which the transmitter is to be synchronized. This is why the receiving channel selection does not appear.

Once the synchronization has been started, **Hold to IR** appears on the display panel and the infra-red interface flashes blue.
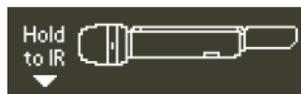
▶ Hold the infra-red interface of the switched-on transmitter (see the instruction manual of the transmitter) in front of the infra-red interface of the EK 6042.
The frequency set on the EK 6042 is transferred to the transmitter. If the transfer was successful, the status LED of the corresponding receiving channel lights up green – provided that the transmitter is not muted. The radio link is ready for immediate use. If the transfer fails, the message **Failure** appears on the display panel.
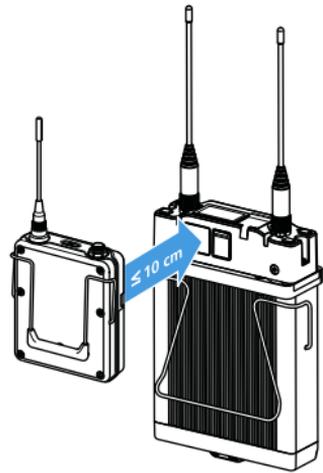
Performing an automatic configuration (Auto)

No manual settings are required. The EK 6042 automatically determines suitable settings for the **Transmitter**, **Frequency** and **Squelch** submenus.

▶ Long-press the ▼ button.
The receiving channel selection appears.

▶ Select the receiving channel (**CH1** or **CH2**) for the automatic configuration.

▶ Use the ✓ button to start the automatic configuration.
Hold to IR appears on the display panel and the infra-red interface flashes blue.
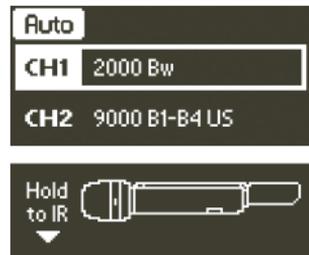
▶ Hold the infra-red interface of the switched-on transmitter (see the instruction manual of the transmitter) in front of the infra-red interface of the EK 6042.
The EK 6042 recognizes the transmitter and its frequency range. Subsequently, the infra-red interface stops flashing blue.

▶ Now increase the distance between the transmitter and the EK 6042. Depending on the transmitter type, **Increase transmitter distance** may appear on the display panel. In this case, increase the distance even more.
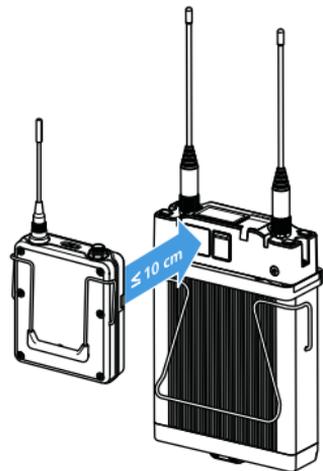
The EK 6042 now automatically determines a suitable frequency as well as the noise level in the environment and makes the corresponding

settings in the **Transmitter**, **Frequency** and **Squelch** submenus.
Then, **Hold to IR** appears again on the display panel and the infra-red interface flashes blue again.

▶ Hold the infra-red interface of the transmitter in front of the infra-red interface of the EK 6042.

The determined frequency is transferred to the transmitter. If the transfer was successful, the status LED of the corresponding receiving channel lights up green – provided that the transmitter is not muted. The radio link is ready for immediate use. If the transfer fails, the message **Failure** appears on the display panel.

Performing a frequency scan

You can perform a frequency scan to get an idea of the current frequency situation on site. During a frequency scan, the audio outputs of both receiving channels are muted.

 To set a receiving frequency, you can use the functions in the **Frequency** submenu of the **CH1 Settings** and **CH2 Settings** menus (see page 16). Alternatively, you can perform an automatic configuration (see page 17).

▶ Call up the operating menu (see page 15), select **Spectrum Scan** and confirm the warning message.

The frequency scan starts from the center of the EK 6042 frequency range and scans simultaneously toward the lower and higher frequencies. You can use the and buttons to scroll through the entire frequency scan at any time.

▶ Press the button to return to the operating menu.

Changing scenes

If microphones are changed between several takes and there is no time for configuring the devices, you can prepare as follows:

▶ Configure the transmitter and the EK 6042 in advance. Store each of the required receiver configurations as a scene (see below).
You can store up to 10 scenes.

▶ Change to the required configuration without losing time by calling up the stored scene (see page 20).

Storing a scene

▶ Set all parameters as desired and synchronize the corresponding transmitters.

▶ Call up the operating menu (see page 15) and select **Store Scene**.
The scene selection appears.

| System Settings |
| Store Scene |
| |
| #3 |

▶ Select a scene number (**#1** to **#10**).
Your configuration is stored under the selected scene number. In doing so, older scenes are overwritten. You can view the configurations of all scenes via a web browser and delete them (see page 20).

Calling up a scene

There are two options to call up a scene.

Option one:

▶ Long-press the ☑ button.
The scene selection appears. The preset frequencies, the names of the transmitters and the frequency bands of the synchronized transmitters are displayed.

CH1	CH2
626.000	630.000
9000 A5-A8 US	9000 B1-B4 US
# 1	Scene

▶ Use the ⌃ or ⌄ button to select the desired scene number and confirm by pressing the ☑ button.
The selected scene becomes effective immediately.

Option two (quick selection):

▶ Press and hold the ☑ button while simultaneously pressing the ⌃ button or the ⌄ button to navigate to the desired scene number.

▶ Release the two buttons.
The last selected scene becomes effective and the standard display appears.

Configuring the EK 6042 using a web browser

You can connect the EK 6042 directly to a Windows computer or Mac and configure it using a web browser.

▶ When connecting the EK 6042 to a Windows computer, no drivers need to be installed.

▶ Install an RNDIS driver on your Mac before connecting the EK 6042. RNDIS drivers for Mac are available free of charge from the Internet.

> ℹ If you want to connect several EK 6042 simultaneously to your computer, you first have to assign different IP addresses to the receivers via the **Network** menu item.

▶ Use the USB cable to connect the EK 6042 to your computer.
The EK 6042 automatically switches on. When connecting to a Windows computer for the first time, the necessary drivers for detecting the EK 6042 are installed. This can take several minutes.
Then, a URL appears on the display panel of the EK 6042.

▶ Enter this URL into your web browser.
  The web browser displays the following menus:

Licence List

The **Licence List** menu allows you to specify up to 100 freely selectable frequencies which will be selected preferentially during the automatic frequency scan.

Band List

The **Band List** menu allows you to specify up to 25 freely selectable frequency bands which will be selected preferentially during the automatic frequency scan.

If frequencies have been specified in the **Licence List** menu (see above), they will be prioritized over the frequency bands.

Transmitter Profiles

The **Transmitter Profiles** menu contains preset transmitter profiles which are compatible with the EK 6042. These profiles can be viewed via the **Default Profiles** menu item.

The **Custom Profiles** menu item allows you to create custom transmitter profiles and edit them (**Add profile**) or transmitter detection via infra-red interface (**Detect over IR**). Profiles of compatible but unknown transmitters are automatically added.

Scenes

The **Scenes** menu allows you to view the settings of the stored scenes (see also page 19) by clicking on them.

The settings can be deleted by clicking on **X**.

Maintenance

Via this configuration menu, you can, among other things:
• perform a reset of the EK 6042
• import/export configurations
• perform firmware updates

Care and maintenance

ATTENTION

Liquids can damage the electronics of the product.

Liquids entering the housing of the product can cause a short-circuit and damage the electronics.

▶ Keep all liquids far away from the product.

▶ Do not use any solvents or cleansing agents.

▶ Clean the EK 6042 and its accessories with a slightly damp cloth.

Accessories

Product	Cat. No.	Description
EK 6042 A	506210	Portable camera receiver
GA 6042-15	506213	15-pin D-sub adapter for Sony cameras
GA 6042-25	506212	25-pin D-sub adapter for UniSlot/SuperSlot™ cameras
GA 6042 BP	506214	Backpanel adapter
GA 6042 BA	506215	Accupack adapter
CA 6042 XLR	506216	Y-adapter cable (mini-XLR to 2 x XLR)
CA 6042 DC	506217	DC-IN cable
BA 61	504703	Accupack
L 60	504704	Charger for charging the BA 61 accupack

Specifications

RF characteristics

Receiver principle	superheterodyne with digital demodulation
Receiving channels	2
Receiver compatibility	digital modulation: Digital 9000 LR mode wideband FM: HiDyn Plus, HDX
Frequency ranges	470 to 654 MHz
Switching bandwidth	184 MHz
Step width	≥ 5 kHz
Reception diversity	true diversity (2 x 2 receivers)
Sensitivity	LR mode: <−90 dBm
	FM mode: <−94 dBm @52 dB Audio SNR
Antenna inputs	2 SMA sockets (50 Ω)
Antenna type	2 UHF wideband antennas
Adjacent channel selection	typ. 70 dB (channel spacing ≥ 400 kHz)

Audio characteristics

Audio frequency response	20 Hz to 20 kHz (+/−1.5 dB)	
Dynamic range	> 108 dB(A)	
THD	LR mode:	< 0.03% (at 1 kHz)
	FM mode:	< 0.5% (at 1 kHz)
Latency	LR mode:	3.0 ms (AES3)
	FM mode:	1.5 ms (AES3)
Audio outputs	5-pin mini XLR (male), balanced	
MAIN 1/2 digital:	0 dBFs, AES3, 48 kHz, 24 bit	
analog:	−22 dBu to +8 dBu (adjustable)	
(Top) AUX 1/2 analog:	−22 dBu to +8 dBu (adjustable)	

Other characteristics

Dimensions (H x W x D)	approx. 107 x 90 x 26 mm (without antennas)
Weight	approx. 340 g
Configuration interface	micro USB socket, type B
Multi-pin interface	60-pin connector for GA 6042 adapters

Operation with GA 6042 BP backpanel adapter

Power consumption	typ. 3 W at 12 V (7 to 18 V)
Input voltage	4-pin DC IN socket, typ. 12 V (7 to 18 V)
Headphone output	3.5 mm jack socket
	2 x 25 mW at 32 Ω
Dimensions (H x W x D)	approx. 135 x 90 x 26 mm
Audio outputs	5-pin mini XLR (male), balanced
MAIN 1/2 digital:	0 dBFs, AES3, 48 kHz, 24 bit
analog:	−22 dBu to +8 dBu (adjustable)
(Top) AUX 1/2 analog:	−22 dBu to +8 dBu (adjustable)

Operation with GA 6042 BA accupack adapter

(requires the GA 6042 BP for operation)

Compatible accupack	Sennheiser BA 61
Operating time	> 4 hours (with 2 x BA 61 accupack)
Dimensions (H x W x D)	approx. 135 x 90 x 44 mm

Operation with D-sub adapters

D-sub adapter	GA 6042-15	GA 6042-25
Camera interface	D-sub-15 (male) (Sony)	D-sub-25 (male) (UniSlot/SuperSlot™)
Dimensions (H x W x D)	approx. 135 x 90 x 26 mm	

Operating conditions

Ambient temperature	−10°C to +55°C
Relative air humidity	max. 90% at 40°C (non-condensing)
Protection against dripping and light splashing of liquids	The product must not be exposed to dripping and splashing (IP2X).

Storage and transport conditions

Ambient temperature	−25°C to +70°C
Relative air humidity	max. 90% at 40°C
Protection against dripping and light splashing of liquids	The product must not be exposed to dripping and splashing (IP2X).
Shock resistance	as per IEC 68 or EN 60068, T2-27

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Display Font (Palm OS)

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http://fontstruct.com/fontstructions/show/palm_os

DHCP Server (dhcps)

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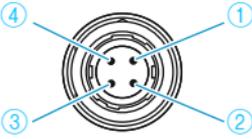
Pin assignment

5-Pin-Mini-XLR (Male) AES3 MAIN 1/2, AUX 1/2, (Top) AUX
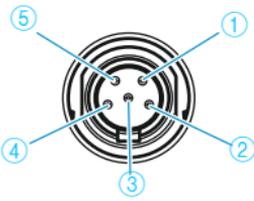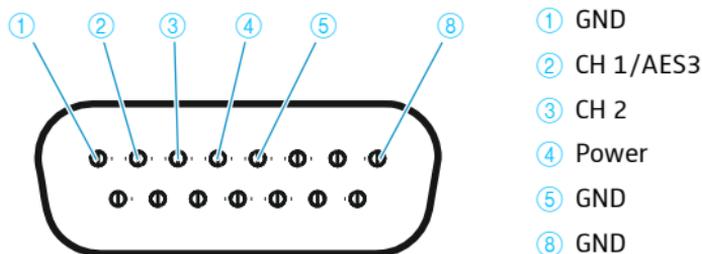

① GND
② CH 1 (+)
③ CH 1 (−)
④ CH 2 (+)
⑤ CH 2 (−)

DC-IN

① GND
② −
③ −
④ Power

CA 6042 XLR Cable
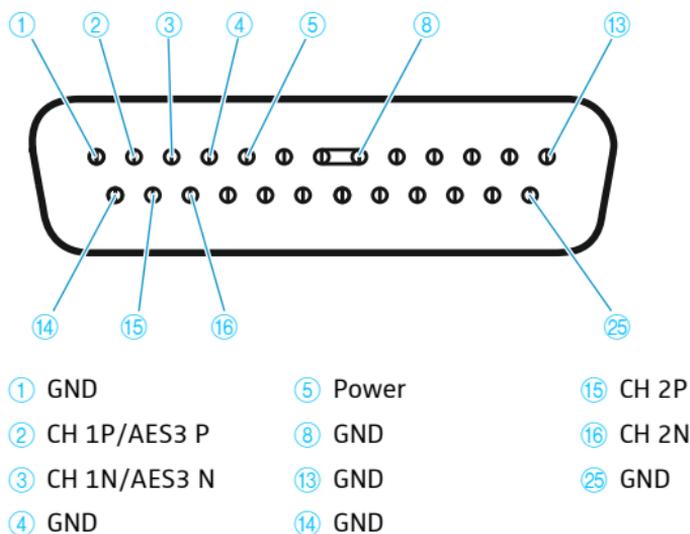
3-Pin-XLR (Female) MAIN 2/AUX 2	5-Pin-Mini-XLR (Female)	3-Pin-XLR (Female) MAIN 1/AUX 1
white / red	black / green	
① GND	① GND	① GND
	② + (black) ③ − (green)	② + (black) ③ − (green)
④ + (white) ⑤ − (red)	④ + (white) ⑤ − (red)	

D-Sub-15

① GND
② CH 1/AES3
③ CH 2
④ Power
⑤ GND
⑧ GND

D-Sub-25

① GND	⑤ Power	⑮ CH 2P
② CH 1P/AES3 P	⑧ GND	⑯ CH 2N
③ CH 1N/AES3 N	⑬ GND	㉕ GND
④ GND	⑭ GND	

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