



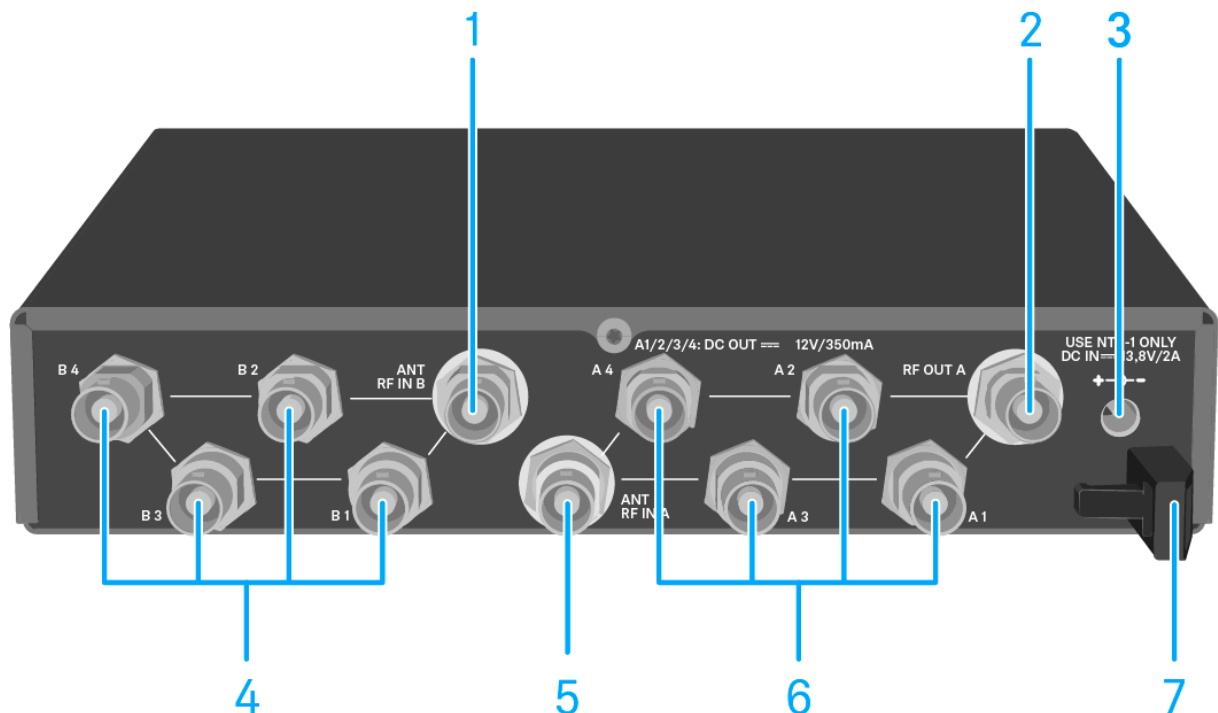
Installing the ASA 214

These sections contain detailed information about installing and starting up the ASA 214.

You can find information about operating the ASA 214 under “Using the ASA 214”.

Connectors on the rear of the device

Product overview for the rear side of the ASA 214



1 ANT RF IN B BNC socket

- Antenna input of diversity branch B
- See “Connecting antennas”

2 RF OUT A BNC socket

- RF output only for connecting an additional ASA 214 to build an 8-channel diversity system
- See “Configuring multi-channel systems”

3 DC IN socket

- To connect the NT 1-1 power supply unit
- See “Connecting/disconnecting the ASA 214 to/from the power supply system”

4 4 BNC sockets B1 to B4

- RF outputs of diversity branch B for connection to the receiver
- See “Connecting receivers to the ASA 214”

5 ANT RF IN A BNC socket

- Antenna input of diversity branch A
- See “Connecting antennas”



- 6** 4 BNC sockets **A1** to **A4**
 - RF outputs of diversity branch A for connection to the receiver
 - Every one of these RF outputs can also provide voltage to a receiver.
 - See “Connecting receivers to the ASA 214”
- 7** Strain relief for the cable of the power supply unit
 - See “Connecting/disconnecting the ASA 214 to/from the power supply system”

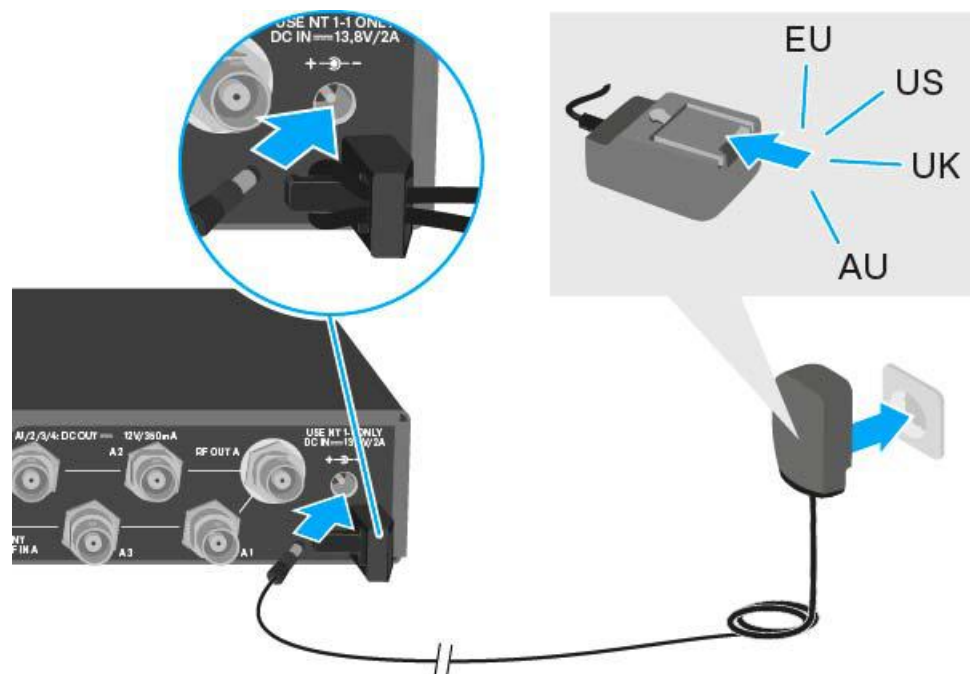
Connecting/disconnecting the ASA 214 to/from the power supply system

To supply power to the ASA 214, the connected receivers and any antenna amplifiers used, you will need the NT 1-1 power supply unit.

Only use the supplied NT 1-1 power supply unit. It is designed for your antenna splitter and ensures safe operation.

To connect the ASA 214 antenna splitter to the power supply system:

- ▷ Plug the hollow jack plug of the power supply unit into the **DC IN** socket of the antenna splitter.
- ▷ Pass the cable of the power supply unit through the cable grip.
- ▷ Slide the supplied country adapter onto the power supply unit.
- ▷ Plug the power supply unit into the wall socket.



To completely disconnect the ASA 214 antenna splitter from the power supply system:

- ▷ Unplug the power supply unit from the wall socket.
- ▷ Unplug the hollow jack plug of the power supply unit from the **DC IN** socket of the antenna splitter.



Connecting receivers to the ASA 214

You can connect and operate up to four stationary receivers to the ASA 214.

Sennheiser receivers of the ew G4 and ew G3 series can also be supplied with power from the ASA 214.

The following receivers are compatible:

evolution wireless G4:

- EM 100 G4
- EM 300-500 G4

evolution wireless G3:

- EM 100 G3
- EM 300 G3
- EM 500 G3

2000 series:

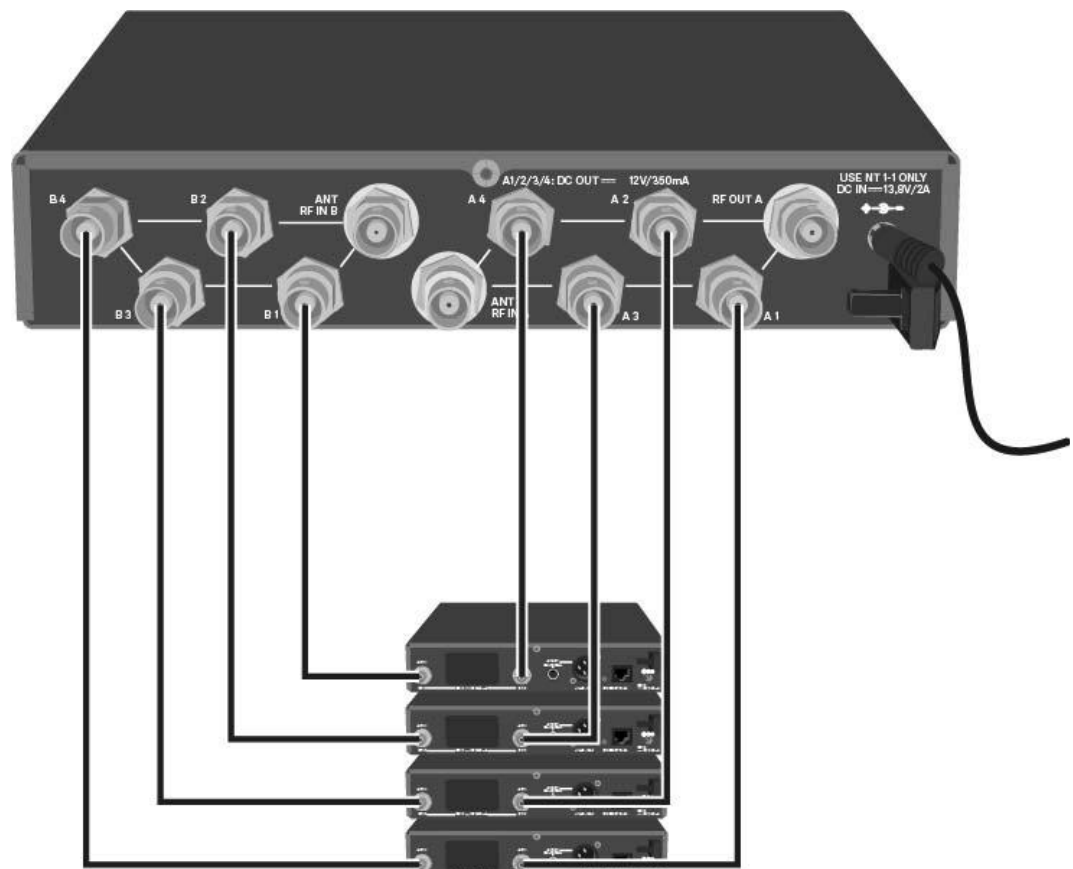
- EM 2000 (with its own power supply)
- EM 2050 (with its own power supply)

To connect the receivers to the ASA 214 antenna splitter:

- ▷ Connect one of the receiver's antenna inputs to one of the BNC sockets **A1** to **A4** using one of the supplied BNC cables.

The compatible receivers listed above do not require their own power supply. They are powered via the BNC sockets **A1** to **A4**.

- ▷ Connect the receiver's other antenna input to one of the BNC sockets **B1** to **B4** using one of the supplied BNC cables.





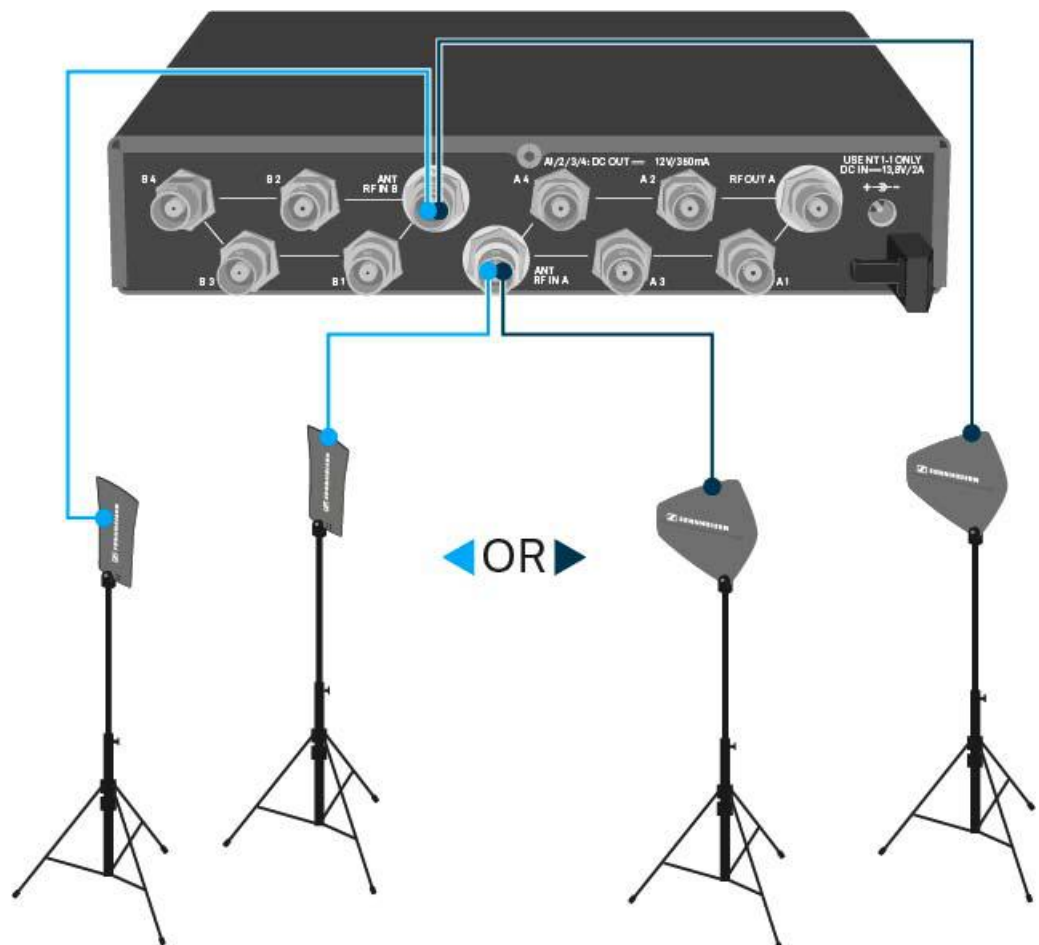
Connecting antennas

i For more information about antennas and antenna accessories, see “Antennas and accessories”.

i In order to ensure optimal reception even in the case of poor reception conditions, we recommend using remote antennas.

Connecting remote antennas

- ▷ Mount two antennas or a combination of an antenna and an antenna amplifier to the BNC sockets **ANT RF IN A** and **ANT RF IN B**.



Connecting rod antennas

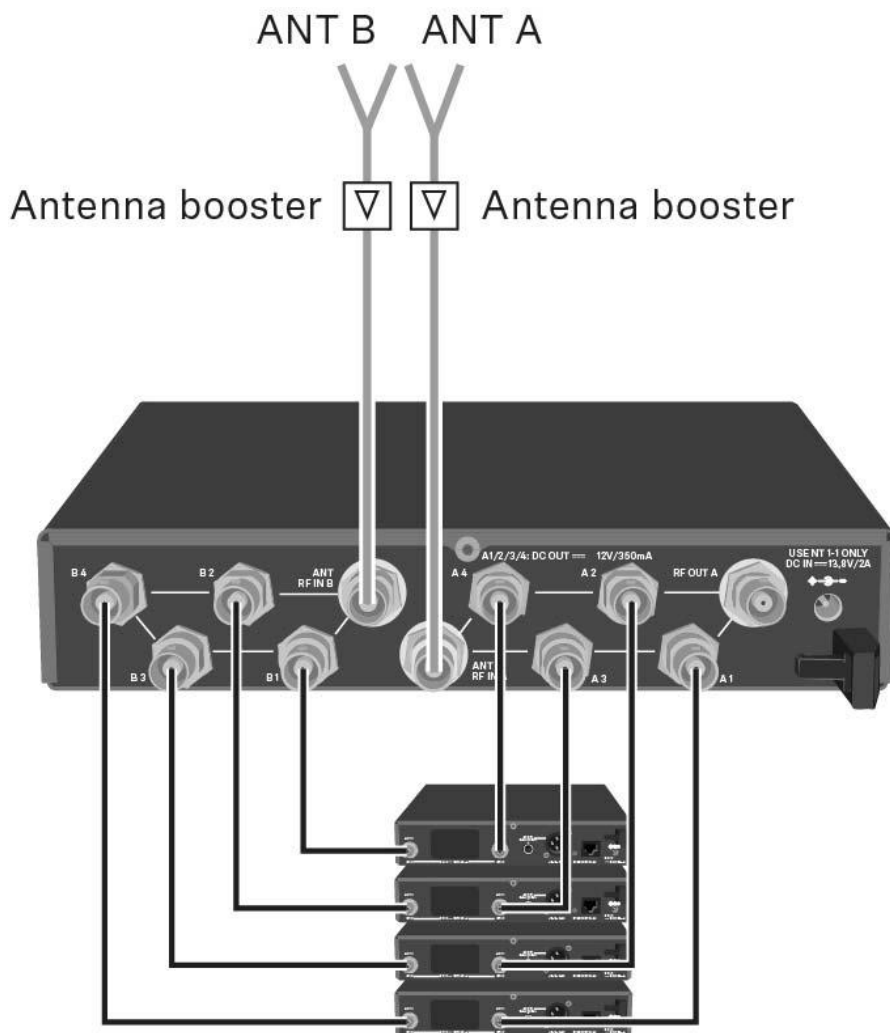
- ▷ Mount the antennas to the BNC sockets **ANT RF IN A** and **ANT RF IN B**.
- ▷ Align the antennas in a V-shape in order to ensure the best possible reception.



Configuring multi-channel systems

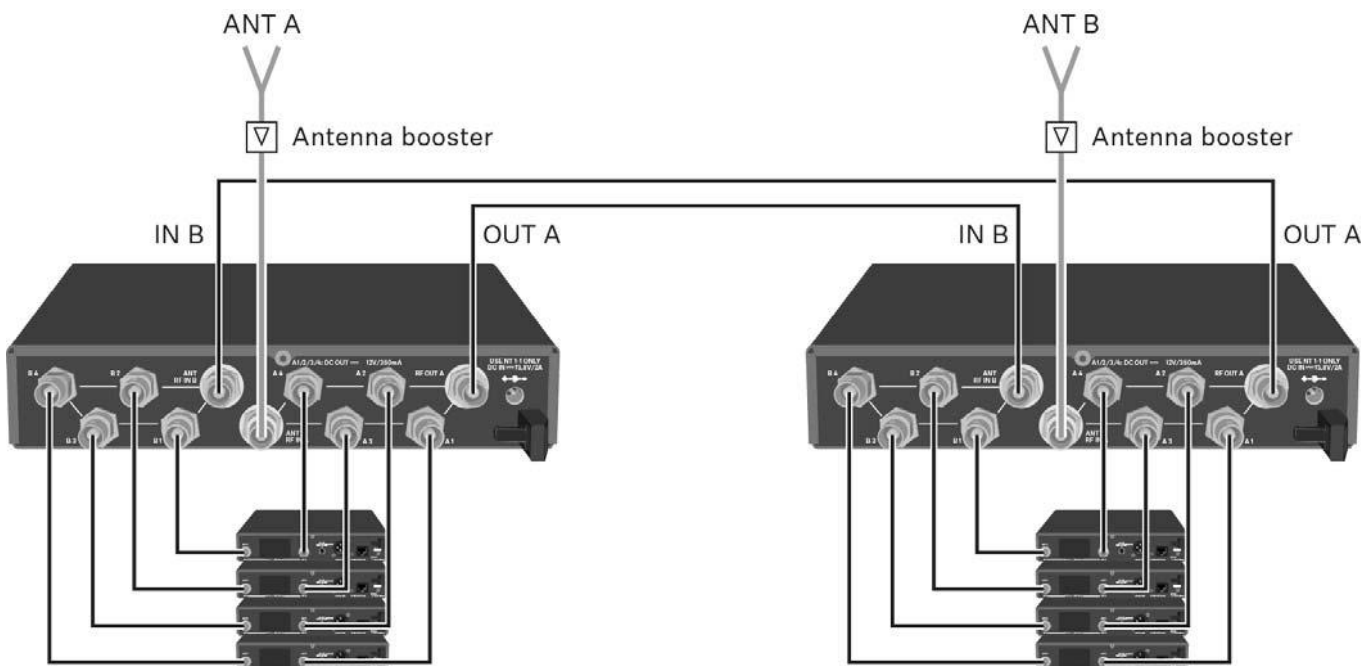
The following options for connecting multi-channel systems are possible:

Option 1: Two antennas supply a 4-channel system

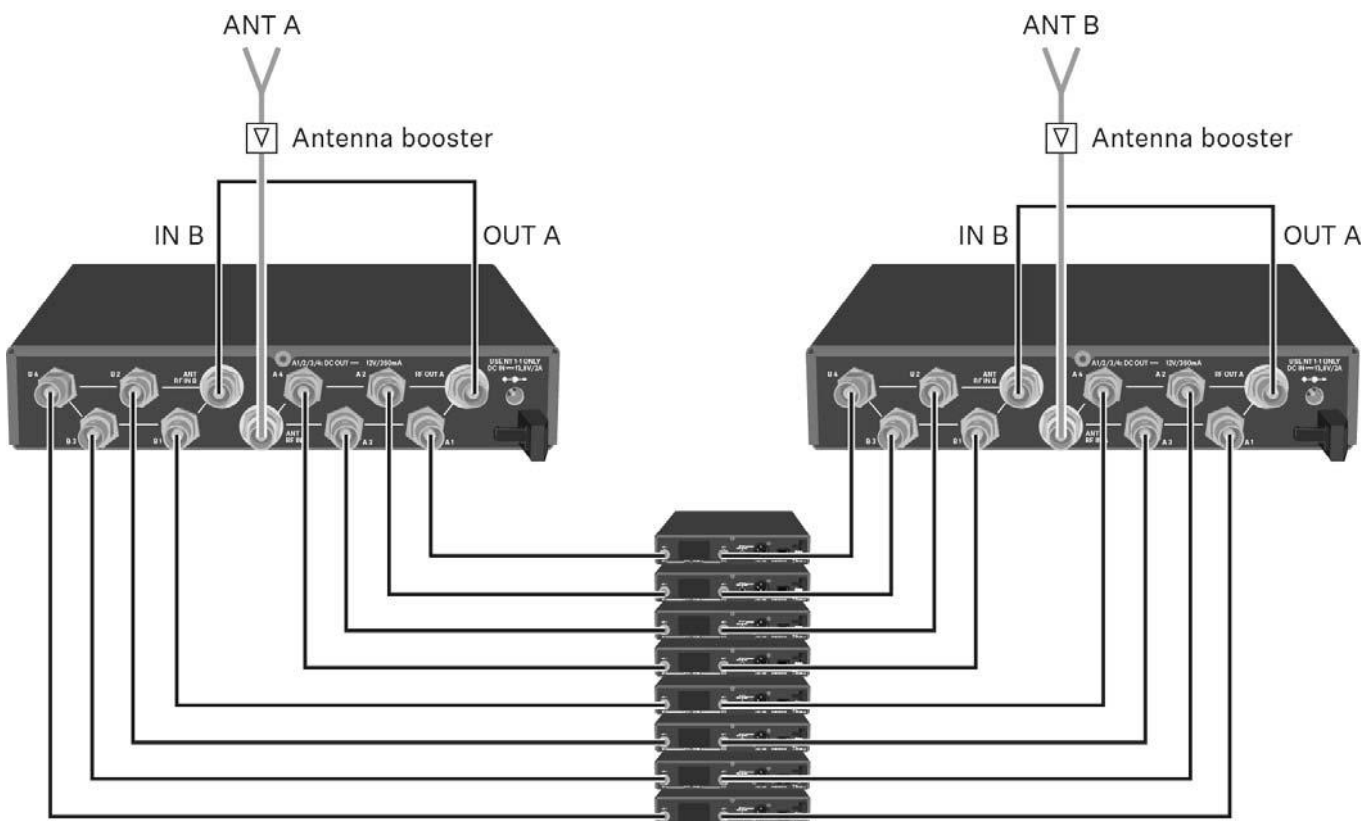




Option 2: Two 4-channel systems are interconnected



Option 3: Two antennas supply a 8-channel system





Installing the ASA 214 in a rack

CAUTION

Rack mounting poses risks

When installing the device in a closed or multi-rack assembly, please consider that, during operation, the ambient temperature, the mechanical loading and the electrical potentials will be different from those of devices which are not mounted into a rack.

- ▷ Make sure that the ambient temperature within the rack does not exceed the permissible temperature limit specified in the specifications. See “Specifications”.
 - ▷ Ensure sufficient ventilation; if necessary, provide additional ventilation.
 - ▷ Make sure that the mechanical loading of the rack is even.
 - ▷ When connecting to the power supply system, observe the information indicated on the type plate. Avoid circuit overloading. If necessary, provide overcurrent protection.
 - ▷ When rack mounting, please note that intrinsically harmless leakage currents of the individual power supply units may accumulate, thereby exceeding the allowable limit value. As a remedy, ground the rack via an additional ground connection.
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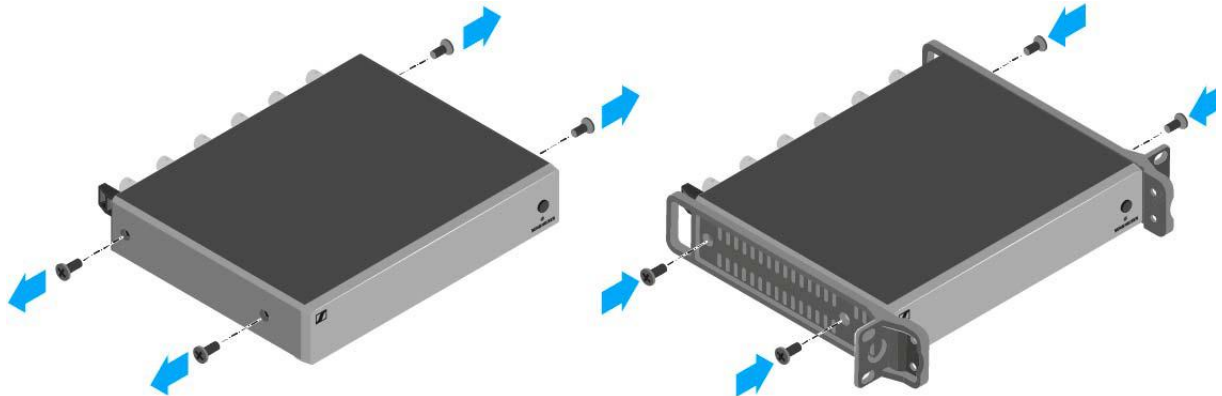


Mounting a single antenna splitter in a rack

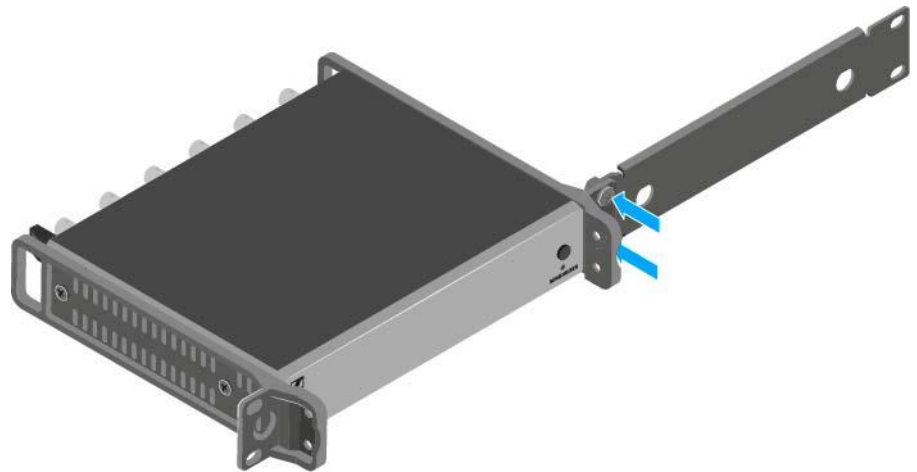
To mount the antenna splitter in a rack, you will need the GA 3 rack mounting kit (optional accessory).

To fasten the mounting angle of the GA 3 rack mounting kit:

- ▷ Unscrew and remove the two recessed head screws (M4x8) on each side of the antenna splitter.
- ▷ Secure the mounting angles to the sides of the antenna splitter using the previously removed recessed head screws.

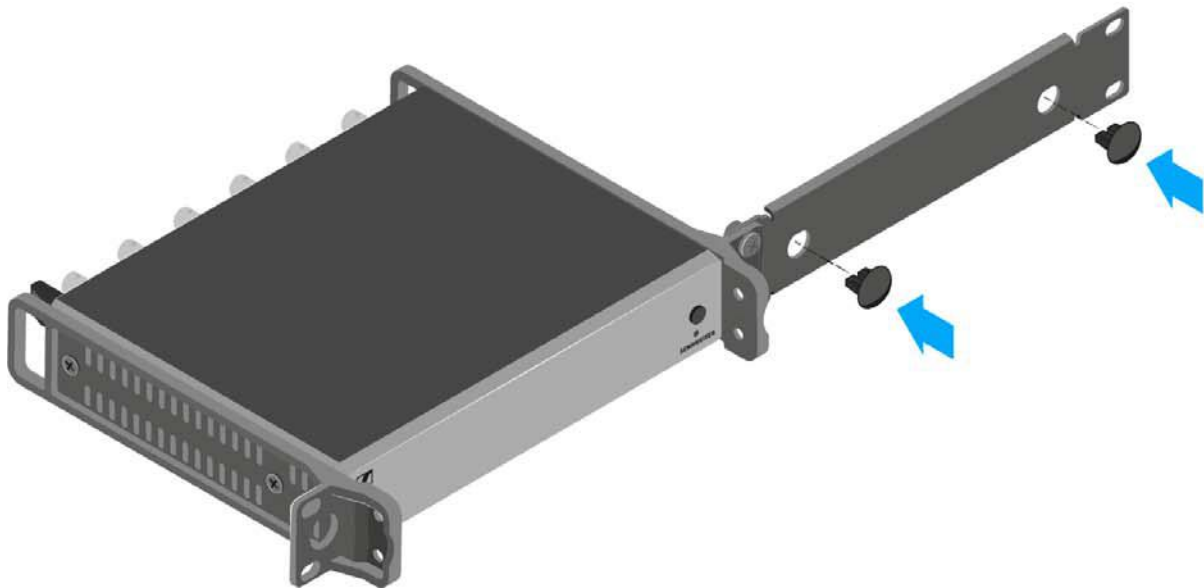


- ▷ Secure the blanking plate to one of the mounting angles using two recessed head screws (M6x10).





- ▷ Attach the antennas. You have the following options:
 - Connect the supplied rod antennas on the rear side of the antenna splitter. In this case, cover the antenna holes with the two covers (left diagram).
 - Attach the AM 2 antenna front mounting set (optional accessory) and mount the rod antennas on the blanking plate (right diagram).



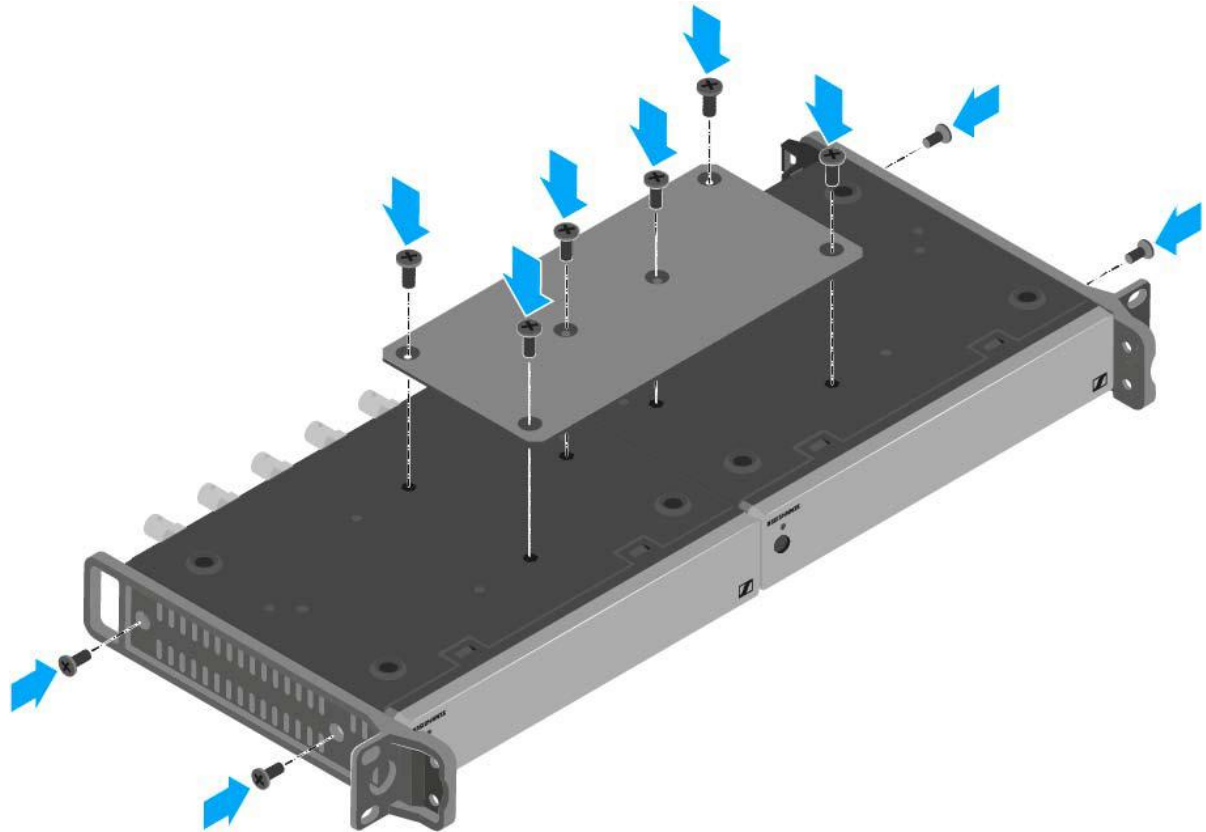
- ▷ Slide the antenna splitter with the mounted blanking plate into the 19" rack.
- ▷ Secure the mounting angle and the blanking plate to the 19" rack.
- ▷ Align the mounted antennas in a V-shape.



Mounting two antenna splitters side by side in a rack

To mount the antenna splitters using the GA 3 rack mounting kit (optional accessory):

- ▷ Place both antenna splitters upside down and side by side on an even surface.
- ▷ Secure the jointing plate to the transmitters using the six recessed head screws (M3x6).
- ▷ Secure the mounting angle.

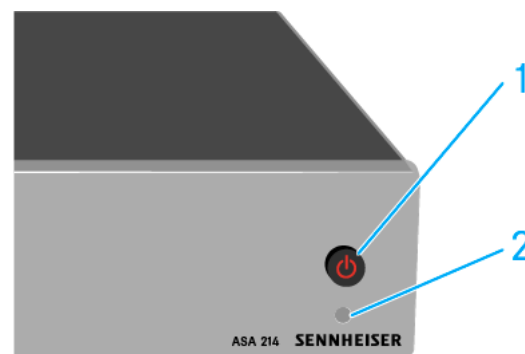




Using the ASA 214

These sections contain detailed information about operating the ASA 214. You can find information on installation and startup of the ASA 214 under “Installing the ASA 214”.

Operating elements on the front of the device



- 1 STANDBY button
 - See “Switching the ASA 214 on and off”
- 2 LED: Operation indicator

Switching the ASA 214 on and off

To switch on the antenna splitter:

- ▷ Short-press the **STANDBY** button.
 - The antenna splitter switches on and the power LED turns green.
 - The RF signals of the connected antennas are distributed to all connected receivers.



To switch the antenna splitter to [standby mode](#):

- ▷ Press the **STANDBY** button for approx. 2 seconds.
 - The LED turns off. The connected antenna amplifiers are switched off. Connected receivers are switched off if they draw their supply voltage from the BNC sockets A1 to A4 (see “Connecting receivers to the ASA 214”).

To [fully switch off](#) the antenna splitter:

- ▷ Disconnect the antenna splitter from the power supply system by unplugging the power supply unit from the wall socket.
 - The LED turns off.



Antennas and accessories

The following antenna components are available as accessory parts.

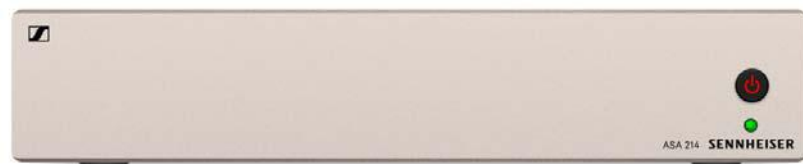
Omni-directional antennas

- **A 1031-U**, passive omni-directional antenna, article no. 004645

Directional antennas

- **A 2003 UHF**, passive directional antenna, article no. 003658

Antenna splitter



- **ASA 214**, active antenna splitter 2×1:4
 - **ASA 214-UHF** variant, 470 – 870 MHz, article no. 508241

Antenna amplifiers

- **AB 3700**, broadband antenna amplifier, article no. 502196
- **AB 4**, antenna amplifier, up to 88 MHz bandwidth
Available from the end of 2018



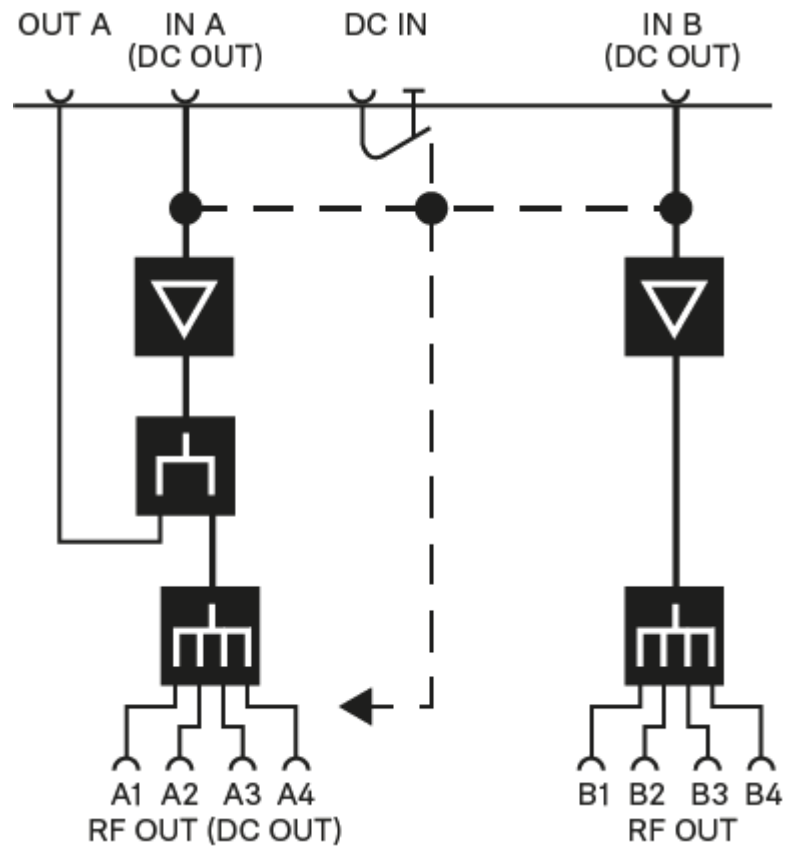
Information on antenna amplifiers and cable lengths

The following table shows which cable lengths require the use of the AB 3 antenna amplifier as well as the maximum recommended cable lengths.

Device	Frequency range around	Number of AB 3	Max. cable length	
			RG 58	GZL 5000
ASA 214	500 MHz	0	8 m	16 m
		1	36 m	72 m
		2	64 m	128 m
	700 MHz	0	7 m	14 m
		1	30 m	60 m
		2	53 m	106 m
	900 MHz	0	6 m	12 m
		1	26 m	52 m
		2	46 m	92 m
ASA 214 - 1G8	1800 MHz	0	4 m	8 m
		1	16 m	36 m
		2	28 m	64 m



Block diagram





ASA 214

Specifications

ASA 214 antenna splitter	2 × 1:4 or 1 × 1:8, active
Connection cable	8 pieces, 50 cm, BNC
Frequency range	
ASA 214-UHF:	470 – 870 MHz at –3 dB
ASA 214-1G8:	1785 – 1805 MHz at –3 dB
Amplification	
In A – Out A	0 ± 1 dB
In A – Out A1 ... A4	0 ± 1 dB
In B – Out B1 ... B4	0 ± 1 dB
IIP3	20 dBm min. 23 dBm, typical
Impedance	50 Ω
Reflection loss	10 dB (all RF outputs)
Operating voltage	13.8 V DC (with power supply unit NT 1-1)
Power consumption	ASA 1: 245 mA ASA 1-1G8: 350 mA
Total power consumption	max. 2.0 A with 4 receivers and 2 × 2 antenna amplifiers per antenna input
Antenna amplifier power supply at ANT RF IN A and ANT RF IN B	12 V, 130 mA
Receiver power supply at A1 to A4	12 V (protected against reverse supply), 350 mA
Relative air humidity	5 to 95%
Temperature range	
Operation:	-10 °C to +55 °C (14 °F to 131 °F)
Storage:	-20 °C to +70 °C (-4 °F to 158 °F)
Dimensions	approx. 212 x 168 x 43 mm
Weight	approx. 1090 g