



# AC 3200-II

## AC 3200-II High Gain

Instruction manual

**SENNHEISER**

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## Important safety instructions

1. Read these safety instructions and the instruction manual of the product.
2. Keep these safety instructions and the instruction manual of the product. Always include all instructions when passing the product on to third parties.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Only clean the product when it is not connected to the power supply system. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Only operate the product from the type of power source specified in the chapter „Specifications“ and indicated on the power supply unit.
10. Protect the power cord from being walked on or pinched, particularly at plugs and convenience receptacles.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug the power supply unit from the wall socket,
  - to completely disconnect the product from the power supply system,
  - during lightning storms,
  - when not using the product for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, when the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. Only use the supplied power supply unit.
16. Warning: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture and objects filled with liquids, such as vases, should not be placed on this apparatus.
17. When using the supplied device feet, do not place the product on delicate surfaces. Delicate surfaces can become discolored or stained when they come into contact with the plastic of the device feet.

18. Always ensure that the power supply unit is
  - in a safe operating condition and easily accessible,
  - properly plugged into the wall socket,
  - only operated within the permissible temperature range,
  - not covered or exposed to direct sunlight for longer periods of time in order to prevent heat accumulation.

### Intended use

- The product is designed for indoor use.
- The product can be used for commercial purposes.
- It is considered improper use when the product is used for any application not named in the corresponding instruction manual.
- Sennheiser does not accept liability for damage arising from improper use or misuse of this product and its attachments/accessories.
- Before putting the products into operation, please observe the respective country-specific regulations!
- Sennheiser is not liable for damages resulting from the loss of connection due to flat or overaged (rechargeable) batteries or exceeding the transmission range.
- Sennheiser does not accept liability for damage arising from abuse or misuse of this product and its attachments/accessories.

## Active Transmitter Combiner 8:1 AC 3200-II

With the AC 3200-II active transmitter combiner, the signals of up to eight Sennheiser wireless monitoring transmitters can be combined onto a single antenna, e.g. the A 2003 UHF directional antenna, the A 1031 U omni-directional antenna or the A 5000 CP circularly polarized UHF antenna. For suitable transmitters, please refer to the AC 3200-II product page at [www.sennheiser.com](http://www.sennheiser.com).

The AC 3200-II allows you to make high-quality 8-channel transmission systems suitable for the following areas of application:

- Multi-channel monitoring systems for stage use
- Multi-channel systems suitable for any application where talk-back signals are to be transmitted (e.g. studio).

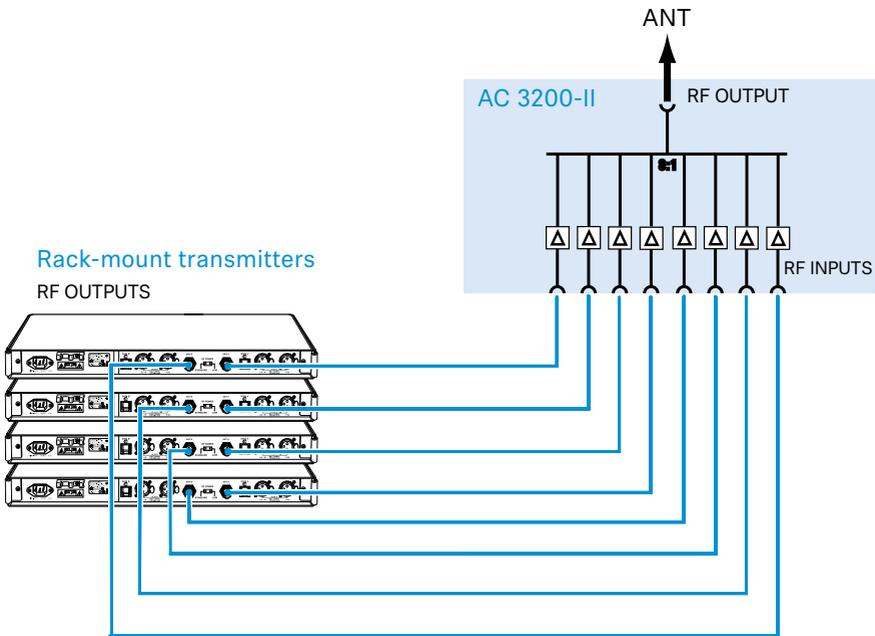
Delivery includes

## Delivery includes

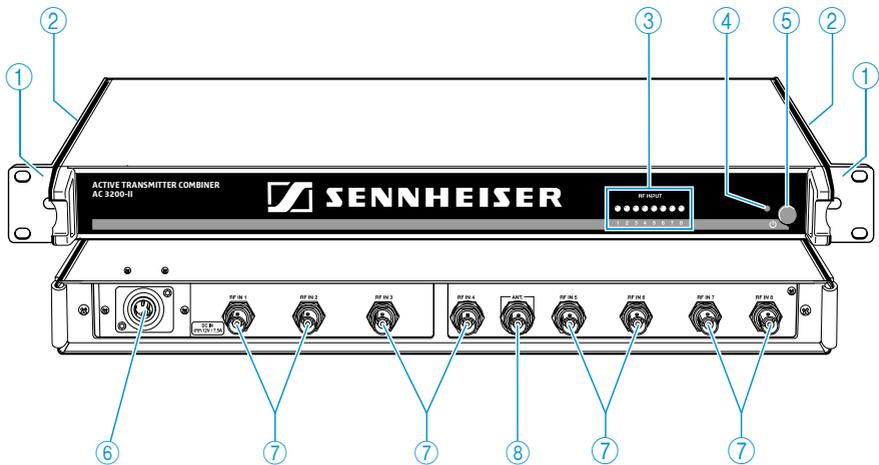
- 1 AC 3200-II active transmitter combiner 8:1
- 1 NT 12-125D mains unit
- 3 mains cables (EU/UK/US)
- 4 self-adhesive device feet
- 1 instruction manual

## Connection diagram

The below connection diagram shows the connections for an 8-channel system with a single antenna.



# Product overview



- ① Rack mount “ears”
- ② Air vents (on the sides)
- ③ 8 LEDs: operation indicators of the RF inputs
- ④ LED 
- ⑤ On-/Off switch 
- ⑥ DC input socket for connecting the NT 12-125D mains unit
- ⑦ 8 RF inputs **RF IN 1** to **RF IN 8** for connecting the transmitters
- ⑧ BNC socket for antenna output **ANT**

Putting the AC 3200-II into operation

# Putting the AC 3200-II into operation

## Preparing the AC 3200-II for use

You can set up the AC 3200-II on an even surface or mount it into a rack.

### Setting up the device

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#### **CAUTION**

##### **DANGER OF HEAT DAMAGE TO THE DEVICES**

During operation, the AC 3200-II and the connected transmitters produce considerable waste heat. If this heat cannot dissipate, it can cause damage to the devices.

The devices are equipped with fans to assist dissipation of generated heat:

- ▷ Make sure that the air vents ② on the sides of the AC 3200-II are not covered or blocked and provide ducts of sufficient size or allow sufficient space to ensure a free air flow between the devices.
- ▷ Regularly clean the air vents on the sides of the AC 3200-II with a soft brush.
- ▷ In order to avoid heat accumulation, make sure to install the AC 3200-II as the uppermost device.
- ▷ Never stack more than two devices directly one above the other.
- ▷ Never place several NT 12-125D mains units directly next to or on top of one another.

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To ensure that the AC 3200-II cannot slip on the surface on which it is placed, four self-adhesive soft rubber feet are supplied.

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#### **CAUTION**

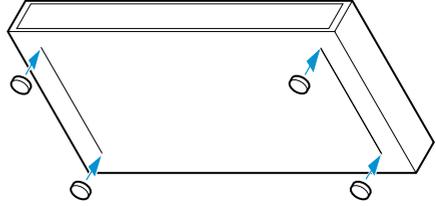
##### **RISK OF STAINING OF SURFACES**

Some surfaces have been treated with varnish, polish or synthetics which might cause stains when they come into contact with other synthetics. Despite a thorough testing of the synthetics used by us, we cannot rule out the possibility of staining.

- ▷ Do not place the AC 3200-II on delicate surfaces.
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## Putting the AC 3200-II into operation

- ▷ Ensure that the base of the AC 3200-II is clean and free from grease before fitting the rubber feet.
- ▷ Fix the rubber feet to the base of the AC 3200-II by peeling off the backing paper and fitting them as shown in the diagram on the right.
- ▷ Place the AC 3200-II on an even, horizontal surface.



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## Rack-mounting

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### CAUTION

#### RISKS WHEN RACK MOUNTING THE AC 3200-II

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:

- ▷ The ambient temperature within the rack must not exceed the temperature limit specified in the AC 3200-II specifications.
- ▷ When installing the device in a rack, take good care not to affect the ventilation required for safe operation. If necessary, provide additional ventilation.
- ▷ In order to avoid heat accumulation, make sure to install the AC 3200-II as the uppermost device in the rack.
- ▷ Provide for a duct or vent space of 1 U above the AC 3200-II to ensure that the heated air can dissipate.
- ▷ Never place several NT 12-125D mains units directly next to or on top of one another.
- ▷ Make sure the mechanical loading of the rack is even to avoid a hazardous condition such as a severely unbalanced rack.
- ▷ Make sure the two cables of the NT 12-125D mains unit are not exposed to mechanical loading (e.g. pulling).
- ▷ When connecting the device to the power supply, observe the information indicated on the mains unit. Avoid circuit overloading. If necessary, provide overcurrent protection.
- ▷ Ensure a reliable mains ground connection of the device by taking appropriate measures – especially when you are using multi-outlet power strips or extension cables.

## Connecting devices

To mount the AC 3200-II into a 19" rack:

- ▷ Slide the AC 3200-II into the 19" rack.
- ▷ Secure the rack mount “ears” ① to the rack using four screws (to be ordered separately).

# Connecting devices

## Connecting the antenna

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### CAUTION

#### DANGER OF DAMAGE TO THE DEVICES!

Do **not** daisy-chain several AC 3200-II. Do **not** connect other active combiners to the AC 3200-II.

- ▷ Never connect the AC 3200-II to other active combiners.
- ▷ Only connect suitable antennas to the output of the AC 3200-II.

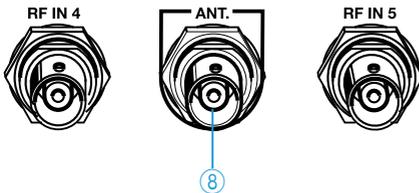
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The AC 3200-II active transmitter combiner can be used with either the A 2003 UHF directional antenna, the A 1031 U omni-directional antenna or the A 5000 CP circularly polarized UHF antenna. The antenna transmits the signals of all connected transmitters.

The signals are combined onto the antenna output with no distribution attenuation.

To connect an antenna:

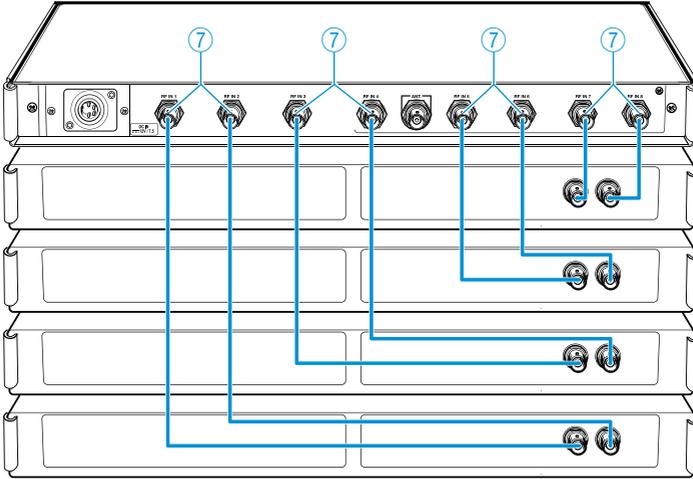
- ▷ Connect the antenna using a low-attenuation 50-Ω-coaxial cable.
- ▷ Connect the coaxial cable to the antenna output ⑧.



## Connecting a transmitter to the AC 3200-II

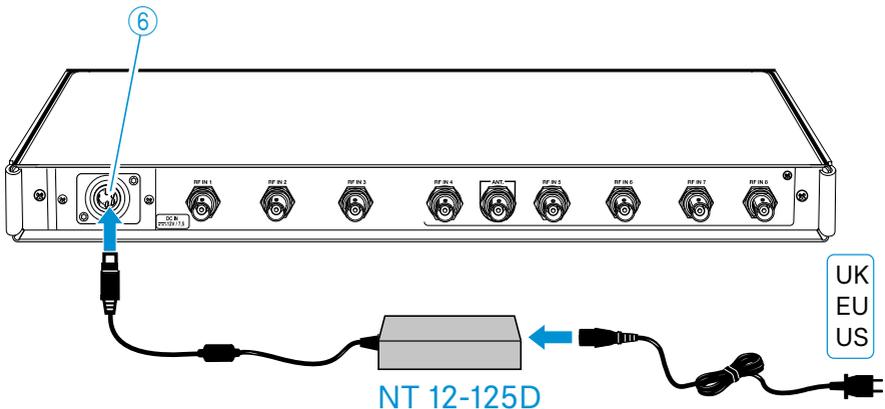
To connect a transmitter:

- ▷ Connect the BNC cable of the transmitter to one of the eight RF inputs **RF IN 1** to **RF IN 8** ⑦.



## Connecting the mains unit

- ▷ Connect the mains cable (EU, UK or US version, depending on your location) to the input socket on the NT 12-125D mains unit.
- ▷ Connect the DC connector of the mains unit to the DC input socket ⑥ of the AC 3200-II.
- ▷ Connect the mains connector of the mains cable to the mains power supply.



Switching the AC 3200-II on and off

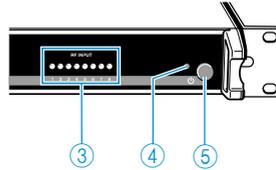
## Switching the AC 3200-II on and off

- ▷ Press the on/off switch  ⑤.

The AC 3200-II switches on and the LED  ④ lights up red.

- ▷ Press the on/off switch  ⑤ again.

The AC 3200-II switches off and the LED  ④ goes off.



After switch-off, the AC 3200-II is in standby mode. To disconnect the device and the NT 12-125D mains unit from the mains power supply, pull out the mains connector from the wall socket.

### RF indicators

The AC 3200-II has 8 control LEDs ③ which light up green on the channels where transmission power is available.

## Recommendations and tips for optimum transmission

- There should be a “free line of sight” between transmitting and receiving antennas.
- To avoid overloading the receiver, observe a minimum distance of 5 m between transmitting and receiving antennas.
- Observe a minimum distance of 50 cm between the transmitting antenna and metal objects (such as cross members or reinforced-concrete walls).
- When using a multi-channel system:  
Set all transmitters of your multi-channel system to intermodulation-free frequencies.

# Cleaning and maintaining the AC 3200-II

## CAUTION

### LIQUIDS CAN DAMAGE THE ELECTRONICS OF THE DEVICE

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

- ▷ Keep all liquids away from the device.
- ▷ Do not use any solvents or cleansing agents.

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- ▷ Before cleaning, disconnect the NT 12-125D mains unit from the mains power supply.
  - ▷ Only use a dry cloth to clean the device.
  - ▷ Regularly check the air vents for dust deposits. If necessary, remove the dust with a soft brush.

## If a problem occurs

Problem	Possible cause	Solution
The LED  ④ does not light up.	The AC 3200-II doesn't consume current.	Check if the AC 3200-II is connected to the NT 12-125D mains unit, if the mains unit is connected to the mains power supply and if the on/off switch  ⑤ is pressed.
Extra LEDs ③ light up for RF inputs which are not in use.	The transmitting antenna or the antenna cable is not connected, of the wrong type, damaged or faulty.	Check that the transmitting antenna or the antenna cable is correctly connected, of the correct type, and is not damaged or faulty.
		Check that the transmitting antenna or the antenna cable is connected to the antenna output ⑧ and that all transmitters are connected to RF inputs ⑦.
One or several LEDs ③ do not light up.	A transmitter is connected to the corresponding input but the transmitter is not switched on.	Switch the transmitter on.

## Cleaning and maintaining the AC 3200-II

Problem	Possible cause	Solution
Disturbed reception or no reception	The transmitting antenna is not within the reception area.	Reduce the distance between transmitter and receiver.
	The receiver batteries are not inserted or batteries are low.	Replace the receiver batteries.
	The antenna is not connected correctly.	Check if the antenna is connected correctly.
	Too high cable attenuation due to too long antenna cables	Use a shorter antenna cable or the correct type of antenna cable.
	or wrong type of antenna cable.	Use low-attenuation 50-Ω-coaxial cable.
	Interference or inter-modulation during multi-channel operation.	Set all transmitters of your multi-channel system to inter-modulation-free frequencies.

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](http://www.sennheiser.com) under “Service & Support”.

# Specifications

	AC 3200-II	AC 3200-II High Gain
Frequency range	500 to 870 MHz	
Distribution attenuation	0 dB ( $\pm 1$ dB)	+3 dB ( $\pm 1$ dB)
RF input power	max. 100 mW	
Inputs protected up to	max. 250 mW	
Impedance	50 $\Omega$	
Power supply	12 V $\overline{\text{---}}$	
Current consumption	max. 7.5 A	
Power consumption	max. 90 W	
Temperature range	-10 °C to +45 °C	
Weight	approx. 4 kg	
Dimensions	436 x 215 x 44 mm	

## NT 12-125D

Type	Mean Well GST160A12
Input voltage	100 to 240 V $\sim$
Input frequency	50 to 60 Hz
Current consumption	max. 1.85 A
Output voltage	12 V $\overline{\text{---}}$
Output current	max. 11.5 A
Temperature range	- 30°C to +50 °C
Relative air humidity	20 - 90%
Weight	approx. 660 g (without mains cable)
Dimensions	175 x 72 x 35 mm
Length of DC output cable	approx. 100 cm/39 inch

# Manufacturer declarations

## Warranty

Sennheiser electronic GmbH & Co. KG gives a warranty of 24 months on these products.

For the current warranty conditions, please visit our website at [www.sennheiser.com](http://www.sennheiser.com) or contact your Sennheiser partner.

## In compliance with the following requirements

- WEEE Directive (2012/19/EU)



## Notes on disposal

The symbol of the crossed-out wheeled bin (imprint available depending on national requirements) on the product, the battery/rechargeable battery (if applicable) and/or the packaging indicates that these products must be disposed of separately at the end of their operational lifetime in accordance with the national legislation. For packaging disposal, please observe the legal regulations on waste segregation applicable in your country.

The separate collection of waste electrical and electronic equipment, batteries/rechargeable batteries (if applicable) and packagings is used to promote the reuse and recycling and to prevent negative effects caused by e.g. potentially hazardous substances contained in these products. Herewith you make an important contribution to the protection of the environment and public health.

## EU Declaration of conformity

- RoHS Directive (2011/65/EU)

Hereby, Sennheiser electronic GmbH & Co. KG declares that the radio equipment type (accessory) **AC 3200-II**, **AC 3200-II High Gain** is in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following internet address: [www.sennheiser.com/download](http://www.sennheiser.com/download).



**Sennheiser electronic GmbH & Co. KG**

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