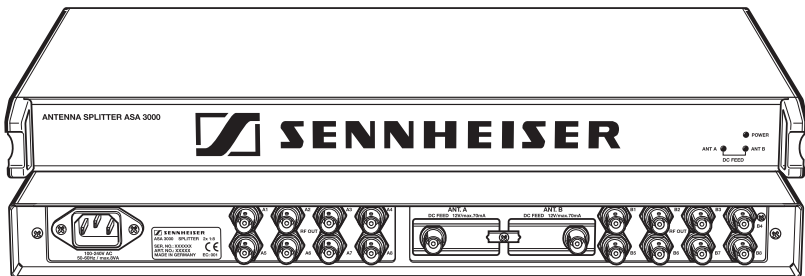


# Active Antenna Splitter 2 x 1:8 **ASA 3000**

Instructions for use



## Contents

Safety information .....	3
Delivery includes .....	3
Operating elements .....	4
Connection diagram .....	5
Trouble shooting .....	9
Accessories .....	10
Specifications .....	11
Manufacturer declarations .....	12

## Brief description

With the 2 x 1:8 active antenna splitter, up to eight receivers (EM 3031) or twin receivers (EM 3032, EM 3532) can be operated with only one pair of diversity antennas.

Each diversity section is fitted with a wideband input module which can be exchanged for a selective input module. Due to the built-in antenna boosters, the signals are routed without loss to the connected receivers.

The active antenna splitter allows you to make receiver systems with up to 16 channels.

Areas of application:

- Multi-channel RF installations (fixed or mobile)
- Permanent installations in small conference centres and similar venues

## Safety information

The 2 x 1:8 active antenna splitter must only be set up and connected by an electrical engineering expert.

Never open electronic units! This must only be done by authorized personnel and is all the more important for units connected to AC outlets. If units are opened by customers in breach of this instruction, the warranty becomes null and void!

Make sure that the air vents of the unit are not covered or blocked. Keep the unit away from central heating radiators and electric heaters!

Set up the unit on an even surface or mount it into a rack! Lay the cables in such a way that no-one can stumble over them!

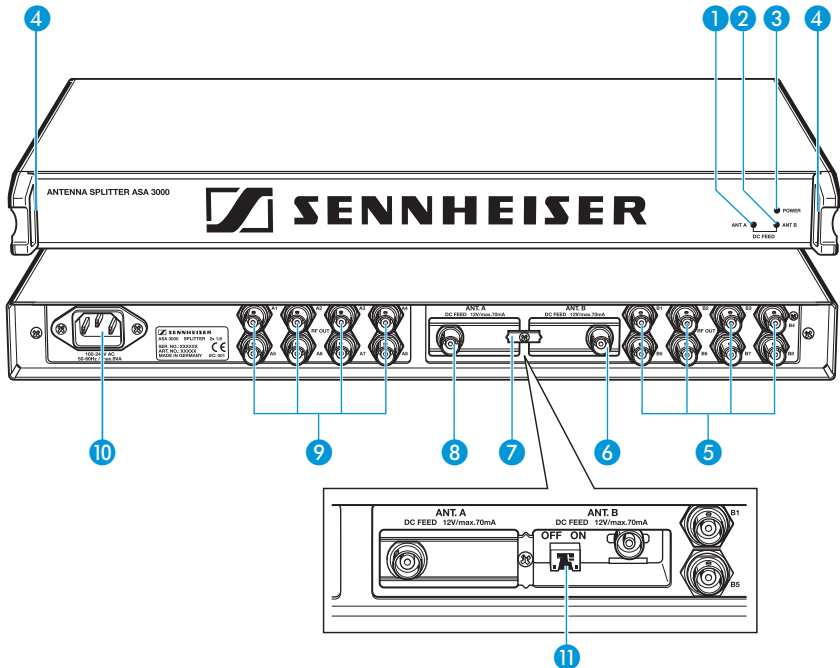
Keep liquids and small parts which conduct electricity away from the unit! Use a damp cloth for cleaning the unit. Do not use any solvents or cleansing agents!

## Delivery includes

- 1 active antenna splitter, 2 x 1:8
- 1 mains cable
- 1 rack-mounting kit
- 1 set of self-adhesive plastic feet
- 2 telescopic antennas
- 1 instruction manual

For accessories, please refer to page 10.

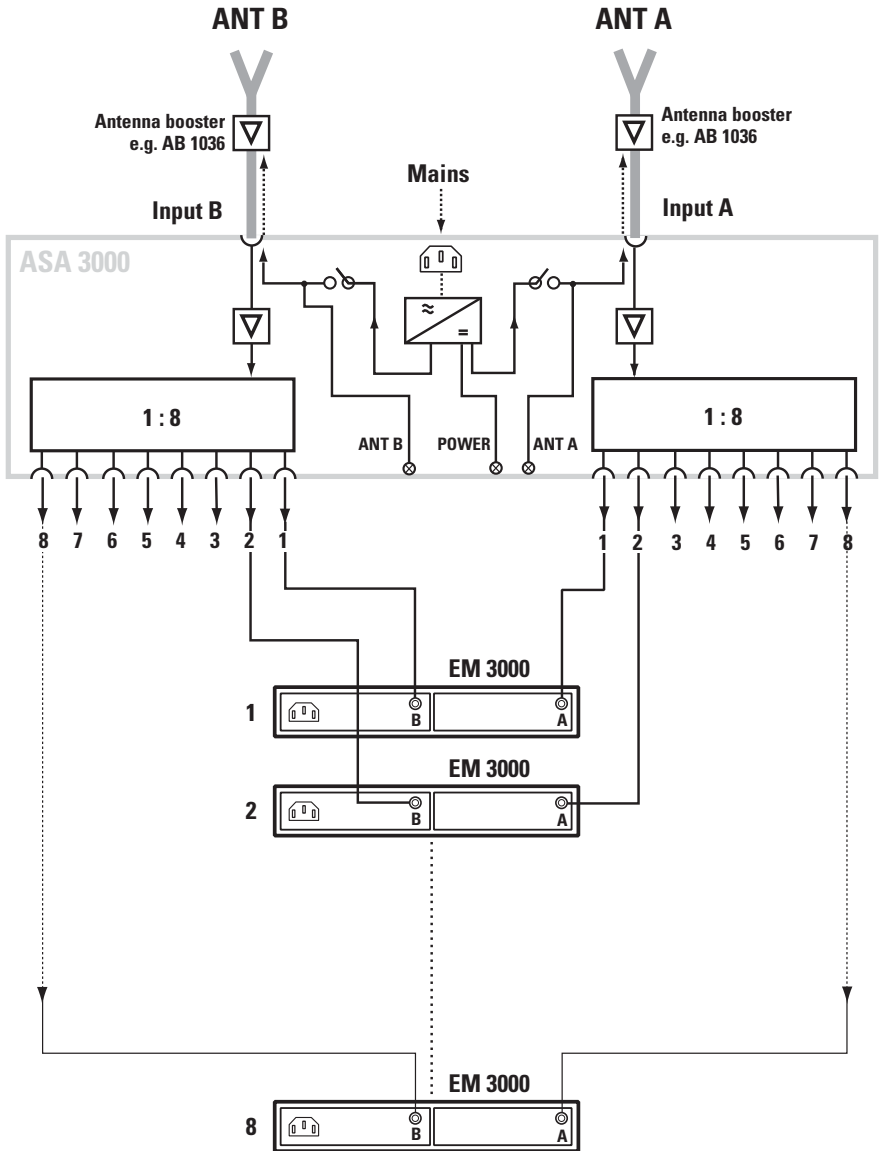
# Operating elements



- ① LED DC FEED ANT A (green)
- ② LED DC FEED ANT B (green)
- ③ LED POWER (red)
- ④ Threaded holes for rack-mounting
- ⑤ BNC sockets for antenna outputs, diversity section "B", B1 to B8
- ⑥ Exchangeable wideband input module with BNC antenna input for diversity section "B" ANT. B
- ⑦ Catch for input modules
- ⑧ Exchangeable wideband input module with BNC antenna input for diversity section "A" ANT. A
- ⑨ BNC sockets for antenna outputs, diversity section "A", A1 to A8
- ⑩ IEC mains socket
- ⑪ Switches DC-Feed ANT A and DC-Feed ANT B for turning the DC supply voltage for active antennas and antenna boosters on and off (switches are located inside the input module slots ⑥ and ⑧)

# Connection diagram

The below connection diagram shows the connections for an 8- or 16-channel system.



## Putting the unit into operation

### Setting up the unit

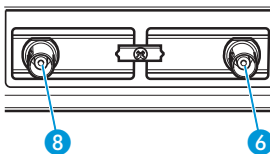
The unit is suitable for use as table top or can be mounted into a rack.

- ▶ Fix the unit to a 19" rack by using the supplied rack-mounting kit.
- ▶ To set up the unit on an even, horizontal surface, fix the four self-adhesive plastic feet to the base of the unit.

#### Note:

Some furniture 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 discoloration, since we don't know your furniture. To protect your furniture, we recommend placing the unit on a non-slip pad.

### Connecting the antennas



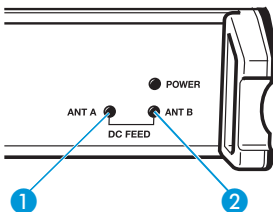
- ▶ You can connect the following antenna types to the BNC sockets 6 and 8 of the input modules:

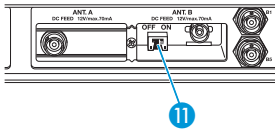
- two GZA 1036 or A 2003-UHF passive antennas or
- two A 12 active antennas or
- two GZA 1036 passive antennas with AB 1036 antenna boosters.

The ASA 3000 routes the antenna signals without loss to the respective antenna outputs.

#### Notes:

The ASA 3000 is delivered with the DC supply voltage for active antennas or antenna boosters turned on. The two LEDs **DC FEED ANT A** 1 and **DC FEED ANT B** 2 light up green.



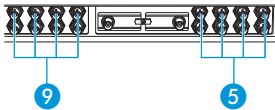


If you use passive antennas only, the DC supply voltage can be turned off. To do so, remove the two input modules (see “Exchanging the input modules” on page 7) and set the two switches **DC-Feed ANT A** and **DC-Feed ANT B** **11** to position “OFF”.

### Connecting the receivers

Up to eight receivers, e.g. EM 3031, or eight twin receivers, e.g. EM 3032 or EM 3532, can be connected.

- ▶ Use BNC cables to connect the receivers to the BNC sockets **5** and **9** as follows:



First receiver:

Diversity section “A” to **A1**, diversity section “B” to **B1**.

Second receiver:

Diversity section “A” to **A2**, diversity section “B” to **B2**.

etc.

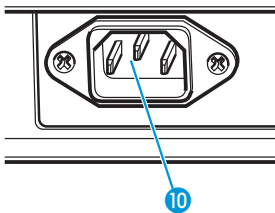
### Connecting the mains cable

- ▶ Connect the mains cable to the IEC mains socket **10** and to the mains.

The ASA 3000 has no power switch. The unit is ready for operation as soon as it is connected to the mains.

#### Note:

The ASA 3000 can be connected to any mains power supply with 100 V to 240 V AC (50 to 60 Hz).



### Exchanging the input modules

The unit is fitted with two wideband input modules (470 to 870 MHz) which are suitable for most applications. However, to ensure optimum reception reliability, we recommend using two selective input modules (60-MHz window) (see “Accessories” on page 10).

When using the selective input modules:

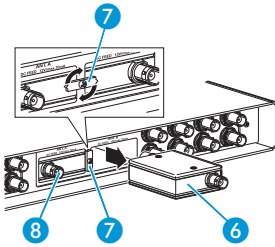
- Make sure that all transmitters and receivers of your transmission system operate within the frequency window of the selective input modules!

When using the wideband input modules:

- Use an active antenna (e.g. A 12 AD antenna) or an antenna with antenna booster (e.g. GZA 1036 antenna with AB 1036 antenna booster).

To exchange the input modules:

- ▶ Use a crosstip screwdriver to loosen the screw of the catch for the input modules 7.
- ▶ To remove the input modules 6 and 8, plug a BNC connector into the input modules' BNC sockets and pull hard (!) at the BNC connector.
- ▶ Insert the new input modules and tighten the screw of the catch 7.





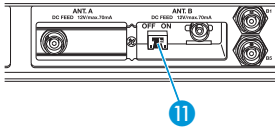
## Trouble shooting

### The LED POWER ③ does not light up

The unit is not powered.

### Disturbed reception or no reception

Possible causes:



- Transmitting antennas are not within the reception area
- Transmitters or receivers are not turned on
- Transmitter batteries are not inserted or batteries are low
- The antennas are not connected correctly
- The connecting cables are defective
- Too high cable attenuation due to too long antenna cables or wrong type of antenna cable
- The selected transmission and receiving frequencies are not within the frequency window of the selective input modules (optional) and antenna boosters (optional)
- When using active antennas or antenna boosters, the supply voltage must be turned on (see “Connecting the antennas” on page 6). The two LEDs DC FEED ANT A ① and DC FEED ANT B ② light up green. If the LEDs do not light up even though the two switches DC-Feed ANT A and DC-Feed ANT B ①② are set to position “ON”, the antenna inputs are short-circuited.

## Accessories

The following accessories are available from Sennheiser:

		Cat. No.
<b>A 2003 UHF</b>	Active antenna	03658
<b>A 12 AD UHF</b>	Active antenna	04645
<b>GZA 1036</b>	Passive antenna	02243
<b>AB 1036</b>	Antenna booster	03598
<b>IM 3000</b>	Selective input module	05241
<b>GZL 1019 A1</b>	BNC-BNC coaxial cable, length 1 m	02324
<b>GZL 1019 A5</b>	BNC-BNC coaxial cable, length 5 m	02325
<b>GZL 1019 A10</b>	BNC-BNC coaxial cable, length 10 m	02326

# Specifications

## RF characteristics / active diversity antenna splitter

Antenna splitter:	2 x 1:8, active
Frequency range:	470–870 MHz
Distribution attenuation:	+3/-1 dB
Nominal impedance of the inputs/outputs:	50 Ω
Connections inputs A/B:	BNC sockets
Connections outputs A1-A8/B1-B8:	BNC sokkets
Booster supply at the inputs A and B:	12 V, 200 mA max. each, short circuit-proof

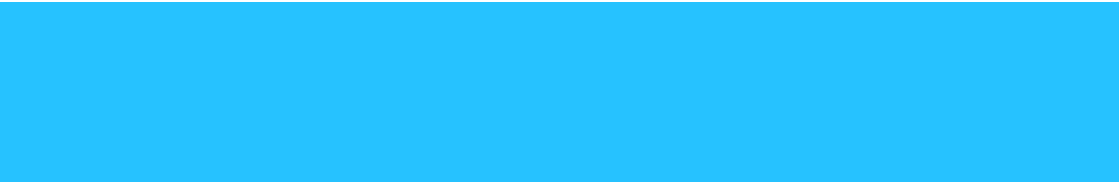
## Overall unit

Supply voltage range:	nom. 100–240 V AC, 50–60 Hz
Power consumption:	max. 15 W
Weight:	approx. 3 kg
Dimensions:	19", 1 U
Temperature range:	-10 to +55 °C

## Selective input module (optional)

### Variable two-circuit bandpass filter

Frequency range:	470–870 MHz
Insertion loss:	< 1.5 dB
Bandwidth -1 dB:	≥ 40 MHz
Bandwidth -3 dB:	≤ 60 MHz
Bandwidth -10 dB:	≤ 100 MHz
Far-off selection:	≥ 50 dB
DC feed:	max. 0.5 A, 20 V
Input:	BNC socket, 50 Ω
Output:	IEC connector



Sennheiser electronic GmbH & Co. KG  
30900 Wedemark, Germany  
[www.sennheiser.com](http://www.sennheiser.com)

Printed in Germany

Publ. 05/07

093248 / A03