

# R&S®UPZ Audio Switcher

## Multichannel switcher for audio channel inputs and outputs



# R&S®UPZ Audio Switcher At a glance

The R&S®UPZ audio switcher is a multichannel switcher for audio channel inputs and outputs. Used with Rohde & Schwarz audio analyzers, it opens up further application fields.

As an add-on unit to the R&S®UPV and R&S®UPP audio analyzers, the R&S®UPZ audio switcher can be used whenever input or output signals need to be switched over to multiple channels or DUTs. Users can directly operate the switcher from the graphical user interface of the audio analyzer. Control via PC is also possible.

## Key facts

- Available as input and output switcher
- Cascading of up to 128 channels
- Operation directly from the R&S®UPV or R&S®UPP audio analyzers
- Control via RS-232-C or USB 2.0 for handling universal applications

Rear view of the R&S®UPZ.



Several R&S®UPZ audio switchers can be cascaded.



# Benefits and key features

## Wide variety of applications for all kinds of audio measurements

Surround applications in homes, multichannel mixing consoles in sound studio environments, multichannel amplifiers as well as the adaptation of several DUTs in production are just some examples of the wide variety of applications that are possible using the R&S®UPZ audio switcher. As an add-on unit to the R&S®UPV and R&S®UPP audio analyzers, the R&S®UPZ is directly operated from the graphical user interface. Remote control, e.g. in production environments, also runs via the audio analyzer.

Users can also control the R&S®UPZ audio switcher directly from a PC via its RS-232-C or USB 2.0 interfaces.

## Available as input and output switcher

The R&S®UPZ audio switcher – like the R&S®UPV and R&S®UPP audio analyzers – comes with XLR connectors. Since there is a difference between male and female connectors in the XLR system, the R&S®UPZ is available both as an input and as an output model.

Both models feature two switching channels, enabling users to simultaneously operate the two generator or measurement channels of the audio analyzer.

Up to 16 input switchers plus 16 output switchers can be cascaded, allowing up to 128 input or output channels to be switched.

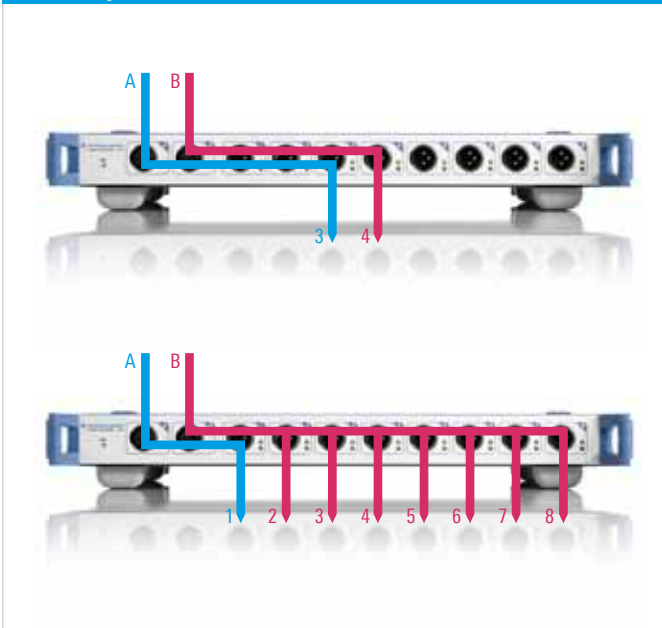
## Applications for testing multichannel amplifiers

The standard application is paired or individual switching of the DUTs or measurement channels to be tested. In each case, one signal path is connected to an assigned channel.

A special feature is measuring the crosstalk of the individual channels of multichannel amplifiers, which requires a particularly critical measurement.

For this application, the signal coupled into a channel will be measured while all other amplifier channels are driven at the same time. The output switcher enables users to switch signal path B through to all channels in parallel, while signal path A can be switched to any selectable channel.

### Switch paths with the R&S®UPZ switcher



The R&S®UPZ together with the R&S®UPV.



# Specifications

Electrical data		
Nominal switching capacity <sup>1)</sup>	resistive load	33 V (46.7 V V <sub>p</sub> ), 0.5 A
Max. switching power	resistive load	60 W
Max. switching current		2 A
Crosstalk (balanced 600 Ω load) <sup>2)</sup>	20 kHz	typ. -140 dB
	100 kHz	typ. -126 dB
Series resistance	per signal pin	typ. < 0.3 Ω
Shunt capacitance	each signal pin to ground	typ. < 90 pF

General data		
<b>Environmental conditions</b>		
Temperature	operating temperature range	0°C to +50°C
	storage temperature range	-40°C to +70°C
Humidity		95% relative humidity at 40°C, constant, in line with EN 60068-2-78
<b>Power supply</b>		
	nominal voltage	100 V to 120 V AC ± 10% 220 V to 240 V AC ± 10%
	nominal frequency range	50 Hz to 60 Hz ± 5%
<b>Power consumption</b>		
	input switcher	max. 10 VA
	output switcher	max. 15 VA
<b>Product conformity</b>		
Electromagnetic compatibility	in line with EMC Directive 2004/108/EC	applied harmonized standards: EN 61326-1 (for industrial use) EN 61326-2-1 EN 55011 (Class B) EN 61000-3-2 EN 61000-3-3
Electrical safety	in line with Low Voltage Directive 2006/95/EC	applied harmonized standard: EN 61010-1
	USA	UL 61010-1
	Canada	CAN/CSA-C22.2 No. 61010-1
International certification	VDE – Association for Electrical, Electronic and Information Technologies	GS mark 138469
	CSA – Canadian Standards Association	CSA <sub>US</sub> mark 1245063
<b>Dimensions</b>	W × H × D	427 mm × 43 mm × 350 mm, 1 HU (16.81 in × 1.69 in × 13.78 in)
<b>Weight</b>		3.7 kg
<b>Remote Control</b>		via RS-232-C or USB 2.0

<sup>1)</sup> For max. relay life: max. 5 W or 0.2 A.

<sup>2)</sup> Between any two channels into 600 Ω.

# Ordering information

Designation	Type	Order No.
<b>Base unit</b>		
Audio Switcher (input, female)	R&S®UPZ	1120.8004.12
Audio Switcher (output, male)	R&S®UPZ	1120.8004.13
<b>Accessories supplied</b>		
Power cable		
Operating and service manual		
RS-232-C extension cable		
USB cable		
<b>Recommended extras</b>		
19" Rack Adapter	R&S®ZZA-111	1096.3254.00

## Service you can rely on

- | Worldwide
- | Local and personalized
- | Customized and flexible
- | Uncompromising quality
- | Long-term dependability

## About Rohde & Schwarz

Rohde & Schwarz is an independent group of companies specializing in electronics. It is a leading supplier of solutions in the fields of test and measurement, broadcasting, radiomonitoring and radiolocation, as well as secure communications. Established more than 75 years ago, Rohde & Schwarz has a global presence and a dedicated service network in over 70 countries. Company headquarters are in Munich, Germany.

## Environmental commitment

- | Energy-efficient products
- | Continuous improvement in environmental sustainability
- | ISO 14001-certified environmental management system

Certified Quality System  
**ISO 9001**

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