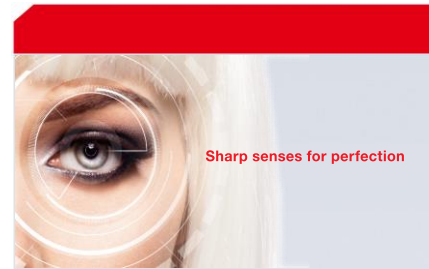


Manual

Output Audio Switch



Sharp senses for perfection

Softline

Modline

Conline

Boardline

Avidline

Pixline

Application



■ Measurement Technology beyond the decimal point

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1. Safety instructions

The Output Audio Switch is intended for use indoors. It may not be exposed to moisture. If the device is brought from a cold environment into a warm one, it must be allowed to stand for at least one hour without the power cord and other cables connected until any condensation moisture has dried.

The device has no parts that can be replaced by the user. Any repair must be carried out by a trained technician. Before opening the housing, disconnect the power cord and wait for about a minute.

Before starting the device for the first time, be absolutely sure that the correct operating voltage has been configured (you can see this on the viewing window on the power cable connection). If it is configured incorrectly, the device can be damaged.

Fuse inserts must be replaced with the same type. If other types are used, there is a risk of fire.

2. General information

The Output Audio Switch is a switching device for output signals. Up to 16 devices can be connected in series, enabling the connection of up to 128 output channels. These can then be switched on the two output channels of the AudioAnalyzer. The device is controlled via either USB2.0 or RS232C with simple text commands.

There is also a control application named Toolmonitor Audio Switch which provides a Graphical User Interface for control of the Audio Switch. External software can be used to control the Toolmonitor Audio Switch completely remotely. COM/DCOM or a .Net assembly can be used as the interface. This allows the Toolmonitor Audio Switch to be integrated into many different applications (MCD TestManager CE, LabView[®], Microsoft Visual Studio[®] (C#, C++, Visual Basic), Microsoft Office[®] (for example Excel[®]), Open Office[®]).

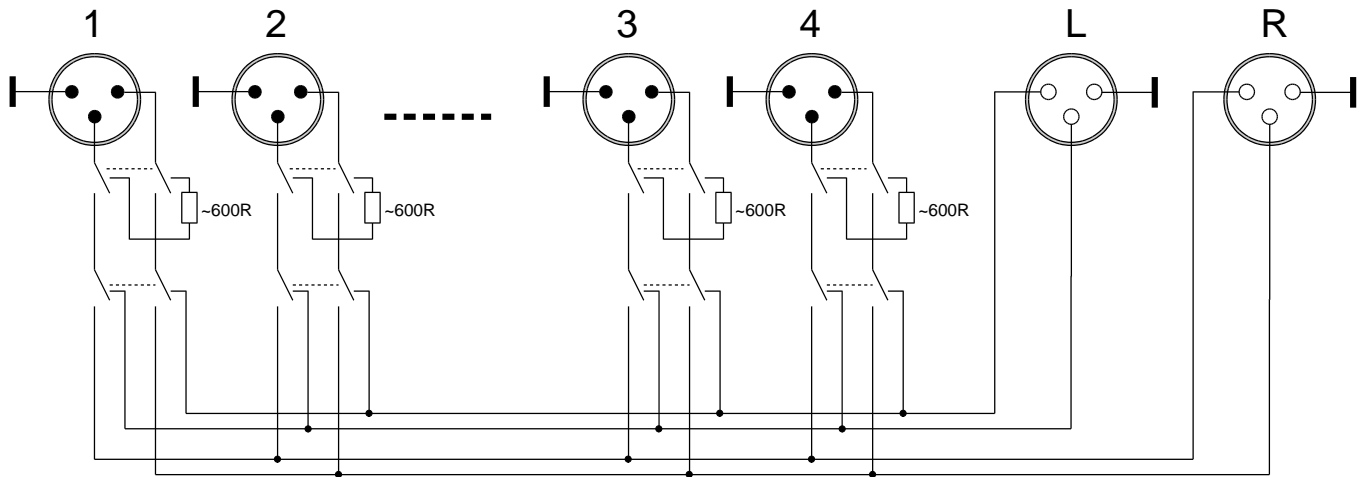
Order number: 122083

3. Scope of delivery

- 1x Output Audio-Switch
- 1x USB storage card with installation software
- 1x power cord 1.8m

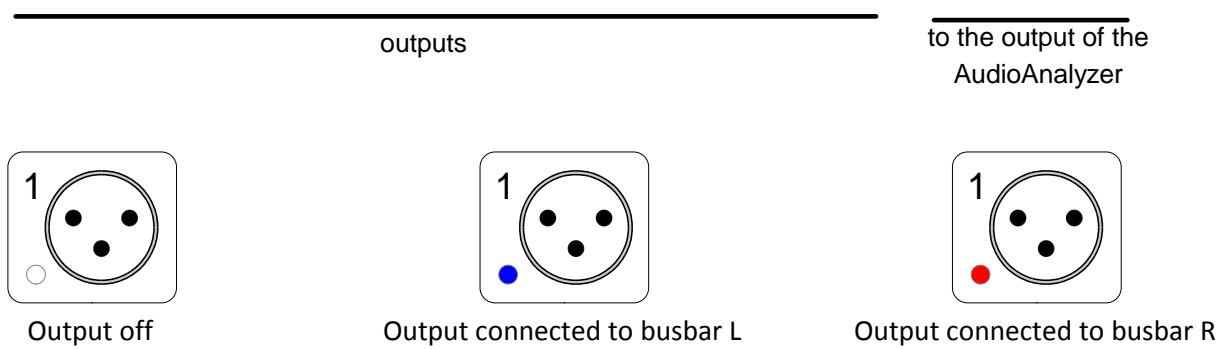
4. Switching scheme

The outputs can optionally be connected to busbar "L" or "R". Unused outputs are terminated with about 600 ohms. This prevents signal noise on the line. Multiple outputs can be switched on busbar L. This allows, for example, a multichannel amplifier to be used to distribute the superimposition of all other channels onto another.

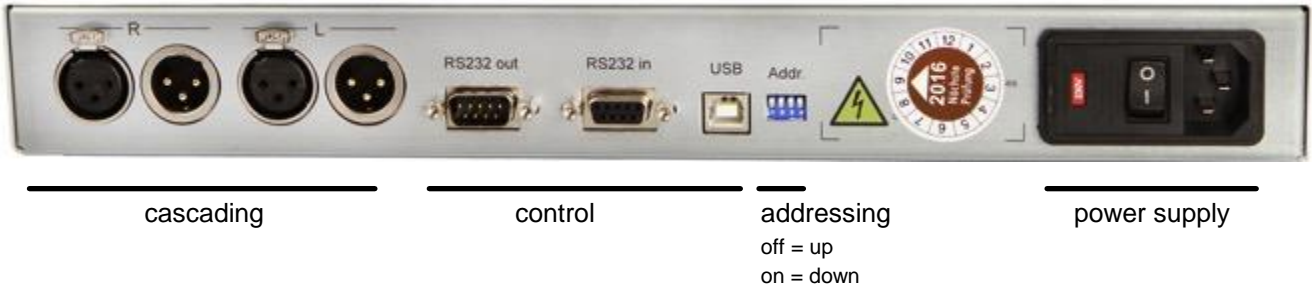


5. Connections

Outputs 1 through 8 are connected to the signal inputs. Connections L and R are connected to the outputs of the AudioAnalyzer. Other signal inputs can be connected by cascading additional Audio Switches. If a connection is connected to one of the two busbars L and R, the corresponding signal lamp will light up in blue or red. If the connection is not connected, the signal lamp is off.



The back of the device has the connections for cascading multiple units, the control connections, the device addressing, and the connector for the power supply.



Address	Switch position	Channels	Address	Switch position	Channels
0	Off – Off – Off – Off	0 – 7	8	Off – Off – Off – On	64 – 71
1	On – Off – Off – Off	8 – 15	9	On – Off – Off – On	72 – 79
2	Off – On – Off – Off	16 – 23	10	Off – On – Off – On	80 – 87
3	On – On – Off – Off	24 – 31	11	On – On – Off – On	88 – 95
4	Off – Off – On – Off	32 – 39	12	Off – Off – On – On	96 – 103
5	On – Off – On – Off	40 – 47	13	On – Off – On – On	104 – 111
6	Off – On – On – Off	48 – 55	14	Off – On – On – On	112 – 119
7	On – On – On – Off	56 – 63	15	On – On – On – On	120 – 127

6. Cascading

Up to 16 Output Audio Switches can be switched in series to provide up to 128 outputs. Only one control connection is required for the entire chain. The connection to the controlling PC is at the start of the chain (USB or RS232). The control signals are then sent from device to device.



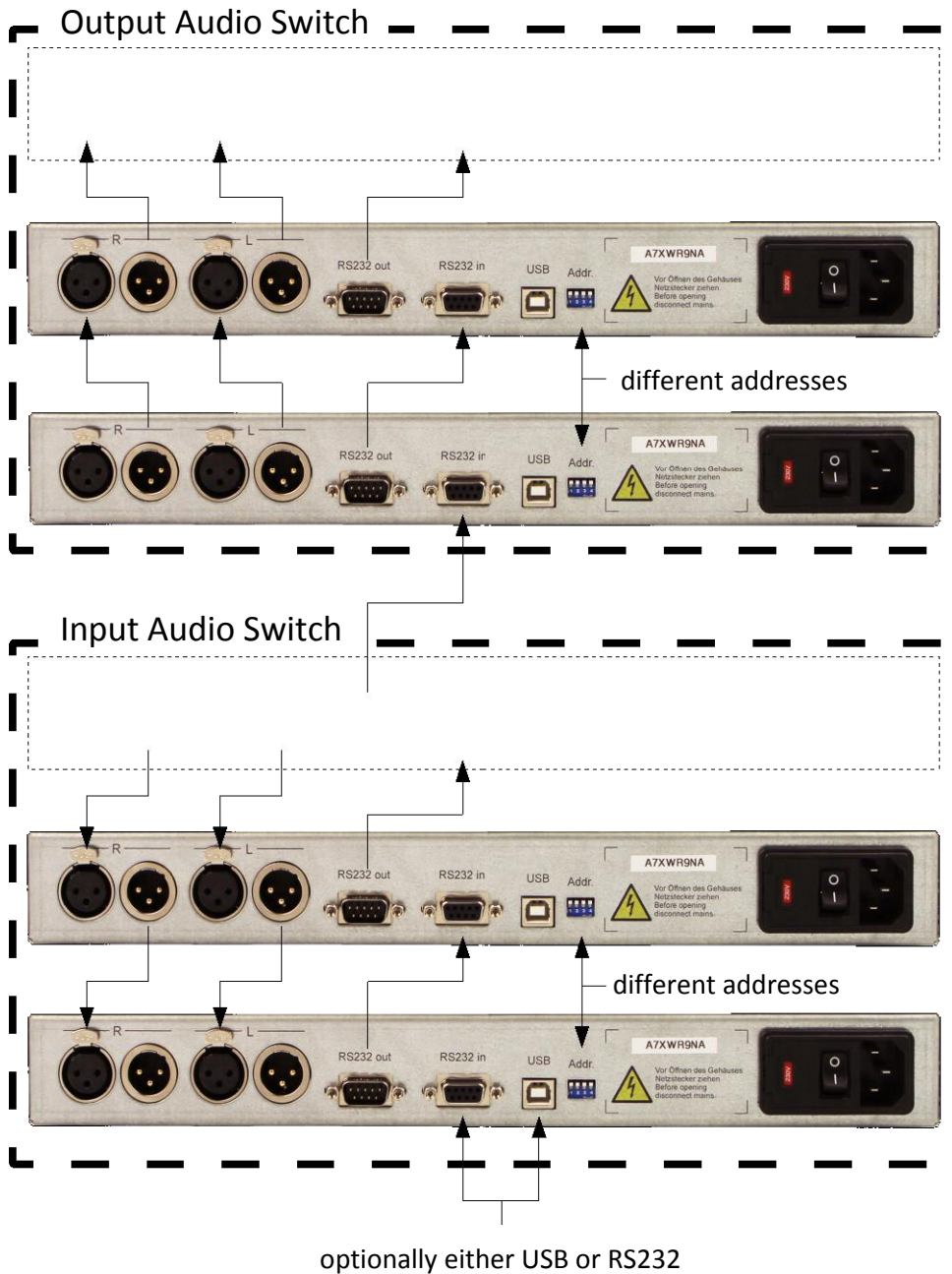
The PC should only be connected to the middle or end of the chain, as this can lead to malfunctions.

The total length of the control line may not exceed 15 m. On many devices, short connection cables will therefore be required.

No address may appear more than once in the control chain for the input switches or for the output switches. However, an input switch may have the same address as an output switch.

Audio lines may not be connected between input and output switches.

6.1. Connection schematic



7. Technical data

Electrical characteristics		
Operating voltage	115 / 230 VAC 47 – 63Hz	When changing the input voltage, disconnect the power cord and set the voltage on the power filter!
Connection power	5W	
Fuse	2x 50mA slow blow	Glass fuse inserts, 5x20mm
Switching power	50Vrms / 0.5A	
Mechanical characteristics		
Dimensions (H x W x D)	44mm x 350mm x 135mm	without connectors or supporting feet
Connections on back	IEC power plug	Power supply
	(1) USB-B	Control input from PC (alternative to RS232)
	(1) D-sub 9-pin female connector	RS232 input from previous switch or PC (alternative to USB)
	(1) D-sub 9-pin male connector	RS232 chaining to next switch
	(2) XLR female	Feed from previous switch
	(2) XLR male	Feed to next switch
Control elements on back	4-pin DIP switch	Setting for the device address
Other characteristics		
USB version	USB 2.0	
Control	via USB or RS232C	
Display	(8) Blue LEDs	connection on busbar L
	(8) Red LEDs	connection on busbar R
	(1) Blue LED	Marking for signal input line L
	(1) Red LED	Marking for signal input line R
Control interface	Virtual serial port via USB or RS232C	19200 baud 1 start bit 2 stop bits No handshake
Ambient temperature	0 – 40°C (32 °F – 104 °F)	
Weight w/o accessories	1.7kg (3.7 lb)	

8. Interface description

The command line interface uses simple ASCII strings. Recognized valid commands are acknowledged with the string "ok" if the command is a configuration command and the address is uniquely detected. For a read command, the corresponding data is sent. An unrecognized command is ignored.

All strings end with a CR (ASCII 13).

Command	Parameter	Response value	Comment
Configuration commands			
OSL	00 - 7F	ok	Switches output 0 to 127 to busbar L. All other outputs on L are switched off.
OSL	R		Switches all left outputs off. Affects all cascaded devices.
OSA	00 - 7F	ok	Switches another output 0 to 127 to busbar L without switch off the other outputs already on busbar L.
OSR	00 - 7F	ok	Switches output 0 to 127 to busbar R. All other outputs on R are switched off.
OSR	R		Switches all right outputs off. Affects all cascaded devices.
Read commands			
OGL		00 – 7F	Returns which output is on busbar L. If no output is switched to busbar L, there is no response. If more than one output is switched to busbar L, there is also no response.
OGR		00 – 7F	Returns which output is on busbar R. If no output is switched to busbar R, there is no response.
Special			
OGV	0 – F	String	Version of the firmware on the switch with the address specified.