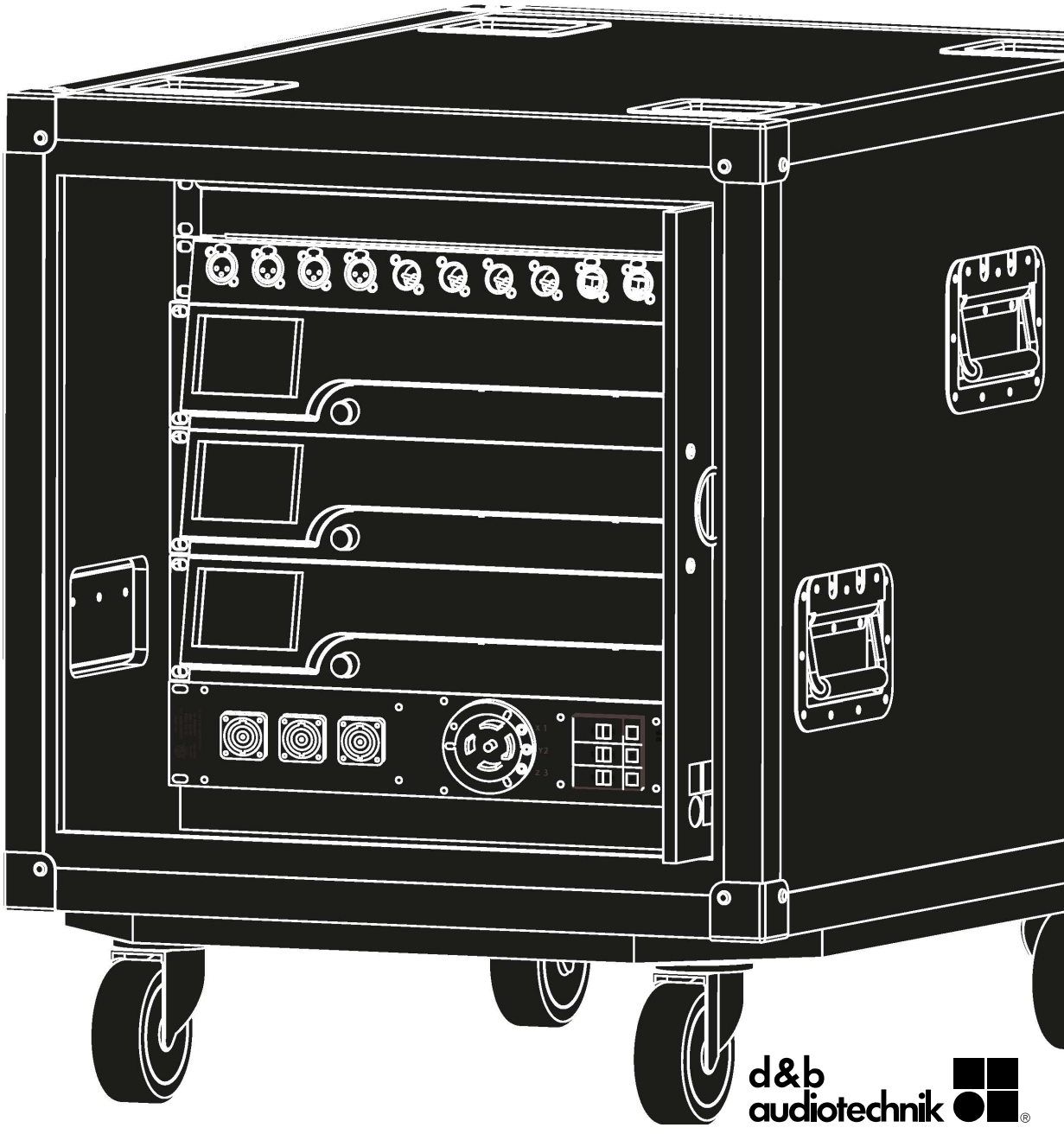
D20 Touring rack assembly US
Manual 1.0



d&b audiotechnik

General information

D20 Touring rack assembly US
Manual 1.0

Version: 1.0, 09/2016

Keep this manual with the product or in a safe place so that it is available for future reference.

When reselling this product, hand over this manual to the new owner.

If you supply d&b products, please draw the attention of your customers to this manual. Enclose the relevant manuals with the systems. If you require additional manuals for this purpose, you can order them from d&b.

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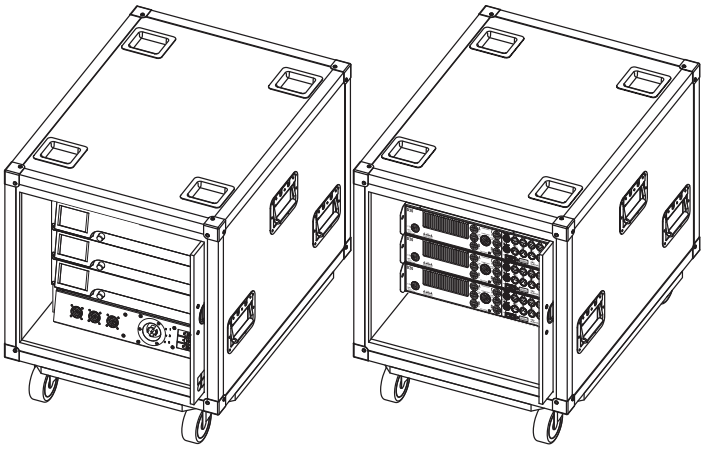
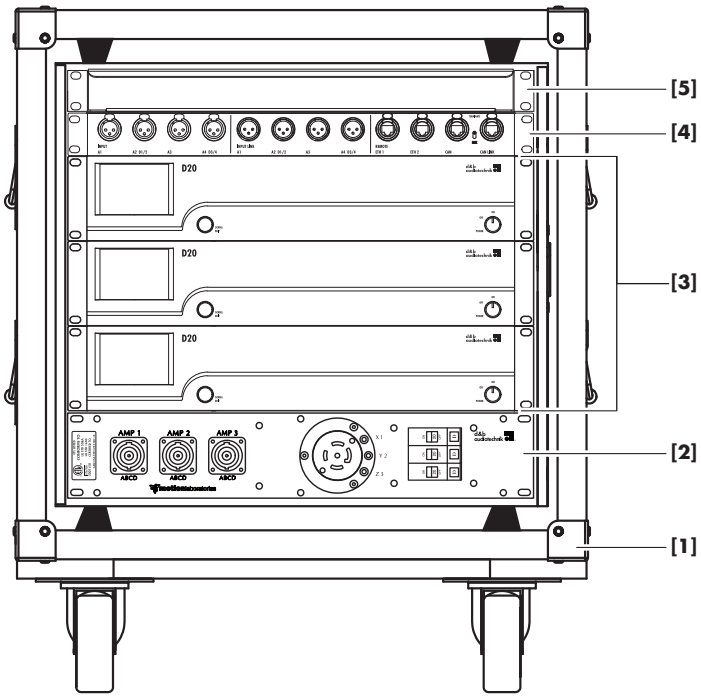
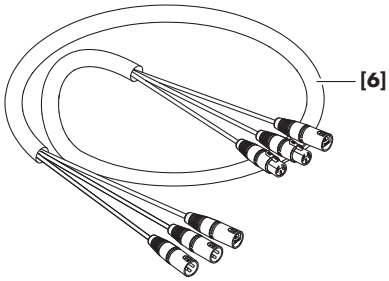
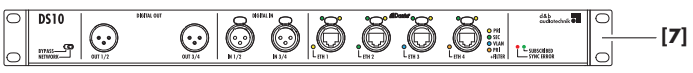
1. Z5560.US D20 Touring rack assembly US









1.1. Intended use

The Z5560.US D20 Touring rack assembly is designed as a closed system rack providing mains power distribution and connector interfaces for 3 x D20 amplifiers. For this purpose, the touring rack is equipped with a mains power distribution device (ML 1105), which also serves as a loudspeaker connector panel. Also incorporated is an I/O panel (Z5338), which serves as a connector interface for both analog and digital audio signals. In addition, four network connectors are provided for either Ethernet or CAN-Bus remote capabilities

1.2. Scope of supply

Before starting up, please verify the shipment for completeness and proper condition of the items.

If there is any sign of obvious damage, do not operate the rack assembly and contact your local dealer from whom you received it.

Pos.	Qty.	d&b Code	Description
[1]	1	Z5560.US	Touring rack assembly 10 RU (CE) - with shock mounted 19" frame
Including			
[2]	1	ML 1105	D20 RakPak - L21-30/NL8 115v
[4]	1	Z5338	I/O Panel
[5]	1	Z5334	Rack drawer 1RU
[6]	1	Z5333	Rack link
Available separately			
[3]	3	Z2710	D20 Amplifier
[7]	1	Z4010	DS10 Audio network bridge (replaces 1RU drawer)

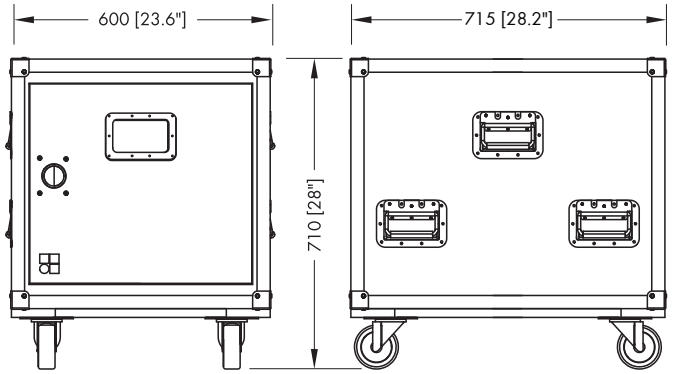
Dimensions and weight

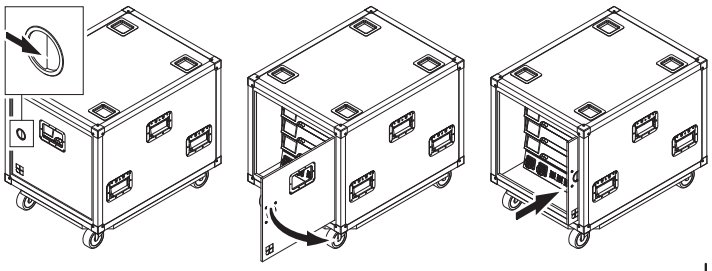
Height x width x depth .....710 mm x 600 mm x 715 mm

.....28" x 23.6" x 28.2"

Total weight (w/ 1RU drawer) .....92.5 kg / 204 lb

Total weight (w/ DS10) .....91.2 kg / 201 lb

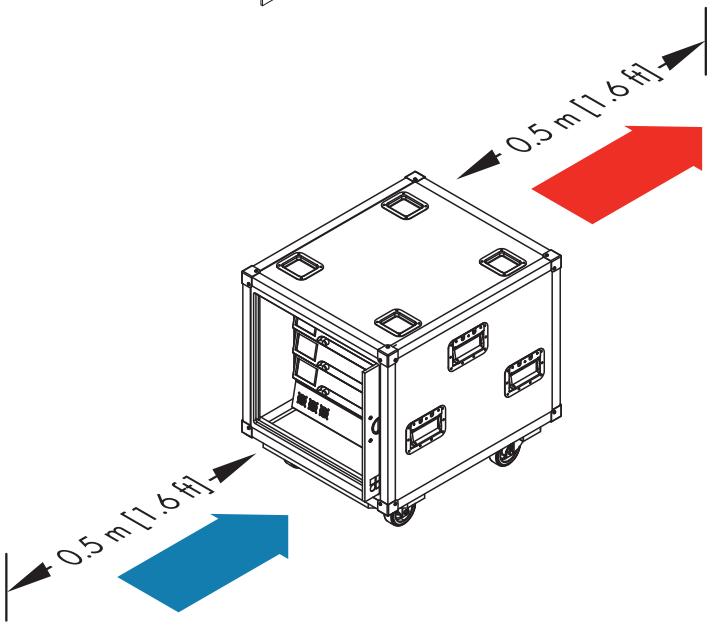




2.1. Handling

The touring rack is equipped with two sliding doors allowing quick and easy access to the front and rear panels of the devices.

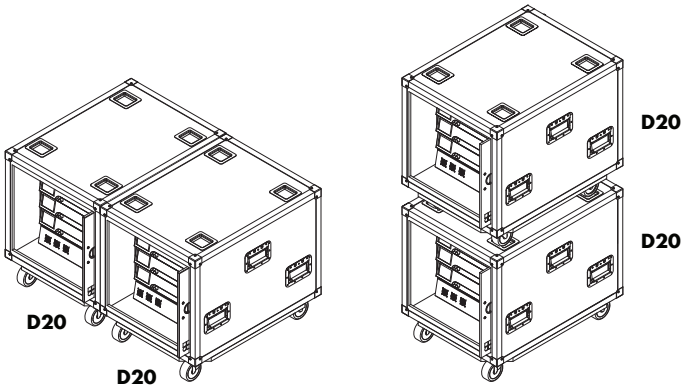
1. Unlock the door lock mechanism.
2. Open the door and ...
3. Push the door to the rear into its park position.

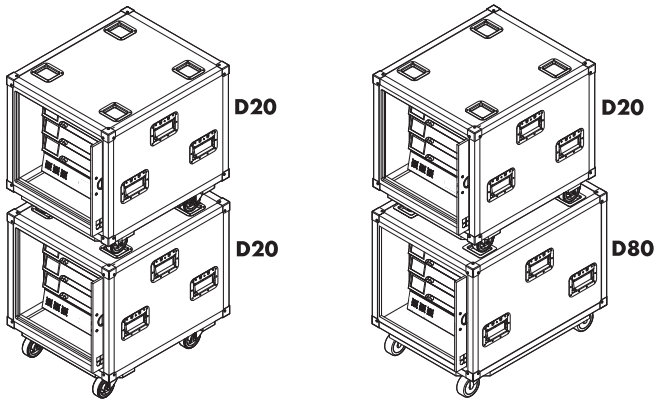


2.2. Cooling and placement

When using the d&b Z5560 D20 Touring rack assembly, make sure to provide sufficient space of 0.5 m (1.6 ft) at the front and rear of the touring rack to ensure sufficient cooling airflow.

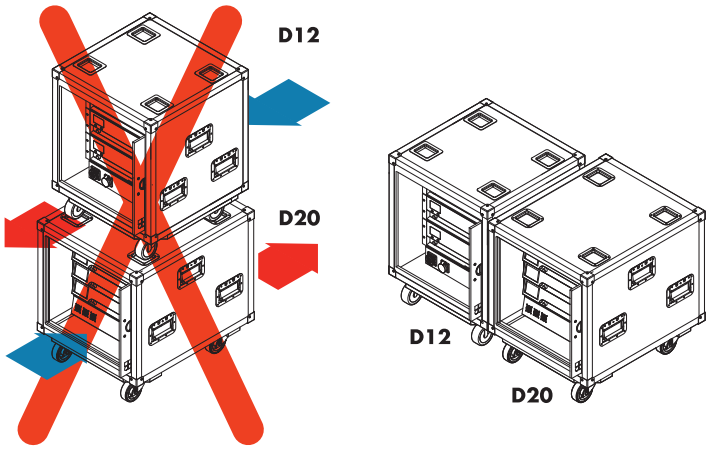
D20 Touring rack assemblies as well as D20 and D80 Touring racks can be stacked or positioned side by side.

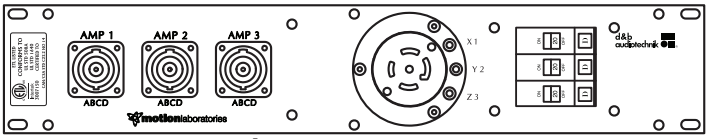




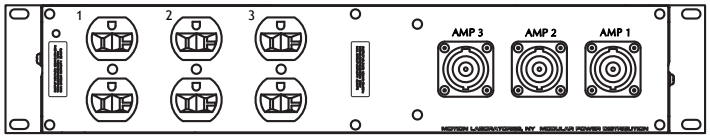
When combining the Z5560 D20 Touring rack assembly with the Z5310 D12 Touring rack assembly or any other rack assembly that produces an opposing airflow, observe the following restrictions:

- D12/D20 Touring rack assemblies can be positioned side by side.
- Do not stack D20 and D12 Touring racks or any other rack assemblies with opposing airflow.





ML 1105 Front Panel

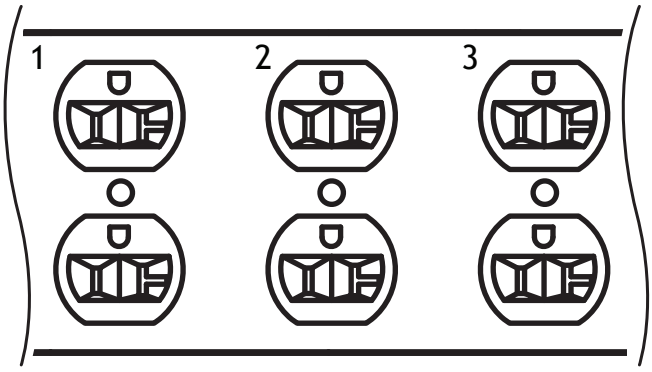


ML 1105 Rear Panel

3.1. Intended use

The ML 1105 Mains power distributor is designed and dimensioned to provide and distribute the mains power supply necessary for the three D20 amplifiers. It also serves as a loudspeaker connection panel for different connection options. It is a type 1 enclosure intended for indoor use only.

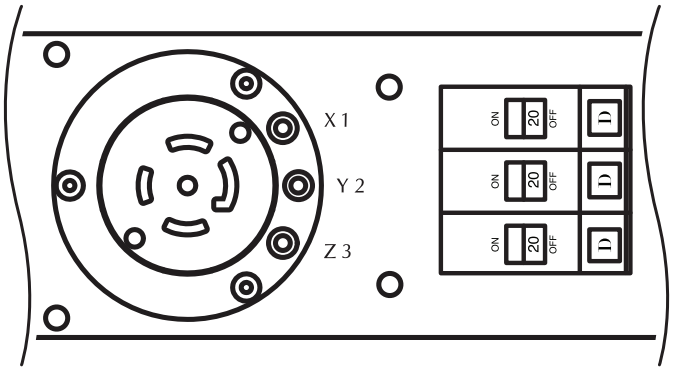
The ML 1105 Mains power distributor must not be used for any other purpose or outside the system rack.



3.2. Power

3.2.1. AMP 1 / AMP 2 / AMP 3

Three single-phase mains power outlet (1, 2, 3), each fitted with a NEMA 5-20 mains socket, are provided for the internal mains power supply of the amplifiers.



3.2.2. MAINS SUPPLY

The ML 1105 Mains power distributor is supplied with a fixed 3-phase 30 A L21-30 mains connector socket.

When the rack is connected to the on-site mains power supply, three LED indicators display the presence of the on-site mains supply lines (phase conductor X, Y, Z).

WARNING!
Potential risk of electric shock.

The mains power distributor is a type 1 enclosure. A missing earth (ground) contact may cause dangerous voltages in the housing and controls and may lead to electric shock.

- Connect the unit to mains power supplies with protective earth only.
- If there is any sign of obvious damage to the power cord and/or L21-30 mains connector, do not use the unit and replace it before further use.
- Please ensure the mains connector is accessible at any time to disconnect the unit in case of malfunction or danger.
- Do not connect or disconnect the L21-30 mains connector under load or live.

Mains supply configuration

Input Voltage	120/208Y VAC 3PH 60Hz
Wiring configuration	4P5W
Max Ampacity	30 A

NOTICE!

To avoid any overload of the on-site mains power supply, we recommend you to connect no more than one system rack to the respective mains power supply line.

3.2.3. AUXILIARY MAINS OUTPUT 20 A

The installed D20 amplifiers will use three of the six available NEMA 5-20 sockets. Three remaining sockets are intended for the connection of low current devices such as notebook computers, DS10 Audio Network Bridge, or additional Ethernet switches.

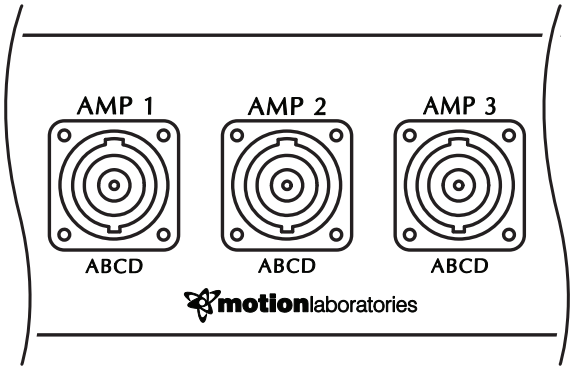
3.3. Signal

3.3.1. 4 CH. OUTPUTS - NL8

NOTICE!

The 4 CH OUTPUTS connectors are only intended as an interface to a rack panel or to loudspeaker multicores such as d&b Z5343.xxx and breakout adapters such as d&b Z5347.xxx and d&b Z4348.xxx.

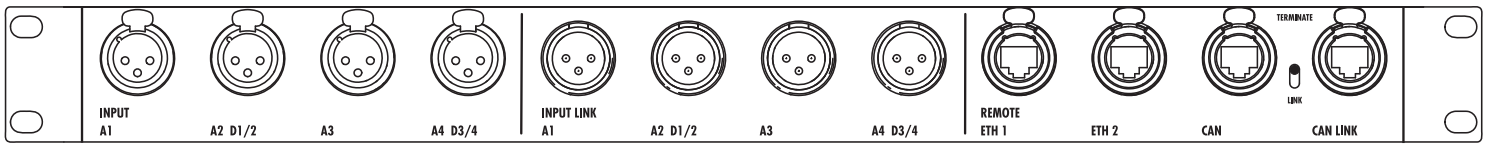
Do not connect any loudspeaker cabinets, neither passive nor active systems, to the 4 CH OUTPUTS connectors, otherwise there is a risk of damaging the loudspeaker components or the amplifier.

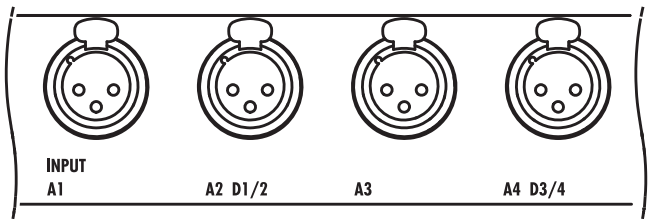


Each of the 4 CH OUTPUTS connectors represents the 4 CHANNEL OUTPUT of the respective D20 amplifier. Each connector carries the output signals of all four channels of the amplifier with the following pin assignment.

1+/– = Channel A pos. / neg.	2+/– = Channel B pos. / neg.
3+/– = Channel C pos. / neg.	4+/– = Channel D pos. / neg.

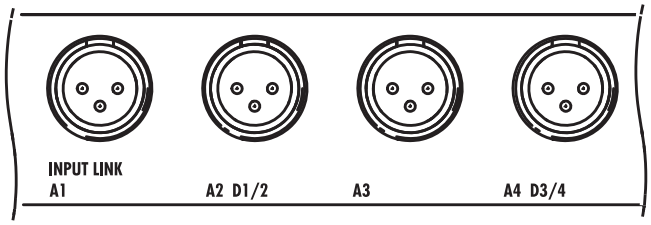
Please refer to the corresponding amplifier assignment label above each connector as shown in the graphic opposite.





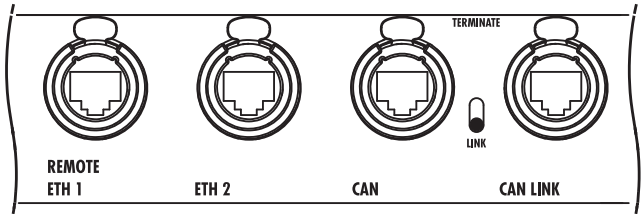
4.1. INPUT

The INPUT section represents the input connectors of the first amplifier while the other two amplifiers are linked within the rack. The INPUT section allows both analog and digital audio signals to be fed to the amplifier.



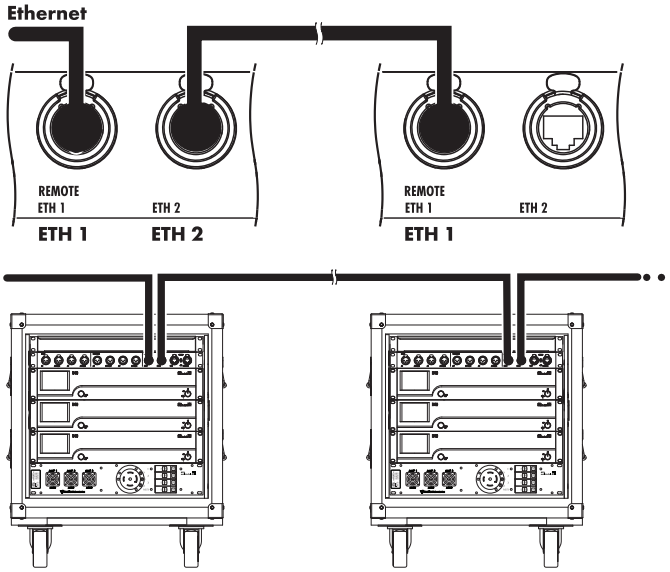
4.2. INPUT LINK

The INPUT LINK section represents the link output connectors of the last (third) amplifier and allows the linking of further system racks using the enclosed rack link cable (Z5333 Rack link).



4.3. REMOTE

The REMOTE section allows the daisy-chaining of system racks within a remote network using the enclosed rack link cable (Z5333 Rack link).



Ethernet network

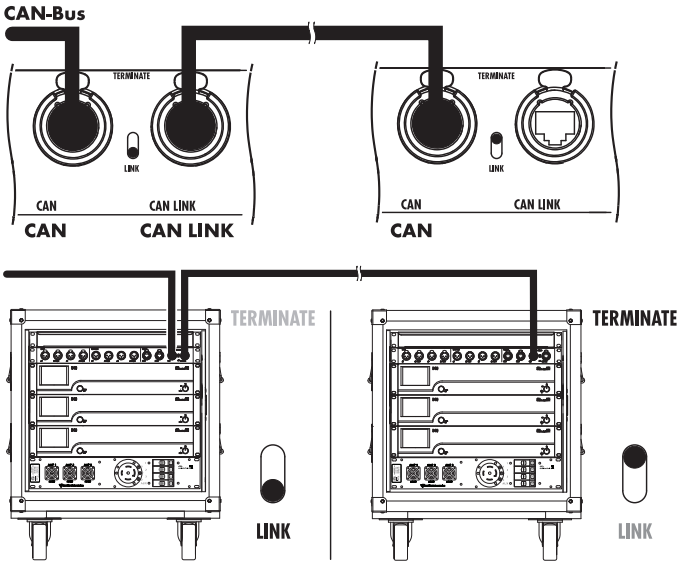
ETH 1 Represents the upper etherCON connector of the first amplifier and may be used as input while the other two amplifiers are linked within the rack.

ETH 2 Represents the bottom etherCON connector of the last amplifier and may be used as output.

Note

In a daisy chain topology, if one device or an entire rack fails or is switched off, this also affects all subsequent devices and/or system racks which are then no longer connected to the network either.

A detailed description of remote control via Ethernet is given in the technical information TI 310 (d&b code D5310.EN) which can be downloaded from the d&b website at www.dbaudio.com



CAN-Bus network

CAN Represents the CAN input of the first amplifier while the other two amplifiers are linked within the rack.

CAN LINK Represents the CAN output of the last amplifier.

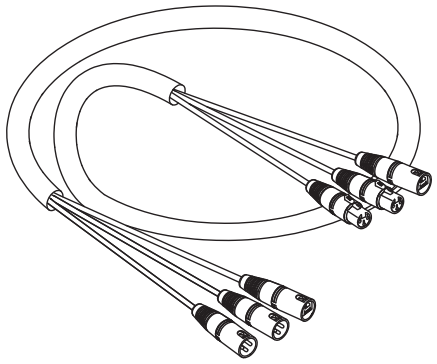
TERMINATE/ LINK The built-in termination switch allows two settings:

1. **LINK**: In system racks, at the start of and within a CAN-Bus segment, set the switch to LINK.
2. **TERMINATE**: On the last system rack of a CAN-Bus segment, set the switch to TERMINATE.

Note

A detailed description of remote control via the d&b Remote network (CAN-Bus) is given in the technical information TI 312 (d&b code D5312.EN) which can be downloaded from the d&b website at www.dbaudio.com.

5. Z5333 Rack link

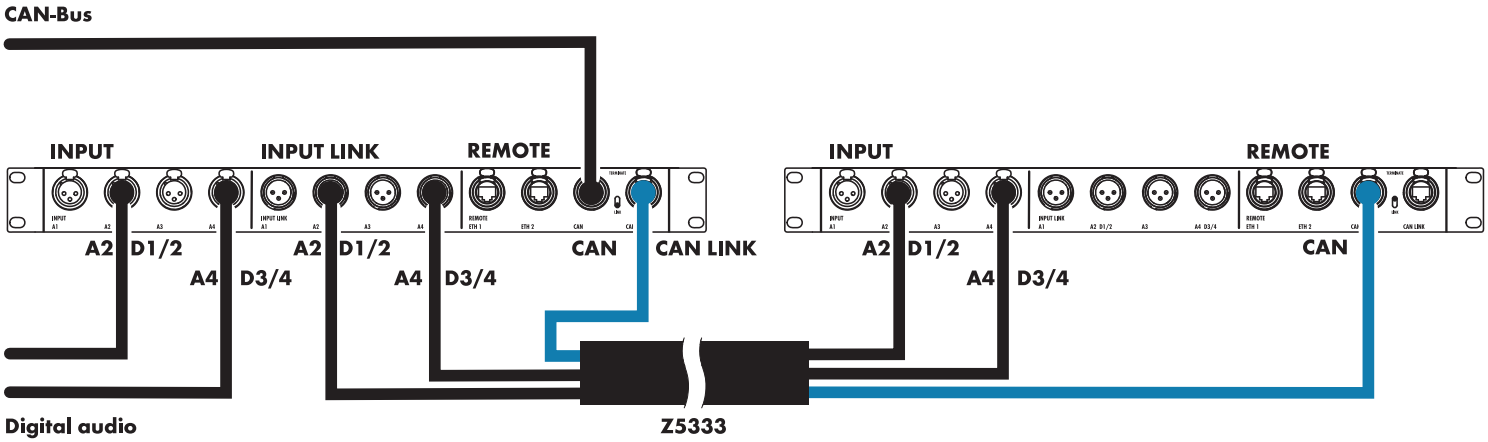


The rack link cable allows further system racks to be linked together.

It is suitable for both analog and digital audio signals as well as for network wiring (Ethernet or CAN-Bus networks).

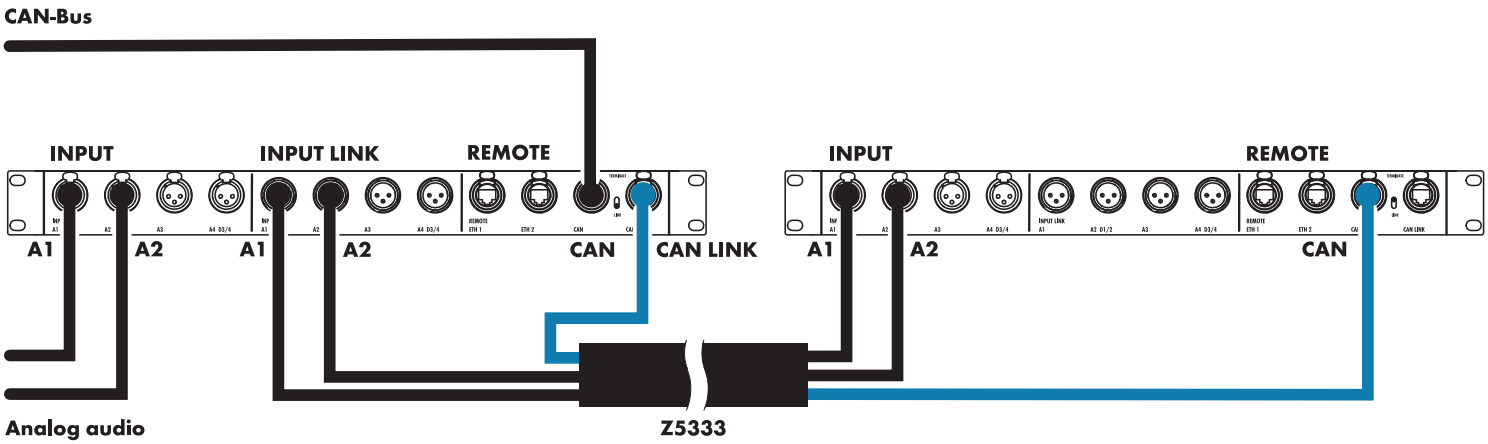
Technical specifications

Audio connector ..... 2 x XLR female to 2 x XLR male
..... with color markup
Audio signal capability..... Analog
..... Digital AES/EBU (AES 3)
Network connector..... etherCON
Network cable ..... CAT 5E SFTP
Length ..... 2 m / 6.5 ft



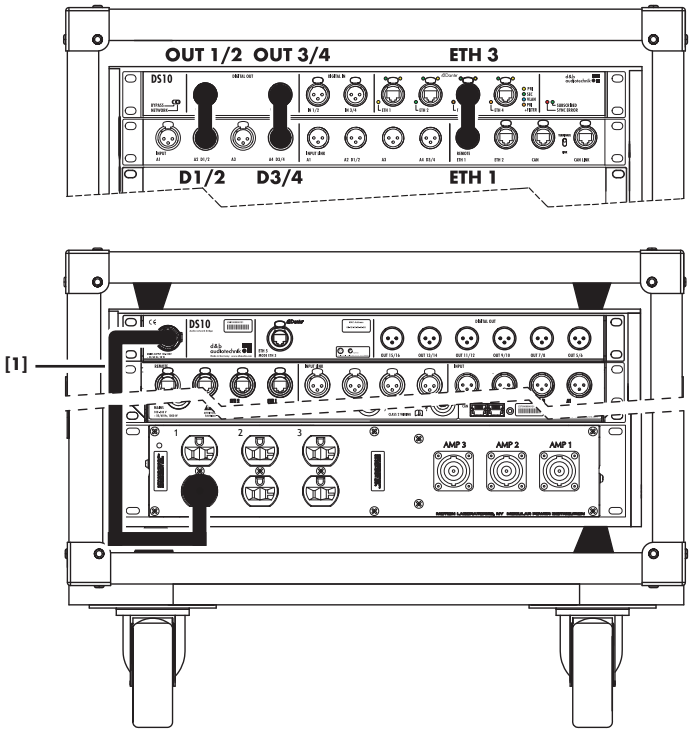
Rack link example:

4ch Digital audio and CAN-Bus



Rack link example:

2ch Analog audio and CAN-Bus



6.1. Use with d&b Touring rack I/O panel

The DS10 replaces the 1RU drawer of the complete rack assembly.

1. The DS10 is mounted above the I/O panel.
   If upgrading a complete rack assembly, simply remove the rack drawer.

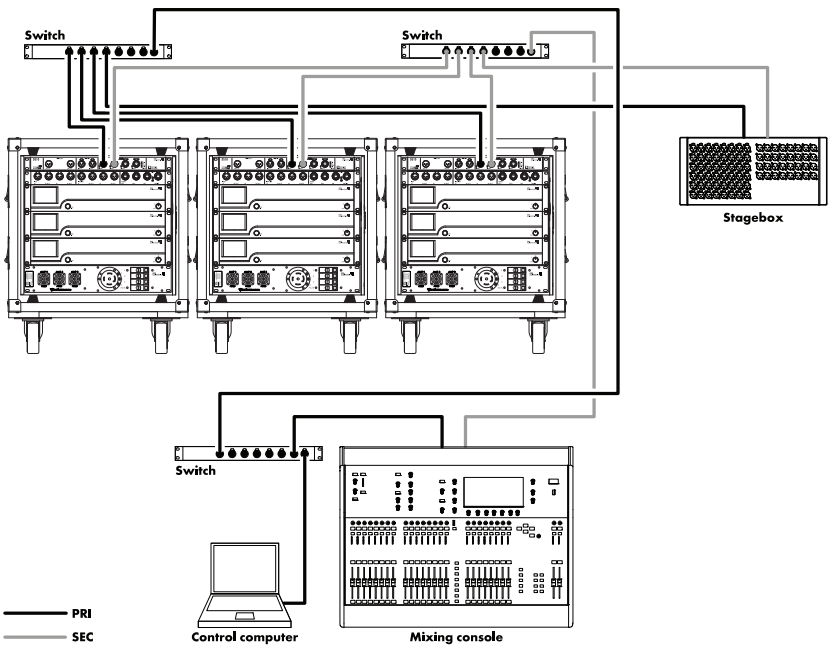
2. The two digital outputs at the front of the DS10 are connected to the digital inputs D1/2 and D3/4 of the I/O panel.

3. The ETH 3 port of the DS10 is connected to the ETH 1 port of the I/O panel in order to bridge the R1 control for the amplifiers over the Dante network.
   Note: Connect only one of the Ethernet ports on the I/O panel to the DS10. Otherwise an Ethernet ring is built, causing a packet storm leading to the Network no longer being accessible.

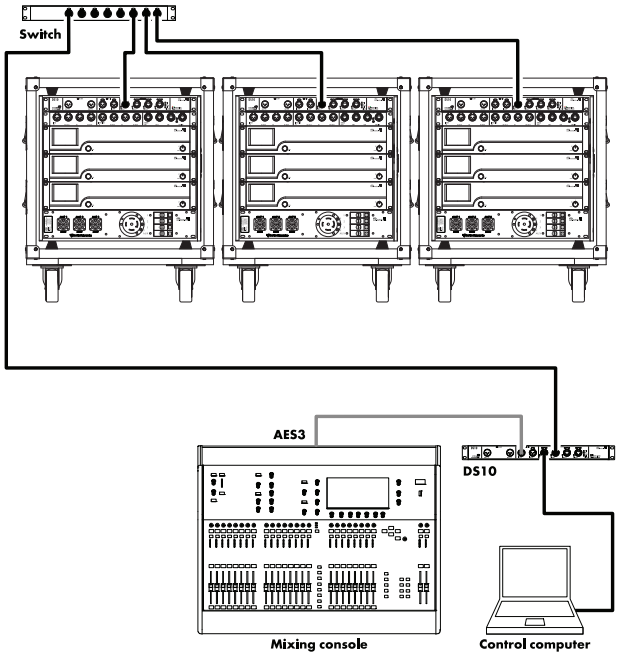
4. On the rear, the power cord **[1]** (powerCON/ L5-15) is connected to the auxiliary NEMA 5-20 socket of the mains distributor.

Note: When ordered with a touring rack assembly the DS10 audio network bridge will include the necessary 25cm CAT6 and XLR cables for connecting to the I/O panel.

6.2. DS10 select example deployments



Redundant networking with DS10 Audio network bridge



DS10 Audio network bridge as break-in box

7.1. Declaration of conformity (ETL symbol)

This declaration applies to:

D20 RakPak - L21-30/NL8 115v, ML 1105.000
Motion Laboratories part number: 1105-2-K-000-5001
manufactured by Motion Laboratories.

ML 1105.001 is ETL listed

Conforms to

- UL STD 508A
- UL STD 1640

Certified to

- CAN/CSA STD C22.2 NO 14

7.2. Disposal

Electrical and electronic equipment must be disposed of separately from normal waste at the end of its operational lifetime.

Please dispose of this product according to the respective national regulations or contractual agreements. If there are any further questions concerning the disposal of this product, please contact d&b audiotechnik.

d&b audiotechnik