MA-4150

Ordercode: D6149

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Warning

| FOR YOUR OWN SAFETY, PLEASE READ THIS USER MANUAL CAREFULLY BEFORE YOUR INITIAL START-UP! |

Unpacking Instructions

Immediately upon receiving this product, carefully unpack the carton and check the contents to ensure that all parts are present, and have been received in good condition. Notify the dealer immediately and retain packing material for inspection if any parts appear damaged from shipping or the carton itself shows signs of mishandling. Save the carton and all packing materials. In the event that a device must be returned to the factory, it is important that the device is returned in the original factory box and packing.

Your shipment includes:
• DAP MA-4150
• 19" mounting ears
• power cable - 2m
• User manual

| CAUTION! Keep this device away from rain and moisture! |

Safety Instructions

Every person involved with the installation, operation and maintenance of this system has to:
• be qualified
• follow the instructions of this manual

| CAUTION! Be careful with your operations. With a dangerous voltage you can suffer a dangerous electric shock when touching the wires! |

Before you initial start-up, please make sure that there is no damage caused by transportation. Should there be any, consult your dealer and do not use the system.

To maintain perfect condition and to ensure a safe operation, it is absolutely necessary for the user to follow the safety instructions and warning notes written in this manual.

Please consider that damages caused by manual modifications to the system are not subject to warranty.

This system contains no user-serviceable parts. Refer servicing to qualified technicians only.

Important:
The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual or any unauthorized modification to the system.

• Never let the power-cord come into contact with other cables! Handle the power-cord and all connections with the mains with particular caution!
• Never remove warning or informative labels from the unit.
• Never use anything to cover the ground contact.
• Never leave any cables lying around.

- Do not insert objects into air vents.
- Do not connect this system to a dimmerpack.
- Do not switch the system on and off in short intervals, as this would reduce the system's life.
- Do not open the device and do not modify the device.
- Do not drive the inputs with a signal level bigger, than required to drive the equipment to full output.
- Do not plug Mics into the console (or stagebox) while Phantom Power is on. Also mute the monitor / Pa system when turning Phantom Power on or off. Allow the system to adjust for a couple of seconds, before setting the input gains.
- Only use system indoor, avoid contact with water or other liquids.
- Avoid flames and do not put close to flammable liquids or gases.
- Always disconnect power from the mains, when system is not used. Only handle the power-cord by the plug. Never pull out the plug by tugging the power-cord.
- Always operate the unit with the AC ground wire connected to the electrical system ground.
- Make sure you don't use the wrong kind of cables or defective cables.
- Make sure that the signals into the mixer are balanced, otherwise hum could be created.
- Make sure you use DI boxes to balance unbalanced signals; All incoming signals should be clear.
- Make sure that the available voltage is not higher than stated on the rear panel.
- Make sure that the power-cord is never crimped or damaged. Check the system and the power-cord from time to time.
- Please turn off the power switch, when changing the power cord or signal cable, or select the input mode switch.
- Extreme frequency boosts in connection with a high input signal level may lead to overdriving your equipment. Should this occur, it is necessary to reduce the input signal level by using the INPUT control.
- To emphasize a frequency range, you don't necessarily have to move its respective control upward; try lowering surrounding frequency ranges instead. This way, you avoid causing the next piece of equipment in your sound path to overdrive. You also preserve valuable dynamic reserve ("headroom")
- Avoid ground loops! Always be sure to connect the power amps and the mixing console to the same electrical circuit to ensure the same phase!
- If system is dropped or struck, disconnect mains power supply immediately. Have a qualified engineer inspect for safety before operating.
- If the system has been exposed to drastic temperature fluctuation (e.g. after transportation), do not switch it on immediately. The arising condensation water might damage your system. Leave the system switched off until it has reached room temperature.
- If your Dap Audio device fails to work properly, discontinue use immediately. Pack the unit securely (preferably in the original packing material), and return it to your Dap Audio dealer for service.
- Repairs, servicing and electric connection must be carried out by a qualified technician.
- For replacement use fuses of same type and rating only.
- WARRANTY: Till one year after date of purchase.

Operating Determinations

This system is not designed for permanent operation. Consistent operation breaks will ensure that the system will serve you for a long time without defects.

If this system is operated in any other way, than the one described in this manual, the product may suffer damages and the warranty becomes void.
Any other operation may lead to dangers like short-circuit, burns, electric shock, etc.

You endanger your own safety and the safety of others!

Improper installation can cause serious damage to people and property !

Connection with the mains
Connect the device to the mains with the power-plug.
Always pay attention, that the right color cable is connected to the right place.

International	EU Cable	UK Cable	US Cable	Pin
L	BROWN	RED	YELLOW/COPPER	FASE
N	BLUE	BLACK	SILVER	NULL
⏚	YELLOW/GREEN	GREEN	GREEN	EARTH

Make sure that the device is always connected properly to the earth!

⚠ Return Procedure ⚠

Returned merchandise must be sent prepaid and in the original packing, call tags will not be issued. Package must be clearly labeled with a Return Authorization Number (RMA number). Products returned without an RMA number will be refused. Highlite will not accept the returned goods or any responsibility. Call Highlite 0031-455667723 or mail aftersales@highlite.nl and request an RMA prior to shipping the fixture. Be prepared to provide the model number, serial number and a brief description of the cause for the return. Be sure to properly pack fixture, any shipping damage resulting from inadequate packaging is the customer's responsibility. Highlite reserves the right to use its own discretion to repair or replace product(s). As a suggestion, proper UPS packing or double-boxing is always a safe method to use.

Note: If you are given an RMA number, please include the following information on a piece of paper inside the box:
1) Your name
2) Your address
3) Your phone number
4) A brief description of the symptoms

Claims
The client has the obligation to check the delivered goods immediately upon delivery for any short-comings and/or visible defects, or perform this check after our announcement that the goods are at their disposal. Damage incurred in shipping is the responsibility of the shipper; therefore the damage must be reported to the carrier upon receipt of merchandise.
It is the customer's responsibility to notify and submit claims with the shipper in the event that a fixture is damaged due to shipping. Transportation damage has to be reported to us within one day after receipt of the delivery.
Any return shipment has to be made post-paid at all times. Return shipments must be accompanied with a letter defining the reason for return shipment. Non-prepaid return shipments will be refused, unless otherwise agreed in writing.
Complaints against us must be made known in writing or by fax within 10 working days after receipt of the invoice. After this period complaints will not be handled anymore.
Complaints will only then be considered if the client has so far complied with all parts of the agreement, regardless of the agreement of which the obligation is resulting.

Description of the device

Features

The MA-4150 is a matrix amplifier. This gives you the functionality to route any input to any output. With this functionality you can control 5 audio sources in 4 different areas from one unit. Each input is equipped with adjustable gain and two band tone control. At the front panel you can monitor each zone with a pair of headphones and plug in a MP3 player with a 3,5mm jack cable. Each zone has its own VU meter which gives you the output level in one overview. All zones are equipped with pre amp outputs to extend the system with extra mono amplifiers like the DAP VPA series.

- 4 individual 150W outputs
- 5 Inputs with matrix functionality
- Bass & Treble control on each channel
- Front line input: 3,5mm Jack
- Pre amp zone outputs
- Telephone paging with volume & zone control
- 4/8Ohm & 70/100V output
- Monitor output
- Priority on input 1
- Limiter protection Features

Frontpanel
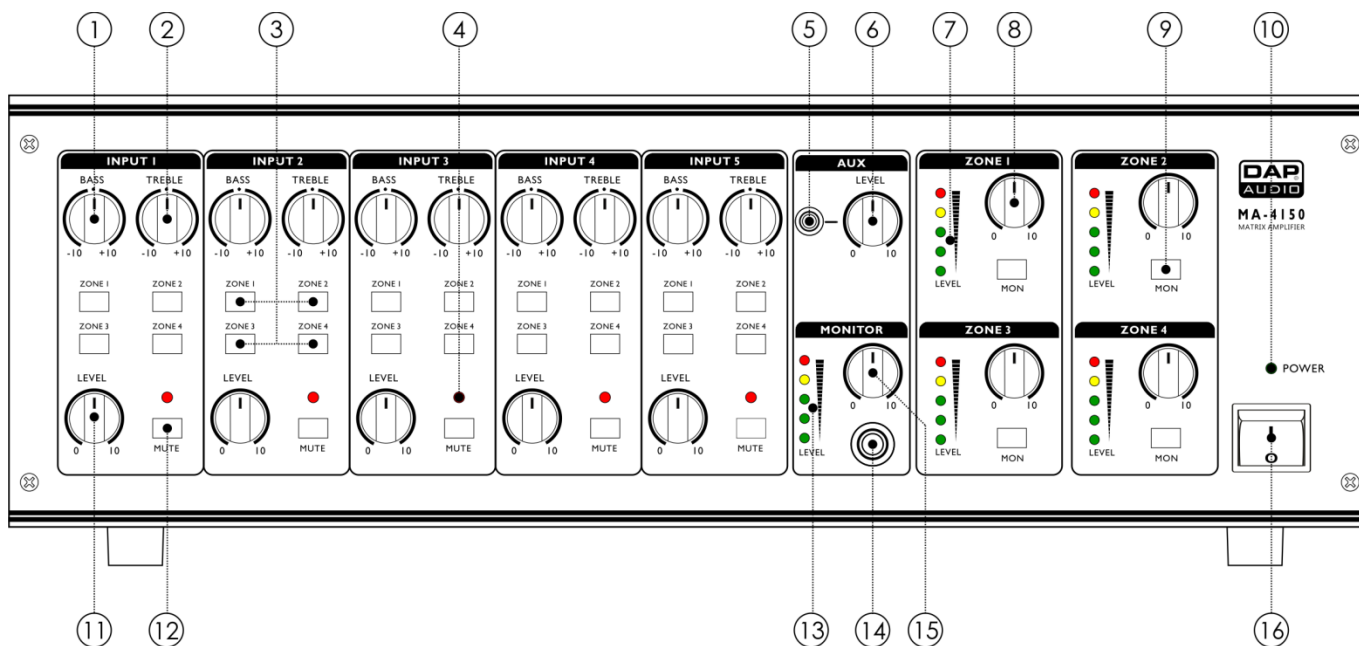
1. Channel bass control
Use to adjust the Bass frequencies for each channel to your preference.

2. Channel treble control
Use to adjust the treble frequencies for each channel to your preference.

3. Zone assign buttons
Use to assign a channel to one or more zones.

4. Channel mute LED
Lights up if the corresponding channel is muted.

5. Aux input
3,5mm stereo mini jack input for connecting a line level device such as an I-pod, CD player etc. The aux input is routed to all zones and is not selectable.

6. Aux level
Use to adjust the input volume level for the **aux (5)** input.

7. Zone VU meter
Indicates the signal level at the output of the corresponding zone. If the red LED blinks frequently or lights continuously, the output is likely to enter clipping. If this happens, we strongly suggest lowering the corresponding **zone level (8)** control.

8. Zone level control
Use to adjust the output volume for zone 1-4.

9. Monitor button
Allows you to monitor one or more zones with your **headphone (14)** output or **monitor (23, 24)** outputs.

10. Power LED
Indicates the amplifier is turned on.

11. Channel level control
Use to adjust the level for channel 1-5.

12. Channel mute button
Pushing this button allows you to mute the corresponding channel. If a channel is muted, the corresponding **mute (4)** LED will light.

13. Monitor VU meter
Indicates the signal level at the output of the corresponding zone. If the red LED blinks frequently or lights continuously, the output is likely to enter clipping. If this happens, we strongly suggest lowering the **monitor level (15)** control.

14. Headphone output
You can connect a pair of headphones with a minimum impedance of 32 Ohm to this stereo 1/4" jack. The jack should be wired as Tip=left, Ring=right and sleeve=ground.
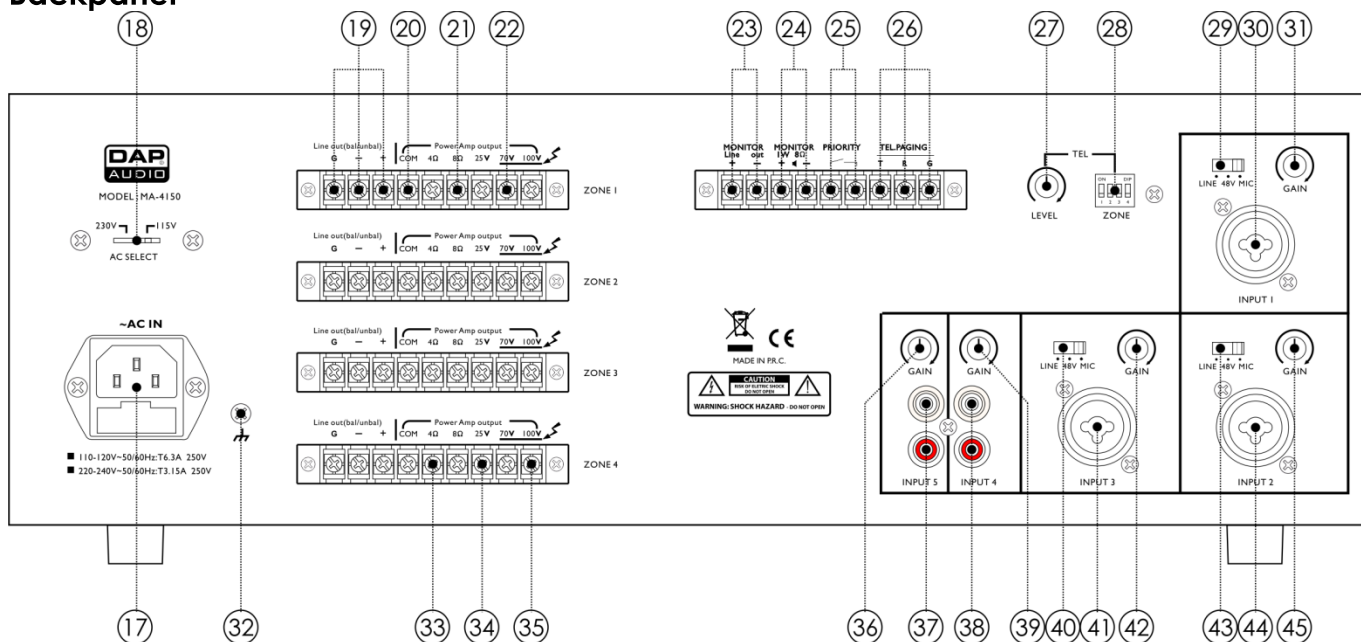
15. Monitor level control
Is used to adjust your **headphone (14)/ monitor (23, 24)** volume level.

16. AC power switch
This is the main Power switch. Push to turn the amplifier on.

Backpanel

17. AC Inlet with integrated fuse holder

This connector is meant for the connection of the supplied main cord. Connect one end of the power cord to the connector, the other end to the mains, then turn on the **power (16)** switch to operate the unit.
Make sure that the supply voltage matches the operation voltage before connecting the unit to mains. Replace the fuse only with a fuse of the same specification (230V:T3,15A, 115V:T6,3A).

18. AC-selector

Before connecting your MA-4150 to the mains, make sure the AC-selector is set to the proper voltage used in your country. If you're not sure, consult a skilled technician.

19. Zone line out terminal

These terminals allow you to connect an external amplifier to a zone in case the internal amplifier can't provide sufficient power. The terminals allow you to connect a balanced or unbalanced amplifier input.

20. Zone com speaker terminal

Connect these terminal with the – terminal of your zone speaker(s).

21. Zone 8Ω impedance speaker terminals

Connect this terminal to the + terminal of a 8Ω speakerload.
In case of using several speakers, make sure that the total speaker load is the same as the impedance of the corresponding terminal. The total power rating of the low impedance speakers connected to this terminal summed, should be at least 150W.

22. Zone 1-4 70V output terminal

Each zone has its own output terminal. Connect this terminal to the + terminal of your 70V high impedance speaker load.
In case of using several speakers make sure all speakers are wired in parallel.
The total power rating of the high impedance speakers connected to this terminal summed, should never exceed 150W.

23. Monitor line out terminal

These terminals allow you to connect an external monitor amplifier. The output level is controlled by the **monitor level (15)** control.

24. Monitor 8Ω 1W out terminal

These terminals allow you to connect an external 1W 8Ω monitor speaker. The output level is controlled by the **monitor level (15)** control.

25. Priority remote terminal
Use this terminal for connecting a remote switch or relay contact. If these two contacts are shorted, all inputs except **combo input 1 (30)** will be muted when **combo input 1 (30)** detects a sound.

26. Telephone paging terminal
Use this terminal for connecting a telephone system equipped with a paging output.

27. Telephone paging level control
Use to adjust the input volume level for the **telephone paging (26)** terminal.

28. Telephone paging assign dipswitch
Use to assign the telephone paging input to one or more zones.

29. Input 1 Impedance/level switch
This switch allows you to set up combo input 1 for line level, microphone level with phantom power or microphone level without phantom power.

30. Input 1
Combo input for channel 1. Accepts balanced or unbalanced inputs.

31. Input 1 gain control
Use to adjust the input gain for **input 1 (30)**.

32. GND Screw
This screw offers a separate ground connection. Can be useful in case of grounding problems.

33. Zone 4Ω impedance speaker terminals
Connect this terminal to the + terminal of a 4Ω speakerload.
In case of using several speakers, make sure that the total speaker load is the same as the impedance of the corresponding terminal. The total power rating of the low impedance speakers connected to this terminal summed, should be at least 150W.

34. Zone 25V high impedance terminals
Each zone has its own output terminal. Connect this terminal to the + terminal of your 25V high impedance speaker load.
In case of using several speakers make sure all speakers are wired in parallel.
The total power rating of the high impedance speakers connected to this terminal summed, should never exceed 150W.

35. Zone 100V high impedance terminals
Each zone has its own output terminal. Connect this terminal to the + terminal of your 100V high impedance speaker load.
In case of using several speakers make sure all speakers are wired in parallel.
The total power rating of the high impedance speakers connected to this terminal summed, should never exceed 150W.

36. Input 5 gain control
Use to adjust the input gain for **input 5 (37)**.

37. Input 5
RCA stereo input for connecting a line level device such as an I-pod, CD player etc.

38. Input 4
RCA stereo input for connecting a line level device such as an I-pod, CD player etc.

39. Input 4 gain control
Use to adjust the input gain for **input 4 (38)**.

40. Input 3 Impedance/level switch
This switch allows you to set up combo input 3 for line level, microphone level with phantom power or microphone level without phantom power.

41. Input 3
Combo input for channel 3. Accepts balanced or unbalanced inputs.

42. Input 3 gain control
Use to adjust the input gain for **input 3 (41)**.

43. Input 2 Impedance/level switch
This switch allows you to set up combo input 2 for line level, microphone level with phantom power or microphone level without phantom power.

44. Input 2
Combo input for channel 2. Accepts balanced or unbalanced inputs.

45. Input 2 gain control
Use to adjust the input gain for **input 2 (44).**

Operation

Installation
Remove all packing materials from the MA-4150. Check that all foam and plastic padding is removed. Secure the equipment into a 19" rack. Connect all cables.

Set Up and Operation
Before plugging the unit in, always make sure that the power supply matches the product specification voltage. Do not attempt to operate an 115V specification product on 230V power, or vice versa.

Before powering up the first time, make sure the AC-selector switch is set to the proper voltage.

Damage caused by connecting the amplifier to improper AC voltage is not covered by any warranty.

NOTE: **Always turn off and disconnect the amplifier from mains voltage before making audio connections. Also, as an extra precaution, have the attenuators turned down during power-up.**

Connecting Inputs
Use the XLR input connectors on the rear to supply audio signals to your DAP Audio PA-Series amplifier. The connectors accept balanced and unbalanced audio connections. (The PA- Series amplifiers are configured standard with "Pin 2 hot" on XLR inputs. For more Information, see the section on Connection cables on page 12.
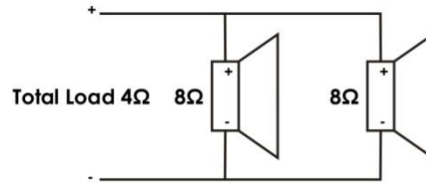
Connecting Outputs.
Speakers are connected using terminal connectors. See the examples below and following page.
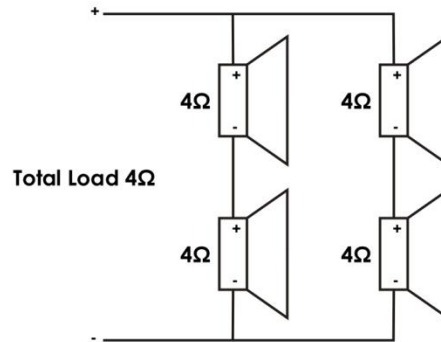
Low impedance outputs
You can use as many speakers as you want as long as the total impedance matches the amplifiers output.
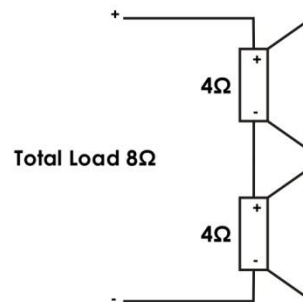
Example 1: using the 4Ω output with two 8Ω speakers.

Example 2: using the 4Ω output with four 4Ω speakers

Example 3: using the 8Ω output with two 4Ω speakers.

In a low impedance system, the total speakerload should always match the amplifier impedance. This to avoid overloading the amplifier.
The total speaker power should be at least the power of the amplifier to avoid damage to the speakers.
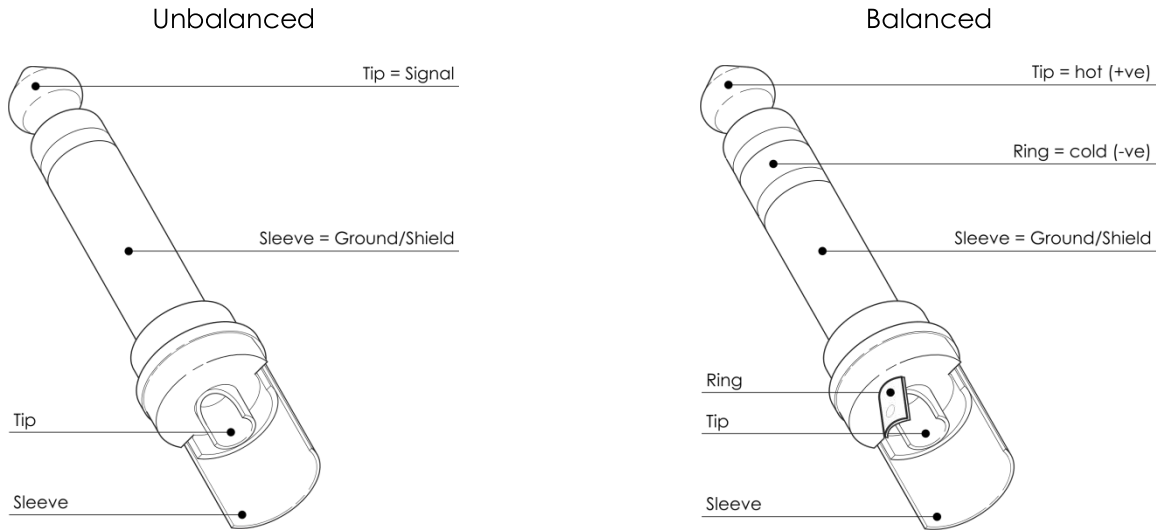
High impedance outputs
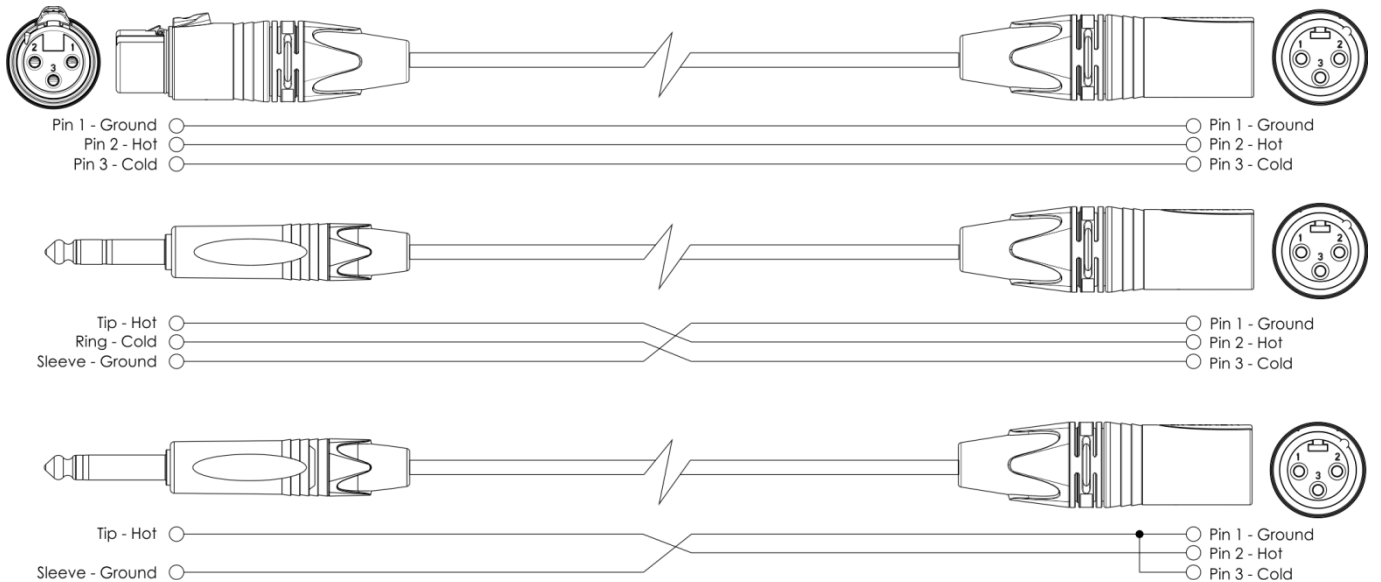If using the 25V, 70V or 100V outputs, note that all speakers should be wired in parallel.

The total power of all speakers summed together should never exceed the total power of the amplifier in a high impedance (25V, 70V or 100V) system!

Connection Cables

Take care of your cables, always holding them by the connectors and avoiding knots and twists when coiling them: This gives the advantage of increasing their life and reliability. Periodically check your cables. A great number of problems (faulty contacts, ground hum, discharges, etc.) are caused entirely by using unsuitable or faulty cables.

Unbalanced

Tip = Signal

Sleeve = Ground/Shield

Tip

Sleeve

Balanced

Tip = hot (+ve)

Ring = cold (-ve)

Sleeve = Ground/Shield

Ring
Tip

Sleeve

For these applications the unit provides 1/4" TRS and XLR connectors to easily interface with most professional audio devices. Follow the configuration examples below for your particular connection.

Pin 1 - Ground
Pin 2 - Hot
Pin 3 - Cold

Pin 1 - Ground
Pin 2 - Hot
Pin 3 - Cold

Tip - Hot
Ring - Cold
Sleeve - Ground

Pin 1 - Ground
Pin 2 - Hot
Pin 3 - Cold

Tip - Hot

Sleeve - Ground

Pin 1 - Ground
Pin 2 - Hot
Pin 3 - Cold

Maintenance

The DAP Audio MA-4150 requires almost no maintenance. However, you should keep the unit clean. Disconnect the mains power supply, and then wipe the cover with a damp cloth. Do not immerse in liquid. Do not use alcohol or solvents.
Keep connections clean. Disconnect electric power, and then wipe the audio connections with a damp cloth. Make sure connections are thoroughly dry before linking equipment or supplying electric power.

Troubleshooting

DAP Audio MA-4150
This troubleshooting guide is meant to help solve simple problems. If a problem occurs, carry out the steps below in sequence until a solution is found. Once the unit operates properly, do not carry out following steps.
1. If the device does not operate properly, unplug the device.
2. Check power from the wall, all cables, connections, etc.
3. If all of the above appears to be O.K., plug the unit in again.
4. If nothing happens after 30 seconds, unplug the device.
5. Return the device to your DAP Audio dealer.

Replacing a Fuse

Power surges, short-circuit or inappropriate electrical power supply may cause a fuse to burn out. If the fuse burns out, the product will not function whatsoever. If this happens, follow the directions below to do so.
1. Unplug the unit from electric power source.
2. Insert a flat-head screwdriver into a slot in the fuse cover. Gently pry up the fuse cover. The fuse will come out.
3. Remove the broken fuse. If brown or unclear, it is burned out.
4. Insert the replacement fuse into the holder where the old fuse was. Reinsert the fuse cover. Be sure to use a fuse of the same type and specification. See the product specification label for details.

Product Specifications

Output Power:	4 x 150W
Power outputs:	4 Ohm, 8 Ohm, 25V, 70V, 100V (terminal strip)
Zone pre amp outputs:	Terminal strip
Input 1:	Line/Microphone with variable gain and phantom power (XLR/Jack combo)
Input 2:	Line/Microphone with variable gain and phantom power (XLR/Jack combo)
Input 3:	Line/Microphone with variable gain and phantom power (XLR/Jack combo)
Input 4:	Line with variable gain (RCA)
Input 5:	Line with variable gain (RCA)
Indication LEDs:	VU bar with clip indication each zone
Tone control:	Bass 100 Hz, treble 10 KHz, +/-12dB
Priority:	Input 1 (terminal strip, N.O. contact)
Monitor output:	1W/ 8 Ohm & Line, terminal strip
Tel paging zone:	By dipswitch back panel
Main power supply:	230/115V AC, 50/60Hz
Power consumption:	1100W
Fuse:	230V: 3,15A / 115V: 6,3A
Power connection:	IEC
Dimensions:	420 x 374 x 145mm (WxDxH)
Weight:	12,5Kg
Accessories:	19" Rack mounts

Dimensions
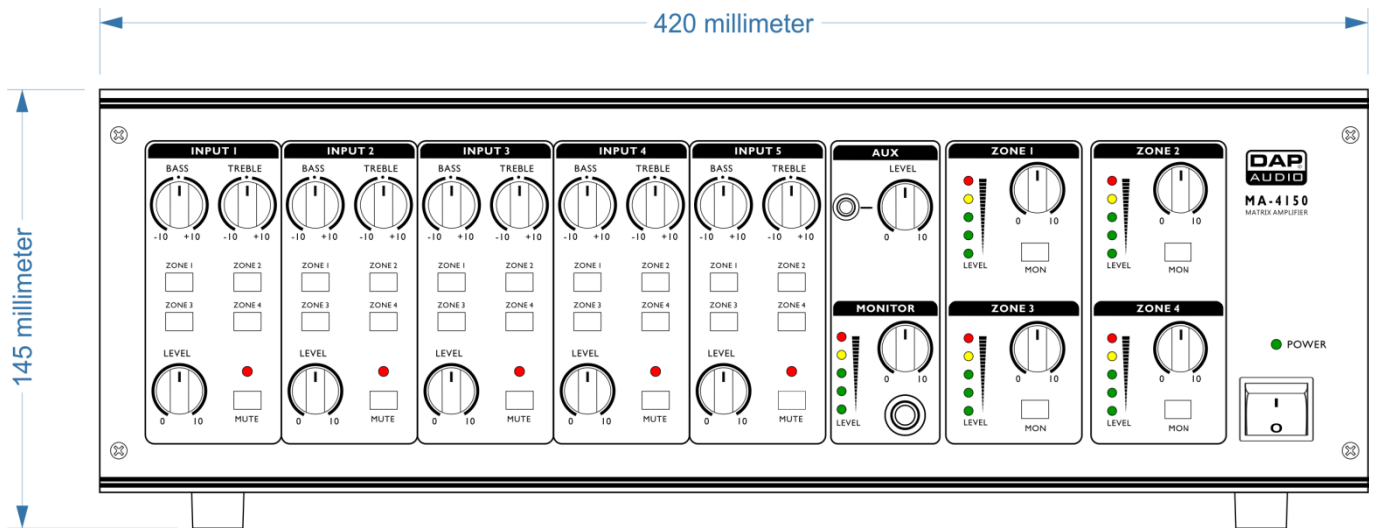
Design and product specifications are subject to change without prior notice.

Notes

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