Stage-Amp

Stage-Amp 2.2	**ORDERCODE D4502**
Stage-Amp 2.6	**ORDERCODE D4503**
Stage-Amp 4.0	**ORDERCODE D4504**
Stage-Amp 4.4	**ORDERCODE D4505**



SHOWELECTRONICS FOR PROFESSIONALS

Congratulations!

You have bought a great, innovative product from DAP Audio.
The DAP Audio Stage Amp series bring excitement to any venue. Whether you want simple plug-&-play action or a sophisticated show, this product provides the effect you need.

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We design and manufacture professional audio equipment for the entertainment industry.
New products are being launched regularly. We work hard to keep you, our customer, satisfied.
For more information: iwant@dap-audio.info

You can get some of the best quality, best priced products on the market from DAP Audio.
So next time, turn to DAP Audio for more great audio equipment.
Always get the best -- with DAP Audio !

Thank you!

DAP Audio

DAP Audio Stage Amp 2.2, Stage Amp 2.6, Stage Amp 4.0, Stage Amp 4.4 Product Guide

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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 fixture must be returned to the factory, it is important that the fixture be returned in the original factory box and packing.

Your shipment includes:
- Stage Amp
- User manual

WARNING



CAUTION!

Keep this system away from rain and moisture!



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

SAFETY INSTRUCTIONS

Every person involved with the installation, operation and maintenance of this system have 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.
- 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 open this device. Risk: hazardous radiation exposure.
- Do not shake the device. Avoid brute force when installing or operating the device.
- Please clean the dust filter every 15 days.
- 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.
- 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 device is not exposed to extreme heat, moisture or dust.
- 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.
- Make sure that the amplifier is turned down, before turning the power on or off. So you can avoid supersonic frequencies, which could damage your speakers.
- Don't put your equipment next to TV, radio, etc., because of interference or distortion.
- If you connect other parts of the system, be careful of ground loops.
- If the external cable is damaged, it has to be replaced by a qualified technician.
- The best way to avoid ground loops is connecting the electrical system ground to one central point ("star" system). In this case the mixer can act as a central point.
- Before changing the ground, always turn off your amplifier.
- Please read this manual carefully and keep it for future reference. Remember that the amplifier has a better value on the market, if you save the carton and all packing materials.
- Always operate the unit with the AC ground wire connected to the electrical system ground.
- Connecting amplifier outputs to oscilloscopes or other test equipment, while the amplifier is in bridged mode, may damage both the amplifier and test equipment.
- Do not drive the inputs with a signal level bigger, than required to drive the equipment to full output.
- In system setup, the amplifier's output power must be 50%-100% more than the loaded loudspeakers rated power.
- Please turn off the power switch, when changing the power cord or signal cable, or select the input mode switch.
- In typical use, please set the volume at 0dB position.
- Sometimes, when you want to send one signal to more than one amplifier, you should use a signal distributor.
- 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.
- Allow time to cool down, before cleaning or servicing.
- For replacement use fuses of same type and rating only.
- Prevent distortion! Make sure that all components connected to the device have sufficient power ratings. Otherwise distortion will be generated because the components are operated at their limits.
- 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.
- For adult use only. Amplifier must be installed out of the reach of children.
- This device falls under protection class I. Therefore it is essential to connect the yellow/green conductor to earth.

- The user is responsible for correct positioning and operating of this device. The manufacturer will not accept liability for damages caused by the misuse or incorrect installation of this device.
- Repairs, servicing and electric connection must be carried out by a qualified technician.
- WARRANTY: Till one year after date of purchase.

OPERATING DETERMINATIONS

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 !

⚠ 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 Stage Amp 2.2, Stage Amp 2.6, Stage Amp 4.0, Stage Amp 4.4 are professional high-end amplifiers :

• Power rating

	2Ω	4Ω	8Ω
Stage Amp 2.2	RMS 2 X 1350W	RMS 2 X 1050W	RMS 2 X 650W
Stage Amp 2.6	RMS 2 X 2300W	RMS 2 X 1400W	RMS 2 X 850W
Stage Amp 4.0	RMS 2 X 3000W	RMS 2 X 2000W	RMS 2 X 1200W
Stage Amp 4.4	RMS 2 X 3700W	RMS 2 X 2500W	RMS 2 X 1500W

• Features: Clip limiting
Thermal protection
VHF protection
Short circuit protection
DC voltage protection
Soft start
• Frequency response: 20Hz~20KHz
• S/N Ratio: >95 dB
• Slewrate: >20V/uSec
• Total Harmonic distortion (THD+N): <0,05%
• Mode: Stereo/Parallel/Bridge
• Airflow: From front to rear
• Input connector: XLR
• Output connector: Speakon + XLR + Pomona



Fig. 1

Frontpanel

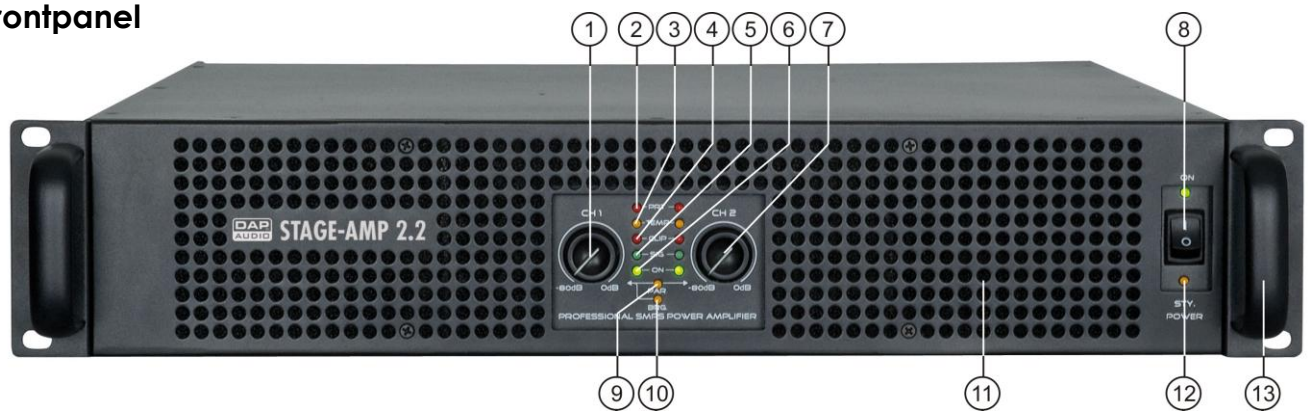


Fig. 2

1. CH1 volume control
In bridge mode, this attenuator controls the volume of two channels. CH2 attenuator has no function.
In stereo or parallel mode, this attenuator just controls CH1 volume.
Gain control range: -8 ~, continuous control.
Gain control range: -8 ~ 0dB, 40 steps control, effective rotation angle is 280 degrees.

2. Protection LED
The Protection LED indicates that one or more critical issues require your attention. The amplifier is protected against overheat, overload, DC and short circuit. When the LED is lit, check the amplifier for these problems and provide an adequate solution.

3. Over-heat indicator
The over-heat LED will light when the internal temperature of the amplifier exceeds 105 degrees Celsius. At the same moment, the over-heated channel might automatically be switched off in order for the amplifier to cool down. When the over-head LED is lit, be sure to check the air circulation at the front and the back of the amplifier.

4. Clip indicator
The Clip Indicator LED will light when over-modulation of the audio signal is detected. Although the amplifier has a built-in clip limiting circuit, any illumination of the Clip indicator LED indicates that the input level should be reduced.

5. Signal indicator
The signal LED indicates that an audio signal is present at the amplifier input. The sensitivity of this LED is 0,35V or -9 dB. Illumination of this LED indicates correct functioning of the device.

6. Power LED.
Indicates that AC power is connected and the amplifier is turned on.

7. CH2 volume control
In bridge mode, this attenuator has no function, the volume is controlled by CH1 attenuator.
In stereo or parallel mode, the attenuator just controls CH2 volume.
Gain control range: -8 ~ 0dB, 40 steps control, effective rotation angle is 280 degrees.

8. AC Power Switch.
This is the main Power switch. Press to turn the amplifier on.

9. Parallel indicator
When this LED is lit, means the amplifier is working in parallel mode .

10. Bridge indicator
When this LED is lit, means the amplifier is working in bridge mode.

11. Air entrance
Don't obstruct or insert objects into air vents.

12. Standby power indicator
The stand-by LED indicates that the amplifier is in Stand-by mode. When the amplifier is switched on, the stand-by LED will stay illuminated for a few seconds, during which a self-test is performed. When the self-test is completed, the stand-by LED dims.

13. Handles
Handles are used for easy transportation.

Backpanel

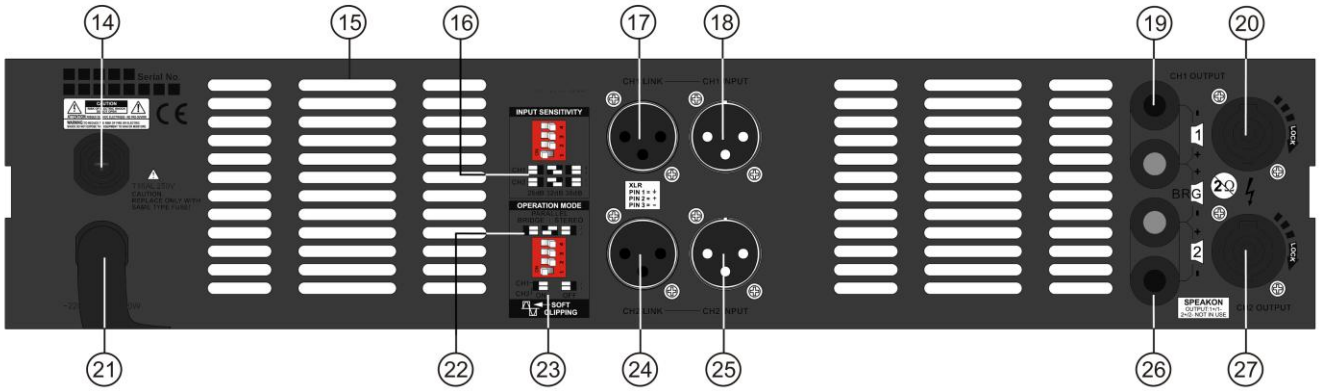


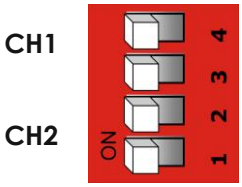
Fig. 3

14. Power Fuse (18AL / 250V)
Replace the fuse only by a fuse of the same type.

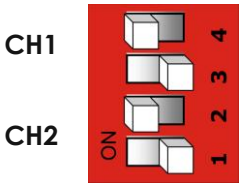
15. Air cooling
Make sure these outlets remain clear to allow unrestricted air flow.

16. Input sensitivity selector
The switch has three exchange modes:

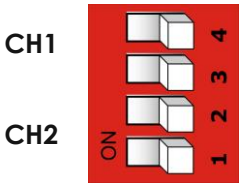
1) Whole equipment signal gain is **26dB**

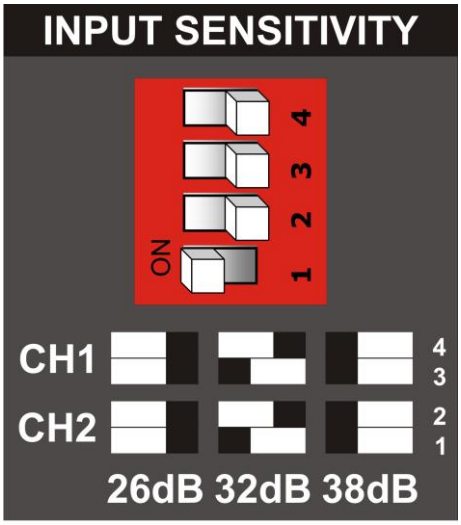


2) Whole equipment signal gain is **32dB**



3) Whole equipment signal gain is **38dB**





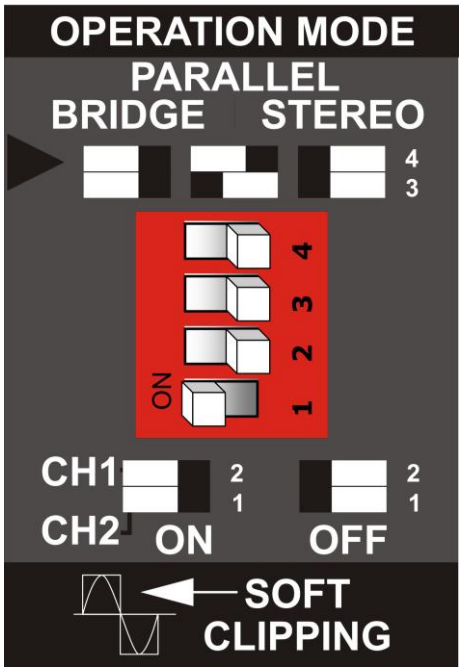
17. Balanced Link Out connectors.
Used to Link the input signals to other amplifiers.

18. Balanced XLR Input Connectors.
These connectors accept input signals on XLR input plugs, See the section on connecting cables on page 13 for more information on polarity. Connectors for each channel are in parallel, the unused connectors may be used for linking to other amplifiers.

19. CH1 Binding post output
In stereo or parallel mode, connect the negative wire of your speaker to the black binding post and the positive wire of your speaker to the red binding post. ***In bridge mode, only connect the speaker wires to the red binding post of Channel 1 and Channel 2.***

20. CH1 SPEAKON output
In stereo or parallel mode, connect the negative wire of your speaker to the -1 pin and connect the positive wire of your speaker to the +1 pin of the speakon connector. ***In bridge mode, connect the speaker wires to the +1 and the +2 pins of the speakon connector.***

21. Power cord
Plug this cord into the power supply socket. (Before using the power amplifier, check if the power supply is 240V).



Operation Mode (#3 and #4)

Soft-clipping (#1 and #2)

22. Operation mode selector (Dipswitch #3 and #4)

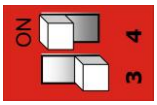
The switch has three exchange modes:

1) Stereo mode:



In this mode both channels operate independently of each other, with their input attenuates controlling their respective levels. A signal at Channel 1's input produces an amplified signal at Channel 1's output, while a signal at Channel 2's input produces an amplified signal at Channel 2's Output.

2) Parallel mode:



In this mode, both signals from Ch1 and Ch2 input are summed and sent to both Ch1 and Ch2 outputs. This results in an summed monaural output signal on both outputs. The input attenuators will independently adjust their corresponding output signal levels. This mode might be useful in certain subwoofer set-ups to reduce phase problems.

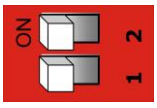
3) Bridge mode:



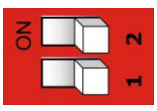
Both amplifier channels can be bridged together to make a very powerful single channel amplifier. When the Mode switch is set to the "Bridge" position, 1 channel "pushes", while the other "pulls" equally. Thus effectively doubling the power. Use extreme caution when operating the amplifier in the bridged mode. To bridge the amplifier, set the mode switch to the "Bridge" position. Apply the signal to Channel A's input and connect the speakers across the "hot" outputs – the red binding posts – of Channel 1 and 2. Channel 1's "hot" output is in phase with the input.
For operation adjust only the Channel 1's input attenuator, while Channel 2's input will not function (Channel 2's input signal has been disconnected).

23. Soft clip selector (Dipswitch #1 and #2)

1) Set the dipswitch #1 and #2 to ON and the limiter will smoothly limit the wave form.



2) Set the dipswitch #1 and #2 to OFF and soft-clipping will be disabled.



24. CH2 bypass socket

Ch2 bypass socket is in parallel connection with XLR, provide an output signal same with the inputs.

25. CH2 XLR input

This XLR input is a balanced input, connect to the upper processing equipments.

26. CH2 Binding post output

In stereo or parallel mode, connect the negative wire of your speaker to the black binding post and the positive wire of your speaker to the red binding post. ***In bridge mode, only connect the speaker wires to the red binding post of Channel 1 and Channel 2.***

27. CH2 SPEAKON output

In stereo or parallel mode, connect the negative wire of your speaker to the -1 pin and connect the positive wire of your speaker to the +1 pin of the speakon connector. ***In bridge mode, the Ch2 Speakon connector cannot be used. See "Ch1 Speakon output" for connection in bridge mode.***

Set Up and Operation

Installation

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

Connecting Power / Circuit Size Requirements.

The actual current draw, the amplifier demands from the AC mains, depends on many factors (its load, output level or the crest factor of its program material).

The power requirement is rated under typical music conditions, with both channels driven so those peaks are just at the clipping point.

Make sure the mains voltage is correct and is the same as printed on the rear of the amplifier. Damage caused by connecting the amplifier to improper AC voltage is not covered by any warranty. Unless otherwise specified when ordered. DAP audio amplifiers shipped to customers are configured as follows:

North America 120VAC/60Hz
Europe 230VAC/50Hz
Asia 220VAC /50Hz/60Hz
Australia 240VAC/50Hz
South America 120VAC/60Hz or 220VAC/50Hz
Japan 1OOVAC/50Hz

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 STAGE AMP Series amplifier. The connectors accept balanced and unbalanced audio connections. (The STAGE AMP Series amplifiers are configured standard with "Pin 2 hot" on XLR inputs. The Link connector can be used to loop the audio Input to another amplifier Input. For more Information, see the section on Connection cables page 13.

Connecting Outputs.

Speakers are connected using Speakon connectors. For examples see Fig. 4, 5 and 6 (Page 10 and 11).

Mode Selection

The three-position, recessed Mode Select switch (located on the rear panel) configures the amplifier for Stereo, Parallel or Bridged Mono Mode. Amplifiers are factory set to Stereo Mode.

Stereo Mode

In Stereo Mode, both channels operate independently, with their input attenuators controlling their respective levels. Signal at Channel A's input produces output at Channel A's output, while the signal at Channel B's input produces output at Channel B's output.

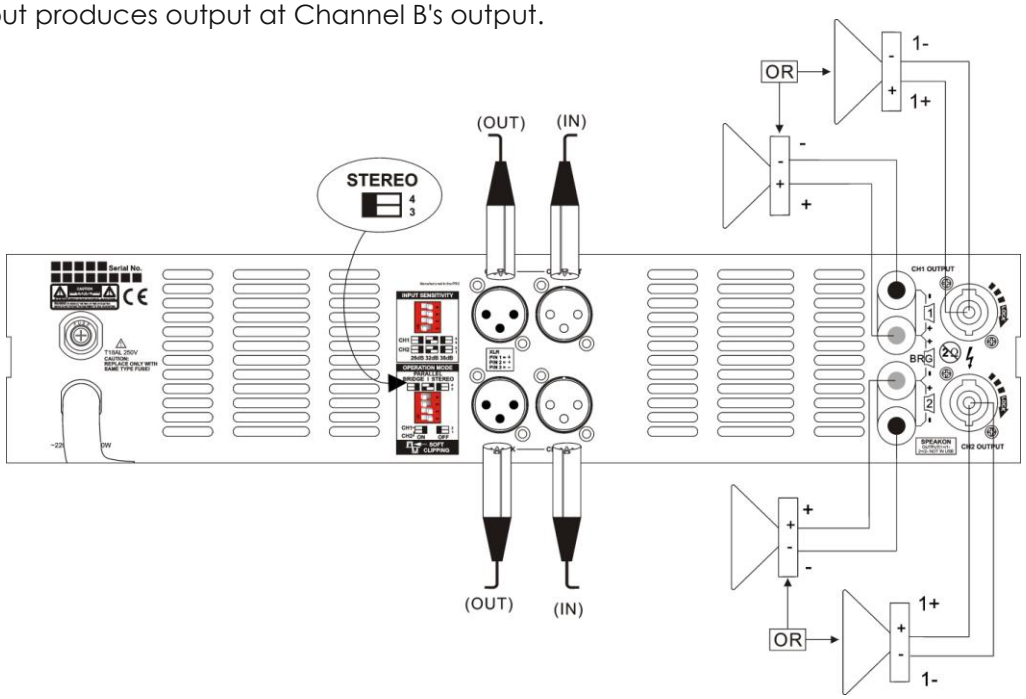


Fig. 4

Important !!!

Absolute minimum nominal load Impedance for stereo operation is:
STAGE AMP 2.2, 2.6, 4.0 and 4.6: 2 Ohm per channel.

Parallel Mode

When set to Parallel Mode, a signal applied to Channel A's input will be amplified and appear at outputs of both Channels A and B.

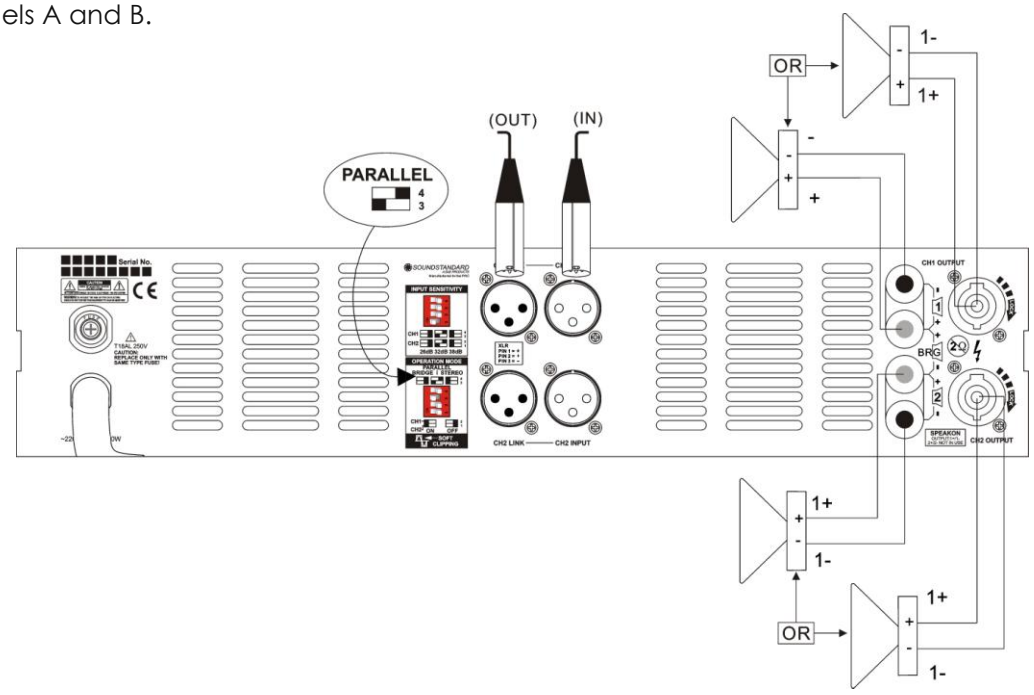


Fig. 5

Important !!!

Absolute minimum nominal load Impedance for parallel operation is:
STAGE AMP 2.2, 2.6, 4.0 and 4.6: 2 Ohm per channel.

Bridged Mono Mode

Bridged Mono Mode straps both amplifier channels together to make a very powerful, single-channel monaural amplifier. One channel "pushes" and the other "pulls" equally, doubling the power over that of channel alone. Signal is applied to the Channel A input only. Both attenuators are used to control signal level; in addition, both must be adjusted to the same setting. Only channel A input may be used.

Use extreme caution when operating the amplifier In Bridged Mono Mode.
Never ground either side of the speaker cable when the amplifier Is in Bridged Mono Mode; both sides are "hot. "If an output patch panel is used, all connections must be Isolated from each other and from the panel.

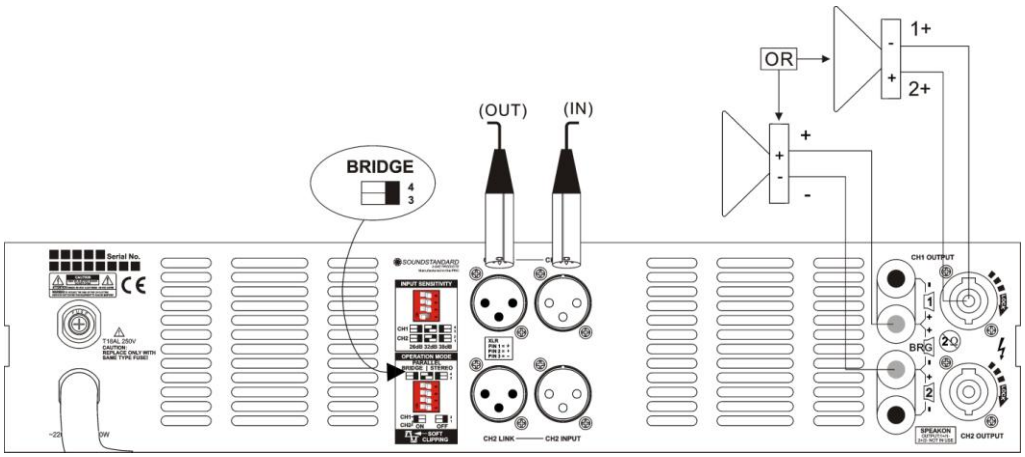


Fig. 6

Important!!!

Absolute minimum nominal load Impedance for bridge operation is:
STAGE AMP 2.2, 2.6, 4.0 and 4.6: 4 Ohm

Connecting amplifier outputs to oscilloscopes or other test equipment, while the amplifier is in bridged mode, may damage both the amplifier and test equipment!

Reliability protection function

1. Clip/Limit

This feature has two protection functions:

1) Limit on the input signal range, to prevent input signal overload beyond the amplifiers rated range and cause square wave output to damage the speaker.
2) When the signal waveform is distorted, it can automatically adjust gain and limit distortion signal output.

   Note : If the input signal exceeds +22dBu (10V), clip limit will be impossible, so do not increase the input source signal unlimitedly.

2. Soft clip

This function can be selected by using the ON/OFF switch. When the input signal exceeds the setting range, it will smoothly limit the input waveform range. Compared to clip limit, soft-clip provides even a more powerful output.

3. Overheat protection

1) When the amplifier works at full load for a long time , the fans will reach the maximum speed, thus providing maximum air flow. In case the internal transistor temperature rises to 95 degrees Celsius, the first step of power demotion (down ½ output power) will be activated to ensure that in overheated state, the amplifier will maintain program output. Depending on different music characteristics, the amplifier will return to the original output power within 3-10 minutes.
2) When the amplifier is subjected to overload for a continuous period of time and no temperature improvement is made, it will advance to the next level of power demotion. Transistor temperature will reach 105 degrees Celsius and the amplifier will reach full protection mode. The output will be completely muted and no sound will be reproduced. At this time, the protection LED and temperature LED are lit at the same time.



Absolute minimum nominal load Impedance for Bridge operation is 4 Ohm per channel
Absolute minimum nominal load Impedance for Parallel / Stereo operation is 2 Ohm per channel

4. VHF protection

If the amplifier output has reached a certain range, and frequency exceeds 10KHz, such as MIC feedback shout, then amplifier may go into VHF protection after 3 seconds. The protection LED (PRT) on the front panel will be on, the amplifier output will be muted and no sound will be reproduced. Sound reproduction will recover automatically after 10 seconds of protection. If the output signal does not change, VHF protection will remain active.

5. Short-circuit protection

All Stage Amp models are equipped with a short circuit protection. This protects your amplifier against short-circuitry. When the output is short circuited, the protection LED (PRT) on the front panel will be on and the amplifier will be muted. The operating mode will be restored 10 seconds after the short circuit has been removed.

6. AC Power Supply Protection

If the AC power voltage drops below the allowed working voltage (-165V), the power supply will be turned off automatically until the power voltage is restored to normal.

7. DC protection

1) If the a DC voltage (2.6V or higher) occurs on the output signal, the DC protection circuit will be startup in order to protect the speakers. The protection LED (PRT) on the front panel will be on and the amplifier output will be muted.
2) If there is DC output and for any reason the protection relay should not be able to disconnect the speakers, the output stage is designed to short circuit the amplifiers output. The fuse will blow, thus protecting the speakers.

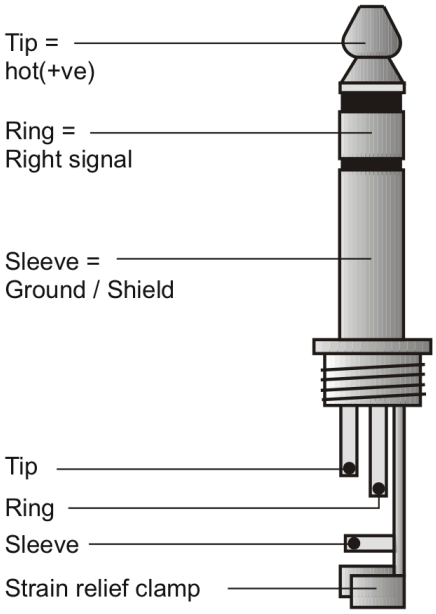
Ex-factory setting

1. All the volume adjustment buttons were set to **-∞**.
2. Power switch was set to **OFF**.
3. Grounding selector switch was set to **ON**.
4. Working mode selector switch was set to **STEREO**.
5. Sensitivity selector switch was set to **0.775V**.
6. 30Hz high pass selector switch was set to **ON**.

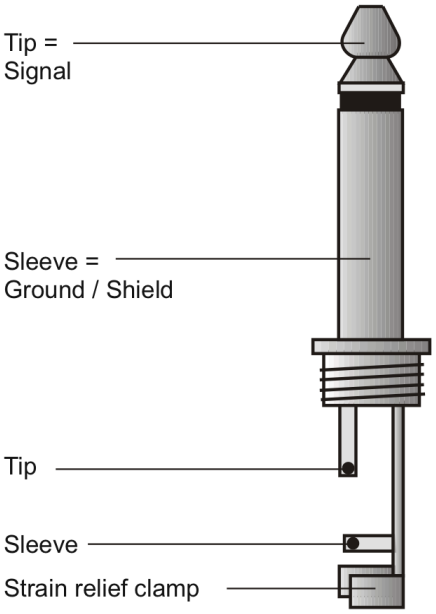
Connection Cables

Take care of the connector 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, which is always to your advantage.
Periodically check that your cables are in good condition, that they are correctly wired and that all their contacts are in good condition: a great number of problems (faulty contacts, ground hum, discharges, etc.) are caused entirely by using unsuitable or faulty cables.

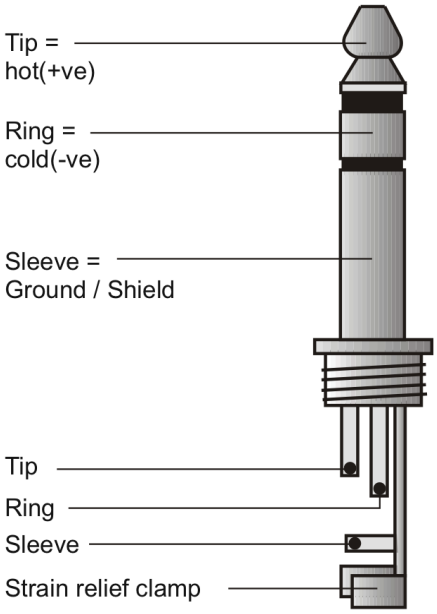
Headphones



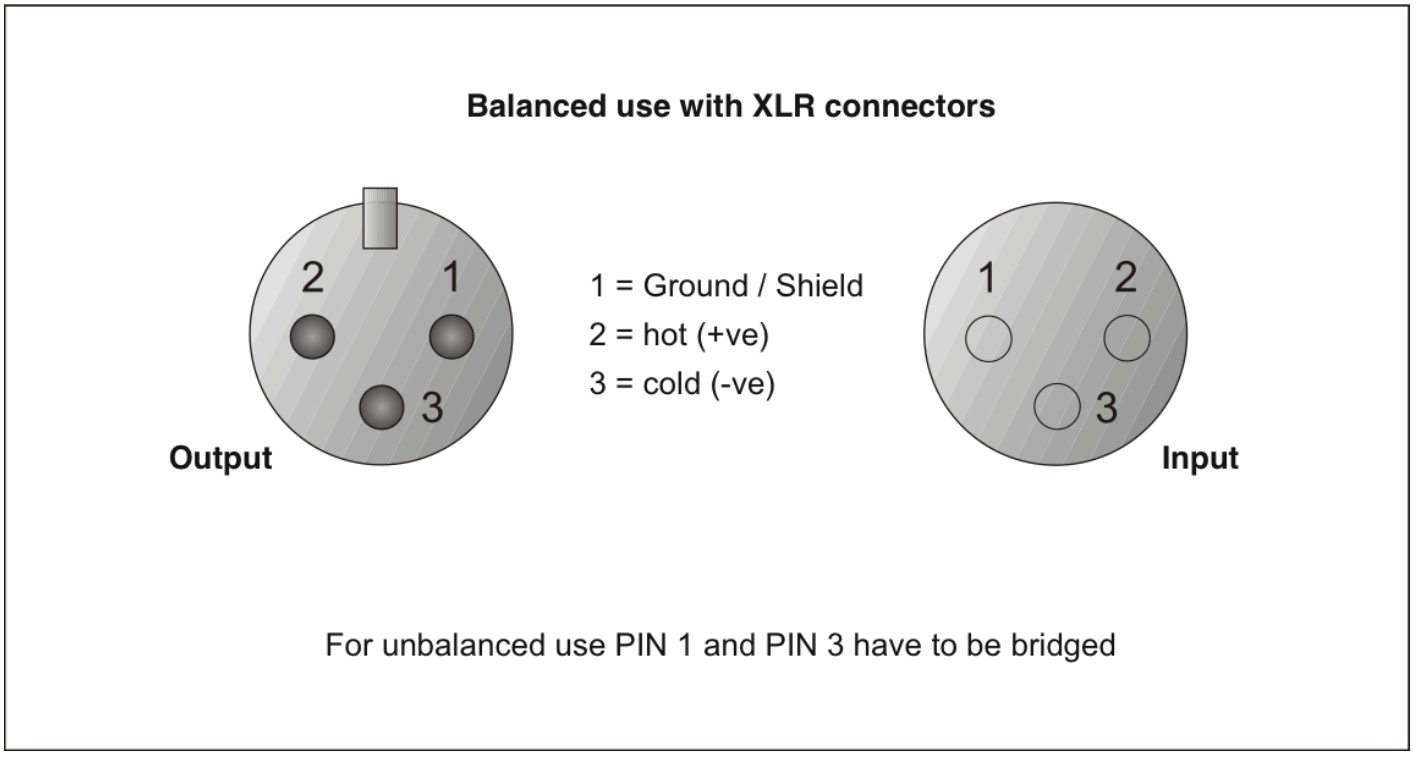
Unbalanced mono 1/4" jack plug



Balanced mono 1/4" jack plug



Compensation of interference with balanced connections



Maintenance

The DAP Audio STAGE AMP 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 DMX and audio connections with a damp cloth. Make sure connections are thoroughly dry before linking equipment or supplying electric power.

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.

Troubleshooting

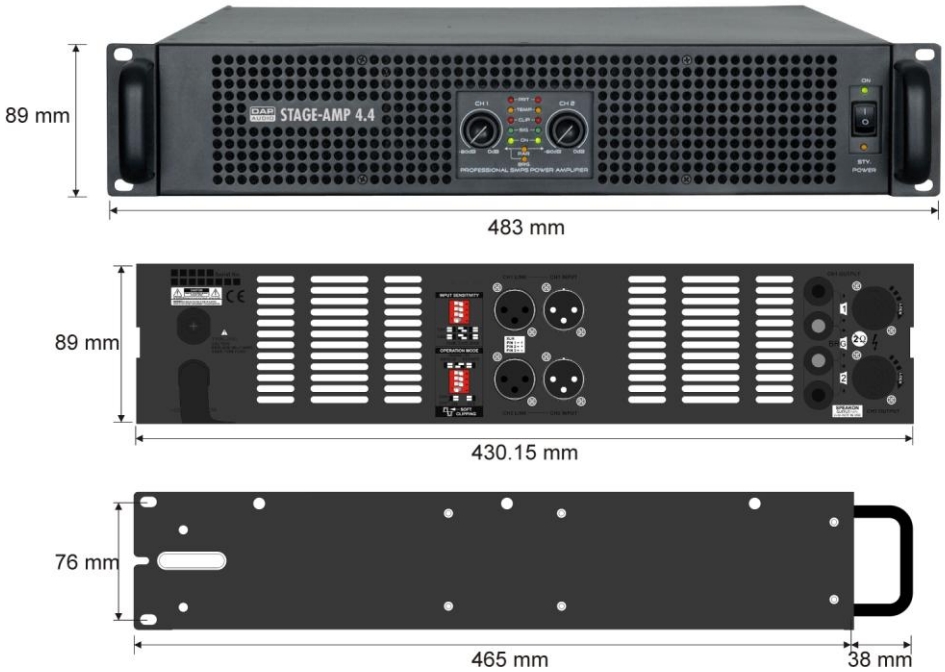
DAP Audio STAGE AMP-series Amplifiers.
This troubleshooting guide is meant to help solve simple problems. If a problem occurs, carry out the steps below in sequence until a solution is found. Once the unit operates properly, do not carry out following steps.

1. If the device does not operate properly, unplug the device.
2. Check the fuse, power from the wall, all cables, etc.
3. If all of the above appears to be O.K., plug the unit in again.
4. If you are unable to determine the cause of the problem, do not open the amplifier, as this may damage the unit and the warranty will become void.
5. Return the amplifier to your Dap Audio dealer.

Product Specifications

Model	Stage Amp 2.2	Stage Amp 2.6	Stage Amp 4.0	Stage Amp 4.4
Stereo, 8 Ω (per ch.)*	650Wx2	850Wx2	1200Wx2	1500Wx2
Stereo, 4 Ω (per ch.)*	1050Wx2	1400Wx2	2000Wx2	2500Wx2
Stereo, 2 Ω (per ch.)**	1350Wx2	2300Wx2	3000Wx2	3700Wx2
Bridge, 8 Ω *	2200W	3000W	4100W	4800W
Bridge, 4 Ω**	2900W	4600W	6200W	7600W
Performance				
Frequency response	20Hz-20KHz@8 Q ±0.5dB			
THD+N	<0.05%	<0.05%	<0.05%	<0.05%
Slew rate	>20V/us	>20V/us	>20V/us	>20V/us
Damping factor(@100Hz)	>300	>300	>300	>300
Dynamic range	≥80dB	≥80dB	≥80dB	≥80dB
S/N Ratio	>95dB	>95dB	>95dB	>95dB
Input Sensitivity	26dB/32dB/38dB 3.64V/1.82V/0.91V	26dB/32dB/38dB 4.0V/2.0V/1.0V	26dB/32dB/38dB 4.89V/2.44V/1.22V	26dB/32dB/38dB 5.47V/2.73V/1.36V
Voltage gain	38dB	38dB	38dB	38dB
Input impedance	Balanced 20k/ unbalanced 10k			
Output circuit class	2 steps class H	3 steps class H	3 steps class H	3 steps class H
Protection	Soft-start, short-circuit, overload, DC, over-heat, THD clip/limit, output volume will gradually increase when switching the amplifier on, lack of voltage of SMPS, VHF, infrasound frequency protection, over-power limit, output power will be limited if over-heat			
Cooling air-flow	Airflow from front panel to rear panel.			
Power supply	240V ±10% / 50Hz			
Weight	9.8Kg	12.29Kg	13.5Kg	15.25Kg

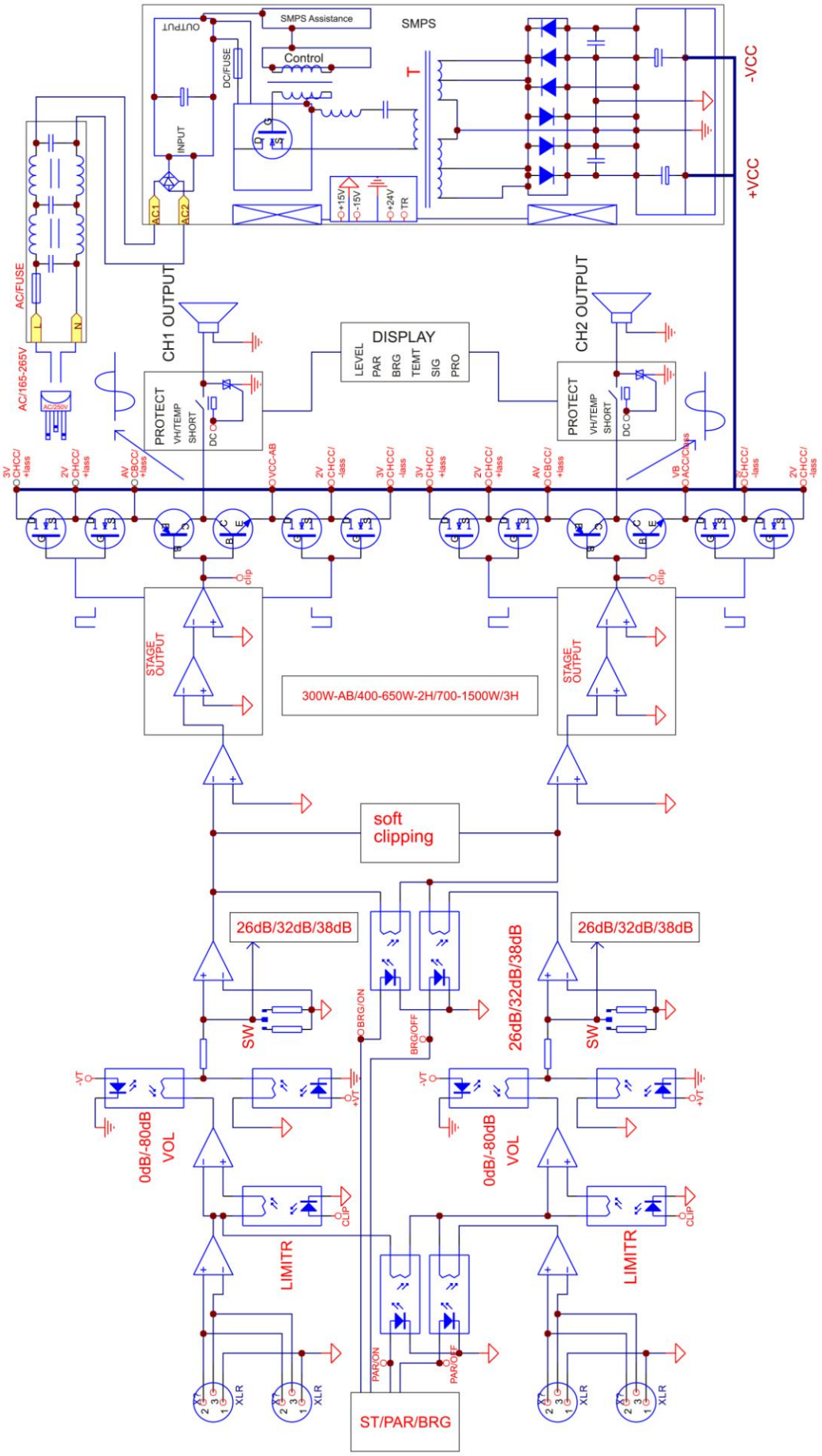
Note: * The power are tested under **EIA** standard.
** The power are tested under the condition of 1KHz,THD1 %,40ms burst.



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

Website: www.dap-audio.info
Email: service@highlite.nl

STAGE AMP Block Diagram



Wire Gauge Chart (Metric)

Stranded Cable Length (m)	Wire Gauge (mm^2)	Power Loss % (8 ohm load)	Power Loss % (4 ohm load)	Power Loss % (2 ohm load)
2	0,3	2,9	5,6	10,8
	0,5	1,74	3,4	6,7
	0,75	1,16	2,3	4,5
	1,5	0,58	1,16	2,3
	2,5	0,35	0,70	1,39
	4	0,22	0,44	0,87
5	0,5	4,3	8,2	15,5
	0,75	2,9	5,6	10,8
	1,5	1,45	2,9	5,6
	2,5	0,87	1,74	3,4
	4	0,55	1,09	2,2
	6	0,37	0,73	1,45
10	0,5	8,24	15,5	28
	0,75	5,6	10,8	19,9
	1,5	2,9	5,6	10,8
	2,5	1,74	2,9	6,7
	4	1,09	1,74	4,3
	6	0,73	1,09	2,9
30	0,75	15,5	0,73	45
	1,5	8,2	15,5	28
	2,5	5,1	9,8	18,2
	4	3,2	6,3	12
	6	2,2	4,3	8,2
	10	1,31	2,6	5,1

Wire Gauge Chart (AWG: American Wire Gauge)

Stranded Cable Length(ft)	Wire Gauge (AWG)	Power Loss % (8 ohm load)	Power Loss % (4 ohm load)	Power Loss % (2 ohm load)
5	18	0.81	1.61	3.2
	16	0.51	1.02	2
	14	0.32	0.64	1.28
	12	0.2	0.4	0.8
	10	0.128	0.25	0.51
10	18	1.61	3.2	6.2
	16	1.02	2	4
	14	0.64	1.28	2.5
	12	0.4	0.8	1.6
	10	0.25	0.51	1.01
40	18	6.2	11.9	22
	16	4	7.7	14.6
	14	2.5	5	9.6
	12	1.6	3.2	6.2
	10	1.01	2	4
	8	0.6	1.2	2.4
80	18	11.9	22	37
	16	7.7	14.6	26
	14	5	9.6	17.8
	12	3.2	6.2	11.8
	10	2	4	7.7
	8	1.2	2.4	4.7



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