

REVAMP4120T

Instruction manual

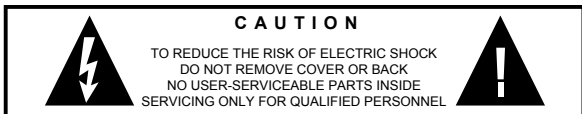
REVAMP4120T manual



Safety first!

- Caution! This professional device needs to be installed by qualified personnel only.
- Please check the carton box for any kind of damage on reception of the goods. In case of a damaged carton, please contact your dealer before opening the carton.
- !!!! Danger !!!! Exposure to high sound levels may cause a permanent hearing loss. Individuals vary considerably to sound pressure level induced hearing loss but nearly everyone will lose some hearing if exposed to high sound pressure levels for a sufficient amount of time. Therefore it is recommended that all persons exposed to equipment capable of producing high sound pressure levels, such as this amplifier, be protected by hearing protection while installing or operating this unit.
- Read all documentation before operating your equipment.
- Keep all documentation for future reference.
- Save the carton and packing material even if the equipment has arrived in good condition.
- Should you ever need to ship the unit, use only the original factory packing.
- Do not spill water or other liquids into or on the unit.
- Make sure power outlets conform to the power requirements listed on the back of the unit.
- Do not use the unit if the electrical power cord is frayed or broken.
- Always operate the unit with the AC ground wire connected to the electrical system ground.

- Set level controls on amplifiers all the way down during power-up to prevent speaker damage if there are high signal levels at the inputs.
- Do not connect the inputs / outputs of amplifiers or consoles to any other voltage source, such as a battery, mains source, or power supply, regardless of whether the amplifier or console is turned on or off.
- Power down & disconnect units from mains voltage before making connections.
- Do not use the unit near stoves, heat registers, radiators, or other heat producing devices.
- Do not operate equipment on a surface or in an environment which may distort the normal flow of air around the unit. If the unit is used in an extremely dusty or smoky environment, the unit should be periodically "blown free" of dust.
- Do not remove the cover. Removing the cover will expose you to potentially dangerous volt ages.
- Do not drive the inputs with a signal level higher than that required to drive equipment to full output.
- Do not run the output of any amplifier back into another input.
- In case of mal-function this device should be serviced by qualified service personnel only.
- This unit has NOT been designed for use in mobile applications, such as: mobile discobars, mobile PA systems, Live bands, audio rental systems, ...
- Before using the amplifier for the first time, check the impedance of your 100 volt speaker lines using the Apart IMPMET.



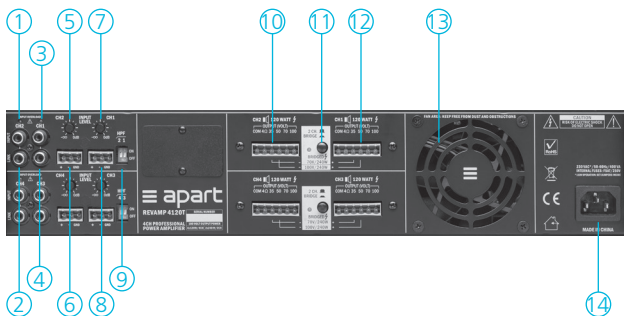
Features

- 2 rack units high
- High power Hypex® class-D power amplifier modules
- Bridgeable 4 channel class-D amplifier
- Output power: 4x120W@100V
- Bridged output power: 2x240W@100V
- High thermal efficiency
- Convectional cooling with temperature controlled cooling fan (normally off)
- Integrated APC limiter/compressor
- Soft start switching power supply unit
- Toroidal 100 volt transformers
- Switching mode power supply
- Balanced euroblock inputs
- Unbalanced inputs on RCA with pass through
- Input level attenuators on all inputs

- Euroblock speaker connectors with multiple taps: 35 volt, 50 volt, 70 volt, 100 volt and 4 ohm
- Extended speaker and amp protection circuits: over current protect, over temperature protect
- Versatile LED status indicators
- This unit has NOT been designed for use in mobile applications, such as: mobile discobars, mobile PA systems, Live bands, audio rental systems, ...
- Removable rack-ears

Note: the integrated APC limiter will automatically limit the incoming audio signal to avoid overloads. This feature can not be defeated and acts as a lifesaver for your valuable speakers.

Connections



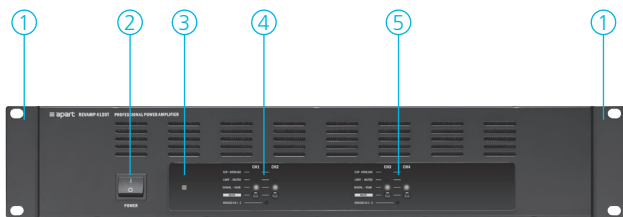
Only channel 1 and 2 are explained. Channel 3 and 4 are functionally identical to 1 and 2.

1. **Channel 2 overload led:** when this led lights up, you are overloading the input. Lower the input signal immediately to prevent the amplifier from shutting down.
2. **Channel 2 unbalanced input and link cinch connector:** connect the line level input signal for channel 2 here. Line level is 0 dBV. Input and link connector are internally connected 1 on 1.
3. **Channel 1 overload led:** when this led lights up, you are overloading the input. Lower the input signal immediately to prevent the amplifier from shutting down.

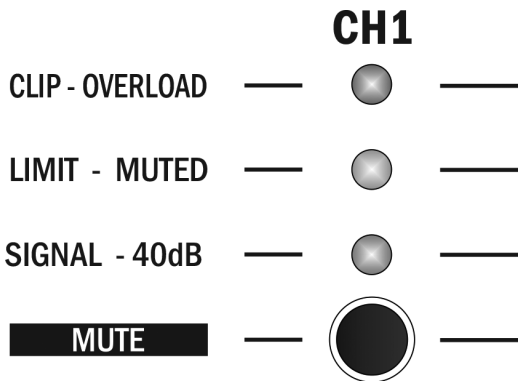
4. **Channel 1 unbalanced input and link cinch connector:** connect the line level input signal for channel 1 here. Line level is 0 dBV. Input and link connector are internally connected 1 on 1. This connector is also used in bridge mode.
5. **Channel 2 input gain setting:** Adjust the input gain to the output level of your source. Make sure to avoid the clip led lighting up at the strongest input peak level.
6. **Channel 2 balanced input on 3 pole euroblock connector.**
7. **Channel 1 input gain setting:** Adjust the input gain to the output level of your source. Make sure to avoid the clip led lighting up at the strongest input peak level.
8. **Channel 1 balanced input on 3 pole euroblock connector:** This connector is used in bridge mode.
9. **HPF on/off dipswitch for channels 1 and 2:** set to on position to enable the 250Hz highpass filter (ideal for using 100 volt horn speakers)
10. **Channel 2 output on euroblock:** use the com (negative) in combination with one of the output options: low impedance (4 ohms), 35 volt, 50 volt, 70 volt or 100 volt (positive). Never use more than one output simultaneously.
11. **Bridge button:** set to 2 channel for normal operation. Set to bridge mode for bridge mode operation.
12. **Channel 1 output on euroblock:** use the com (negative) in combination with one of the output options: low impedance (4 ohms), 35 volt, 50 volt, 70 volt or 100 volt (positive). Never use more than one output simultaneously.
13. **Fan area:** keep free from dust and obstructions.

14. Mains voltage inlet: connect the mains power cord here.

Operation



1. Removable rack ears for 19 rack mounting.
2. Power switch.
3. Power led.
4. Channel 1 and 2 mute buttons and multifunctional led display.
5. Channel 3 and 4 mute buttons and multifunctional led display.



- **Clip** – overload led indicates that the amplifier is overloaded or clipping: reduce the incoming signal immediately to avoid overloads or clipping and eventually amplifier shutdown.
- **Limit** – muted indicates that the internal limiter is active or that the channel is muted by pushing the mute button.
- **Signal** -40dB indicates that a signal is present at the input
- **Mute button**: push to mute/unmute the channel.
- **Bridged led** (yellow) lights up when bridge mode is selected via the rear panel bridge pushbutton.

!!!IMPORTANT!!!

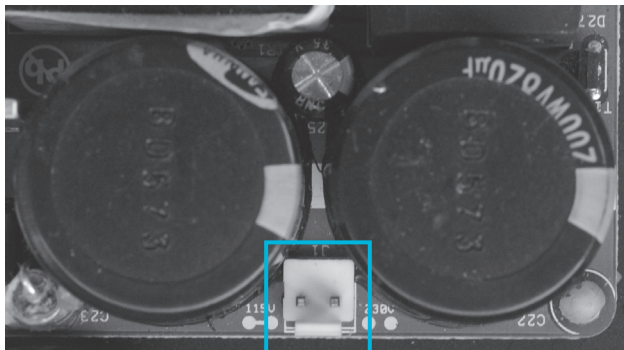
This amplifier relies on convectional and active cooling. In normal situations, overheating will not occur. The unit can be built in a 19 inch rack system, but it is forbidden to block the ventilation holes provided. Therefore, it is absolutely necessary to allow at least one free rack space or 44 mm above and beneath the amplifier. Make sure the ambient temperature is between 0 and 40°C. Operating the unit beyond its normal limits will result in excessive internal temperature. Power amplifiers are hard workers, and their behaviour is similar to human beings. In extreme conditions, human beings are not able to perform efficiently. This also applies to amplifiers. It is generally a bad idea to mount multiple heat generating units such as amplifiers in the same rack. If necessary, use an additional forced ventilation system in your mounting rack.

The mains fuse is located inside the unit. When the fuse is broken, replace it with a fuse of the same current and voltage rating: 5 AT/250V. For qualified personnel only!

This unit has NOT been designed for use in mobile applications, such as: mobile discobars and DJ setups, mobile PA systems, Live bands, audio rental systems ...

Use it in fixed installations only.

Before using the amplifier for the first time, check the impedance of your 100 volt speaker lines using the Apart IMPMET: temporarily disconnect the speaker line from the amplifier and measure the speaker line. Impedance @ 100 volt must be 83 ohms or more. This value corresponds to 120 watts @ 100 volt.



110 VAC operation: it is possible to operate the unit at 110 (115) VAC.

Therefore, open the unit and set a wire jumper on the connector for 110 VAC operation.

Technical specifications

Output power	4x120 W/100 volt
Load impedance	83 ohms / 100 volts; 41 ohms / 70 volts; 21 ohms / 50 volts; 10.5 ohms / 35 volts; 4 ohms / 4 ohms
Input connections	4 x unbalanced on RCA with pass through + 4 x balanced on euroblock
Input sensitivity	0 dBV / 1V
Input impedance	22 k Ω
S/N ratio	>101 dB A weighted
THD	<0.05% @ 1 W / 4 Ω / 1 kHz A weighted
Frequency response	50 – 20 kHz + 0 / - 3 dB
Protection circuits	over current, over temperature
Channel separation	> 68 dB @ 1 kHz
Power amp topology	Class D
Power supply	switching mode power supply
Cooling	convectional and temperature controlled fan
Max power consumption	525 W
Operating temperature range	0 to 40°C
Mains operating voltage	230 VAC / 50 Hz – 115 VAC / 60 Hz
Dimensions	483 x 88 x 332 mm (including rack ears)
Net weight	12.1 kg
Gross weight	15.1 kg

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Apart-Audio specifications are subject to change without notice.

