

REVAMP4100
Instruction manual

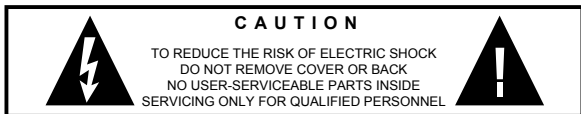
REVAMP4100 manual



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, ...

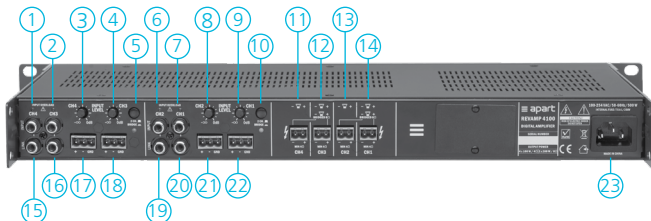


Features

- 1 rack unit high
- High power class-D power amplifier module
- Bridgeable 4 channel amplifier
- Dynamic output power: 4 x 110 W @ 4 ohms
- Sine wave power per channel: 4 x 100 W @ 4 ohms (500 ms)
- Dynamic bridged output power: 2 x 225 W @ 8 ohms (500 ms)
- Bridged Sine wave output power: 2 x 200 W @ 8 ohms
- High thermal efficiency
- Universal switching power supply unit
- No cooling fan
- Low power consumption
- Integrated APC clip limiter
- Balanced euroblock inputs
- Unbalanced inputs on RCA with pass through
- Input level attenuators on all inputs
- Euroblock speaker output connectors
- Extended speaker and amp protection circuits: DC protect, over current protect, over temperature protect, input overload
- Individual channel mute buttons and versatile LED status indicators
- Removable rack-ears

Note: the integrated APC clip limiter cannot be bypassed.

Connections



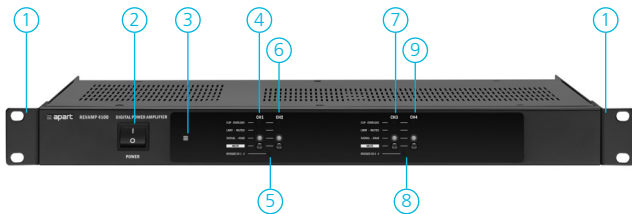
1. **Channel 4 overload led:** when this led lights up, you are overloading the input. Lower the input signal immediately to prevent distortion.
2. **Channel 3 overload led:** when this led lights up, you are overloading the input. Lower the input signal immediately to prevent distortion.
3. **Channel 4 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.
4. **Channel 3 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.
5. **Bridge/2 channel mode selector:** push the selector switch to enable bridge mode operation. Minimum load impedance in bridge mode is 8 ohms. The yellow led underneath the switch lights up when bridge mode has been activated. Always

disconnect the speaker(s) before (de-)activating bridge mode !
In bridge mode, the input signal from channel 3 is used.

6. **Channel 2 overload led:** when this led lights up, you are overloading the input. Lower the input signal immediately to prevent distortion.
7. **Channel 1 overload led:** when this led lights up, you are overloading the input. Lower the input signal immediately to prevent distortion.
8. **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.
9. **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.
10. **Bridge/2 channel mode selector:** push the selector switch to enable bridge mode operation. Minimum load impedance in bridge mode is 8 ohms. The yellow led underneath the switch lights up when bridge mode has been activated. Always disconnect the speaker(s) before (de-)activating bridge mode !
In bridge mode, the input signal from channel 1 is used.
11. **Channel 4 speaker output on 2 pole euroblock connector.**
12. **Channel 3 speaker output on 2 pole euroblock connector.**
13. **Channel 2 speaker output on 2 pole euroblock connector.**

14. Channel 1 speaker output on 2 pole euroblock connector.
15. Channel 4 unbalanced input and link cinch connector: connect the line level input signal for channel 4 here. Line level is 0 dBV. Input and link connector are internally connected 1 on 1.
16. Channel 3 unbalanced input and link cinch connector: connect the line level input signal for channel 3 here. Line level is 0 dBV. Input and link connector are internally connected 1 on 1. This connector is also used in bridge mode.
17. Channel 4 balanced input on 3 pole euroblock connector.
18. Channel 3 balanced input on 3 pole euroblock connector: this connector is used in bridge mode.
19. 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.
20. 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.
21. Channel 2 balanced input on 3 pole euroblock connector.
22. Channel 1 balanced input on 3 pole euroblock connector: this connector is used in bridge mode.
23. Mains inlet: connect the mains power cord here.

Operation



1. Removable rack ears for 19" rack mounting.
2. **Power switch**: after switching on the power, the power led will light up after approx 1 second.
3. **Power led**
4. **Channel 1 status led bar and mute switch**: when the mute switch is pressed, the orange "LIMIT – MUTED" led will light up. This led will also light up when the internal limiter is activated to avoid the amplifier from being overloaded by high input signals. The "CLIP – OVERLOAD" led indicates that the power amplifier is clipping: reduce the input signal at once whenever this occurs !!! The green "SIGNAL - -40dB" led will light up when an input signal is present.
5. **Bridged CH 1-2 led**

6. **Channel 2 status led bar and mute switch:** when the mute switch is pressed, the orange "LIMIT – MUTED" led will light up. This led will also light up when the internal limiter is activated to avoid the amplifier from being overloaded by high input signals. The "CLIP – OVERLOAD" led indicates that the power amplifier is clipping: reduce the input signal at once whenever this occurs !!! The green "SIGNAL - -40 dB" led will light up when an input signal is present.
7. **Channel 3 status led bar and mute switch:** when the mute switch is pressed, the orange "LIMIT – MUTED" led will light up. This led will also light up when the internal limiter is activated to avoid the amplifier from being overloaded by high input signals. The "CLIP – OVERLOAD" led indicates that the power amplifier is clipping: reduce the input signal at once whenever this occurs !!! The green "SIGNAL - -40dB" led will light up when an input signal is present.
8. **Bridged CH 3-4 led**
9. **Channel 4 status led bar and mute switch:** when the mute switch is pressed, the orange "LIMIT – MUTED" led will light up. This led will also light up when the internal limiter is activated to avoid the amplifier from being overloaded by high input signals. The "CLIP – OVERLOAD" led indicates that the power amplifier is clipping: reduce the input signal at once whenever this occurs !!! The green "SIGNAL - - 40dB" led will light up when an input signal is present.

Important notice

This amplifier relies on convectional cooling only. In normal situations, overheating will not occur due to the class D amplifier topology. Since there are no cooling fans in the amplifier, make sure the convectional cooling system can work properly. 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 may cause overheating. 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 a 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: T 5 A L / 250 V. 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.

Technical specifications

19" (483 mm wide) rack mounting	yes
Height rack units in U (1U = 44 mm)	1
Depth (built-in)	230 mm
Depth (incl. front)	239 mm
Power supply	100 - 254 VAC / 50 - 60 Hz
Power consumption (max)	500 W
Output power RMS @ 4 ohms	4 x 100 W
Output power RMS @ 8 ohms	4 x 50 W
Dynamic output power @ 4 ohms	4 X 110 W
Output power bridged @ 8 ohms	2 x 200 W
Dynamic output power bridged @ 8 ohms	2 x 225 W
Minimum load impedance	4 ohms 8 ohms in bridged mode
Output channels	4
Input sensitivity	0 dBV / 1 V RMS
Input impedance	22 kohms
Line inputs balanced	4 on euroblock
Line inputs unbalanced	8 (4 x cinch with pass-through)
Frequency response	20 - 22 kHz +0 / -3 dB
S/N ratio	>98 dB A-weighted
Protection circuits	over current over temperature DC offset

Channel separation	> 65 dB @ 1kHz
Damping factor	> 50 @ 1 kHz all channels
APC system	clip limiter
Cooling system	convectonal
Power amp topology	class-D
Power supply	SMPS
Operating temperature range	0 to 40°C
Dimensions (w x h x d)	483 x 44 x 239 (including rack ears and front).
Net weight	3.5 kg
Gross weight	5.5 kg
Applicable in low impedance	yes

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Apart-Audio specifications are subject to change without notice.

