

REVAMP2120T


Instruction manual

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IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions
2. Keep these instructions
3. Heed all warnings
4. Follow all instructions
5. This professional device needs to be installed by qualified personnel only.
6. 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.
7. Make sure to only use power outlets conform to the power requirements listed on the back of the unit.
8. 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.
9. Do not drive the inputs with a signal level higher than that required to drive equipment to full output.
10. Do not run the output of any amplifier back into another input.
11. This unit has NOT been designed for use in mobile applications, such as: mobile discobars, mobile PA systems, Live bands, audio rental systems, ... Using it in such application will lead to product damages and safety risks.
12. Do not use this apparatus near water
13. Clean only with dry cloth.
14. Do not block any ventilation openings. Install in accordance with the manufacturer instructions.

15. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
16. Do not defeat the safety purpose of the polarised or grounding plug. A polarised plug has two blades with one wider than the other. A grounding plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. Always use the device with a grounded mains power plug. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
17. Protect the power cord from being walked on, pinched or damaged. Particularly at the plugs, connectors and at the point where they exit from the apparatus.
18. Only use attachments/accessories specified by the manufacturer.
19. Unplug the apparatus during lightning storms or when unused for long periods of time.
20. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart or rack is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over. 
21. Refer all servicing to qualified personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
22. **WARNING:** To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture. The apparatus shall not be exposed to dripping or splashing and that objects filled with liquids, such as vases, shall not be placed on apparatus.
23. **WARNING:** The mains plug/appliance coupler is used as disconnect device, the disconnect device shall remain readily operable.



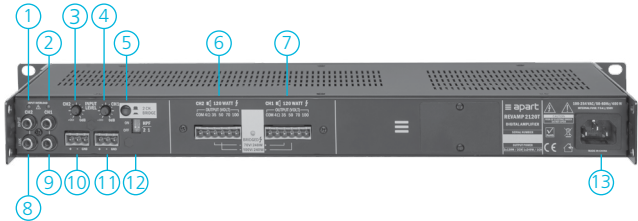
24. This lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of non-insulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock.
- Warning: To reduce the risk of electric shock, do not remove cover (or back) as there are no user-serviceable parts inside. Refer servicing to qualified personnel.
 - The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance instructions in the literature accompanying the appliance.
25.  Protective earthing terminal. The apparatus should be connected to a mains socket outlet with a protective earthing connection.
26.  Correct Disposal of this product. This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling.
27. No naked flame sources, such as lighted candles, should be placed on the apparatus.
28. Do not install this equipment in a confined or building-in space such as a book case or similar unit, and remain a well ventilation conditions at open site. The ventilation should not be impeded by covering the ventilation openings with items such as newspaper, table-cloths, curtains etc.

Features

- 1 rack unit high
- High power class-D power amplifier module
- Toroidal 100 V output transformers
- Bridgeable 2 channel amplifier
- Output power: 2 x 120 W @ 100 V or 70 V
- Bridged output power: 1 x 240 W @ 100 V or 70 V
- Dynamic output power: 2 x 120 W @ 4 Ω
- RMS power per channel: 2 x 120 W @ 4 Ω (500 ms)
- Dynamic bridged output power: 240 W @ 8 Ω
- Bridged RMS output power: 240 W @ 8 Ω (500 ms)
- Each output can be used in either LowZ or constant voltage mode without changing settings.
- High thermal efficiency
- Signal clip indicators on the rear for fast and easy configuration of the input gain.
- Universal switching power supply unit
- No cooling fan – maintenance free
- Low power consumption
- Integrated APC clip limiter
- Balanced euroblock inputs
- Unbalanced inputs on RCA with pass through
- Input level attenuators on all inputs
- Switchable high pass filter on each input
- Euroblock speaker output 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, input overload
- Individual channel mute buttons and versatile LED status indicators
- Removable rack-ears

Note: the integrated APC clip limiter cannot be bypassed.

Connections

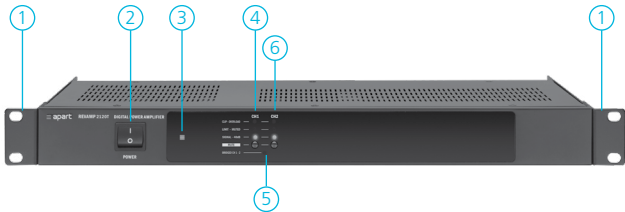


1. **Channel 2 overload led:** when this led lights up, you are overloading the input. Lower the input level immediately to prevent distortion.
2. **Channel 1 overload led:** when this led lights up, you are overloading the input. Lower the input level immediately to prevent distortion.
3. **Channel 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.
4. **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.
5. **Bridge/2 channel mode selector:** push the selector switch to enable bridge mode operation. 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. For use with low impedance speakers, the minimum load impedance in bridge mode is 8 ohms: connect – to CH2 -> 4 ohms, connect + to CH1 -> 4 ohms.

6. Channel 2 speaker output on 6 pole euroblock connector.
7. Channel 1 speaker output on 6 pole euroblock connector.
8. 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.
9. 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.
10. Channel 2 balanced input on 3 pole euroblock connector.
11. Channel 1 balanced input on 3 pole euroblock connector: this connector is used in bridge mode.
12. 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)
13. 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 - -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 35°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, ...

Note: 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 83.3 ohms or more. This value corresponds to 120 watts @ 100 volt.

Technical specifications

output power RMS @ 100 volts	2 x 120 watts
output power RMS bridged @ 100 volts	240 watts
output voltage tapings	100 - 70 - 50 - 35 volts - 4 ohms
RMS output power @ 4 ohms	2 x 120 watts
dynamic output power @ 8 ohms	2 x 60 watts
RMS output power @ 8 ohms	2 x 60 watts
dynamic output power bridged @ 8 ohms	240 watts
output power RMS bridged @ 8 ohms	240 watts
minimum impedance load per channel	4 ohms
minimum impedance load bridged per channel	8 ohms
output channels	2
line input balanced	2
line input unbalanced	2
input impedance	22 k Ω
input sensitivity	0 dBV / 1 V
S/N ratio	>98 dB A weighted
THD ch. 1/2	<0.1% @ max power -6dB / 4 Ω / 1kHz A weighted
channel separation	> 65 dB @ 1 kHz

frequency response	50 - 20 kHz
cooling system	convectonal
protection circuits	over current, over temperature, DC offset
operating temperature range	0 to 35°C
net weight product	6.1 kg
height- rack units (1U=44 mm)	1 U
depth (build in)	230 mm
depth (incl front)	239 mm
19" (483 mm wide) rack mounting	Yes
power consumption (max)	300 watts
power supply	100 - 240 V~ 50/60 Hz
power supply technology	SMPS
power amp topology	class-D

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