REVAMP1680
Instruction manual

REVAMP 1680 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

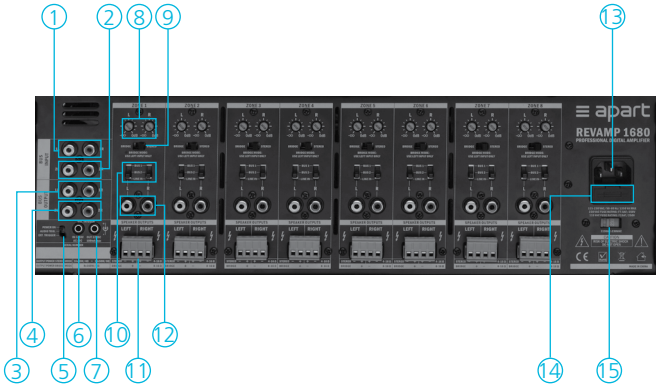
- 3 rack units high
- 16 output Channels powered with D-Class amplifiers
- 16 x 80 watts (4 ohms) or 8x160 watts (8 ohms) sine wave output power
- Very high channel seperation
- 8 stereo output zones
- High thermal efficiency
- Highest possible damping factor
- Dual analog power supply with toroidal power transformers
- Switching mode standby power supply with multiple auto power on/off options: trigger, audio sense, …
- Low power consumption, less than 0.5 W in standby
- Intelligent thermal power limiting circuit: limits the output power to a safe limit whenever a thermal overload occurs
- Individual unbalanced inputs on RCA per zone
- 2 stereo input buses selectable for all stereo output zones, with passthrough
- Input level attenuators on all inputs
- Euroblock speaker connectors
- Extended speaker and amp protection circuits: DC protect, 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

This amplifier is equipped with 2 stereo bus inputs with passthrough. These bus inputs are ideal when you want to hear the same audio signal in different output zones. For example: zones 1 to 4 use bus 1 input. Zones 5 to 7 use bus 2. Zone 8 is set to line in and uses its own input signal. In this case, set the input selector for zone 1 to 4 to bus 1, from zone 5 to 7 to bus 2 and zone 8 to line in.

The trigger input is ideal when you want to switch on the power amplifier automatically using an external AC or DC trigger signal coming from your audio system. The amplifier will be switched on as long as the trigger voltage is present. Alternatively, you can set the power on mode switch to the audio trig position: the amp will automatically switch on when a sufficiently strong audio signal is present at the input. The input sensitivity for the audio trigger function is 15 mV on all inputs. After a few minutes of silence, the amplifier will automatically switch itself off.

Connections (only output zone 1 is explained. Zone 2 – 8 are identical)



1. Bus 1 unbalanced stereo input on RCA connector: This input can be selected in any zone by setting switch "10" to the BUS 1 position.

2. Bus 2 unbalanced stereo input on RCA connector: This input can be selected in any zone by setting switch "10" to the BUS 2 position.

3. Bus 1 unbalanced stereo pass through on RCA connector: the audio signal applied to the BUS 1 input can be tapped here.

4. Bus 2 unbalanced stereo pass through on RCA connector: the audio signal applied to the BUS 2 input can be tapped here.

5. Power on mode selector: power on: the amplifier is powered on when the power switch at the front panel is switched to the on position. In the Audio Trig position, the amplifier will be switched on automatically when a strong audio signal is present at the input. In the Ext Trigger position, you have to apply a 3-30 V AC or DC voltage at the jack input "6". The power switch on the front panel must be in the on position. In the off position, the amplifier will always be off.

6. Trigger input jack: 3.2 mm monojack input for the 3-30 V AC or DC trigger voltage. The trigger voltage will switch on the amplifier when switch "5" is in the Ext Trigger position and the front panel power switch is in the on position.

7. Ext Trigger output jack pass through (out) connector, 3.2 mm mono minijack: the trigger voltage applied at connector "6" is passed through via this connector.

8. Channel input gain setting. Adjust the input gain to the output level of your source.

9. Amplifier mode selector: set to stereo for normal operation, set to bridge for bridged mode. Load impedance in bridged mode must be 8 ohms or higher.

10. Input selector for zone 1. Select Bus 1, Bus 2 or Line in.

11. Zone 1 stereo speaker outputs on euroblock. Minimum load impedance is 4 ohms in stereo mode and 8 ohms in bridge mode.

12. Line in: unbalanced stereo input on RCA connector. In bridge mode: use left input only.

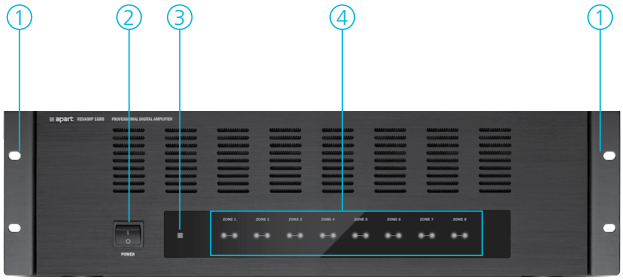
13. Mains inlet connector: connect the mains cable supplied with

the unit here.

14. Mains fuse: when the fuse blows, replace only with the same type and fuse rating.

15. Mains voltage selector: set to 230 or 115VAC according to your local mains voltage.

Operation



1. Removable rack ears for 19” rack mounting.

2. Power switch.

3. Power led.

4. Zone 1 - 8 status leds: green = active, red = inactive, protect or overload.

!!!IMPORTANT!!!

This amplifier relies on convection 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: 8 AT/250V for 230 VAC operation or 15 AT/250V for 115 VAC operation. 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

Dynamic program power per channel	100 W @ 4 Ω
Sine wave power per channel	80 W @ 4 Ω
Sine wave power bridge mode	160 W @ 8 Ω
Load impedance	minimum 4 Ω in stereo mode, minimum 8 Ω in bridge mode
Input connections	2 x stereo bus with pass through, unbalanced on RCA + individual unbalanced zone inputs on RCA
Input sensitivity	500 mV
Input impedance	22 kΩ
S/N ratio	> 98 dB A weighted
THD	< 0.5% @ 1 W / 4Ω / 1 kHz A weighted
Frequency response	20 – 30 kHz +0 / -3dB
Protection circuits	over current, over temperature, DC offset, AC and DC over- and undervoltage
Channel separation	> 68dB @ 1kHz
Damping factor	> 60 all channels
Power amp topology	class D
Power supply	toroidal transformers & switching mode standby power supply
Cooling	convectional
Max power consumption	1350 W

Standby power consumption	< 0.5 W
Operating temperature range	0 to 40°C
Mains operating voltage	230 VAC / 50 Hz – 115 VAC / 60 Hz
Dimensions	483 x 132 x 411 (including rack ears)
Net weight	21.7 kg
Gross weight	24 kg