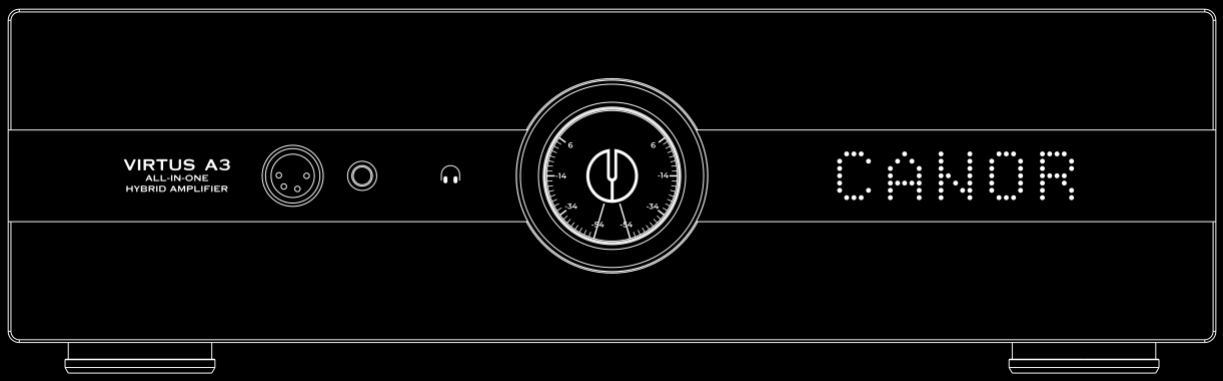
VIRTUS A3
USER MANUAL



CANOR, spol. s r.o., Družstevná 39, 080 06 Prešov, Slovakia
canor-audio@canor-audio.com / + 421 51 7710 396 / www.canor-audio.com

CANOR VIRTUS A3 All-In-One Hybrid Amplifier User Manual



Dear Music Lover,
thank you for purchasing our CANOR VIRUS A3 All-In-One Hybrid Amplifier. To preserve and maintain the best characteristics of your amplifier, we recommend you carefully read the following lines.

Virtus A3 is a Dual Mono Hybrid Tube Class A Current Dumping Amplifier featuring a full suite of Digital and Analog inputs. Four products in the single housing – a powerful Amplifier, a fully discrete Phono Preamp, a balanced Headphone Amplifier, and a DAC.

SAFETY INSTRUCTIONS
Please read before putting the device into operation.

1. Read the instructions – all safety information and instructions should be read before using the amplifier.
2. Keep the user manual – the safety and user instructions manual should be stored for possible later use.
3. Follow the instructions – all safety and user instructions should be followed.
4. Water and moisture – the Virtus A3 amplifier should not be placed near water, for example near bathtubs, swimming pools, kitchen sinks, etc...
5. Accessories – do not use accessories not recommended by the manufacturer.
6. Placement – do not place a device on an unstable pad. The device may fall, which can cause serious injuries to children or adults, as well as damage to the device. Use only pads or racks recommended by the manufacturer or pads sold to dealers with this device. Any placement of the device should be in accordance with the manufacturer's instructions and only accessories recommended by the manufacturer should be used.
7. Ventilation – the unit should be placed the way to ensure proper airflow. That means it is not allowed to place the amplifier on a sofa, or on upholstered furniture. The amplifier may not be covered over when in operation; it would otherwise prevent proper airflow around the vent holes of the amplifier.
8. Heat – amplifier must be placed to avoid the heating effect from heat sources, for example, radiators or stoves, or other heat-producing equipment. The distance from the back wall of the unit may not be less than 20 cm, and 20 cm above the area of Virtus A3 may not be any barrier. Alongside the unit should be ensured 20 cm minimum distance from other objects.
9. Power source – the device must be connected only to a main supply for what it is designed for.
10. Power cord – it is necessary to pay particular attention to a power cord, it must be positioned to avoid setting foot on it and ensure it is protected against mechanical damage.
11. If you do not use the amplifier for a longer period – you should disconnect the power cord from the mains supply or at least turn off the main power switch located on the back panel.
12. Objects containing liquid – do not place these objects (vases, flowerpots), so that they can fall on the amplifier and, eventually, prevent the liquid from being leaked out on the amplifier.
13. Damages requiring service – equipment should be repaired only by qualified service if:
    a. The power cord is damaged.
    b. The device dropped into the water or was poured.
    c. The device was exposed to rain.
    d. The device works incorrectly.
    e. The device fell on the ground or is otherwise mechanically damaged.
14. Repairs – all repairs must be entrusted to a qualified service.
15. General warning – use the device only in accordance with this user guide.

The manufacturer declines any liability should these safety measures not be observed. To help you avoid an electric shock, do not expose the amplifier to rain or moisture!

DELIVERY CONTENT

- Shipping packaging
- CANOR VIRTUS A3 All-In-One Hybrid Amplifier
- Remote control (CR2032 battery required)
- Power cord
- Textile gloves
- CANOR VIRTUS A3 User Manual

FRONT PANEL

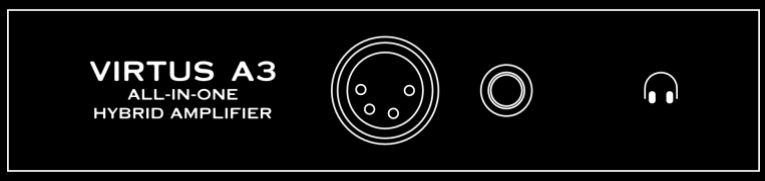
- **VOLUME CONTROL KNOB / SELECTOR OPERATING KNOB with touch panel display**
- **HEADPHONE SELECTOR –** Turning on and off the headphone amplifier.
- **HEADPHONE XLR BALANCED OUTPUT –** 4pin XLR connector
- **HEADPHONE JACK OUTPUT –** 6,3mm jack connector

HEADPHONE AMPLIFIER / HEADPHONE OUTPUTS

The front panel of the Virtus A3 features a balanced headphone output using a 4-pin XLR connector, as well as an unbalanced connection via a 6.3mm audio jack.

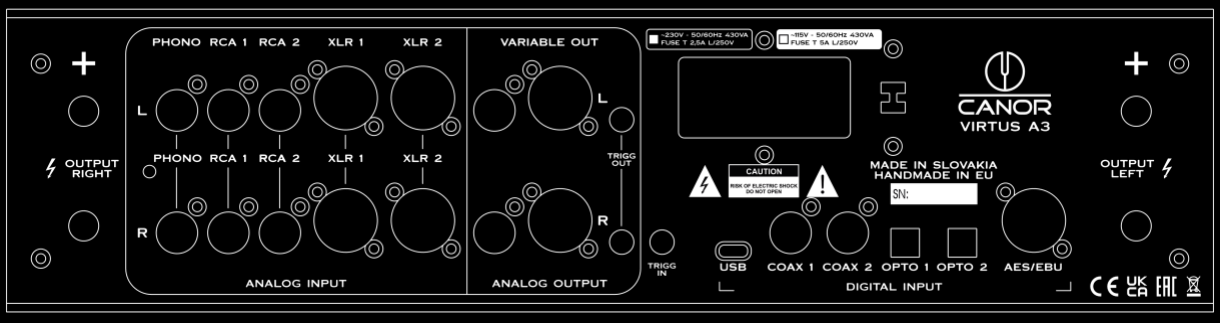
To activate the headphone amplifier, simply touch the headphone icon on the front panel. This will disconnect the output signal to the speaker terminals. To deactivate the headphone output, touch the headphone icon again.

When the headphone output is active and the volume is set below -35dB, deactivating the headphone output will automatically lower the volume by 20dB when reconnecting the signal to the amplifier output terminals. This adjustment is made to protect the connected speakers.



BACK PANEL

- **LEFT / RIGHT SPEAKER OUTPUTS –** Dedicated to both 4- and 8-Ohm loudspeakers
- **PHONO Grounding Screw –** Grounding point for phono analogue input
- **PHONO Analogue Input –** Left / Right RCA phono input for MM/MC cartridge
- **RCA1, RCA2 Analog Inputs –** Left / Right RCA inputs
- **XLR1, XLR2 Analog Inputs –** Left / Right XLR inputs
- **VARIABLE OUT / Analogue Output RCA –** Left / Right RCA variable analogue output
- **VARIABLE OUT / Analogue Output XLR –** Left / Right XLR variable analogue output
- **TRIGGER OUT –** 2 x 3,5mm jack trigger output (12V)
- **TRIGGER IN –** 3,5mm jack trigger input (12V)
- **USB Digital Input –** USB type-C digital input
- **COAX 1, COAX 2 Digital Input –** Coaxial digital inputs
- **OPTO 1, OPTO 2 Digital Input –** Optical digital inputs
- **AES/EBU Digital Input –** 3pin XLR digital input
- **230V/115V Mains inlet switch –** 230V/115V mains input voltage switch (dedicated fuse required)
- **POWER –** Mains power inlet / mains switch with mains fuse.
  Note: The mains fuse needs to be replaced when switching the mains inlet switch (230V/115V)
  230V = FUSE T 2,5A L/250V / 115V = FUSE T 5,0A L/250V



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REMOTE CONTROL

Do not expose the sensors of your remote control to direct sunlight or to other strong light sources. Remote control operates at an angle of 60 ° to about 5 meters. Aim your remote control at the sensor on the device. There may not be any obstacles in the way between the sensor and remote control. If the appliance is placed behind glass, it may result in shortening the operating distance of a remote control (according to the colour and strength of the glass). The buttons on the remote control have the same function as the buttons on the front panel of the device.

The remote control is compatible with your amplifier, DAC and Phono preamplifier built in Virtus A3.



General features

- ⏻ – Turning on and off the device.
- **Dimm** – Sets the display brightness in steps.
- **Theme** – Switch display theme on supported devices.

Phono preamplifier features

- **MM/MC** – Instant switching between MM / MC cartridges.
- **R/C** – Instant switching between Load (MC cartridge) and Capacitance (MM cartridge).

DAC features

- **Upsamp.** – Enable/disable the up-sampling function.
- **IN DAC** – DAC input selector (switching in loop).
- **Reclock** – Enable/disable the re-clocking function.
- **Filter** – Digital filter selector (switching in loop).

Amplifier / Preamplifier features

- **◄ IN** – Amplifier input selector (left).
- **IN ►** – Amplifier input selector (right).
- **Mute** – Instant muting of the volume.
- **Vol -** – Volume down control button.
- **Vol +** – Volume up control button.

CD Player features

- **Eject** – A short press ejects the CD from the CD player.
- **IN CD** – CD player input selector (switching in loop).
- **Repeat** – Allows you to cyclically opt for a single-track repeat, entire disc repeat, or disable repeat.
- ■ – Ceases CD playback.
- ⏮ – One short press jumps to the beginning of a track. If playback time lasts longer than 5 seconds, further pressing results in jumping one track back. When pressed for a longer time, playback moves smoothly backwards.
- ⏭ – A short press skips one track forward; when pressed for a longer time, playback moves smoothly forward.
- ⏯ – Resumes and pauses CD playback.

BASIC FUNCTIONS OF REPRODUCTION

**Note: ** Ensure that all inputs and outputs are connected while the Virtus A3 is turned off or disconnected from the mains.

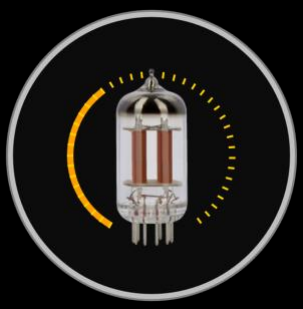
1. Connect the power cord to the Virtus A3.
2. Turn on the Virtus A3 using the main power switch located on the back panel. After you switch it on, the device will enter standby mode, indicated by the red LED lighting up on the front panel.
3. Once on standby, you can power it up by either touching the display on the central knob on the front panel or by using the power button on the remote controller. This will initiate the controlled startup sequence, which includes preheating the tubes to extend their lifespan.
4. A cooling cycle will also occur when the unit is turned off.
5. During the first power-up or when the main power supply is disconnected, the XLR1 input will be pre-selected, and the volume level will be set to –44 dB.

OPERATION OF THE VIRTUS A3

The Virtus A3 features two displays:

1. The informative LED dot matrix display, located on the right side of the front panel, shows the selected input and the volume level.
2. The central circular touch display, integrated into the control knob, allows you to turn the device on and off, select the desired input, and adjust other device functions.

To start up from standby mode, simply touch the circular display or press the power button on the remote control. This action initiates a controlled sequence for tube preheating, which is graphically represented on the display by a tube icon and a circular countdown timer. Once the preheating is complete, the device automatically switches to the default or last selected input. Meanwhile, the LED dot matrix display will show the CANOR logo, followed by the currently active input and volume level.



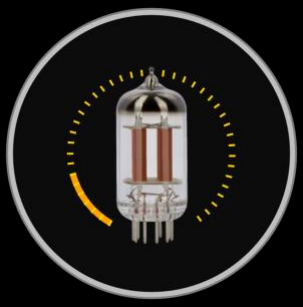


To switch off the device (put it into standby mode), swipe your finger down from the top of the control circular display to reveal the Power-Off icon.

To initiate the shutdown process, press and hold the Power-Off icon for 2 seconds. This will start a controlled tube cooling sequence, which will be visually represented by the tube and a circular countdown timer indicating the time remaining until shutdown. During this process, "CANOR" will appear on the informative display.

Once the cooling sequence is complete, the device will enter standby mode, and the displays and backlight will turn off.





VOLUME CONTROL

The volume can be adjusted in 99 steps, each changing the level by 1 dB. The highest volume setting is 0 dB, while the lowest is -99 dB. An additional step down switches the device to MUTE mode. The volume control is managed by the gain control of a discrete, fully symmetrical operational amplifier. You can adjust the volume using the central control knob on the front panel or with the remote control.

INPUT SELECTION

There are three ways to choose your desired input:

1. Use the ◄ IN / IN ► buttons on the remote control.
2. Slide the control touch screen to the right or left.
3. Hold your finger on the selected input for 2 seconds to unlock the input roller blind. You can then move this roller blind by rotating the central knob and selecting the desired input with a brief touch.





Virtus A3 features the following inputs:
Analogue inputs: PHONO, RCA 1, RCA 2, XLR 1, and XLR 2
Digital inputs: USB, COAX 1, COAX 2, OPTO 1, OPTO 2, and AES/EBU

The analogue phono input (labelled PHONO) is compatible with turntables that use both MM (Moving Magnet) and MC (Moving Coil) cartridges.

To select the cartridge type and adjust the gain, touch the MM or MC icon above the PHONO input, then rotate the central knob. The available gain settings are: MM at 40 dB or 46 dB and MC at 60 dB or 66 dB. You can select your desired setting by briefly touching the icon.

Additionally, to choose capacitance/load parameters, touch the capacitance/load icon below the PHONO input and rotate the central knob. For MM cartridges, you can select from 50pF, 150pF, 300pF, and 400pF. For MC cartridges, the options are 47k, 1k, 100Ω, 50Ω, and 10Ω. Again, briefly touch the parameter you want to select.



DIGITAL INPUTS / DIGITAL FILTER SELECTION

All Virtus A3 digital inputs allow for the selection of digital filters. The available digital filters are: Fast Rolloff, Slow Rolloff, Minimum Phase Fast, Minimum Phase Slow, Linear Apodizing, Hybrid Filter, Brickwall Filter, Optimal Transient, and MQA Filter.
To select a filter, touch the "PCM – Fx" icon located above the displayed digital input. You can then choose one of the filters using the central rotary knob and confirm your selection with a brief touch on the desired filter.



DEVICE SETTINGS / SUB-MENU

To access the sub-menu from the main menu on the circular display, swipe up from the bottom. In this sub-menu, you can adjust the following settings: Dimmer, Saver, HT mode (Home Theatre mode), +3dB/+6dB gain, Skip INPUTS feature and view information about the temperature of the heatsinks as well as the speed of the cooler fans.

Navigate through the sub-menu by swiping right to view the next page and left to return to the previous page. To exit the sub-menu and return to the main menu, swipe down from the top of the circular display. This swipe action applies to all pages within the sub-menu.

DIMMER FUNCTION

This feature allows you to adjust the backlight level of the central knob and the Virtus A3 displays. You can control the brightness using the rotary central knob or the DIMM button on the remote control, and any selected backlight level does not require confirmation.

Please note that in the Dimmer menu, you cannot adjust the volume using the rotary knob. Instead, the knob is used to adjust the dimmer/backlight level.

When you select the lowest backlight level, known as "Dimmer OFF," the device's backlight will completely turn off after 3 seconds. However, if you touch the control device or change the volume or input, the display will briefly light up for 3 seconds to provide information. Unless you change the backlight setting, the "Dimmer OFF" function will remain active.





SAVER

This feature allows you to choose between two options for displaying the screensaver on the Virtus A3 control circular display: Logo or VU Meter. The selected option will appear after 1 minute of inactivity in the main menu. The screensaver will disappear when you touch the display or change inputs using the remote control, and it will reappear after another minute of inactivity. Volume control, whether adjusted via the remote control or the rotary knob, does not impact the screensaver function.







HT MODE (HOME THEATRE MODE)
Allows you to set a fixed volume for one of the available inputs: RCA1, RCA2, XLR1, XLR2, COAX1, or OPT1. Once you select an input, the current volume for that input is saved, and the display is updated to rename the input to "HT." While in HT mode, the volume cannot be adjusted for that input unless you either select HT mode for a different input or deactivate HT mode altogether. This feature is ideal for devices that have volume control, enabling the user to make direct volume adjustments or align the volume with the specific device.
Please note that in the HT mode menu, you cannot adjust the volume using the rotary knob. Instead, the knob is used to scroll through the HT mode options.



+3dB / +6dB
This setting allows you to adjust the gain for the analogue inputs: PH (phono), RCA1, RCA2, XLR1, and XLR2. By touching the corresponding field, you can set the gain for each analogue input based on the preferences of either +3dB or +6 dB. This function is useful for aligning connected devices that have different input gain levels. Turn the central rotary knob to navigate through the menu.
Please note that in the +3dB / +6dB menu, you cannot adjust the volume using the rotary knob. Instead, the knob is used to scroll through the +3dB / +6dB options.



SKIP INPUTS
You can disable one or more inputs on the device, including PHONO, RCA 1, RCA 2, XLR 1, XLR 2, USB, COAX 1, COAX 2, OPTO 1, OPTO 2, and AES/EBU. To disable an input, simply touch the corresponding box. The disabled inputs will not appear in the main input selection menu or on the display when switching between inputs.
Please note that in the Skip INPUTS menu, you cannot adjust the volume using the rotary knob. Instead, the knob is used to scroll through the input selection options.



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The display shows real-time temperature data on the power components and fan speeds of both channels on the Virtus A3 output stages. Please note that the temperature difference between channels can vary by up to 10 degrees. This is a perfectly normal operational state. The data presented here is for informational purposes only.



FACTORY RESET

The factory reset will restore the device to factory settings. For the factory reset, tap the power button, then use the knob to navigate through the following menu. Choose the “Yes” option and confirm by tapping the screen.





The last page in the settings menu is the software version information screen.



VARIABLE OUT / ANALOG OUTPUT

The back panel of the Virtus A3 includes a pair of balanced (XLR) outputs and a pair of unbalanced (RCA) variable output connections. These connections are mainly designed for use with a powered (active) subwoofer or an external power amplifier.

ELECTRICAL PROTECTIONS
The Virtus A3 is equipped with several advanced fault detection and protection features to prevent damage to the device. The protection features include protection against incorrect device connection, overload, and short circuits of the output terminals. These features are designed to protect the Virtus A3 itself as well as other components in your setup.

SMALL and LARGE WARNING TRIANGLE
A small red triangle with an exclamation mark indicates a short-term detected temporary error on the left or right channel. This only informs the user about the short-term problem that occurred momentarily (mostly a signal peak overload). Playback is not interrupted, and if the problem doesn't persist, the message disappears after a minute.

A large red triangle with an exclamation mark indicates a long-term detected error. Playback is interrupted, and the Virtus A3 amplifier output stages are disconnected. When the large red triangle alert shows, it is necessary to turn off the device. To learn more about possible errors and their solutions, follow the chapters OT PROTECTION, OC PROTECTION, and DC ERROR.







OVERTEMPERATURE PROTECTION—OT PROTECTION
The VIRTUS A3 power components can reach temperatures of up to 100 °C during normal operation. This is expected and within normal operating conditions.
OT protection reacts if the device starts to overheat due to incorrect product placement or if there is insufficient airflow for the cooling fans. In case of overheating, a large red warning triangle will appear on the display, indicating an OT protection alert on the right (R) or left (L) channel.

To resolve the problem, turn the Virtus A3 off and let it cool down for a few minutes. To prevent this problem, make sure the product is placed in a location with sufficient airflow for the cooling fans, and inspect that the fan grilles are not covered or obstructed. In case this error persists, please contact the service center or manufacturer.



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OVERCURRENT PROTECTION—OC PROTECTION
This is an overcurrent, overload, or speaker terminal short circuit detection and protection.

This protection will react and disconnect the amplifier output stages if the output is on long-lasting overload, or if speaker terminals are accidentally short-circuited. The output stage overloads can be caused by an inappropriate choice of speakers (mostly too low impedance speakers). In case of overloading, a large red warning triangle will appear on the display indicating an OC protection alert on the right (R) or left (L) channel.

To resolve the problem, turn the Virtus A3 off and let it cool down for a few minutes. Subsequently, make sure that the speaker terminals are not short-circuited, and, that the positive and negative speaker poles are not reversed. In addition, check if your speakers meet the required impedance. If the error persists, please contact the service center or manufacturer.



DC ERROR
This error is detected if a DC signal voltage is presented at the output. This may be caused by an external source device error.

To resolve the error, unplug the source device from the Virtus A3. In case this error persists, please contact the service center or manufacturer.



FAN STOP WARNING
This message indicates the failure of one of the cooling fans. Check the cooling fan grilles for any foreign objects. The fan stop alert over lapses any other UI graphics when detected.





INPUT RELAY CLEANING

The Virtus A3 has a function for the contacts of used electronic relays. This function is intended to extend the relay contact lifespans that have not been used for a long time and also increase their electrical conductivity. Cleaning is carried out by triggering multiple high-frequency signals sequentially through all relays in the device. The function is started automatically every 20th time the device is turned off, and its progress is shown by the CLEANER inscription on the informative LED dot matrix display.

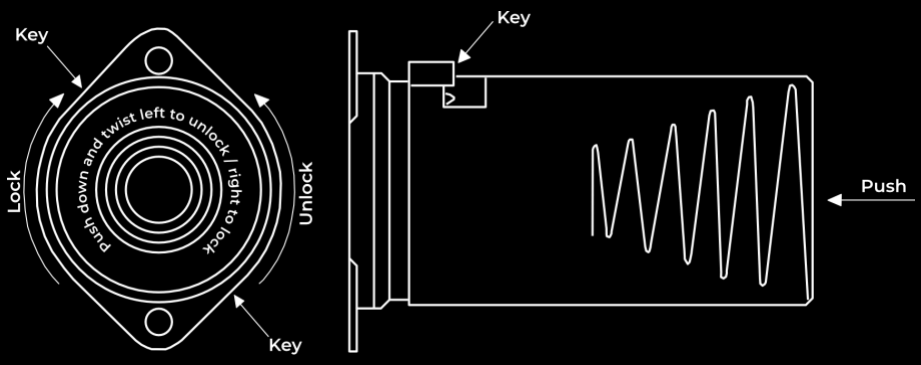
PRE-AMPLIFIER VACUUM TUBE ANTI-RESONANCE COVER

The Virtus A3 pre-amplifier tubes are housed in anti-resonance covers that not only provide anti-resonance and shielding properties but also protect the tubes during transportation.

If you need to replace the pre-amplifier tube, follow these steps to remove the cover:

1. Gently press and turn the cover to the left.
2. Slide the cover out of the locking grooves and lift it off.

After replacing the tube, carefully reposition the cover by aligning it with the locking grooves. Press down gently and turn it to the right to lock it in place.



CAUTION!

The Waste Electrical and Electronic Equipment Directive Regulation of the European Union 2002 / 96 / EC governs the issue of separate waste collection.

This device may not be disposed of in unsorted municipal waste. Devolve the appliance into a collection centre for recycling and disposal of electrical and electronic equipment waste. Correct disposal of waste does not cause negative impacts on the environment and human health. You will thus contribute to the protection of the environment.

EUROPEAN COMMUNITY DIRECTIVES

This product is designed and manufactured to comply with existing laws of the European Community. This product is certified by a testing laboratory and bears the CE mark.

GUARANTEE CONDITIONS

Your CANOR Virtus A3 hybrid amplifier is guaranteed against any defect in materials and workmanship for 24 months from the date of purchase except for audio vacuum tubes that are covered by warranty for three months.

The warranty only applies if an original proof of purchase and acknowledged certificate of warranty can be furnished. The warranty covers defects in materials and labour but does not cover misuse, unauthorized modifications, and external causes such as acts of nature.

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SPECIFICATIONS

Stereo output power	2 x 140 W / 4 Ohm, 2 x 100 W / 8 Ohm (IHF Dynamic Power)
Headphone unbalanced output	500 mW / 30 Ohm, 70 mW / 300 Ohm
Headphone balanced output	500 mW / 30 Ohm, 270 mW / 300 Ohm
Gain	34.5 dB
Input sensitivity	550 mV
Gain phono	MM -40 dB, MM -46 dB, MC -60 dB, MC -66 dB
Damping factor	180 / 4 Ohm, 380 / 8 Ohm
Frequency range	10 – 35 000 Hz (± 0.5 dB / 5 W)
Input impedance	50 kOhm
Analog Inputs	1 pair RCA (Phono) / 2 pairs RCA / 2 pairs XLR
Analog Variable Outputs	1 pair RCA / 1 pair XLR
Digital Inputs	1 x USB / 2 x Coax / 2 x Opto / 1 x XLR (AES/EBU)
DAC Configuration	2 x ESS 9038 (Dual Mono)
Headphone Outputs	1 x 6,3mm jack / 1 x 4-pin XLR
Total Harmonic Distortion	< 0.005 % / 1 kHz, 5 W < 0.008 % / 1 kHz, 1 W
Signal-to-noise ratio	> 90 dB (20 Hz – 20 kHz)
Tube Complement	2 x E88CC
Trigger Connectors (12 V)	1 x IN (3,5mm jack) / 2 x OUT (3,5mm jack)
Power	115 / 230 V, 50 – 60 Hz, 820 VA
Dimensions (W x H x D)	435 x 130 x 460 mm
Weight (Net)	18 kg
Weight (gross)	23 kg



www.canor-audio.com