Vanguard Universal DAC w/Digital Preamp Option (DAC)

Vanguard Integrated Amplifier (VIA)

Digital Vanguard Integrated Amplifier (DVI)





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Thank you for your purchase of a Krell Vanguard component. The Vanguard Family includes the Vanguard Universal DAC w/Digital Preamp Option (DAC), the Digital Vanguard Integrated Amplifier (DVI) and the Vanguard Integrated Amplifier (VIA).

This manual covers all three Vanguard models and notes differences where appropriate.

The Vanguard Integrated Amplifier can be equipped with or without the Optional Digital Module that is used in the Vanguard Universal DAC and Digital Vanguard Integrated Amplifier.

All Vanguard models feature discrete signal paths from input to output and employ a wide bandwidth design with low negative feedback for sonic accuracy throughout the frequency spectrum. All circuits up to the driver stage operate in pure Class A.

Krell's surface mount technology (SMT) means that Vanguard components employ the most sophisticated circuit designs possible without requiring the typical space. SMT allows individual circuit elements to be placed very close together. This shortens signal paths and allows circuit elements to operate at the same temperature, resulting in more accurate signal transfer and enhanced reliability. This combination of sophisticated circuitry and small space makes it possible to design and manufacture a very high powered 200W per channel amplifier in a small enclosure. The Vanguard is easy to operate and integrate into your system. The remote control accesses all functions, and remote control connection options allow the Vanguard to be easily connected with other components.

WARNINGS

This product complies with the EMC directive (89/336/EEC) and the low-voltage directive (73/23/EEC).This CLASS 1 apparatus must be connected to an AC MAIN socket outlet with a protective earthing connection

The Theater Throughput (Digital Vanguard Integrated Amplifier and Vanguard Integrated Amplifier) feature provides easy integration of these models into a home theater system.

The optional digital module (Vanguard Integrated Amplifier) adds a full range of digital technologies and connections that are already included in the Vanguard Universal DAC and Digital Vanguard Integrated Amplifier.

WARNING: Do not place the component where it could be exposed to dirt or excessive moisture. The ventilation grids on the top and bottom of the Vanguard must be unobstructed at all times. Do not place flammable material on top of or beneath the unit. When making connections to this or any other model, make sure all components are off. Turn off all system power before connecting the Vanguard to any other component. Make sure all cable and speaker wire terminations are of the highest quality, free from frayed ends, short circuits or cold solder joints.

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Open the shipping box and remove the top layer of foam. You will see these items:

1. Vanguard unit and Accessories - Included

A. 1 AC power cord
B. 1 handheld remote control
C. 2 AAA batteries
D. 1 CD w/ owner's reference
E. 1 warranty registration card
F. 1 trigger cable
G. 1 T-10 Torx Screwdriver

2. Carefully remove all items from the shipping box.
3. Place the preamplifier and power supply in a safe location and remove the protective plastic wrapping.

Place the Vanguard on a firm, level surface, away from excessive heat, humidity, or moisture. The Vanguard is a precision instrument and should be handled with the utmost care when deciding where it is to be placed and while it is being unpacked and finally installed. Make sure the installation location is dry and level, and able to provide adequate ventilation. The Vanguard runs warm to the touch and requires the bottom and top of the unit be free from obstruction with good circulation of air. Allow a minimum of 2 inches (5cm) above the unit for proper ventilation, and at least one inch (2.54 cm) on each side. Additional ventilation may be required when the unit occupies the same space with other electronics that generate heat, like power amplifiers. Please consult an authorized KRELL dealer or KRELL Industries to insure proper installation guidelines.

The Vanguard is designed to work all over the world. The operating voltage is determined at the factory and is specifically set to operate in the country of final destination. The Vanguard requires good clean power and doesn't require additional filtration. A 15 Amp circuit is recommended for the Vanguard.

Note:
The Vanguard may not operate correctly when AC regeneration or voltage conversion devices are utilized, but at a minimum, they must be rated for the maximum power consumption of the Vanguard.

Note:
Save all packing materials; if you need to ship the Vanguard in the future, repack the unit in its original packaging to prevent shipping damage.

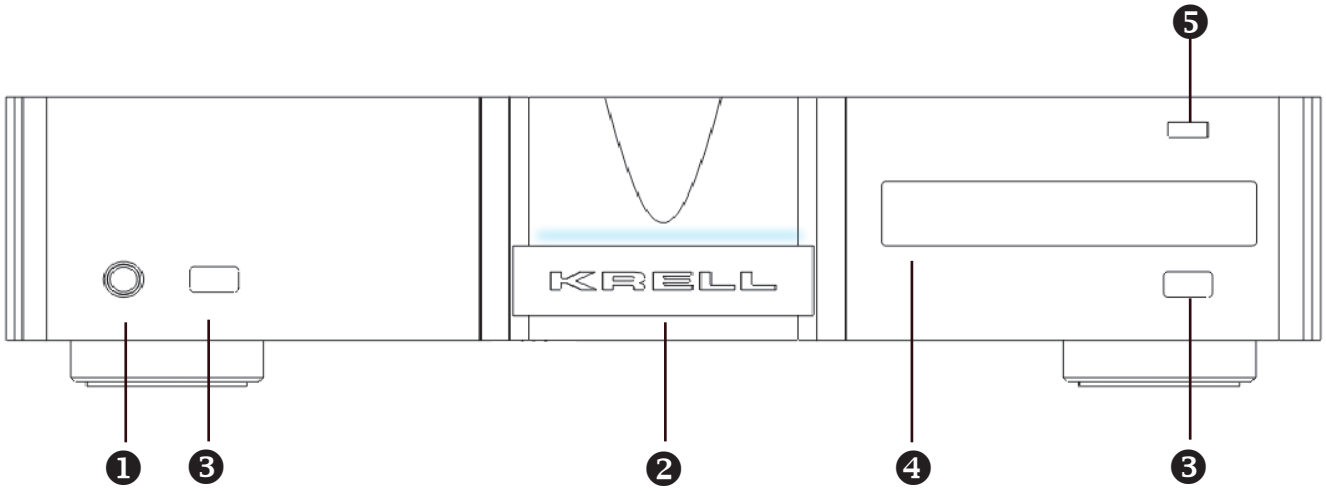
Recommended Cleaning Instructions for Krell Products

Clean your Krell product gently, using a high quality lint-free cloth that has not been treated with chemicals of any kind.

Please note the following: Do not use cleaning agents of any kind, such as water, alcohol, or other common cleaning products.

Thank you.

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❶ Power
Use this button to switch the Vanguard between stand-by and operational modes.

❷ Stand-by Indicator
The stand-by indicator illuminates red when the Vanguard is plugged into a standard AC wall receptacle and the rear panel power switch is in the ON position. The indicator illuminates blue when the Vanguard is in operational mode.

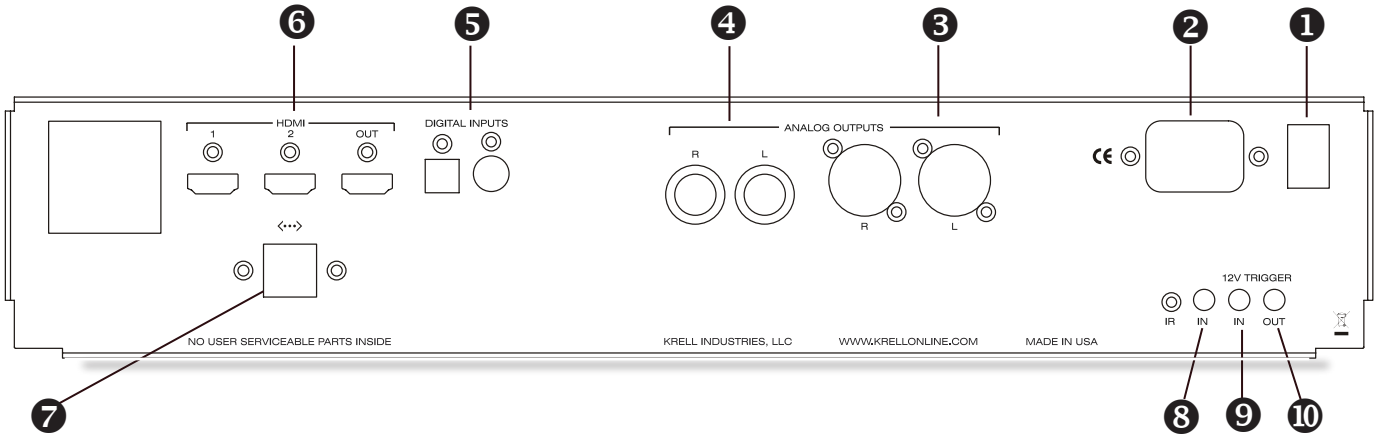
❸ Infared Sensor
IR receives commands from the remote control. Make sure this is not obstructed.

❹ Front Panel Display
The front panel display shows the input selected, volume, balance, and Theater Throughput status.

❺ USB input
For playback of audio files from a USB flashdrive. (Please see page 14 - mConnect App)



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❶ Power Switch

Use this power switch to change the Vanguard from off to the stand-by mode.

❷ AC Power Cord Receptacle

The connector is for use with the provided IEC standard 15 amp power cord. This connector and power cord must remain unobstructed for easy removal in case of emergency.

❸ Balanced Analog Outputs

The Vanguard is equipped with one pair of balanced outputs via XLR connectors.

❹ Single-Ended Analog Outputs

The Vanguard is equipped with one pair of single-ended outputs via RCA connectors.

❺ Digital Audio Inputs

The Vanguard is equipped with one coaxial and one optical digital input.

❻ HDMI Inputs and Outputs

The Vanguard is equipped with 2 HDMI Inputs and 1 Output.

❼ Ethernet

The Ethernet port connects the Vanguard to a home network for control, firmware updates and network streaming.

❽ IR In

The Vanguard is equipped with an RC-5 input that makes custom installation easy and secure by accepting baseband RC-5 input commands from a remote IR detector or hard wired remote controllers.

❾ ❿ 12 VDC In/Out (12 V trigger)

The 12 V Trigger input allows you to place the Vanguard into the stand-by or operational mode from other components. The 12 V trigger output allows the Vanguard to turn other components on or off.

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Remote Control Buttons have the same function as the front panel controls, when applicable.

❶ Power
Use this button to switch the Vanguard between stand-by and operational modes.

❷ Mute Button
Use this to mute the Vanguard output. To un-mute, press the mute button again.

❸ Analog Input Buttons (VIA and DVI)
Use these buttons to select analog inputs on the Vanguard.

❹ Digital Input Buttons (DVI, DAC)
Use these buttons to select digital inputs on the Vanguard. Note: These buttons are only active when the optional digital module is installed.

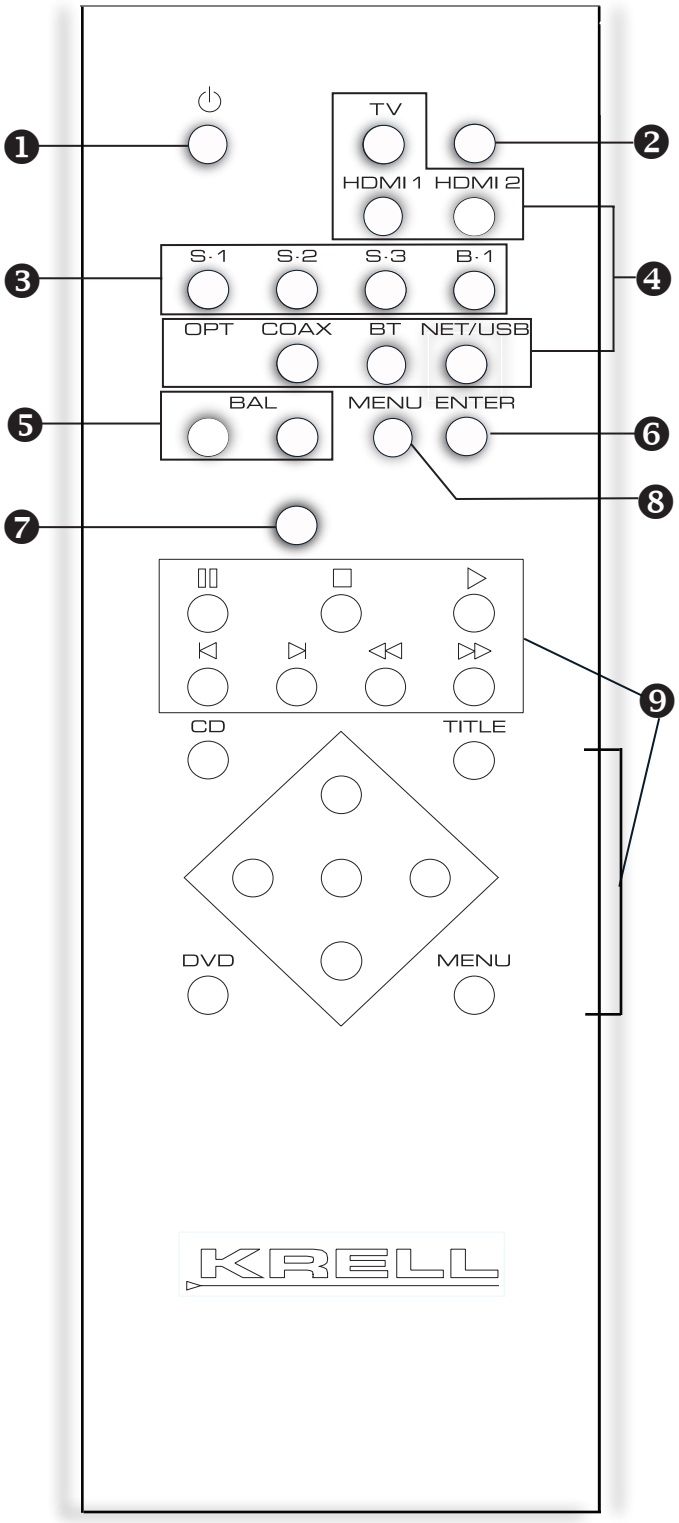
❺ BAL (Balance) Buttons (VIA,DVI)
Use these buttons to shift the balance to the left or the right channel. Note: In menu mode, the balance buttons are used for left and right navigation.

❻ The Enter button
Use the enter button to confirm menu selections.

❼ Volume Up/Down Buttons
Adjusts volume up and down on VIA, DVI and DAC with a range of 0-100.

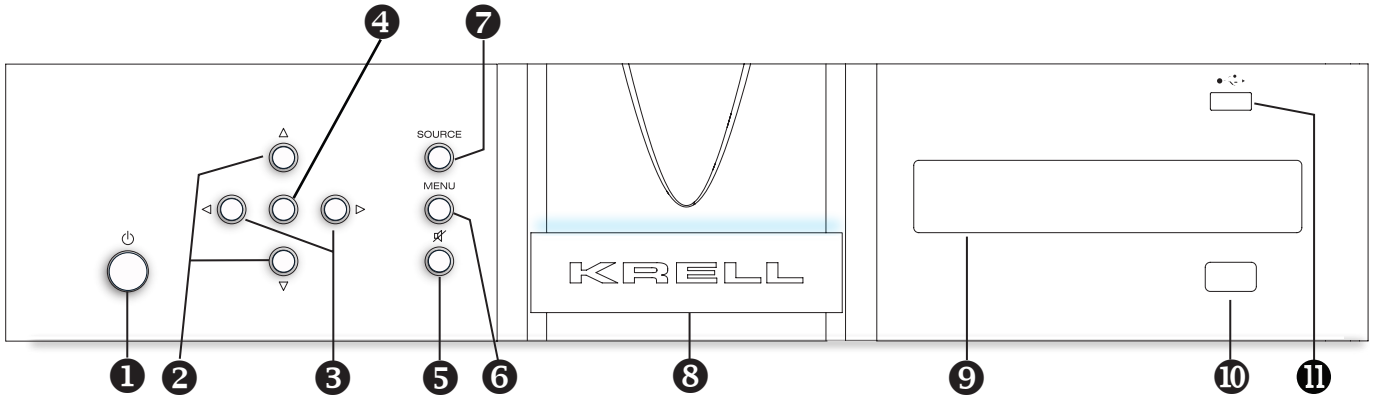
❽ Menu Button
Use this to access the menu functions of the Vanguard

❾ CD / DVD Transport Control
Not in use forVanguard; used to control basic CD / DVD functions on other Krell products.



Note: The remote comes with two AAA batteries that have to be installed. Use the supplied Torx Screwdriver to remove the 4 battery panel Torx screws (T10) then install the batteries.

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❶ Power
Use this button to switch the Vanguard between stand-by and operational modes.

❷ Volume/Navigation Up/Down Buttons
Use these buttons to adjust the amplifier output level and navigate through the menu system. The output level is indicated numerically on the front panel display, with a range from 0-100.

❸ Left/Right Navigation Buttons Use these buttons to navigate through the menu system.

❹ Enter Button
Press the enter button or use the enter key to confirm menu selections.

❺ Mute Button
Use this to mute the Vanguard output. To un-mute, press the mute button again.

❻ Menu Button
Use to access the menu functions of the Vanguard.

❼ Source Button
Use this button to select the source functions of the Vanguard.

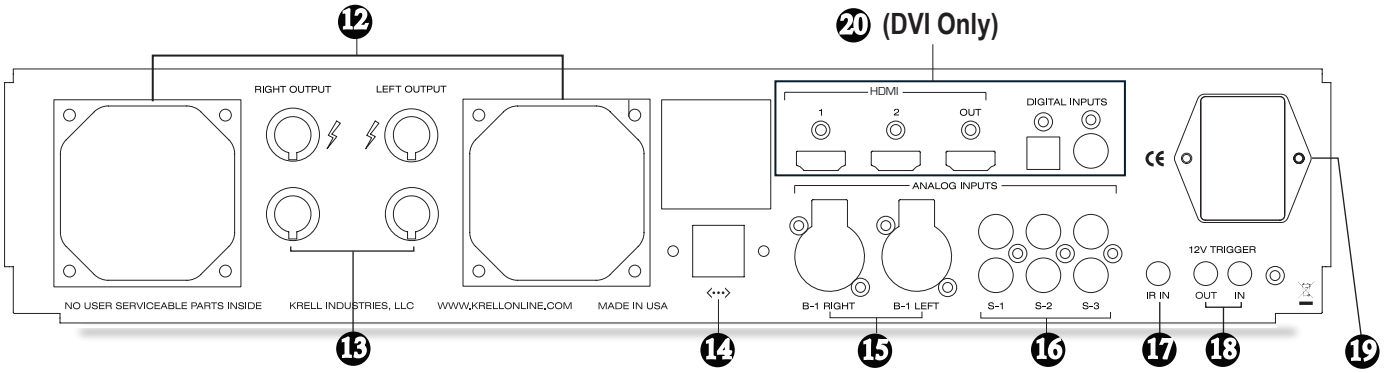
❽ Stand-by Indicator
The stand-by indicator illuminates red when the Vanguard is plugged into a standard AC wall receptacle and the rear panel power switch is in the ON position. The indicator illuminates blue when the Vanguard is in operational mode.

❾ Front Panel Display
The front panel display shows the input selected, volume, balance, and Theater Throughput status.

❿ Infrared sensor
Receives commands from the remote control. Make sure this is not obstructed.

⓫ USB input
Only active when optional digital module is installed. (Please see page 13 - mConnect App)

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⓬ Fans

The Vanguard is equipped with two cooling fans. Be sure to leave them unobstructed for proper ventilation.

⓭ Loudspeaker Outputs

The Vanguard is equipped with gold-plated binding posts for each amplifier channel.

⓮ Ethernet

The Ethernet port connects the Vanguard to a home network for control, firmware updates and, network streaming for DVI.

⓯ Balanced Analog Inputs

The Vanguard is equipped with one pair of balanced (B-1) inputs via XLR connectors.

⓰ Single-Ended Analog Inputs

The Vanguard is equipped with three pairs of single-ended (S-1, S-2, or S-3 on Remote) inputs via RCA connectors.

⓱ IR In

The Vanguard is equipped with an RC-5 input that makes custom installation easy and secure by accepting baseband RC-5 input commands from a remote IR detector or hard wired remote controllers.

⓲ 12 VDC In/Out (12 V trigger)

The 12 V Trigger input allows you to place the Vanguard into the stand - by or operational mode from other components. The 12 V trigger output allows the Vanguard to turn other components on or off.

⓳ Power Switch and Connector

The connector is for use with the provided IEC standard 15 amp power cord. This connector and power cord must remain unobstructed for easy removal in case of emergency. Use this power switch to change the Vanguard from off to the stand-by mode.

⓴ Digital Connections module (DVI)

The optional digital connections module adds one coaxial, one optical, two HDMI inputs and one HDMI output.

VIA / DVI



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Operating the Vanguard When powering up any system, always turn amplifiers on last. When powering down, always turn amplifiers off first.

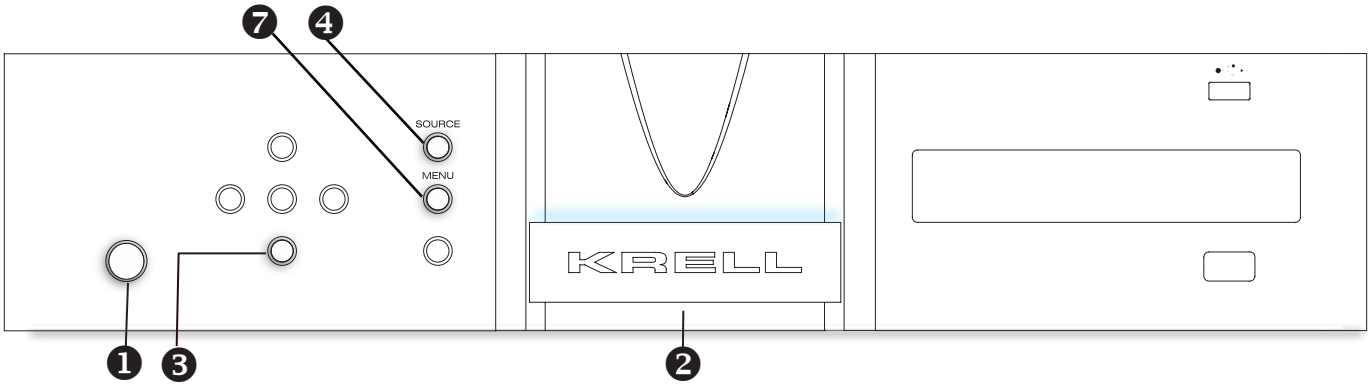
1. When the amplifier is in stand-by mode - with the red stand-by indicator (2) - turn the amplifier on by pressing the power button on the front panel or the power key on the remote control (1). There are audible clicks and the blue power indicator (2) will illuminate. The Vanguard is now in the operational mode.

2. With the amplifier in the mute position, or the volume control fully attenuated (O), select a source (4) from the front panel or the remote control.

3. Start playing the source.

4. Set the volume to a comfortable listening level using the up or down keys on the front panel or the level keys on the remote control (3).

5. To turn the amplifier off, press the power button on the front panel or the power key on the remote control (1). The red stand-by indicator (2) illuminates. It is now safe to turn off the rest of the system.



Menu Options (from Remote or Front Panel)

The Vanguard menu system offers a number of options and information. Main selections include:

- Source Setup
- Network Setup
- Operation Mode
- Diagnostic Mode
- Software Version
- Software Update
- Display Setup
- Restore Settings
- Save Settings
- Serial Number

Press the Vanguard's Menu button (7), then use the navigation buttons or keys to highlight one of the menu options. Press the Enter button or key to select.

Source Setup

Press the Enter button and use the Up or Down buttons to highlight the desired parameter to edit. Press the Enter button to select. Assign Names: The first input is displayed. Press the Up or Down buttons to select a different source.
To edit the currently displayed source, press the Enter button and the cursor will begin flashing at the first character field. Use the Up or Down buttons to change the character. Use the Right or Left buttons to move the blinking cursor to another character and repeat the editing procedure. Press Enter to confirm changes. Press the Up or Down buttons to select a different source and repeat the editing process. The edited name will appear when the Source button is pressed on the remote or front panel. The new source name

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will also appear on a web connected device. Press the Left button to return to the Source Setup Menu.

Theater Mode

Theater Mode bypasses the Vanguard's volume control and passes the left and right output of a surround processor directly to the Vanguard's left and right amplifiers. Use the Left and Right buttons to highlight the input that is connected to the surround processor. Press the Enter button and the cursor will begin flashing in the Disabled field. Press the Up or Down buttons to change to Enabled and press the Enter button to select.

Note: Turn down volume on surround processor before setting Theater Mode.

Level Trim (VIA, DVI, DAC)

The level trim allows for output adjustment between sources. Press the Enter button and the source field will start flashing. Press the Up or Down buttons to select a different source to edit. Press the Enter button and the dB field will begin flashing. Press the Up or Down buttons to increase or decrease output. When finished, press the Enter button and then the Left button to return the Source Setup sub menu.

Network Setup

Press the Up or Down buttons to view the various network parameters. Press the Enter button to see the value for the displayed parameter.

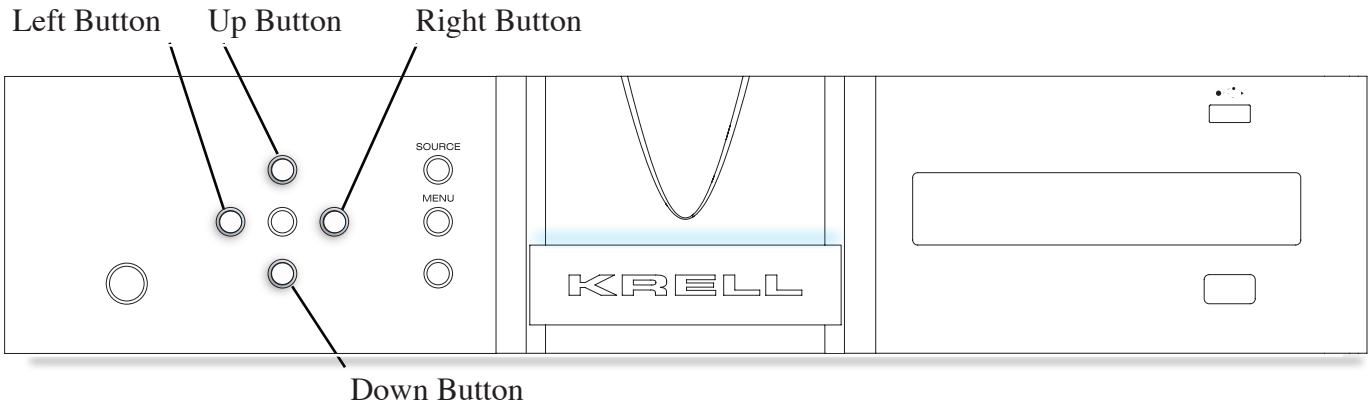
IP Address

The default network discovery is DHCP. If the Vanguard is connected to an active network, it automatically acquires an IP address. To enter an IP address manually, change the Vanguard to Static IP operation. To change to Static IP operation, press the Enter button at the IP Address sub menu. Press the Up or Down buttons to change the setting to Static. Press the Enter button to display the IP address. Press the Right button to move the cursor to the number to be edited. Press the Enter button again and the selected number of the IP Address will begin blinking. Use the Up or Down buttons to edit the IP Address value. Press the Enter button to confirm change. Press the Left or Right button to move the cursor to another number in the IP address and repeat editing process. Use the same process to edit the other network settings.

Note: the MAC Address is a factory set value and is not user editable.

Operation Mode (DAC)

The Operation Mode allows user to select between DAC or Preamp functionality. The DAC functionality bypasses volume control whereas Preamp utilizes built in volume control. Press the Enter button and the cursor will begin flashing. Press the Up or Down buttons to change between DAC or Preamp options. Press the Enter button to select. NOTE: Turn down volume on surround processor before setting Operation Mode to DAC.



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The Vanguard processor operation and setup options are available from the built in web server. To use the web server, connect the Vanguard to a router in your local network (LAN). The IP address can be found in the Network Setup sub menu. Press the Enter button twice to find the address of the unit. **It should be similar to 192.168.1.9.**

To access the web server, type your IP address into the web browser address bar; press Enter. For above, the correct address to enter would be: 192.168.1.9. The Vanguard control web page will now appear on your computer or tablet screen. Using your mouse or finger, follow the remote control or front panel instructions to operate the Vanguard.

Diagnostic Mode

Diagnostic mode is used for troubleshooting and is disabled as a default. Leave diagnostic mode disabled unless directed by Krell.

Software Version

Press the Enter button to view current operating Vanguard Software version and build date

Software Update

Press the Enter button to display the Software Update Press the Enter button to select and then the Enter button again to confirm. Choose the Network option if the Vanguard is connected to the internet. The Vanguard will check the Krell update server to determine if a new software update is available.

Display Setup

Backlight time-out

Backlight time-out turns off the front panel display after a period of inactivity. The default time setting is not disabled which keeps the display always illuminated. Time out can be set between 15 and 129 seconds, in 15 second increments.

Contrast Setup

Three contrast levels are available with level 2 being the default. Press the Enter button to activate the level setting and then use the up or down button to adjust. Press the Enter button to confirm the desired choice.

Restore Settings

Restore Settings will return the Vanguard to the original factory settings or to previously saved user settings. Press the Up or Down button to change to User. Press the Enter button to confirm selection. Press the Enter button again to return to factory or user saved settings. The Vanguard will display various messages and will eventually return to the standby mode.

Save Settings

Save Settings will save all configuration settings in non volatile memory. Press the Enter button to begin saving process.

Serial Number

Serial number displays the unit's serial number and is not user editable.

CEC Operation (Only applies to digital board option)

Consumer Electronics Control (CEC) is an HDMI feature designed to allow the user to control up-to 15 CEC-enabled devices, that are connected through HDMI, by using only one of their remote controls (for example by controlling a television set, set-top box, and DVD player using only the remote control of the TV). The default setting for CEC is Enabled. In some installations, it desirable to have CEC operation disabled. To disable CEC operation, Press the Enter button and use the Up or Down button to change the setting (Blinking E) to Disabled. Press the Enter button to confirm change.

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The Digital Vanguard works in conjunction with the Connect Player app for Ethernet streaming and USB playback. Please download the free mConnect Player app from the Apple App Store or Google Play Store.

Note: The Digital Vanguard supports standard DLNA so any DLNA music player app can be used for music management. However, proprietary control functions, such as Volume control of the Digital Vanguard is only available when using the mConnect Player app.

From the Digital Vanguard faceplate, remote, or web-server, select the digital input labeled NET/USB. The mConnect Player app will automatically find music on the local network and the USB input.

For Bluetooth use, open the Bluetooth setting on a mobile device. The Digital Vanguard automatically outputs a Bluetooth pairing signal. Select Vanguard once it registers connected. From the Digital Vanguard faceplate, remote, or webserver, select the digital input labeled Bluetooth. Select the desired music on the device.

The Digital Vanguard features aptX® Bluetooth technology for the best sound quality possible when using aptX® equipped mobile devices.

Please check the mobile device's specifications to determine whether it is equipped with aptX® technology.

Note: The volume control of the mobile device is active during Bluetooth operation but will only raise the maximum volume to the current volume setting on the Digital Vanguard. It is recommended to raise the mobile device's volume control to maximum and then use the Digital Vanguard volume control for further adjustments. This will result in the best sound quality.

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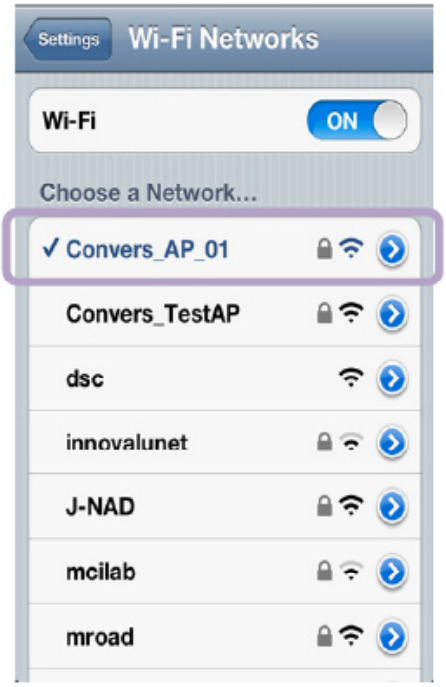
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mConnect App

Make WiFi Connection and Open MCONNECT Player app

Connect a mobile device to the same network that the Digital Vanguard is connected to.

Note: iPhone is used as an example. Screen images might vary with different devices.



Select the Wi-Fi network on the setting menu of your network device. Make sure it is the same network that the Digital Vanguard is connected to.

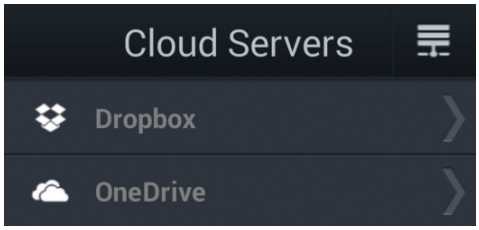


Launch the mConnect Player app on your network device.

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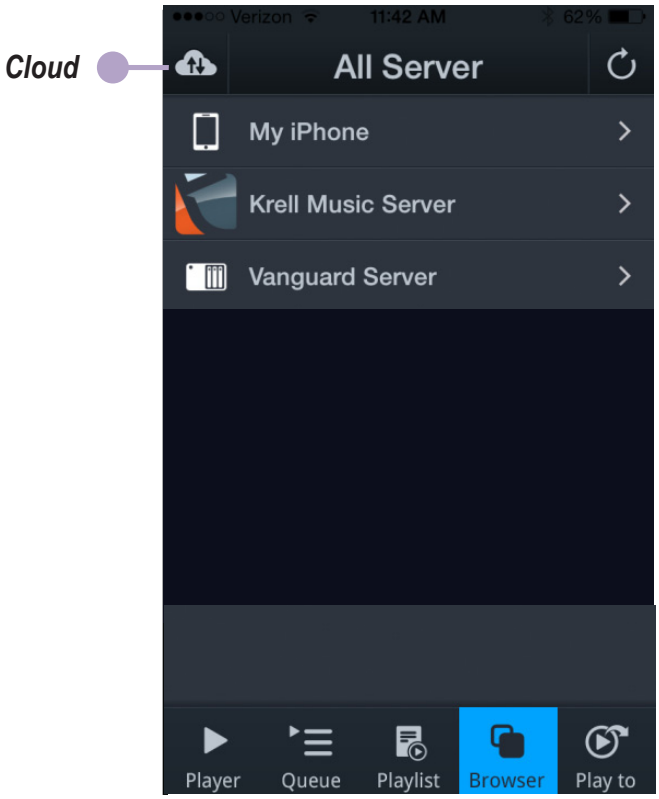
Discover Music Servers

By pressing the Browser button, the list of server devices, Krell Music Server in this example, on the local network will be displayed.
By pressing Cloud icon, you will see Dropbox & OneDrive storages



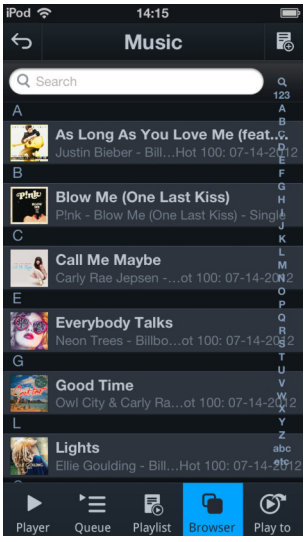
Vanguard Server is the USB input. All navigation and playback operations are the same for network servers and the USB input.

mConnect Player finds DLNA/UPnP compatible devices such as Network Storages and Windows PCs.

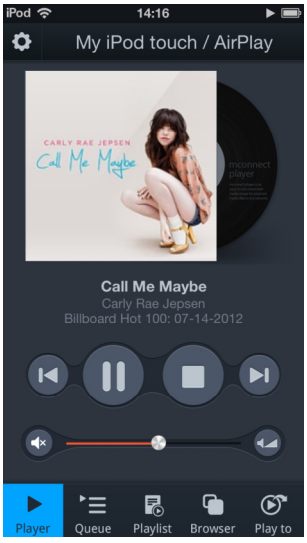


Select Music to Play

Select a server device in the server list.
Sub-categories such as artist, genre, title, song, etc. are displayed. The category and tree structure may vary between devices.



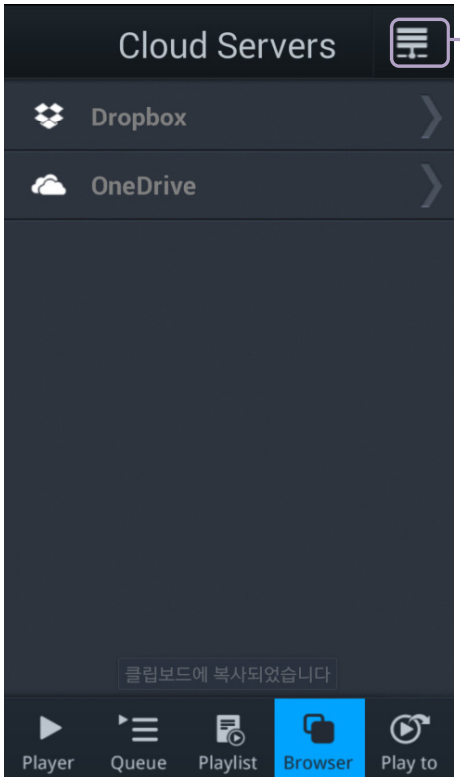
Select the desired music from the list. The music will be played by the playback device selected in the Play to list. Select Vanguard to play the music through the Digital Vanguard.
All the music in the selected folder is automatically listed in the Queue.



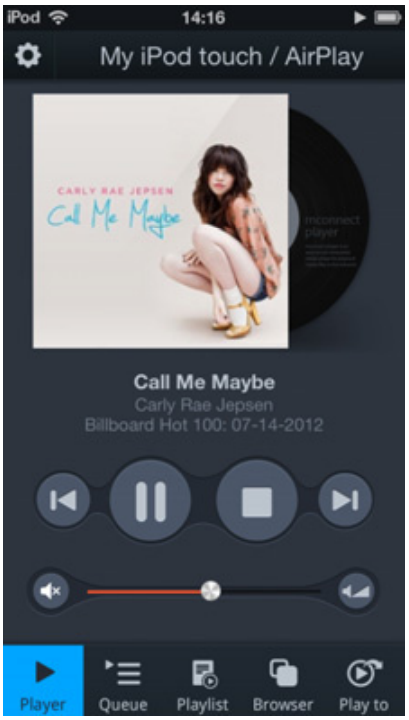
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Cloud Storage Access and Remote Playback

The Digital Vanguard provides cloud storage access and playback. Upon first time access to a cloud storage account, login to the account will be required. After authorization, music playback selection is the same as for local network playback.

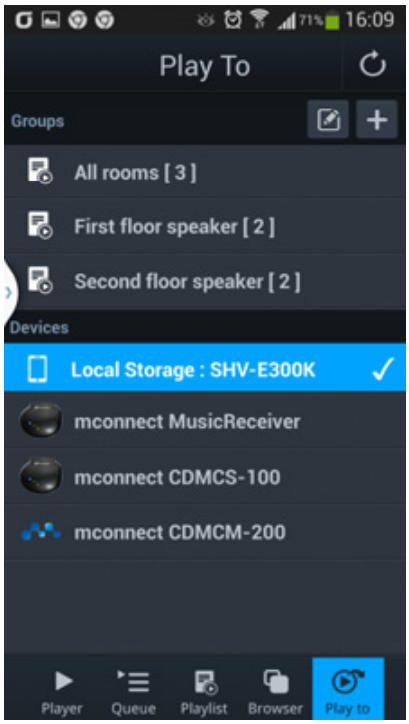


Go back to Local server List



Play to network device

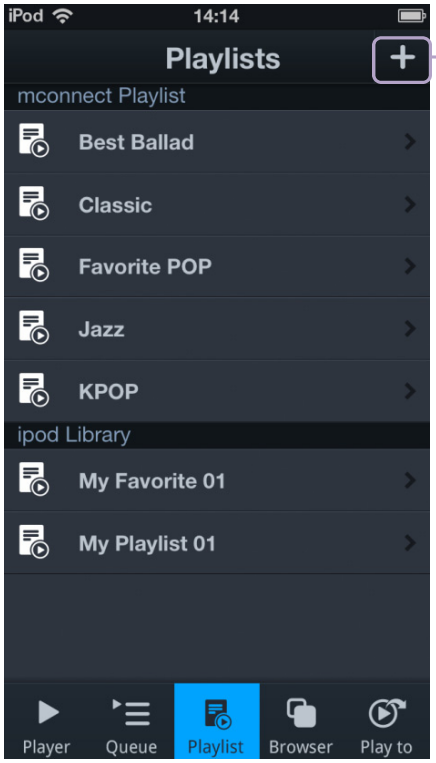
Choose Vanguard to stream music to the Digital Vanguard



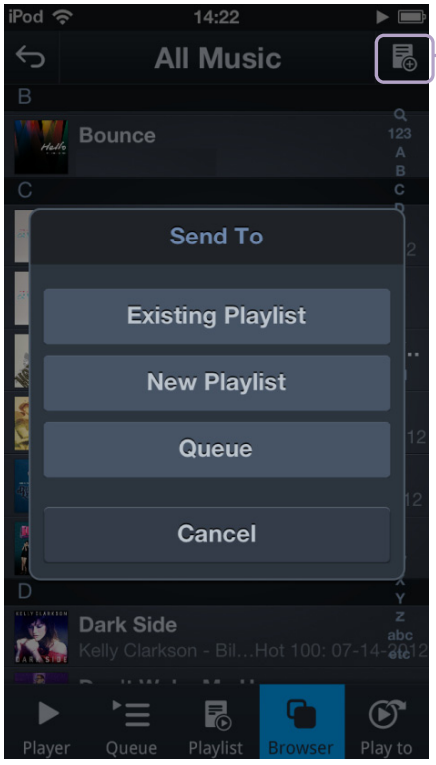
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Playlist Creation and Management

The mConnect Player app provides playlist management across servers. Music stored in different servers may be combined into a playlist.
Playlists may be created and managed from the playlist browser, and queue screens. The mConnect Player app automatically detects the server devices on the network and makes the playlist available.

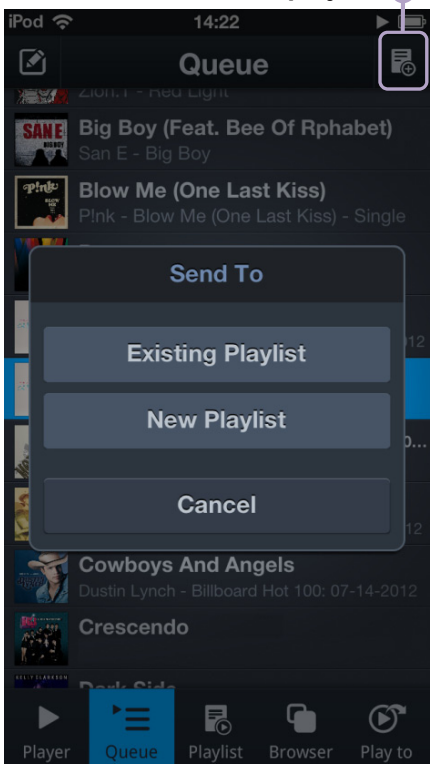


Manage playlist at Playlist



Send to playlist at Browser

Send current Queue to playlist



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This Krell product has a limited warranty of five years for parts and labor on circuitry from date of purchase or six years from date of original shipment from the Krell factory. Should this product fail to perform at any time during the warranty, Krell will repair it at no cost to the owner, except as set forth in this warranty.

The warranty does not apply to damage caused by acts of God or nature.

The warranty on this page shall be in lieu of any other warranty, expressed or implied, including, but not limited to, any implied warranty of merchantability or fitness for a particular purpose. There are no warranties which exceed beyond those described in this document. If this product does not perform as warranted herein, the owner's sole remedy shall be repair. In no event will Krell be liable for incidental or consequential damages arising from purchase, use, or inability to use this product, even if Krell has been advised of the possibility of such damages.

Proof of purchase in the form of a bill of sale or receipted invoice substantiating that the unit is within the warranty period must be presented to obtain warranty service. The warranty begins on the date of retail purchase, as noted on the bill of sale or receipted invoice from an authorized Krell dealer or distributor.

The warranty for Krell products is valid only in the country to which they were originally shipped, through the authorized Krell distributor for that country, and at the factory. There may be restrictions on or changes to Krell's warranty because of regulations within a specific country. Please check with your distributor for a complete understanding of the warranty in your country.

If a unit is serviced by a distributor who did not import the unit, there may be a charge for service, even if the product is within the warranty period.

Freight to the factory is your responsibility. Return freight within the United States (U.S.A.) is included in the warranty. If you have purchased your Krell product outside the U.S.A. and wish to have it serviced at the factory, all freight and associated charges to the factory are your responsibility.

Krell will pay return freight to the U.S.A.-based freight forwarder of your choice. Freight and other charges to ship the unit from the freight forwarder to you are also your responsibility.

Krell is not responsible for any damage incurred in transit. Krell will file claims for damages as necessary for units damaged in transit to the factory. You are responsible for filing claims for shipping damages during the return shipment.

Krell does not supply replacement parts and/or products to the owner of the unit. Replacement parts and/or products will be furnished only to the distributor performing service on this unit on an exchange basis only; any parts and/or products returned to Krell for exchange become the property of Krell.

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No expressed or implied warranty is made for any Krell product damaged by accident, abuse, misuse, natural or personal disaster, or unauthorized modification.

Any unauthorized voltage conversion, disassembly, component replacement, perforation of chassis, updates, or modifications performed to the unit will void the warranty.

The operating voltage of this unit is determined by the factory and can only be changed by an authorized Krell distributor or at the factory. The voltage for this product in the U.S.A. cannot be changed until six months from the original purchase date.

In the event that Krell receives a product for warranty service that has been modified in any way without Krell authorization, all warranties on that product will be void. The product will be returned to original factory layout specifications at the cuntomer's expense before it is repaired. All repairs required after the product has been returned to original factory specifications will be charged to the customer, at current parts and labor rates.

All operational features, functions, and specifications and policies are subject to change.

Notes:

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Return Authorization Procedure

If you believe there is a problem with your component, please contact your dealer, distributor, or the Krell factory to discuss the problem before you return the component for repair.

To expedite service, you may wish to complete and e-mail the Service Request Form on our website at:

http://www.krellonline.com/service-request-form.html

To return a product to Krell, please use this procedure so that we may serve you better:

1. Obtain a Return Authorization Number (R/A number) and shipping address from the Krell Service Department. Print the return authorization number on the outside of the box next to the Krell address label.
2. Insure and accept all liability for loss or damage to the product during shipment to the Krell factory and ensure all freight (shipping) charges are prepaid.
3. The product may also be hand delivered if arrangements with the Service Department have been made in advance. Proof of purchase will be required for warranty validation at the time of hand delivery.

NOTE: **Use the original packaging** to ensure the safe transit of the product to the factory, dealer, or distributor. Krell may, at its discretion, return a product in new packaging and bill the owner for such packaging if the product received by Krell was boxed in nonstandard packaging or if the original packaging was so damaged that it was unusable. If Krell determines that new packaging is required, the owner will be notified before the product is returned.

To purchase additional packaging, please contact your authorized Krell dealer, distributor, or the Krell Service Department for assistance.

To Contact the Krell Service Department:

Telephone: 203-298-4020
Monday-Friday, 9:00 am to 5:00 pm EST
Fax: 203-799-9796
E-Mail: service@krellonline.com

World Wide Web: http://www.krellonline.com

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Vanguard Family - Owner's Reference

SIGNAL-TO-NOISE RATIO		"A" Weighted	112 dB
TOTAL HARMONIC DISTORTION (THD)		Un-weighted	20 Hz-20 kHz, 0.003%
OUTPUTS	ANALOG AUDIO	(2) Balanced via XLR Connectors R, L (2) Single-ended via RCA Connectors R, L	
	DIGITAL VIDEO	(1) HDMI	
INPUTS	DIGITAL AUDIO	(1) EIAJ optical via TosLink connector (1) Bluetooth (1) USB-A (1) Ethernet Streaming (1) Coaxial via RCA connector	
	DIGITAL VIDEO	(2) HDMI	
CONTROL/UPDATE		(1) IR Receiver for Remote Control (1) RC-5 via 1/8" stereo "trs" Receptacle (1) Ethernet via RJ-45 Connector (1) 12vdc Remote Trigger Input via 1/8" Mono Receptacle (1) 12vdc Remote Trigger Output via 1/8" Mono Receptacle	
RC-5 pin out		Tip = RC-5 data, Ring = +5 V, Sleeve = GND XLR Pin Out Pin 1 (ground) Pin 2 (non-inverting "Hot") Pin 3 (Inverting)	
Maximum Output		Balanced 4 Vrms (11.6 Vrms w/Digital Pre-Amp) * Single Ended 2 Vrms (5.8 Vrms w/Digital Pre-Amp) *	
Audio Output Impedance		Balanced 150 Ω Single Ended 150 Ω	
Power Consumption		Stand-by 6w Operation 26w	
DIMENSIONS		Inches (L) 16.83 x (W) 17.06 x (H) 3.47 Centimeters (L) 42.76 x (W) 43.33 x (H) 88.1	
WEIGHT		18lbs Unit only 8.16kg Unit only 24lbs Shipping Weight 10.89kg Shipping weight	

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SIGNAL-TO-NOISE RATIO		"A" Weighted 97 dB
TOTAL HARMONIC DISTORTION (THD)		Un-weighted <0.015% at 1 kHz, at 200W, 8 Ω load <0.013% at 1 kHz, at 200W, 8 Ω load
OUTPUTS	ANALOG AUDIO	1 pr. speaker outputs via gold-plated binding posts
	DIGITAL VIDEO	(1) HDMI
INPUTS	DIGITAL AUDIO (DVI Only)	(1) EIAJ optical via TosLink connector (1) Coaxial via RCA connector (1) Bluetooth (1) USB-A (1) Ethernet Streaming
	ANALOG AUDIO	1 pr. balanced XLR connectors 3 pr. single-ended via RCA connectors
	DIGITAL VIDEO (DVI Only)	(2) HDMI
CONTROL/UPDATE		(1) IR Receiver for Remote Control (1) RC-5 via 1/8" stereo "trs" Receptacle (1) Ethernet via RJ-45 Connector (1) 12vdc Remote Trigger Input via 1/8" Mono Receptacle (1) 12vdc Remote Trigger Output via 1/8" Mono Receptacle
RC-5 pin out		Tip = RC-5 data, Ring = +5 V, Sleeve = GND XLR Pin Out Pin 1 (ground) Pin 2 (non-inverting "Hot") Pin 3 (Inverting)
Maximum Output Power		200W RMS per channel at 8 Ω 400W RMS per channel at 4 Ω
Maximum Output Voltage		113 V peak to peak 40V RMS
Power Consumption		Stand-by 12W ▫ Idle: 70W ▫ Maximum: 1300W
DIMENSIONS		Inches (L) 16.83 x (W) 17.06 x (H) 3.47 Centimeters (L) 42.76 x (W) 43.33 x (H) 88.1
WEIGHT		Unit only: 39 lbs (17.7 kg) Shipping Weight: 47 lbs (21.31 kg)

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Thank you for your purchase of a Krell Vanguard component. Enjoy!



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