STREAMER/DAC

USER GUIDE | AAVIK SD-188 / SD-288 / SD-588

Rev.1.0 ENG

Aavik

CONTENTS

SAFETY INSTRUCTIONS

1. Read and retain these instructions.

2. Follow all warnings and guidelines.

3. Clean the device with a dry, lint-free cloth. For deeper cleaning, unplug it and use a damp cloth. Avoid chemical solvents or cleaners.

4. Do not place near heat sources like radiators, stoves, or heat-producing equipment.

5. Protect the power cord from damage, especially at plugs, outlets, and exit points.

6. Unplug during lightning storms or extended periods of non-use.

7. Do not modify the polarized or grounding plug.

8. Place the device horizontally on a stable surface. If stacking, keep the hottest component (e.g., an amplifier) on top.

9. Only qualified personnel should perform servicing.

10. Servicing is required if the device shows damage, such as:
Exposure to moisture or foreign objects
Liquid spills
Unusual operation, physical damage, or being dropped.

11. Keep liquids and objects away from the device's openings. Avoid dripping or splashing; do not place liquid-filled items (e.g., vases) on it.

12. Use in moderate climates and domestic settings only.

13. Connect only to the specified power supply. Ensure the mains plug is easily accessible for quick disconnection.

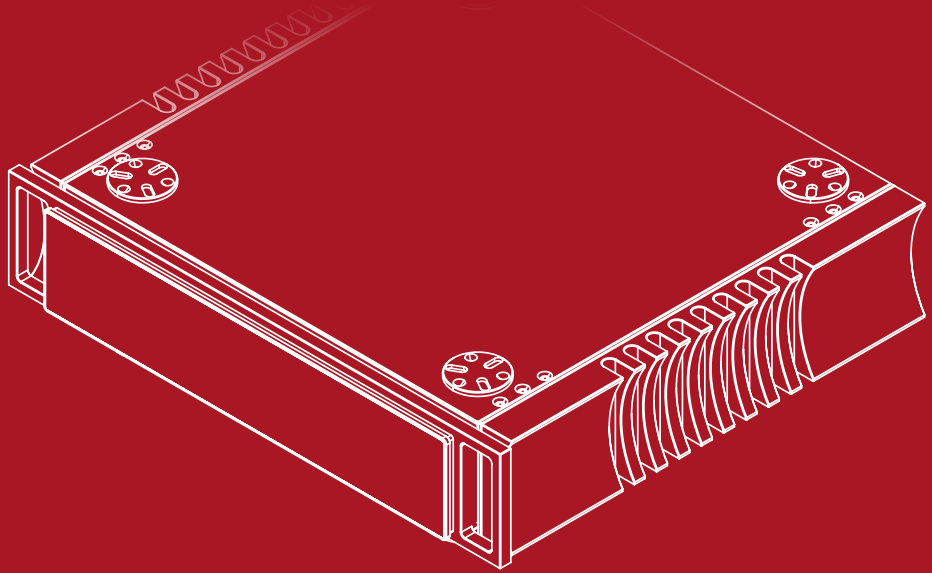
14. If smoke or abnormal odors occur, turn off the device, unplug it, and contact your dealer.

WARNING:

- To reduce fire or shock risk, do not expose the device to rain or moisture.

- The lightning symbol in a triangle alerts users to potentially hazardous voltage inside the device.

- Do not remove the cover or back panel. There are no user-serviceable parts inside. Refer servicing to qualified personnel.



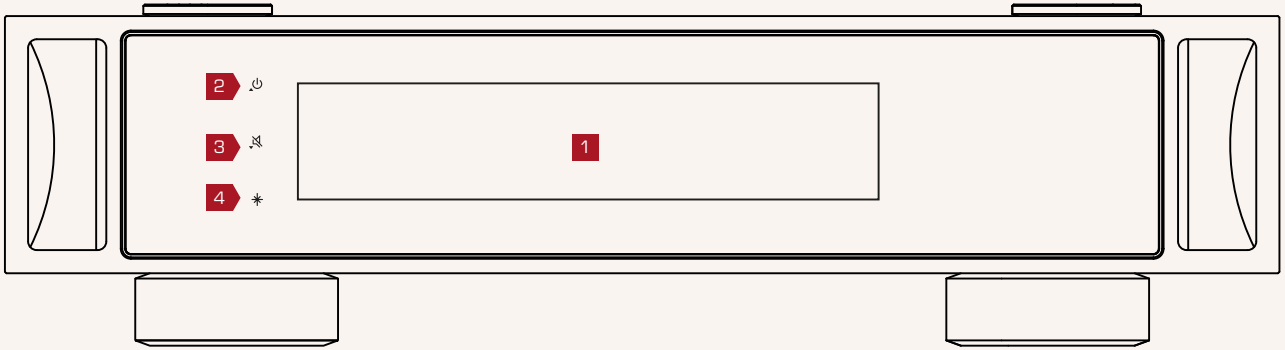
CONGRATULATIONS

Congratulations on your selection of the Aavik SD-x88 product! We are thrilled that you have chosen Aavik as your new piece of electronic, hand crafted in Denmark, ready to lift your performance.

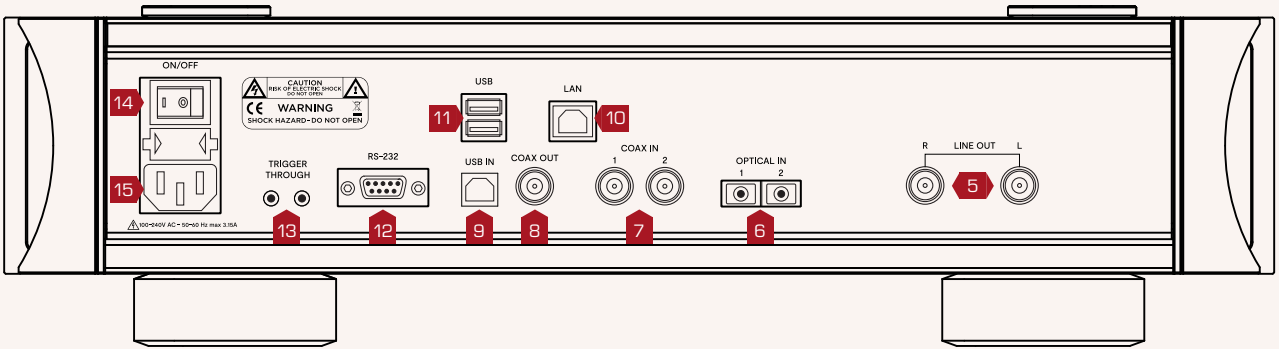
Prepare to be blown away from your music once again and get closer to artist more than ever before.

FUNCTIONS

BUTTONS ON THE FRONT OF THE DEVICE



CONNECTORS ON THE BACK OF THE DEVICE



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FRONT PANEL FUNCTIONS

1 DISPLAY

During streamer playback the display shows the first two lines of metadata - usually the artist and track name. The display will switch to showing input ("Stream"), the format being played and the volume setting, when changes occur. When the streamer is not playing, or if a non-streamer input is selected, the active input and volume setting is shown.

Note: The volume setting will only be shown, if the volume control is switched on in the menu settings.

When changing settings (See "Menu Functions" on page 8), the display will show the setting being changed.

2 STANDBY

Press the standby button to place the DAC in standby mode, or to switch on the DAC from standby mode.

When the DAC is in standby mode, the only light howing on the device will be a dim LED in the lower left corder of the display. When you switch on the DAC, the outputs will be muted, and a line will illuminate at the bottom of the displays, starting in the lower left corner.

During the start-up cycle, the circuits of the unit will initialise. When using trigger cables between the DAC and an amplifier, the DAC will be switched on and off together with the amplifier.

3 MUTE

When you press this button briefly, it will mute the analogue outputs of the DAC. The display will show "Mute" next to the active input name. Press mute again, to disable mute.

4 INPUT SELECT/MENU BUTTON

The input select button lets you select the desired source. Pressing the button briefly will activate input selection. The display will flash, while still showing the selected input. Pressing the standby and mute buttons lets you select the desired source.

Press the input select button again to deactivate input selection mode.

Press and hold the menu button for 3 seconds to enter the menu. You can change setting using the standby and mute buttons, and then press the menu button to step to the next setting. For more information, See "Menu Functions" on page 8.

REAR PANEL FUNCTIONS

5 LINE OUT
The DAC is equipped with an analogue line output. This can be fixed level or variable. Use fixed level for best quality playback.

DIGITAL INPUTS AND OUTPUTS
The DAC is equipped with the following digital inputs and outputs:

6 TOSLINK OPTICAL INPUT
The DAC comes equipped with two optical S/P-DIF (11-192kHz, 16-32 bit) TOSLINK inputs.

7 BNC DIGITAL INPUTS
The DAC comes equipped with two electrical S/P-DIF (11-768kHz, 16-32 bit) digital inputs.

8 DIGITAL OUT
The DAC is equipped with an electrical (BNC) digital S/P-DIF output, for connecting an external DAC. It supports sample rates up to 768kHz. Most equipment cannot handle sample rates that high, so the maximum sample rate can be limited in the menu settings.

9 USB INPUT
The DAC comes equipped with one fully isolated, UAC 2, asynchronous USB input. It supports 44-384kHz, 16-32 bit PCM DSD64/DSD128 using DoP encoding and up to DSD256 using native mode.

When connecting a computer running Mac OS X, Linux or a recent Windows version, no drivers are needed. For Windows 7/8 a driver can be downloaded from the Aavik Acoustics website.

10 NETWORK
The DAC is equipped with an Ethernet 100BASE-TX network interface. Connect to a 100Mb or 1Gb network for best performance. A 10Mb network will not support high-res streaming.

11 USB
The DAC is equipped with two USB 2.0 sockets. They can be used for a WiFi dongle and a USB flash drive. Note: 500mA max. can be supplied to connected USB devices, as specified in the USB standards. So external hard drives will usually need a power supply to work.

12 RS-232, SOFTWARE UPDATE
The DAC RS-232 terminal is used mainly for software updates. You can check for updates on the Aavik Acoustics homepage.

13 TRIGGER CONNECTIONS
The DAC is equipped with two DC trigger connectors. These can be used to power-on the DAC, when the amplifier is switched on. Connect one of the connectors to the amplifier. The second connector can be used to switch on a further piece of equipment. The DAC will switch on when 5-15VDC is applied to a trigger input.

14 POWER ON/OFF SWITCH
Toggle the switch to switch between fully off and standby mode. The power consumption is less than 1W in standby mode. When the DAC is on, the power consumption is less than 40W.

15 POWER INLET (CAUTION!)
The DAC accepts mains voltages from 100 to 240VAC 50-60Hz.

The power inlet accepts power cables with an IEC 60320-C13 female connector.

To ensure the best performance, please consult your Aavik Acoustics dealer for a suitable mains cable.

REMOTE

B STANDBY, Press this button to place the device in standby mode, or to switch the device on from standby mode.

C INV, Used to invert the phase of the music being played back. This allows compensation for recordings that have inverted polarity.

Default setting “Positive”: A positive sine wave at the input remains positive at the output.

Inverted setting: A positive sine wave at the input is negative or inverted at the output. When the setting is inverted, an “i” is shown in the display after the name of the selected input.

E MENU, Use this button to enter the menu, or switch back to normal operation. Use the ARROW RIGHT and LEFT buttons to cycle through the menu, and the ARROW UP and ARROW DOWN buttons to change a setting. See “MENU FUNCTIONS” for details.

F i, Use this button to show information about the current input signal.

G ARROW UP/ARROW DOWN, Press these buttons for menu navigation, and to adjust the volume setting.

H ARROW RIGHT/LEFT, Press these buttons, to move to the next/previous input. The arrow buttons are also used for menu navigation.

I VOLUME DOWN, Press this button to decrease the volume setting of an Aavik amplifier.

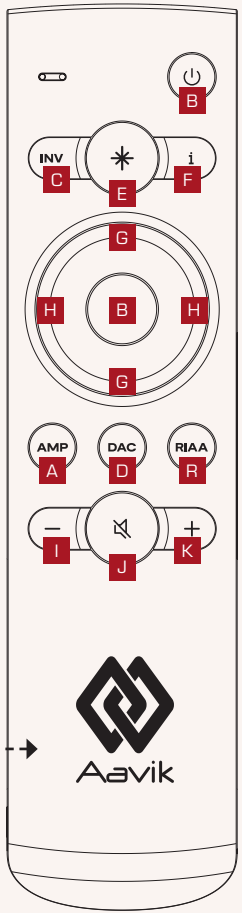
J MUTE, Press the button to mute the outputs. The display will show ”Mute”. Pressing the button again will reactivate the outputs of the device.

K VOLUME UP, Press this button to increase the volume setting of an Aavik amplifier.

A A, Used to select the amplifier mode of the remote control.

D D, Used to select the DAC mode of the remote control.

R R, Used to select the phono stage mode of the remote control.



INSTALLING/REPLACING BATTERY

To remove the backplate, apply slight pressure and move it downwards to release it. Install one AAA battery as indicated in the battery compartment.

Remove the battery if you are not going to use the remote for an extended period of time.

MENU FUNCTIONS

Note: Settings are stored when your Aavik device is switched to standby. So remember to switch your device to standby, before removing power, if you have changed settings.

Using the front panel or remote control, you can change many settings of the streamer/DAC.

Using the remote, press the “Menu” button E to enter or exit the menu.

Using the front panel, press and hold the INPUT SELECT/MENU BUTTON 4 button for 3 seconds.

When entering the menu, the display brightness setting will be shown.

Using the remote, cycle through the options using the ARROW LEFT and ARROW RIGHT H buttons.

Using the front panel, press the INPUT SELECT/MENU BUTTON 4 button to cycle through the options.

Use the ARROW UP and ARROW DOWN G buttons of the remote or the up and down front panel buttons (2/ 3) to change the settings.

Once in the menu, using the remote, you can cycle through all options in the order shown in the diagram below.

Using the front panel, the amplifier will return to normal operation once cycled through all the options

SETTINGS	DISPLAY SHOWS
DISPLAY BRIGHTNESS You can change the display brightness in four steps: 10, 40, 70 and 100%.	Display brightness 70%
DISPLAY DIM Using this setting, you can set the display to switch off automatically after 1-5 seconds. The standard setting is off. When the display is off, a single dim LED will be lit in the lower right corner.	Display dim Off
DAC SAMPLING RATE You can switch the sampling rate of the internal DAC between 22.6MHz and 2.8MHz. Generally the default setting 22.6MHz provides the best sound quality.	DAC sampling rate 22.6Mhz
FIXED VOLUME You can select between having fixed output volume, or variable output volume. Use fixed volume for best sound quality, and adjust the volume on your amplifier instead. The volume control should be regarded as a convenience feature only.	Fixed volume On (fixed)
GAPLESS PLAYBACK With gapless playback off, the streamer will insert small breaks between tracks. This is needed by some DACs.	Gapless playback On

MENU FUNCTIONS

SETTINGS	DISPLAY SHOWS
METADATA DISPLAY Using this setting, you can switch between using 1 line or 2 lines for displaying metadata during streamer playback (usually displaying the artist and track name). The default setting "2 lines, European" uses one line for each line of metadata. But only European languages are supported (Latin, Greek and Cyrillic alphabets). The settings "1 line, Unicode" and "1 ln, Unicode, rev." display the two lines as one, separated by a comma. The second setting displays the two lines in reverse order. When using the full height of the display, more alphabets are supported, like Chinese, Japanese and Korean.	
MQA STREAM UNFOLDING The DAC supports MQA unfolding (decoding). To enable this, use the default option "On (full)". Enabling full MQA unfolding disables the digital output, so if you use an external DAC or amplifier with DAC, use the settings "On (core only)", "In external DAC" or "Off". The setting "In external DAC" will inform some streaming services, that MQA decoding is on, although the internal DAC is not performing the decoding step.	
DSD S/P-DIF OUTPUT If you use an external DAC that supports DoP (DSD over PCM) on it's S/P-DIF input, use the "Encaps. as DoP" setting. Most DACs do not, and the the "Convert to PCM" setting should be used. If the internal DAC of the streamer is used, either setting will work.	
STREAM MAX. PCM RATE This setting can be used to reduce the maximum PCM sample rate reported to streaming services. This can be used if an external DAC does not support the default 384kHz maximum. When using the internal DAC, you should use the default 384kHz setting.	
STREAM MAX. DSD RATE This setting can be used to reduce the maximum DSD rate reported to streaming services. This can be used if an external DAC does not support the default DSD256 maximum (many DACs support only DSD64 over S/P-DIF). When using the internal DAC, you should use the default DSD256 setting.	
NETWORK STATUS This will show if either LAN (wired Ethernet) or WiFi (wireless network) is connected. If both is available, the wired connection is selected.	
STREAM FIRMWARE This can be updated over the network.	

MENU FUNCTIONS

SETTINGS	DISPLAY SHOWS
SOFTWARE VERSION This can be updated through the RS-232 port.	Software version 1.0.0
WIFI SIGNAL LEVEL This displays the signal level between 0 and 100%. If your streamer does not have an active WiFi connection, "0%" will be shown.	Wifi signal level 80%
SCAN WIFI NETWORK If you want to connect to a WiFi network, and have a supported WiFi dongle installed in the top USB socket, you can scan for available networks. Press the up button to scan. After the scan, you can browse through networks using the up and down buttons. Connecting to a WiFi network, can only be done using the remote - not through the front panel. Select the network using the centre button of the remote (E). To enter the password of the network, browse through letters and numbers using the up and down buttons. To move to the next character, press the right button. When you have selected the final character, do not press the right button, but press the centre button of the remote (E) to enter the password. If the connection fails, you can enter the password again.	Scan WiFi networks Press ^ to scan
FIRMWARE UPDATE Press the up button to check, if a firmware update is available. If it is, you can install it by pressing the down button. The update takes a few minutes - progress is shown on the display. "Downloading ..." will be shown while the update is downloaded. DO NOT switch off the power while the streamer is updating	Firmware update Press ^ to check
FACTORY RESET Press the ARROW UP button to reset all settings to factory default. When the reset is complete, the DAC will switch off. During the next power-up cycle, the DAC will reboot a couple of times.	Factory reset Press ^ to reset

SPECIFICATIONS

	SD-188	SD-288	SD-588
STREAMING	DLNA 1.5 | UPnP AV 1.0 Spotify Connect | Tidal Connect | Qobuz Connect	DLNA 1.5 | UPnP AV 1.0 Spotify Connect | Tidal Connect | Qobuz Connect	DLNA 1.5 | UPnP AV 1.0 Spotify Connect | Tidal Connect | Qobuz Connect
INPUTS	2 x BNC S/P-DIF (PCM 11-768 k-samples, 32-bit, DSD 64-256 in DoP mode) 2 x TOSLINK optical (PCM 11–192 k-samples, 32-bit, DSD 64 in DoP mode) 1 x USB fully isolated, UAC 2, asynchronous PCM 44–384 k-samples, 32-bit, DSD 64-256 native, DSD 64-128 in DoP mode	2 x BNC S/P-DIF (PCM 11-768 k-samples, 32-bit, DSD 64-256 in DoP mode) 2 x TOSLINK optical (PCM 11–192 k-samples, 32-bit, DSD 64 in DoP mode) 1 x USB fully isolated, UAC 2, asynchronous PCM 44–384 k-samples, 32-bit, DSD 64-256 native, DSD 64-128 in DoP mode	2 x BNC S/P-DIF (PCM 11-768 k-samples, 32-bit, DSD 64-256 in DoP mode) 2 x TOSLINK optical (PCM 11–192 k-samples, 32-bit, DSD 64 in DoP mode) 1 x USB fully isolated, UAC 2, asynchronous PCM 44–384 k-samples, 32-bit, DSD 64-256 native, DSD 64-128 in DoP mode
OUTPUTS	1 pair of RCA line outputs 1 x BNC S/P-DIF (11 - 768 k-samples, 32-bit)	1 pair of RCA line outputs 1 x BNC S/P-DIF (11 - 768 k-samples, 32-bit)	1 pair of RCA line outputs 1 x BNC S/P-DIF (11 - 768 k-samples, 32-bit)
AAVIK NOISE REDUCTION	Active Tesla Coils: 36 Active Square Tesla Coils: 72 Dither circuitry: 3 Gold Anti-Arial Resonance Coils (Gold AARC): 1	Active Tesla Coils: 72 Active Square Tesla Coils: 144 Dither circuitry: 6 Gold Anti-Arial Resonance Coils (Gold AARC): 2	Active Tesla Coils: 108 Active Square Tesla Coils: 216 Dither circuitry: 9 Gold Anti-Arial Resonance Coils (Gold AARC): 3
POWER CONSUMPTION	Standby: <1W On: <30W	Standby: <1W On: <30W	Standby: <1W On: <40W
DIMENSIONS	440 x 430 x 116mm / 17,3 x 16,9 x 4,6 inches	440 x 430 x 116mm / 17,3 x 16,9 x 4,6 inches	440 x 430 x 116mm / 17,3 x 16,9 x 4,6 inches
WEIGHT	21kg / 46lbs	21kg / 46lbs	21kg / 46lbs
MAINS VOLTAGE AND CURRENT:	100-240V AC - 50-60 Hz max 3,15A	100-240V AC - 50-60 Hz max 3,15A	100-240V AC - 50-60 Hz max 3,15A
ENCLOSURE CLASSIFICATION:	IP10	IP10	IP10

Aavik

We would love to hear about your experience with this product.
Don't hesitate to contact us with feedback or questions.

info@audiogroupdenmark.com

AUDIOGROUPDENMARK.COM