UNITY AMPLIFIER

USER GUIDE: U-180 / U-280 / U-580

Aavik



Rev.1.1 ENG | Please find the latest version of this manual on our website **audiogroupdenmark.com**

THE EQUIPMENT SHOULD BE SERVICED BY QUALIFIED SERVICE PERSONNEL

1. Read these instructions.

2. Keep these instructions.

3. Heed all warnings.

4. Follow all instructions.

5. Clean the amplifier only with a dry, lint-free cloth. For more thorough cleaning, unplug the amplifier from the mains supply and go over it lightly with a damp, lint-free cloth.

Do not use any type of chemical solvents or other cleaning products for cleaning.

6. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

7. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

8. Unplug this apparatus during lightning storms or when unused for long periods of time.

9. Do not defeat the safety purpose of the polarized or grounding-type plug.

10. Only place apparatus horizontally and on a suitable table or rack. If more components are stacked. Make sure to place the hottest unit - usually the amplifier, at the top.

11. Refer all servicing to qualified service personnel.

12. Servicing is required when the apparatus has been damaged in any way, such as when the power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

1. WARNING – Take care that objects do not fall and liquids are not spilled into the enclosure through any openings.

The equipment shall not be exposed to dripping or splashing. Liquid-filled objects such as vases should not be placed on the equipment.

2. The equipment has been designed for use in moderate climates and in domestic situations.

3. Only connect the equipment to a power supply of the type described in the operating instructions or as marked on the equipment. The primary method of isolating the equipment from the mains supply is to remove the mains plug. The equipment must be installed in a manner that makes disconnection possible.

4. If an abnormal smell or smoke is detected from the equipment, turn the power off immediately and unplug the equipment from the wall outlet. Contact your dealer and do not reconnect the equipment.

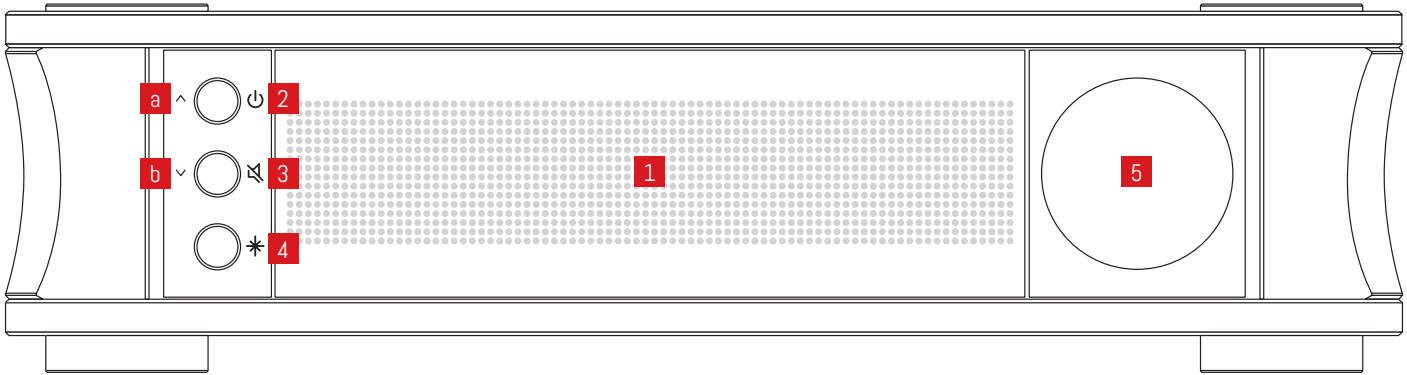


WARNING: To reduce the risk of fire or electric shock, do not expose the amplifier to rain or moisture.

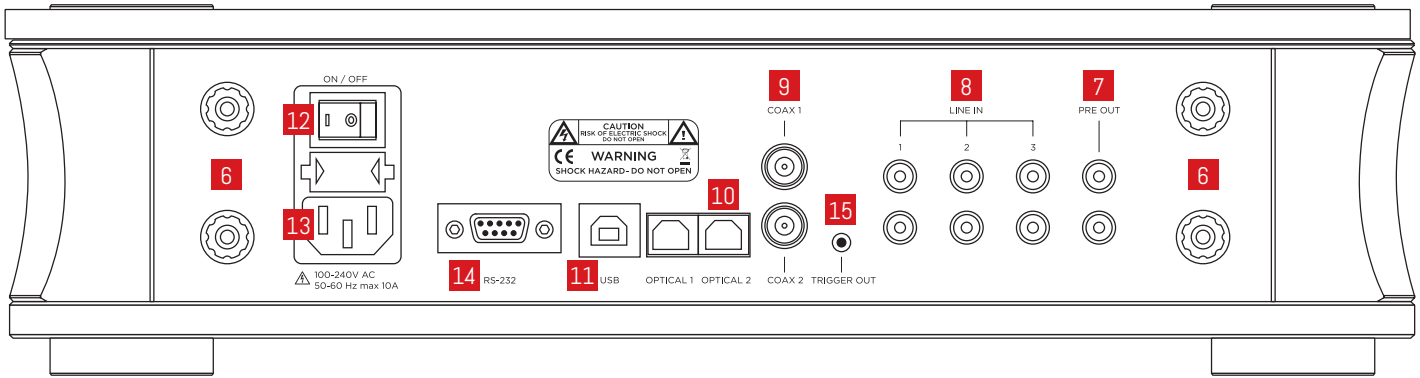
The lightning flash with an arrowhead symbol within an equilateral triangle, is intended to alert the user to the presence of uninsulated 'dangerous voltage' within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

CAUTION: To reduce the risk of electric shock, do not remove cover (or back). No user serviceable parts inside. Refer servicing to qualified service personnel.

BUTTONS ON THE FRONT OF THE AMPLIFIER



CONNECTORS ON THE BACK OF THE AMPLIFIER



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FRONT PANEL FUNCTIONS

1 DISPLAY

During normal operation the top line of the display shows the selected source, and the bottom line shows the volume setting.

When a digital input is selected, the format received is also displayed (PCM, MQA or DSD).

It is possible to change the source with the rotating knob 5 and/or the up/down buttons a / b when navigation mode is activated. When changing settings (see “MENU FUNCTIONS” page 7), the display will show the setting being changed.

2 STANDBY

Press the standby button 2 to place the amplifier in standby mode, or to switch on the amplifier from standby mode. When the amplifier is in standby mode, the only light showing on the amplifier will be a dim LED light in the lower left corner. When you switch on the amplifier, 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 amp will stabilize, and any power amp(s) connected to the pre outs will have some time to stabilize. When using trigger cables between the amplifier and power amp(s), the power amp(s) will be switched on and off together with the amplifier.

3 MUTE / REMOTE CONTROL PAIRING BUTTON

The mute button has multiple functions. When you press this button briefly, it will mute the speaker outputs of the amplifier, and also the pre outs with the standard configuration (see “MENU FUNCTIONS” page 7). The display will show "Mute" instead of the volume setting.

If you are using an Apple remote, you can pair the amplifier with one specific remote. In order to pair your remote control with the amplifier, press and hold the front panel mute button 3 for more than one second. When the amplifier is ready to pair, the display will flash slowly. To pair, press a button on your remote control facing it toward the amplifier. The display will show "Paired". Press the front panel mute button 3 again briefly to go back to normal operation.

You can remove the pairing, so that the amp will stop responding to the remote again, by pressing the front panel mute button for more than five seconds. When the five seconds have passed, the displays will flash fast. Press a button on the remote, to complete the procedure. The display will show "Unpaired". Press the front panel mute button 3 again briefly to go back to normal operation.

Note: Settings, including remote control pairing, are stored when your Aavik device is switched to standby. So remember to switch your device to standby, before removing power.

4 NAVIGATION/MENU BUTTON

The navigation button lets you select the desired source. Pressing the navigation button 4 briefly will activate input selection. The display will flash, while still showing the selected input. Turning the volume control knob 5 either clockwise or counter-clockwise, or pressing the up/down buttons a / b lets you select the desired source. Press the navigation button again to deactivate input selection mode.

The navigation button is also used for accessing the menu. See "MENU FUNCTIONS" page 7.

5 VOLUME CONTROL (ROTATING KNOB)

Use the rotating knob 5 to change the volume, source or other settings.



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REAR PANEL FEATURES

6 SPEAKER TERMINALS

The amplifier accepts speaker cables terminated with spade connectors and 4 mm banana plugs.

To connect speaker wires terminated with spades, loosen the isolation knob and insert the spade between the isolator and terminal. Tighten the isolation knob to secure the spade.



To connect speaker wires terminated with banana plugs, insert the banana plug into the center hole of the terminal.

7 PRE OUT

The amplifier is equipped with a set of pre out (pre-amplifier output) connections. They can be used for an active sub-woofer, a separate power amplifier or a headphone amplifier.

For some uses, such as in combination with an headphone amplifier, you may need to mute the speaker outputs, but not the pre outs. This can be achieved by changing the "Pre Out Mute" setting. See "MENU FUNCTIONS" for guidance.

8 LINE INPUTS

The amplifier is equipped with five single-ended, RCA line inputs.

The gain of the line inputs can be changed to equalize the volume of different signal sources. The range is between 5 and 15 dB for input 1-4, and between 1 and 11 dB for input 5. The default gain for all inputs is 9dB. Please see "MENU FUNCTIONS" for guidance.

9 BNC DIGITAL INPUTS

The DAC comes equipped with two electrical S/P-DIF digital inputs. They support PCM (32-192kHz, 16-24 bit), MQA.

10 TOSLINK OPTICAL INPUT

The DAC comes equipped with two optical S/P-DIF TOSLINK inputs. They support PCM (32-192kHz, 16-24 bit), MQA.

11 USB INPUT

The DAC comes equipped with one fully isolated, UAC 2, asynchronous USB input. It supports 32-192kHz, 16-24 bit PCM, MQA and DSD64/DSD128 using DoP encoding.

Note: When playing music in PCM format from a computer, the DAC supports sample rates up to 192kHz.

12 POWER ON/OFF SWITCH

Toggle the switch to switch between fully off and standby mode. When the amplifier is in standby mode, the power consumption is less than 1W. When the amplifier is on and idling, the power consumption is less than 65W.

13 POWER INLET (CAUTION!)

The amplifier 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.

14 RS-232, FIRMWARE UPDATE

Only for the use by qualified service personnel.

15 TRIGGER OUTPUT

The amplifier is equipped with one DC trigger output. This can be used to power-on power amps, sub-woofers and other equipment together with the amplifier. When the amplifier is switched on (not in standby mode), the trigger outputs will supply 12VDC. It can supply up to 80mA.

REMOTE

B i, Use this button to show information about the amplifier, or the currently playing stream.

C 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.

E ARROW UP/ARROW DOWN, Press this button to increase/decrease the volume setting.

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

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

H VOLUME DOWN, Press this button to decrease the volume setting.

I MUTE Press the button to mute the outputs of the amplifier, the display will show "Mute". Pressing the button again will reactivate the outputs of the amplifier.

J VOLUME UP, Press this button to increase the volume setting.

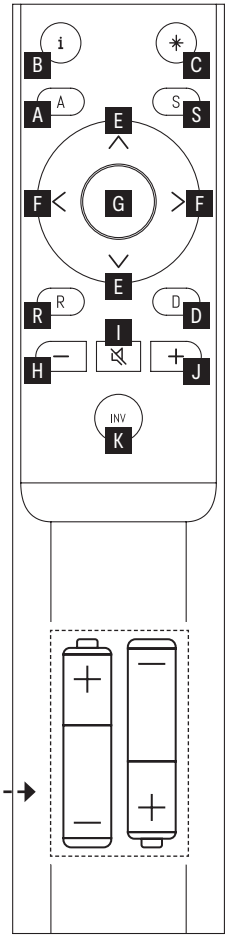
K INV, Used to invert the phase when playing back digital audio (streamer or DAC). An ‘i’ will be added to the source display, when the DAC is in inverting mode.

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 RIAA mode of the remote control.

S S, Used to select the streamer mode of the remote control.



INSTALLING/REPLACING BATTERIES

Press the button at the top of the back plate, and slide the cover down to reveal the battery compartment. Install two AAA batteries as indicated in the drawing. Slide the cover back, and press the button again to allow closing the remote completely.

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

Using the front panel or remote control, you can change many settings of the amplifier.
Using the remote, press the "Menu" button to enter or exit the menu.
Using the front panel, press and hold the navigation button 4 for 3 seconds.
When entering the menu, the gain setting of the current input will be shown on the display. The top line of the display shows the current option ("Preamp gain" when entering the menu), and the bottom line shows the current setting.
Using the remote, cycle through the options using the INPUT + and INPUT - buttons.
Using the front panel, press the navigation button 4 to cycle through the options.
Use the VOLUME UP and VOLUME DOWN buttons of the remote, the up and down front panel buttons (a / b)or the rotary knob 5 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.

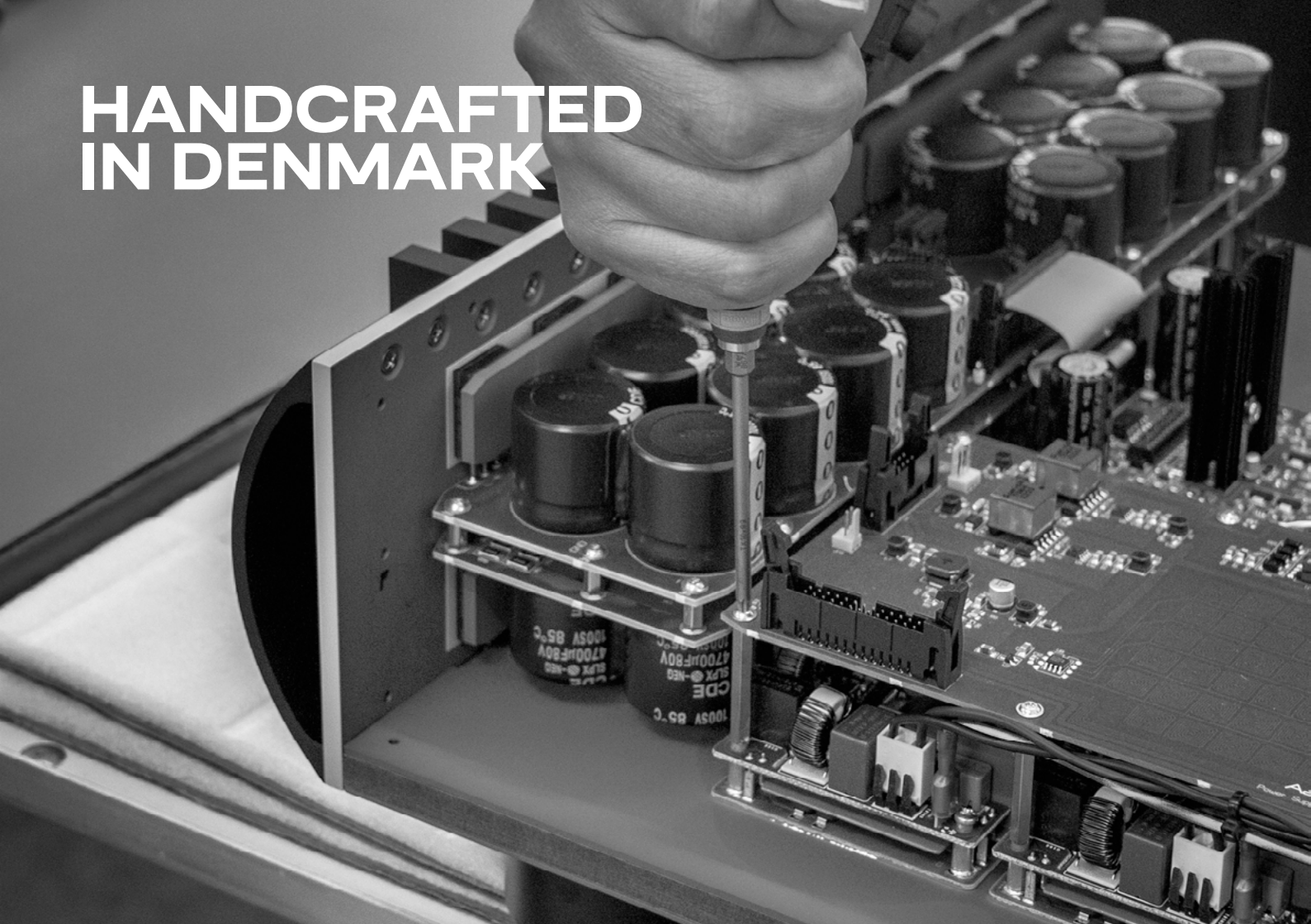
SETTINGS	DISPLAY SHOWS
Preamp gain (settings for individual inputs) Using this function you can set the gain of the selected input. The gain number shown, is the gain between the input and pre out. The power amp adds 26dBs of gain.	
Balance Using this function, you can change the left/right balance in 6 1dB steps.	
Pre out mute This setting can be set either on or off. With the default setting (On), the pre out connectors are muted with the speakers, when muting is enabled. With pre out muting off, the pre out connectors will stay on, when the amp is muted. This function can be used e.g. for running a headphone amp on the pre out connectors. With pre out muting off, you can change inputs and volume setting with muting on. When you switch off muting again, the volume will return to the previous setting.	
Display brightness You can change the display brightness in four steps: 10, 40, 70 and 100%	

MENU FUNCTIONS

SETTINGS	DISPLAY SHOWS
Display dim Using this setting, you can set the display to switch off automatically after 1-5 seconds. The standard setting is "dim off". When the display is off, a single dim LED will be lit in the lower right corner.	
Temperature This menu option shows the current operating temperature of the power amp.	
Software version This menu option shows the current firmware version of the amplifier.	
Home theatre bypass Using the home theatre bypass function, you can setup one of the inputs to use a fixed volume setting. Choose the input you want to use, or "Disabled" to use all inputs as regular inputs.	
Home theatre bypass level If you have setup one of the inputs as a home theatre bypass input, you can set the fixed volume level using this menu option. 0dB (full volume) is often used, but any level can be set.	

SPECIFICATIONS

	Aavik U-180	Aavik U-280	Aavik U-580
Line inputs:	Gain (line 1 - 2): 5-15dB; maximum input 4.5V RMS Gain (line 3): 1-11dB; maximum input 6.5V RMS Input impedance 10K ohm	Gain (line 1 - 2): 5-15dB; maximum input 4.5V RMS Gain (line 3): 1-11dB; maximum input 6.5V RMS Input impedance 10K ohm	Gain (line 1 - 2): 5-15dB; maximum input 4.5V RMS Gain (line 3): 1-11dB; maximum input 6.5V RMS Input impedance 10K ohm
Digital inputs:	2 x BNC S/P-DIF - 2 x TOSLINK optical 1 x USB UAC 2 All inputs support PCM 24-bit 32-192kHz and MQA. The USB input also supports DSD64 / 128.	2 x BNC S/P-DIF - 2 x TOSLINK optical 1 x USB UAC 2 All inputs support PCM 24-bit 32-192kHz and MQA. The USB input also supports DSD64 / 128.	2 x BNC S/P-DIF - 2 x TOSLINK optical 1 x USB UAC 2 All inputs support PCM 24-bit 32-192kHz and MQA. The USB input also supports DSD64 / 128.
Preamp output:	1 pair of RCA outputs Max output: 7,5Vrms Distortion, line stage: <0,005% (THD at 1kHz, 1V input) Output impedance: 50 ohms	1 pair of RCA outputs Max output: 7,5Vrms Distortion, line stage: <0,005% (THD at 1kHz, 1V input) Output impedance: 50 ohms	1 pair of RCA outputs Max output: 7,5Vrms Distortion, line stage: <0,005% (THD at 1kHz, 1V input) Output impedance: 50 ohms
Volume control:	76 1dB steps	76 1dB steps	76 1dB steps
Output:	2 x 300W 8 ohm, 2 x 600W 4 ohm Distortion (THD+N): <0,006% (1-100W, 1kHz, 8 ohm) IMD: <0,002% (1-100W, 4 ohm) TIM: <0,008% (1-100W, 4 ohm)	2 x 300W 8 ohm, 2 x 600W 4 ohm Distortion (THD+N): <0,006% (1-100W, 1kHz, 8 ohm) IMD: <0,002% (1-100W, 4 ohm) TIM: <0,008% (1-100W, 4 ohm)	2 x 300W 8 ohm, 2 x 600W 4 ohm Distortion (THD+N): <0,006% (1-100W, 1kHz, 8 ohm) IMD: <0,002% (1-100W, 4 ohm) TIM: <0,008% (1-100W, 4 ohm)
Aavik noise reduction:	Active Tesla Coils: 36 Active Square Tesla Coils: 88 Dither circuitry: 5 Anti Areal Resonance Coils: 4	Active Tesla Coils: 72 Active Square Tesla Coils: 160 Dither circuitry: 8 Anti Areal Resonance Coils: 4	Active Tesla Coils: 108 Active Square Tesla Coils: 232 Dither circuitry: 11 Anti Areal Resonance Coils: 4
Power consumption:	Standby: <0.5W Idle: <65W	Standby: <0.5W Idle: <65W	Standby: <0.5W Idle: <65W
Dimensions:	102 x 384 x 400mm	102 x 384 x 400mm	102 x 384 x 400mm
Weight:	8,8 kg	9,0 kg	10,7 kg


HANDCRAFTED
IN DENMARK

USER NOTES

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

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