Aavik ACOUSTICS

C-300 Preamplifier

User's guide



Aavik ACOUSTICS | C-300 Preamplifier | User's guide

Specifications:

Output:	Max 7.5Vrms unbalanced (RCA) or 15Vrms balanced (XLR) Distortion, line stage: <0.003% (THD at 1kHz, 1Vrms input) Output impedance: 50 ohms (unbalanced) or 100 ohms (balanced)
Phono:	Floating RCA (1 set) Load-impedance adjustable from 50 Ohm to 10 kOhm Frequency response: +/-0.5dB (20Hz-20kHz) Noise < -100dB at 2Vrms out Distortion < 0.01% (20Hz-20kHz) RIAA correction curve Gain: 62dB
Line:	Line 1: Gain: 14.5dB Input impedance: 5kOhm Line 2: Gain: 9dB Input impedance: 10kOhm Line 3: Gain: 5.5dB Input impedance: 10kOhm
Digital:	2 x RCA S/P-DIF (32-192kHz, 16-24 bit) 2 x TOSLINK optical (32-96 kHz, 16-24 bit) 1 x USB fully isolated, UAC 2, asynchronous (PCM 32-192kHz, 16-24 bit and DSD64/DSD128)
Volume control:	Volume adjustable from -80dB to 0dB in 80 1dB steps
Trigger outputs:	Two outputs with 12VDC 100mA available on each. Two 1/8" sockets, for stereo or mono jacks, with positive pole on the tip.
Dimensions:	100 x 440 x 370mm
Weight:	16.5 kg

Contents:

SPECIFICATIONS Page 2
SAFETY INSTRUCTIONS Page 3
REAR PANEL FUNCTIONS Page 4
FRONT PANEL FUNCTIONS Page 6
REMOTE FUNCTIONS Page 7

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.

WARNING: To reduce the risk of fire or electric shock, do not expose the preamplifier 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.

Safety instructions

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 the preamplifier 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. Place the preamplifier horizontally and on a suitable table or rack.
11. Refer all servicing to qualified service personnel.
12. Servicing is required when the preamplifier has been damaged in any way, such as when the powersupply cord or plug is damaged, liquid has been spilled or objects have fallen into the preamplifier, the preamplifier has been exposed to rain or moisture, does not operate normally, or has been dropped.

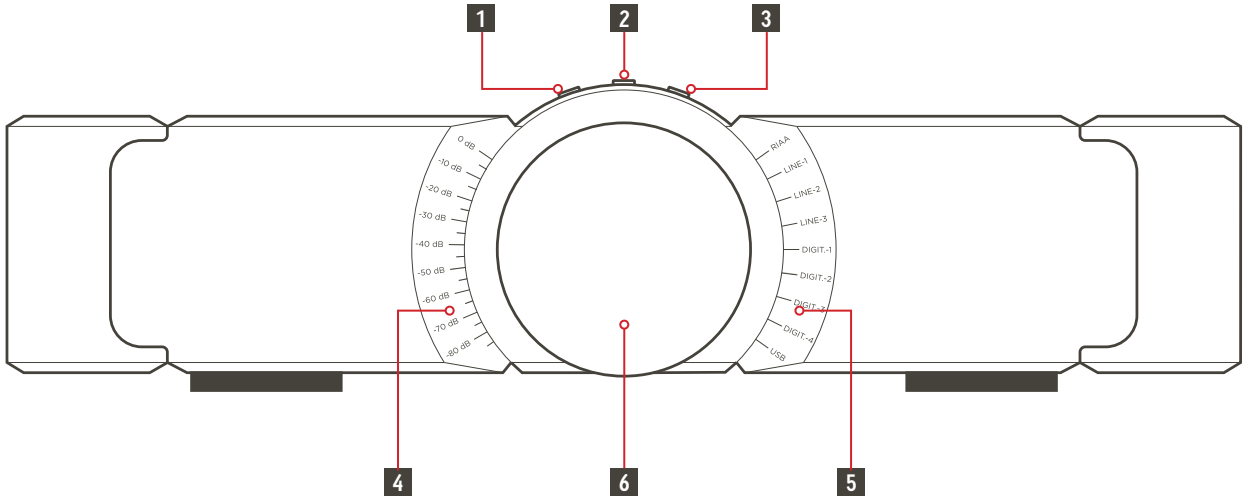
The equipment should be serviced by qualified service personnel

The preamplifier should be serviced by qualified service personnel when:

A. the power-supply cord or the plug has been damaged, or
B. objects have fallen, or liquid has been spilled into the preamplifier, or
C. the preamplifier has been exposed to rain, or
D. the preamplifier does not appear to operate normally or exhibits a marked change in performance, or
E. the preamplifier has been dropped or the enclosure damaged.

1. WARNING - Take care that objects do not fall and liquids are not spilled into the enclosure through any openings. The preamplifier shall not be exposed to dripping or splashing. Liquid-filled objects such as vases should not be placed on the preamplifier.
2. The preamplifier has been designed for use in moderate climates and in domestic situations.
3. Only connect the preamplifier to a power supply of the type described in the operating instructions or as marked on the preamplifier. The primary method of isolating the preamplifier from the mains supply is to remove the mains plug.
   The preamplifier must be installed in a manner that makes disconnection possible.
4. If an abnormal smell or smoke is detected from the preamplifier, turn the power off immediately and unplug the preamplifier from the wall outlet. Contact your dealer and do not reconnect the preamplifier.

Front panel



1 MUTE, OFF-SET, CARTRIDGE LOADING AND BALANCE SETTINGS

The mute button has multiple functions. When you press this button briefly, it will mute the outputs of the amplifier. A small light beneath the mute button will indicate that the outputs of the amplifier are muted. While muted, the volume display will continue showing the volume setting.

The other functions of the mute button, allows you to set individual volume off-sets between inputs, to set the cartridge loading for the phono stage, and to adjust the left/right balance.

INDIVIDUAL OFF-SET SETTINGS

Press and hold the mute button (1) one second to activate the individual off-set setting mode. When activated, three LEDs of the volume display (4) will be lit, with the same brightness *(Fig. b)*. This mode will let you choose between 6 off-set settings. Please see the Individual Off-set Setting Chart for the off-set settings. Turning the rotating knob (6) counter-clockwise will decrease the off-set setting, whilst turning the knob clockwise increases the off-set setting. Pressing the mute button (1) briefly will deactivate the gain setting mode, and the usual volume display will return. *(Fig. a)*

Individual Off-set Setting Chart	
dB (shown on display)	dB (off-set setting)
-85 - -75	-4
-70 - -60	-2
-55 - -45	0
-40 - -30	+2
-25 - -15	+4
-10 - 0	+6

CARTRIDGE LOADING ADJUSTMENT

With the RIAA/phono input selected in the source indicator (5), press and hold the mute button (1) for more than three seconds to enter cartridge loading adjustment mode. The volume display will change to having only a single LED lit, to indicate that cartridge loading adjustment mode is activated. *(Fig. c)*

Use the volume control (6) to set the cartridge loading. Please refer to the cartridge loading chart. Deactivate the cartridge loading adjustment by pressing the mute button briefly.

NOTE!

Pressing and holding the mute button (1) for less than three seconds, with the RIAA selected, will activate the gain setting mode. The button needs to be held for more than three seconds to activate the cartridge loading adjustment mode.

Cartridge Loading Chart			
dB	Ohm	dB	Ohm
-85	50	-40	800
-80	75	-35	900
-75	100	-30	1000
-70	200	-25	1500
-65	300	-20	2000
-60	400	-15	3000
-55	500	-10	4000
-50	600	-5	5000
-45	700	0	10000

BALANCE SETTING ADJUSTMENT

The balance between the left and right channel, can be adjusted in 1dB steps. The balance setting is common for all inputs. To enter the balance setting mode, press and hold the mute button (1) for more than five

Front panel functions

seconds. The volume display will change to having four LEDs lit with the same brightness, to indicate that balance adjustment mode is activated. *(Fig. d)*

Use the volume control (6) to change the balance setting. Please refer to the balance setting chart. Deactivate the balance setting adjustment by pressing the mute button briefly.

NOTE!
Pressing and holding the mute button (1) for less than five seconds, will cycle through off-set setting mode, and, with the RIAA selected, cartridge loading mode. The button needs to be held for more than five seconds to activate the balance setting adjustment mode.

Balance Setting Chart		
dB (shown on display)	dB (off-set left)	dB (off-set right)
-80 - -65	0	-3
-70 - -55	0	-2
-60 - -45	0	-1
-50 - -35	0	0
-40 - -25	-1	0
-30 - -15	-2	0
-20 - 5	-3	0

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 beneath the standby button. When you switch on the preamplifier, the outputs will be muted, and the standby LED with flash for a few seconds, to allow the power amp(s) some time to stabilise. When using trigger cables between the preamplifier and the power amp(s), the power amp(s) will be switched on and off together with the preamplifier.

3 NAVIGATION / REMOTE CONTROL PAIRING ✳

The navigation button lets you select the desired source. Pressing the navigation button (3) briefly will activate the navigation. A small light beneath the navigation button will indicate that navigation mode is activated. Turning the rotating knob (6) either clockwise or counter-clockwise lets you select the desired source. The LED light in the source indicator (5) shows the selected source. Press the navigation button again to deactivate navigation mode.

If you have more that one piece of equipment, that responds to the Apple IR code, you can pair the pre-amp with one specific remote. In order to pair your remote control with the C-300 amplifier, press and hold the navigation button (3) for more than one second. When the amplifier is ready to pair, the LED light beneath the navigation button (3) will flash slowly. To pair, press the play/pause button on your remote control facing it toward the amplifier. If the amplifier is playing during the remote pairing, the music should mute. You can reset the pairing, so that the pre-amp will respond to all Apple remotes again, by pressing the navigation button for more than five seconds. When the five seconds have passed, the LED will flash fast. Press the play/pause button on a remote, to complete the procedure. Press the navigation button (3) again briefly to go back to navigation mode.

4 VOLUME DISPLAY

The volume display consists of 18 small LED lights. The volume display has four functions:

1. When the amplifier is in normal setting, the volume display shows the current volume. The volume setting is activated when three LEDs are lit, with different brightness, in the volume display. Of the three LEDs, the brightest LED will indicate the current volume.
   The volume can be increased or decreased by turning the rotating knob (6). *(Fig. a)*
2. In individual off-set setting mode, three LEDs will be lit, with the same brightness. *(Fig. b)*
3. In cartridge loading adjustment mode, one LED will be lit in the volume display. *(Fig. c)*
4. In balance setting adjustment mode, four LEDs will be lit, with the same brightness. *(Fig. d)*

For these three alternate functions, please see the "1 Mute, Off-set, Cartridge Loading and Balance Settings" section for guidance.

5 SOURCE INDICATOR

A single LED light in the source indicator shows the selected source. It is possible to change the source with the rotating knob (6), when navigation mode (3) is activated.

6 VOLUME CONTROL (ROTATING KNOB)

Use the rotating knob (6) to change the volume (4), source (5) or other settings (1).

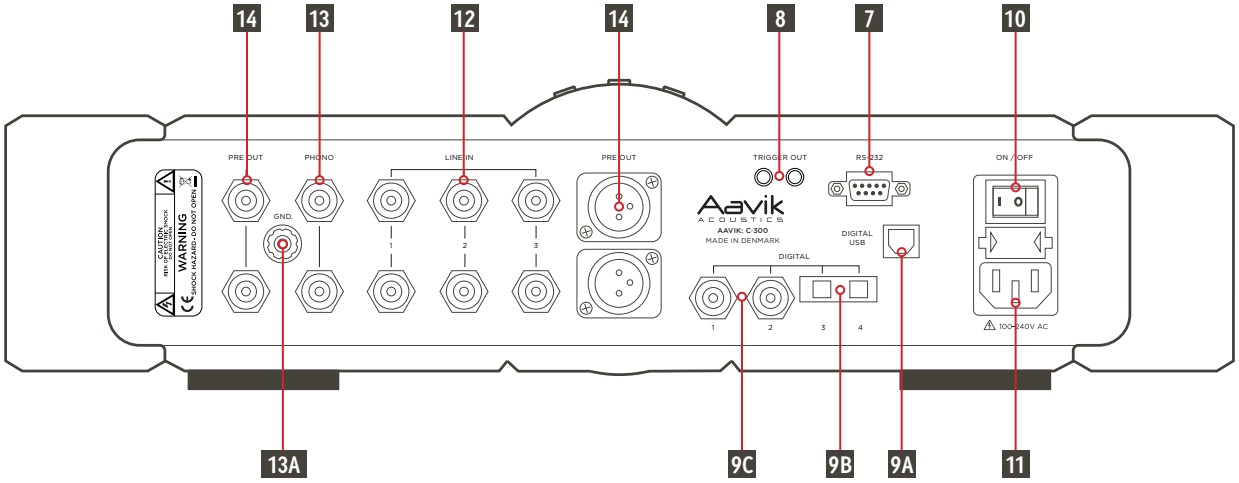

Fig. a


Fig. b


Fig. c


Fig. d

Rear panel functions



7 RS-232
The C-300 amplifier RS-232 connection can be used for firmware updates.

8 TRIGGER OUTPUTS
The C-300 preamplifier is equipped with two DC trigger outputs. These can be used to power-on power amps, subwoofers and other equipment together with the preamplifier. When the preamplifier is switched on (not in standby mode), the trigger outputs will supply 12VDC. They can each supply up to 100mA.

9 DIGITAL INPUTS
The C-300 is equipped with the following digital inputs: USB input, TOSLINK optical S/P-DIF inputs, and RCA electrical S/P-DIF inputs.

9A USB INPUT
The C-300 comes equipped with one fully isolated, UAC 2, asynchronous USB input. It supports 32-192kHz, 16-24 bit PCM and DSD64/DSD128 using DoP encoding.

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

Note: When playing music in PCM format from a computer, it is possible to select sample rates as high as 384kHz. The PCM DAC in the C-300 however, only supports sample rates up to 192kHz.

9B TOSLINK OPTICAL INPUT
The C-300 comes equipped with two optical S/P-DIF (32-96kHz, 16-24 bit) TOSLINK inputs.

9C RCA DIGITAL INPUTS
The C-300 comes equipped with two electrical S/P-DIF (32-192kHz, 16-24 bit) digital inputs.

10 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 0.5 watt.
When the amplifier is fully on, the power consumption is less than 25 watts.

11 POWER INLET (CAUTION!)
The C-300 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.

12 LINE INPUTS
The C-300 amplifier is equipped with three single-ended, RCA line inputs. The input impedance of the three inputs is 5 kOhm for the line 1 input, and 10 kOhm for the other two.

The gain of the line inputs is fixed, but you can set individual off-sets, to equalise the volume of different signal sources. Please see "1 Mute, Off-set, Cartridge Loading and Balance Settings" on page 4 for guidance.

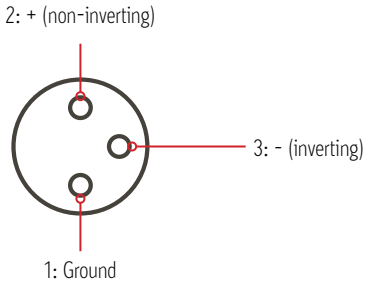
13 PHONO INPUT
The C-300 amplifier is equipped with one RCA phono input. The phono input is fully balanced with floating ground. The ground reference is found on the ground terminal (13A). To ensure the best performance, use a phono cable with a separate ground wire. The phono section of the C-300 amplifier uses the RIAA equalization curve. The gain of the phono section is 62 dB, which makes the C-300 phono section suitable for most low to medium

output MC cartridges. The cartridge load impedance is adjustable in 18 steps from 50 Ohm to 10 kOhm. Please see "1 Mute, Off-set, Cartridge Loading and Balance Settings" on page 4 for guidance.

14 LINE OUTPUTS

The C-300 amplifier is equipped with a single ended (RCA) and a balanced (XLR) line output. Both outputs can be used simultaneously.

XLR pin-out:

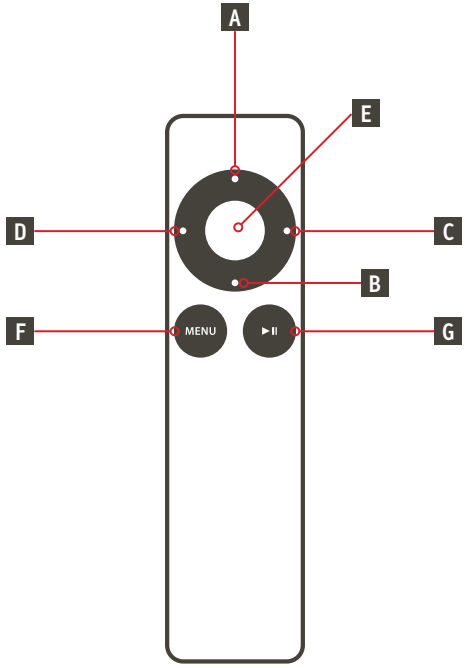


FACTORY RESET

You can reset all settings back to factory defaults. This will erase off-set settings, the cartridge load setting, the balance setting and the remote pairing settings. To do this, proceed as follows:

- Switch off the preamplifier at the main power switch (10)
- Wait 30 seconds
- Press and hold the three front panel buttons (1), (2) and (3)
- Switch on the main power using (10), while still holding the front panel buttons
- All LED indicators on the front panel will switch on, and stay on
- After approx. 8 seconds the LED indicators will switch off again.
- Release the front panel buttons, and switch off the preamplifier using the main power switch (10)

Remote functions



D VOLUME UP
Press this button to increase the volume setting.

D VOLUME DOWN
Press this button to decrease the volume setting.

D INPUT +
Press this button, to move to the next input. From Line 1 to Line 2 etc.

D INPUT -
Press this button, to move to the previous input. From Line 2 to Line 1 etc.

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

F MENU
Use this button to cycle through the off-set, cartridge loading (when the phono input is selected) and balance settings, and to return to the volume setting. The light patterns of the volume display (4), indicate which setting is active. The active setting can be changed using the volume up/down buttons (A and B). You can read about the different settings on page 4.

G MUTE
Press the ►II button to mute the outputs of the amplifier. A small light beneath the mute button of the front panel will indicate that the outputs of the amplifier are muted. Pressing the ►II button again will reactivate the outputs of the amplifier.

Aavik ACOUSTICS

www.aavik-acoustics.com