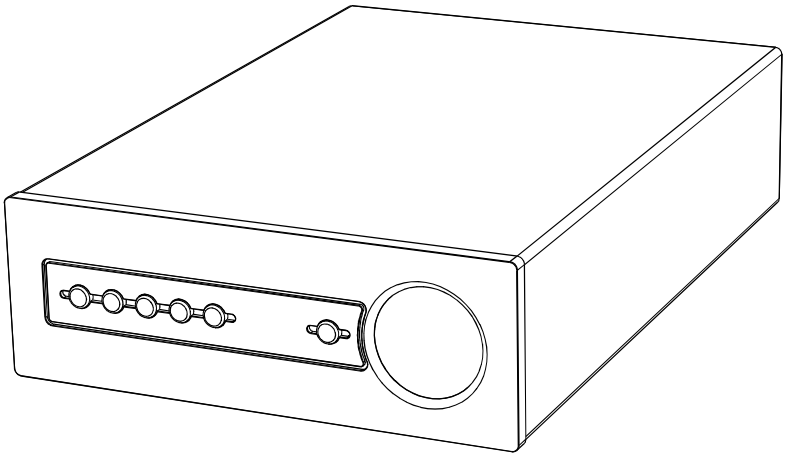
heed

forget hi-fi... remember music.



ABACUS S

digital-to-analogue converter

owner`s manual

precautions

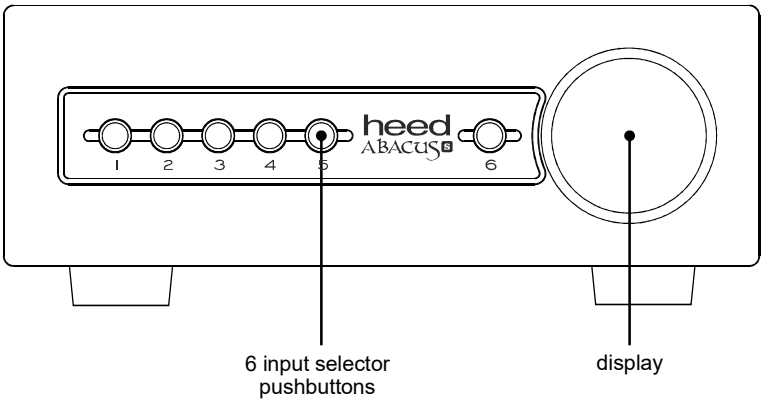
Instructions	All safety and operating instructions should be read and adhered to exactly as written here or as depicted on the unit. Please retain for future reference
Water and moisture	The unit sould not be used near water - that is, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or swimming pool, etc.
Ventilation	The unit should be situated so that its location or position does not interfere with its ventilation. For example, the unit should not be placed on a bed, sofa, rug, or similar surface, that may block the ventilation openings; or placed in a built-in installation, such as bookcase or cabinet that may impede the flow of air through the ventilation openings.
Heat	The unit should be situated away from heat sources such as radiators, stoves, etc.
Power-cord protection	Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the unit.
Lightning	For added protection during a lightning storm, or when left unattended and unused for long periods of time, unplug the unit from the wall outlet. This will prevent damage to the product due to lightning and power-line surges.
Object and liquid entry	Care should be taken so that objects do not fall into and liquids are not spilled into the inside of the unit. For this reason, no objects filled with liquid, such as vases or drinking glasses should be placed on the equipment.
Damage requiring service	The unit should be serviced by qualified service personnel when: - The power-supply cord or the plug has been damaged - Objects have fallen, or liquid has been spilled into the unit - The unit has been exposed to rain - The unit does not appear to operate normally or exhibits a change in performance - The unit has been dropped, or the cbinet damaged

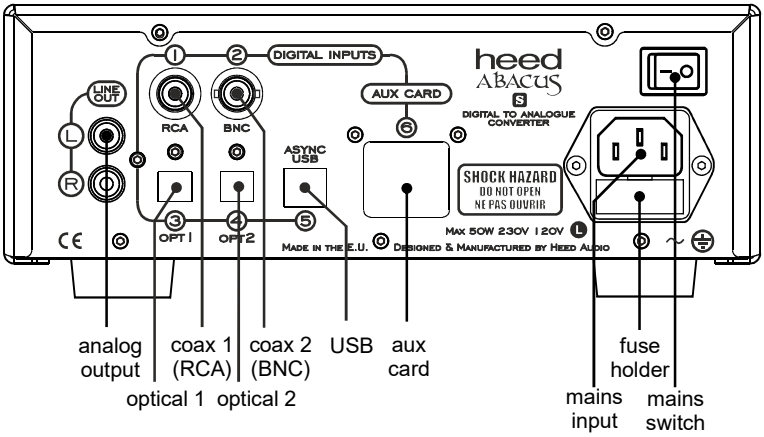
The Abacus d/a converter do not have any user serviceable parts. It is essential that repairs and updates are only carried out by our authorised trade partners - distributors and dealers -, or at the factory by Heed Audio itself. Many components are custom made, tested or matched and appropriate replacements are often unobtainable from other sources.

Therefore, users should not attempt to service the units beyond those means described in the operating instructions, or under any circumstances allow anyone to modify them. Unautrorised repairs or modifications will invalidate the guarantee of the units.

Grounding or polarization	Precautions should be taken so that the grounding or polarization is not defeated. All Heed components are designed to provide reasonable protection against harmful interference in a domestic installation. However, there is no guarantee that interference will not occur in a particular installation. If your Abacus does cause harmful interference to radio or television reception, which can be determined by turning off and on, you are encouraged to try to correct the interference by one or more of the following measures: - Reorient or relocate the receiving antenna; - the separation between amplifier and receiver (radio tuner, television set, etc.) - Connect the equipment into a power outlet on a circuit different from that to which the receiver is connected; - your Heed dealer or any experienced radio/TV technician for help.
Maintenance/cleaning	It is recommended to dust the equipment from time to time with a soft dry cloth.

Do not use cleaning solvents or abrasives for cleaning!
Always switch off and unplug he unit from the power supply when cleaning!





important note

always turn off the device and wait 2 minutes
before changing any cable connection in your system

installation

The installation procedure is straight-forward enough that you may install your new Abacus yourself by following the instructions contained herein. Should any problems be experienced which are not covered here, contact your local dealer. If you are unable to do so, or problems persist, however, do not hesitate to contact our distributor / reseller in your country (see our website) or us directly at Heed Audio.

unpacking

When opening the cardboard and unpacking the unit, you will find following items being supplied with:

Heed Abacus d/a converter, remote control handset, IEC-norm mains power cord, Owner`s manual

placement

In common with all high-quality audiophile equipment, the Abacus performs optimally when positioned on its own individual mounting surface, ideally a light rigid structure. There are many purpose built examples readily available from all better dealers.

Always allow adequate ventilation with sufficient airflow around the unit, do not mount on soft surfaces, for example, carpets or soft fabrics.

connection to mains supply

Before performing any connections or disconnections ensure that the power on/off switch of the unit is in off position.

Always check that the voltage and frequency of the mains supply corresponds to the specifications as labeled on the unit.

1. Connect the power cord`s IEC type plug into the power inlet connector of the Abacus.
2. Connect the power cord`s mains plug to your power outlet (mains wall connector).

input connections

The Abacus S has 5+1 digital input connectors.

Number 1 to 5 inputs are standard built-in connections. See specifications for data of the inputs.
Number 6 input is dedicated for the expansion card. When no card is fitted, this input is inactive.
The specifications of input 6 are detailed in the manual of the expansion card.
The installation of the expansion card can be made by an authorized Heed dealer only.

If an STR network card is installed, connect either the ETHERNET adaptor (included) or the WIFI adaptor (optional) to the USB A connector of the AUX input. In case of the ETHERNET adaptor, connect an ETHERNET cable to the adaptor and connect this cable to your router/modem.

Never connect line level analog signal into the coaxial connectors of the Abacus.

line-level output connection

Your Abacus has a pair of RCA line-level analog outputs. This output has no volume control, therefore do not connect a power amplifier directly to these outputs.

operation

When all steps of installation are correctly completed, your Abacus is ready for action!

Turn down the volume control of your amplifier to the minimum setting
Switch on your desired source components.
Switch on your Abacus with the power switch on the rear panel and
allow some time (5-10 minutes minimum) for warming up.

If your unit was transported or stored in cold environment allow it to warm up to room temperature before switching on!

input selection

The input you`d like to listen to can be selected either with the front panel input selector buttons or with the grey input up (▶) or input down (◀) buttons of the remote control handset. The numbered front panel buttons are:

1.: coaxial 1 (RCA) **2.:** coaxial 2 (BNC) **3.:** optical 1 **4.:** optical 2 **5.:** USB (**6.**): network

The active input changes automatically to input 6. if a playback is started with a connected streaming app*.

***Streaming app: *mConnect Control* for Android or iPhone, *mConnect Control HD* for Android tab or iPad**

display

If the Abacus is locked onto a digital audio signal, the display can show you its actual sampling frequency. There are three display modes, which can be rotated through with the (**D**) button of the remote control.

***1.**: input name and frequency **2.**: input name **3.**: number of the input only*

menu

Through the menu system you can adjust some extra sound options of the Abacus. The menu is accessible by pressing the (**MENU**) button of the remote control.
The main functions (upper row) can be chosen by the (◀) and (▶) buttons. By pressing the (**MENU**) button you can access the second level options. These can be selected by the (◀) and (▶) buttons, and they are taking effect immediately.
You can exit the menu by pressing the (**MENU**) button again. The menu system is the following:

FILTER MODE
sharp: linear phase fast roll-off filter
soft: linear phase slow roll-off filter
SD hard: short delay fast roll-off filter
SD soft: short delay slow roll-off filter

VOLUME (only active when STR card is installed)
to max: reset volume to max on all inputs
exit: leave menu without changing volume

WIFI REG (only active when STR card with Wifi adaptor is installed and input 6 is selected)
WPS mode: start WPS discovery (60 seconds)
softAP: start softAP mode for direct connection

The **device volume** can be set by a connected STR module and active player application. The choosen volume level is stored and applied to all inputs equally. If the device is not connected to the network, the 'VOLUME' - 'to max' option of the menu can restore the original maximum volume.

For **Wifi connection with WPS**, push WPS button on your router/modem, then select 'WIFI REG' - 'WPS mode' in the menu. The Abacus will try to connect to your network, and display 'WIFI' when the connection is active.

SoftAP mode creates a temporary Wifi network, the SSID name starts with '**`Abacus_`**'.
1. With your mobile device, connect to this network, the password is: `password`.
2. In the control app (**mConnect Control**, or **Control HD**), select the '*Play to*' tab, and choose '*HEED Abacus*'.
3. Select the '*Player*' tab, and with the gear icon, select '*Device Setup*' and '*Wifi network selection*'.
4. Choose your Wifi network from the list, type in your password, and connect. The connection process may take some minutes. When the connection becomes active, the display shows 'WIFI'.
5. Reconnect your mobile device to your network.
6. Select and refresh the 'Play to' tab in the control app, and choose 'HEED Abacus'.

troubleshooting

no power, no lights	connect the mains supply chord and switch on the mains ↶ still not OK? disconnect the mains chord then check the fuse on the back panel and replace it with the same rated one if it is blown ↶ still not OK? test your mains socket with an other appliance and if it does not work either check your household fuse or contact your electrician ↶ still not OK? contact your heed dealer
no sound from the output or volume is low	turn on your source component, select the corresponding input, be sure your amplifier is not muted and the correct input is selected, then apply some volume ↶ still not OK? check the connections go to and from the d/a converter ↶ still not OK? with STR card, check the volume with a player app or reset volume ↶ still not OK? contact your heed dealer
the display does not show the sample rate	check every digital connections and be sure your source device is turned on and playing ↶ still not OK? change the display mode to see the the sample rate ↶ still not OK? make sure that the source format is compatible with the Abacus ↶ still not OK? contact your heed dealer
the sound is OK but the display is not working properly	change onto another input and back, see if the display works as it should ↶ still not OK? switch off the Abacus, wait a minute and switch it on again. If this solves the problem, you probably connected or disconnected a cable in your system with the Abacus turned on, or there is a chance that your system has some grounding issues. Please check it. ↶ still not OK? contact your heed dealer
rc handset does not work	do not block the front panel area of your d/a converter ↶ still not OK? change your RC handset batteries with the same type ↶ still not OK? contact your heed dealer
troubles during Wifi setup	check your Wifi router/modem, verify that your network is active ↶ still not OK? if WPS mode does not connect within 60 seconds, try the process again ↶ still not OK? if the network start with 'Abacus_' cannot be found with your mobile device in softAP mode, restart the Abacus and try again the process ↶ still not OK? contact your heed dealer
any other abnormal activity	restart the Abacus ↶ still not OK? contact your heed dealer

specifications

inputs:	1 RCA coaxial S/PDIF input 1 BNC coaxial S/PDIF input 2 Toslink optical input 1 asynchronous USB input 1 auxiliary input for expansion card
outputs:	1 pair RCA line level analog output
output level:	2.1 Vrms
frequency response:	3 Hz - (depends on sample rate)
DSD filter frequency:	50 kHz standard Scarlet Book
sampling frequencies BNC, RCA, optical:	32 / 44.1 / 48 / 88.2 / 96 / 176.4 / 192 kHz max. 24bit PCM
asynchronous USB:	32 / 44.1 / 48 / 88.2 / 96 / 176.4 / 192 / 352.8 / 384 kHz max. 32bit PCM and 64 / 128 DoP DSD
network (optional card):	32 / 44.1 / 48 / 88.2 / 96 / 176.4 / 192 / 352.8 / 384 kHz max. 32bit PCM and 64 / 128 / 256 native DSD
max consumption:	50 VA
weight:	4.5 kg
dimensions:	22 x 8.7 x 32.5 cm (W x H x D)

heed
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heed audio factory contact

Heed Audio Kft. (Ltd.)
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H-1181 Budapest
Hungary

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info@heedaudio.hu
www.heedaudio.com

distributor contact

warranty

Service enquiries in countries with appointed distributor should be addressed first to the supplying dealer and/or Heed Distributor.
Warranties granted in these countries are entirely at the discretion of distributor.

factory warranty

If within three years of the purchase date your Heed Abacus proves to be defective for any reason other than accident, misuse, neglect, unauthorised modification or fair wear and tear, Heed Audio Ltd. will, at its discretion, replace the faulty parts without charge for labour. This factory warranty is valid only for units sold into countries with no appointed Heed Distributor.