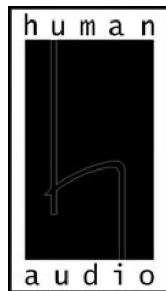


Human Audio – „human scale”

Fortepiano - Integrated Amplifier

DuoForte - Additional Power Plant



OPERATION MANUAL

(User's Manual)

v1.0a



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Introduction>>>

Chapter 1 – Presentation of Fortepiano

Human Audio says thanks you for choosing the **Fortepiano/DuoForte** product!

This section explains the main advantages of the device and how these solutions create almost the same fidelity as live music.

The power supply without any power network interference:

This product is **network independent**, battery operated, and free of any disturbing „inverter” circuits. This technology is utilized in order to ensure that the listener enjoys the same high quality of sound any time of day, anywhere in the world. With Human Audio devices, many expensive and unstable power supply regenerator, and network cable become useless. In addition, for those who would like to relax and enjoy their music without worrying about short battery life - we have the solution! Thanks to its **optimized energy consumption**, Fortepiano and the optional DuoForte are here with up to **24 hours continuous listening on a single charge**.

Communication and Control:

The Fortepiano is prepared to be simply and easily controlled by the listener while it displays all the important information. The volume functions are available through the ergonomically designed, **easy to understand**, soft-touch **bamboo remote (optional)**. The remote gives control of the device at the touch of a button and all the incidents immediately displayed on the modern, but not overbearing, **OLED** display built into your device. The **battery control** is always active and **informative** the discrete alert light turns before an **automatic disconnection** occurs because of a needed recharge.

Chapter 2 - Important warnings and safety information



The manufacturer certifies that the product meets the requirements of the European Union **CE certificate**, so the device can be safely used in-house. **Use in full compliance with the instructions!** Never attempt to disassemble or mechanically damage the device, because it is **dangerous** and can cause **accidents**, personal injury or **fire**! If the device damaged, **DO NOT TRY TO USE THE DEVICE** and **immediately** contact the dealer or manufacturer!



DO NOT try to power on the device without properly connected speakers!
NEVER attempt to connect any cable during power on state! Using of third party or damaged wires or accessories is FORBIDDEN and life threatening! Near of the Fortepiano some electromagnetic interference is POSSIBLE because of switching amplifier technology inside!

FCC Notice “Declaration of Conformity Information”

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna. Locate the antenna more than five meters away from the equipment and connect it to the receiver using a shield cable.

WARNING: Only peripherals complying with the FCC class B limits may be attached to this equipment. Changes or modifications made to this equipment, not expressly approved by us or parties authorized by us could void the user’s authority to operate the equipment. This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference,
- (2) This device must accept any interference received, including interference that may cause undesired operation.



The built in **battery contains acid**. Dismantling and/or damaging it, or not following the instructions can cause **personal injury or even a fire**! If the device is not working properly, please **immediately** contact the dealer or manufacturer!

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Chapter 3 - Packaging and accessories

The device consists of **two main parts**, which are packed in one box:

1: Fortepiano Unit

- Power supply (including battery and charge connector)
- Source selector and 32 steps volume attenuator with discrete relay circuit
- Power amplifier
- In & output connectors (including the "umbilical cord" connector for the optional DuoForte Unit)
- Battery control lights
- Display
- Control buttons and knob (including the on/off switch)
- Remote control receiver

2: DuoForte Unit (optional)

- Power supply (including battery and charge and "umbilical cord" connector)
- Battery control lights

The packages also include:

1. external battery charger with CE approval
2. DuoForte's " umbilical cord " which connects the two units (**optional**)
3. charging forwarder cable for DuoForte (**optional**)
4. infrared remote controller (**optional**)

Chapter 4 – Usage the device with other Human Audio products

Recommended components:

- **Libretto** CD-Player
- **DuoForte** the Fortepiano's optional auxiliary/additional power plant
- **Scene** dipole speakers



Of course, other standard non Human Audio product is also compatible with your device, so there will be no compatibility problems if you want to use other **standardized** components. If you are not sure of the anything mentioned above, please ask your **dealer** before using.

Chapter 5 - Technical data

Fortepiano & optional DuoForte unit

Inputs:	2 pairs unbalanced (RCA) & one pair balanced (XLR*) (*Note: do not use the balanced input without DuoForte)
Input sensitivity:	1.5 Vrms
Input impedance:	
- XLR* input:	10K Ohm*
- RCA input:	10K Ohm
Attenuation:	32 steps from -62dB to 0dB (2dB/step)
Frequency response:	20Hz - 20kHz (\pm 1dB)
Minimum load impedance:	3 Ohm
Output power:	2x 10W @ 8 Ohm 2x 16W @ 4 Ohm 2x 35W @ 8 Ohm (with DuoForte) 2x 50W @ 4 Ohm (with DuoForte)
THD+N:	<0.035% @ 8W with 8 Ohm load <0.017% @ 10W with 8 Ohm load (with DuoForte) <0.019% @ 30W with 8 Ohm load (with DuoForte)
Signal to Noise ratio:	> 101dBA > 110dBA (with DuoForte)
Dynamic Range:	> 110dBA > 114dBA (with DuoForte)
Channel separation:	> 99dBA > 101dBA (with DuoForte)
Power supply:	
- Internal:	Sealed, maintenance-free batteries (SLA type)
- Charging:	Automatic battery charger with CE approval 100-230V AC
Operation time:	12-24 hours continuous (assuming full charge)
Charging cycle:	max.12 hours
Physical Dimensions:	(2x) 180 x 100 x 270 mm
Weight:	TBD

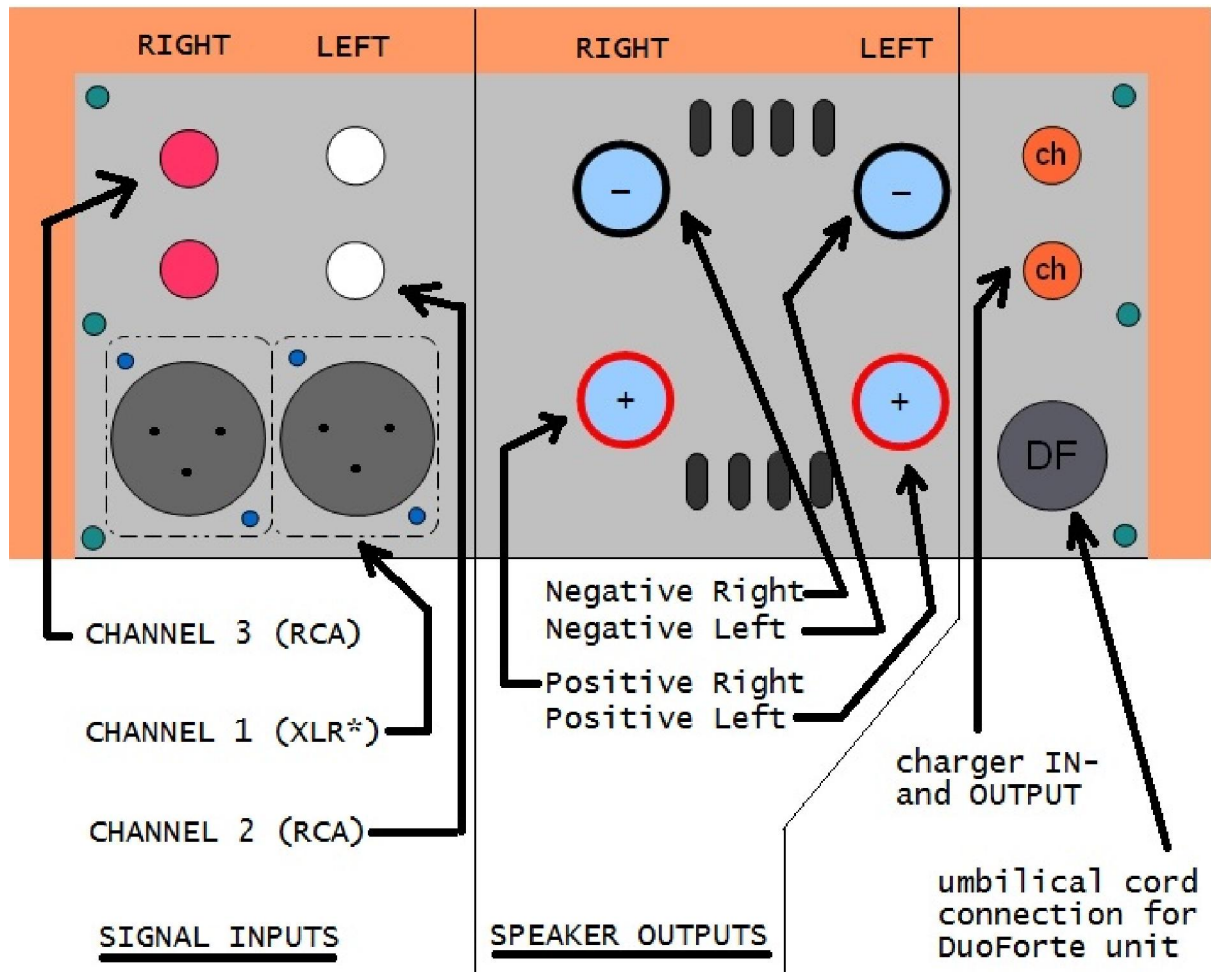


This data is indicative! We reserve the right of unannounced change without notice!

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Connecting the device>>>

Chapter 6 - Connectors on the back



Fortepiano:

- charging connector **IN** (you need to connect here the external charger)
- charging connector **OUT** (you need to connect here optional DuoForte for charging purpose)
- **"umbilical cord"** connection (to connect the optional DuoForte)
- Speaker outputs (2 pairs vertically)
- Inputs (one pair **XLR*** and two pairs RCA)



*The XLR inputs can be used only together with DuoForte PSU

DuoForte:

- charging connector **OUT** (you need to connect here optional DuoForte for charging purpose)
- **"umbilical cord"** connection (to connect the optional DuoForte)

Chapter 7 - Charging and connecting the charger



In case of operation with DuoForte: **DO NOT** connects the charging unit until the „umbilical cord“ is properly connected to two units!



Never, under any circumstances **DO NOT** disconnect the "umbilical cord" while the amplifier is powered on!

The **devices** and the electrical outlet plug (**supplied accessory**) external **automatic charger** can be connected constantly (**provided that the "umbilical cord" is properly connected at both ends**) because the device, when turned on, instantly disconnects the charger internally, so the network and the operation of the charger has no effect on the sound.

If the informative light (LED) **on the charger** is **red**, it is currently charging on high current. **Green** signifies a fully charged internal battery. It is fully **charged** when the charging state indicator on the external charger remains green.



Long duration float is not harmful to the batteries, but if the device will not be used for a long time (longer travel, etc...) it is recommended to unplug the charger.



If the device is not used regularly it is recommended to **completely charge** the batteries at least **once a month** (until green light) to maximize battery life.



IMPORTANT NOTICE!



Never, under any circumstances use a third party charger!

Any not approved by the manufacturer can cause device failure and could be dangerous, causing serious injuries and even fire!

Chapter 8 - Speaker outputs

There are two pair speaker outputs on the Fortepiano's rear side.

You can easily connect your speakers to the terminals, but please be careful during to connection:



DO NOT powering on the amplifier without load (proper connected speakers)



Floating Speaker Output – The speaker output terminals are floating, with a 12VDC offset (DC across the speaker terminals is still 0V).

Please consult Human Audio Support (support@human-audio.com) if your setup requires any of the following configurations:

1. Multiple amplifiers to drive a single speaker driver (**Never do this!**)
2. Subwoofer that accepts and sums left and right input signals from **TWO** amplifier's speaker terminals
3. Grounding other audio signal grounds to any of the speaker terminals on the amplifier
4. Using two amplifiers to drive a bi-amp, series-crossover speaker (uncommon setup)

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Use of equipment>>>

Chapter 9 - Front panel controls

The front-panel of the control unit there are two two-position (multifunction) up and down, tilt switches and between those a volume control knob from left side to right side, which are the followings:

1. POWER

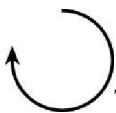


POWER ON



POWER OFF

2. VOLUME UP & DOWN



Turn the volume knob clockwise direction to increase the volume



Turn the volume knob reverse clockwise direction to decrease the volume

3. INPUT SOURCE (CHANNEL) SELECTOR



CHANNEL UP

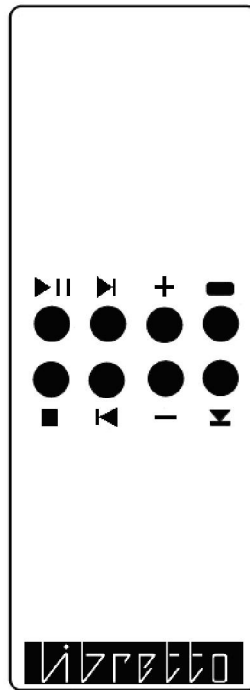


CHANNEL DOWN

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Chapter 10 - Remote controller (optional)

The remote control button features four columns 2 rows of buttons with the following functions:



1: PLAY / PAUSE

2: STOP-PLAYING

3: NEXT TRACK

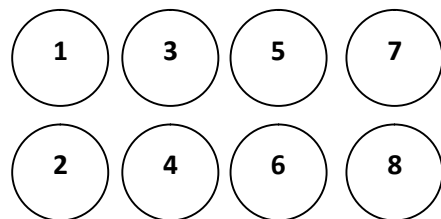
4: BEGINNING / PREVIOUS TRACK

5: **Volume Up**

6: **Volume Down**

7: DISPLAY ON/OFF (for Libretto CDP only)

8: Digital input selector (for future implementation only)



Chapter 11 - Display

The display constantly informs the listener of the function status:

The following displayed:

- Volume level form -62dB (minimum level) to 0dB (maximum level)
- Selected input:
 - o Channel [1] means the XLR input selected
 - o Channel [2] means #2 of RCA input selected
 - o Channel [3] means #3 of RCA input selected

Chapter 12 – Powering On and Off



Before turning on the device, **make sure** that the speakers connected properly! **DO NOT** tries to powering ON the amplifier **without** load! (connected speakers)

The **front power button** can switch the device on and off.



Never connect the DuoForte unit to the amplifier while the device switched on! Otherwise, the **device can be heavily damaged!**



Before you turn off your device, we recommend decreasing the volume level.



The amplifier will memorize the last settings of volume and input on the next switching on.

Chapter 13 – Selection of input channels / sources /

After the correct connection and powering ON the device, you can easily select input channels (sources) on the front panel placed INPUT SOURCE SELECTOR switch.

Chapter 14 - Charge states and signals

The control unit at the bottom (normally pale green light), shows the battery control status state.

If green, the battery is at an appropriate charging level for listening music.

A red light indicates only short time left for device usage, at this point the device should be turned off in order for the automatic charging process to start.



If the red light is triggered it is safe to continue to listen to music, as the system will disconnect itself before the built-in rechargeable batteries reach a critical low level of charge.



If you are listening to music while the light was red, it means that you have only a maximum of 2 hours to go to the auto-off!

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Troubleshooting>>>

Chapter 15 – The device does not turn on

1. It is possible that the batteries are no longer holding charge, or the power network, the charger, or the control unit connection is faulty. If you start charging, the red light indicates the charge level. Wait a few hours for recharge the batteries before listening music.



If the above points are carried out, but did not succeed, please contact the dealer or the manufacturer!

Chapter 16 - The device switched on but no sound from the speakers

1. 1. Make sure that the input and speakers connected properly, there is input signal existing, selected the right input source and that you have set any volume level.



If the above point carried out, but did not succeed, please contact the dealer or the manufacturer!

Chapter 17 – The remote control does not work

1. It is possible that the remote control device is outside the reach of the receiving device, make sure that the infrared remote control unit is close enough to the optical medium on the device to be read and that nothing is obstructing the infrared from reaching the receiver.
2. If the device is operated in accordance with the front panel controls of the device, but the remote still does not seem to function, replace the batteries in the remote. (only 1.5 volt AAA / ALKALINE type / LR03 / batteries and make sure to use the correct polarity)



If the above points are carried out, but did not succeed, please contact the dealer or the manufacturer!

Chapter 18 – The battery charger does not charge the device

Make sure that each endpoint of the charger is properly connected and the charger indicator lights (red or green color) are lit. If not, it is possible that there is no voltage (power) to the power connector (plug).



It should be noted that the charging process is not taking place unless there is a red indicator light signifying that occurrence. If the above points are carried out, but did not succeed, please contact the dealer or the manufacturer!

Other information>>>

Chapter 19 – Explanations

In this chapter, there are explanations for some of the terms and abbreviations mentioned in the manual

HUMAN AUDIO / multi-location “HA” stand by the device manufacturer (brand)

PSU: power supply

LED: abbreviation for light emitting diode

OLED: organic LED

UMBILICAL CORD: essential cable for the connecting the devices to each other

RCA: asymmetric coupling which provides connectivity (pin 2: signal and ground)

XLR: symmetric coupling which provides connectivity (pin 3: + / - signs and ground)

AAA: one size type of batteries

ALKALINE: durable and leak-proof battery type

Chapter 20 - User notes

[illegible]

Chapter 21 - Service and dealer registrations