

Harley Benton

HBCE 990BK / WH / RD / AM / BEM
electric cello



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1 General information

This user manual contains important information on the safe operation of the device. Read and follow all safety notes and all instructions. Save this manual for future reference. Make sure that it is available to all persons using this device. If you sell the device to another user, be sure that they also receive this manual.

Our products and user manuals are subject to a process of continuous development. We therefore reserve the right to make changes without notice. Please refer to the latest version of the user manual which is ready for download under www.thomann.de.

1.1 Further information

On our website (www.thomann.de) you will find lots of further information and details on the following points:

Download	This manual is also available as PDF file for you to download.
Keyword search	Use the search function in the electronic version to find the topics of interest for you quickly.
Online guides	Our online guides provide detailed information on technical basics and terms.
Personal consultation	For personal consultation please contact our technical hotline.
Service	If you have any problems with the device the customer service will gladly assist you.

1.2 Notational conventions

This manual uses the following notational conventions:

Letterings

The letterings for connectors and controls are marked by square brackets and italics.

Examples: *[VOLUME]* control, *[Mono]* button.

Instructions

The individual steps of an instruction are numbered consecutively. The result of a step is indented and highlighted by an arrow.

Example:

1. ➤ Switch on the device.
2. ➤ Press *[Auto]*.
⇒ Automatic operation is started.
3. ➤ Switch off the device.

1.3 Symbols and signal words

In this section you will find an overview of the meaning of symbols and signal words that are used in this manual.

Signal word	Meaning
DANGER!	This combination of symbol and signal word indicates an immediate dangerous situation that will result in death or serious injury if it is not avoided.
CAUTION!	This combination of symbol and signal word indicates a possible dangerous situation that can result in minor injury if it is not avoided.
NOTICE!	This combination of symbol and signal word indicates a possible dangerous situation that can result in material and environmental damage if it is not avoided.
Warning signs	Type of danger
	Warning – danger zone.

2 Safety instructions



DANGER!

Danger for children

Ensure that plastic bags, packaging, etc. are properly disposed of and are not in the reach of babies and young children. Choking hazard!

Ensure that children do not detach any small parts (e.g. knobs or the like) from the product. They could swallow the pieces and choke!

Never let children play unattended with the product.



CAUTION!

Possible hearing damage

Making music for a prolonged period and at high volume can cause hearing damage.

Avoid playing the unit at full volume, especially when using headphones.



NOTICE!

Operating conditions

This device has been designed for indoor use only. To prevent damage, never expose the device to any liquid or moisture. Avoid direct sunlight, heavy dirt, and strong vibrations.

Only operate the device within the ambient conditions specified in the chapter 'Technical specifications' of this user manual. Avoid heavy temperature fluctuations and do not switch the device on immediately after it was exposed to temperature fluctuations (for example after transport at low outside temperatures).

Dust and dirt inside can damage the unit. When operated in harmful ambient conditions (dust, smoke, nicotine, fog, etc.), the unit should be maintained by qualified service personnel at regular intervals to prevent overheating and other malfunction.



NOTICE!

Possible damage by leaking batteries

Leaking batteries can cause permanent damage to the device.

Take batteries out of the device if it is not going to be used for a longer period.



NOTICE!

Possible property damage by magnetic fields

Loudspeakers produce a static magnetic field. Therefore, maintain an appropriate distance to devices that can be adversely affected or damaged by an external magnetic field.

**NOTICE!****Possible staining**

The plasticiser contained in the rubber feet of this product may possibly react with the coating of your parquet, linoleum, laminate or PVC floor and after some time cause permanent dark stains.

In case of doubt, do not put the rubber feet directly on the floor, but use felt-pad floor protectors or a carpet.

3 Scope of delivery

Keep the original packaging. To optimally protect the instrument against vibration, dust and moisture during transportation or storage use the suitable carrying bag.

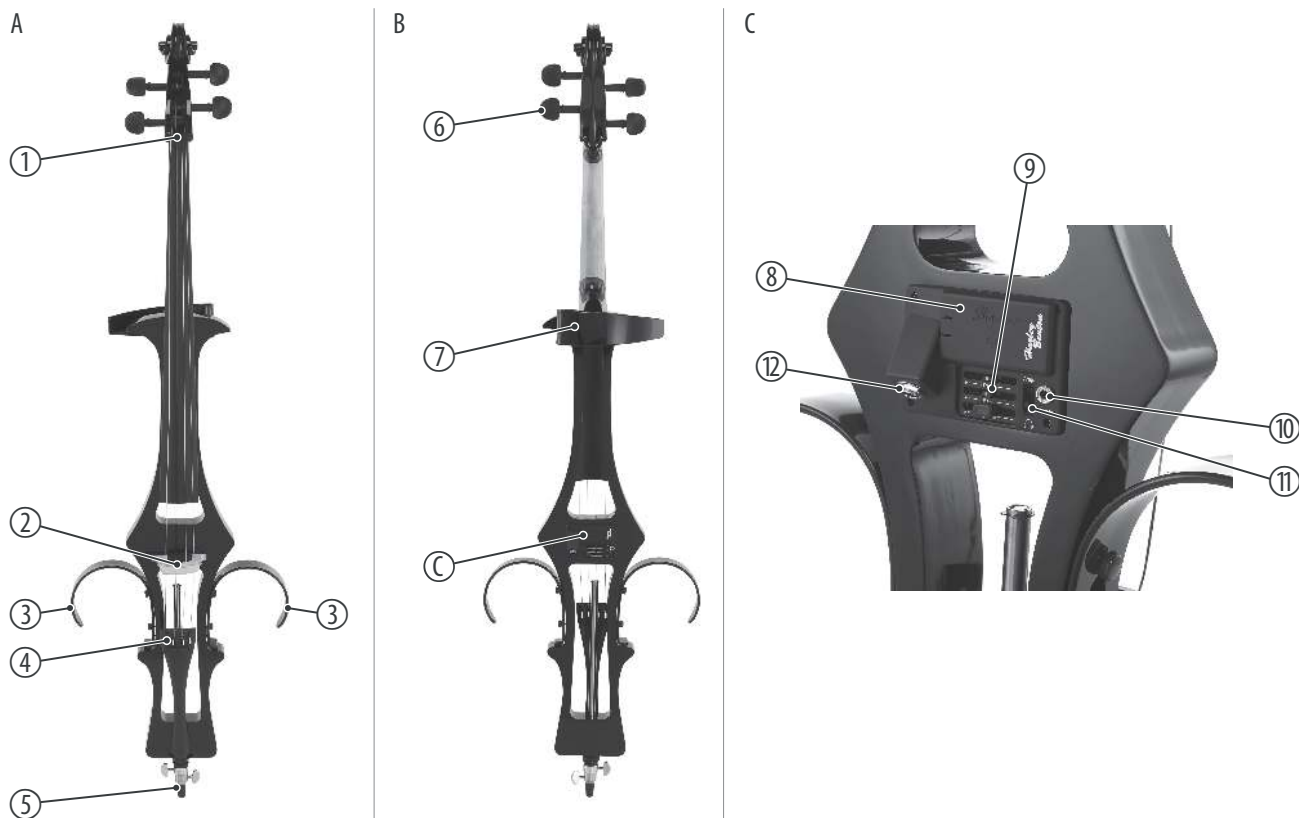
The package includes the following components:

- 1 × electric cello with active Shadow pickup system
- 1 × endpin (pre-assembled)
- 1 × bridge (pre-assembled)
- 1 × strings set (pre-assembled)
- 1 × bow
- 1 × bow rosin
- 1 × abdominal and knee supports
- 1 × suitable transport bag

Assembling and tuning your instrument are described in detail in the following sections.

4 Assembly instructions

Overview



A (front side)	1	Nut
	2	Bridge
	3	Knee support
	4	Tailpiece
	5	Endpin with wing screws
B (rear side)	6	Machine heads
	7	Abdominal support
	C	Operating elements
C (operating elements)	8	Battery compartment for 9 V block battery (not included)
	9	[Treble] Treble control
		[Bass] Bass control

		<i>[Volume]</i> Volume control
	10	<i>[Aux In]</i> Connector for audio devices (3.5 mm mini jack socket, mono).
	11	<i>[Amp.]</i> /  Selector switch amp / headphone
	12	Connector for amplifier or headphones (1/4" jack, mono)

4.1 Setting the height



The endpin to adjust the height of the instrument is fully retracted in delivery condition and fixed with wing screws.

Turn the wing screws counterclockwise to loosen the fixation and the endpin.



Drag out the endpin so far that the instrument can be played at the desired and for you ergonomically correct and comfortable height.

Then tighten the wing screws clockwise to fix the endpin in this position.

4.2 Tuning the strings



Now tune all strings with the pegs using a tuner device to the correct pitch (usually C-G-D-A from low to high).

5 Connections and controls

**CAUTION!****Possible hearing damage**

Making music for a prolonged period and at high volume can cause hearing damage.

Avoid playing the unit at full volume, especially when using headphones.

**NOTICE!****Risk of breakage, possible deformation**

When placing the instrument with the fretboard down, there is a risk of damaging the fingerboard and the tailpiece.

Avoid any compressive load on the rear of the instrument, if it is placed for the assembly or for service work with the fretboard down on a solid surface.



Before connecting amplifiers or headphones, the volume controls of the cello and the equipment to be connected must be set to "minimum". This avoids loud crack noises when switching on.



5.1 Connecting and inserting the battery

The instrument is operated with a 9 V block battery. The battery is not included in the scope of delivery.

Open the battery compartment cover on the back of the instrument. Clamp the power cable with the correct polarity to the battery. Insert the battery into the battery compartment and close the battery compartment cover. It must audibly click into position.



NOTICE!

Risk of fire due to incorrect polarity

Incorrectly inserted batteries may destroy the device or the batteries.

Ensure that proper polarity is observed when inserting batteries.



NOTICE!

Possible damage by leaking batteries

Leaking batteries can cause permanent damage to the device.

Take batteries out of the device if it is not going to be used for a longer period.

5.2 Connecting audio devices

The connector for audio devices (3.5 mm jack socket) is located on the rear side of the instrument.

5.3 Connecting headphones

The connector for head phones (1/4" jack socket) is located on the rear side of the instrument.



When using headphones with 3.5 mm mini jack, you need an appropriate adapter.

5.4 Adjusting Volume and Tone

The controls to adjust the volume [*Volume*] and the tone (*[Treble]* and *[Bass]*) are located on the back of the instrument.

6 Maintenance

6.1 Changing strings

Proceed as follows to change the strings:

Strings are subject to a natural aging process, which is also affected by the frequency of use of the instrument. Changing the strings is recommended if the sound quality of the instrument decreases audibly. Always replace the complete set of strings (strings of 4/4 length) and always go string by string. In this way you avoid a strong temporary bending of the neck due to reduced string tension. The bridge also remains in the correct position and does not have to be readjusted.

1. ➤ For example, loosen the run-down C string from the capstan of the machine head and from the tailpiece.
2. ➤ Thread the new C string into the tailpiece, pull it over the bridge into the capstan bore of the machine head.
3. ➤ Hook the string end to the capstan and tighten the string tension slowly. At the first windings, pay particular attention that the string is taut to the mechanics.
4. ➤ Make sure that the string is running correctly through the grooves of bridge and nut at the upper end of the neck.
5. ➤ Slowly increase the string tension until the correct pitch is reached. Use a tuner or a pitch pipe for reference.
6. ➤ Proceed in the same way with the G, D and A strings and then tune all strings again successively to the correct pitch. Note that the string tension will drop a little and the instrument needs to be retuned several times until the strings stay in tune.

6.2 Battery change



1. ➤ Replace the inserted battery if necessary (weak output signal) or at regular intervals.
2. ➤ Open the battery compartment cover on the back of the instrument. Remove the battery and unplug the connection cable from the battery terminals.
3. ➤ Clamp the power cable with the correct polarity to the new battery. Insert the battery into the battery compartment and close the battery compartment cover. It must audibly click into position.



NOTICE!

Risk of fire due to incorrect polarity

Incorrectly inserted batteries may destroy the device or the batteries. Ensure that proper polarity is observed when inserting batteries.

7 Technical specifications

	HBCE 990BK	HBCE 990WH	HBCE 990RD	HBCE 990AM	HBCE 990BEM
Item no.	417528	417529	417530	417531	511886
Colour	black	White	Red	Amber	Birds Eye Maple
Input connections	3.5 mm mini jack socket (AUX IN)				
Output connections	1/4" jack socket (headphones, amplifier)				
Scale	693 mm				
Body material	Plywood				
Fingerboard and peg material	Birch (Betula albosinensis)				
Neck material	Maple				
Abdominal and knee support material	Acrylic				
Pick-up	Shadow NFX Nanoflex, active				
Machine heads	Machine heads				
Operating supply voltage	9 V block battery				
Dimensions (W × H × L), Incl. abdominal and knee supports	370 cm × 1315 cm - 1815 cm × 210 cm				
Weight	2.7 kg				
Ambient conditions	Temperature range		0 °C...40 °C		
	Relative humidity		20 %...80 % (non-condensing)		

Further information

Number of strings	4
Incl. bag	yes
Incl. case	No
Incl. bow	yes
Incl. 4 fine tuners	yes
Incl. stand	No
Incl. endpin	yes

8 Plug and connection assignment

Introduction

This chapter will help you select the right cables and plugs to connect your valuable equipment in such a way that a perfect sound experience is ensured.

Please note these advices, because especially in 'Sound & Light' caution is indicated: Even if a plug fits into the socket, an incorrect connection may result in a destroyed power amp, a short circuit or 'just' in poor transmission quality!

Unbalanced transmission

Unbalanced transmission is mainly used in semi-professional environment and in hifi use. Instrument cables with two conductors (one core plus shielding) are typical representatives of the unbalanced transmission. One conductor is ground and shielding while the signal is transmitted through the core.

Unbalanced transmission is susceptible to electromagnetic interference, especially at low levels, such as microphone signals and when using long cables.

1/4" TS phone plug (mono, unbalanced)



1	Signal
2	Ground, shielding

1/4" TRS phone plug (stereo, unbalanced)



1	Signal (left)
2	Signal (right)
3	Ground

Three-pole 1/8" mini phone jack (stereo, unbalanced)



1	Signal (left)
2	Signal (right)
3	Ground, shielding

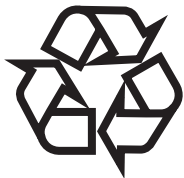
9 Cleaning

Clean the instrument and especially the strings after playing with a dry, soft, lint-free cloth. Stubborn dirt can be removed with a slightly dampened cloth.

Never use cleaners containing alcohol or thinner.

10 Protecting the environment

Disposal of the packaging material



For the packaging, environmentally friendly materials have been chosen that can be supplied to normal recycling.

Ensure that plastic bags, packaging, etc. are properly disposed of.

Do not just dispose of these materials with your normal household waste, but make sure that they are collected for recycling. Please follow the notes and markings on the packaging.

Disposal of batteries



Batteries do contain some hazardous chemicals so they should not be thrown away with the normal household waste. They should be returned to the manufacturer for disposal or recycled elsewhere in accordance with your local regulations.

Disposal of your old device



This product is subject to the European Waste Electrical and Electronic Equipment Directive (WEEE) in its currently valid version. Do not dispose with your normal household waste.

Dispose of this device through an approved waste disposal firm or through your local waste facility. When discarding the device, comply with the rules and regulations that apply in your country. If in doubt, consult your local waste disposal facility.

