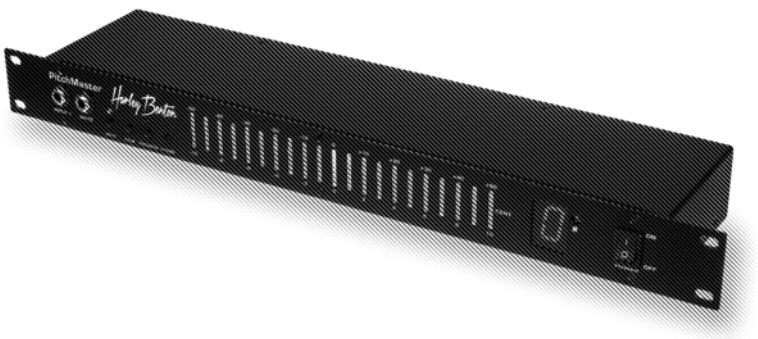
Harley Benton

PitchMaster Racktuner

tuner



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MUSIC IS OUR PASSION

user manual

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17.12.2019, ID: 468748

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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.

Displays

Texts and values displayed on the device are marked by quotation marks and italics.
Examples: *'24ch'*, *'OFF'*.

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.
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

Intended use

This device is intended to be used to tune musical instruments. Use the device only as described in this user manual. Any other use or use under other operating conditions is considered to be improper and may result in personal injury or property damage. No liability will be assumed for damages resulting from improper use.

This device may be used only by persons with sufficient physical, sensorial, and intellectual abilities and having corresponding knowledge and experience. Other persons may use this device only if they are supervised or instructed by a person who is responsible for their safety.

Safety

DANGER!

Danger for children

Ensure that plastic bags, packaging, etc. are disposed of properly and are not within 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 unit. They could swallow the pieces and choke!

Never let children unattended use electrical devices.

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!

Risk of fire

Do not block areas of ventilation. Do not install the device near any direct heat source. Keep the device away from naked flames.

NOTICE!

Possible damage due to installation of a wrong fuse

The use of different types of fuses can cause serious damage to the unit. Fire hazard!

Only fuses of the same type may be used.

3 Features

- Chromatic digital rack tuner for live and studio applications
- Suitable for guitar and bass
- Standard pitch: 436 Hz … 445 Hz
- Calibration with different instruments or audio sources
- Tuning accuracy: ± 1 Cent
- Mute mode for silent tuning
- Fine tuning mode
- Regular and strobe mode
- Very good readability due to LED display
- 21 LEDs for precise visualization
- Silent tuning via footswitch (not included)
- 19" rack mountable (1RU)

4 Starting up

Unpack and check carefully there is no transportation damage before using the unit. Keep the equipment packaging. To fully protect the product against vibration, dust and moisture during transportation or storage use the original packaging or your own packaging material suitable for transport or storage, respectively.

Create all connections while the device is off. Use the shortest possible high-quality cables for all connections. Take care when running the cables to prevent tripping hazards.

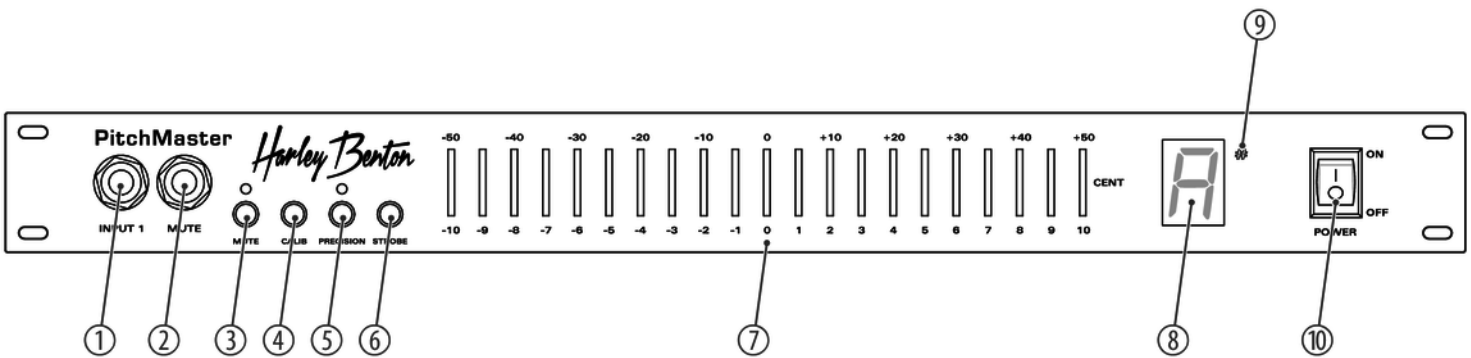
Handle the device with care.

Do not try to disassemble or repair the device yourself if it should not work.

Do not use solvents such as alcohol to clean the device.

5 Connections and controls

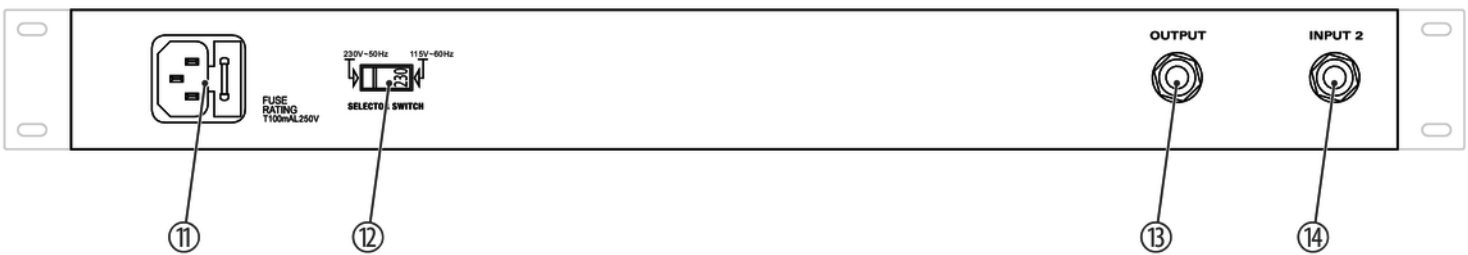
Front panel



1	*[INPUT 1]* Input for connecting a guitar or bass, designed as 1/4" phone socket
2	*[MUTE]* Input for connecting a footswitch (not included), designed as a 1/4" phone jack When you press the footswitch, the output is muted.
3	*[MUTE]* Button to mute the output. The LED lights up when this button is activated.
4	*[CALIB]* Button to calibrate the device.
5	*[PRECISION]* Button for adjusting the sensitivity of the tuner. The LED lights up when this button is activated.
6	*[STROBE]* Button for setting the strobe mode.

7	Meter display The strings must each be tuned so that the *'0'* in the middle lights up green. If an LED in the right-hand area lights up red, the string is tuned too sharp. If an LED in the right-hand area lights up red, the string is tuned too flat.
8	Display The currently played note is displayed.
9	**#** This LED lights up when the displayed note is increased by one semitone. For example, if the display shows *'F'* and the LED is lit, **#** the played note is *'F#'*.
10	*[POWER]* Mains switch. Turns the device on and off.

Rear panel


FUSE
RATING
T100mAL250V
230V~50Hz 115V~60Hz
230
SELECTOR SWITCH
OUTPUT
INPUT 2
11
12
13
14

11	IEC chassis plug with fuse holder
12	*[SELECTOR SWITCH]* Operating voltage selector switch. This setting should only be performed by qualified personnel.
13	*[OUTPUT]* Output for connecting an amplifier or effects units, designed as 1/4" phone socket
14	*[INPUT 2]* Input for connecting a guitar or bass, designed as 1/4" phone socket

6 Operating

Muting via footswitch

Using an optional footswitch allows you to mute the output of the device.

1. Connect the footswitch to the dedicated input *[MUTE]* on the front panel of the device.
2. Press the footswitch to mute the output.
   ⇨ The LED of the *[MUTE]* is lit. No signal is present at the output.
3. Press the footswitch again to unmute the output.
   ⇨ The LED of the *[MUTE]* turns off. A signal is present at the output.

Muting on the unit

1. Press *[MUTE]* on the front panel to mute the output.
   ⇨ The LED of the *[MUTE]* is lit. No signal is present at the output.
2. Press *[MUTE]* again again to unmute the output.
   ⇨ The LED of the *[MUTE]* turns off. A signal is present at the output.

Calibrating

The general tuning standard is based on the standard pitch frequency A = 440 Hz, this corresponds to a middle *'A'* on a piano. You can calibrate the tuner to a different pitch than A = 440 Hz.

1. Press *[CALIB]* flashes on its front panel.

⇨ The display shows the current setting of the standard pitch frequency. *'0'* corresponds to the general tuning standard A = 440 Hz.

2. Press *[CALIB]* again to adjust the standard pitch frequency between *'0'* … *'9'*.

3. After selecting the standard pitch frequency, wait without pressing another key. When the selection has been accepted, the green LED *'0'* lights up in the middle of the meter display.

The following table shows which standard pitch frequency is assigned to which value.

Value	Standard pitch frequency	Value	Standard pitch frequency
0	440 Hz	5	445 Hz
1	441 Hz	6	436 Hz
2	442 Hz	7	437 Hz
3	443 Hz	8	438 Hz
4	444 Hz	9	439 Hz

General tuning

1. Connect the guitar or bass to the dedicated inputs *[INPUT 1]* or *[INPUT 2]*.
2. Play a string and tune it to the desired note. The display will show the note closest to the played tone.
   ⇨ If the string is tuned correctly, the green LED *'0'* lights up in the middle of the meter display.

3. If the string is tuned too sharp, the red LEDs in the right area will light up. The more red LEDs are lit, the sharper the tone of the string to be tuned.

⇨ Slightly adjust the tuning until the green LED *'0'* in the middle of the display lights up. The string is tuned correctly.

4. If the string is tuned too flat, the red LEDs in the left area will light up. The more red LEDs are lit, the flatter the tone of the string to be tuned.

⇨ Slightly adjust the tuning until the green LED *'0'* in the middle of the display lights up. The string is tuned correctly.

Tuning with Strobe function

The device allows a more accurate tuning of the guitar or bass with the help of the Strobe function.

1. Connect the guitar or bass to the dedicated inputs *[INPUT 1]* or *[INPUT 2]*.
2. Press *[STROBE]* to enable the Strobe function.
3. Play a string and tune it to the desired note. The display will show the note closest to the played tone.
   ⇨ If the string is tuned correctly, the green LED *'0'* lights up in the middle of the meter display.
4. If the string is tuned too sharp, the red LEDs will pulsate from left to right. The faster the red LEDs pulsate, the sharper the tone of the string to be tuned.
   ⇨ Slightly adjust the tuning until the green LED *'0'* in the middle of the display lights up. The string is tuned correctly.
5. If the string is tuned too flat, the red LEDs will pulsate from right to left. The faster the red LEDs pulsate, the flatter the tone of the string to be tuned.
   ⇨ Slightly adjust the tuning until the green LED *'0'* in the middle of the display lights up. The string is tuned correctly.

Fine tuning

You can increase the device's sensitive.

1. Press *[PRECISION]* flashes on its front panel.
   ⇨ The LED of the *[PRECISION]* is lit. The sensitivity of the tuner is increased.
2. You can now tune the guitar or bass.

If fine tuning is enabled, the colours of the meter display LEDs change. The LED '0' in the middle of the meter display now lights red, the LEDs in the left and right areas now light up green.

7 Technical specifications

Input connections	Voltage supply	IEC chassis plug C14
	Guitar or bass	2 ×1/4" jack socket
	Foot switch	1/4" phone socket
Output connections	Amplifier, further effects devices	1/4" phone socket
Calibration	436 Hz … 445 Hz	
Operating supply voltage	AC 115 – 230 V ~ 50/60 Hz	
Fuse	5 mm × 20 mm, 100 mA, 250 V, slow-blow	
Mounting properties	19 inch, 1 RU	
Dimensions (W × H × D)	482 mm × 45 mm × 110 mm	
Weight	2.25 kg	
Ambient conditions	Temperature range	0 °C…40 °C
	Relative humidity	50 %, non-condensing

Further information

Display	LED
Built-in microphone	No
Built-in metronome	No
Specials	Strobe mode

8 Protecting the environment

Disposal of the packaging material

For the transport and protective 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 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.

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