



Harley Benton

Dr. Chord Pro
chord finder

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Table of contents

1	General information	4
	1.1 Further information.....	5
	1.2 Notational conventions.....	6
	1.3 Symbols and signal words.....	6
2	Safety instructions	8
3	Instructions for use	10
4	Features	11
5	Connections and operating elements	12
6	Operating	18
	6.1 Starting the device.....	18
7	Technical specifications	33
8	Protecting the environment	34

1 General information

This manual contains important instructions for the safe operation of the unit. Read and follow the safety instructions and all other instructions. Keep the manual for future reference. Make sure that it is available to all those using the device. If you sell the unit please make sure that the buyer also receives this manual.

Our products are subject to a process of continuous development. Thus, they are subject to change.

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.

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.



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.

3 Instructions for use

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

Handle the device with care.

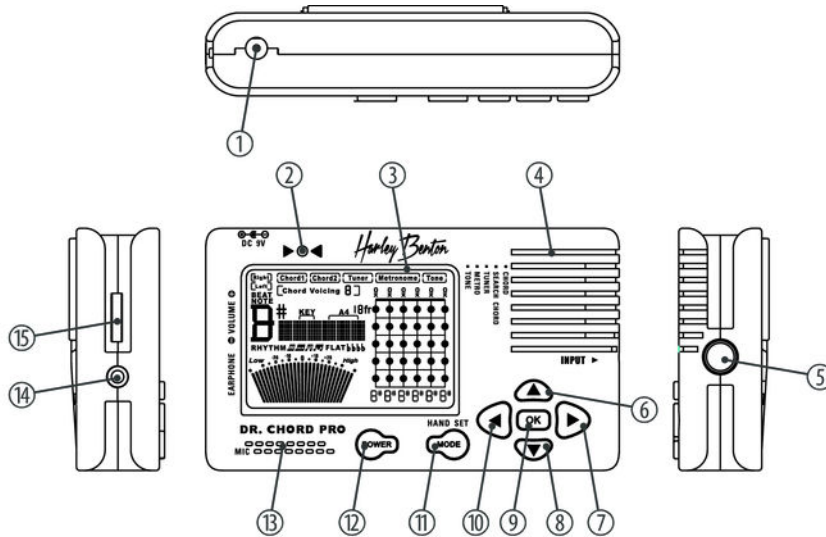
Do not try to disassemble or repair the device yourself in the unlikely event that it does not work.

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

4 Features

- Chromatic tuner, metronome and tone generator
- Chord searching function
- detects 2640 chords
- suitable for right and left-hander
- Tuning range: A0 (27.5 Hz) - C8 (4186.01 Hz)
- Calibration: 430 - 450 Hz
- adjustable metronome: 30 - 250 bpm
- Tone generator: C4 (32.7 Hz) - B4 (493.883 Hz)
- Headphones output (3.5 mm TRS phone socket)
- big display
- built-in microphone
- Automatic shutdown
- built-in speaker

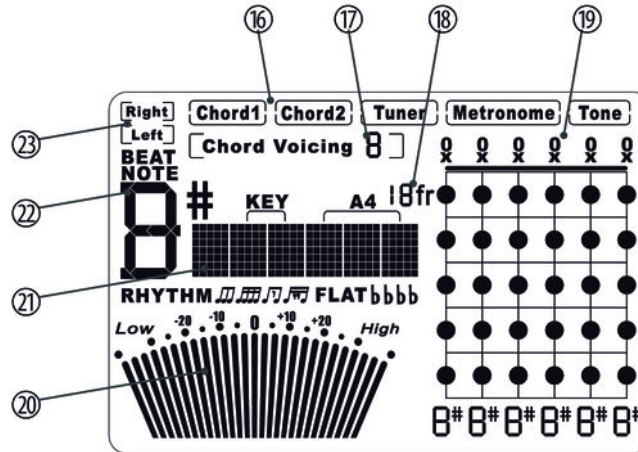
5 Connections and operating elements



1	DC 9V Connection for power adapter.
2	LED display.
3	Display.
4	Speaker.
5	INPUT 1/4" standard instrument cable input.
6	▲ Arrow button 'up'.
7	▶ Arrow button 'right'.
8	▼ Arrow button 'down'.

9	OK OK button.
10	◀ Arrow button 'left'.
11	MODE / HAND SET Mode selector right / left-handedness switch
12	POWER On / off switch.
13	MIC Microphone.
14	EARPHONE Headphones socket.
15	VOLUME Volume control.

Display



16	Mode display.	Chord1	Find chord position.
		Chord2	Find chord name.

		Tuner	Tuner.
		Metronome	Metronome.
		Tone	Tone generator.
17	Chord voicing display. Shows the selected chord voicing.		
18	Fret number display. Shows the fret where you should put your fingers.		
19	Guitar fretboard display. The six vertical lines represent the six strings of the guitar, from low E to high E (if set for right-handed) or from high E to low E (if set for left-handed). An 'X' indicates that this string should not sound. 'O' stands for an open string. The black dots show the finger position. The note name appearing below each string tells you which note name you played.		
20	Measuring pointer for tuner function.		
21	Chord name display.		
22	Root note display.		

23	Right / left-handedness indicator.	[Right]	right-handed (default)
		[Left]	left-handed.

6 Operating

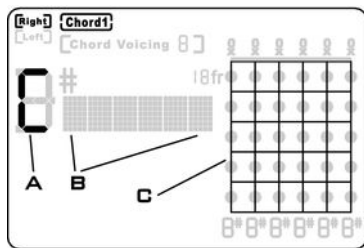
6.1 Starting the device

Press *[POWER]* to turn the device on. After 5 minutes without any operation, the unit will automatically switch off. Press *[POWER]* again to turn the device off.

Operating mode selection

If you press *[MODE]* the mode selection menu appears in the display. The flashing outline frame indicates the selected mode. Use ◀ and ▶ to move the selection. When the desired mode is selected, press *[OK]* to confirm. The device will then enter that mode. If you don't confirm the desired mode the device remains in the mode select status until it will automatically power off.

Finding a chord position



In this mode the display shows **Chord1**. On the left you see the selected root note. When it's flashing you can use ▼ and ▲ to set the root note from C to B. When the desired root note is displayed, press [OK] to confirm. Or press ► to move the selection to the next position.

When the area to the right of the root note flashes, you can use ▼ and ▲ to select chord quality or type. When the desired value is displayed, press [OK] or ► to confirm your selection. Or move the flashing cursor to the next chord type, if existing. If it does not exist press [OK] to complete the chord name input. Then the chord position will be displayed in the fret board area.

The device offers 44 chord types for each of the twelve root notes. You can find your desired chord under its symbol. For example, if you want to find the chord C7b5#9, you should select the chord root note as C, then select the first chord type as 7, and as second chord type b5. Select #9 as the last chord type. For the chord name selecting process you do not need to know the chord's construction. You only need to know the symbols used for the chord name. The following table present the chord types of the device:

Root note	Chord type 1	Chord type 2	Chord type 3	Name	Other description
From C to B					maj
	5			5	
	6			6	
		.9		6.9	6/9, 6add9
	7			7	dom7
		b5		7b5	7-5, dom7b5
			#9	7b5(#9)	7-5(+9),dom7 b5(#9)
		b9		7b9	7-9,dom7b9
		#9		7#9	7+9,dom7#9
		#11		7#11	7+11,dom7# 11
sus4			7sus4	7sus	

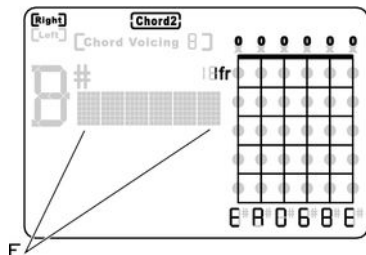
Root note	Chord type 1	Chord type 2	Chord type 3	Name	Other description
	9			9	
		b5		9b5	9-5,dom9b5
		sus4		9sus4	9sus
	11			11	
	13			13	dom13
		sus4		13sus4	13sus
	m			m	min,-
		6		m6	min6,-6
			.9	m6.9	m6/9
		b6		mb6	-(b6),minb6
		7		m7	-7(b5),min7-5
			b5	m7b5	-9,min9

Root note	Chord type 1	Chord type 2	Chord type 3	Name	Other description	
		9		m9	-9,min9	
			b5	m9b5	m9-5,min9b5	
			maj7	m9(maj7)	m9+7,-9+7	
		11		m11	-11,min11	
		13		m13	-13,min13	
		add9		m(add9)		
		maj7		m(maj7)	m(+7)	
		maj	7		maj7	M7
				#11	maj7#11	M7#11
			9		maj9	M9
	13			maj13	M13	
	sus	2		sus2	5add2	

Root note	Chord type 1	Chord type 2	Chord type 3	Name	Other description
		4		sus4	sus
	+			+	aug.#5
		7		+7	7#5
			b9	+7b9	7+5(b9)
			#9	+7#9	7+5(#9)
		9	+9	9#5,9+5	
	dim	5	dim5	°	
		7	dim7	°7	
	add9			add9	

Different chord voicings under the same chord name: One chord can have many different voicings. A voicing refers to how the chord notes are arranged. It depends on where the chord is played on the guitar and on the fingering. The device provides 5 different voicings for each chord. If the display shows a chord position and no cursor flashes, press ◀ or ▶ to start entering chord names or chord voices. Then chord name or chord voicing flashes in the display. When the chord voicing flashes, press [OK] to confirm. Then press ▼ and ▲ to select voicing number 1 - 5. When selection is finished, press [OK] to confirm. The selected chord voicing appears in the display. When the chord name flashes, press [OK] to enter a new chord name. Repeat the above steps.

Finding the chord name

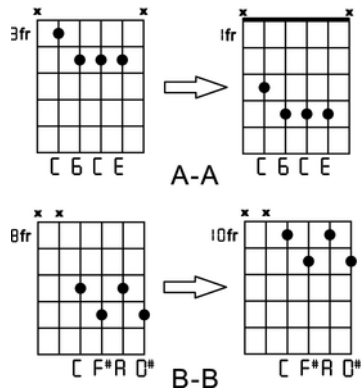


After entering this mode, the position '1fr' will flash in the display. Press ▼ and ▲ to determine the fret (from 1 to 15). Press [OK] to confirm the selection or press ► to enter the fingering for each string. For a right-handed chord, the 6 vertical lines represent the strings: 6=E, 5=A, 4=D, 3=G, 2=B, 1=E from left to right. For a left-handed chord, the 6 vertical lines represent the strings: 6=E, 5=A, 4=D, 3=G, 2=B, 1=E from right to left.

When you enter your fingering on the string, the cursor flashes on the string. Press ▼ and ▲ to select the fingering on this string. '0' stands for an open string, a string marked with 'X' should not sound. The black dots show the finger positions. Now you can press ◀ and ▶ to select other strings. When you are finished with the last string press [OK] to complete entering the chord position. On the basis of these entries, the device now searches for the corresponding chord name.

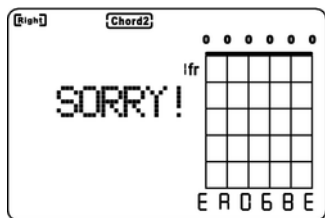


If you have pressed [OK] after completing the input for the last string, the cursor will still move to the next string, so that you can make further entries here. The unit will not start searching for names until you have made entries for the last string and have then pressed [OK].

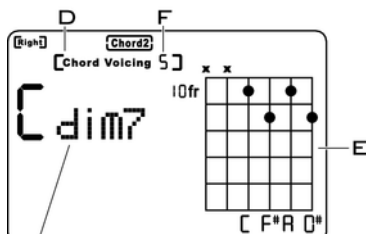


Transforming standard chords: When you have finished entering the chord position, press [OK]. The device now performs a standard transformation of your inputs. This follows 2 rules:

- (1) If the fret number can go back to 1, the unit will perform the transformation for fret 1, as shown on the left (A-A). The left-hand figure shows your input, the right-hand figure shows the chord position after the standard transformation, which stands for the same chord position.
- (2) If the fret number is not 1 and can not go back to 1, the unit makes the first fret in which strings are to be pressed to the first line. In the picture on the left, the left figure (B-B) shows your inputs for the chord position. The right figure shows the position after the standard transformation, which represents the same chord position. The device shows the position image after the standard transform in the display.



(A)

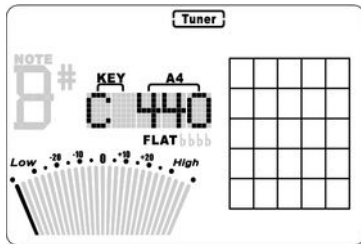


(B)

Display after chord name search: The device will search its memory for the chord name that matches the fingering you have entered. If such a chord name can not be found, the display will show the information outlined in the left figure (A). The word 'SORRY!' is flashing. Then press ◀ or ▶ to reset the chord position. Repeat the above chord name search steps. If the device can find the corresponding chord name, the display shows the desired information as outlined in the figure on the left (B). The chord name is displayed in area (C). The chord position is displayed in area (D). If the search has delivered more than one chord name, press ◀ to move the flashing cursor to position (C). The chord name flashes. You can now press ▼ and ▲ to display further found chord names. The flashing cursor moves at positions (C), (D) and (E). If position (D) is flashing, press [OK] to move the flashing selection to position (F). Now press ▼ and ▲ to search for other chord voicings. Press [OK] to confirm. If with area (E) the entire chord position is flashing, start a new chord position entry. Then, repeat the above steps for the new search. If the search result contains only one chord name, the cursor will not change to position C in the display.

Chord settings for right / left-handedness: Regardless of whether the unit is in Chord1 or Chord2 mode, press [MODE / HAND SET] for approximately 2 seconds to indicate 'Right' or 'Left' in the display. The selection flashes. With ▲ you select the desired mode. Then press [OK] to confirm your choice and exit this setting.

Operating mode 'Tuner'



After you have called up this mode, you can start tuning with the device as soon as it detects a signal input. The signal can be detected via the built-in microphone or the signal input. The microphone is only active when there is no plug in the INPUT socket. Move the sound-producing part of the instrument as close as possible to the microphone of the instrument to get the best possible tuning result. If you want to tune using a direct signal, connect the instrument to be tuned to the INPUT socket on the unit using a cable.

1. ➤ Key selection: Press ◀ and ▶ to move the flashing selection to the 'KEY' position (see figure above). Then press ▼ and ▲ to select the desired note. Choose from C, Bb, Eb and F. The selected note is displayed in the 'KEY' position.
2. ➤ A4 calibration: Press ◀ and ▶ to move the flashing selection to the 'A4' position. Then press ▼ and ▲ to select the desired A4 frequency in increments of 1 Hz between 410 ~ 480 Hz. Keeping the buttons pressed changes the frequency quickly. The set frequency is shown in the 'A4' position in the display.

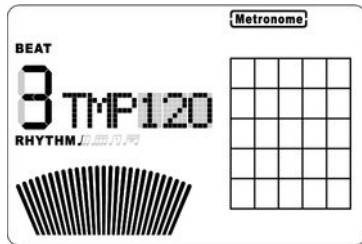
3. ➤ FLAT tuning settings: Press ◀ and ▶ to move the flashing selection to the 'FLAT' position. Then press ▼ and ▲ to select the desired FLAT setting. You can choose Standard or FLAT tuning. These FLAT tunings are available: ♭, ♭♭, ♭♭♭ and ♭♭♭♭. The flat setting is shown under the FLAT position in the display.



If no ♭ is displayed in the 'FLAT' position, the device is set to Standard tuning.

4. ➤ Start tuning: When tuning, make the instrument sound. The note name of this tone is shown in position (A) in the display. Now vary the tension of the respective string until the note name of the tone is displayed correctly. The measuring pointer moves accordingly in the display. If the tone is too high or too low, the LED will light red. If the tone is exactly tuned, the LED indicator lights green and the measuring pointer is in the middle position.

Operating mode 'Metronome'



In this mode, the display appears as shown in the illustration on the left.

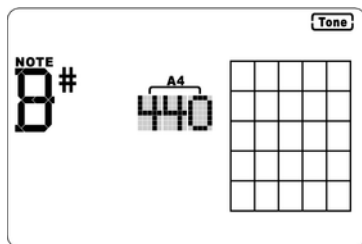
1. ➤ Setting the 'Beats': Press ◀ and ▶ to move the cursor to 'BEATS' position. Then press ▼ and ▲ to set Beat values between 0 and 9. You can then move the cursor with ▼ and ▲ to the desired position to adjust other parameters. To finish these settings, press [OK] to confirm.
2. ➤ To set the Tempo, press ◀ and ▶ to move the cursor to 'TMP' position. Then press ▼ and ▲ to adjust the Tempo in a range from 30 to 250 BPM (beats per minute). If you keep ▼ and ▲ pressed, the Tempo is continuously increased or decreased in increments of 1 BPM. You can then move the cursor with ◀ and ▶ to the desired position to adjust other parameters. To finish these settings, press [OK] to confirm.

3. To set the Rhythm, press ◀ and ▶ to move the cursor to 'RHYTHM' position. Then press ▼ and ▲ to set the Rhythm. You can then move the cursor with ◀ and ▶ to the desired position to adjust other parameters. To finish these settings, press [OK] to confirm.



Whenever you have changed settings, press [OK] to save. Otherwise, the cursor continues to flash.

Operating mode 'Tone generator'



In this mode, the display appears as shown in the illustration on the left.

1. ▶ Tone selection: Press ▼ and ▲ to select the desired tone from the 12 available notes between C and B. The selected note name is displayed in the 'NOTE' area.
2. ▶ Calibration: Press ◀ and ▶ to move the cursor to 'A4' position. Then press ▼ and ▲ to set the A4 frequency to a value between 410 and 480 Hz. If you keep ▼ and ▲ pressed, the frequency is continuously increased or decreased in increments of 1 Hz. To finish these settings, press *[OK]* to confirm.

Battery change

When the charge status drops, the display gets darker. If readability gets poor you should change the battery. To do so, first turn off the device. Then open the battery compartment on the back of the unit, remove the old battery and insert a fresh 9V battery (6F22). If you are not going to use the unit for an extended period of time, remove the battery to prevent damage from leakage.

Using the mains adapter

You can operate the unit with a mains adapter that provides 9 V DC voltage with at least 150 mA. Connect the adapter to the DC 9V connector. The plug of the adapter must correspond to the polarity of the socket (⊕—●—⊖).

Unfold the stand

You can also place the unit on a table. To do this, unfold the stand on the back of the device.

7 Technical specifications

Power supply	9V battery (6F22) or 9V power adapter (not supplied)
Tuning range	A0 (27.5 Hz) - C8 (4186.01 Hz)
Calibration	430 - 450 Hz
Tone generator	C4 (32.7 Hz) - B4 (493.883 Hz)
Metronome	30 - 250 bpm
Dimensions (B × H × T)	120 × 70 × 28 mm
Weight	approx. 150 g (incl. battery)

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 these materials with your normal household waste, but make sure that they are fed to a recovery. Please follow the notes and markings on the packaging.

Disposal of batteries



Batteries must not be disposed of as domestic waste or thrown into fire. Dispose of the batteries according to national or local regulations regarding hazardous waste. To protect the environment, dispose of empty batteries at your retail store or at appropriate collection sites.

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 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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