



*Harley Benton*

TU-100  
tuner pedal

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# 1 General notes

This user manual contains important information on 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 other users, be sure that they also receive this manual.

Our products are subject to a process of continuous development. We therefore reserve the right to make changes without notice.

## **Symbols and signal words**

This section provides an overview of the symbols and signal words used in this user manual.

Signal word	Meaning
<b>DANGER!</b>	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.
<b>NOTICE!</b>	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!**

**External power supply**

The device is powered by an external power supply. Before connecting the external power supply, ensure that the input voltage (AC outlet) matches the voltage rating of the device and that the AC outlet is protected by a residual current circuit breaker. Failure to do so could result in damage to the device and possibly the user.

Unplug the external power supply before electrical storms occur and when the device is unused for long periods of time to reduce the risk of electric shock or fire.



### **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

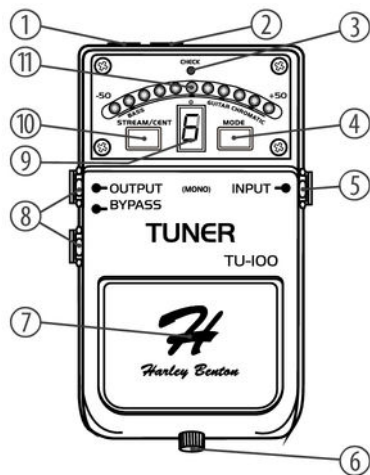
Unpack and check carefully there is no transportation damage before using the unit. Keep the equipment packaging. To fully protect the device against vibration, dust and moisture during transportation or storage use the original packaging or your own packaging material suitable for transport or storage,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



### 1 DC 9V INPUT

Input socket for external power supply DC 9 V.

### 2 DC 9V OUTPUT

Output socket for the power supply of another device with 9 V.

### 3 CHECK

Power indicator. This LED indicates operational readiness in battery or mains adapter operation. If the LED is not lit or flickers in battery operation you have to replace the battery.

### 4 MODE

Operating mode selector switch. Use this button to switch between the modes 'Guitar', 'Bass' and 'Chromatic'.

### 5 INPUT

1/4" phone input socket for a standard instrument cable.

6	Knurled-head screw to open / lock the battery compartment lid.
7	Foot switch to toggle the tuning function and indicator on / off.
8	<p><b>OUTPUT / BYPASS</b></p> <p>Use these two 1/4" output sockets to send the input signal to an amplifier or an effects pedal.</p> <p>When using the <b>OUTPUT</b> socket, <b>no</b> signal is transmitted when the tuning function is <b>activated</b>. That means, you'll be tuning your instrument only via the LED bar of the unit and have to deactivate the tuning function to resume sending the signal to whatever is connected to this socket.</p> <p>When using the <b>BYPASS</b> socket, the signal is <b>always transmitted independently</b> of the pedal's operating mode. That means, the sound of your instrument is sent to whatever is connected to this socket during tuning your instrument.</p>
9	<p>7-segment LED</p> <p>In 'Chromatic' mode, the display shows the note name. In the modes 'Guitar' and 'Bass', the display shows the plucked string.</p>

10	<b>STREAM/CENT</b> Use this push button to toggle between two display modes: 'Running LED light' (the LED chain indicates continuously, whether and by what value the tuning is too high or too low) and 'Cent' (indication of the exact Cent value).
11	<b>Indicator LEDs</b> The LED chain shows the deviation of the displayed pitch (string or note).

Establish all connections as long as the unit is switched off. Use the shortest possible high-quality cables for all connections.

### Power supply

You can either use a 9 V battery or the DC 9 V connection for an external power supply. Before connecting, check for correct polarity.

When you do not use the pedal unplug the instrument cable from the input jack. Otherwise, the battery will be discharged.

### **Changing the battery**

Before you insert or replace the battery, disconnect a possibly used power adapter from the mains. Loosen the knurled-head screw to open the battery compartment lid. Insert or replace the 9 V battery respecting the pole marking. Then close the battery compartment lid and tighten the knurled-head screw firmly.

## 5 Technical specifications

Input impedance	1 M $\Omega$
Output impedance	1 k $\Omega$
Load impedance (recommended)	> 10 k $\Omega$
Internal noise	-90 dBu
LED indicating range	-50 ... +50 cent
Max. current draw	22 mA
Operating voltage supply	9 V battery (6F22) / 9 V power supply
Dimensions (L x W x H)	128 mm x 72 mm x 60 mm
Weight	390 g (without battery)

## 6 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 device is subject to the European directive 2002/96/EC. Do not dispose the device 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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