BTU-1000 owners manual

- **chromatic tuner**
- **chord computer**
- **metronome**
- **pitch generator**

Thank you for purchasing the BTU-1000,
a unique combination of 4 powerful musical tools:

- **Chromatic tuner:**

The tuner is suitable to tune any instrument due to it's full flexibility. The extensive tuning range can detect all notes between A0 (27,5Hz) and C8 (4186,0Hz). It's accuracy of +/- 1 cent is far beyond human ear's distinction. Pitch of standard note A=440 can be altered from 410Hz to 480Hz and 4 different scales of guitar tuning are available: C, Bb, Eb and F. Also, flat tuning up to two notes down can be easily set.

- **Chord computer:**

The chord database can be used in two modes. Mode 1 will accept a chord name and display the chord's finger setting on the guitar neck and in up to 4 alternate positions. Mode 2 will allow you to mark the finger positions on the guitar neck and give you the chord name. 2640 chords are available!

- **Metronome:**

The metronome is very flexible and the 'louder than loud' volume plus earphone jack will assure that even a drummer can use this to keep pace.

- **Tone generator:**

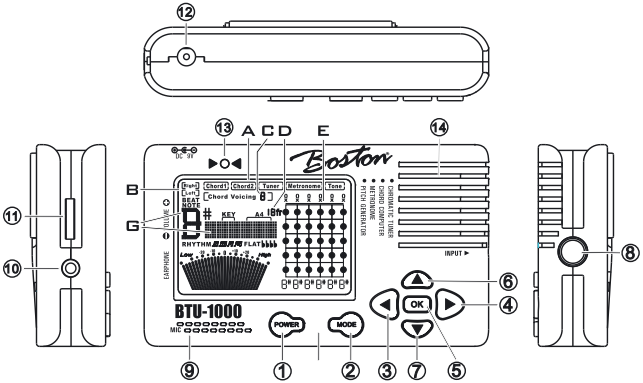
All tones of the fourth octave can be generated. Standard pitch can be adjusted from 410Hz to 480Hz. Very convenient for certain wind instruments!

Please read this manual thoroughly to familiarize yourself wit proper usage of this BTU-1000

CAUTION

- Do not open the casing for any reason as this may cause short circuit or malfunction of the product.
- Do not apply excessive force to the product. in the event of the product suffering breakage, be carefull not to damage yourself with broken pieces.
- Do not put in any liquid nor foreign object.
- Keep unit away from dust , extreme temperatures and humidity.
- When the unit is not in use for a longer period of time, remove the battery to prevent leakage.

OPERATION PANEL



① Power switch
② Mode button
Hand set button
③ Left arrow button
④ Right arrow button
⑤ OK button
⑥ Up arrow button
⑦ Down arrow button
⑧ Input
⑨ MIC
⑩ Earphone
⑪ Volume
⑫ DC adapter input
⑬ Led Indicator
⑭ Dynamic Speaker

LCD DISPLAY

- **Mode display area A:**
  Chord1 Find chord position mode, Chord2 Find chord name mode, Tuner Tuner mode, Metronome Metronome mode, Tone Tone generator mode.
- **Handset display area B:**
  Right Right handed (standard), Left Left handed.
- **Chord Voicing display position C:**
  Chord Voicing 8 Display your selected chord voicing.
- **Guitar Fret number display position D:**
  This tells you to move your hand up to that fret position your fingers.
- **Guitar fret board area E:**
  On the guitar fret board, the six vertical lines represent the six strings on the guitar, from low E to high E if 'right hand' is selected, from high E to low E if 'left hand' is selected (from left to right). 'X' stands for mute, "0" indicates an open string. Black dots indicate the finger position. Note name appearing below each string tells you which note name you played.

OPERATION PROCEDURE

- **Press button ① to turn on the BTU-1000.**
  The power will be turned off automatically 5 minutes later if the unit has been left unattended.
  Press this button again to turn off the BTU-1000.

- **Mode select:**
  When you press button ② under any situation when the unit is on, the mode selecting menu will appear on the LCD like the left picture. The flashing outline frame indicates the mode you select, you can press button ③ and ④ to move the flashing cursor. When you have moved the flashing cursor to the mode you desire, press button ⑤ tot confirm your selected mode, the system will enter your selected mode.

Mode selecting menu

Chord1 Chord2 Tuner Metronome Tone

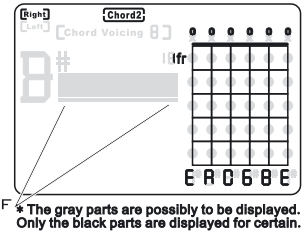
*** The gray parts are possibly to be displayed. Only the black parts are displayed for certain.**

* If you have not pressed button ⑤ to confirm your selected mode, the system will stay on the mode select menu until auto power off.

FIND CHORD POSITION

1. Under Find chord position mode, the LCD will display like the left picture. The position A on the LCD shows your selected chord root. When the chord root is flashing, you can press button ⑥ and ⑦ to select chord root from C to B, when your desired chord root appears, you should press button ⑤ to confirm your selection or press ④ button to move the flash on ④ button to move the flashing cursor to the next position.

Find Chord Name mode LCD display



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2. When the LCD position B is flashing, you can press the button ⑥ and ⑦ to select the chord quality or type. When the chord type you need appears press button ⑤ or ④ to confirm your selecting or move the flashing cursor to the next chord type selecting if the next chord type exist. If the next chord type does not exist, press button ⑤ will finish chord name setting and chord position will display in the area C.

3. How to select a chord name:

The BTU-1000 does contain 44 chord types for each of the twelve chord root. You can find your desired chord under its symbol. For example, you want to find the chord C7b5#9, you should select the chord root as C, then select the first chord type as 7, select the second chord type as b5, select the last chord type as #9. The chord name selecting process does not need you to know the chord's construction, you only need to know how to spell the chord symbol. The following table present the BTU-1000 chord types:

CHORD ROOT	CHORD TYPE 1	CHORD TYPE 2	CHORD TYPE 3	NAME SPELL	OTHER SPELL
From C To B					maj
	5			5	
	6			6	
		.9		6.9	6/9,6add9
	7			7	dom7
		b5		7b5	7-5,dom7b5
			#9	❶ 7b5(#9)	7-5(+9),dom7b5(#9)
		b9		7b9	7-9,dom7b9
		#9		7#9	7+9,dom7#9
		#11		7#11	7+11,dom7#11
		sus4		7sus4	7sus
	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,min7
			b5	m7b5	-7(b5),min7-5
		9		m9	-9,min9
			b5	m9b5	m9-5,min9b5
			maj7	❸ m9(maj7)	m9+7,-9+7
		11		m11	-11,min11
		13		m13	-13,min13
		add9		❸ m(add9)	
		maj7		❸ m(maj7)	m(+7)
	maj	7		❷ maj7	M7
			#11	❷ maj7#11	M7#11
		9		❷ maj9	M9
		13		❷ maj13	M13
	sus	2		sus2	5add2
		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			❸ add9	

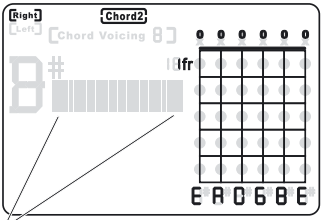
In the blank "OTHER SPELL", different spells is separated with ",".
❶ When displaying chord type, "(" and ")" do not appear.
❷ When displaying chord type, "maj" display as "MAJ".
❸ When displaying chord type, "add" display as "Add"

4. **Different chord voicing under the same chord name:**
One chord can have many different voicing. A voicing refers to how the chord notes are arranged, which are related to where the chord is played on the guitar, and how its fingered. BTU-1000 provides 5 different chord voicing for each chord name. When the LCD displays chord position and there is no flashing cursor, press button ③ or ④ to start chord name setting or chord voicing setting. The chord name or chord voicing you select will display in the LCD. If the chord name flash, press button ⑤ to enter new chord name setting. Repeat the previous steps.

FIND CHORD NAME MODE

1. After entering this mode, the position "1fr" in the left picture will flash, press button ⑥ and ⑦ to select guitar fret (from 1 to 15). Press button ⑤ to confirm your selection or press button ④ to enter finger position setting of each guitar string. For right handed chord, the 6 vertical lines stand for 6E, 5A, 4D, 3G, 2B, 1E, from left to right. For left handed chord, the 6 vertical lines stand for 6E, 5A, 4D, 3G, 2B, 1 E from right to left.

Find Chord Name mode LCD display



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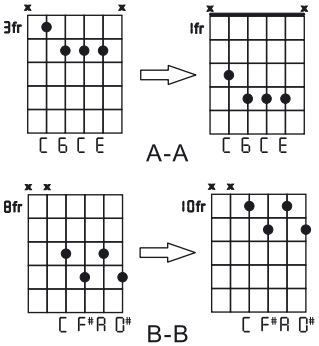
2. When you set finger position on the string, the cursor will flash at the string. Press button ⑥ and ⑦ to select the finger position of that string. "0" stands for open string, "x" stands for not playing this string (mute), ③ and ④ to move to different strings to set. If you have finished the last string (1E) setting, press button ⑤ to finish chord position setting.
BTU-1000 will search the related chord name according to the chord position you set.

*If you press button ⑤ not when you have finished the last string setting the cursor will move the next string for you to make finger position setting. BTU-1000 will begin the chord name searching only when you have finished the last string setting and pressed button ⑤ to confirm.

3. Standard guitar chord position transforming.

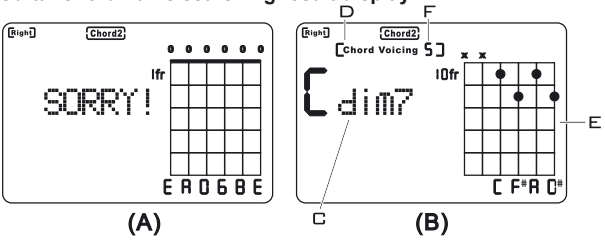
When you finished chord position setting, press button ⑤ BTU-1000 will make standard transforming for your setting.
The standard transforming has the following 2 rules:

(1) if the fret number can go back to 1 fret, BTU-1000 will transform it to 1 fret, such as the left picture A-A.
The left picture is the position picture you set.
The right picture is the chord position picture after standard transforming.
They stand for the same chord position.



(2) If the fret number is not 1 fret and can not go back to 1 fret, BTU-1000 will make the first doted fret the first line. In the above picture B-B, the left one is the chord position picture you set. The right one is the position picture after standard transforming. They stand for the same guitar chord position. BTU-1000 will display the position picture on the LCD after standard transforming.

4. Guitar chord name searching result display:



BTU-1000 will search in its memory the chord name in accordance with the chord position you set. If it can not find the related chord name, the LCD will display the information as the above picture A. and the word “SORRY!” will flash standing for not finding this chord. Press button ③ or ④ tot reset the chord position. Repeat the

previous steps. If the BTU-1000 find the related chord name, the LCD will display the information as the above picture B. Chord name will display at position C. Chord position will display at position D. If the searching result includes more than one chord name, press button ③, the flashing cursor will move to position C. The chord name will flash. You can press button ⑥ and ⑦ to check other chord names. The flashing cursor will move among position C, D and E. When the flashing cursor is at position D, pressing button ⑤ will stop the flashing position D and position F will start flashing. At this time press button ⑥ and ⑦, you can check other chord voices under this chord name. Press button ⑤ to confirm. When the flashing cursor is at the area E (the whole chord position picture), press button ⑤ you will begin new chord position setting. Repeat the previous steps to have a new search. If the searching result has only one chord name, the cursor will not move to position C in the LCD.

5. Right and left handed chord setting.

No matter it's under chord1 or chord2 mode, press button ② for about 2 seconds, you will see right and left displaying on the LCD as the left picture. The cursor will flash at the position you have chosen. Press button ⑥ and ⑦ to select the mode you need. Then press button ⑤ to confirm and leave right and left handed chord setting.

Hand Set Display

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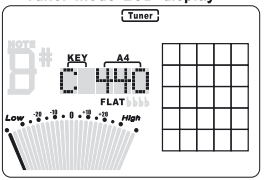
TUNER MODE

1. After entering this mode, BTU-1000 can start tuning automatically if there is any sound input. Choose tuning with mic or input jack: When tuning with mic, don't plug any object in the input jack. Otherwise the mic will not work. And please try to make the sounding part of the music instrument closer to the mic of BTU-1000 to get best tuning result.

When tuning with input jack, please plug the output plug of pick up in the input jack of BTU-1000.

Tuner mode LCD display



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2. **Key selecting:**
   Press button ③ and ④ to move the flashing cursor to the position KEY in above picture. Then press button ⑥ and ⑦ to select the key you need. You can choose among C, Bb and F. The key you selected will display at the position KEY.

3. **A4 calibration**
   Press button ③ and ④ to move the flashing cursor to the position A4 in above picture. Then press button ⑥ and ⑦ to select the A4 frequency you need. The A4 frequency will increase or decrease every time with 1 Hz step. A4 range is from 410 Hz ~ 480 Hz. Keeping pressing this button will automatically increase or decrease A4 frequency continuously. A4 frequency will display at position A4 in the above LCD picture.

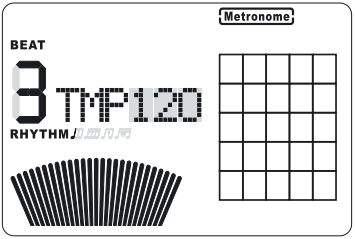
4. **Flat tuning setting:**
   Press button ③ and ④ to mover flashing cursor to position FLAT in the above picture. Then press button ⑥ and ⑦ to select the flat setting you need. You can set standard mode tuning or flat tuning. Flat tuning can be set as b, bb, bbb and bbbb. Flat setting will display at FLAT position in above LCD picture.
   * Its standard tuning if there is no “b” at the position FLAT in the LCD.

5. **How to tune:**
   When tuning, the musical instrument gives a sound. The note name of that sound will display at position A in the LCD. Adjust the sound of the musical instrument to get the desired note name in the LCD. At the same time, the needle in the LCD will move according to the sound. When the sound is lower or higher, the LED indicating light will light red. When the sound is in tune, the LED indicating light ⑬ will light green. And at this time the LCD needle will be at the center position.

METRONOME MODE

1. After entering this mode, the LCD display will be as the left picture.

Metronome mode LCD display



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2. **Beat setting:**
   Press button ③ and ④ to move cursor to position BEAT as in the left picture. Than press button ⑥ an ⑦ to adjust beat.

   Beat adjusting range is from 0 to 9. After finishing beat setting, you can move the cursor to the position you need by pressing button ⑥ and ⑦ to set other parameter. If you have finished setting, press button ⑤ to confirm.

3. **Tempo setting:**
   Press button ③ and ④ to move the cursor to the position TMP as in the above picture. Than press button ⑥ and ⑦ to adjust the tempo. Tempo range is from 30 to 250 BPM. If keeping pressing button ⑥ or ⑦, you can increase or decrease tempo continuously with 1 Hz step. After finishing tempo setting, you can move the cursor to the position you need by pressing button ⑤ to confirm.

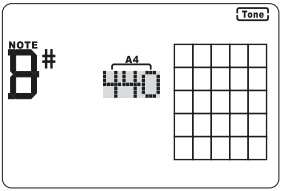
4. **Rhythm setting:**
   Press button ③ and ④ to mover the cursor to the position RHYTHM as in the above picture. Then press button ⑥ and ⑦ to adjust the rhythm. After finishing rhythm setting, you can move the cursor to the position you need by pressing button ③ or ④ to set other parameter. If you have finished setting, press button ⑤ to confirm.

   *You need to press button ⑤ to confirm your setting every time when you finish setting. Otherwise the cursor will stay flashing.

TONE GENERATOR MODE:

1. After entering this mode, the LCD display will be as the left picture.

Tone generator mode LCD display



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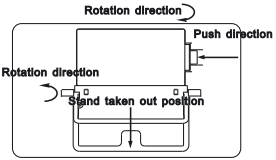
2. **Note name selecting:**
   Press button ⑥ and ⑦ to select note name. Note name range is from C to B, total 12 notes. The selected note name will display at position NOTE as in left LCD picture.

3. **Calibration:**
   Press button ③ and ④ to move the cursor to the position A4 as in the above picture. Then press button ⑥ and ⑦ to adjust A4 frequency. The range of A4 frequency is 410Hz ~ 480Hz. Keeping pressing the button 6 or 7 will automatically increase or decrease the A4 frequency .continuously with 1Hz step. After finishing A4 setting press button 5 to confirm.

BATTERY CHANGING OPERATION INSTRUCTION:



As the battery runs out, the LCD will become darker. When the LCD is not clear, you need to change the battery. Before changing battery, please turn off the unit. Please use 6F22 (9V) dry battery to replace. Please open the battery cover according to the left picture indicating when changing battery. If you will not use the unit for a long period of time, Please take out the battery to avoid battery leakage damaging the unit.

DC adapter using instruction:
You can use 9V, over 150 mA DC adaptor as the power supply for BTU-1000. Plug the adaptor plug into position ⑫. The positive and negative pole of adaptor must be ⊕—◉—⊖.

Using Stand
When you want to put the unit on the table to get a better view effect you can open the stand according to the above picture.

SPECIFICATIONS

Power supply	:	1pc 6F22 (9V) dry battery (included) Or 9V, over 150mA DC adapter
Measure	:	120 (L) x 70(H) x 28(D) mm
Weight	:	150g (including battery)
Auto power off	:	auto power off if the unit is left unattended for about 5 minutes. Under metronome mode, power off takes about 10 minutes
Display	:	big screen LCD with backlite, LCD size is 60x50mm
Chord number	:	2640 chords
Tuning	:	chromatic tuning
Tuning range	:	A0 (27.5Hz)~C8(4186.01Hz)
Tuning accuracy	:	1 cent
A4 range	:	A=410Hz~480Hz
Tuning scale	:	C, Bb, Eb, F
Flat tuning	:	b, bb, bbb, bbbb
LED indicator	:	tune=green, high or low=red light
Tuning detector	:	input jack or mic
Beat	:	0 ~ 9
Tempo range	:	30 ~ 250 BPM
Rhythm	:	
Tones generated	:	4C-4B