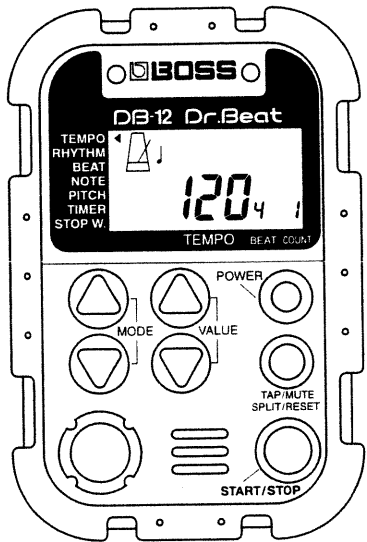


DB-12 Dr. Beat

Owner's Manual



Thank you for purchasing the BOSS DB-12 Dr. Beat.

Before using this unit, carefully read the sections entitled: "USING THE UNIT SAFELY" and "IMPORTANT NOTES." These sections provide important information concerning the proper operation of the unit. Additionally, in order to feel assured that you have gained a good grasp of every feature provided by your new unit, Owner's manual should be read in its entirety. The manual should be saved and kept on hand as a convenient reference.

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IMPORTANT NOTES

In addition to the items listed under "USING THE UNIT SAFELY," please read and observe the following:

Power Supply: Use of Batteries

- A battery was installed in the unit before it left the factory. The life of this battery may be limited, however, since its primary purpose was to enable testing.
- Before connecting this unit to other devices, turn off the power to all units. This will help prevent malfunctions and/or damage to speakers or other devices.

Placement

- This device may interfere with radio and television reception. Do not use this device in the vicinity of such receivers.
- Do not expose the unit to direct sunlight, place it near devices that radiate heat, leave it inside an enclosed vehicle, or otherwise subject it to temperature extremes. Excessive heat can deform or discolor the unit.

Maintenance

- For everyday cleaning wipe the unit with a soft, dry cloth or one that has been slightly dampened with water. To remove stubborn dirt, use a cloth impregnated with a mild, non-abrasive detergent. Afterwards, be sure to wipe the unit thoroughly with a soft, dry cloth.
- Never use benzine, thinners, alcohol or solvents of any kind, to avoid the possibility of discoloration and/or deformation.

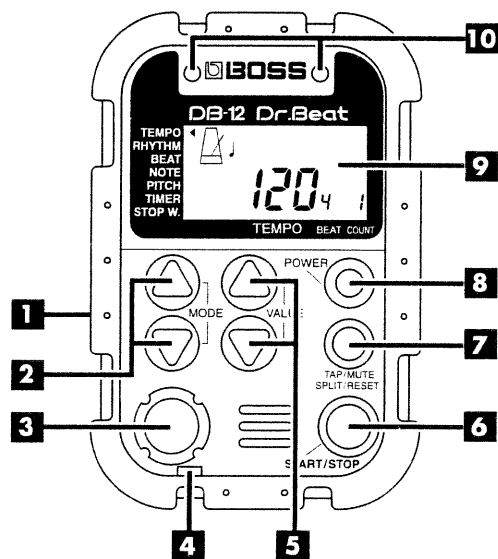
Additional Precautions

- Use a reasonable amount of care when using the unit's buttons, sliders, or other controls; and when using its jacks and connectors. Rough handling can lead to malfunctions.
- Never strike or apply strong pressure to the display.

FEATURES

- Four independent functions are provided by the DB-12: Metronome, Tune, Timer, and Stopwatch. The versatile DB-12 can be conveniently used to set tempos, tune instruments, measure performance times, and more—with whatever kind of music you play.
- In Metronome mode, the DB-12's 6 rhythms and 24 different beats allow you to create complex rhythm patterns. The tempo can be set within a range of ♩ = 35–250.
- The DB-12's tap function allows you to easily determine the tempo of a song simply by tapping a button.
- Dr. Beat includes chromatic sound generation that can produce reference tones over a one-octave range. You can use this for tone practice with winds and other instruments, as well as for tuning acoustic instruments.
- The timer can be set to anything from one minute to a full sixty minutes. An alarm can be set to sound after the set time has elapsed.
- The Stopwatch feature allows you to easily time the length of your performances. You can also have the elapsed time displayed.
- Features an “Auto Power-Off” function which automatically turns the unit off when unused for ten minutes.
- Even when the power is turned off—whether manually or as the result of Auto Power-Off—the settings will be retained.

PANEL DESCRIPTIONS



1 Headphones Jack (Monaural, Miniature phone)

For connecting earphone or monaural headphones equipped with a miniature phone plug (3.5 mm in diameter). Also serves as the output jack, for connecting to external sound equipment.

- * Although you can connect stereo headphones, sound will be output from one side only.

- * The DB-12's speaker is disabled whenever a plug is inserted into the Headphones jack.
- * Always turn OFF the unit before you connect any external devices.

2 MODE UP/DOWN Buttons

Used for switching among the different modes. The currently selected mode is indicated by the arrow in the display.

3 Pen Hole

4 Hand Strap Mount

You can attach a commercially available strap here.

5 VALUE UP/DOWN Buttons

These adjust the value of the setting blinking in the display. When in “TEMPO,” “BEAT,” or “TIMER” mode, pressing the UP button while pressing the DOWN button (or the DOWN button while pressing the UP button) causes the value of the setting to change more rapidly.

6 START/STOP Button

7 TAP/MUTE/SPLIT/RESET Button

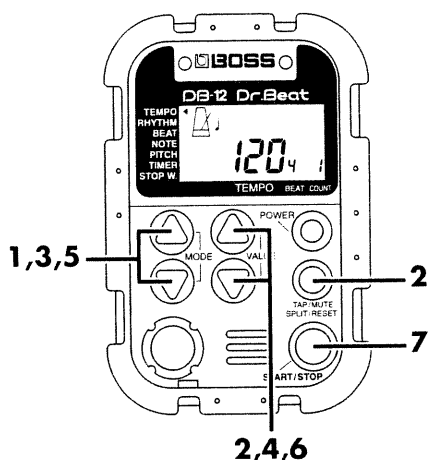
8 POWER Button

Turns the unit on or off.

9 Display

10 Tempo Indicators

USING THE DB-12 AS A METRONOME



1. With the unit turned on, use the **MODE UP/DOWN** buttons to set the mode to "TEMPO."

2. Use the **VALUE UP/DOWN** buttons to set the tempo. Set the tempo in the range of $\text{♩} = 35\text{--}250$.

* To set a tempo that matches a particular song, press the **TAP** button (**TAP/MUTE/SPLIT/RESET** button) in time with the song. After you have tapped the button three or more times, the tempo will have been detected, and should be indicated in the display.

* When tapping in a tempo, if your tempo exceeds $\text{♩} = 250$, "Hi" (High) will be shown in the display. If the tempo is $\text{♩} = 30\text{--}34$, "Lo" (Low) is indicated. If the tempo is slower than $\text{♩} = 30$, the display will not respond.

3. Press the **MODE DOWN** button to switch to "RHYTHM."

4. Use the **VALUE UP/DOWN** buttons to set the rhythm. There are six rhythm styles from which to choose.

5. Press the **MODE DOWN** button to switch to "BEAT."

6. Use the **VALUE UP/DOWN** buttons to set the beat. There are 24 beat values from which to choose.

7. Press the **START/STOP** button to start the metronome. Press the button once more to stop it.

* Pressing the **MUTE** (**TAP/MUTE/SPLIT/RESET**) button after the **START** button has been pressed switches off the DB-12's speaker. Pressing the **MUTE** button once more cancels the mute. This ability to mute the sound should come in handy whenever you want to use the metronome, but don't want it to be audible to others, such as when on stage.

* The **TAP/MUTE/SPLIT/RESET** button functions as the **TAP** button when the metronome is off, and as the **MUTE** button when the metronome is on.

* While you can switch to a different mode while the metronome is on, the metronome cannot be turned off if you switch to the **TIMER** or **STOPWATCH** modes. To stop the metronome, return to the **METRONOME** mode first.

PLAYING A REFERENCE TONE (TUNE)



1. With the unit turned on, use the **MODE UP/DOWN** buttons to set the mode to "NOTE."

2. Use the **VALUE UP/DOWN** buttons to set the note. Any note name from C through B can be selected.

3. Press the **MODE DOWN** button to switch to "PITCH."

4. Use the **VALUE UP/DOWN** buttons to set the reference pitch. Any value from 438 to 445 Hz can be set as the frequency of "A."

5. Press the **START/STOP** button to sound the reference tone. Press the button again to stop the tone from playing.

* While you can switch to a different mode while the reference tone is on, the reference tone cannot be turned off if you go into the **TIMER** or **STOPWATCH** modes. To stop the reference tone, return to the **TUNE** mode first.

AS A STOPWATCH



1. With the unit turned on, use the **MODE UP/DOWN** buttons to set the mode to "STOP W."
2. Press the **START/STOP** button to start the stopwatch. Press the button once more to stop it.
3. If you press the **SPLIT (TAP/MUTE/SPLIT/RESET)** button while the stopwatch is running, the split time (elapsed time up to that point) is shown, and the time display stops with that indicated time.



Press the **SPLIT** button once more and the regular stopwatch count resumes.

4. Pressing the **RESET (TAP/MUTE/SPLIT/RESET)** button while the stopwatch is stopped resets the stopwatch to zero.

* The stopwatch continues to operate when you switch to a different mode.

* Although the stopwatch can measure up to a maximum of ten hours, if no buttons are pressed the Auto Power-Off function will go into effect—so a maximum of only 70 minutes can be measured. If you intend to measure time periods greater than 70 minutes, you need to disable the Auto Power-Off function first.

AS A TIMER



1. With the unit turned on, use the **MODE UP/DOWN** buttons to set the mode to "TIMER."
2. Use the **VALUE UP/DOWN** buttons to select a value from 1 through 60 for the timer (in one-minute increments).
3. Press the **START/STOP** button to start the timer. Pressing the button once more stops the timer.

While the timer is functioning, the timer active symbol (⊕) will be blinking, and the time decreases. When the timer reaches 0, an alarm sounds for 20 seconds. The alarm stops sounding when any button is pushed while the alarm is sounding.

* If you switch to another mode while the timer is in operation, the timer still counts down and the alarm still sounds (the metronome and reference tone stop).

* If after starting the timer you want to reset the timer from the beginning, then after pressing the **START/STOP** button to stop the timer, press the **RESET (TAP/MUTE/SPLIT/RESET)** button.

* When you want to change the timer settings, after first stopping the timer, use the **VALUE UP/DOWN** buttons to change the countdown time.


* The timer active symbol (⊕) appears when the time is set. One sector of the symbol showing the time remaining goes blank each moment that another 1/4 of the set time has elapsed.

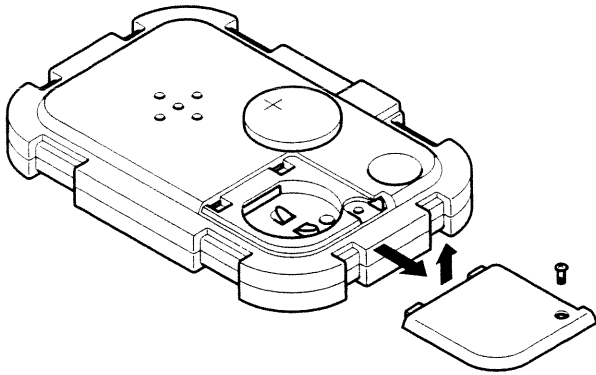
REPLACING THE BATTERY

As the battery becomes depleted, the display becomes fainter and the speaker volume gets lower. Promptly replace the battery as soon as you observe these symptoms.

Replace with one 3-Volt CR2032-type lithium battery.

⚠ CAUTION

- Use only the specified type (model no. CR2032) of lithium battery. Be sure to insert it as directed (to ensure correct polarity). 



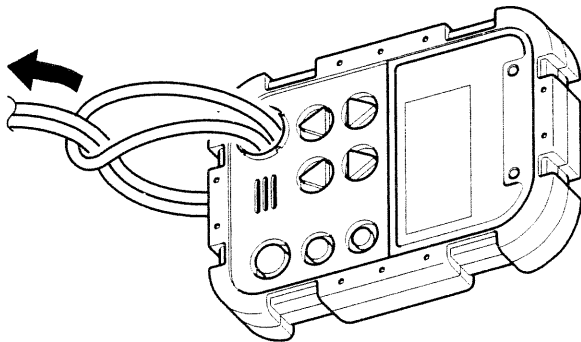
1. Remove the screw from the battery cover, then slide off the cover.
2. Using a narrow-blade screwdriver or similar, lift out the old battery.
3. With the "+" side facing out, place the new battery in the unit.
4. Replace the battery cover and fasten the screw.

* After replacing the battery, the following settings will be in effect.

Metronome	Tempo: ♩ = 120
	Rhythm: ♩
	Beat: 4
Tune	Note: A
	Pitch: 440 Hz
Timer	Time: 60 Minutes

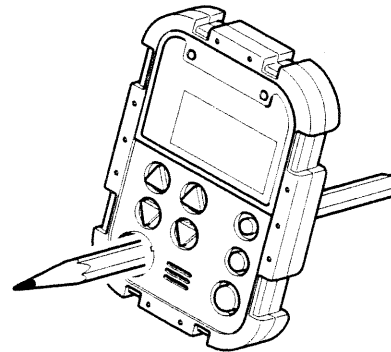
ATTACHING THE STRAP

Use the strap included with the DB-12 as shown in the figure.



USING THE PEN HOLE

By inserting, as shown in the figure, a pencil, pen, or other such item in the pen hole, you can stand the DB-12 up for use in the upright position.



THE AUTO POWER-OFF FUNCTION

To preserve battery power, the DB-12 features an Auto Power-Off function which automatically shuts the unit off if no button has been pressed for a predetermined amount of time. With no function in use, this period is about 10 minutes. When any of the unit's functions (except reference tone) are being used, Auto Power-Off occurs after about 70 minutes. The reference tone stops after about 10 minutes.

DISABLING THE AUTO POWER-OFF FUNCTION

To disable the Auto Power-Off function, hold down these four buttons: MODE DOWN, VALUE UP, VALUE DOWN, and START/STOP—and at the same time, press the POWER button. Since this status is not retained, Auto Power-Off will be enabled the next time you turn on the DB-12.

SPECIFICATIONS

DB-12: Dr. Beat

Power Supply

DC 3V CR2032 lithium battery

Current Draw

No Sound: 1.5 mA

Reference Tone Sounding: 4 mA

*Expected battery life under continuous use: 100 hours
(Metronome, Tempo: ♩ = 120, Rhythm: ♩, Beat: 4)

Metronome

Tempo Range: ♩ = 35–250 ± 0.2 %

Rhythm: ♩, ♩, ♩, ♩, ♩, ♩, ♩

Beat: 0–9, 2 + 3, 3 + 2, 3 + 4, 4 + 3, 4 + 5, 5 + 4, 5 + 6, 6 + 5,
6 + 7, 7 + 6, 7 + 8, 8 + 7, 8 + 9, 9 + 8 (Total of 24 types)

Tune

Reference Pitch: 438–445 Hz, in 1 Hz steps

Range of Reference Tone: C4–B4 ± 1 cent

Timer

Setting Range: 1–60 minutes

Stopwatch

Timing Resolution: 1/10 second

Timing Duration (Max.): 10 hours (with Auto Power-Off disabled)

Display: Custom LCD (Liquid Crystal Display)

Indicators: Tempo Indicator LED x 2

Buttons

POWER, MODE UP, MODE DOWN, VALUE UP, VALUE DOWN, START/STOP, TAP/MUTE/SPLIT/RESET

Jacks

Headphones Jack (Monaural, Miniature Phone Type)

Dimensions

60 (W) x 90 (D) x 17 (H) mm

2-3/8 (W) x 3-9/16 (D) x 11/16 (H) inches

Weight

60 g / 3 oz (including battery)

Supplied Items

CR2032 Lithium Battery, Strap,
Owner's Manual, Information

* In the interest of product improvement, the specifications and/or appearance of this unit are subject to change without prior notice.



USING THE UNIT SAFELY

INSTRUCTIONS FOR THE PREVENTION OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS

About ⚠ WARNING and ⚠ CAUTION Notices


WARNING	Used for instructions intended to alert the user to the risk of death or severe injury should the unit be used improperly.
CAUTION	Used for instructions intended to alert the user to the risk of injury or material damage should the unit be used improperly. * Material damage refers to damage or other adverse effects caused with respect to the home and all its furnishings, as well to domestic animals or pets.


About the Symbols


	The ⚠ symbol alerts the user to important instructions or warnings. The specific meaning of the symbol is determined by the design contained within the triangle. In the case of the symbol at left, it is used for general cautions, warnings, or alerts to danger.
	The ⚡ symbol alerts the user to items that must never be carried out (are forbidden). The specific thing that must not be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the unit must never be disassembled.
	The ● symbol alerts the user to things that must be carried out. The specific thing that must be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the power-cord plug must be unplugged from the outlet.


----- **ALWAYS OBSERVE THE FOLLOWING** -----

⚠ WARNING


- Before using this unit, make sure to read the instructions below, and the Owner's Manual. 


- Do not open or perform any internal modifications on the unit. 

- Do not attempt to repair the unit, or replace parts within it (except when this manual provides specific instructions directing you to do so). Refer all servicing to your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information." 


- Never use or store the unit in places that are: 
 - Subject to temperature extremes (e.g., direct sunlight in an enclosed vehicle, near a heating duct, on top of heat-generating equipment); or are
 - Damp (e.g., baths, washrooms, on wet floors); or are
 - Humid; or are


 - Dusty; or are
 - Subject to high levels of vibration.


- Do not allow any objects (e.g., flammable material, coins, pins); or liquids of any kind (water, soft drinks, etc.) to penetrate the unit. 


- Immediately turn the power off, and request servicing by your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page when: 
 - Objects have fallen into, or liquid has been spilled onto the unit; or
 - The unit has been exposed to rain (or otherwise has become wet); or
 - The unit does not appear to operate normally or exhibits a marked change in performance.

⚠ WARNING


- In households with small children, an adult should provide supervision until the child is capable of following all the rules essential for the safe operation of the unit. 



- Protect the unit from strong impact. (Do not drop it!) 


- Keep lithium batteries out of reach of small children. If a child has accidentally swallowed a battery, see a doctor immediately. 


- Lithium batteries must never be recharged, heated, taken apart, or thrown into a fire or water. 

⚠ CAUTION

- Never climb on top of, nor place heavy objects on the unit. 

- If used improperly, batteries may explode or leak and cause damage or injury. In the interest of safety, please read and observe the following precautions. 
 - Remove the batteries whenever the unit is to remain unused for an extended period of time.

- Use only the specified type (model no. CR2032) of lithium battery. Be sure to insert it as directed (to ensure correct polarity). 

- Used lithium batteries must be disposed of in compliance with whatever regulations for their safe disposal that may be observed in the region in which you live. 

For EU Countries

Apparatus containing Lithium batteries

ADVARSEL!

Lithiumbatteri - Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandøren.

ADVARSEL!

Lithiumbatteri - Eksplosjonsfare.
Ved utskifting benyttes kun batteri som anbefalt av apparatfabrikanten.
Brukt batteri returneres apparatleverandøren.

CAUTION

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type recommended by the manufacturer.
Discard used batteries according to the manufacturer's instructions.

VARNING!

Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens instruktion.

VAROITUS!

Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

For EU Countries



This product complies with the requirements of European Directive 89/336/EEC.

For the USA

FEDERAL COMMUNICATIONS COMMISSION RADIO FREQUENCY INTERFERENCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Unauthorized changes or modification to this system can void the users authority to operate this equipment.
This equipment requires shielded interface cables in order to meet FCC class B Limit.

For Canada

NOTICE

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

AVIS

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

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