

Thank you for purchasing the Seiko Metronome & Tuner STH50. Please read this instruction manual carefully before using your STH50, as proper use is important to ensure the life of the product. Store this instruction manual in a place that is readily accessible and refer to it regularly.

**PRECAUTIONS**

The following warnings and cautions are important in ensuring safe and proper use of the product, preventing injury to yourself and others, and preventing damage to your belongings.

- Do not disassemble, attempt to repair, or tamper with the product or battery.
- Do not handle the product with wet hands.
- Do not use or store the product in places where it may become wet such as in bathrooms, near sinks, or outdoors.
- Do not expose the batteries to fire.
- Use only the batteries specified for this product.
- Do not insert pins or other foreign objects into the product.
- In the event that such an object gets trapped in the device, cease use of the device and contact the store of purchase or a professional for assistance.
- Do not place the product on unstable surfaces.
- Do not intentionally throw or drop the product.
- Do not use or store the product in places where it may be exposed to extremely high temperatures such as near heaters, on devices that generate heat, in direct sunlight, or in vehicles.
- Do not use or store the product in places where it may be exposed to extremely high levels of humidity.
- Keep the product out of the reach of small children.
- Keep removed batteries and the battery lid out of the reach of small children. In the event that a child swallows these parts, contact a physician immediately.
- Do not apply excessive force to the switch or body of the product.
- Do not mix old and new batteries or batteries of different types.
- Do not let leaked battery fluid come in contact with your skin.
- Do not use or store the product in dusty places or places prone to vibration.
- Do not use thinner or alcohol to clean the product.
- Replace all (two) batteries of the product at the same time. When installing new batteries, check that the (+) and (-) terminals are oriented correctly.
- Remove the batteries when depleted or when not using the product for a long period of time.
- Use headphones at a safe volume.

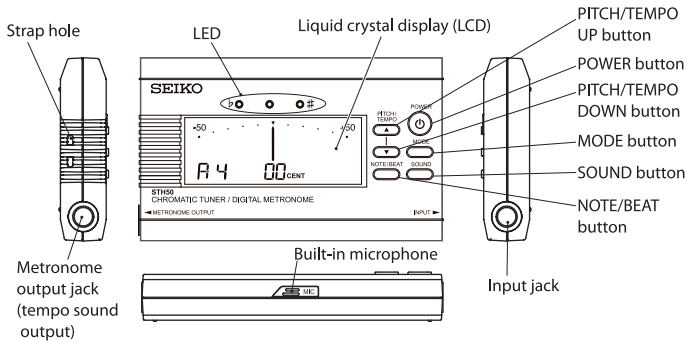
Please refer to the "BATTERY REPLACEMENT" section and insert included batteries before use.

The batteries included with the metronome are for functionality testing and their life may be shorter than expected.

**FEATURES OF THIS PRODUCT**

This product can be used as a tuner or a metronome. In tuning mode you can choose between tuning with the meter and tuning while listening to a reference tone.

**NAMES OF PARTS**



**TURNING ON/OFF AND MEMORY BACK-UP**

Use the POWER button to turn the product on and off. The product will automatically enter tuning mode (reference pitch off) when turned on. The product will remember the settings you use [for reference pitch, note, tempo, and beat and automatically use the most recent settings when you turn the product on for the second time or thereafter (memory back-up function).

**HOW TO USE THE TUNER MODE**

**Tuning using the meter**

- (1) Use the MODE button to select tuner mode.
- (2) Set the reference pitch. Push the PITCH/TEMPO UP button or the PITCH/TEMPO DOWN button once and the current reference pitch will flash for two seconds. Push the PITCH/TEMPO UP button or the PITCH/TEMPO DOWN button while the reference pitch is flashing to change the reference pitch. Push and hold to fast forward.
- (3) When you play your instrument toward the internal microphone, the note closest to the one you are playing and whether you are sharp or flat in relation to that note will be displayed on the tuning meter and cent display. (See Figure 1) Tune the instrument so that the needle of the tuning meter comes to the ▼ position and the cent display shows 0 cents. When the instrument is tuned (just tuned), the green lamp in the center of the LED will illuminate.

**[How to practice major thirds and minor thirds in just intonation]**

The STH50 has an auxiliary feature for practicing major and minor thirds in just intonation. A major third that is in tune, in just intonation, is 14 cents lower than it would be if tuned in equal temperament. When you tune your instrument so that the major third is "just tuned", the characters M3, indicating a major third, will appear on the left side of the cent display. (See Figure 1) A minor third that is in tune, in just intonation, is 16 cents higher than it would be if tuned in equal temperament. When you tune your instrument so that the minor third is "just tuned", the characters m3, indicating a minor third, will appear on the left side of the cent display.

- \* You can also tune your instrument by plugging your guitar or bass's amplifier cord into the input jack of the product, or by plugging the Pickup Microphone (sold separately) into the input jack of the product.
- \* The built-in microphone of the product disabled when the input jack is in use.
- \* Ambient sound or hum noise from electronic appliances may cause the product to behave as if in use. This is not a malfunction.
- \* In some cases, instruments that produce harmonic overtones or short-sustaining tones may not tune accurately.

**Tuning by playing a reference tone**

- (1) While in tuner mode, push the SOUND button to play the reference tone. (See Figure 2)
- (2) Use the NOTE/BEAT button to change the note. Push and hold to fast forward.
- (3) Use the PITCH/TEMPO UP and PITCH/TEMPO DOWN buttons to change the reference pitch. Push and hold to fast forward.
- (4) To turn the reference tone off, press the SOUND button.

\* The volume cannot be adjusted.

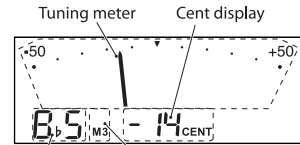


Figure 1: LCD screen when tuning with meter

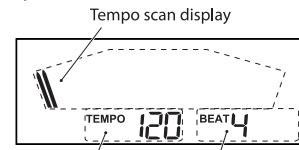


Figure 2: LCD screen when reference tone is played

**HOW TO USE THE METRONOME**

- (1) Use the MODE button to select metronome mode. The metronome will start and the tempo will be shown by sound, LCD, and LED lights.
- (2) Use the PITCH/TEMPO UP and PITCH/TEMPO DOWN buttons to change the tempo. Push and hold to fast forward.
- (3) Use the NOTE/BEAT button to change the beat/rhythm. Push and hold to fast forward.
- (4) To mute the metronome, push the SOUND button. To unmute, push the SOUND button again.
- (5) Stop the metronome by pushing the mode button or the POWER button.

\* The volume cannot be adjusted.



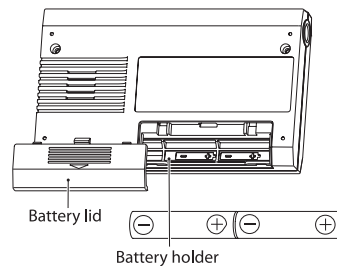
LCD screen in metronome mode

**OTHER FUNCTIONS**

- External Output  
The sound of the metronome and the reference pitch can be output by connecting an external device to the output jack of this device via a cable. You can connect to an external speaker to listen at a high volume or connect to headphones to listen without disturbing others.  
\* When attaching earphones directly to this device a  $\Phi 3.5\text{mm}$  earphone plug to  $\Phi 6\text{mm}$  standard plug adaptor is needed.  
\* Please adjust the volume on attached external devices. Be sure to check the volume in advance when using earphones.  
\* Please be aware that there is no bypass function (to directly output the signal entering from the input jack)
- Auto-powerdown  
The product will turn off automatically if it unused for a certain length of time. The length of time until the product turns off in each mode is as follows.  
• In tuner mode  
(1) When tuning with the tuning meter: 10 minutes after any operation or after 10 minutes waiting for tuning.  
(2) When sounding the reference note: 5 minutes after any operation.  
• In metronome mode  
The auto-powerdown function does not operate.

**BATTERY REPLACEMENT**

When the LED becomes dim, the LCD becomes difficult to read, and the volume becomes low, it is time to replace the batteries. In these cases, replace the batteries immediately.



Press the POWER button to turn off the tuner. Locate the battery lid on the back side of the tuner. Slide the battery lid in the direction of the arrow on it to remove it. Remove both (2) depleted batteries. Install two new batteries in the battery holder, making sure that the batteries are aligned with the polarity markings. Replace the battery lid. After replacing the batteries, turn the tuner on and confirm that the tuner functions normally. The tuner is reset to factory settings when the batteries are replaced (reference pitch: 440Hz, reference note: A4, tempo: 120 beats/minute, beat: 0).

- \* Be sure that the (+) and (-) terminals of the batteries are oriented correctly.
- \* Follow all local ordinances and regulations when disposing of depleted batteries.
- \* Please note that rechargeable batteries cannot be used with this product.

**SPECIFICATIONS**

- Tuner
  - Tuning range/ Accuracy: A0 ~ C8 (when A4 is set to 440Hz),  $\pm 1$  cent
  - Reference tone range/Accuracy: C4 ~ B4 (12 notes),  $\pm 1$  cent
  - Pitch shift: A4= 410 ~ 450Hz
- Metronome
  - Tempo range/Accuracy: 30 ~ 250 beats/min. ( $\pm 0.2\%$ )
  - Beat/Rhythm types: 0 ~ 7, 6/8,  $\text{♪}$ ,  $\text{♪♪}$ ,  $\text{♪♪♪}$ ,  $\text{♪♪♪♪}$ ,  $\text{♪♪♪♪♪}$
- Other
  - Input: Built-in microphone,  $\Phi 6$  jack (mono)
  - Output:  $\Phi 6\text{mm}$  jack (mono), speaker
  - Auto power-off: 10 min. (tuner), 5 min. (reference tone)
  - Power supply: AAA batteries x 2 (3V)
  - Battery life: Approximately 100 hours (Continuous A4 input) Approximately 100 hours (continuous use at tempo 120, beat 2)
- Operating temperature range: 0°C - 40°C
- Dimensions/Weight: 105 (W) x 64(H) x 18(D) mm, approximately 90g (including batteries)
- Accessories: AAA manganese battery x 2 (for functionality testing), instruction manual

\* The design and specifications are subject to change without prior notice for product improvement.