

INSTRUCTION MANUAL

Thank you for purchasing the SEIKO CHROMATIC TUNER STX1N. Carefully read this instruction manual before using your STX1N 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.

FOR SAFE OPERATION

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.

— Please adhere to the following warnings. —

**WARNING**

Disregard of these warnings may result in injury or death.



- Do not disassemble, attempt to repair, or tamper with the tuner or battery.



- Do not handle the tuner with wet hands.



- Do not use or store the tuner in places where it may become wet such as in bathrooms, near sinks, or outdoors.



- Do not expose the battery to fire.
- Use only the battery specified for the tuner.
- Do not insert pins or other foreign objects into the tuner.
- Do not place the tuner on unstable surfaces.
- Do not intentionally throw or drop the tuner.
- Do not use or store the tuner 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 tuner in places where it may be exposed to extremely high levels of humidity.



- Do not let small children play with the tuner.
- Keep removed battery and the battery lid out of the reach of small children. In the event that a child swallows these parts, contact a physician immediately.

**CAUTION**

Disregard of these cautions may result in injury or physical damage.



- Do not exceed the stipulated range of movement of the clip.
- Do not apply excessive force to the buttons or body of the tuner.
- Do not let leaked battery fluid come in contact with your skin.
- Do not use or store the tuner in dusty places or places prone to vibration.
- Do not use thinner or alcohol to clean the tuner.

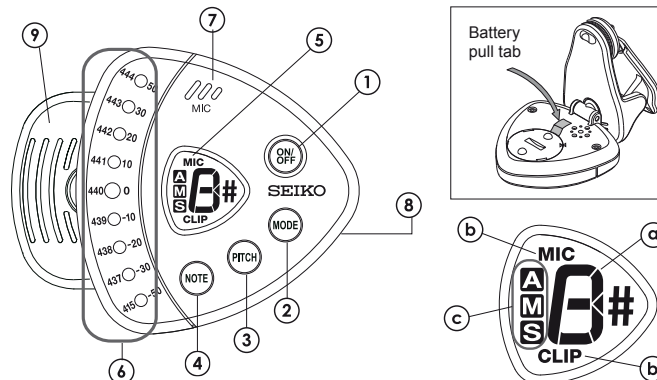


- Install the battery properly, checking that the (+) and (-) terminals are oriented correctly.
- Be careful not to pinch fingers in the clip.
- Remove the clip from your instrument when not using the tuner.
- Remove the battery when it is depleted or when not using the tuner for a long period of time.

NAME AND OPERATION OF PARTS

Before use, pull out the insulating sheet from the battery compartment, as shown in the illustration below.

Note: The battery included with the tuner are monitor battery, and the battery life may be shorter than the specified period.

**1 Power button**

With each press, the tuner stands by for "CLIP" and "MIC" input, and is turned off in order.

- **CLIP input method:**

The vibration sensor senses the vibrations generated when the instrument gives out a note, and tuning is made using them. This input method is convenient for the tuning in noisy environments or in a situation where other instruments are played nearby.

- **MIC input method:**

Tuning is made using the note of the instrument input through the built-in microphone.

2 Mode button

Use the button to select the tuning mode from auto, manual and sound.

Auto mode : By playing a note, the tuner automatically identifies and indicates the note having the pitch closest to it. It also indicates that the pitch of the input note is lower or higher than that of the indicated note.

Manual mode : Set the note you wish to tune, and then, play a note. The tuner indicates that the pitch of the input note is lower or higher than that of the note you have set.

Sound mode : The tuner gives out the note you have set. Tune the instrument on the basis of the reference note the tuner produces.

3 Pitch button

Use the button to set the reference pitch (frequency of A4).

4 Note button

Use the button to set the note you wish to tune.

5 Liquid crystal display**a Note indication****b Input method indication****c Mode indication**

A : Tuning is made in the auto mode.

M : Tuning is made in the manual mode.

S : Tuning is made in the sound mode.

6 Tuning guide/ reference pitch LED display

In the auto and manual modes, the difference in pitch between the note indicated on the display and the note given by the instrument is indicated by the LED that lights up. The LED display also indicates the reference pitch you have set.

7 Built-in microphone

Use it to input a note directly from the instrument in the "MIC" input method. When the "CLIP" input method is selected, the built-in microphone is disabled.

8 Vibration sensor/built-in speaker

In the "CLIP" input method, it senses the vibration generated by the instrument. When the "MIC" input method is selected, the vibration sensor/built-in speaker is disabled. In sound mode, the reference note you have set is produced from the built-in speaker.

9 Clip

Attach the tuner to the instrument using it to sense the vibration it generates.

HOW TO TUNE THE INSTRUMENT

■ Auto/manual mode

Play a note with the instrument, and tune it according to the note indication and the tuning guide.

1. Press the power button to select the "CLIP" or "MIC" input method. When the "CLIP" input method is selected, attach the tuner to the instrument using the clip.
2. Press the mode button to set the tuning mode to the auto or manual.
3. When the manual mode is selected, press the note button to set the note you wish to tune.
4. To change the reference pitch, press the pitch button to set the desired pitch.
5. Play the instrument to give a note. When the "MIC" input method is selected, bring the instrument close to the built-in microphone.
6. Tune the instrument until the LED at the center of the tuning guide lights up in green. In the auto mode, also check the input note with the note indication.

■ Sound mode

The tuner gives out the note you wish to tune, and tune the instrument on the basis of the reference note the tuner produces.

1. Press the power button to select the "CLIP" or "MIC" input method. (The sound mode is available irrespective of the input method selected.)
2. Press the mode button to set the tuning mode to the sound.
3. Press the note button to set the note you wish to tune.
4. To change the reference pitch, press the pitch button to set the desired pitch.
5. Tune the instrument on the basis of the reference note the tuner produces.

● Precautions on tuning

1. The tuner may pick up noise from the surrounding environment or the hum noise generated by electric appliances, and shows indications as if a note is played. This is not a malfunction, and the tuner operates properly when a note is played.
2. When the "MIC" input method is used, it is recommended that the tuning procedure be performed in a quiet environment for accurate tuning. Also, bring the instrument close to the tuner to register a note.
3. If you find it difficult to tune the instrument with the "CLIP" input method, re-attach the tuner in such a position to the instrument that the vibrations are transmitted to the tuner more clearly.

AUTO POWER-OFF FUNCTION

The tuner is equipped with an auto power-off function as described below to save the battery energy.

■ Auto/manual mode

1. If none of the buttons ②, ③ and ④ is pressed, if no note is input in the built-in microphone or if the vibration sensor senses no vibrations for approximately 10 seconds while the power is turned on, the liquid crystal display becomes slightly dim. (Power save mode, Phase 1)
2. If the tuner is left untouched further for approximately five more minutes without sensing a note or vibrations, the liquid crystal display becomes black, and the green LED at the center of the tuning guide starts flashing. (Power save mode, Phase 2)
3. If the tuner is left untouched further for approximately 15 more minutes without sensing a note or vibrations, the tuner is turned off automatically. (Auto power-off function)

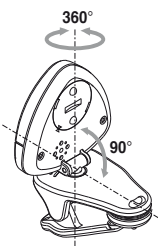
* If any one of the buttons are pressed, or if a note or vibrations are sensed during the power save mode, the liquid crystal display lights up normally.

■ Sound mode

1. If none of the buttons ②, ③ and ④ is pressed for approximately 10 seconds while the power is turned on, the liquid crystal display becomes slightly dim. (Power save mode)
2. If the tuner is left untouched for approximately 5 more minutes, the tuner is turned off automatically. (Auto power-off function)

* If any of the buttons are pressed during the power save mode, the liquid crystal display lights up normally.

MOVABLE RANGES OF THE CLIP PORTION



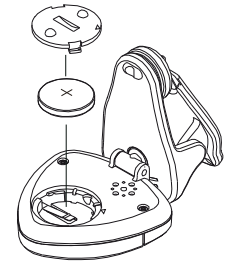
The clip portion of the tuner can be moved within the range shown in the illustration. Please note that if the clip portion is moved or rotated forcibly beyond those movable ranges, the tuner may be damaged.

* Remove the clip from your instrument when not using the tuner. Leaving the tuner clipped to your instrument for a long time may result in marking or discoloration of your instrument.

BATTERY CHANGE

When the battery nears its end, the liquid crystal display and the tuning guide will become dim. In that case, replace the battery with a new one immediately. If the battery is exhausted, the tuner may not operate properly.

1. Turn off the power.
2. Rotate the battery lid counterclockwise to remove it.
3. Take out the old battery, and insert a new one with its (+) side up.
4. Replace the battery lid and rotate it clockwise until the Δ mark on the battery lid aligns with the Δ mark on the main tuner.
5. Press the power button repeatedly to turn on and off the tuner, and check if it operates properly.



- * Be sure to use the specified battery (CR2032).
- * Check that the battery is inserted with the (+) side up. Otherwise, it may result in a malfunction.
- * Keep the old battery and the battery hatch beyond the reach of children. If a child swallows either of them, consult the doctor immediately.
- * When disposing of the old battery, observe the regulations of the authorities concerned.

SPECIFICATIONS

1. INPUT METHOD	: Microphone, built-in sensor
2. MODE	: Auto mode/manual mode/sound mode
3. DISPLAY	: Liquid crystal display and tuning guide
4. TUNING RANGE	: A0 (27.5 Hz) ~ C8 (4186.0 Hz) (when A4 is set to 440 Hz)
5. ACCURACY	: ± 1 cent
6. REFERENCE NOTE	: C4 ~ B4 (at one-semitone steps)
7. REFERENCE PITCH RANGE	: 415 Hz and 437 Hz ~ 444 Hz (at 1 Hz steps)
8. ADDITIONAL FUNCTIONS	: Auto power off (in 20 min. in auto/manual mode and 5 min. in sound mode), memory backup
9. POWER SUPPLY	: Lithium battery CR2032 (3 V), 1 piece
10. BATTERY LIFE	: Approx. 15 hours (at continuous A4 input)
11. OVERALL DIMENSIONS	
AND WEIGHT	: 55 (W) x 67 (H) x 50 (D) mm, 50 g (including battery)
12. ACCESSORIES	: Monitor battery (lithium battery CR2032), 1 piece and instruction manual

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

Seiko Instruments Inc. <http://www.sii.co.jp/music/english/>

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.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:


- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.


This Class B digital apparatus complies with Canadian ICES-003.

CALIFORNIA, USA ONLY

This perchlorate warning applies only to primary CR (Manganese Dioxide) Lithium coin cells sold or distributed ONLY in California USA. "Perchlorate Material-special handling may apply. See www.dtsc.ca.gov/hazardouswaste/perchlorate."

NOTICE (for EU only)

 This symbol means that electrical and electronic equipment, at their end-of-life, should be disposed of separately from your household waste. If you ever need to throw away an old tuner or any of its components, please ensure that it is disposed of carefully in the way designated by local authorities.

 This symbol (Directive 2006/66/EC Annex II) indicates separate collection of waste batteries in the EU countries. Please use the return and collection systems available in your country for the disposal of the waste batteries.

RoHS Compliant