

KORG

LCA-120

CHROMATIC TUNER

Owner's manual

Thank you for purchasing the **Korg LCA-120 chromatic tuner**. Before you use the LCA-120 please read this owner's manual carefully, and use the LCA-120 as directed. Keep this manual for future reference.

Precautions

Location

Using the unit in the following locations can result in a malfunction.

- In direct sunlight
- Locations of extreme temperature or humidity
- Excessively dusty or dirty locations
- Locations of excessive vibration
- Close to magnetic fields

Power supply

Please connect the designated AC adapter to an AC outlet of the correct voltage. Do not connect it to an AC outlet of voltage other than that for which your unit is intended.

Interference with other electrical devices

Radios and televisions placed nearby may experience reception interference. Operate this unit at a suitable distance from radios and televisions.

Handling

To avoid breakage, do not apply excessive force to the switches or controls.

Care

If the exterior becomes dirty, wipe it with a clean, dry cloth. Do not use liquid cleaners such as benzene or thinner, or cleaning compounds or flammable polishes.

Keep this manual

After reading this manual, please keep it for later reference.

Keeping foreign matter out of your equipment

Never set any container with liquid in it near this equipment. If liquid gets into the equipment, it could cause a breakdown, fire, or electrical shock.

Be careful not to let metal objects get into the equipment. If something does slip into the equipment, unplug the AC adapter from the wall outlet. Then contact your nearest Korg dealer or the store where the equipment was purchased.

THE FCC REGULATION WARNING (for U.S.A.)

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 user's authority to operate this equipment.

CE mark for European Harmonized Standards

CE mark which is attached to our company's products of AC mains operated apparatus until December 31, 1996 means it conforms to EMC Directive (89/336/EEC) and CE mark Directive (93/68/EEC). And, CE mark which is attached after January 1, 1997 means it conforms to EMC Directive (89/336/EEC), CE mark Directive (93/68/EEC) and Low Voltage Directive (73/23/EEC). Also, CE mark which is attached to our company's products of Battery operated apparatus means it conforms to EMC Directive (89/336/EEC) and CE mark Directive (93/68/EEC).

IMPORTANT NOTICE TO CONSUMERS

This product has been manufactured according to strict specifications and voltage requirements that are applicable in the country in which it is intended that this product should be used. If you have purchased this product via the internet, through mail order, and/or via a telephone sale, you must verify that this product is intended to be used in the country in which you reside.

WARNING: Use of this product in any country other than that for which it is intended could be dangerous and could invalidate the manufacturer's or distributor's warranty. Please also retain your receipt as proof of purchase otherwise your product may be disqualified from the manufacturer's or distributor's warranty.

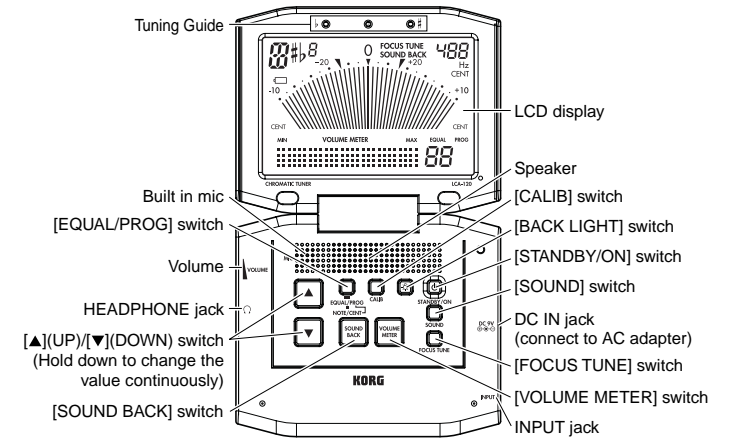
KORG

KORG INC.

4015-2 Yanokuchi, Inagi-city, Tokyo 206-0812 Japan

© 2006 KORG INC.

Features of the LCA-120



Turning the power on

Turning the power on

Open the LCA-120 and press the [STANDBY/ON] switch to turn on the power.

Turning the power off

Press the [STANDBY/ON] switch again to turn off the power or simply close the cover. If you're operating the LCA-120 on batteries, the power will automatically turn off if there is no audio input for approximately 20 minutes. The following settings are remembered when you turn off the power.

Settings remembered when the power is off	Available range	Factory setting
Calibration	410...480 Hz	440 Hz
Focus Tune mode	ON/OFF	OFF
Sound Back mode	ON/OFF	OFF
Temperament	EQUAL/PROG	EQUAL
Cent value of programmable temperament	-50...0...+50	All zero
Reference tone	A0...C8	A4
Volume measurement display	ON/OFF	ON

Tuning procedure

The LCA-120 has four tuning modes; Meter mode, Focus Tune mode, Sound Out mode, and Sound Back mode.

Tune using the INPUT jack

Connect an instrument cable between your instrument and the LCA-120's INPUT jack. Or, if you're using a separately sold Korg CM-100L contact mic to tune your instrument, plug the CM-100L into the LCA-120's INPUT jack.

▲ If a cable is connected to the INPUT jack, the built-in mic cannot be used.

▲ The INPUT jack is mono so stereo plugs cannot be used.

Tune using the internal mic

Position your instrument as close as possible to the internal mic without connecting anything to the INPUT jack.

▲ While tuning with the built-in mic a quiet environment is recommended for precise tuning.

Connecting Headphones (Sound Out mode or Sound Back mode)

You can connect 1/8" mini-plug headphones to the HEADPHONE jack. When plugged in, no sound will be heard from the speaker.

Use the volume control to adjust the volume of the headphones.

■ Meter mode

This mode lets you tune using the meter in the display.

1. Play a single note on your instrument.
The name of the note closest to the note you played will appear in the left of the display. Tune your instrument to the correct pitch, so that the desired note name appears.
2. While playing a single note on your instrument, tune your instrument so that the tip of the meter indicates "0" and the center indicator of the tuning guide is lit. The left tuning guide indicator will light if the pitch of your instrument is flat, and the right indicator if the pitch is sharp. If you want to tune to a **just major third above** or a **minor third above** a certain note, use the "♭" (-13.7 cent) or "♯" (+15.6 cent) marks on the meter.

Tuning to a just major third above or a minor third above

If you want to tune to a **just major third** above A (0 cent), tune your instrument so that the note name indicator shows C# and the meter is at "♭".

If you want to tune to a **minor third** above A (0 cent), tune your instrument so that the note name indicator shows C and the meter is at "♯".

■ Focus Tune mode

In this mode the meter indicates a range of ±10 cents, allowing you to tune with greater precision.

1. Press the [FOCUS TUNE] switch to enter Focus Tune mode.
2. Play a single note on your instrument.
The LCD will show the name of the note that is closest to the pitch you played. When the input pitch comes within ±10 cents of the "0" (center) position, the display will change to a range of ±10 cents. If the input pitch is not within ±10 cents, the display will return to its previous state of ±50 cents.
3. Play a single note on your instrument and tune it so that the meter indicates the "0" (center) position and the center indicator of the tuning guide is lit. The tuning guide indicator to the left will light if the pitch is flat, and the indicator to the right will light if the pitch is sharp.
4. Press the [FOCUS TUNE] switch to exit Focus Tune mode.

■ Sound Out mode

In this mode you can tune to an audible reference tone from the LCA-120.

1. Press the [SOUND] switch to select Sound Out mode.
2. Press the [▲] or [▼] switch to select the name of the note you want to tune.
The name of the note [C2...C6: Equal Temperament, A0...C8: Programmable Temperament]
3. Tune your instrument to match the reference tone from the LCA-120.
▲ The LCA-120 detects pitches between A0 and C8 and reproduces them between C2 and C6. In Sound Out Mode, the LCA-120 will provide a reference tone within the C2 to C6 pitch range.
4. Press the [SOUND] switch to exit Sound Out mode.

■ Sound Back mode

This lets you tune your instrument using the reference tone and the meter display. In this mode, the LCA-120 will sound an audible reference tone that is closest to the pitch of the audio input from the INPUT jack, and the meter will indicate the difference between the input pitch and the reference tone.

▲ Sound Back mode won't work for sound that's input via the LCA-120's internal mic.

1. Press the [SOUND BACK] switch to enter Sound Back mode.
2. Play a single note on your instrument.
The LCA-120 will sound the reference tone that is closest to the pitch of the audio input, and the LCD will indicate the name of that note. The meter will indicate the difference between the reference note and the input pitch in a range of -50 cents – +50 cents. Tune your instrument so the LCA-120 sounds and displays the desired reference note.
▲ The LCA-120 detects pitches between A0 and C8 and plays back pitches between C2 and C6. In Sound Back Mode, if the note you play is below C2 or above C6, the LCA-120 will transpose the octave of the note being played back and reproduce the corresponding pitch within the C2 to C6 pitch range.
3. Tune your instrument to match the reference tone and meter indication.
4. Press the [SOUND BACK] switch again to exit Sound Back mode.

■ Adjusting the calibration (standard pitch)

1. Press the [CALIB] switch.
2. Use the [▲] or [▼] switches to adjust the calibration. You can adjust the calibration in steps of 1 Hz.

Calibration range [410...480Hz]

■ Programmable Temperament

In addition to equal temperament, the LCA-120 lets you program and store any desired temperament. This is convenient for tuning ethnic or historical instruments. You can specify the pitch of each note in the 88-note range from A0 to C8. The cent values you specify are available in all tuning modes.

1. Hold down the [EQUAL/PROG] switch to change the temperament to "Program." The LCD will indicate "PROG," and the note name will blink.
2. Press the [▲] or [▼] switch to select the name of the note whose pitch you want to adjust.
3. Press the [EQUAL/PROG] switch to make the cent value blink. Press the [▲] or [▼] switch to specify the cent value relative to equal temperament.
4. To continue specifying the cent value for other note names, press the [EQUAL/PROG] switch and repeat steps 2 and 3.
5. Press the [CALIB] switch, and you'll be able to tune using the temperament you specified.
6. Once again hold down the [EQUAL/PROG] switch to change the temperament to "Equal."

■ Volume Meter display

The volume of your instrument via the internal mic or INPUT jack is shown in the LCD as a meter indication and a numerical value.

This is convenient when you want to practice playing at a steady volume or when you want to practice increasing or decreasing the volume gradually. You can use Volume Meter mode at the same time as the tuner.

- ▲ The meter display may become unstable depending on the input level.
- ▲ If you're using the internal mic, the displayed level may change according to the distance from the mic.
- ▲ We do not guarantee any special accuracy for the volume or numerical value displayed in this mode. Use this feature as a general guide.

1. Press the [VOLUME METER] switch to enter Volume Meter mode.
2. Play a continuous note on your instrument, and watch the volume indication in the LCD.

■ Backlight

Press the [BACK LIGHT] switch to turn on the backlight of the LCD display. The backlight will turn off automatically when there has been no audio for approximately two minutes.

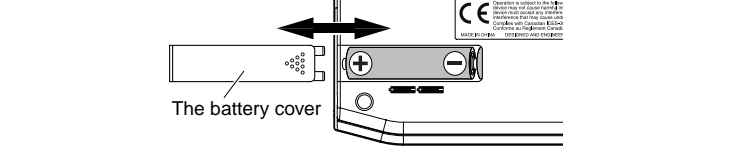
Auto Backlight

While in Meter mode or Focus Tune mode, hold down the [BACK LIGHT] switch for more than 1 second. The LCD backlight will now turn on and remain lit as long as a note is played into the LCA-120. If no note is played for approximately 2 minutes, the backlight will turn off automatically but will turn back on when you play a note again. To turn this function off, once again hold down the [BACK LIGHT] switch for more than 1 second.
▲ This setting will not be remembered when the LCA-120 is turned off.

Installing the batteries

- ▲ Turn off the power switch before replacing the batteries.
- ▲ The included batteries are for the purpose of verifying operation so they may have a shorter lifespan than normal.

1. Slide the back panel battery cover in the direction of the arrow, and lift the cover.
2. Insert two AAA batteries, making sure to observe the correct polarity (+, -).



3. Close the battery cover.

When the batteries run down, a battery symbol will appear in the left of the display. When this occurs, replace the batteries.

Restoring the factory settings

You can restore the LCA-120 to its factory settings. Doing this will overwrite all previously stored settings.

1. While holding down the [▲] switch, press the [STANDBY/ON] switch.

Specifications

Scale:	12 note equal temperament, program (88 notes)
Detection range:	A0 (27.50 Hz) – C8 (4186.01 Hz) for a sinewave
Reference tone:	C2 (65.41 Hz) – C6 (1046.50 Hz)
Tuning modes:	Meter mode (AUTO), Focus Tune mode (AUTO), Sound Out mode (MANUAL), Sound Back mode (AUTO)
Calibration range:	A4 = 410 Hz – 480 Hz (1 Hz step)
Detection accuracy:	Better than ±1.0 cent
Sound accuracy:	Better than ±1.5 cent
Connectors:	INPUT jack (1/4" mono), HEADPHONE jack (1/8" mini), DC IN (9V)
Speaker:	Dynamic speaker (16 mm x 35 mm)
Power supply:	Two AAA alkaline batteries (3V) or AC adapter (⏻)
Battery life:	Tuner ... Approximately 60 hours (Alkaline batteries, Meter mode, A4 continuous input and Backlight off)
Dimensions:	101 (W) x 84 (D) x 22 (H) mm (folded) 3.98 (W) x 3.31 (D) x 0.81 (H) inches (folded)
Weight:	148 g / 5.22 oz. (including batteries)
Included items:	Owner's manual, two AAA batteries for checking operation, soft case
Option(sold separately):	AC adapter (⏻)

⚠ The specifications and external appearance of this product are subject to change without notice for improvement.

⚠ Do not subject the LCD display to extreme pressure, impact or sharp objects. Also, don't twist or bend the tuner to avoid damage to the LCD display.