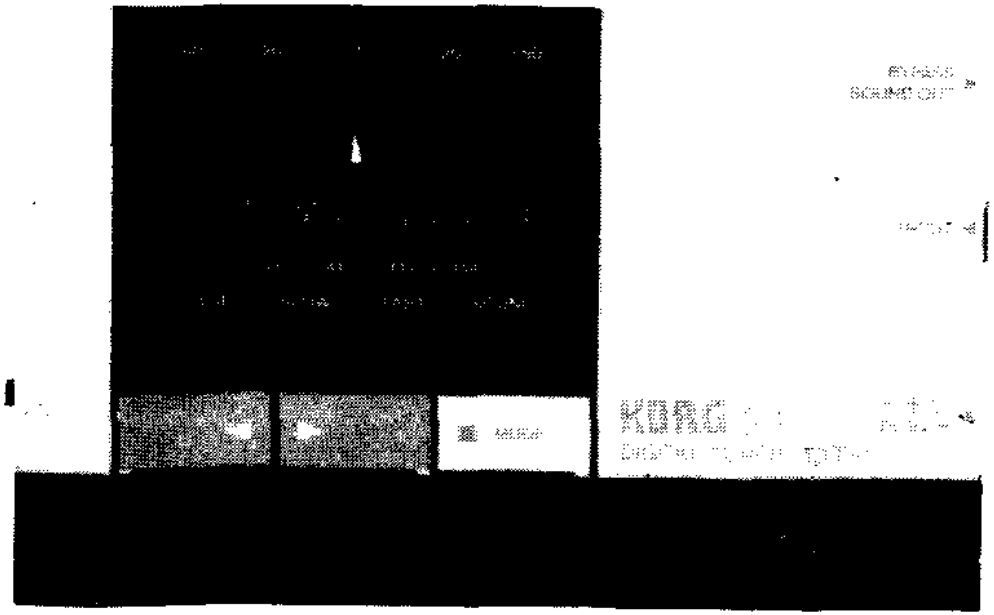
KORG



DT-1

DIGITAL TUNER

OWNER'S MANUAL

Congratulations and thank you for purchasing the Korg DT-1 Digital Tuner. To assure optimum performance and long-term reliability, please read this manual carefully before using this product.

MAJOR FEATURES

1. Digital Auto Chromatic Tuner design eliminates the need to select notes before checking pitch. Easier to use.
2. New digital LED meter has same easy-to-read design as needle type meters, but boasts greatly improved precision and durability.
3. When connected with an external amplifier, the DT-1 generates reference notes covering four octaves.
4. Covers very wide 7-octave frequency range from 32Hz to 3.9kHz. Handles all instruments from contrabass to piccolo.
5. Uses quartz crystal oscillator reference for highest accuracy.
6. Digital performance in a tuner the size of a compact cassette case. More features than other tuners yet fits right in your pocket.

IMPORTANT SAFETY PRECAUTIONS

Please read and observe the following precautions to assure reliability and safety.

■LOCATION

To avoid malfunction do not use this unit in the following locations for long periods of time:

- **In direct sunlight.**
- **Exposed to extremes of temperature or humidity.**
- ***In sandy or dusty places.***

■POWER SUPPLY

- Use batteries or the optional AC adaptor. Replace all old batteries at the same time with all new batteries of exactly the same kind. Do not mix different kinds of batteries or old and new batteries. Because of differences in voltage or polarity, damage may be caused if you use any AC adaptor other than the one recommended for use with this unit.
- Always be sure that the power switch is turned off before connecting the AC adaptor. Erratic operation may result if connected while the power is on. If this occurs, turn the power switch off and then back on again.
- Always turn off the power after use. To avoid the chance of leakage, remove batteries if this unit will not be used for a long period of time.

IMPORTANT SAFETY PRECAUTIONS

■HANDLE GENTLY

Selectors and switches are designed to provide positive operation with a light touch. Excessive force may cause damage.

■MAINTENANCE

Wipe the exterior with a soft, dry cloth. Never use cleaning fluids, paint thinner, benzene or other liquids. Never use flammable polishes.

■WARRANTY

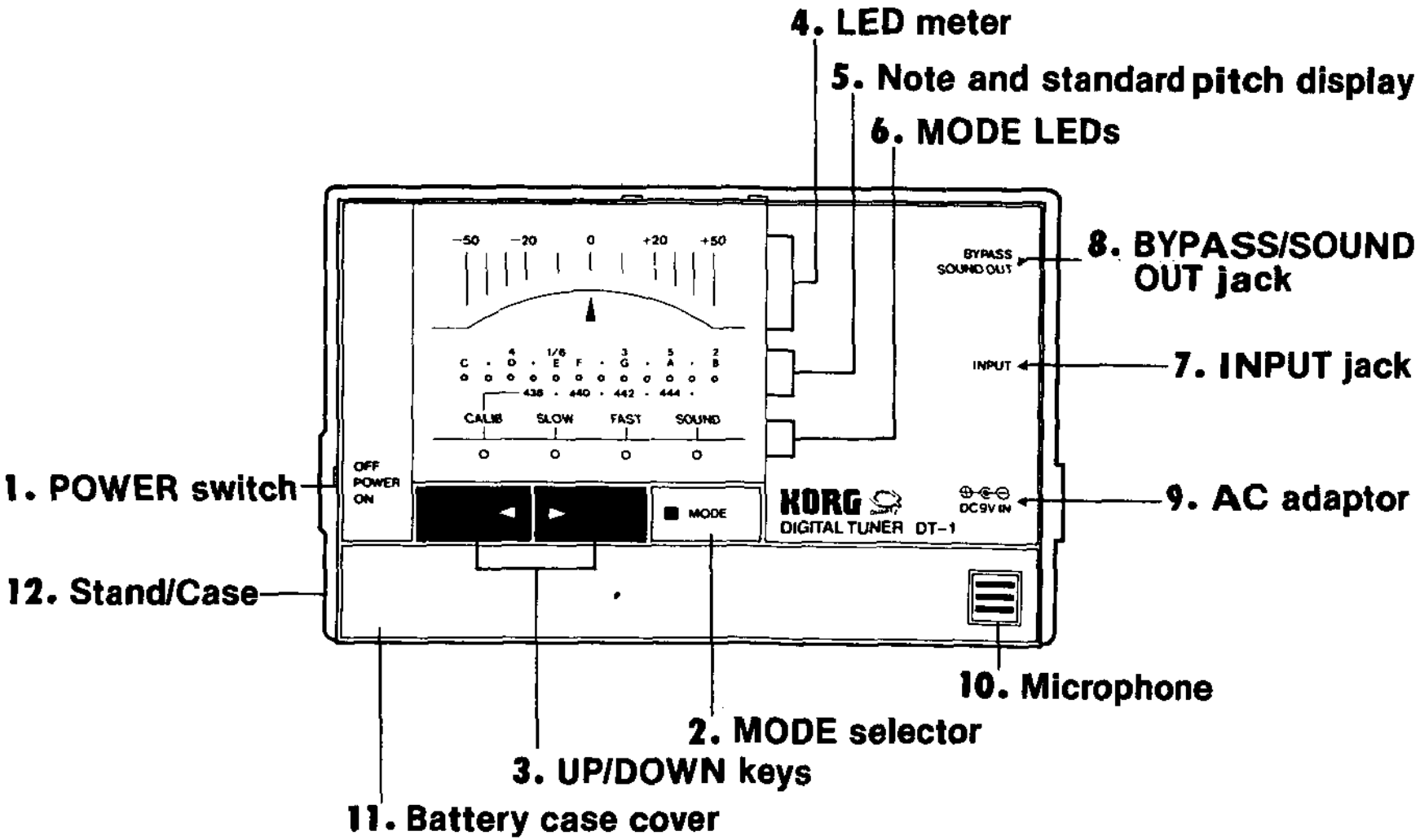
For fullest guarantee protection, return your properly filled in warranty card.

■KEEP THIS MANUAL

Store this manual in a safe place for future reference.

CONTENTS

FEATURES & FUNCTIONS



1. POWER switch

Remember to turn off power after use.

2. MODE selector

Each time this is pressed, operation changes from one mode to the next in the order CALIB, SLOW, FAST, SOUND, as indicated by the LEDs so marked.

CALIB (calibration):

This mode is used to set the standard pitch. The pitch of middle A can be set to any frequency from 438Hz to 445Hz in 1Hz steps. (Pitch of all other notes are based on this.)

SLOW/FAST:

Use the SLOW mode for meter indication when tuning instruments that have relatively unsteady pitch. Slow response makes the meter easier to read. In the FAST mode, the meter responds instantly to any pitch fluctuations.

SOUND:

If the BYPASS/SOUND OUT jack is connected to an amp, then this position can be used to generate reference tones for tuning. Tones can be selected from C2 through B5, a span of four octaves.

FEATURES & FUNCTIONS

3.UP/DOWN Keys

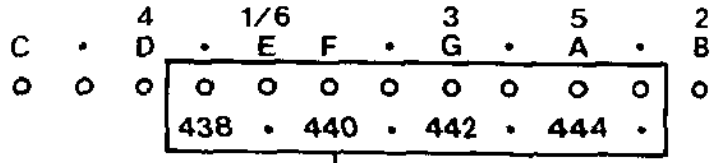
Used to set standard pitch when in the calibration mode. In the sound mode, these keys are used to select the reference tone and octave.

4.LED meter

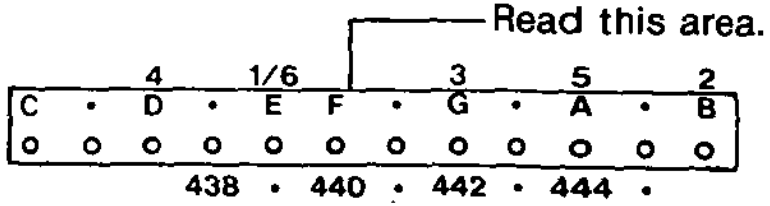
Indicates the accuracy of musical pitch. Pitch is correct when the LEDs light up immediately to the left and right of the center 0. If pitch is sharp or flat, LEDs will light up at higher or lower positions. The meter scale is marked in 10 cent steps.

5.Note and standard pitch display

- In the calibration mode refer to the LEDs marked 438 through 444. These show the standard pitch setting (the frequency for A).



- In the SLOW or FAST mode, the display indicates the name of the note being played.
  In the SOUND mode, it indicates the name of the note being generated. Numbers refer to guitar strings.



6.MODE LEDs
These show the presently selected mode.

7.INPUT jack
For connection to an electric or electronic instrument, or to a microphone. The built-in microphone does not operate when this jack is used.

8.BYPASS/SOUND OUT jack
This must be connected to an amplifier if you want to hear reference tones generated by the DT-1. It can also be used to transmit the instrument signal (connected to the input jack) to an amplifier or mixing console. The input signal is sent on unchanged, regardless of whether the DT-1 is on or off. In the sound mode, the input signal and the reference tone are sent out this jack at the same time.

9.AC adaptor
For optional AC adaptor.

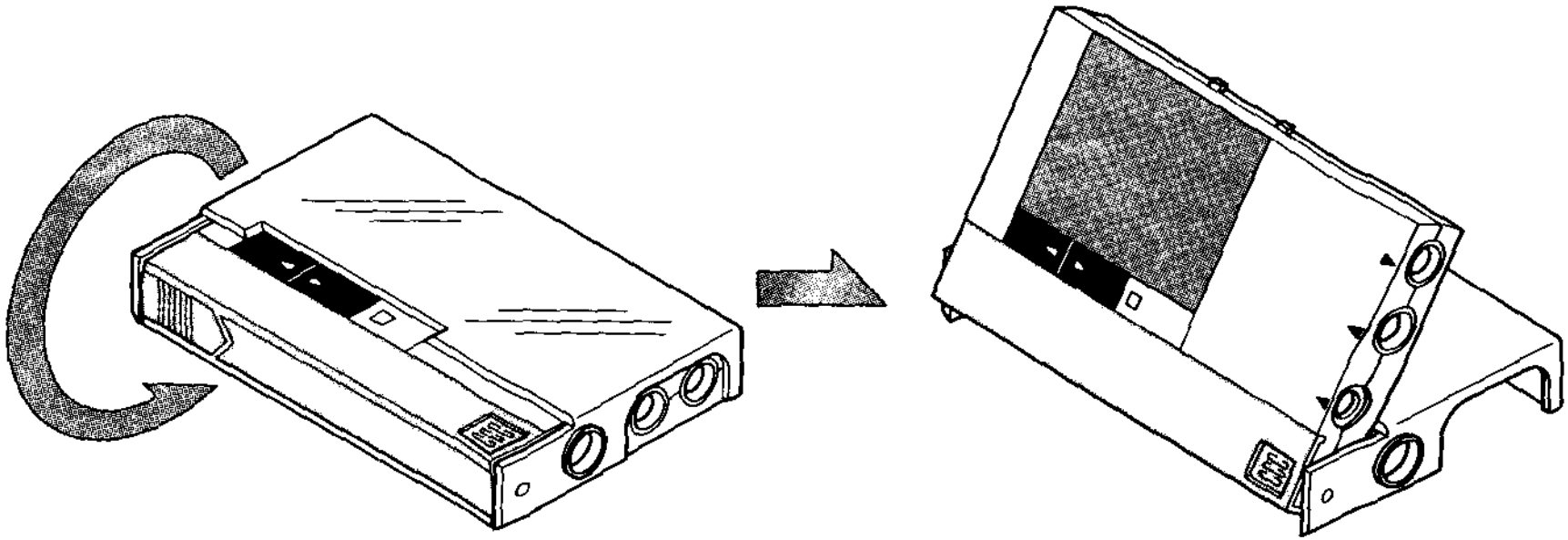
10.Microphone
For tuning acoustic instruments. This is active as long as nothing is plugged into the input jack.

11.Battery case cover
Takes two AAA 1.5V batteries.

FEATURES & FUNCTIONS

12. Stand/Case

The case can be swiveled around (like a tape cassette case) to serve as a stand.



TUNING PROCEDURE

1. Basic information

①The Cent Indication

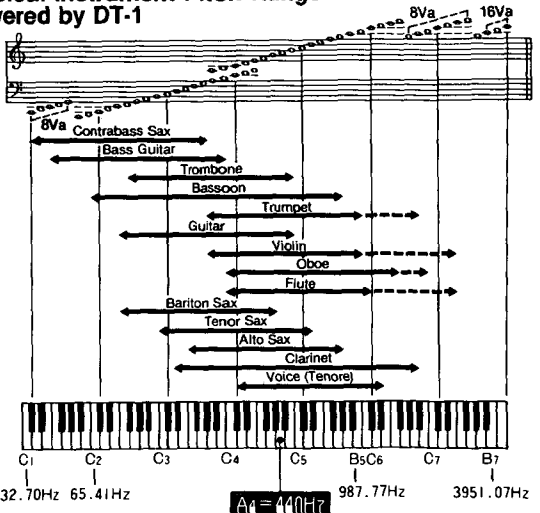
The cent is the smallest unit used to express relative pitch. A difference of a semitone is 100 cents and an octave is 1200 cents. The DT-1 LED meter uses a cente scale to indicate how far the input note's pitch deviates from correct pitch. However, one cent is such a small pitch difference that a deviation of up to plus or minus 3 cents will not be a problem in most performance situations.

②Standard Pitch and Calibration Function

The most widely agreed upon standard pitch is A = 440Hz (for A4 which is middle A on the piano). Although most instruments are tuned to this standard, slightly higher pitch standards (A4 = 441~444Hz) are in use. Furthermore, there has been considerable historical variation. The DT-1 can be calibrated to set the standard pitch for A4 as any frequency from 438Hz to 445Hz (in 1Hz steps).

TUNING PROCEDURE

③ Musical Instrument Pitch Range Covered by DT-1

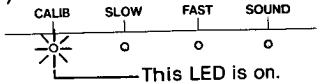


● In the SLOW or FAST mode, the DT-1 can measure the pitch of inputs over a 7-octave range from C1 to B7, as shown in the chart. In the SOUND mode, the DT-1 can generate reference tones over a range of four octaves from C2 to B5.

2. Calibration

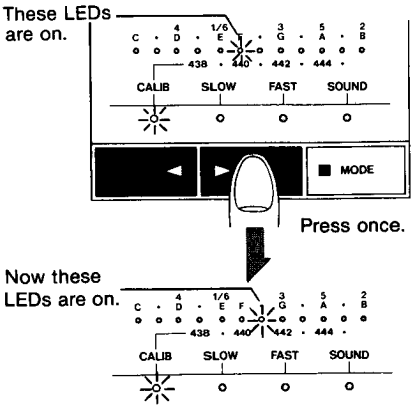
If you want to use 440Hz = A as your pitch standard, then calibration is not necessary. If you want a higher or lower standard, then proceed as follows:

1. Be sure that the power is turned on.
2. Press the MODE Key so that the CALIB LED lights up. (CALIB is the default mode when power is turned on.)



3. Press the UP or DOWN arrow key so that the LED lights up above the frequency that you wish to use as standard pitch for A. Standard pitch can be set in 1Hz steps from 438Hz to 445Hz.

Example: To change standard pitch from A = 440Hz to A = 441Hz.



TUNING PROCEDURE

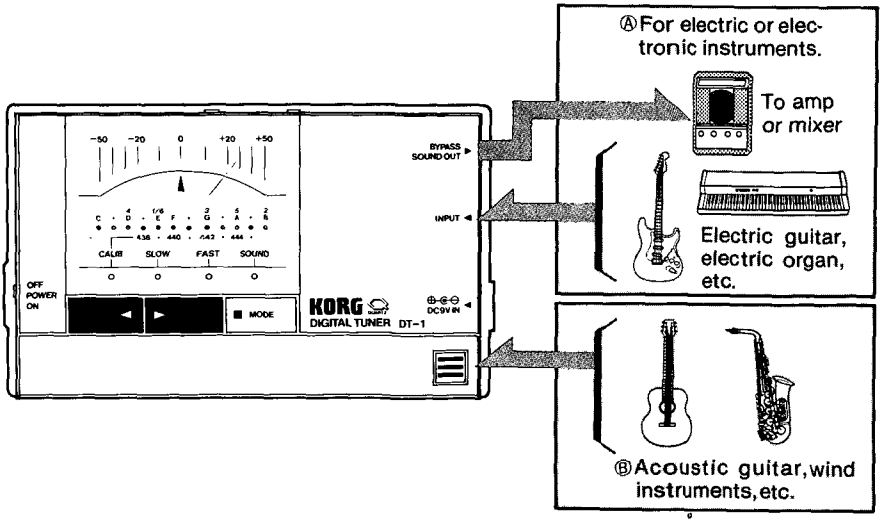
Note: Standard pitch returns to 440Hz when power is turned on, regardless of the setting in effect when the power was turned off.

Calibration on the DT-1 is a simple pushbutton operation that can be performed quickly any time you need a standard pitch setting other than A = 440Hz.

3. Tuning by the LED meter

1 Ⓐ If the instrument is electric, plug it into the DT-1 INPUT jack. If you want to hear the instrument as you tune, connect the DT-1 BYPASS/SOUND OUT jack to an amplifier. (The instrument sound will continue to be heard through the amp even if you turn off the DT-1.)

Ⓑ If the instrument is acoustic, put the DT-1 near the instrument so it can pick up the sound with the built-in microphone.


Ⓐ For electric or electronic instruments.
To amp or mixer
Electric guitar, electric organ, etc.
Ⓑ Acoustic guitar, wind instruments, etc.
−50 −20 0 +20 +50
C D E F G A B
438 440 442 444
CALIB
SLOW
FAST
SOUND
OFF
POWER
ON
MODE
BYPASS
SOUND OUT
INPUT
DC9V IN
KORG
DIGITAL TUNER DT-1

TUNING PROCEDURE

2 Turn on power and perform calibration if you want a pitch standard higher or lower than A = 440Hz.

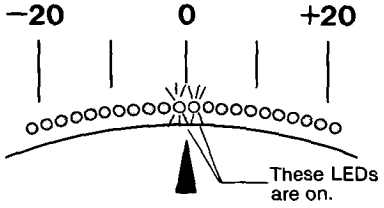
3 Press the mode switch to select the SLOW or FAST mode.

- In the FAST mode, the display instantly changes with the frequency of the input. This means that you get a quick indication if your instrument has steady pitch. But if the pitch fluctuates then the indication will constantly change, making it hard to read.
- In the SLOW mode, the display remains steady even if there are sizable fluctuations in pitch. Therefore, the SLOW mode is suitable for instruments such as wind instruments on which a steady pitch is difficult to maintain.

Meter Mode	Instrument
FAST	Keyboards, electric guitar, electric bass
SLOW	Wind instruments, voice, acoustic guitar

4 When a single note is played, the LED will light up for that note. If the note played on the instrument does not match the LED note name, then the instrument is seriously out of tune. Adjust instrument tuning so that the indication matches the note played.

5 Next, perform fine tuning by adjusting instrument pitch while looking at the meter. When pitch is exactly right, the LEDs to the left and right of the center 0 mark will illuminate.



6 Repeat steps 4 and 5 for other notes to be tuned.

7 After finishing tuning, turn off power.

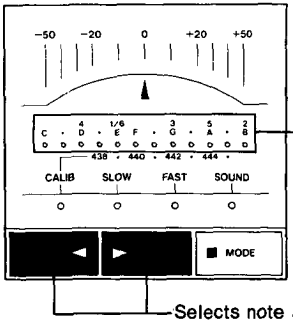
Note:
In some rare cases, such as when there are many over-tones, the timbre or other characteristic of the note may make measurement difficult on the DT-1. Should this occur, try the following:

- **If using the built-in microphone, try changing the position of the tuner in relation on the instrument.**
- **Try using an external microphone.**
- **Try adjusting the volume or tone settings on the instrument.**

TUNING PROCEDURE

4. Tuning to reference tones

1. Connect the BYPASS/SOUND OUT jack to an amplifier. Turn down amp volume.
2. Turn on DT-1 power. Perform calibration if your standard pitch is higher or lower than A = 440Hz.
3. Press the MODE selector key so that the SOUND LED lights up. Turn up amplifier volume. You will now hear the sound of the note indicated by the illuminated LED on the DT-1. Press the up or down arrow keys to change to higher or lower notes and octaves.



- Tones can be produced over a range of four octaves, from C2 to B5.
- You can instantly return to A4 by pressing both the up and down arrow keys at the same time.

4 Tune your instrument to the pitch of the tone.

5 For fine tuning, follow steps 3 to 6 in the previous section "Tuning by the LED meter."

6 After tuning, turn off the power.

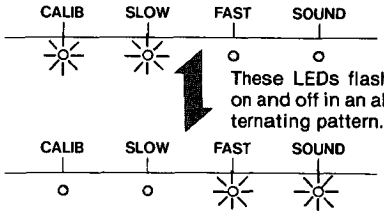
● General tuning procedure:
If the instrument is far out of tune, first tune to a reference tone, then use the meter for fine tuning.

Note: If you producing instrument and reference tone through amp via DT-1, adjust volume on instrument to obtain desired balance.

BATTERY DOWN INDICATION AND BATTERY

1. Battery down indication.

When the batteries have run down, the display LEDs will flash on and off in the pattern shown here.

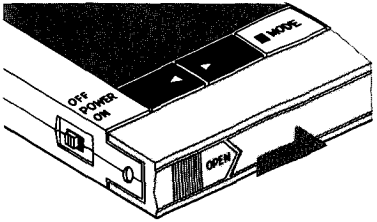


Tuning cannot be performed in this condition. Replace the batteries at your earliest convenience. Even if you will not be using the tuner, remove or replace the batteries to avoid the danger of leakage.

2. Battery replacement procedure

1 Obtain two new AAA 1.5V batteries of the same kind.

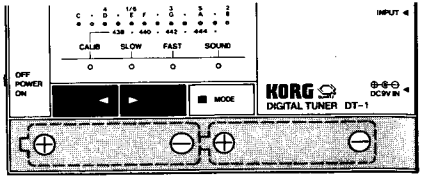
2 Remove the stand/case and slide the battery case cover in the direction of the arrow.



3 Remove both of the old batteries.

REPLACEMENT

4 Replace with the two new batteries, being careful to insert the batteries facing the proper direction as indicated by the ⊕ and ⊖ markings.



5 Slide the cover back over the batteries.

SPECIFICATIONS & OPTIONS

- **Measurement range:** 32.70Hz (C1) to 3951.07Hz (B7), 7 octaves.
- **Measurement precision:** ±0.5 cent
- **Indication resolution:** 2 cents (−20 to +20 cents); 10 cents (−50 to −21 cents, +21 to +50 cents)
- **Reference tones:** 65.41Hz (C2) to 987.77Hz (B5), 4 octaves.
- **Calibration range:** A = 438Hz to 445Hz (1Hz steps)
- **Display LEDs:** 28 for LED meter (10 cent steps for −50 to −21 cents and +21 to +50 cents; 2 cent steps for −20 to +20 cents).
  4 mode display LEDs.
  12 note name and calibrated standard pitch LEDs.
- **Connection facilities:** INPUT, BYPASS/SOUND OUT, DC9V IN
- **Power supply:** 1.5V AAA × 2; Optional AC adaptor (DC9V).
- **Dimensions:** 109(W)×69.5(D)×17(H)mm (excluding stand/case)
- **Weight:** 123g (including batteries)
- **Supplied accessories:** AAA batteries × 2.
- **Options:** AC adaptor (9V).

N O T I C E

Korg products are manufactured under strict specifications and voltages required by each country. These products are warranted by the Korg distributor only in each country. Any Korg product not sold with a warranty card or carrying a serial number disqualifies the product sold from the manufacturer's/distributor's warranty and liability. This requirement is for your own protection and safety.

KORG

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6004 C0TH PRINTED IN JAPAN