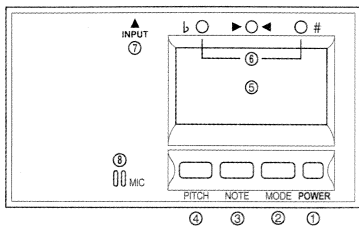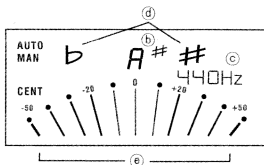# CHROMATIC TUNER
USER'S MANUAL

Caution

@ To avoid short circuit, electric shock or malfunction:
Do not disassemble for repair.
Do not place in high temperature and humid space such as electric heater, direct sunlight, bathroom, wet floor etc.
Do not place in excessive vibration.
Do not place in dusty or dirty space.
Do not operate the tuner with wet hands.

@ To avoid breakdown
Do not handle all controls with excessive power.
Do not drop the tuner.

@ Cleaning
Do not use thinner or alcohol for cleaning.
Use only dry and clean cloth.

@ To prevent battery loss
Remove the battery when the tuner is not in use for a long time.
Turn the power button off when the tuner is not in use.

@ Battery
Use only 3V battery : AAA(R03, LR03, L30) x 2

Features & Functions

① POWER button for On/Off
The power will be On & Off by each press of POWER button.
This tuner will be turn off automatically if it is not in use for 20 minutes.

② MODE button for AUTO/MAN selection
Following modes will be indicated on LCD in order by each press of MODE button.

③ NOTE button for Tuning Note selection
When you wish to tune MAN mode, you can select the note you wish to tune by each press of NOTE button.
Note : C, C#, D, D#, E, F, F#, G, G#, A, A#, B

④ PITCH button for reference pitch setting(Calibration)
You can set the calibration by each press of PITCH button.
Calibration Range : 435 - 445Hz (1Hz step)

⑤ Liquid Crystal Display (LCD)
@ Initial setting : mode=AUTO, calibration=440Hz

a. Mode : AUTO / MAN
b. Note of instruments.
c. Referece pitch : Indicatedes the current calibration value.
d. b & # : When the instrument is in tune, b & # will be indicated simultaneously on LCD.
If the pitch is flat, b will be indicated on LCD.
If the pitch is sharp, # will be indicated on LCD.
e. Tuning meter : When the instrument is in tune, tuning needle stops in the center "0".

⑥ Tuning Guide LEDs
These LEDs will help the discriminnation of tuning process.
When the instrument is tune, middle LED lights up.
If pitch is flat, left LED lights up.
If pitch is sharp, right LED lights up.

⑦ INPUT jack for electric instruments
When you wish to tune electric instruments, connect the output cord of the instrument to the INPUT jack of tuner.

⑧ MICrophone for acoustic instruments
When you wish to tune acoustic instrument, locate this tuner near the instrument for more accurate tuning.
This MICrophone do not operate when the INPUT jack is connected with instrument.

Tuning Procedure

For Accurate Tuning

@ Do not operate the tuner nearby sound equipment such as Radio or TV, if possible. These units can be impediment in reception of exact sound by internal microcomputer.
@ Locate the volume level of instrument at center for resonable sound input.
@ Do not pluck loudly and heavily.
@ If you want quick tuning of next string, press all string with finger lightly after current tuning to cut sound input of current tuning string.
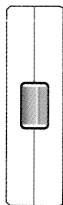
Auto & Manual Tuning Procedure

1. Electric instruments : Connect output of the instrument to the INPUT jack of tuner and if possible, adjust the volume level of the instrument to center position.
Acoustic instuments : Locate the instrument near the MIC in tuner.
2. Press the POWER button to turn the tuner On.
The LCD lights up and will be initial setting.
3. Adjust the reference pitch by PITCH button, if necessary.
4. **(AUTO)** Try the tuning from the low frequency.
(MAN) Press the MODE button one time, MAN & A(note) will be indicated on LCD. Then, select the note you wish to tune by each press of NOTE button.
Try the tuning.
5. **(AUTO)** Adjust the instrument until the tuning note you wish to tune is indicated on LCD.
6. If the pitch of the instrument is greater than -50 or +50cents, adjust the instrument until one of the LEDs lights up.
If the pitch of the instrument is within -50 or +50cents, adjust the instrument slowly until to approach the needle of meter to the center "0".
7. When the needle of meter stops in the center "0", middle LED lights up and b & # will be indicated simultaneously on LCD.
This point is exact sound of the instrument.

Specifications

Mode : Auto & Manual
Note : C, C#, D, D#, E, F, F#, G, G#, A, A#, B
Accuracy : +/- 0.5cent
Calibration : 435 - 445Hz (1Hz step)
Indicator : LCD & 3LEDs
Input : Microphone, 1/4" Input jack
Dimensions : 94mm(W) x 53mm(D) x 17mm(H)
Weight : 80g(including battery)
Power : 3V = AAA(R03, LR03, L30) x 2

Installation & Replacement of Battery

1. While pressing on the tabs marked push on side, open the bottom case.
2. Insert the batteries being careful to observe the correct polarity.
3. Close the bottom case on the contrary.
4. Battery life may differ according to the condition of use. If the unit malfunction, and turning the power Off and then On does not resolve the problem, remove and then reinstall the battery.

CE

This is to certify that Chromatic Tuner FT-2000
is in conformity with :
Council Directive 89/336/EEC (EMC Directive)
Aplicable Standards :
EN50081-1 : 01. 92
Electromagnetic Compatibility - Generic emission standards.
Part 1 : Residential, commercial and light industry.
EN50082-1 : 01. 92
Electromagnetic Compatibility - Generic immunity standards.
Part 1 : Residential, commercial and light industry.