BOSS

TU-120
Tuner

INSTRUCTIONS

AC & BATTERY POWERED

• Please read these instructions carefully for proper operating procedures for the BOSS TU-120.

The BOSS Tuner TU-120 is designed to help you tune your instruments with an accuracy of ±1 cent by virtue of the highly stable tuning-fork oscillator. The TU-120 gives electronic tuning either by the 16-LED stroboscope or by the beat method.

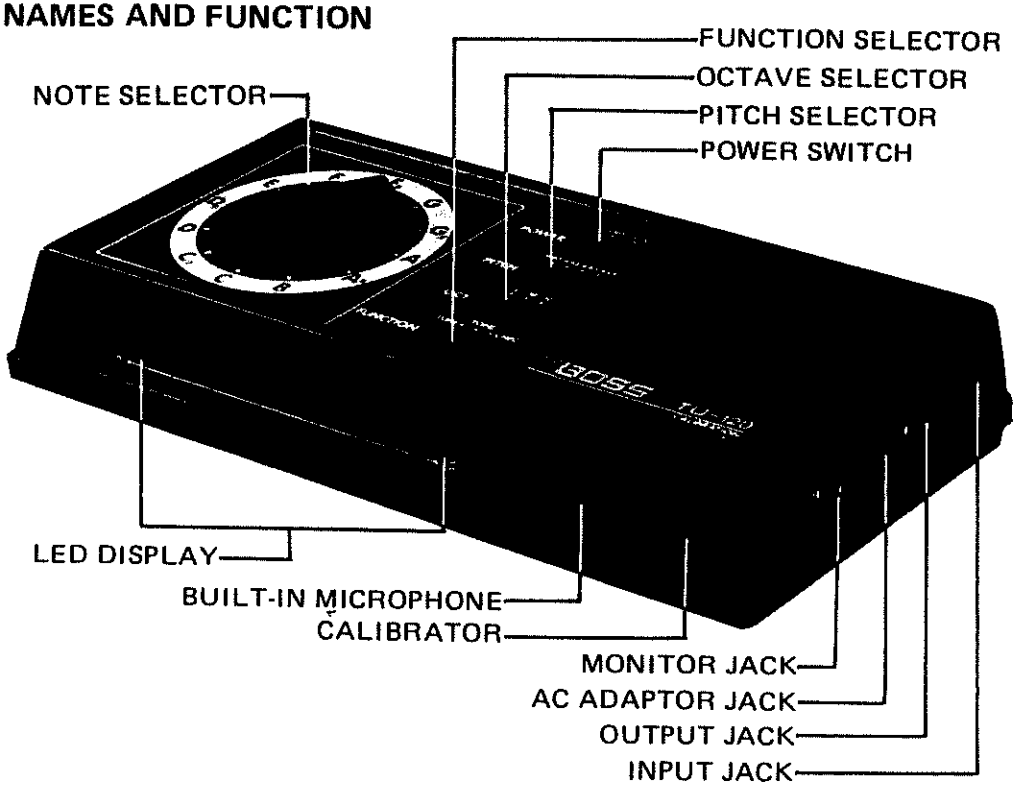
For the stroboscope method, electric instrument is connected directly to the jack and acoustic instruments sound is picked up with the built-in microphone. Any mistune of pitches is clearly shown by the stroboscope made up of 16 LED's. Tuning for a wide range of five octaves (C2-B6) is possible by this method.

For the beat method, TU-120 generates sounds of three octaves (C3-B5), making it possible to tune simply by ears.

TU-120 is designed to tune to four concert pitches (A4 = 440/442/443/444Hz) and which can be changed easily by a selector.

TU-120 operates both from self-contained battery or from AC line. Its compact size combined with all other features helps you tune accurately, instantly, anywhere.

NAMES AND FUNCTION



• POWER SWITCH

• PITCH SELECTOR

One of the four concert pitches (A4 = 440/442/443/444Hz) is selected by this switch. Then all other pitches are shifted according to the selected concert pitch.

• OCTAVE SELECTOR

Set this switch to proper position according to the notes to be generated or tuned.

Position	For Beat	Strobo
L	C3-B3	C2-B4
M	C4-B4	C3-B5
H	C5-B5	C4-B6

* If every other LED goes on and off at a very high rate, switch to the one-octave higher position.

• FUNCTION SELECTOR

TUNE: When a note is put in for strobo method tuning, the LED illumination will appear to move either to the right (when input tone is sharp) or to the left (when input tone is flat). Tune the instrument so that the illumination becomes stationary.

TONE: A tone is generated from the speaker for beat method tuning, which is determined by note selector and Octave selector.

CHECK: At this position, the 12 note oscillator frequencies are corrected by the calibrator to the built-in standard oscillator frequency. At this position, the generated tone is 440Hz regardless of setting of Pitch selector and other selectors.

• NOTE SELECTOR

Select a note to be generated or tuned to.

• CALIBRATOR

With Funciton selector at CHECK, LED's are illuminated and the standard note A4 = 440Hz is generated. Adjust the calibrator so that the LED illumination is stationary.

• INPUT JACK

Connect electric guitar, electronic organ or external microphone to this jack. If nothing is connected, the built-in microphone will work.

• OUTPUT JACK

A sound from Input jack or the built-in microphone is given from this jack.

• AC ADAPTOR JACK

When operating TU-120 from AC line, connect BOSS AC Adaptor (DC9V) to this jack, and the battery is disconnected from the circuit, guaranteeing stable long-time service.

• MONITOR JACK

The 12-note sounds generated are monitored by an amplifier or headphones connected to this jack.

• BUILT-IN MICROPHONE

An instrument sound to be tuned is picked up by this microphone and compared with the standard pitch. The result is displayed by the LED illumination.

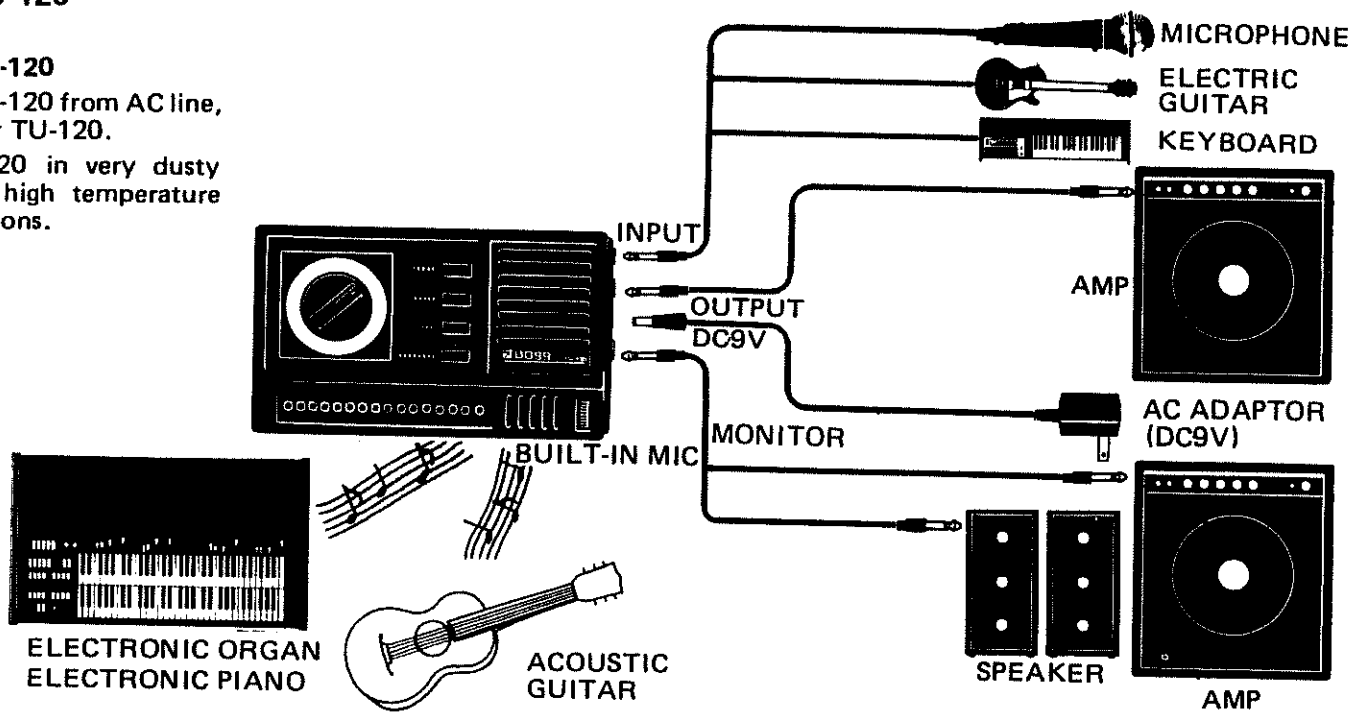
• LED DISPLAY

LED shows whether input sound pitch is accurately in tune with the standard pitch. When correctly tuned, the LED illumination becomes stationary.

CONNECTING TU-120

BEFORE USING TU-120

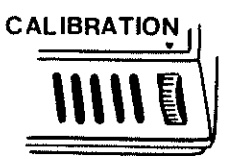
- When operating TU-120 from AC line, use AC Adaptor for TU-120.
- Avoid using TU-120 in very dusty location or under high temperature or humidity conditions.



OPERATING TU-120

CALIBRATION

1. Set Power Switch at ON.
2. Set Function Selector at CHECK.
3. Adjust Calibrator so that LED illumination becomes stationary.



BEAT METHOD TUNING

1. Set Power Switch at ON.
2. Set Function Selector at TONE.
3. Select a tone with PITCH/OCTAVE/NOTE Selectors.
4. While listening to the tone from TU-120 and that from the instrument, tune the instrument so that no beat is recognized.
   * C2-B2 and C6-B6 tones are not generated. Make use of the harmonic of the instrument sound for tuning in these ranges.

TU-120 features very high accuracy. ▶ Only slight movement of the LED illumination means almost perfectly tuned state.

STROBO METHOD TUNING

1. Make arrangements that the sound of instrument to be tuned is taken through the built-in microphone or the input jack. Set Power Switch at ON.
2. Set Function Selector at TUNE.
3. Select a tone with PITCH/OCTAVE/NOTE Selectors.
4. Feed the instrument sound. The LED illumination will appear to move. Tune the instrument so that it becomes stationary.
   Every other LED lights — instrument tone is one-octave higher.
   Every other group of TWO LED's light — the tone is in tune.
   Every other group of FOUR LED's light — the tone is one-octave lower.

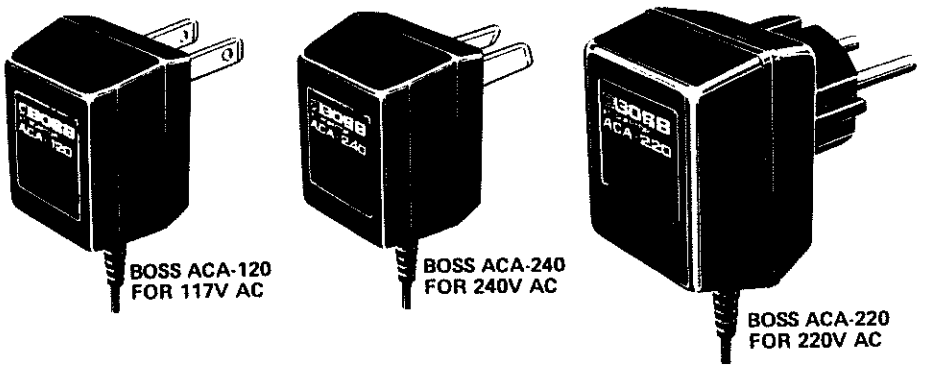
CAUTIONS

- When the battery voltage drops, accurate tuning is impossible. To prevent this, replace the battery a little earlier.
  * Use 9V battery.
- When replacing the battery, be careful not to catch the battery strap in the battery housing lid and place it in position.
  * Install the battery housing lid firmly.
- When you don't use for a long period, remove the battery to prevent current leakage and leaking out of sticky substances.
- Be sure to keep the battery snapped by connector in the housing, when using AC Adaptor, too.
  * Even if AC adaptor cord comes out during tuning, the tuner is immediately operated from the battery, causing no trouble in tuning.

AC ADAPTOR (OPTION)

BOSS ACA-100

When you operate TU-120 from AC line, use AC Adaptor (DC9V) for TU-120.



FREQUENCIES OF TEMPERAMENT SCALE

OCT.SW	PITCH	C	C#	D	D#	E	F	F#	G	G#	A	A#	B
H	440	523.25	554.37	587.33	622.25	659.25	698.46	739.99	783.99	830.61	880.00	932.33	987.77
	442	525.63	556.89	590.00	625.08	662.25	701.64	743.35	787.55	834.39	884.00	936.57	992.26
	443	526.82	558.14	591.32	626.50	663.76	703.21	745.02	789.34	836.28	886.00	938.68	994.48
	444	528.00	559.40	592.66	627.92	665.26	704.82	746.70	791.12	838.18	888.00	940.80	996.76
M	440	261.63	277.18	293.66	311.13	329.63	349.23	369.99	392.00	415.31	440.00	466.16	493.88
	442	262.82	278.44	295.00	312.54	331.13	350.82	371.67	393.78	417.20	442.00	468.28	496.13
	443	263.41	279.07	295.66	313.25	331.88	352.06	372.51	394.67	418.14	443.00	469.34	497.24
	444	264.00	279.70	296.33	313.96	332.63	352.41	373.35	395.56	419.09	444.00	470.40	498.38
L	440	130.81	138.59	146.83	155.56	164.81	174.61	185.00	196.00	207.65	220.00	233.08	246.94
	442	131.41	139.22	147.50	156.27	165.56	175.41	185.84	196.89	208.60	221.00	234.14	248.06
	443	131.70	139.54	147.83	156.62	165.94	175.80	186.26	197.33	209.07	221.50	234.67	248.62
	444	132.00	139.85	148.17	156.98	166.31	176.20	186.68	197.78	209.54	222.00	235.20	249.19

Roland®

10426

UPC 10426

SPECIFICATIONS

Power	Battery 9V (1) AC Adaptor
Current draw	DC9V, 13.3mA
Generated tone range	Switch selection (C3-B5) L: C3-B3; M: C4-B4; H: C5-B5
Strobo tuning range	Switch selection (C2-B6) L: C2-B4; M: C3-B5; H: C4-B6
Pitch accuracy	±1 cent
Display	16-LED Stroboscope
Standard pitch oscillator	440Hz ±1 cent
Built-in microphone	Electret condenser microphone (1)
Jack	Input, Output, Monitor, AC Adaptor
Dimensions	97(W) x 40(H) x 194(D)mm 3.8(W) x 1.6(H) x 7.6(D)in
Weight	500g, 1.1 lbs

* Specifications are subject to change without notice.

BOSS
Products of Roland

TU-120 INSTRUCTIONS Printed in Japan Jun. '79 C-3