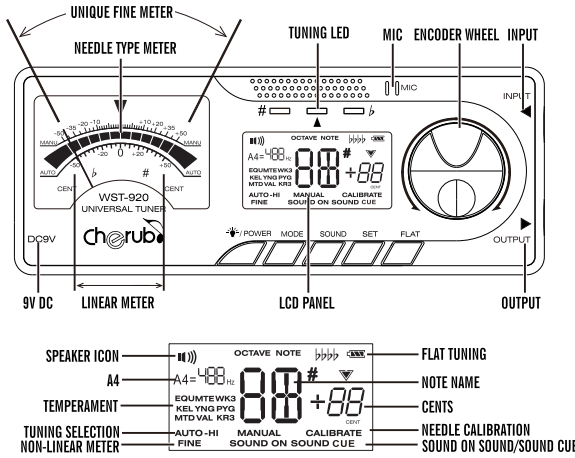




# WST-920 Universal Tuner Owner's Manual

Thank you and congratulations on your purchase of the cherub tuner WST-920. Please take the time to read through this manual to ensure you get the best from your product.

## Product Description



## Features

- Chromatic tuner with an 8-octave detection range  $E_1$  (20.60 Hz)– $C_8$  (4186 Hz) that supports band and orchestra instruments.
- Transposition.
- Broad range of A4 calibration: 349 – 499Hz (1Hz steps).
- Built-in mic supports acoustic instruments, instrument input.
- Dual display: Classic needle type tuner + backlit LCD.
- Multiple Temperaments support historical tunings: 12 Equal tempered, Pythagorean, Mean tone  $E^1$ /D#, Werckmeister III (WRK), Kirnberger III (KRN), Kellner (KLN), Vallotti (VAL), Young (YNG).
- Drop Tuning function.

## Operation Instruction

- Tuning mode**
1. Press POWER for 2 seconds to turn on the WST-920. Then press power briefly to turn on/off backlight of needle meter.
  2. Connect the instrument to be tuned to the INPUT jack or use the built-in MIC to tune. (Make sure that nothing is plugged into the INPUT or OUTPUT jack when the MIC is used to tune)
  3. Play a single note on your instrument. The display will show the name of the note and octave number closest to the pitch detected by the WST-920. Tune your instrument until the LCD shows the correct octave and note name.
  4. Play another single note on your instrument, if the “#” LED flashes that means the note is sharp; if the “b” LED flashes that means the note is flat. Tune your instrument until the center LED lights. The cent meter will tell you how far you are away from the correct note. The “#” and “b” LEDs will flash quickly when the note is way out of tune, and will flash more slowly as the note approaches the correct pitch.
  5. Press MODE to choose Auto, Auto-Hi, Manual, Sound on Sound or Sound Cue.

Tuning Mode	Description
Auto	The WST-920 will automatically display the octave. The tuning range is $E_1$ – $C_8$ .
Auto-Hi	The WST-920 will automatically display the octave. The tuning range is $E_7$ – $D_8$ .
Manual	Choose the note manually $E_1$ – $D_8$ .
Sound Cue	The WST-920 will give a standard tone after it detects any tone which is close to the standard tone, (the standard tone is from $C_1$ – $C_8$ )
Sound on Sound	There is a rapid tone when the note is way out of tune and slows when approaching the correct pitch. A steady tone indicates the note is in tune.

6. There are two tuning meters, the FINE meter and the LINEAR meter. Press MODE key for 2 seconds to turn on/off FINE meter tuning.
 

Mode	Description
Fine	Fine tuning meter is a non-linear meter to make precision (<1 cent) tuning possible while still showing the full -50 to +50 cent range.
Linear	Linear is a standard tuning meter which has a linear response.

7. Settings
  - 1) Press SET to choose A4 settings, Octave Note settings and temperaments settings (in each setting, the proper segment on LCD will flash). After choosing a setting, use the encoder knob to adjust the parameters. Press the encoder knob to confirm settings or any other button to discard the changes and leave SET mode.
  - 2) Press SOUND for 2 seconds to switch to Tone generator mode.
  - 3) Press FLAT key to set flat tuning, 1/2 steps to 2 steps  $b$  –  $bb$  –  $bbb$  –  $bbbb$  – off.

- Tone generator**
1. Press SOUND for 2 seconds to turn on the tone generator. You will hear a tone. The note name is displayed on the LCD. Turn the encoder knob to choose the tone you want.
  2. Press SOUND briefly to exit tone generator mode.

- Other features**
1. There are two meter displays, the fine mode and the linear mode. The fine mode is non-linear tuning where 1 cent close to zero has more needle movement than 1 cent far from zero, which will make precision (<1 cent) tuning possible. The linear meter is a standard tuning meter, where 1 cent close to zero has the same needle movement as 1 cent far from zero.
  2. The cent meter on the LCD indicates how far your instrument is away from the correct pitch. If there is a negative number (e.g., -3), it means that your instrument's note is 3 cents flat. If there is a positive number (e.g., +3), it means that your instrument's note is 3 cents sharp. Tune your instrument until the cent meter shows “0”. The in tune LED will light.
  3. The temperament feature allows tuning of virtually any instrument to classical temperaments: Equal tone (EQU), Pythagorean (PYG), Mean Tone (MTE), Mean Tone D' (MTD), Werckmeister III (WRK), Kellner (KLN), Vallotti (VAL), Young (YNG), and Kirnberger III (KRN).
  4. Press SOUND when in Auto, Auto-Hi or Manual, mode to turn on the indicator tone when the note is in tune.
  5. SOUND CUE tuning mode: The WST-920 measures the note for 1 second and plays the correct tone for 2 second. This will repeat. This mode lets you alternate between playing and listening to train your ear to accurately recognise differences in pitch. The tone is the pitch to which you are tuning.
  6. SOUND ON SOUND tuning mode: there is a rapid tone when the note is way out of tune and slows when approaching the correct pitch. When the note is in tune, there is a steady tone. The tone is the pitch to which you are tuning.
  7. Auto shut-off: If there is no signal for 5 minutes, the tuner shuts off.
  8. Auto save function: settings are saved upon power off.
  9. Low voltage detection: The Battery icon flashes when detecting low voltage and the device shuts off automatically after the icon flashes 10 times.

Setting	Original factory settings
A4	440Hz
Manual tuning note	4A
Temperaments	EQU
Flat	OFF
Mode	Auto
Temperament key	C
Tone Generator note	4A
Needle display mode	Fine
Needle backlight	ON

10. Calibrating the needle meter
 

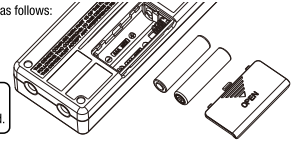
When the WST-920 is turned on, the needle will point to “0” position, and then points to “-50”. If the needle does not rest in the “0” position, you must calibrate the needle: Press SET for 3 seconds. The Calibration icon will be displayed on the LCD. Rotate the encoder knob to adjust the needle to “0” position. Press the encoder knob to save the adjustment.

\* This tuning mode is only activated when using the input jack.

## Installing the battery

When the battery icon becomes “” please replace the batteries promptly as follows:

1. Open the battery cover.
2. Put in 2 of AAA batteries observe proper polarity.
3. Close the battery cover.



- ⚠️ 1. Pay attention to polarity when replacing battery.**  
**NOTE 2. Remove the battery if the product will not be used for a long period.**

## Specifications

- Tuning range:  $E_1$ (20.6Hz)– $D_8$ (4699.0Hz)
  - Tuning precision:  $\pm 0.1$  cent
  - A4 range: 400–499Hz
  - Detection method: Mic, Line-in
  - Reference tone range: 2C–7C
  - Reference tone precision:  $\pm 0.1$  cent
  - Flat tuning:  $\frac{1}{2}$  steps to 2 steps
  - Display mode: VU Meter Display, LCD Display
  - Tuning method: Auto, Manual
  - Temperaments: 12-note Equal tempered, Pythagorean, Mean tone  $E^1/D^1$ , Werckmeister III, Kirnberger, Kellner, Vallotti, Young
  - Power supply: 3V(2xAAA)batteries or DC 9V
  - Dimensions: 147(W)x26(D)x58(H)mm
  - Weight: 140g
- \* Specification may change without notice.

## Precautions

- Environment:
  1. Do NOT use the Tuner in high temperature, or high humidity, or subzero environments.
  2. Do NOT use the Tuner in the direct sunlight.
- Please do NOT disassemble the Tuner by yourself.
- Please keep this manual for future reference.

## Accessories

- Owner's manual
- 2xAAA batteries

## Precautions

- Location**  
 Using the unit in the following locations can result in a malfunction.  
 - Direct sunlight  
 - Extreme temperature or humidity  
 - Excessively dusty or dirty locations
- Power**  
 Switch OFF power when the unit is not in use.  
 Remove batteries to prevent damage from battery leakage when the unit is not in use for long periods.
- Handling**  
 Do not apply excessive force to the switches or controls. Do not take the tuner apart by yourself.
- Care**  
 If the exterior becomes dirty, wipe it with a clean, dry cloth. Do not use liquid cleaners such as Benzene, thinner, cleaning compounds or flammable polishes.
- Keep this manual**  
 After reading this manual, please keep it for future reference.
- Keeping foreign matter out of your equipment**  
 Never set any container with liquid in it near this tuner. If liquid gets into it, that could cause malfunction, fire or electrical shock. Be careful not to let metal objects get into the tuner.

## 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.

## CE mark for European Harmonized Standards

CE Mark which is attached to our company's products of Battery mains the product is in fully conformity with the harmonized standard(s) EN 61000-6-3:2007+A1:2011 & EN 61000-6-1:2007 Under the Council Directive 2004/108/EC on Electromagnetic Compatibility.

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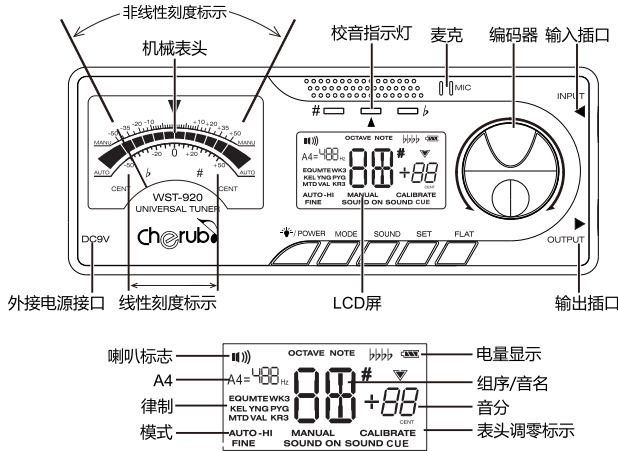
Made in China



# WST-920 通用校音器 使用说明书

祝贺您拥有了Cherub WST-920通用校音器，在您首次使用本产品之前，请花几分钟时间阅读一下本说明书。

## 产品界面



## 产品特点

- 1. 指针表头有两组刻度标示，非线性刻度标示(FINE)和线性刻度标示(LINEAR)。
- 2. LCD上有一个“CENT”的图标，其图标上方显示的正负数字代表了被校乐器的音高标准音的距离。
- 3. 九种经典律制：十二平均律、PYTHAGOREAN、MEAN TONEE、MEAN TONE E'/D'、WERCKMEISTER III、KIRNBERGER III、KELLNER、VALLOTTI和YOUNG。
- 4. SOUND CUE校音模式：在该模式下，当检测到有音频信号输入时，本机会自动分析，然后发出一个接近该音频信号的标准音。
- 5. SOUND ON SOUND校音模式：在该模式下，当乐器发出的声音离标准音较远时，本机发出高频的蜂鸣声，LED同时快速的闪烁；当乐器发出的声音离标准音越来越远时，蜂鸣声频率逐渐变慢，LED闪烁变慢，直到校音器发出长鸣，音准LED点亮。该功能只在使用PICKUP或插入音频线时工作。
- 6. 自动关机功能：5分钟内无操作或无任何有效信号输入时，本机将自动关机。
- 7. 自动保存设置：关机时会自动保存已设置的参数。

参数	出厂默认值
A4	440Hz
Manual tuning note	4A
Temperaments	EQU
Flat	OFF
Mode	Auto
Meter	Fine

- 8. 电压检测：当LCD上电池符号变成“”时，请及时更换电池。如未更换电池，本机会在“”符号闪烁10秒钟后自动关机。
- 9. 指针位置调整：每次开机时，表头的指针将会指向“0”处，然后回到“-50”处。如在开机时指针未指向“0”的位置，请按SET键3秒，当LCD上显示“CALIBRATION”图标时，旋转编码器来调整指针的位置。调整完毕后，短按编码器，指针会回到“0”位置，完成指针位置调整，进入待校音状态。
- 10. 在AUTO、AUTO-HI、MANUAL模式下，短按SOUND键开启/关闭音准提示音。该功能只在使用PICKUP或插入音频输入线时工作。

## 操作说明

### 校音模式

- 1. 长按POWER键开/关机；开机状态下，短按POWER键打开/关闭背光灯。
- 2. 将需要校音的乐器信号采集连接线插入INPUT口，如果INPUT口无音频输入线接入，本机将自动默认为MIC接收乐音方式来校音。（当用MIC拾音时，请勿在INPUT口、OUTPUT口插入任何连接线）
- 3. 按MODE键选择校音模式：AUTO → AUTO-HI → MANUAL → SOUND CUE → SOUND ON SOUND → AUTO (该功能只能在PICKUP或插入音频输入时启用)

校音模式	功能
AUTO	本机将自动识别音名弦序，校音范围为E <sub>1</sub> ~C <sub>6</sub> 。
AUTO-HI	本机将自动识别音名弦序，校音范围为E <sub>2</sub> ~D <sub>6</sub> 。
MANUAL	需手动设置音名弦序
SOUND CUE	本机将根据检测到的声音发出一个与检测音接近的标准音，标准音的范围C <sub>2</sub> ~C <sub>7</sub> 。
SOUND ON SOUND	校音过程中，本机一直发出蜂鸣声，当乐器发出的声音离标准音越远，蜂鸣声频率越快；当发出的声音越接近标准音，蜂鸣声频率越慢；当乐器发出的声音与标准音一致时，蜂鸣声会长鸣2秒。

- 4. 指针表头有两组刻度标示：非线性刻度标示(FINE)和线性刻度标示(LINEAR)。如需切换到线性刻度标示(LINEAR)，请长按MODE键，此时LCD上“FINE”会消失；当再次长按MODE键时，刻度标示切换回非线性刻度标示(FINE)。
- 5. 参数设置  
在AUTO、AUTO-HI、SOUND CUE和SOUND ON SOUND校音模式下，按SET键选择需要设置的项目，即A4 → KEY → 律制（在选中一个需要设置的项目时，LCD上对应的符号会闪烁4秒），在符号闪烁期间，通过旋转编码器来选择参数，设置完毕后，按下编码器来确认并保存。（如：当按SET键选到A4时，A4符号会闪烁4秒，在闪烁过程中，请旋转编码器选择参数值，选定后按下编码器确认并保存参数值。编码器顺时针旋转为增加，逆时针旋转为减少）若在4秒内无操作，本机将自动退回校音模式。

- 6. 在MANUAL校音模式下，请直接通过旋转编码器来选择音名和组序，再通过按SET键选择需要设置的项目（即A4 → KEY → 律制），在选中一个需要设置的项目时，LCD上对应的符号会闪烁4秒，在符号闪烁期间，通过旋转编码器来选择参数值，设置完毕后按下编码器确认并保存。（如：当按SET键选到A4时，A4符号会闪烁4秒，在闪烁过程中，请旋转编码器来选择参数值，选定后按下编码器确认并保存参数值。编码器顺时针旋转为增加，逆时针旋转为减少）。
- 7. 在AUTO、AUTO-HI或MANUAL校音模式下，短按SOUND键，会出现“SOUND”图标，校准时，本机发出提示音（该功能只能在PICKUP或插入音频输入时启用）。
- 8. 按FLAT键选择降半音：b → bb → bbb → bbbb → off。

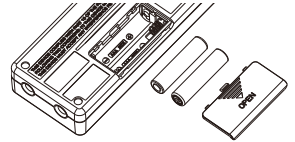
### 定音模式

长按SOUND键进入定音模式，旋转编码器选择需要的标准音。再次短按SOUND键退出定音模式。

## 电池安装

当LCD上电池电量符号变成“”时，请及时更换电池，方法见右图：

- 1. 更换电池时，请注意电池的极性。
- 2. 若要长期放置产品，请把电池取出。



## 技术规格

- 校音项目：通用校音
- 校音范围：E<sub>1</sub> (20.60Hz) ~ D<sub>6</sub> (4699.00Hz)
- 校音模式：AUTO、AUTO-HI、MANUAL、SOUND CUE、SOUND ON SOUND
- 标准音：C2(65.41Hz)~C7(2093.00Hz)
- 音名：C, C', D, D', E, F, F', G, G', A, A', B
- A4范围：400 ~ 499Hz (1Hz/step)
- 降半音：b bb bbb bbbb
- 律制：十二平均律、PYTHAGOREAN、MEAN TONEE、MEAN TONE E'/D'、WERCKMEISTER III、KIRNBERGER III、KELLNER、VALLOTTI和YOUNG。
- 电源：3V(2xAAA)电池或DC 9V
- 体积：147(W)x26(D)x58(H)mm
- 重量：140g

\* 技术规格如有变更，恕不另行通知。

## 注意事项

- 使用环境：
  1. 避免在高温、潮湿、零下等恶劣的环境中
  2. 避免在强光下使用。
- 请勿自行拆卸本机。
- 请保存好本手册以便以后查阅。

## 随机附件

- 操作说明书
- 3V(2XAAA)电池

## 质量承诺

亲爱的小天使用户：

在您使用小天使产品时，请仔细阅读产品说明书，当您有疑问和困难时，请拨打售后服务热线：400-990-9866

- 一周内出现质量问题可退货退款
- 一年内出现质量问题可免费维修
- 一月内出现质量问题可调换
- 终身享有咨询和维修服务

【请向销售商索取有效购买凭证并予以保存】

## 换修政策

- 一、包换政策：
  1. 消费者自购机之日起1个月之内，在正常使用情况下，出现非人为的产品性能故障，且产品外观及包装保持完好可向购机的经销商换机。
  2. 消费者在换机时应出示由经销商开出的购机收据及保修卡，否则经销商可以不予更换。
- 二、保修政策：

产品在购买之日起1年内，可免费享有维修服务；对于超过1年的产品及人为或不可抗力因素造成损坏的产品，我司可提供有偿维修服务。

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