

vibrations. This will eliminate any extraneous overtones that may disturb the tuning.

- Use good strings. Old strings tend to lose their uniformity and will not vibrate evenly. Brand new strings stretch flat as you play.
- All sources of friction cause tuning problems. For example, if the slot in an instrument's nut is too tight, the string will be pulled flat as it is played. A tight nut (or capo) will cause the string's pitch to change in steps rather than evenly.
- Avoid pressure on the instrument while tuning. Even moderate pressure on the neck of a guitar will cause a noticeable change in pitch. Also, press the strings straight down to the fingerboard. Bending the strings sideways is very common, especially on difficult chords, but causes the strings to be pulled sharp.
- A note for advanced fretted instrumentalists: Almost all fretted instruments, and most other instruments, are constructed to play an "even-tempered scale." Sabine tuners are also calibrated to this scale. The even-tempered scale places equal tonal spacing between all notes in the scale so that the musician will not have to re-tune to change keys. A disadvantage, however, is that the third note of the scale sounds a little flat (14 cents, to be exact). For example, when playing in the key of G, the B note will sound flat. If you tune the B string so that it sounds correct in an open G chord, other chords using the B string will sound out of tune. The musician may choose to optimize the tuning of a particular key or to use the even-tempered scale. Much depends on the musician's style, but generally it is best to tune exactly as your Sabine tuner indicates.

### SPECIFICATIONS

- Dimensions: 3.3 x 1.8 x 0.4 in. (8.4 x 4.6 x 1.0 cm)
- Weight: 1.25 oz. (36 g), with batteries
- Scale: Even-tempered, 12 notes per octave
- Range: Low B of a five-string bass to the highest note of a mandolin
- Accuracy: +/- one cent (uses quartz crystal)
- Batteries: Two standard Lithium CR-2430, 3 Volts each

### LIMITED TWO-YEAR WARRANTY

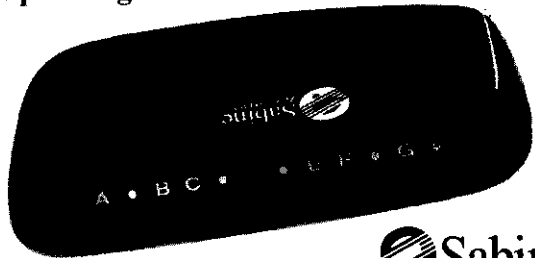
If your AX Tuner fails because of a manufacturing defect within two years from the date of the original purchase, please return it, postage prepaid, to Sabine for a replacement with a new or reconditioned product. **You must include your full name, address, proof of purchase and the nature of the defect.** This warranty does not cover damage caused by accident, misuse or defective batteries.



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## Operating Guide



Now that you're the owner of a Sabine AX-800 Chromatic AutoTuner (patent pending), the most unique and innovative chromatic tuner available, you'll find tuning your instrument has never been easier. This removable, business card-sized tuner is always at your fingertips.

The AX Tuner's highly accurate advanced digital technology allows superior performance when tuning most stringed instruments, particularly electric or acoustic guitars, banjos, mandolins, violins, and four- or five-string bass guitars. The tuner also works well with many band instruments when placed on a nearby music stand or table.

### OUTSTANDING FEATURES OF YOUR SABINE AX TUNER

- **HIGHLY ACCURATE**
- **MOUNTS DIRECTLY ON YOUR GUITAR**
- **InTouch™ CONTACT MICROPHONE PICKS UP YOUR INSTRUMENT'S VIBRATIONS**
- **ELIMINATES EXTRA CORDS**
- **EASY-TO-READ IndiColor™ LED TUNING SYSTEM**
- **WORLD'S SMALLEST TUNER**
- **FULL RANGE CHROMATIC SCALE**
- **AUTOMATIC RECALIBRATION**
- **AUTOMATIC POWER DOWN**
- **LONGEST BATTERY LIFE**
- **QUARTZ ACCURACY**



### INSTRUCTIONS FOR TUNING

**CAUTION:** The AX Tuner is not recommended for use on instruments with antique or cracked finishes.

**1. PLACE THE TUNER DIRECTLY ON YOUR INSTRUMENT WHEREVER IT IS MOST CONVENIENT AND EASY TO SEE.** You will want to experiment with the tuner to find where its peak performance can be reached on your particular instrument. For example, the tuner may work best on your guitar when placed near where the fingerboard meets the top.

**2. PRESS THE POWER BUTTON ("P") TO TURN ON YOUR TUNER.** When the power is turned on, the D# note indicator will blink once per second.

Tones generated by both acoustic and electric instruments are detected by the AX Tuner's InTouch™ sensitive internal

contact microphone. The AX Tuner picks up vibrations from the top of the instrument rather than the air so it is not as affected by background noise as other tuners. It is therefore not necessary to play loudly; plucking the string lightly once per second usually gives the best results. Heavy plucks may make tuning more difficult.

The tuner will turn itself off after two minutes.

### IF YOU WISH TO DEFEAT THE POWER DOWN TIMER

To have the tuner stay on throughout the performance instead of automatically turning off after two minutes, turn the tuner off; then hold down the calibrate ("C") button and press the power ("P") key. Release the power key first and then the calibrate button. Two LEDs will light initially to indicate the tuner is in the non-timer mode.

### 3. LIGHTLY PLUCK THE STRING YOU WISH TO TUNE.

Adjust the instrument's pitch until the desired NOTE INDICATOR LED lights.

For example, if you wish to tune a D string on a guitar, pluck the string and tune it until the "D" LED lights. Pluck the string every second or so to keep the note "fresh" and to prevent the note from fading flat. Also, to eliminate extraneous overtones, mute the other strings after each pluck.

### 4. SLOWLY ADJUST THE INSTRUMENT'S PITCH UNTIL THE DESIRED NOTE'S LED TURNS GREEN, INDICATING THE STRING IS EXACTLY IN TUNE.

~~Note that the LED turns yellow when the tone is flat and turns red when the tone is sharp. The LED blinks rapidly when the tone is far from being in tune and blinks slower and slower as the tone approaches being in tune.~~

Repeat steps 3 and 4 for the other notes until the entire instrument is tuned.

### 5. TO REMOVE THE AX, GENTLY TWIST AND LIFT THE TUNER. Store the AX in its DomeHome™.

**HOW TO RECALIBRATE YOUR AX TUNER:** Most other tuners allow the user to recalibrate only a few Hertz from standard A=440Hz. They are almost useless if you wish to tune to an instrument that is more than a few Hertz out of tune. However, you can recalibrate your AX Tuner to match the pitch of any reference instrument simply by touching the calibrate ("C") button.

**Example:** If you wish to tune a guitar so it will be in tune with a certain piano, place the tuner on the piano, defeat the two-minute power down timer, play an "A" (or any other note) and wait a moment for the note to register on the tuner's display. Then lightly press the calibrate button on the tuner. The "A" LED will turn green, indicating that the tuner now considers the piano to be in perfect tune. Now if you tune your instrument to the tuner, your instrument will be in tune with the piano.

TO RESET THE TUNER TO STANDARD A=440 HZ, PRESS THE POWER BUTTON TO TURN THE TUNER OFF AND THEN BACK ON. THE AX TUNER ALWAYS RETURNS TO A=440 HZ WHEN IT IS TURNED ON.

**TO CLEAN THE SafeMount™ PAD:** If the tacky material gets dirty, simply place a dab of soap on your finger and lightly spread the soap on the material. To rinse the soap, repeatedly wipe the soap off the pad with your finger, and rinse your finger with water. ONLY DAMPEN THE PAD; DO NOT IMMERSE THE TUNER IN WATER OR PLACE IT DIRECTLY UNDER A FAUCET. THIS MAY DAMAGE THE TUNER AND WILL VOID THE WARRANTY.

Allow the pad to air dry for about five minutes. The SafeMount™ becomes tacky again when it dries. To keep the pad tacky longer between cleanings: Keep the guitar surface clean, avoid touching the SafeMount™, and keep your AX Tuner in its DomeHome™ when not in use.

**TO CHANGE THE AX'S BATTERIES:** The AX Tuner's batteries should allow approximately 1,500 tunings. When you find it necessary to change the batteries, locate the battery door (exposed on the bottom of the AX Tuner). Place the bottom end lip of the DomeHome™ in the door's slot and turn the door counter-clockwise until it opens. Remove the old batteries and replace them with two standard CR-2430 Lithium batteries (3 Volts each). Place the negative side of both batteries towards the tuner's top (marked "NEG").

**CAUTION:** 1) Always remove the tuner before putting your instrument in its case. 2) The tuner should not be left in the same spot on your instrument for more than one week. 3) The wood on new guitars with clear finishes darkens naturally from light exposure. To prevent uneven darkening, move the tuner to a different place on the instrument every few days. 4) The AX Tuner is not recommended for use on instruments with antique or cracked finishes.

### TUNING TIPS

*Many musical instruments have peculiarities that cause annoying tuning problems. Most of these peculiarities are overcome by following these simple procedures:*

1. Pluck one string at a time.
2. Pluck the instrument once per second to keep the note "fresh" while you are tuning. Notes go noticeably flat a second or two after being plucked. If tuning a higher-pitched instrument (such as a mandolin), pluck a little faster; for a lower-pitched instrument (such as a bass), pluck slower.
3. Do not pluck loudly. Your AX Tuner's sensitive contact microphone can pick up light to medium volumes, and heavy plucking may overpower the microphone or pull the note sharp.
4. Pluck the strings with the flesh of the thumb. Fingernails and flat picks add overtones and slow the tuning process.
5. Tune from a pitch that is flat up to the pitch you desire. This procedure removes any slack in the gears of the instrument's tuning heads. If you tune from SHARP to IN TUNE, the gears will slip as you play, and the instrument will go flat after a few minutes of playing.
6. If you have difficulty getting a note to register on the tuner, try touching the other strings lightly to stop their sympathetic