

# Korg CA-30

## - Instructions for Pipe Band Tuning

By Chris Hamilton

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*The Korg CA-30, while not designed for bagpipes, can be used for tuning pipe band drones and Low A's quite effectively. Here is the method that I've developed over the past few years.*

### Drones:

**0.** Select one bagpipe in the band to be the "master". All others will tune to this one. Once the chanter is well set, tune the drones of the master bagpipe ... by **EAR**. Make sure the drones are perfectly in tune with Low A.

**1.** Turn on the tuner using the **Power** button.

**2.** Initially, the standard frequency will read 440 Hertz (Hz), or cycles per second, at this point. This does not mean that B-flat is 440 Hz, but rather that the B-flat is relative to an A of 440 Hz. Therefore, the B-flat is 467 Hz. (this "+27" formula will tell you your absolute pitch of Low A with these things).

**3.** Hold the meter up to the outside tenor of the well-tuned master pipe, and repeatedly push the Up or Down **Calib** buttons until the Green LED lights steadily (and the red sharp/flat lights stop) and the needle is locked at 0 (zero) cents (the deviation from the

master pitch). In the right corner of the screen the note "heard" will be displayed. This will typically be "Bb" (B Flat). The number displayed in the left corner of the display screen (say 448) is of the note Low A (which is akin to Bb) relative to standard A. So if it's 448, you add 27 and know your Low A pitch is 475 Hz.

Now, if the note displayed on the screen says "A", then the number on the left side will typically be in the 470s range. If this is the case, then you don't need to do any conversion mathematics. At any rate, the important thing is the **calibration** to "0" (zero).

Note that unlike the CA-20, there are Up and Down calibrate buttons! The unit will calibrate from 410 Hz to 480 Hz.

**4.** Tune the rest of the drones to this frequency. There are two ways to do it. First, you can go around while the whole band is playing and do all drones to the meter. In addition, you can have each piper blow up individually, tune their outside tenor to the meter, then tune the middle tenor and bass to the outside tenor by ear (can be much faster). I use both methods so that I'm constantly tuning drones regardless of what the P/M is doing. Note that there may be cases where the chanter does not "meet" the drones exactly. This can indicate a sharp or flat chanter, but minor variations are to be expected. A badly out-of-sync sound can point out a bad chanter. Make adjustments to the pitch as you play. On a hot day, expect to raise that pitch by several hertz as you get closer to competition time and the pipes get played in and the temperature affects them. Recheck the P/M for upward drift as you go.

Note that the tick marks or increments on the screen are in 5-cent increments, which \*roughly\* correspond to 1 Hz in this frequency range.

Watch pipers on which the needle goes up and down while they're blowing. This is tough to tune to, but you've kind of got to take an "average" or "most common" reading.

Unlike the CA-10, when you turn the power off on the CA-30, it "remembers" the last pitch you used and will display that as the standard when you turn it on again. Unlike the CA-20, there is no "Auto" or "Manual" button - it's all automatic.

### Chanters:

You can check the unison of the band Low A's by going around and, with the tuner already calibrated, holding it up to their chanter while the piper is playing Low A. Flat / sharp variations will be visible just as in drone tuning. Adjustments for sharpness or flatness can then be made to the reed.

### Opinion:

The person(s) doing the tuning, in my opinion, should be pipers with a good ear themselves. The tuner is a supplement, an aid, and can be a disaster if used incorrectly. Also, make sure whoever is tuning is playing their own pipes enough so they're not going flat to the band, and has a known stable bagpipe.

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