RCT Mac/Win 5 What's New

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Smart Tune mode - new for RCT 5.x
This new tuning mode for CyberEar does a super-accurate micro pitch raise using RCT's patented pitch raise technology. Even if the piano is a few cents off pitch, Smart Tune mode will predict the overpull so that each note ends up exactly on target. This often avoids an extra pass saving the tuner 20 to 40 minutes per tuning!

When should you use Smart Tune mode? Whenever the piano is more than .5 to 1.0 cents off pitch Smart Tune will help the tuning end up closer to the final target. If the piano will require another pass, for instance if it is more than about 20 to 25 cents off pitch it's usually better to use Pitch Raise mode. However, you should use Fine Tune mode if you are giving or taking the tuning exam, or if the piano is almost exactly in tune and you're doing a "touch-up" tuning (for instance you just tuned it a very short time ago).

Many tuners like Smart Tune mode so much they want Smart Tune to be the default tuning mode. To do this tap Prefs button in CyberEar, choose Smart Tune in the Defaults: Start Mode popup menu.

To start Smart Tune mode in CyberEar tap the tuning mode popup menu (may say Fine Tune or Pitch Raise). Choose "Smart Tune".

When you initiate Smart Tune mode you'll see a dialog box that's similar to the Pitch Raise mode dialog box, but there are several additions:

- Highest Tenor Note (HTN) is the note just below the first plate strut above the temperament. This note must be higher than Lowest Plain Wire Note.
- Lowest Tenor Trichord – The Lowest Trichord must be the same as or higher than the Lowest Tenor Note.
- Tenor Bichords(s): Number of bichords in tenor (above Lowest Tenor Note).
- Lowest Tenor Note (LTN) is the note just above the plate strut that separates the bass and treble sections. The LTN has to be the same or lower than the Lowest Trichords.

For Smart Tune mode, the Lowest Tenor Note and Lowest Trichord are the same on pianos without any bichords on the tenor bridge. *Be sure to check the "tenor Bichords" box against the actual piano!*

How does Smart Tune compare to Fine Tune mode?

Smart Tune uses the same spinner speed and other CyberEar spinner settings as Fine Tune mode since its goal is similar to Fine Tune, which is to execute the final pass on the piano. However, Smart Tune differs from Fine Tune in that it records the original pitch and uses automatic overpulls.

How does Smart Tune mode differ from Pitch Raise mode?

Pitch Raise mode's intent is to quickly get the piano close to pitch, preparing for a final pass. PR mode intentionally leaves the piano slightly sharp (2-4 cents), which compensates for the piano's pitch falling during the coming days, which is normal after a large pitch change. Smart Tune on the other hand, targets A440 (or whatever pitch you've chosen in CyberEar's pitch popup menu). *The goal is for the piano to end up exactly on pitch.*

Smart Tune tweaks the overpulls based on a number of factors:

1. Your input in the Smart Tune dialog box, the Highest and Lowest tenor note, and Lowest Trichord note. Based on actual piano testing, Smart Tune tweaks the overpull just above and below these notes.

2. The size and inharmonicity of the piano. Smaller pianos usually need more overpull than larger ones, and Smart Tune adjusts the whole overpull chart for each piano.

New Chameleon 3 pitch display
Chameleon 3 in version 5x and later displays the pitch offset for each note it records, A1 to A5. This offset is displayed relative to the tuning which would be calculated with the current Octave Tuning Style (OTS). If you change the OTS the cents offset in Ch3 will change slightly. This feature helps greatly to determine whether to use Fine Tune, Smart Tune or Pitch Raise mode.

New for version 5: If a demo piano is currently loaded into Chameleon, the piano make and model will appear in the upper right hand corner of the Chameleon window. If you've recorded a piano with Chameleon then "Recorded Piano" will appear instead.

Smart Partials - new for RCT 4.4x
New for this version is “Smart Partials”. This feature takes a profile of each piano in Chameleon 3, and chooses the optimal tuning partial for various areas of the piano, especially the bass and across the bass/treble break. This feature is always on in “Easy” mode in Chameleon 3, and can be turned on or off in “Advanced” mode. Ch3 shows either “Easy” or "Advanced" in the upper right hand corner of the Ch3 window.

The partial choices Ch3 is making for the current piano are shown at the bottom of the Ch3 window. Turn Smart Partials on or off with the checkbox indicated. The partial popup menus are grayed out when Smart Partials is chosen.

Chameleon makes careful, smart choices for partials for each individual piano. Generally, smaller pianos with high inharmonicity (IH) want lower tuning partials, larger pianos with lower IH need higher tuning partials. You should only turn Smart Partials off if you are a very experienced aural tuner. Smart Partials will almost always choose the optimal partial set for each piano.

Piano Size feature
This feature is part of Smart Partials. For version 5.x and later, after recording a low inharmonicity piano with Ch3, you may sometimes see a dialog box asking you the piano size. This information is used to determine the low bass partial. If Ch3 does not ask you this question for a large (7 ft or 210cm or longer) piano, you can change by tapping the button which says “Size: <6ft”.

The piano size feature is only effective when Smart Partials is checked in the Ch3 dialog box.

Ch3 will usually choose the 10^{th} partial for 7 ft pianos and the 12^{th} partial for 9 ft concert grand pianos.

Wibu brand SentinelKey is required for RCT 5 for Mac and Windows.
A Wibu branded aqua-colored SentinelKey with serial number above 10000 is required to run RCT 5. If you have any other type key, contact RCT support for information about trading keys.