

Welcome to RCT's Getting Started Manual 1

Congratulations on your decision to use Reyburn CyberTuner (RCT).

This Getting Started Manual will teach you how to use RCT to tune pianos.

After reading this Getting Started Manual, you may want to learn more about RCT. Here's how:



Watch the RCT video tape or DVD, included with purchase. The video starts with the basics then goes into advanced details. You don't need to watch it all in one sitting.



Win



Mac

Use RCT's on-line help, accessed by pulling down RCT's Help menu or clicking the Help button in many of RCT's windows. When running RCT, use On-Line help any time you need quick answers.



RCT manual
.PDF

Refer to the RCT Reference Manual, which is very complete and has an index. This manual is in Acrobat PDF electronic format and is on the RCT CD installed in RCT's folder on your computer. This manual is the best resource for learning everything about RCT's full capabilities.

What is Reyburn CyberTuner and how does it work?

Reyburn CyberTuner is software that turns a computer into an easy-to-use yet extremely powerful piano tuning device. The two modules used for tuning pianos are Chameleon 3 (Ch3) and CyberEar (CE).

RCT has additional capabilities and modules such as Pianalyzer, PTG Exam mode, Custom Equalizer, Preview Graphs, and more. These are not covered in this Getting Started Manual. See the RCT video and the RCT Reference Manual on the CD for information on these features.

Do this first

Install RCT from CD or SD card



RCT 5.x CD

1. Start your computer. Insert the RCT CD-ROM or SD card. (On Windows computers double click to open "My Computer" and double click to open the CD or SD card icon.)



Install RCT 5

2. Open the folder for your operating system, Windows or Macintosh. RCT 5.x only installs and runs on MacOS X or Windows 2000 and later. Open and read the RCT Read Me file (printing this file is highly recommended).

3. On both Mac and Windows Open "Install RCT 5". On Mac, after the disk image opens, drag the "Reyburn CyberTuner 5" folder to the "Applications" folder.



Wibu brand
SentinelKey

4. Open the "WibuKeyInstall" and accept the default installation options.

5. After RCT is installed, attach the Wibu SentinelKey to the USB port. Normally there is no need to restart, only restart if there is a problem.



Reyburn
CyberTuner

On Windows, open RCT from the desktop icon shortcut. On MacOS X open your hard drive, Applications, Reyburn CyberTuner 5 folder and open the RCT icon.

If your computer is a laptop, you'll be asked to install SoftKey, which lets you run RCT without SentinelKey attached. You do, so click the Install button.

Quit RCT, remove SentinelKey and put it back in its plastic pouch and white or clear box. On SentinelKey's box, write down the computer onto which SoftKey is installed and SentinelKey is locked.

Store SentinelKey in a safe place. If you lose SentinelKey, you'll need to repurchase RCT at full price.

You may install RCT onto as many computers as you like, but SentinelKey and SoftKey let you run RCT on only one computer at a time. To uninstall SoftKey choose Edit menu, SoftKey, and click the Uninstall button. This allows you to move RCT to another computer. See the RCT Reference Manual for more details.

Calibrate your computer to A440



Included with your purchase of RCT is a CyberFork, an electronic metronome that outputs a tone at A440. Use the Cyberfork to calibrate your computer's soundcard to A440. You only need to do this once. Detailed instructions are printed on a separate blue sheet and are on the Reyburn.com download page.

Send in your registration card



To insure you'll be eligible for free support and to receive update notices, fill out and mail in your RCT registration card.

Join CTuner



Registered owners of Pocket RCT and RCT (Mac and Windows) are eligible to join CTuner and RCTUPgrade. CTuner is a free email discussion group about Pocket RCT and RCT and where we post announcements of upgrade releases.. RCTUpgrade is for users who only want to receive notices of upgrade releases without any discussion. As a CTuner subscriber, any email you send to the CTuner list will automatically be sent to all other CTuner subscribers. Likewise, email from other CTuner subscribers will automatically be sent to you. To subscribe to CTuner or RCTUpgrade, see <www.reyburn.com/lists.html>.



Watch the RCT "Mitch and Dean show" DVD

The 2.5 hour video of Dean and Mitch demonstrating RCT is a great way to learn about RCT. We show most essential RCT features including taking samples, tuning tips, saving files, and much more.



RCT manual
.PDF

Make friends with the RCT Reference Manual and On-Line Help

The RCT Reference Manual has full and complete information about RCT. The RCT manual is a ".pdf" file that is loaded onto your hard disk when you install RCT. If the PDF manual doesn't open on your computer you may need to download Acrobat Reader from www.adobe.com.

On-Line Help is available while running RCT and will provide quick answers to most of your questions. Click on a Help button in an RCT window or pull down RCT's Help menu.



Win



Mac

RCT Support

Despite all the resources already provided, you may have "emergency" questions

about RCT. Free and unlimited support is available on our toll free phone number (in USA or Canada), but please check your documentation first. Contact information is listed at the end of this manual.



If you don't get a live person when phoning, the fastest way to get an answer is to fill out our support web form at www.reyburn.com/support.html. The support web form is answered quickly even if we're away from the phone.

If you have questions about your computer, operating system, or other non-RCT software, please contact the appropriate vendor or manufacturer.

Tuning a piano



The two RCT modules that are used for tuning pianos are Chameleon and CyberEar.



Chameleon measures and records five (or six) sample notes, then calculates a **tuning record** with the correct pitches for all 88 notes.

CyberEar helps you tune each string to its correct pitch with a rotating Spinner as a visual aid.

Easy Mode or Advanced Mode?



The first time you open RCT, Chameleon opens with Easy Mode automatically selected. To simplify the process of learning to use RCT, we recommend you use Easy Mode for at least twenty tunings. (Many experienced users stay in Easy Mode all the time.)

Easy Mode is called "easy" because it makes most tuning decisions for you, automatically creating a tuning that will sound great on almost all pianos.



Advanced Mode is for experienced and adventuresome tuners who want to customize the sound of their tunings by choosing other stretch styles and partials. Advanced Mode is described in this Getting Started Manual *after* we fully explain Easy Mode. If you're using Easy Mode, you don't need to read any of the Advanced Mode explanations.

To switch between Easy Mode and Advanced Mode, click on the Easy/Advanced switch in Chameleon.

Creating a tuning in Chameleon 3

To create a new tuning in Easy Mode



Start up your computer and open RCT. Set your computer on or near the piano: grands, on the plate struts; verticals, on top of the pinblock or on the fallboard or music shelf. (Suggestion: glue rubberized shelf liner to the laptop's bottom.)

RCT automatically opens to Chameleon . Click the Record button to begin sampling.

A finger will point to the note you should play. Mute the unison so only one string is sounding and play the note. You'll sample A4, A3, A2, A1, and A5 (A6 if needed) three times each. Play each note with a consistent medium strength blow. Hold down the note while the rings pulse around the ear and let up when the tuning fork spins.



After playing A4 three times, the actual pitch of A4 will be displayed in either Hertz (e.g. 440.00) or cents from 440. (To switch, click on A4's pitch reading.) This helps you know whether the piano needs a Fine Tuning or a Pitch Raise. Generally, if the piano is off by at least 2 Hertz or 8¢, a Pitch Raise is recommended. (More on Pitch Raising below.)

Hot tip!

When sampling notes to create a new tuning, the piano doesn't need be in tune at correct pitch. However, it does need to be within 50¢, and Chameleon will automatically tell you if it's not. If it's not, you can sample A# or tune the A string up (assuming the piano is flat) until sampling starts as indicated by the pulsing rings.

After each note is sampled three times, Good, Fair, or Poor will appear under the note, indicating the variance (consistency) of the note's three samples. Good variance yields the most accurate tunings. Fair variance on one or two notes is OK. But if any note reads Poor, you should resample it by clicking on its key, tuning fork icon, or variance box. The ear will appear over the note, meaning it's OK to play it. (To cancel a resample, click the Stop button.) Keep trying until you get Good or Fair variance. To improve Variance, try these tips: reduce extraneous noises, move the computer or mic an inch or two, point the mic at the soundboard, choose a cleaner-sounding string, play a short-sustaining note twice during sampling (especially A5, A6, or A1), or pluck the string.



Click the Calculate button. CyberEar will open and you're ready to tune strings. (Although you didn't see it happen, an 88-note tuning record was created when you clicked Calculate. Tuning records are more fully explained under Advanced Mode.)

Tuning the strings in CyberEar

CyberEar helps you tune the strings to the 88 pitches that Chameleon calculated.

When CyberEar first opens, note A0 will be selected, as indicated by the note name in the big box in the center and by the pointing finger on the graphic keyboard. (Another note such as A4 can be selected as default start note in CyberEar Prefs)

Spinner

CyberEar's Spinner looks like a round pie with two opposite slices removed. The Spinner shows you if the selected note is sharp, flat, or correctly tuned. The Spinner rotates clockwise if the note is sharp and counterclockwise if flat, and moves to the right if the note is sharp and left if flat. The rotation and movement of the Spinner increases the more out of tune the note is. When a note is close to correct, the Spinner will be centered on the black Target and its rotation almost stopped. When the note is *extremely* close, the Spinner will stop rotating and a dim ball called the Blush will appear inside the Spinner. The Blush first appears at half the Spinner's diameter and gets larger as the note gets even closer, until the Blush completely fills the Spinner when the note is virtually perfectly tuned.



Generally, we recommend you try to get at least partial or temporary blush on all strings when Fine Tuning. The better the piano, the more discerning the client, and the more skillful the tuner, then the more you can try for maximum blush. But in reality, it's impossible or impractical to tune all strings on all pianos to a full blush.



The first time you open CyberEar, the Spinner is set to rotate at 2¢ per revolution per second. Students may prefer a less sensitive Spinner rate of 4¢ or more. (The Blush sensitivity will automatically adjust too.) To adjust the Spinner rate, color, or arc size, click the Spinner button.

Note Switching

CyberEar's NoteSwitcher "automagically" switches to the next chromatic note (up or down). Simply play an adjacent note and NoteSwitcher will switch to it.

NoteSwitcher hints

If NoteSwitcher has trouble auto-switching to the next note, play the note it's stuck on then play the note you want to switch to.

To switch to a note several half steps distant, play a chromatic run. NoteSwitcher will follow along at about 3 notes per second.

You can also manually switch to any note. The easiest way is to press your computer keyboard's arrow keys: up arrow for note up, down arrow for note down, left arrow for octave down, and right arrow for octave up. Hold down an arrow key for rapid continuous switching. (Switch speed rate can be adjusted in your operating system's Control Panel.)



Other ways to manually switch notes are to press the space bar to switch up one note (hold down for continuous switching), click on any key on CyberEar's graphic keyboard to immediately switch to it, or click on CyberEar's navigation buttons, note-up, note-down, octave-up, octave down.

Note order and muting procedure

Most RCT users tune chromatically from A0 up to C8 because it's quick, easy, and promotes tuning stability. Others begin with an aural temperament sequence you can instruct RCT to use (see RCT User manual). Many of us use two rubber mutes (or a split mute) and tune unisons as we go; others strip-mute the entire piano, tune a single string for all notes, then tune unisons.

It doesn't much matter which order or muting method you use. However, it's important that you listen to aural intervals during and, more importantly, *after* the tuning. This will help you make sure RCT did its normal great job and will help improve your aural skills. Pay special attention to the bass/treble break on short-scale pianos (e.g., spinets, small grands, short consoles) where occasionally some notes may benefit from aural refinement.

Changing the pitch of a tuning



All RCT tunings are originally created in Equal Temperament at A-440. To tune a piano to any other pitch, in CyberEar hold down the mouse button over the pitch popup menu (located at CyberEar's top center) and select a pitch in Hertz or, to offset the pitch in cents from 440 Hz, choose Other. To convert an Equal Temperament tuning to another temperament, please refer to your User Manual. The offset button can also be used to incrementally change the pitch.

After the piano is tuned

When you're finished tuning the piano in CyberEar, click the Done button. If you were in Easy Mode, you'll go back to Chameleon and be ready to sample another piano.

When you quit RCT, you'll be asked if you want to "Save changes to the Reyburn CyberTuner document "Untitled" before quitting RCT?" We recommend Easy Mode users don't save tunings, so click Don't Save. (To learn to save tunings and re-use them later, read "Saving Tuning Records and Files" in the Advanced section.)

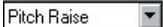
Pitch Raising

Pitch raising (or lowering) with RCT is very accurate and fast because every note is automatically measured and overpulled using a customized overpull percentage optimized for each note. The first pitch raise pass usually leaves most notes within a cent or two, even for pitch raises of 50¢.

We recommend you pitch raise if A4's pitch (displayed immediately after sampling A4 in Chameleon) is off by more than 8 cents or 2 Hz. For optimum accuracy, after pitch raising go back to Chameleon, re-sample and calculate another tuning, then return to CyberEar and do a Fine Tuning.

To pitch raise with RCT

In Chameleon, click the Record button and record samples.

Click the Calculate button which takes you to CyberEar (Easy Mode). Hold down the mouse button over the Tuning Mode popup menu (which is probably set to Fine Tune) and select Pitch Raise. The Pitch Raise dialog box will open. (If Pitch Raise is already selected, reselect it.)



In the Pitch Raise dialog box, enter the piano's lowest plain-wire note (unwrapped string) by pressing your computer's up or down arrow keys.

Usually, the other settings in the Pitch Raise dialog box don't need to be changed. See the RCT User Manual or video for more info.

If you're starting a new pitch raise, click Start New. If you're continuing a partially completed pitch raise, click OK. You'll return to CE.

If starting a new pitch raise, A0 will be selected. Play A0 and let it sustain while the Spinner fills in. In other words, don't tune the string until the Spinner fills in completely. Then tune A0 normally so the Spinner stops rotating.

Play the next chromatic note up. NoteSwitcher will automatically switch and measure it, offsetting the Spinner's black Target as needed.

Continue tuning chromatically up to C8, *tuning each note's unisons as you go.*

After pitch raising is completed, click the Done button, which returns you to Ch3. Resample and create a new tuning record. Return to CyberEar, select Fine Tune mode, and retune as needed.

Pitch Raising hints

Especially in the bass, watch out for Note-Switcher accidentally selecting the note a minor third below the note you want to tune. To help avoid this, set NoteSwitcher to up-only (press the U key). To reset NoteSwitcher to bi-directional, press the B key. (For down-only, press the D key). If the pitch raise is large, open the file named "chip tuning.rctx" which has a special tuning record optimized for large pitch raises.

If the next note (up a half step) is too flat for NoteSwitcher to correctly auto-switch to, set NoteSwitcher to up-only or locked-off (press the L key to toggle NoteSwitcher on or off), manually switch up one note by pressing the computer's space bar or the up arrow key, then play the selected note.

If a note's measurement was poor (noise, incorrect note struck, etc.), press the E key to erase the highest sampled note, then reselect and re-measure it.

Don't worry too much about getting a Blush when pitch raising, especially if the pitch raise is over 50¢.

Easy Mode users are done Getting Started!



Easy Mode users now know everything (well, almost everything) you need to know about RCT and don't need to read any further in this Getting Started Manual. So put down this manual, pull up your socks, and go tune some pianos!-

Advanced Mode users—Read on....

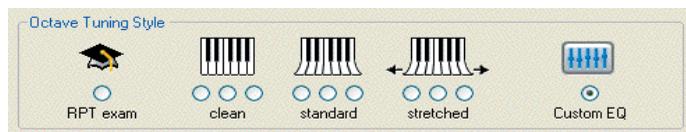
Chameleon's Advanced Mode

To change from Easy mode to Advanced mode, click on Chameleon's Easy/Advanced switch. More choices will appear, discussed below. (If you switch from Easy Mode to Advanced Mode, the Easy Mode default OTS 4 and Smart Partial will be selected.)

Advanced mode is different from Easy mode in that clicking the Calculate button creates a tuning record and displays its **tuning chart**. A tuning chart is a spreadsheet with pitches and partials for all 88 notes and is where you can name the tuning record if you want to save it (described below). To go from a tuning chart to CyberEar, click the CyberEar button or pull down the Windows menu to select CyberEar or press the Enter/Return key.

Octave Tuning Styles

Ch3's Advanced Mode lets you select from nine graduated levels of overall stretch ranging from very clean to very stretched. Each stretch style is called an Octave Tuning Style (OTS). The OTSes are arranged in groups of three: clean (1, 2, 3), standard (4, 5, 6), and stretched (7, 8, 9).

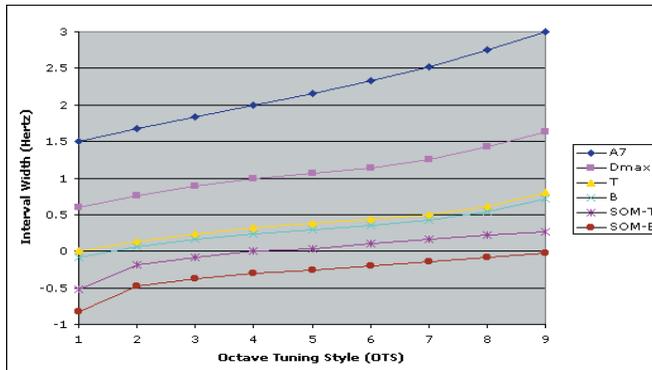


OTS 4 uses a stretch style similar to what most pro tuners (RCT and aural) use on most pianos, which is why OTS 4 is automatically selected in Easy Mode. We suggest Advanced Users use OTS 4 on a few pianos, listen to it, then decide if you prefer a different style. You may prefer a lesser stretched style such as OTS 2 or 3, especially for low inharmonicity pianos such as Kawai and Yamaha.

Higher-stretched styles such as OTS 5, 6, and sometimes 7 are often preferred for larger grands, especially a Steinway D in a concert hall. The tenth OTS is RPT Exam, which emulates a Master Tuning for PTG's Tuning Exam (OTS 4 with less treble stretch).

OTS choice is subjective, critical listening is the best way to choose.

Octave Tuning Style beat rates are illustrated in this chart. For more detailed info, please see your User Manual.



B = Bass control octave (A2 to A3 6:3 octave)

T = Treble control octave (A3 to A4 4:2 octave)

A7 = lower note referenced, single, double or triple octave (1.0, 2.0, 3.0)

SOM-T = Treble control octave Single Octave Minimum

SOM-B = Bass control octave Single Octave Minimum

DMax = Double Octave Maximum (see Auto Compensation below)

Predicted Beat Rates

When a tuning record is created, the predicted beat rates for B (A2-A3 as a 6:3), T (A3-A4 as a 4:2), and D (A2-A4 as a 4:1) are automatically written into the tuning record's header, displayed in its tuning chart, graph, file, and CyberEar. This allows you to "pre-listen" to the middle octaves (and know if DMax and SOM were invoked, see below).

Chameleon remembers the current set of A-note samples until you sample another piano, even if you quit RCT or turn off your computer. This means you can calculate many tunings for a piano (e.g., using different OTSes) without resampling.

Hot tip!

Partials

Advanced Mode lets you select different partials for various sections of the keyboard. Generally, the partials selected by Ch3's "Smart Partial" feature sound great on almost all pianos, it is rare to find a piano which can be improved.

Chameleon allows advanced users to change partials, just uncheck the box next to “Smart Partial”. Click on a partial popup menu to see a list of available partials. The notes affected by that choice will be darkened on the graphic keyboard.



The “Smart Partial” feature will often choose partials 7 or 10 in the bass and 5 in the tenor. These partials may appear out of place in the graph window. They are non-octave partials and the math of equal temperament makes them offset. No need for concern, Smart Partial makes good partial choices on any size or type piano. Smart Partial gives more accurate stretch and a smoother bass-treble transition. The final test is to listen to the piano after tuning!



Chameleon will sometimes ask you for the piano’s size for after recording. It only displays the piano size dialog box if it detects a low inharmonicity piano. You can change the size later by clicking on the Size: button. The Size setting affects Ch3’s partial choice in the lowest octave.

Automatic compensation for short-scale pianos

Ch3 has two Limits (think of them as watchdogs) that help a lot when tuning “scale challenged” pianos such as spinets, short consoles, etc.

In the fraction of a second after clicking the Calculate button and before a tuning record is created, DMax (Double Octave Maximum) and SOM (Single Octave Minimum) inspect every tuning record, automatically sense scaling problems and, as necessary, make an interactive series of compromises so each piano will sound its best.

Ch3’s Limits use a “thought process” that closely mimics aural techniques:

First, Ch3 tunes a two octave A2-A4 temperament using the chosen OTS’s stretch for single octaves A2-A3 and A3-A4.

DMax “listens” to the beat speed of the resultant double octave A2-A4. If it sounds good, the tuning record is created and the watchdogs go back to sleep. But if A2-A4 is too wide, DMax narrows the single octaves until the double octave sounds OK.

Then SOM “listens” to the two single octaves A2-A3 and A3-A4. If they sound good, the tuning record is created and the watchdogs retreat to bed. But if the single octaves are too narrow, SOM (re)expands them until they sound OK, forcing the double octave to expand further than DMax prefers.

RCT’s Limits are invoked only if a piano needs their help. Limits are not needed on most midsize pianos and never on well-scaled big grands and verticals. On some short-scale spinets and consoles, the A2-A4 double octave is narrowed by DMax and the single octaves still sound good, so SOM is not invoked. On problematical short-scale pianos with substantial scale inconsistencies (aka Piano Shaped Objects and less printable epithets) DMax and SOM are both used. You can tell when and which Limits have been used by looking at the Predicted Beat Rates and comparing them to an OTS’s standard specs. (For specific beat rate numbers for each OTS see the RCT User Manual.)

In essence, RCT's Limits dynamically modify any OTS to match each piano's scale. That's why many RCT users use one OTS on most of their residential (non-concert) pianos. We suggest you do the same for your first few short-scale pianos. Then if you decide you want to make further modifications, read about Custom Equalizer and User Limits in the RCT User Manual.

Saving tuning records and files

We recommend you don't save tunings for at your first few dozen tunings, especially if you're new to computers. This will help you concentrate on learning to tune with RCT. After you're comfortable with RCT, you may want to save tuning records and re-use it the next time you tune that piano.

Why save tuning records?

1. To save time (about 2 minutes) on subsequent tunings because you don't have to sample notes in Ch3.
2. To insure a piano is tuned exactly the same every time (increases stability).
3. If a room is too noisy for recording good samples in Ch3, you can open a saved tuning record created under quieter circumstances. (CyberEar is much more tolerant of noise than Ch3.)

To save a tuning record in Advanced Mode

Easy Moders can save records and files too! After clicking the Calculate button, select Tuning Chart in the Windows menu and proceed as below.

After clicking Chameleon's Calculate button, a tuning chart will open. The Predicted Beat Rates for that piano will be displayed in the header. Double-click in the header's empty space to select it, then type the desired name for this record (typically, piano model and/or customer name). Stop typing before the Predicted Beat Rates run off the right edge of the header box.

Select Save under the File menu. If a tuning file is already open, the new tuning record will be saved as the last record in that tuning file. If no tuning file is open, a new tuning file will be created and you'll be asked to name the file.

Tips on saving files and records



To insure optimum accuracy when Fine Tuning, re-use a saved tuning record only on the exact same piano. For Pitch Raising, a same-model piano is probably close enough (any piano of similar size or scale may be OK for rough pitch raising).

A tuning file holds up to 240 tuning records. A tuning file appears on your desktop or window just like other computer files. To organize your tunings most efficiently, save many tuning records in a few tuning files.

Hot tip!

The best way to save a tuning record in a desired tuning file is to open the tuning file *before* clicking Ch3's Calculate button. The new tuning record will automatically be placed at the end of the open tuning file.

The Sort command (Tools menu) alphabetizes tuning records in an open tuning file using the text in the header. That's why the first word of a tuning record's name should probably be the customer's last name or the piano model.

Naming tuning files intelligently can help you stay organized. You may want to use the 26 empty tuning files RCT creates for you (A through Z) or create your own (e.g., Customers A-F, Customers G-R, etc, Piano Library, Concert Hall, University Practice Rooms, Steinways, Yamahas, etc.). Suggestion: create one called Research for messing around or storing records from weird pianos.



To move tuning records from one file to another, open the first file, select the Tuning Hammer pointer (View menu), click on a tuning record to select it, use the Edit menu commands Cut or Copy, open the second tuning file, click in the desired location, and use the Edit command Paste. (You can also cut and paste multiple tuning records or move records within the same tuning file.)

The Find command (Tools menu) searches for text in the headers of all tuning records in an *open* tuning file (not all tuning files). Hint: Every piano's serial number is virtually unique, so including it in the header insures you can find a tuning record that exactly matches a particular piano.

Opening a saved tuning record

If your hard disk contains tuning records that have been previously created and saved (for example, if you purchased a Tuning Library from us or after you've saved some tunings yourself), you can open a saved tuning record instead of creating a new one.

To open a saved tuning record

Pull down the File menu, select Open File, and open a tuning file.

To select often-used tuning files, use Open Latest under the File menu.

Files can be viewed as Icons or Headers (View menu). Icon view takes up less space, puts only the first letter of a record inside a small piano icon, and lets you view a record's header by placing the pointer over a record. Header view displays each record's complete header in a scrolling window.



To open a tuning record, click on it with the Magnifying Glass pointer. If using the Tuning Hammer pointer, press the Command (Mac) or Control (Win) key when clicking.

Then select CyberEar using one of the following methods:

Click the CyberEar button in the tuning chart window.



Pull down the Windows menu and select CyberEar.

Press the Return or Enter key.

Demo Pianos

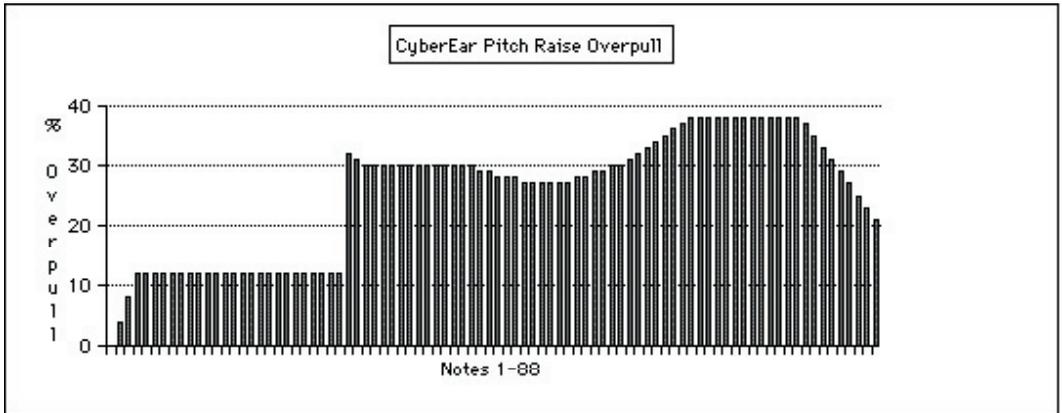
Ch3 permanently stores samples for five Demo pianos: Wurlitzer spinet, Everett console, Kawai UST 7 studio, Yamaha C3E 6' grand, and Steinway D 9' grand. Demo pianos are very convenient for calculating tunings for pitch raising or research (not recommended for Fine tuning).



To choose a Demo piano, click the Demo button, select a Demo piano, then click OK. The Variance numbers will all be 0.00 (Easy Mode will display "Demo" variance.) Click the Calculate button to calculate a tuning record. The name of the Demo piano will automatically appear in the record's header.

Pitch Raising tips for Advanced Users

The graph below shows the standard overpull percentages RCT uses when calculating pitch raises. The overpull percentages jump from 14% to 32% at the break between wound and plain-wire strings, which is why you enter the lowest plain-wire note into the Pitch Raise dialog box. In the example graph below, the lowest plain-wire note is C3, which of course will vary from piano to piano.



In the Pitch Raise dialog box you can choose various settings such as:

Adjust the overpull percentages up or down by 5% in increments of 1%. You can also create a Custom Overpull percentage chart (see the User Manual for details). These features are cool because they can help make your pitch raises more accurate in unusual situations. For example, weakly built spinets sometimes require more overpull and strongly built grands may need less overpull; some tuners don't set tuning pins when pitch raising so might prefer less overpull; or you might like leaving pitch raised pianos sharp of 440 and therefore prefer more overpull.

Select pitch raise type. Small is for pitch raises of less than 60¢, Medium for 60¢ to 100¢, and Large for 100¢ or more. (Large pitch raise mode doesn't sample each note.)

Set caps (limits) for cents overpull in the bass and treble. This helps prevent string breakage if the strings are rusty or weak and the piano is substantially off pitch.

You can also set a different Spinner rate and color for Fine Tuning and each Pitch Raise mode. Select a tuning mode, click the Spinner button, choose the desired settings, then click OK. For example, you may wish to set the Spinner rate to a less sensitive setting such as 4 or 8 cents per revolution per second to help you tune pitch raises quickly. However, pitch raising with RCT is so accurate it can be regarded as a fine tuning under many circumstances (e.g., pitch raises of 10¢ or so) which is why many of us leave Small Pitch Raise mode to the same Spinner rate as Fine Tune (albeit a different color).