

Pure Tuning Aspects of CenterPitch

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One of the unique qualities of CenterPitch is its capability to be easily adjusted from standard display in equal temperament to show notes in pure or just intonation.

CenterPitch uses a system of arrows shown on the screen that tell the player how their note compares to the desired frequency in a standard equal tempered scale. When the player's pitch is in tune the display shows 3 arrows on either side of the note name. If there are more arrows on the left side then the note is flat. More arrows on the right means the note is sharp.

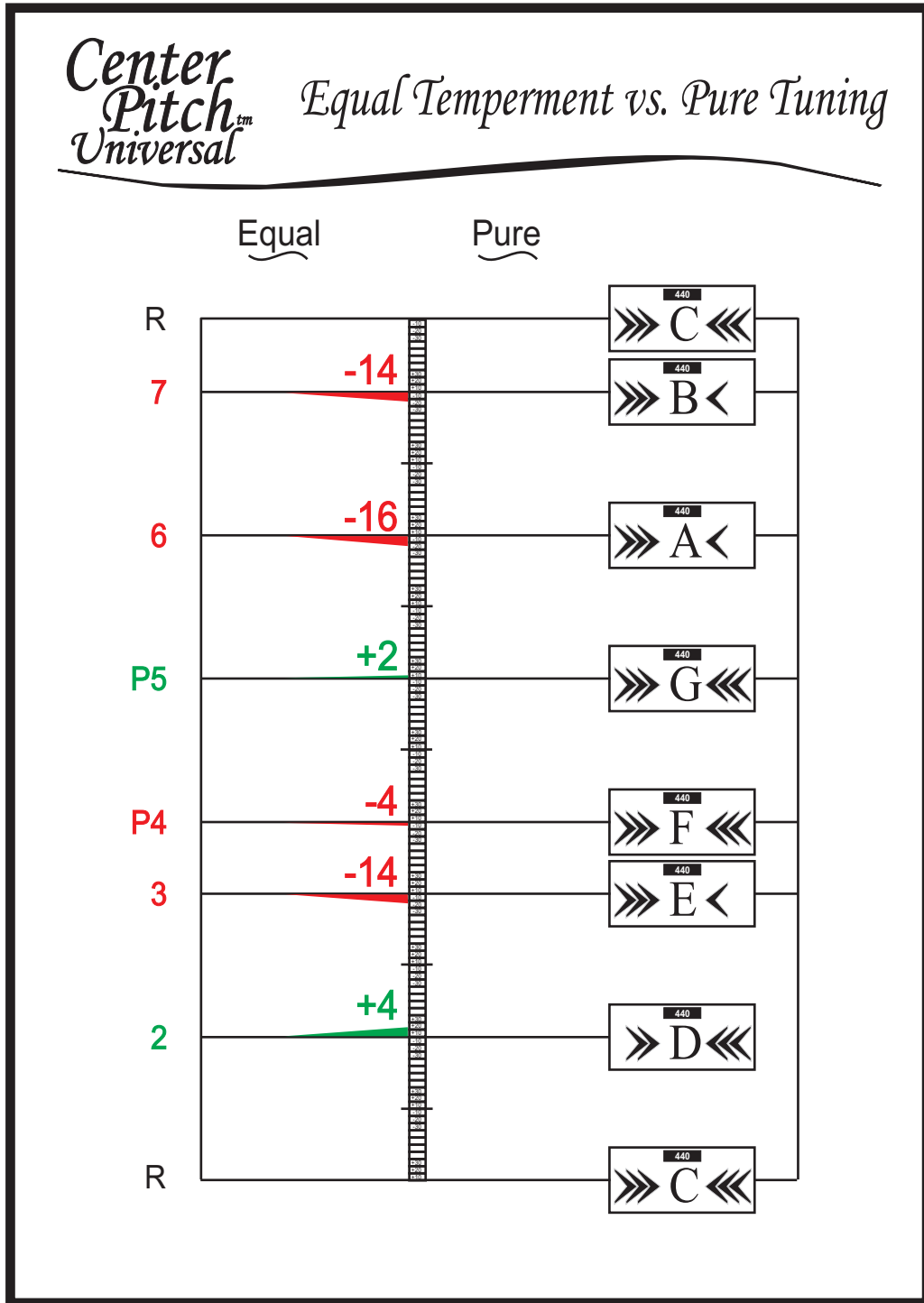
By simply looking for a different display pattern of arrows we can adjust any note to make it a pure tuned interval when compared to a root pitch. The chart below shows the adjustment needed to move from equal to pure tuning for every interval as well as the corresponding CenterPitch display the player should see when making this adjustment.

T·U·N·I·N·G T·A·C·T·I·C·S		
Adjusting From Equal Temperment to Pure Tuning		
Interval	Equal → Pure	CenterPitch Display
Minor 2	▲ 12 cents	
Major 2	▲ 4 cents	
Minor 3	▲ 16 cents	
Major 3	▼ 14 cents	
Perfect 4	▼ 2 cents	
Tri Tone	▼ 18 cents	
Perfect 5	▲ 2 cents	
Minor 6	▲ 14 cents	
Major 6	▼ 16 cents	
Minor 7	▲ 18 cents	
Major 7	▼ 14 cents	

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For instance, the adjustment on a major third played in pure tuning is to lower the pitch -14 cents from the standard tuning. The player should strive for a display that shows 3 arrows on the left of the screen and one on the right side.

Here is a chart showing the adjustments needed and the desired CenterPitch display for each note in a pure tuned major scale. Notice that while the fourth and fifth scale degree needs very little adjustment the other intervals require some more movement to sound pure.



Using CenterPitch with a good pure tuning CD that includes drone tracks to play along with is one of the best ways to start training your ear to hear these subtle pitch differences and begin to almost unconsciously start to make the adjustments necessary.

Tuning Tactics by Yamaha trumpet artist and educator Chase Sanborn (Univ. of Toronto) is a great example of a book and CD set available to do just that. The 88 tracks of pure tuned interval studies and drone tracks in all 12 keys makes the perfect addition to CenterPitch to create a complete personal tuning system.