
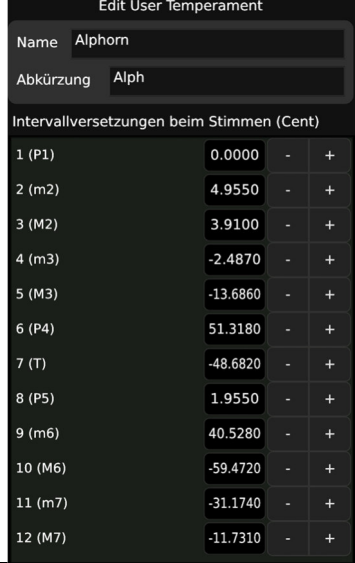

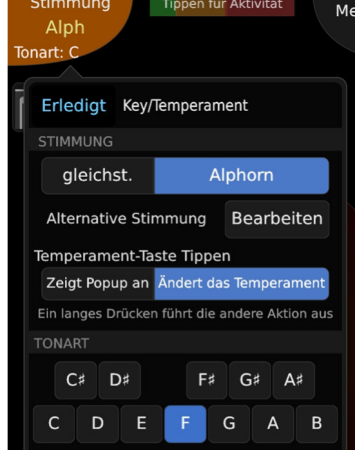
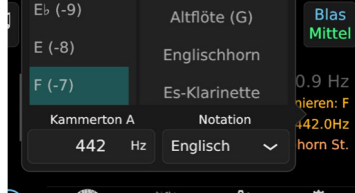




TonalEnergy Tuner-App konfigurieren

Die Anleitung beschreibt die Programmierung der Naturtonleiter und Transponierung.

| <p>Neue Stimmung erstellen</p> |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|---|---|--|--|--------|--------|---|---|--------|--------|---|---|--------|--------|---|---|--------|---------|---|---|--------|----------|---|---|--------|---------|---|---|-------|----------|---|---|--------|--------|---|---|--------|---------|---|---|---------|----------|---|---|---------|----------|---|---|---------|----------|---|---|
| <p>Name geben (z.B. „Alphorn“) und Intervallversetzung der Naturtonleiter definieren</p> |  <table border="1" data-bbox="805 835 1161 1283"> <thead> <tr> <th colspan="4">Intervallversetzungen beim Stimmen (Cent)</th> </tr> </thead> <tbody> <tr><td>1 (P1)</td><td>0.0000</td><td>-</td><td>+</td></tr> <tr><td>2 (m2)</td><td>4.9550</td><td>-</td><td>+</td></tr> <tr><td>3 (M2)</td><td>3.9100</td><td>-</td><td>+</td></tr> <tr><td>4 (m3)</td><td>-2.4870</td><td>-</td><td>+</td></tr> <tr><td>5 (M3)</td><td>-13.6860</td><td>-</td><td>+</td></tr> <tr><td>6 (P4)</td><td>51.3180</td><td>-</td><td>+</td></tr> <tr><td>7 (T)</td><td>-48.6820</td><td>-</td><td>+</td></tr> <tr><td>8 (P5)</td><td>1.9550</td><td>-</td><td>+</td></tr> <tr><td>9 (m6)</td><td>40.5280</td><td>-</td><td>+</td></tr> <tr><td>10 (M6)</td><td>-59.4720</td><td>-</td><td>+</td></tr> <tr><td>11 (m7)</td><td>-31.1740</td><td>-</td><td>+</td></tr> <tr><td>12 (M7)</td><td>-11.7310</td><td>-</td><td>+</td></tr> </tbody> </table> | Intervallversetzungen beim Stimmen (Cent) | | | | 1 (P1) | 0.0000 | - | + | 2 (m2) | 4.9550 | - | + | 3 (M2) | 3.9100 | - | + | 4 (m3) | -2.4870 | - | + | 5 (M3) | -13.6860 | - | + | 6 (P4) | 51.3180 | - | + | 7 (T) | -48.6820 | - | + | 8 (P5) | 1.9550 | - | + | 9 (m6) | 40.5280 | - | + | 10 (M6) | -59.4720 | - | + | 11 (m7) | -31.1740 | - | + | 12 (M7) | -11.7310 | - | + |
| Intervallversetzungen beim Stimmen (Cent) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 (P1) | 0.0000 | - | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 (m2) | 4.9550 | - | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 (M2) | 3.9100 | - | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 (m3) | -2.4870 | - | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 (M3) | -13.6860 | - | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 (P4) | 51.3180 | - | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 (T) | -48.6820 | - | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 (P5) | 1.9550 | - | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 (m6) | 40.5280 | - | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 (M6) | -59.4720 | - | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 (m7) | -31.1740 | - | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 (M7) | -11.7310 | - | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Bestätigen</p> |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>alternative Stimmung aktivieren (oben links lang drücken, dann Stimmung auswählen) Tonart der Naturtonleiter auf Grundton des Alphorns festlegen (hier ein F, analog Fis), evt. Kammerton (440Hz) anpassen</p> |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Transponieren auf Grundton des Alphorns (unten rechts). Oben links sollte „Tonart: C“ erscheinen (in der Stimmung des Alphorns ist die Tonart der Naturtonleiter in C)</p> |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Hintergrund-Information zur programmierten Naturtonleiter

Die so programmierte Stimmung beruht im Wesentlichen auf der oft verwendeten Naturton-Stimmung (Tabelle unten). Allerdings habe ich die Werte für das Alphorn-fa und das as angepasst. TonalEnergy scheint zuerst die Tonhöhe nach gleichstufigem Raster zu bestimmen und erst dann die Abweichung vom Referenzwert; beim fa springt die App daher zwischen f und fis hin und her. In der programmierten Stimmung ist darum für f [P4] und fis [T] derselbe Referenzton fa definiert (f+51 Cts, fis-49Cts); damit wird die grafische Darstellung stabiler. Analog für as [m6] & a [M6]. Dass dadurch der 21. und 25. Naturton nicht mehr abgebildet werden, dürfte nur wenige Alphornbläser/innen stören.

| Note | Naturtöne | | Gleichstufig | Differenz |
|---------|-----------|---------|--------------|-----------|
| | Bruch | Dezimal | Dezimal | Cts |
| c | 1/1 | 1,0000 | 1,00000 | 0,000 |
| des | 17/16 | 1,0625 | 1,05946 | 4,955 |
| d | 9/8 | 1,1250 | 1,12246 | 3,910 |
| es | 19/16 | 1,1875 | 1,18921 | -2,487 |
| e | 5/4 | 1,2500 | 1,25992 | -13,686 |
| f | 21/16 | 1,3125 | 1,33484 | -29,219 |
| fis/ges | 11/8 | 1,3750 | 1,41421 | -48,682 |
| g | 3/2 | 1,5000 | 1,49831 | 1,955 |
| as | 25/16 | 1,5625 | 1,58740 | -27,373 |
| a | 13/8 | 1,6250 | 1,68179 | -59,472 |
| b | 7/4 | 1,7500 | 1,78180 | -31,174 |
| h | 15/8 | 1,8750 | 1,88775 | -11,731 |
| c | 2/1 | 2,0000 | 2,00000 | 0,000 |