

# NIGHTINGALE KEYS, CHORD and TUNING GUIDES

## I. KEYS GUIDES Summary (printed on the instrument side-board)

### Models X & A - C/G Set-up Keys at various bridge positions

|                    |          |             |  |          |            |           |          |             |           |                      |
|--------------------|----------|-------------|--|----------|------------|-----------|----------|-------------|-----------|----------------------|
| bridge positions   | 7        | 6           |  | 5        | 4          | 3         | 2        | 1           | 0         | -1 (tuned down)      |
| approximate scales | 13-3/8   | 14-1/8      |  | 15       | 15-7/8     | 16-13/16  | 17-13/16 | 18-7/8      | <b>20</b> | 21 1/2               |
| primary keys       | DorG     | C#orF#      |  | CorF     | BorE       | BborEb    | AorD     | AborDb      | GorC      | F#orB or ForBb       |
| <i>pseudo-keys</i> | (A)(D,A) | (G#)(C#,G#) |  | (G)(C,G) | (F#)(B,F#) | (F)(Bb,F) | (E)(A,E) | (Eb)(Ab,Eb) | (D)(G,D)  | (C#)(F#,C#) (C)(F,C) |

### Models X & A - C/F Set-up Keys at various bridge positions

|                       |          |             |  |          |          |             |          |             |             |                      |
|-----------------------|----------|-------------|--|----------|----------|-------------|----------|-------------|-------------|----------------------|
| bridge positions      | 7        | 6           |  | 5        | 4        | 3           | 2        | 1           | 0           | -1 (tuned down)      |
| approximate scales    | 13-3/8   | 14-1/8      |  | 15       | 15-7/8   | 16-13/16    | 17-13/16 | 18-7/8      | <b>20</b>   | 21 1/2               |
| playable primary keys | GorC     | F#orB       |  | ForBb    | EorA     | EborAb      | DorG     | C#orF#      | <b>CorF</b> | BorE or BborEb       |
| <i>pseudo-keys</i>    | (D)(G D) | (C#)(F# C#) |  | (C)(F,C) | (B)(E,B) | (Bb)(Eb,Bb) | (A)(D,A) | (G#)(C#,G#) | (G)(C,G)    | (F#)(B,F#) (F)(Bb,F) |

### Model B - C/F Keys Set-up at various bridge positions

|                    |            |             |             |            |              |            |              |               |                      |
|--------------------|------------|-------------|-------------|------------|--------------|------------|--------------|---------------|----------------------|
| bridge positions   | 7          | 6           | 5           | 4          | 3            | 2          | 1            | 0             | -1 (tuned down)      |
| approximate scales | 15         | 15-7/8      | 16-13/16    | 17-13/16   | 18-7/8       | 20         | 21-3/16      | <b>22 1/2</b> | 24                   |
| primary keys       | <b>G/C</b> | <b>F#/B</b> | <b>F/Bb</b> | <b>E/A</b> | <b>Eb/Ab</b> | <b>D/G</b> | <b>C#/F#</b> | <b>C/F</b>    | <b>B/E or Bb/Eb</b>  |
| <i>pseudo-keys</i> | (D)(G D)   | (C#)(F# C#) | (C)(F,C)    | (B)(E,B)   | (Bb)(Eb,Bb)  | (A)(D,A)   | (G#)(C#,G#)  | (G)(C,G)      | (F#)(B,F#) (F)(Bb,F) |

### Model BP-20 - 3 Keys Set-up at various bridge positions

|                    |                      |                       |                        |                      |                         |                      |                        |                       |                      |
|--------------------|----------------------|-----------------------|------------------------|----------------------|-------------------------|----------------------|------------------------|-----------------------|----------------------|
| bridge positions   | 7                    | 6                     | 5                      | 4                    | 3                       | 2                    | 1                      | 0                     | -1 (tuned down)      |
| approximate scales | 15                   | 15-7/8                | 16-13/16               | 17-13/16             | 18-7/8                  | 20                   | 21-3/16                | <b>22 1/2</b>         | 24                   |
| playable keys      | <b>G&amp;C&amp;F</b> | <b>F#&amp;B&amp;E</b> | <b>F&amp;Bb&amp;Eb</b> | <b>E&amp;A&amp;D</b> | <b>Eb&amp;Ab&amp;Db</b> | <b>D&amp;G&amp;C</b> | <b>C#&amp;F#&amp;B</b> | <b>C&amp;F&amp;Bb</b> | <b>B&amp;E&amp;A</b> |

## II. CHORD GUIDES Summary

*Notation through-out: primary full key(s) = underlined; pseudo-key(s) = in (parenth)*

### 15 bar Chord Comparisons at the 0 bridge position only

#### Models X & A - C/G Set-up 15 BAR 1 KEY at a time CHORD GUIDES (1 or 2 pseudo-keys)

|                      |       |      |          |      |          |    |          |    |     |     |            |     |            |     |           |
|----------------------|-------|------|----------|------|----------|----|----------|----|-----|-----|------------|-----|------------|-----|-----------|
| chord bar #          | 1L    | 2    | 3        | 4    | 5        | 6  | 7        | 8  | 9   | 10  | 11         | 12  | 13         | 14  | 15        |
| <u>C</u> chord guide | Cadd2 | Cs4  | <b>F</b> | Bdim | <u>C</u> | Am | (G)      | Em | Dm  | Gs4 | <b>Dp7</b> | Cj7 | <b>Ap7</b> | Fj7 | Dm7       |
| <u>G</u> chord guide | Cadd2 | Cs#4 | F#dim    | Bm   | <u>C</u> | Am | <u>G</u> | Em | (D) | Gs4 | <b>Dp7</b> | Cj7 | <b>Ap7</b> | Am6 | <b>D7</b> |

#### Models X & A & B - C/F Set-up 15 BAR 1 KEY at a time CHORD GUIDES (1 or 2 pseudo-keys)

|                      |       |     |           |      |          |    |          |    |     |      |            |     |            |     |       |
|----------------------|-------|-----|-----------|------|----------|----|----------|----|-----|------|------------|-----|------------|-----|-------|
| chord bar #          | 1L    | 2   | 3         | 4    | 5        | 6  | 7        | 8  | 9   | 10   | 11         | 12  | 13         | 14  | 15    |
| <u>F</u> chord guide | Cadd2 | Cs4 | <b>Bb</b> | Edim | <u>F</u> | Dm | (C)      | Am | Gm  | Fs4  | <b>Gp7</b> | Cj7 | <b>Dp7</b> | Fj7 | Fadd2 |
| <u>C</u> chord guide | Cadd2 | Cs4 | Bdim      | Em   | <u>F</u> | Dm | <u>C</u> | Am | (G) | Fs#4 | <b>Gp7</b> | Cj7 | <b>Dp7</b> | Fj7 | Fadd2 |

#### Model B-16 - C/F Set-up 15 BAR 2 KEYS at a time CHORD GUIDES (1 pseudo-key)

|                              |       |     |           |    |          |    |          |    |     |    |     |     |            |     |       |
|------------------------------|-------|-----|-----------|----|----------|----|----------|----|-----|----|-----|-----|------------|-----|-------|
| chord bar #                  | 1L    | 2   | 3         | 4  | 5        | 6  | 7        | 8  | 9   | 10 | 11  | 12  | 13         | 14  | 15    |
| <b>F &amp; C</b> chord guide | Cadd2 | Cs4 | <b>Bb</b> | Gm | <u>F</u> | Dm | <u>C</u> | Am | (G) | Em | Fs4 | Cj7 | <b>Dp7</b> | Fj7 | Fadd2 |

**Model BP-20 15 BAR 3 KEYS at a time CHORD GUIDES**

| chord bar #                       | 1L  | 2    | 3         | 4  | 5         | 6  | 7        | 8  | 9        | 10 | 11       | 12  | 13  | 14   | 15   |
|-----------------------------------|-----|------|-----------|----|-----------|----|----------|----|----------|----|----------|-----|-----|------|------|
| <b>Bb&amp;F&amp;C chord guide</b> | Fs4 | Bbs4 | <b>Eb</b> | Cm | <b>Bb</b> | Gm | <b>F</b> | Dm | <b>C</b> | Am | <b>G</b> | Em  | Fj7 | Bbj7 | Ebj7 |
| <b>C&amp;G&amp;D chord guide</b>  | Gs4 | Cs4  | <b>F</b>  | Dm | <b>C</b>  | Am | <b>G</b> | Em | <b>D</b> | Bm | <b>A</b> | F#m | Gj7 | Cj7  | Fj7  |

**III. COMPLETE CHORD BAR SETS**

There is only enough room on the sides of the chord bar ends to accommodate 6 Chord Guides, so pick the 6 you prefer or store the extras somewhere else. *Please double check the accuracy of all the entries that follow.*

(To get notes in a chord or identify chord names from a series of notes go to <https://www.scales-chords.com/>)

**Complete Set Models X & A - C/G Set-up 15 BAR 1 KEY at a time CHORD GUIDES** (1 or 2 pseudo-keys)

Bridge positions shown in ( ) next to **Guide #**

Notation through-out: primary full key(s) = **underlined**; pseudo-key(s) = in (parens)

| chord bar # | 1L | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|-------------|----|---|---|---|---|---|---|---|---|----|----|----|----|----|----|
|-------------|----|---|---|---|---|---|---|---|---|----|----|----|----|----|----|

|                                  |                        |        |       |           |       |           |     |           |     |      |      |             |      |             |      |            |
|----------------------------------|------------------------|--------|-------|-----------|-------|-----------|-----|-----------|-----|------|------|-------------|------|-------------|------|------------|
| <b>Guide 1</b><br>(-1)           | <b>side A Bb guide</b> | Bbadd2 | Bbs4  | <b>Eb</b> | Adim  | <b>Bb</b> | Gm  | (F)       | Dm  | Cm   | Fs4  | <b>Cp7</b>  | Bbj7 | <b>Gp7</b>  | Ebj7 | Cm7        |
|                                  | <b>side B F guide</b>  | Bbadd2 | Bbs#4 | Edim      | Am    | <b>Bb</b> | Gm  | <b>F</b>  | Dm  | (C)  | Fs4  | <b>Cp7</b>  | Bbj7 | <b>Gp7</b>  | Gm6  | <b>C7</b>  |
| <b>Guide 2</b><br>(0)            | <b>side A C guide</b>  | Cadd2  | Cs4   | <b>F</b>  | Bdim  | <b>C</b>  | Am  | (G)       | Em  | Dm   | Gs4  | <b>Dp7</b>  | Cj7  | <b>Ap7</b>  | Fj7  | Dm7        |
|                                  | <b>side B G guide</b>  | Cadd2  | Cs#4  | F#dim     | Bm    | <b>C</b>  | Am  | <b>G</b>  | Em  | (D)  | Gs4  | <b>Dp7</b>  | Cj7  | <b>Ap7</b>  | Am6  | <b>D7</b>  |
| <b>Guide 3</b><br>(2)            | <b>side A D guide</b>  | Dadd2  | Ds4   | <b>G</b>  | C#dim | <b>D</b>  | Bm  | (A)       | F#m | Em   | As4  | <b>Ep7</b>  | Dj7  | <b>Bp7</b>  | Gj7  | Em7        |
|                                  | <b>side B A guide</b>  | Dadd2  | Ds#4  | G#dim     | C#m   | <b>D</b>  | Bm  | <b>A</b>  | F#m | (E)  | As4  | <b>Ep7</b>  | Dj7  | <b>Bp7</b>  | Bm6  | <b>E7</b>  |
| <b>Guide 4</b><br>(3)            | <b>side A Eb guide</b> | Ebadd2 | Ebs4  | <b>Ab</b> | Ddim  | <b>Eb</b> | Cm  | (Bb)      | Gm  | Fm   | Bbs4 | <b>Fp7</b>  | Ebj7 | <b>Cp7</b>  | Abj7 | Fm7        |
|                                  | <b>side B Bb guide</b> | Ebadd2 | Ebs#4 | Adim      | Dm    | <b>Eb</b> | Cm  | <b>Bb</b> | Gm  | (F)  | Bbs4 | <b>Fp7</b>  | Ebj7 | <b>Cp7</b>  | Cm6  | <b>F7</b>  |
| <b>Guide 5</b><br>(4)            | <b>side A E guide</b>  | Eadd2  | Es4   | <b>A</b>  | D#dim | <b>E</b>  | C#m | (B)       | G#m | F#m  | Bs4  | <b>F#p7</b> | Ej7  | <b>C#p7</b> | Aj7  | F#m7       |
|                                  | <b>side B B guide</b>  | Eadd2  | Es#4  | A#dim     | D#m   | <b>E</b>  | C#m | <b>B</b>  | G#m | (F#) | Bs4  | <b>F#p7</b> | Ej7  | <b>C#p7</b> | C#m6 | <b>F#7</b> |
| <b>Guide 6</b><br>(5)            | <b>side A F guide</b>  | Fadd2  | Fs4   | <b>Bb</b> | Edim  | <b>F</b>  | Dm  | (C)       | Am  | Gm   | Cs4  | <b>Gp7</b>  | Fj7  | <b>Dp7</b>  | Bbj7 | Gm7        |
|                                  | <b>side B C guide</b>  | Fadd2  | Fs#4  | Bdim      | Em    | <b>F</b>  | Dm  | <b>C</b>  | Am  | (G)  | Cs4  | <b>Gp7</b>  | Fj7  | <b>Dp7</b>  | Dm6  | <b>G7</b>  |
| <b>Guide 7</b><br>(6) (optional) | <b>side A F# guide</b> | F#add2 | F#s4  | <b>B</b>  | Fdim  | <b>F#</b> | D#m | (C#)      | A#m | G#m  | C#s4 | <b>G#p7</b> | F#j7 | <b>D#p7</b> | Bj7  | G#m7       |
|                                  | <b>side B C# guide</b> | F#add2 | F#s4  | Cdim      | Fm    | <b>F#</b> | D#m | <b>C#</b> | A#m | (G#) | C#s4 | <b>G#p7</b> | F#j7 | <b>D#p7</b> | D#m6 | <b>G#7</b> |
| <b>Guide 8</b><br>(7) (optional) | <b>side A G guide</b>  | Gadd2  | Gs4   | <b>C</b>  | F#dim | <b>G</b>  | Em  | (D)       | Bm  | Am   | Ds4  | <b>Ap7</b>  | Gj7  | <b>Ep7</b>  | Cj7  | Am7        |
|                                  | <b>side B D guide</b>  | Gadd2  | Gs4   | C#dim     | F#m   | <b>G</b>  | Em  | <b>D</b>  | Bm  | Am   | Ds4  | <b>Ap7</b>  | Gj7  | <b>Ep7</b>  | Em6  | <b>A7</b>  |

**Complete Set Models X & A & B - C/F Set-up 15 BAR 1 KEY at a time CHORD GUIDES** (1 or 2 pseudo-keys)

Bridge positions shown in ( ) next to **Guide #**

Notation through-out: primary full key(s) = underlined; pseudo-key(s) = in (parens)

**chord bar #    1L    2    3    4    5    6    7    8    9    10    11    12    13    14    15**

|                |   |                     |                   |                      |                  |                      |                 |                             |                 |                  |                    |                        |                   |                        |                   |                     |
|----------------|---|---------------------|-------------------|----------------------|------------------|----------------------|-----------------|-----------------------------|-----------------|------------------|--------------------|------------------------|-------------------|------------------------|-------------------|---------------------|
| <b>Guide 1</b> | side A <b>E<sub>b</sub> guide</b>                   | B <sub>b</sub> add2 | B <sub>b</sub> s4 | <b>A<sub>b</sub></b> | Ddim             | <u>E<sub>b</sub></u> | C <sub>m</sub>  | ( <b>B<sub>b</sub></b> )    | G <sub>m</sub>  | F <sub>m</sub>   | E <sub>b</sub> s4  | <b>F<sub>p</sub>7</b>  | B <sub>b</sub> j7 | <b>C<sub>p</sub>7</b>  | E <sub>b</sub> j7 | E <sub>b</sub> add2 |
|                | (-1)<br>side B <b>B<sub>b</sub> guide</b>           | B <sub>b</sub> add2 | B <sub>b</sub> s4 | A <sub>dim</sub>     | D <sub>m</sub>   | <b>E<sub>b</sub></b> | C <sub>m</sub>  | <u><b>B<sub>b</sub></b></u> | G <sub>m</sub>  | ( <b>F</b> )     | E <sub>b</sub> s#4 | <b>F<sub>p</sub>7</b>  | B <sub>b</sub> j7 | <b>C<sub>p</sub>7</b>  | E <sub>b</sub> j7 | E <sub>b</sub> add2 |
| <b>Guide 2</b> | side A <b>E guide</b>                               | B <sub>add2</sub>   | B <sub>s4</sub>   | <b>A</b>             | D#dim            | <u>E</u>             | C# <sub>m</sub> | ( <b>B</b> )                | G# <sub>m</sub> | F# <sub>m</sub>  | E <sub>s4</sub>    | <b>F#<sub>p</sub>7</b> | B <sub>j7</sub>   | <b>C#<sub>p</sub>7</b> | E <sub>j7</sub>   | E <sub>add2</sub>   |
|                | (-1)<br>side B <b>B guide</b>                       | B <sub>add2</sub>   | B <sub>s4</sub>   | B <sub>b</sub> dim   | D# <sub>m</sub>  | <b>E</b>             | C# <sub>m</sub> | <u><b>B</b></u>             | G# <sub>m</sub> | ( <b>F#</b> )    | E <sub>s4</sub>    | <b>F#<sub>p</sub>7</b> | B <sub>j7</sub>   | <b>C#<sub>p</sub>7</b> | E <sub>j7</sub>   | E <sub>add2</sub>   |
| <b>Guide 3</b> | side A <b>F guide</b>                               | C <sub>add2</sub>   | C <sub>s4</sub>   | <b>B<sub>b</sub></b> | E <sub>dim</sub> | <u>F</u>             | D <sub>m</sub>  | ( <b>C</b> )                | A <sub>m</sub>  | G <sub>m</sub>   | F <sub>s4</sub>    | <b>G<sub>p</sub>7</b>  | C <sub>j7</sub>   | <b>D<sub>p</sub>7</b>  | F <sub>j7</sub>   | F <sub>add2</sub>   |
|                | (0)<br>side B <b>C guide</b>                        | C <sub>add2</sub>   | C <sub>s4</sub>   | B <sub>dim</sub>     | E <sub>m</sub>   | <b>F</b>             | D <sub>m</sub>  | <u><b>C</b></u>             | A <sub>m</sub>  | ( <b>G</b> )     | F <sub>s4</sub>    | <b>G<sub>p</sub>7</b>  | C <sub>j7</sub>   | <b>D<sub>p</sub>7</b>  | F <sub>j7</sub>   | F <sub>add2</sub>   |
| <b>Guide 4</b> | side A <b>F# guide</b>                              | C# <sub>add2</sub>  | C# <sub>s4</sub>  | <b>B</b>             | F <sub>dim</sub> | <u>F#</u>            | D# <sub>m</sub> | ( <b>C#</b> )               | A# <sub>m</sub> | G# <sub>m</sub>  | F# <sub>s4</sub>   | <b>G#<sub>p</sub>7</b> | C# <sub>j7</sub>  | <b>D#<sub>p</sub></b>  | F# <sub>j7</sub>  | F# <sub>add2</sub>  |
|                | (1) (optional)<br>side B <b>C# guide</b>            | C# <sub>add2</sub>  | C# <sub>s4</sub>  | C <sub>dim</sub>     | F <sub>m</sub>   | <b>F#</b>            | D# <sub>m</sub> | <u><b>C#</b></u>            | A# <sub>m</sub> | G# <sub>m</sub>  | F# <sub>s4</sub>   | <b>G#<sub>p</sub>7</b> | C# <sub>j7</sub>  | <b>D#<sub>p</sub></b>  | F# <sub>j7</sub>  | F# <sub>add2</sub>  |
| <b>Guide 5</b> | side A <b>G guide</b>                               | D <sub>add2</sub>   | D <sub>s4</sub>   | <b>C</b>             | F#dim            | <u>G</u>             | E <sub>m</sub>  | ( <b>D</b> )                | B <sub>m</sub>  | A <sub>m</sub>   | G <sub>s4</sub>    | <b>A<sub>p</sub>7</b>  | D <sub>j7</sub>   | <b>E<sub>p</sub>7</b>  | G <sub>j7</sub>   | G <sub>add2</sub>   |
|                | (2)<br>side B <b>D guide</b>                        | D <sub>add2</sub>   | D <sub>s4</sub>   | C# <sub>dim</sub>    | F# <sub>m</sub>  | <b>G</b>             | E <sub>m</sub>  | <u><b>D</b></u>             | B <sub>m</sub>  | A <sub>m</sub>   | G <sub>s4</sub>    | <b>A<sub>p</sub>7</b>  | D <sub>j7</sub>   | <b>E<sub>p</sub>7</b>  | G <sub>j7</sub>   | G <sub>add2</sub>   |
| <b>Guide 6</b> | side A <b>A<sub>b</sub> guide</b>                   | E <sub>b</sub> add2 | E <sub>b</sub> s4 | <b>D<sub>b</sub></b> | G <sub>dim</sub> | <u>A<sub>b</sub></u> | F <sub>m</sub>  | ( <b>E<sub>b</sub></b> )    | C <sub>m</sub>  | B <sub>b</sub> m | A <sub>b</sub> s4  | <b>B<sub>b</sub>p7</b> | E <sub>b</sub> j7 | <b>F<sub>p</sub>7</b>  | A <sub>b</sub> j7 | A <sub>b</sub> add2 |
|                | (3) (optional)<br>side B <b>E<sub>b</sub> guide</b> | E <sub>b</sub> add2 | E <sub>b</sub> s4 | D <sub>dim</sub>     | G <sub>m</sub>   | <b>A<sub>b</sub></b> | F <sub>m</sub>  | <u><b>E<sub>b</sub></b></u> | C <sub>m</sub>  | B <sub>b</sub> m | A <sub>b</sub> s#4 | <b>B<sub>b</sub>p7</b> | E <sub>b</sub> j7 | <b>F<sub>p</sub>7</b>  | A <sub>b</sub> j7 | A <sub>b</sub> add2 |
| <b>Guide 7</b> | side A <b>A guide</b>                               | E <sub>add2</sub>   | E <sub>s4</sub>   | <b>D</b>             | G#dim            | <u>A</u>             | F# <sub>m</sub> | ( <b>E</b> )                | C# <sub>m</sub> | B <sub>m</sub>   | A <sub>s4</sub>    | <b>B<sub>p</sub>7</b>  | E <sub>j7</sub>   | <b>F#<sub>p</sub>7</b> | A <sub>j7</sub>   | A <sub>add2</sub>   |
|                | (4)<br>side B <b>E guide</b>                        | E <sub>add2</sub>   | E <sub>s4</sub>   | D#dim                | G# <sub>m</sub>  | <b>A</b>             | F# <sub>m</sub> | <u><b>E</b></u>             | C# <sub>m</sub> | B <sub>m</sub>   | A <sub>s4</sub>    | <b>B<sub>p</sub>7</b>  | E <sub>j7</sub>   | <b>F#<sub>p</sub>7</b> | A <sub>j7</sub>   | A <sub>add2</sub>   |
| <b>Guide 8</b> | side A <b>B<sub>b</sub> guide</b>                   | F <sub>add2</sub>   | F <sub>s4</sub>   | <b>E<sub>b</sub></b> | A <sub>dim</sub> | <u>B<sub>b</sub></u> | G <sub>m</sub>  | ( <b>F</b> )                | D <sub>m</sub>  | C <sub>m</sub>   | B <sub>b</sub> s4  | <b>C<sub>p</sub>7</b>  | F <sub>j7</sub>   | <b>G<sub>p</sub>7</b>  | B <sub>b</sub> j7 | B <sub>b</sub> add2 |
|                | (5) (optional)<br>side B <b>F guide</b>             | F <sub>add2</sub>   | F <sub>s4</sub>   | E <sub>dim</sub>     | A <sub>m</sub>   | <b>B<sub>b</sub></b> | G <sub>m</sub>  | <u><b>F</b></u>             | D <sub>m</sub>  | C <sub>m</sub>   | B <sub>b</sub> s#4 | <b>C<sub>p</sub>7</b>  | F <sub>j7</sub>   | <b>G<sub>p</sub>7</b>  | B <sub>b</sub> j7 | B <sub>b</sub> add2 |
| <b>Guide 9</b> | side A <b>C guide</b>                               | G <sub>add2</sub>   | G <sub>s4</sub>   | <b>F</b>             | B <sub>dim</sub> | <u>C</u>             | A <sub>m</sub>  | ( <b>G</b> )                | E <sub>m</sub>  | D <sub>m</sub>   | C <sub>s4</sub>    | <b>D<sub>p</sub>7</b>  | G <sub>j7</sub>   | <b>A<sub>p</sub>7</b>  | C <sub>j7</sub>   | C <sub>add2</sub>   |
|                | (7)<br>side B <b>G guide</b>                        | G <sub>add2</sub>   | G <sub>s4</sub>   | F#dim                | B <sub>m</sub>   | <b>C</b>             | A <sub>m</sub>  | <u><b>G</b></u>             | E <sub>m</sub>  | D <sub>m</sub>   | C <sub>s4</sub>    | <b>D<sub>p</sub>7</b>  | G <sub>j7</sub>   | <b>A<sub>p</sub>7</b>  | C <sub>j7</sub>   | C <sub>add2</sub>   |

**Complete Set Model B-16 - C/F Set-up 15 BAR 2 KEYS at a time CHORD GUIDES** (1 pseudo-key)

Bridge positions shown in ( ) next to **Guide #**

Notation through-out: primary full key(s) = underlined; pseudo-key(s) = in (parens)

**chord bar #**   **1L**   **2**   **3**   **4**   **5**   **6**   **7**   **8**   **9**   **10**   **11**   **12**   **13**   **14**   **15**

|                |   |        |      |           |     |           |     |           |     |      |     |      |      |             |      |        |
|----------------|---|--------|------|-----------|-----|-----------|-----|-----------|-----|------|-----|------|------|-------------|------|--------|
| <b>Guide 1</b> | <b>side A Bb/Eb guide</b>                     | Bbadd2 | Bbs4 | <b>Ab</b> | Fm  | <u>Eb</u> | Cm  | <b>Bb</b> | Gm  | (F)  | Dm  | Ebs4 | Bbj7 | <b>Cp7</b>  | Ebj7 | Ebadd2 |
|                | (-1)<br><b>side B B/E guide</b>               | Badd2  | Bs4  | A         | F#m | <u>E</u>  | C#m | <b>B</b>  | G#m | (F#) | D#m | Es4  | Bj7  | <b>C#p7</b> | Ej7  | Eadd2  |
| <b>Guide 2</b> | <b>side A C/F guide</b>                       | Cadd2  | Cs4  | <b>Bb</b> | Gm  | <u>F</u>  | Dm  | <b>C</b>  | Am  | (G)  | Em  | Fs4  | Cj7  | <b>Dp7</b>  | Fj7  | Fadd2  |
|                | (0 & 1)<br><b>side B C#/F# guide</b>          | C#add2 | C#s4 | <b>B</b>  | G#m | <u>F#</u> | D#m | <b>C#</b> | A#m | (G#) | Fm  | F#s4 | C#j7 | <b>D#p7</b> | F#j7 | F#add2 |
| <b>Guide 3</b> | <b>side A D/G guide</b>                       | Dadd2  | Ds4  | <b>C</b>  | Am  | <u>G</u>  | Em  | <b>D</b>  | Bm  | (A)  | F#m | Gs4  | Dj7  | <b>Ep7</b>  | Gj7  | Gadd2  |
|                | (2 & 3)<br><b>side B Eb/Ab guide</b>          | Ebadd2 | Ebs4 | <b>Db</b> | Bbm | <u>Ab</u> | Fm  | <b>Eb</b> | Cm  | (Bb) | Gm  | Abs4 | Ebj7 | <b>Fp7</b>  | Abj7 | Abadd2 |
| <b>Guide 4</b> | <b>side A E/A guide</b>                       | Eadd2  | Es4  | <b>D</b>  | Bm  | <u>A</u>  | F#m | <b>E</b>  | C#m | (B)  | G#m | As4  | Ej7  | <b>F#p7</b> | Aj7  | Aadd2  |
|                | (4 & 5)<br><b>side B F/Bb guide</b>           | Fadd2  | Fs4  | <b>Eb</b> | Cm  | <b>Bb</b> | Gm  | <u>F</u>  | Dm  | (C)  | Am  | Bbs4 | Fj7  | <b>Gp7</b>  | Bbj7 | Bbadd2 |
| <b>Guide 5</b> | <b>side A F#/B guide</b>                      | F#add2 | F#s4 | <b>E</b>  | C#m | <b>B</b>  | G#m | <u>F#</u> | D#m | (C#) | A#m | Bs4  | F#j7 | <b>G#p7</b> | Bj7  | Badd2  |
|                | (6 & 7) (optional)<br><b>side B G/C guide</b> | Gadd2  | Gs4  | <b>F</b>  | Dm  | <u>C</u>  | Am  | <u>G</u>  | Em  | (D)  | Bm  | Cs4  | Gj7  | <b>Ap7</b>  | Cj7  | Cadd2  |

**16 STRING 2 to 1 KEY QUICK CONVERTABILITY**

(example at the 0 Bridge Position)

One of the advantages of this set-up is the ease of going back and forth between playing in 2 full keys or 1. For example, by simply re-tuning the two b notes to bb one can still play all the chords in the key of F [plus the pseudo-keys of (C) = C, F, G5 and (G) = G5, C, Dp7/D5] and randomly finger pick any of the strings all of which fit the key of F.

Similarly, by re-tuning the two bb notes to b one can still play all the chords in the key of C [plus the pseudo-key of (G) = G, C, Dp7/D5] and randomly finger pick any of the strings all of which fit the key of C. This is almost equivalent to the 14 string Model B except for a minor variation in the range of notes. No change in chord bars or chord guides is required. The chords highlighted on the 2 key chord guide below change slightly as indicated below.

**2 key F&C**      g   a   **bb**   **b**   c   d   e   f   g   a   **bb**   **b**   c   d   e   f      **tuning**

**F & C chord guide**    Cadd2   Cs4   **Bb**   Gm   F   Dm   C   Am   (G)   Em   Fs4   Cj7   **Dp7**   Fj7   Fadd2      **chords**

**1 key F tuning change**    g   a   **bb**   **bb**   c   d   e   f   g   a   **bb**   **bb**   c   d   e   f

**F chord changes**      Cadd2   Cs4   **Bb**   Gm   F   Dm   C   Am   **Gm**   Edim   **Fs(#4)**   **C7**   **Dp7**   Fj7   Fadd2      **bb**

**1 key C tuning change**    g   a   **b**   b   c   d   e   f   g   a   **b**   b   c   d   e   f

**C chord changes**      Cadd2   Cs4   **Bdim**   **G**   F   Dm   C   Am   (G)   Em   Fs4   Cj7   **Dp7**   Fj7   Fadd2      **b**

**Complete Set Model BP-20 15 BAR 3 KEYS at a time CHORD GUIDES**

Bridge positions shown in ( ) next to **Guide #**

*Notation through-out: primary full key(s) = underlined*

| chord bar #                         | 1L   | 2    | 3         | 4   | 5         | 6   | 7         | 8   | 9         | 10  | 11        | 12  | 13   | 14   | 15   |
|-------------------------------------|------|------|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|------|------|------|
| <b>side A</b> <b>B/E/A guide</b>    | Es4  | As4  | <b>D</b>  | Bm  | <u>A</u>  | F#m | <u>E</u>  | C#m | <u>B</u>  | G#m | F#        | D#m | Ej7  | Aj7  | Dj7  |
| <b>Guide 1</b> (-1 & 0)             |      |      |           |     |           |     |           |     |           |     |           |     |      |      |      |
| <b>side B</b> <b>C/F/Bb guide</b>   | Fs4  | Bbs4 | <b>Eb</b> | Cm  | <u>Bb</u> | Gm  | <u>F</u>  | Dm  | <u>C</u>  | Am  | G         | Em  | Fj7  | Bbj7 | Ebj7 |
| <b>side A</b> <b>C#/F#/B guide</b>  | F#s4 | Bs4  | <b>E</b>  | C#m | <u>B</u>  | G#m | <u>F#</u> | D#m | <u>C#</u> | A#m | G#        | Fm  | F#j7 | Bj7  | Ej7  |
| <b>Guide 2</b> (1 & 2)              |      |      |           |     |           |     |           |     |           |     |           |     |      |      |      |
| <b>side B</b> <b>D/G/C guide</b>    | Gs4  | Cs4  | <b>F</b>  | Dm  | <u>C</u>  | Am  | <u>G</u>  | Em  | <u>D</u>  | Bm  | A         | F#m | Gj7  | Cj7  | Fj7  |
| <b>side A</b> <b>Eb/Ab/Db guide</b> | Abs4 | Dbs4 | <b>Gb</b> | Ebm | <u>Db</u> | Bbm | <u>Ab</u> | Fm  | <u>Eb</u> | Cm  | <b>Bb</b> | Gm  | Abj7 | Dbj7 | Gbj7 |
| <b>Guide 3</b> (3 & 4)              |      |      |           |     |           |     |           |     |           |     |           |     |      |      |      |
| <b>side B</b> <b>E/A/D guide</b>    | As4  | Ds4  | <b>G</b>  | Em  | <u>D</u>  | Bm  | <u>A</u>  | F#m | <u>E</u>  | C#m | <b>B</b>  | G#m | Aj7  | Dj7  | Gj7  |
| <b>side A</b> <b>F/Bb/Eb guide</b>  | Bbs4 | Ebs4 | <b>Ab</b> | Fm  | <u>Eb</u> | Cm  | <u>Bb</u> | Gm  | <u>F</u>  | Dm  | C         | Am  | Bbj7 | Ebj7 | Abj7 |
| <b>Guide 4</b> (5 & 6)              |      |      |           |     |           |     |           |     |           |     |           |     |      |      |      |
| <b>side B</b> <b>G/C/F guide</b>    | Cs4  | Fs4  | <b>Bb</b> | Gm  | <u>F</u>  | Dm  | <u>C</u>  | Am  | <u>G</u>  | Em  | <b>D</b>  | Bm  | Cj7  | Fj7  | Bbj7 |

**IV. COMPLETE TUNING GUIDE SETS** (Please confirm accuracy)

For the 1 Key at a time Versions, there are up to 5 two sided tuning guides (2 adjunct keys per side – 12 Key signatures total)

2 Guides are attached between both ends of the chord bar holders on each side of the chord mechanism (4 total) and the remaining tuning guide in use fits under the strings on the soundboard below the chord mechanism on the autoharp tuning pin versions, and under the strings at the base of the headpiece on the guitar tuners versions. As the string spacing varies from version to version, make sure the spacing between notes on the guides matches the string spacing for that version.

The keys applicable to each side of the tuning guide are underlined in CAPS and the applicable bridge position indicated as well.

**\*\* Complete Set Models X & A Alto 12 String 1 key at a time TUNING GUIDES C/F Keys Set-up \*\***

(# 6 string re-tunable for the adjunct key – note to left for left key indicted on the side-board and to the right for the right key)

|                           | string no.                        | 12        | 11 | 10 | 9         | 8  | 7    | * 6 * | 5  | 4  | 3  | 2  | 1  | bridge position | key signatures  |
|---------------------------|-----------------------------------|-----------|----|----|-----------|----|------|-------|----|----|----|----|----|-----------------|-----------------|
| <b>Guide 1</b>            | <b>Side A</b> <b>Bb/Eb tuning</b> | <u>Bb</u> | c  | d  | <u>Eb</u> | f  | g    | a/ab  | bb | c  | d  | eb | f  | -1              | (bb)/(bbb)      |
|                           | <b>Side B</b> <b>B/E tuning</b>   | <u>B</u>  | c# | d# | <u>E</u>  | f# | g#   | a#/a  | b  | c# | d# | e  | f# | -1              | (#####)/(#####) |
| <b>Guide 2</b>            | <b>Side A</b> <b>C/F tuning</b>   | <u>C</u>  | d  | e  | <u>F</u>  | g  | a    | b/bb  | c  | d  | e  | f  | g  | 0               | ( )/(b)         |
|                           | <b>Side B</b> <b>C#/F# tuning</b> | <u>C#</u> | d# | f  | <u>F#</u> | g# | a#   | c/b   | c# | d# | f  | f# | g# | 1               | (#####)/(#####) |
| <b>Guide 3</b>            | <b>Side A</b> <b>D/G tuning</b>   | <u>D</u>  | e  | f# | <u>G</u>  | a  | b    | c#/c  | d  | e  | f# | g  | a  | 2               | (##)/(#)        |
|                           | <b>Side B</b> <b>Eb/Ab tuning</b> | <u>Eb</u> | f  | g  | <u>Ab</u> | bb | c    | db/d  | eb | f  | g  | ab | bb | 3               | (bbb)/(bbbb)    |
| <b>Guide 4</b>            | <b>Side A</b> <b>E/A tuning</b>   | <u>E</u>  | f# | g# | <u>A</u>  | b  | c#   | d#/d  | e  | f# | g# | a  | b  | 4               | (#####)/(####)  |
|                           | <b>Side B</b> <b>F/Bb tuning</b>  | <u>F</u>  | g  | a  | <u>Bb</u> | c  | d    | e/eb  | f  | g  | a  | bb | c  | 5               | (b)/(bb)        |
| <b>Guide 5</b> (optional) | <b>Side A</b> <b>F#/B tuning</b>  | <u>F#</u> | g# | a  | <u>B</u>  | c# | d#/d | e     | f# | g# | a  | b  | c# | 6               | (#####)/(#####) |
|                           | <b>Side B</b> <b>G/C tuning</b>   | <u>G</u>  | a  | bb | <u>C</u>  | d  | e/eb | f     | g  | a  | bb | c  | d  | 7               | (#)/( )         |

**Complete Set Models X & A Alto 12 String 1 Key at a time TUNING GUIDES G/C Keys Set-up**

The keys applicable to each side of the tuning guide are underlined in CAPS and the applicable bridge position indicated as well.

(string #'s 9 and 2 are re-tunable for the adjunct key – note to left for left key and to the right for the right key on side-board)

|         | string no. | 12           | 11 | 10 | * 9 * | 8    | 7         | 6  | 5  | 4         | 3  | * 2 * | 1    | bridge position | key signatures |                 |
|---------|------------|--------------|----|----|-------|------|-----------|----|----|-----------|----|-------|------|-----------------|----------------|-----------------|
| Guide 1 | Side A     | F/Bb tuning  | bb | c  | d     | e/eb | <u>F</u>  | g  | a  | <u>Bb</u> | c  | d     | e/eb | f               | -1             | (b)/(bb)        |
|         | Side B     | G/C tuning   | c  | d  | e     | f#/f | <u>G</u>  | a  | b  | <u>C</u>  | d  | e     | f#/f | g               | 0              | (#)/( )         |
| Guide 2 | Side A     | A/D tuning   | d  | e  | f#    | g#/g | <u>A</u>  | b  | c# | <u>D</u>  | e  | f#    | g#/g | a               | 2              | (###)/(##)      |
|         | Side B     | Bb/Eb tuning | eb | f  | g     | a/ab | <u>Bb</u> | c  | d  | <u>Eb</u> | f  | g     | a/ab | bb              | 3              | (bb)/(bbb)      |
| Guide 3 | Side A     | B/E tuning   | e  | f# | g#    | a#/a | <u>B</u>  | c# | d# | <u>E</u>  | f# | g#    | a#/a | b               | 4              | (#####)/(#####) |
|         | Side B     | C/F tuning   | f  | g  | a     | b/bb | <u>C</u>  | d  | e  | <u>F</u>  | g  | a     | b/bb | c               | 5              | ( )/(#)         |
| Guide 4 | Side A     | C#/F# tuning | f# | g# | a#    | c/b  | <u>C#</u> | d# | f  | <u>F#</u> | g# | a#    | c/b  | c#              | 6              | (#####)/(#####) |
|         | Side B     | D/G tuning   | g  | a  | b     | c#/c | <u>D</u>  | e  | f# | <u>G</u>  | a  | b     | c#/c | d               | 7              | (#)/(#)         |

**\*\* Complete Set Model X Soprano 12 String 1 Key at a time TUNING GUIDES G/C Keys Set-up \*\***

The keys applicable to each side of the tuning guide are underlined in CAPS and the applicable bridge position indicated as well.

(string #'s 12 and 5 are re-tunable for the adjunct key – note to left for left key and to the right for the right key on side-board)

|         | string no. | * 12 *       | 11   | 10        | 9  | 8  | 7         | 6  | * 5 * | 4    | 3  | 2  | 1  | bridge position | key signatures |                 |
|---------|------------|--------------|------|-----------|----|----|-----------|----|-------|------|----|----|----|-----------------|----------------|-----------------|
| Guide 1 | Side A     | F/Bb tuning  | e/eb | <u>F</u>  | g  | a  | <u>Bb</u> | c  | d     | e/eb | f  | g  | a  | bb              | -1             | (b)/(bb)        |
|         | Side B     | G/C tuning   | f#/f | <u>G</u>  | a  | b  | <u>C</u>  | d  | e     | f#/f | g  | a  | b  | c               | 0              | (#)/( )         |
| Guide 2 | Side A     | A/D tuning   | g#/g | <u>A</u>  | b  | c# | <u>D</u>  | e  | f#    | g#/g | a  | b  | c# | d               | 2              | (###)/(##)      |
|         | Side B     | Bb/Eb tuning | a/ab | <u>Bb</u> | c  | d  | <u>Eb</u> | f  | g     | a/ab | bb | c  | d  | eb              | 3              | (bb)/(bbb)      |
| Guide 3 | Side A     | B/E tuning   | a#/a | <u>B</u>  | c# | d# | <u>E</u>  | f# | g#    | a#/a | b  | c# | d# | e               | 4              | (#####)/(#####) |
|         | Side B     | C/F tuning   | b/bb | <u>C</u>  | d  | e  | <u>F</u>  | g  | a     | b/bb | c  | d  | e  | f               | 5              | ( )/(#)         |
| Guide 4 | Side A     | C#/F# tuning | c/b  | <u>C#</u> | d# | f  | <u>F#</u> | g# | a#    | c/b  | c# | d# | f  | f#              | 6              | (#####)/(#####) |
|         | Side B     | D/G tuning   | c#/c | <u>D</u>  | e  | f# | <u>G</u>  | a  | b     | c#/c | d  | e  | f# | g               | 7              | (#)/(#)         |

**\*\* Complete Set Model A 14 String 1 Key at a time TUNING GUIDES G/C Keys Set-up \*\***

The keys applicable to each side of the tuning guide are underlined in CAPS and the applicable bridge position indicated as well.  
(string #'s 10 and 3 are re-tunable for the adjunct key – note to left for left key and to the right for the right key on side-board)

|         | string no. | 14                  | 13        | 12        | 11        | * 10 *    | 9           | 8         | 7         | 6         | 5         | 4         | * 3 *     | 2           | 1         | bridge position |    |
|---------|------------|---------------------|-----------|-----------|-----------|-----------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-------------|-----------|-----------------|----|
| Guide 1 | Side A     | <i>F/Bb tuning</i>  | <u>F</u>  | <u>Bb</u> | <i>c</i>  | <i>d</i>  | <i>e/eb</i> | <i>f</i>  | <i>g</i>  | <i>a</i>  | <i>bb</i> | <i>c</i>  | <i>d</i>  | <i>e/eb</i> | <i>f</i>  | <i>g</i>        | -1 |
|         | Side B     | <i>G/C tuning</i>   | <u>G</u>  | <u>C</u>  | <i>d</i>  | <i>e</i>  | <i>f#/f</i> | <i>g</i>  | <i>a</i>  | <i>b</i>  | <i>c</i>  | <i>d</i>  | <i>e</i>  | <i>f#/f</i> | <i>g</i>  | <i>a</i>        | 0  |
| Guide 2 | Side A     | <i>A/D tuning</i>   | <u>A</u>  | <u>D</u>  | <i>e</i>  | <i>f#</i> | <i>g#/g</i> | <i>a</i>  | <i>b</i>  | <i>c#</i> | <i>d</i>  | <i>e</i>  | <i>f#</i> | <i>g#/g</i> | <i>a</i>  | <i>b</i>        | 2  |
|         | Side B     | <i>Bb/Eb tuning</i> | <u>Bb</u> | <u>Eb</u> | <i>f</i>  | <i>g</i>  | <i>a/ab</i> | <i>bb</i> | <i>c</i>  | <i>d</i>  | <i>eb</i> | <i>f</i>  | <i>g</i>  | <i>a/ab</i> | <i>bb</i> | <i>c</i>        | 3  |
| Guide 3 | Side A     | <i>B/E tuning</i>   | <u>B</u>  | <u>E</u>  | <i>f#</i> | <i>g#</i> | <i>a#/a</i> | <i>b</i>  | <i>c#</i> | <i>d#</i> | <i>e</i>  | <i>f#</i> | <i>g#</i> | <i>a#/a</i> | <i>b</i>  | <i>c#</i>       | 4  |
|         | Side B     | <i>C/F tuning</i>   | <u>C</u>  | <u>F</u>  | <i>g</i>  | <i>a</i>  | <i>b/bb</i> | <i>c</i>  | <i>d</i>  | <i>e</i>  | <i>f</i>  | <i>g</i>  | <i>a</i>  | <i>b/bb</i> | <i>c</i>  | <i>d</i>        | 5  |
| Guide 4 | Side A     | <i>C#/F# tuning</i> | <u>C#</u> | <u>F#</u> | <i>g#</i> | <i>a#</i> | <i>c/b</i>  | <i>c#</i> | <i>d#</i> | <i>f</i>  | <i>f#</i> | <i>g#</i> | <i>a#</i> | <i>c/b</i>  | <i>c#</i> | <i>d#</i>       | 6  |
|         | Side B     | <i>D/G tuning</i>   | <u>D</u>  | <u>G</u>  | <i>a</i>  | <i>b</i>  | <i>c#/c</i> | <i>d</i>  | <i>e</i>  | <i>f#</i> | <i>g</i>  | <i>a</i>  | <i>b</i>  | <i>c#/c</i> | <i>d</i>  | <i>e</i>        | 7  |

**\*\* Complete Set Model B 14 String 1 Key at a time TUNING GUIDES C/F Keys Set-up \*\***

The keys applicable to each side of the tuning guide are underlined in CAPS and the applicable bridge position indicated as well.  
(string # 6 is re-tunable for the adjunct key – note to left for left key and to the right for the right key on the side-board)

|                    | string no. | 14                  | 13        | 12        | 11        | 10        | 9         | 8         | 7         | * 6 *       | 5           | 4         | 3         | 2         | 1         | bridge position |    |
|--------------------|------------|---------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------------|-------------|-----------|-----------|-----------|-----------|-----------------|----|
| Guide 1            | Side A     | <i>Bb/Eb tuning</i> | <i>eb</i> | <i>f</i>  | <u>Bb</u> | <i>c</i>  | <i>d</i>  | <u>Eb</u> | <i>f</i>  | <i>g</i>    | <i>a/ab</i> | <i>bb</i> | <i>c</i>  | <i>d</i>  | <i>eb</i> | <i>f</i>        | -1 |
|                    | Side B     | <i>B/E tuning</i>   | <i>e</i>  | <i>f#</i> | <u>B</u>  | <i>c#</i> | <i>d#</i> | <u>E</u>  | <i>f#</i> | <i>g#</i>   | <i>a#/a</i> | <i>b</i>  | <i>c#</i> | <i>d#</i> | <i>e</i>  | <i>f#</i>       | -1 |
| Guide 2            | Side A     | <i>C/F tuning</i>   | <i>f</i>  | <i>g</i>  | <u>C</u>  | <i>d</i>  | <i>e</i>  | <u>F</u>  | <i>g</i>  | <i>a</i>    | <i>b/bb</i> | <i>c</i>  | <i>d</i>  | <i>e</i>  | <i>f</i>  | <i>g</i>        | 0  |
|                    | Side B     | <i>C#/F# tuning</i> | <i>f#</i> | <i>g#</i> | <u>C#</u> | <i>d#</i> | <i>f</i>  | <u>F#</u> | <i>g#</i> | <i>a#</i>   | <i>c/b</i>  | <i>c#</i> | <i>d#</i> | <i>f</i>  | <i>f#</i> | <i>g#</i>       | 1  |
| Guide 3            | Side A     | <i>D/G tuning</i>   | <i>g</i>  | <i>a</i>  | <u>D</u>  | <i>e</i>  | <i>f#</i> | <u>G</u>  | <i>a</i>  | <i>b</i>    | <i>c#/c</i> | <i>d</i>  | <i>e</i>  | <i>f#</i> | <i>g</i>  | <i>a</i>        | 2  |
|                    | Side B     | <i>Eb/Ab tuning</i> | <i>ab</i> | <i>bb</i> | <u>Eb</u> | <i>f</i>  | <i>gb</i> | <u>Ab</u> | <i>bb</i> | <i>c</i>    | <i>db/d</i> | <i>eb</i> | <i>f</i>  | <i>g</i>  | <i>ab</i> | <i>bb</i>       | 3  |
| Guide 4            | Side A     | <i>E/A tuning</i>   | <i>a</i>  | <i>b</i>  | <u>E</u>  | <i>f#</i> | <i>g</i>  | <u>A</u>  | <i>b</i>  | <i>c#</i>   | <i>d#/d</i> | <i>e</i>  | <i>f#</i> | <i>g#</i> | <i>a</i>  | <i>b</i>        | 4  |
|                    | Side B     | <i>F/Bb tuning</i>  | <i>bb</i> | <i>c</i>  | <u>F</u>  | <i>g</i>  | <i>ab</i> | <u>Bb</u> | <i>c</i>  | <i>d</i>    | <i>e/eb</i> | <i>f</i>  | <i>g</i>  | <i>a</i>  | <i>bb</i> | <i>c</i>        | 5  |
| Guide 5 (optional) | Side A     | <i>F#/B tuning</i>  | <i>b</i>  | <i>e</i>  | <u>F#</u> | <i>g#</i> | <i>a</i>  | <u>B</u>  | <i>c#</i> | <i>d#/d</i> | <i>e</i>    | <i>f#</i> | <i>g#</i> | <i>a</i>  | <i>b</i>  | <i>c#</i>       | 6  |
|                    | Side B     | <i>G/C tuning</i>   | <i>c</i>  | <i>f</i>  | <u>G</u>  | <i>a</i>  | <i>b</i>  | <u>C</u>  | <i>d</i>  | <i>e/eb</i> | <i>f</i>    | <i>g</i>  | <i>a</i>  | <i>bb</i> | <i>c</i>  | <i>d</i>        | 7  |

**\*\* Complete Set Model A 16 String 1 Key at a time TUNING GUIDES C/F Keys Set-up \*\***

The keys applicable to each side of the tuning guide are underlined in CAPS and the applicable bridge position indicated as well. (strings # 14 & 7 are re-tunable for the adjunct key – note to left for left key and to the right for the right key on the side-board)

|                    | string no.                 | 16        | 15        | *14*        | 13               | 12        | 11        | 10               | 9         | 8         | *7*         | 6         | 5         | 4         | 3         | 2         | 1         | bridge position |
|--------------------|----------------------------|-----------|-----------|-------------|------------------|-----------|-----------|------------------|-----------|-----------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------------|
| Guide 1            | Side A <i>Bb/Eb tuning</i> | <i>f</i>  | <i>g</i>  | <i>a/ab</i> | <u><b>Bb</b></u> | <i>c</i>  | <i>d</i>  | <u><b>Eb</b></u> | <i>f</i>  | <i>g</i>  | <i>a/ab</i> | <i>bb</i> | <i>c</i>  | <i>d</i>  | <i>eb</i> | <i>f</i>  | <i>g</i>  | -1              |
|                    | Side B <i>B/E tuning</i>   | <i>f#</i> | <i>g#</i> | <i>a#/a</i> | <u><b>B</b></u>  | <i>c#</i> | <i>d#</i> | <u><b>E</b></u>  | <i>f#</i> | <i>g#</i> | <i>a#/a</i> | <i>b</i>  | <i>c#</i> | <i>d#</i> | <i>e</i>  | <i>f#</i> | <i>g#</i> | -1              |
| Guide 2            | Side A <i>C/F tuning</i>   | <i>g</i>  | <i>a</i>  | <i>b/bb</i> | <u><b>C</b></u>  | <i>d</i>  | <i>e</i>  | <u><b>F</b></u>  | <i>g</i>  | <i>a</i>  | <i>b/bb</i> | <i>c</i>  | <i>d</i>  | <i>e</i>  | <i>f</i>  | <i>g</i>  | <i>a</i>  | 0               |
|                    | Side B <i>C#/F# tuning</i> | <i>g#</i> | <i>a#</i> | <i>c/b</i>  | <u><b>C#</b></u> | <i>d#</i> | <i>f</i>  | <u><b>F#</b></u> | <i>g#</i> | <i>a#</i> | <i>c/b</i>  | <i>c#</i> | <i>d#</i> | <i>f</i>  | <i>f#</i> | <i>g#</i> | <i>a#</i> | 1               |
| Guide 3            | Side A <i>D/G tuning</i>   | <i>a</i>  | <i>b</i>  | <i>c#/c</i> | <u><b>D</b></u>  | <i>e</i>  | <i>f#</i> | <u><b>G</b></u>  | <i>a</i>  | <i>b</i>  | <i>c#/c</i> | <i>d</i>  | <i>e</i>  | <i>f#</i> | <i>g</i>  | <i>a</i>  | <i>b</i>  | 2               |
|                    | Side B <i>Eb/Ab tuning</i> | <i>bb</i> | <i>c</i>  | <i>d/db</i> | <u><b>Eb</b></u> | <i>f</i>  | <i>gb</i> | <u><b>Ab</b></u> | <i>bb</i> | <i>c</i>  | <i>d/db</i> | <i>eb</i> | <i>f</i>  | <i>gb</i> | <i>ab</i> | <i>bb</i> | <i>c</i>  | 3               |
| Guide 4            | Side A <i>E/A tuning</i>   | <i>b</i>  | <i>c#</i> | <i>d#/d</i> | <u><b>E</b></u>  | <i>f#</i> | <i>g</i>  | <u><b>A</b></u>  | <i>b</i>  | <i>c#</i> | <i>d#/d</i> | <i>e</i>  | <i>f#</i> | <i>g</i>  | <i>a</i>  | <i>b</i>  | <i>c#</i> | 4               |
|                    | Side B <i>F/Bb tuning</i>  | <i>c</i>  | <i>d</i>  | <i>e/eb</i> | <u><b>F</b></u>  | <i>g</i>  | <i>ab</i> | <u><b>Bb</b></u> | <i>c</i>  | <i>d</i>  | <i>e/eb</i> | <i>f</i>  | <i>g</i>  | <i>ab</i> | <i>bb</i> | <i>c</i>  | <i>d</i>  | 5               |
| Guide 5 (optional) | Side A <i>F#/B tuning</i>  | <i>c#</i> | <i>d#</i> | <i>f/e</i>  | <u><b>F#</b></u> | <i>g#</i> | <i>a</i>  | <u><b>B</b></u>  | <i>c#</i> | <i>d#</i> | <i>f/e</i>  | <i>f#</i> | <i>g#</i> | <i>a</i>  | <i>b</i>  | <i>c#</i> | <i>d#</i> | 6               |
|                    | Side B <i>G/C tuning</i>   | <i>d</i>  | <i>e</i>  | <i>f#/f</i> | <u><b>G</b></u>  | <i>a</i>  | <i>b</i>  | <u><b>C</b></u>  | <i>d</i>  | <i>e</i>  | <i>f#/f</i> | <i>g</i>  | <i>a</i>  | <i>b</i>  | <i>c</i>  | <i>d</i>  | <i>e</i>  | 7               |

Please note: forgot to include - Complete Set Model A 16 String 1 Key at a time TUNING GUIDES G/C Keys Set-up

**\*\* Complete Set Model B 16 String TUNING GUIDES C/F Keys Set-up in the 2 Keys at a time mode \*\***

The keys applicable to each side of the tuning guide are underlined in CAPS and the applicable bridge position indicated as well.

|                    | string no.                 | 16        | 15        | 14        | 13        | 12               | 11        | 10        | 9                | 8         | 7         | 6         | 5         | 4         | 3         | 2         | 1         | bridge position |
|--------------------|----------------------------|-----------|-----------|-----------|-----------|------------------|-----------|-----------|------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------------|
| Guide 1            | Side A <i>Bb/Eb tuning</i> | <i>f</i>  | <i>g</i>  | <i>ab</i> | <i>a</i>  | <u><b>Bb</b></u> | <i>c</i>  | <i>d</i>  | <u><b>Eb</b></u> | <i>f</i>  | <i>g</i>  | <i>ab</i> | <i>a</i>  | <i>bb</i> | <i>c</i>  | <i>d</i>  | <i>eb</i> | -1              |
|                    | Side B <i>B/E tuning</i>   | <i>f#</i> | <i>g#</i> | <i>a</i>  | <i>a#</i> | <u><b>B</b></u>  | <i>c#</i> | <i>d#</i> | <u><b>E</b></u>  | <i>f#</i> | <i>g#</i> | <i>a</i>  | <i>a#</i> | <i>b</i>  | <i>c#</i> | <i>d</i>  | <i>e</i>  | -1              |
| Guide 2            | Side A <i>C/F tuning</i>   | <i>g</i>  | <i>a</i>  | <i>bb</i> | <i>b</i>  | <u><b>C</b></u>  | <i>d</i>  | <i>e</i>  | <u><b>F</b></u>  | <i>g</i>  | <i>a</i>  | <i>bb</i> | <i>b</i>  | <i>c</i>  | <i>d</i>  | <i>e</i>  | <i>f</i>  | 0               |
|                    | Side B <i>C#/F# tuning</i> | <i>g#</i> | <i>a#</i> | <i>b</i>  | <i>c</i>  | <u><b>C#</b></u> | <i>d#</i> | <i>f</i>  | <u><b>F#</b></u> | <i>g#</i> | <i>a#</i> | <i>b</i>  | <i>c</i>  | <i>c#</i> | <i>d#</i> | <i>f</i>  | <i>f#</i> | 1               |
| Guide 3            | Side A <i>D/G tuning</i>   | <i>a</i>  | <i>b</i>  | <i>c</i>  | <i>c#</i> | <u><b>D</b></u>  | <i>e</i>  | <i>f#</i> | <u><b>G</b></u>  | <i>a</i>  | <i>b</i>  | <i>c</i>  | <i>c#</i> | <i>d</i>  | <i>e</i>  | <i>f#</i> | <i>g</i>  | 2               |
|                    | Side B <i>Eb/Ab tuning</i> | <i>bb</i> | <i>c</i>  | <i>db</i> | <i>d</i>  | <u><b>Eb</b></u> | <i>f</i>  | <i>gb</i> | <u><b>Ab</b></u> | <i>bb</i> | <i>c</i>  | <i>db</i> | <i>d</i>  | <i>eb</i> | <i>f</i>  | <i>g</i>  | <i>ab</i> | 3               |
| Guide 4            | Side A <i>E/A tuning</i>   | <i>b</i>  | <i>c#</i> | <i>d</i>  | <i>d#</i> | <u><b>E</b></u>  | <i>f#</i> | <i>g</i>  | <u><b>A</b></u>  | <i>b</i>  | <i>c#</i> | <i>d</i>  | <i>d#</i> | <i>e</i>  | <i>f#</i> | <i>g#</i> | <i>a</i>  | 4               |
|                    | Side B <i>F/Bb tuning</i>  | <i>c</i>  | <i>d</i>  | <i>eb</i> | <i>e</i>  | <u><b>F</b></u>  | <i>g</i>  | <i>ab</i> | <u><b>Bb</b></u> | <i>c</i>  | <i>d</i>  | <i>eb</i> | <i>e</i>  | <i>f</i>  | <i>g</i>  | <i>a</i>  | <i>bb</i> | 5               |
| Guide 5 (optional) | Side A <i>F#/B tuning</i>  | <i>c#</i> | <i>d#</i> | <i>e</i>  | <i>f</i>  | <u><b>F#</b></u> | <i>g#</i> | <i>a</i>  | <u><b>B</b></u>  | <i>c#</i> | <i>d#</i> | <i>e</i>  | <i>f</i>  | <i>f#</i> | <i>g#</i> | <i>a#</i> | <i>b</i>  | 6               |
|                    | Side B <i>G/C tuning</i>   | <i>d</i>  | <i>e</i>  | <i>f</i>  | <i>f#</i> | <u><b>G</b></u>  | <i>a</i>  | <i>b</i>  | <u><b>C</b></u>  | <i>d</i>  | <i>e</i>  | <i>f</i>  | <i>f#</i> | <i>g</i>  | <i>a</i>  | <i>b</i>  | <i>c</i>  | 7               |



**\*\* Complete Set Model B 16 String TUNING GUIDES C/F Keys Set-up in the 1 Key at a time mode \*\***

The keys applicable to each side of the tuning guide are underlined in CAPS and the applicable bridge position indicated as well. (strings # 13 & 6 are re-tunable for the adjunct key – note to left for left key and to the right for the right key on the side-board)

|                           | string no.                 | 16        | 15        | 14        | *13*        | 12               | 11        | 10        | 9                | 8         | 7         | *6*         | 5         | 4         | 3         | 2         | 1         | bridge position |
|---------------------------|----------------------------|-----------|-----------|-----------|-------------|------------------|-----------|-----------|------------------|-----------|-----------|-------------|-----------|-----------|-----------|-----------|-----------|-----------------|
| <b>Guide 1</b>            | Side A <i>Bb/Eb tuning</i> | <i>eb</i> | <i>f</i>  | <i>g</i>  | <i>a/ab</i> | <u><b>Bb</b></u> | <i>c</i>  | <i>d</i>  | <u><b>Eb</b></u> | <i>f</i>  | <i>g</i>  | <i>a/ab</i> | <i>bb</i> | <i>c</i>  | <i>d</i>  | <i>eb</i> | <i>f</i>  | -1              |
|                           | Side B <i>B/E tuning</i>   | <i>e</i>  | <i>f#</i> | <i>g#</i> | <i>a#/a</i> | <u><b>B</b></u>  | <i>c#</i> | <i>d#</i> | <u><b>E</b></u>  | <i>f#</i> | <i>g#</i> | <i>a#/a</i> | <i>b</i>  | <i>c#</i> | <i>d#</i> | <i>e</i>  | <i>f#</i> | -1              |
| <b>Guide 2</b>            | Side A <i>C/F tuning</i>   | <i>f</i>  | <i>g</i>  | <i>a</i>  | <i>b/bb</i> | <u><b>C</b></u>  | <i>d</i>  | <i>e</i>  | <u><b>F</b></u>  | <i>g</i>  | <i>a</i>  | <i>b/bb</i> | <i>c</i>  | <i>d</i>  | <i>e</i>  | <i>f</i>  | <i>g</i>  | 0               |
|                           | Side B <i>C#/F# tuning</i> | <i>f#</i> | <i>g#</i> | <i>a#</i> | <i>c/b</i>  | <u><b>C#</b></u> | <i>d#</i> | <i>f</i>  | <u><b>F#</b></u> | <i>g#</i> | <i>a#</i> | <i>c/b</i>  | <i>c#</i> | <i>d#</i> | <i>f</i>  | <i>f#</i> | <i>g#</i> | 1               |
| <b>Guide 3</b>            | Side A <i>D/G tuning</i>   | <i>g</i>  | <i>a</i>  | <i>b</i>  | <i>c#/c</i> | <u><b>D</b></u>  | <i>e</i>  | <i>f#</i> | <u><b>G</b></u>  | <i>a</i>  | <i>b</i>  | <i>c#/c</i> | <i>d</i>  | <i>e</i>  | <i>f#</i> | <i>g</i>  | <i>a</i>  | 2               |
|                           | Side B <i>Eb/Ab tuning</i> | <i>ab</i> | <i>bb</i> | <i>c</i>  | <i>d/db</i> | <u><b>Eb</b></u> | <i>f</i>  | <i>gb</i> | <u><b>Ab</b></u> | <i>bb</i> | <i>c</i>  | <i>d/db</i> | <i>eb</i> | <i>f</i>  | <i>gb</i> | <i>ab</i> | <i>bb</i> | 3               |
| <b>Guide 4</b>            | Side A <i>E/A tuning</i>   | <i>a</i>  | <i>b</i>  | <i>c#</i> | <i>d#/d</i> | <u><b>E</b></u>  | <i>f#</i> | <i>g</i>  | <u><b>A</b></u>  | <i>b</i>  | <i>c#</i> | <i>d#/d</i> | <i>e</i>  | <i>f#</i> | <i>g</i>  | <i>a</i>  | <i>b</i>  | 4               |
|                           | Side B <i>F/Bb tuning</i>  | <i>bb</i> | <i>c</i>  | <i>d</i>  | <i>e/eb</i> | <u><b>F</b></u>  | <i>g</i>  | <i>ab</i> | <u><b>Bb</b></u> | <i>c</i>  | <i>d</i>  | <i>e/eb</i> | <i>f</i>  | <i>g</i>  | <i>ab</i> | <i>bb</i> | <i>c</i>  | 5               |
| <b>Guide 5 (optional)</b> | Side A <i>F#/B tuning</i>  | <i>b</i>  | <i>c#</i> | <i>d#</i> | <i>f/e</i>  | <u><b>F#</b></u> | <i>g#</i> | <i>a</i>  | <u><b>B</b></u>  | <i>c#</i> | <i>d#</i> | <i>f/e</i>  | <i>f#</i> | <i>g#</i> | <i>a</i>  | <i>b</i>  | <i>c#</i> | 6               |
|                           | Side B <i>G/C tuning</i>   | <i>c</i>  | <i>d</i>  | <i>e</i>  | <i>f#/f</i> | <u><b>G</b></u>  | <i>a</i>  | <i>b</i>  | <u><b>C</b></u>  | <i>d</i>  | <i>e</i>  | <i>f#/f</i> | <i>g</i>  | <i>a</i>  | <i>b</i>  | <i>c</i>  | <i>d</i>  | 7               |

**\*\* Complete Set Model BP-20 String TUNING GUIDES in the 3 Keys at a time mode \*\***

The keys applicable to each side of the tuning guide are underlined in CAPS and the applicable bridge position indicated as well.

Bridge positions shown in ( ) next to Guide #

|                         | string no.                   | 20               | 19        | 18        | 17               | 16        | 15               | 14        | 13        | 12        | 11        | 10        | 9         | 8         | 7         | 6         | 5         | 4         | 3         | 2         | 1         |
|-------------------------|------------------------------|------------------|-----------|-----------|------------------|-----------|------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| <b>Guide 1</b> (-1 & 0) | side A <i>B/E/A guide</i>    | <u><b>E</b></u>  | <i>f#</i> | <i>g#</i> | <u><b>A</b></u>  | <i>a#</i> | <u><b>B</b></u>  | <i>c#</i> | <i>d</i>  | <i>d#</i> | <i>e</i>  | <i>f#</i> | <i>g#</i> | <i>a</i>  | <i>a#</i> | <i>b</i>  | <i>c#</i> | <i>d</i>  | <i>d#</i> | <i>e</i>  | <i>f#</i> |
|                         | side B <i>C/F/Bb guide</i>   | <u><b>F</b></u>  | <i>g</i>  | <i>a</i>  | <u><b>Bb</b></u> | <i>b</i>  | <u><b>C</b></u>  | <i>d</i>  | <i>eb</i> | <i>e</i>  | <i>f</i>  | <i>g</i>  | <i>a</i>  | <i>bb</i> | <i>b</i>  | <i>c</i>  | <i>d</i>  | <i>eb</i> | <i>e</i>  | <i>f</i>  | <i>g</i>  |
| <b>Guide 2</b> (1 & 2)  | side A <i>C#/F#/B guide</i>  | <u><b>F#</b></u> | <i>g#</i> | <i>a#</i> | <u><b>B</b></u>  | <i>c</i>  | <u><b>C#</b></u> | <i>d#</i> | <i>e</i>  | <i>f</i>  | <i>f#</i> | <i>g#</i> | <i>a#</i> | <i>b</i>  | <i>c</i>  | <i>c#</i> | <i>d#</i> | <i>e</i>  | <i>f</i>  | <i>f#</i> | <i>g#</i> |
|                         | side B <i>D/G/C guide</i>    | <u><b>G</b></u>  | <i>a</i>  | <i>b</i>  | <u><b>C</b></u>  | <i>c#</i> | <u><b>D</b></u>  | <i>e</i>  | <i>f</i>  | <i>f#</i> | <i>g</i>  | <i>a</i>  | <i>b</i>  | <i>c</i>  | <i>c#</i> | <i>d</i>  | <i>e</i>  | <i>f</i>  | <i>f#</i> | <i>g</i>  | <i>a</i>  |
| <b>Guide 3</b> (3 & 4)  | side A <i>Eb/Ab/Db guide</i> | <u><b>Ab</b></u> | <i>bb</i> | <i>c</i>  | <u><b>Db</b></u> | <i>d</i>  | <u><b>Eb</b></u> | <i>f</i>  | <i>gb</i> | <i>g</i>  | <i>ab</i> | <i>bb</i> | <i>c</i>  | <i>db</i> | <i>d</i>  | <i>eb</i> | <i>f</i>  | <i>gb</i> | <i>g</i>  | <i>ab</i> | <i>bb</i> |
|                         | side B <i>E/A/D guide</i>    | <u><b>A</b></u>  | <i>b</i>  | <i>c#</i> | <u><b>D</b></u>  | <i>d#</i> | <u><b>E</b></u>  | <i>f#</i> | <i>g</i>  | <i>g#</i> | <i>a</i>  | <i>b</i>  | <i>c#</i> | <i>d</i>  | <i>d#</i> | <i>e</i>  | <i>f#</i> | <i>g</i>  | <i>g#</i> | <i>a</i>  | <i>b</i>  |
| <b>Guide 4</b> (5 & 6)  | side A <i>F/Bb/Eb guide</i>  | <u><b>Bb</b></u> | <i>c</i>  | <i>d</i>  | <u><b>Eb</b></u> | <i>e</i>  | <u><b>F</b></u>  | <i>g</i>  | <i>ab</i> | <i>a</i>  | <i>bb</i> | <i>c</i>  | <i>d</i>  | <i>eb</i> | <i>e</i>  | <i>f</i>  | <i>g</i>  | <i>ab</i> | <i>a</i>  | <i>bb</i> | <i>c</i>  |
|                         | side B <i>G/C/F guide</i>    | <u><b>C</b></u>  | <i>d</i>  | <i>e</i>  | <u><b>F</b></u>  | <i>f#</i> | <u><b>G</b></u>  | <i>a</i>  | <i>bb</i> | <i>b</i>  | <i>c</i>  | <i>d</i>  | <i>e</i>  | <i>f</i>  | <i>f#</i> | <i>g</i>  | <i>a</i>  | <i>bb</i> | <i>b</i>  | <i>c</i>  | <i>d</i>  |

## V. AUTOHARP TUNING PINS VERTICAL TUNING GUIDES

(14, 16 and 20 string versions not shown)

### Model XP – 12 string Single Bar Chorder C/F Set-up Chord/Tuning Guides

One key per side. Key names indicated at top and underlined on guide. Upper case letters guidance for both the tuning and chords. Bridge positions at bottom of each guide. All guides placed under the strings just below the chord mechanism.

| <u>string no.</u> | <u>keys =</u> | <u>guide no. 1</u><br>(tilt for 7ths) |           | <u>guide no. 2</u><br>(tilt for 7ths) |            | <u>guide no. 3</u><br>(tilt for 7ths) |                                      |
|-------------------|---------------|---------------------------------------|-----------|---------------------------------------|------------|---------------------------------------|--------------------------------------|
|                   |               | side A                                | side B    | side A                                | side B     | side A                                | side B                               |
|                   |               | <u>F</u>                              | <u>C</u>  | <u>G</u>                              | <u>D</u>   | <u>A</u>                              | <u>E</u>                             |
| 1                 |               | g                                     | g         | a                                     | a          | b                                     | b                                    |
| 2                 |               | f                                     | f         | g                                     | g          | a                                     | a                                    |
| 3                 |               | e                                     | e         | f#                                    | f#         | g#                                    | g#                                   |
| 4                 |               | <i>Dm</i>                             | <i>Dm</i> | <i>Em</i>                             | <i>Em</i>  | <i>F#m</i>                            | <i>F#m</i>                           |
| 5                 |               | <u>C</u>                              | <u>C</u>  | <u>D</u>                              | <u>D</u>   | <u>E</u>                              | <u>E</u>                             |
| 6                 |               | <b>Bb</b>                             | b         | <u>C</u>                              | c#         | <u>D</u>                              | d# re-tunable string for adjunct key |
| 7                 |               | <i>Am</i>                             | <i>Am</i> | <i>Bm</i>                             | <i>Bm</i>  | <i>C#m</i>                            | <i>C#m</i>                           |
| 8                 |               | <i>Gm</i>                             | <u>G</u>  | <i>Am</i>                             | <u>A</u>   | <i>Bm</i>                             | <u>B</u>                             |
| 9                 |               | <u>F</u>                              | <u>F</u>  | <u>G</u>                              | <u>G</u>   | <u>A</u>                              | <u>A</u>                             |
| 10                |               | e                                     | <i>Em</i> | f#                                    | <i>F#m</i> | g#                                    | <i>G#m</i>                           |
| 11                |               | <i>Dm</i>                             | <i>Dm</i> | <i>Em</i>                             | <i>Em</i>  | <i>F#m</i>                            | <i>F#m</i>                           |
| 12                |               | <u>C</u>                              | <u>C</u>  | <u>D</u>                              | <u>D</u>   | <u>E</u>                              | <u>E</u>                             |
|                   |               | <b>0</b>                              | <b>0</b>  | <b>2</b>                              | <b>2</b>   | <b>4</b>                              | <b>4</b> bridge position             |

### MODEL AP 14 STRING 1 KEY TUNING GUIDES - C or G Set-up

| <u>string number</u> | <u>guide #1</u> |            | <u>guide #2</u> |            | <u>guide #3</u> |            | <u>guide #4</u> |  |
|----------------------|-----------------|------------|-----------------|------------|-----------------|------------|-----------------|--|
| 1                    | g               | g#         | a               | b          | c               | c#         | d               | e  |
|                      | *               | *          | *               | *          | *               | *          | *               | *  |
| 2                    | f               | f#         | g               | a          | bb              | b          | c               | d  |
| 3                    | <i>e/eb</i>     | f/e        | f#/f            | g#/g       | a/bb            | a#/a       | b/bb            | c#/c (re-tunable string for adjunct key) |
| 4                    | d               | d#         | e               | f#         | g               | g#         | a               | b  |
|                      | *               | *          | *               | *          | *               | *          | *               | *  |
| 5                    | c               | c#         | d               | e          | f               | f#         | g               | a  |
| 6                    | bb              | b          | c               | d          | eb              | e          | f               | g  |
| 7                    | a               | a#         | b               | c#         | d               | d#         | e               | f#                                       |
|                      | *               | *          | *               | *          | *               | *          | *               | *  |
| 8                    | g               | g#         | a               | b          | c               | c#         | d               | e  |
| 9                    | f               | f#         | g               | a          | bb              | b          | c               | d  |
| 10                   | <i>e/eb</i>     | f/e        | f#/f            | g#/g       | a/bb            | a#/a       | b/bb            | c#/c (re-tunable string for adjunct key) |
|                      | *               | *          | *               | *          | *               | *          | *               | *  |
| 11                   | d               | d#         | e               | f#         | g               | g#         | a               | b  |
| 12                   | c               | c#         | d               | e          | f               | f#         | g               | a  |
| 13                   | bb              | b          | c               | d          | eb              | e          | f               | g  |
|                      | *               | *          | *               | *          | *               | *          | *               | *  |
| 14                   | f               | f#         | g               | a          | bb              | b          | c               | d  |
|                      | <u>F/Bb</u>     | <u>F#B</u> | <u>G/C</u>      | <u>A/D</u> | <u>Bb/Eb</u>    | <u>B/E</u> | <u>C/F</u>      | <u>D/G</u> primary keys                  |
|                      | <b>-1</b>       | <b>-1</b>  | <b>0</b>        | <b>2</b>   | <b>3</b>        | <b>4</b>   | <b>5</b>        | <b>7</b> bridge position                 |