

specifically and generally. For example, string relationships will be based on the "higher" or "lower" pitches of the open strings (i.e., string ② would be considered "higher" than ③), and higher numbered frets will be considered "higher," regardless of the specifics under discussion.

B. Establish a Natural Map of letters on the fretboard.

The fretboard can be accessed with a minimum of rote-memorized information: 1) Open-string numbers and letter-names, 2) the whole- half-step pattern for the natural letters in music, and 3) the fifth-fret unison tuning process. All of these are learned easily by eager beginners, and can be linked and expanded to build a comprehensive image of the fretboard.

After labelling the open strings with numbers and letter names, a natural map of the fretboard from each open string to fret XII can be diagrammed. When the locations of natural letters have been secured, sharps and flats are easily found one fret higher or lower. It is important to use only the natural letters without sharps and flats at this point. Since the whole- and half-step pattern of the musical alphabet is used as a formula to construct the natural map, the resulting diagram will show skipped frets where letters are a whole-step apart. The following steps are a guide to this process:

1. Memorize the open-string numbers and letters:

⑥ = E, ⑤ = A, ④ = D, ③ = G, ② = B, ① = E

Memorizing letters from the lowest string, ⑥, to the highest, ①, enables the initial learning patterns to remain in alphabetical order.

2. Memorize the whole- / half-step formula for the music alphabet:

A [W] B (H) C [W] D [W] E (H) F [W] G [W] A

This formula is important because whole- half-step distances are *not* reflected on the music staff, which graphs the alphabet without any visual metaphor for these differences. Most letters of the music alphabet are a whole-step [W, two frets] apart. The only exceptions are B-C and E-F, which are a half-step (H, one fret) apart. This formula provides not only theory, but the reassurance that distances between these letters is the same *anywhere* on the fretboard. C is *always* one fret higher than B, G is *always* two frets higher than F, etc., on a given string. These relationships provide an early introduction to intervallic reading on the guitar, whereby the interval distance can be associated with finger patterns. For example, since the letters E - F, or B - C, are on adjacent frets, they may be fingered with adjacent fingers: 1-2, 2-3, or 3-4. Letters that are a whole-step apart, thus skipping a fret on a single string, may skip a finger: 1-3, or 2-4.

3. With the open string letter as the starting point, use the whole- half-step formula to locate all letters to fret twelve (XII).

Playing toward higher frets on a single string produces ever higher pitches. Therefore the music alphabet will be in order. Starting with the open string letter, the alphabet may be continued from that point. After the letter G, the alphabet starts again with A and finishes to fret XII. When playing from higher frets toward lower, the alphabet is reversed, but the whole- and half-steps remain the same. This is the resulting diagram of natural letters:

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|--|---|
| ① | E | F | | G | | A | | B | C | | D | | E |
| ② | B | C | | D | | E | F | | G | | A | | B |
| ③ | G | | A | | B | C | | D | | E | F | | G |
| ④ | D | | E | F | | G | | A | | B | C | | D |
| ⑤ | A | | B | C | | D | | E | F | | G | | A |
| ⑥ | E | F | | G | | A | | B | C | | D | | E |

Several helpful observations are evident from this diagram:

a) Fret XII displays the same letter as the open strings, and is one octave higher.

b) Frets on strings ① and ⑥ have the same letters, though *two* octaves apart in pitch.

c) All letters of the scale are on each string.

d) Only three frets have natural letters across all six strings: V, X and XII.