

superimposed on top. They are played on dominant chords with alterations<sup>14</sup> that is, dominant chords with at least one alteration (b9, +9, +4, or b13), often with more than one. Upper structures are kind of backwards: the most delicate and unstable interval, the *tritone*, is on the bottom, while the strongest and most robust chord, a major triad, is on the top. The overtone series can play havoc with this instability, which you must pay attention to when problems arise (more on this below).

First, look at the Roman numeral underneath each chord: the first chord, played on a C7+4, has a II underneath it. That is because the *root* of the triad, D, is a major second above the *root* of the notated chord (C7+4). Hence “II.” Roman numerals differentiate between different upper structure chords.

In addition, the 3<sup>rd</sup> and 7<sup>th</sup> on the bottom of the voicing can be reversed, putting the 7<sup>th</sup> on the bottom and the 3<sup>rd</sup> on top.<sup>15</sup> Furthermore, because triads can be played in three different positions – root position, first inversion, and second inversion – any of the three notes of the triad can be used as a melody note. **FIGURE 1-5** shows a C7+4 chord with five choices to harmonize a melody note. Either the 13<sup>th</sup>, +4, 9<sup>th</sup>, or 13<sup>th</sup> can be in the melody. See how the left hand *tritone* is reversed, first with the 3<sup>rd</sup> on the bottom, then the 7<sup>th</sup>, as the chord rises on your piano. Both left hand and right hand need to be fairly close together for *upper structures* to sound good.

**FIGURE 1-5** UPPER STRUCTURE CHORD “II” IN VARIOUS POSITIONS

The figure shows five measures of music in 4/4 time. Each measure has a treble clef staff and a bass clef staff. Above each measure is a label 'C7+4'. In the treble staff, a melody note is written: 13TH, +4TH, 9TH, +4TH, 13TH. In the bass staff, a tritone is written: b9, b9, b9, b9, b9. Below each bass staff is a Roman numeral 'II'.

Notice also that the space between your hands is kept small, never more than a 4<sup>th</sup>, because if it increases by anything more than that, the chord will sound somewhat empty. In addition, if the melody note is played high on the piano (as it is in the last bar on the line), it needs to be doubled, to avoid a tinny, “music box” effect, and to get a fuller sound (see fifth bar of Figure 1-5). So a pianist has five different choices to use these voicings with a melody note on a dominant chord with a +4.

14 Not to be confused with the “alt” chord.

15 Shown as both in Figure 1-5.