Remembering "Giant Steps" Changes
(Bb instruments version)

Bob Keller

21 October 2008

The seeming complexity of "Giant Steps" by John Coltrane is due to the rapidity with which the key centers change rather than the number of key centers as such. This note gives a formula that one can remember to construct the changes.

The tune is 16 measures long and there are only three key centers, which alternate every one or two measures. In the first eight measures, the alternations are mostly every measure, with key changes on the half-measure while in the last eight, the alternations are every two measures, with key changes on even-numbered measures.

The tune sounds tricky because the key centers are separated by major thirds. While this is mathematically an easy relation to remember (it is perfectly symmetric, since three major thirds add up to an octave), the keys sound unrelated, due to only three common tones between any pair and no tones common to all three, as shown below:

Db major	Db	Eb	F	Gb	Ab	Bb	C
A major	C#	D	E	F#	G#	A	B
F major	C	D	E	F	G	A	Bb

Coupling the distinctness of keys with rapidity of key changes gives the tune an unusual sound and presents a unique challenge for the player. The same aural challenge can be heard in the bridge to a standard tune, "Have You Met Miss Jones", by Richard Rodgers, however the latter has a more obvious pattern and is only eight measures long.

Here are the changes to Giant Steps:

DbM7 E7	**AM7** C7	**FM7**	Bm7 E7
AM7 C7	**FM7** Ab7	**DbM7**	Gm7 C7
FM7	Bm7 E7	**AM7**	Ebm7 Ab7
DbM7	Gm7 C7	**FM7**	Ebm7 Ab7

The stable (major seventh) chords are shown in bold, and represent the end of a cadence in that key center, except for the first chord, which ends the cadence started in the last measure. The cadences are seen to be either V-I, mostly in the first eighth measures, or ii-V-I in the last eight and at bars 4 and 8.

Below is the derived key map for Giant Steps, where the top designates the keys (in italics) and the second row the chords:

Db	*A*		*F*		*A*
DbM7	E7	AM7	C7	FM7	Bm7 E7
	F		*Db*		*F*
AM7	C7	FM7	Ab7	DbM7	Gm7 C7
		G			*B*
FM7		Bm7 E7		AM7	Ebm7 Ab7
		F			*Db*
DbM7		Gm7 C7		FM7	Ebm7 Ab7

Apparently the second four measures parallel the first four, but a major third lower. Similarly measures 13-16 parallel measures 9-12 a major third lower.

In terms of the amount of harmonic space devoted to each key, we have:

Key	**Measures**
Db	5
A	4.5
F	5.5

an almost even distribution.

The changes can be reconstructed using the following two formulas:

1. **If the next pattern is a V-I**:
   as in bars 1-3 and 5-7, then the chord following a M7 is a dominant up a minor 3rd, and the following key is **down** a major 3rd.

Major 7 chord	Following dominant chord	Following key
Db	E7	A
A	C7	F
F	Ab7	Db

2. **If the next pattern is a ii-V-I**:
   as in bars 4-5, 8-9, and the sequel, then the chord following a M7 is a ii up a tritone, which is followed by the corresponding V chord, which is down a half-step from the M7, and the following key is **up** a major 3rd.

Major 7 chord	Following ii-V	Following key
Db	Gm7 C7	F
A	Ebm7 Ab7	**Db**
F	Bm7 E7	A

The only **exception** to these two rules is found in the last measure, which is a turnaround to the first chord of the piece.

So to summarize the rules:

Next Pattern	Next Chord	Next Key
V-I	Dominant, up a minor 3rd	**Down** a major 3rd
ii-V-I	Minor seventh, up a tritone	**Up** a major 3rd
Last ii-V		Back to the original key