

**Peter McKenzie Armstrong**

# **Flipidodes**

**Voicing Study**

**for piano 4 hands**

**2015**

*Edition Ottaviano Petrucci*

## COMPOSITION NOTES

Searching for 12-tone all-interval chords with central tritone, that would still fit this description were either or both of their component hexachords inverted in place, I found six unique. These in turn proved reducible to three pairs of mutual Mult-x-5 transforms, differing in their degree of hexachord expansion/contraction under that ordeal. The scenario inspired this score, based on the constituent hexachords but maximizing their autonomy, as follows.

There are two score "panels" (unordered pages). Panel 1, printed as the title page, contains the smaller of the dodecaphonic chords' member hexachords; Panel 2 at corresponding indices contains their larger. (These same-indexed smaller/larger halves are intervalwise octave complements.) With additional variants through inversion and octave-registral exchange, each index offers a total of 8 candidate 12-tone all-interval combinations.

For each such full chord two dynamic levels are defined: in foreground (*forte*) a tetrachord combining a selected interval from one component hexachord and this interval's 8va-complement from the other; in background (*piano*) the eight remaining pitches. The selection of tetrachord intervals uniquely fulfills two criteria – that all 8va-complement pairs, and all hexachord interval stack positions, be represented once each. Foreground members are highlighted in the score via a dedicated notehead glyph.

As the free-standing score panels must endure multiple abrupt position shifts in performance, I recommend that they be printed on card stock.

## PERFORMANCE INSTRUCTIONS

- A. Set L, a constant movement length applying to all movements (10–60 sec).
- B. For each of 6 movements, one per index:
  1. Set N, a unique number of realizations (1–6, excluding current index).
  2. For each realization:
    - a. Select 2 current-indexed hexachords for combination as a 12-note chord: a Prime or Inversion; then independently either Complement.
    - b. Determine the score panels' relative left/right reading positions, with Prime and Inversion at left and Complements at right, or vice versa.
    - c. Note the direction of octave shifts ("1o" & "2o"): within the left panel referencing the keyboard's lower half, these shifts are to be applied *downward*; within the right panel referencing the keyboard's upper half, they are to be applied *upward*.
    - d. With proper shiftings the hexachord pair should accordingly now lie in playable range without overlap and at 1 tritone's inner separation.
    - e. Note any overstretchers called for within the hand. If necessary, plan to roll/break chord portions (starting either before- or on-beat) and to depress the damper pedal early enough to catch initial elements.
    - f. Ensure relative volumes putting the diamond-head notes into relief as a clear tetrachord against an 8-note background.
  3. For the N dodecaphonic chords now defined, set durations to roughly L/N with brief intervening silences, and set overall movement volume.
- C. Perform these collections, with the score panels freely detached and so left/right swappable. A page turner may execute the swaps.

Note: 'A B C' in the score merely flags M5-transform pairs; no correlation to similarly flagged INSTRUCTION sections is implied.

to George Barth & Dane Waterman

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## Prime

A B C

2o 2o 1o 2o 1o 2o

1 2 3 4 5 6

## Inversion

A B C

2o 2o 1o 2o 1o 2o

1 2 3 4 5 6

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When either panel is rack-positioned at left, its octave transpositions ('1o' or '2o') are downward; when it is at the right, they are upward.

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## Prime Complement

The Prime Complement section displays six chords arranged in two systems, A and C, across six numbered positions. The chords are as follows:

System	Position	Notes (Treble)	Notes (Bass)	Labels
A	1	C4, E4	C3, E3	1o
	2	Bb3, D4	Bb2, D3	1o
B	3	Bb3, D4	C#3, E3	2o
	4	Bb3, D4	Bb2, D3	1o
C	5	Bb3, D4	C#3, E3	2o
	6	Bb3, D4	Bb2, D3	1o

## Inversion Complement

The Inversion Complement section displays six chords arranged in two systems, A and C, across six numbered positions. The chords are as follows:

System	Position	Notes (Treble)	Notes (Bass)	Labels
A	1	C4, E4	C#3, E3	1o
	2	Bb3, D4	Bb2, D3	1o
B	3	Bb3, D4	C#3, E3	2o
	4	Bb3, D4	Bb2, D3	1o
C	5	Bb3, D4	C#3, E3	2o
	6	Bb3, D4	Bb2, D3	1o

**[ BLANK ]**

