

Modal Inversions

[To Compliment a Complement]

This document illustrates the complementary relationships which exist between modal mirror-inversions. It is a self-contained and self-completing process: Ionian inverts to Phrygian (and vice versa), Dorian inverts to Dorian (identical pitch palindrome), Lydian inverts to Locrian, and Mixolydian inverts to Aeolian.

For instance, one could be composing in F Lydian (C Major) and immediately modulate to F Locrian (Gb Major), effectively shifting key by a tritone through the pivot of a specific note (in this instance F natural). The work contained in this analytical exercise was an important link for the composer's evolving philosophies of pseudo modulation (modal modulation) and modal sfumato.¹

This sheet was presented to 2nd year undergraduate composers over a period of at least eight consecutive years, always with the expectation that its internal relationships would spark the interest and enthusiasm of the cohort ... Nothing ...!

It was always 'just a little disappointing'. So ...

Over the past five years, this work has also been given to PG and PhD composers, but again ... Nothing ...!

It has been a pleasure to teach many talented composers over the past two decades, but no-one has ever really noticed the potential analytical and compositional value of this self-contained cycle, or even 'raised an eyebrow' for the fact that Dorian Mode is a perfect pitch palindrome and therefore unique within western tonality/modality. The internal relationships highlighted on this sheet offer unusual options for pitch modulation, which can present a sense of false modulation (pseudo modulation) within key or offer 'modal' alternatives to traditional functioning harmony when modulating across keys.

Dr Ian Percy

www.ianpercy.me.uk
contact@ianpercy.me.uk

¹ Sfumato: Technique used by Leonardo Da Vinci for softening the transition between colours: Imperceptible transitions between colours and tones ...

Modal Inversions

[Mirror Inversion]

Ian Percy

1. Major (Ionian mode) inverts to Phrygian mode (and vice-versa) with minor 6th/Major 3rd tonal transposition

Two musical staves are shown. The top staff is in treble clef and the bottom in bass clef. A bracket labeled "[pivot]" spans the first four notes of each staff. The first staff shows the C Major (Ionian) mode: C4, D4, E4, F4, G4, A4, B4, C5. The second staff shows the E Phrygian mode: E4, F4, G4, A4, B4, C5, D5, E5. Text boxes provide the following information:

- C Major (Ionian)** inverts to **C Phrygian (A \flat Maj)**. Rhythm: 2-2-1-2-2-2-1. Tonal centre is transposed up aug5th/min6th.
- E Phrygian (C Maj)** inverts to **E Major (Ionian)**. Rhythm: 1-2-2-2-1-2-2. Tonal centre is transposed up a Major 3rd.

2. Dorian mode inverts to itself (D Dorian - D Dorian)

Two musical staves are shown. The top staff is in treble clef and the bottom in bass clef. A bracket labeled "[pivot]" spans the first four notes of each staff. The first staff shows the D Dorian mode: D4, E4, F4, G4, A4, B4, C5, D5. The second staff shows the D Dorian mode: D4, E4, F4, G4, A4, B4, C5, D5. Text boxes provide the following information:

- D Dorian (C Maj)** inverts to **D Dorian (C Maj)**. Rhythm: 2-1-2-2-2-1-2.

3. Lydian mode inverts to Locrian mode (and vice-versa) with tritone tonal transposition

Two musical staves are shown. The top staff is in treble clef and the bottom in bass clef. A bracket labeled "[pivot]" spans the first four notes of each staff. The first staff shows the F Lydian mode: F4, G4, A4, B4, C5, D5, E5, F5. The second staff shows the B Locrian mode: B4, A4, G4, F4, E4, D4, C4, B3. Text boxes provide the following information:

- F Lydian (C Maj)** inverts to **F Locrian (G \flat Maj)**. Rhythm: 2-2-2-1-2-2-1. Tonal centre is transposed by a tritone.
- B Locrian (C Maj)** inverts to **B Lydian (F \sharp Maj)**. Rhythm: 1-2-2-1-2-2-2. Tonal centre is transposed by a tritone.

4. Mixolydian mode inverts to Aeolian mode [natural minor] (and vice-versa) with tone/flat 7th tonal transposition

Two musical staves are shown. The top staff is in treble clef and the bottom in bass clef. A bracket labeled "[pivot]" spans the first four notes of each staff. The first staff shows the G Mixolydian mode: G4, A4, B4, C5, D5, E5, F5, G5. The second staff shows the G Aeolian mode: G4, A4, B4, C5, D5, E5, F5, G5. Text boxes provide the following information:

- G Mixolydian (C Maj)** inverts to **G Aeolian (B \flat Maj)**. Rhythm: 2-2-1-2-2-1-2. Tonal centre is transposed up a flat 7th.
- A Aeolian (C Maj)** inverts to **A Mixolydian (D Maj)**. Rhythm: 2-1-2-2-1-2-2. Tonal centre is transposed up a tone.