

The All-Interval Twelve-Note Chords of Elliott Carter

Vertical and Linear Palindromes – Matryoshka Form

AITN Chords in Theory and Analysis

The following document contains a short definition, analysis and clarification of Elliott Carter's All-Interval Twelve-Note (AITN) Chords. This paper emerged from a period of contextual, analytical and practical research in planning and preparation for a large orchestral composition. This line of research has led the composer to studies into non-linear acoustics, chaotic pairs, fractals and musical pitch palindromes.¹

Pitch palindromes, and the potential for exploring palindromes within palindromes, further informs the composer's evolving concept of Matryoshka Form² and the theories of self-similar repetition and replication which emerged from recent consideration of organising musical pitch and sub-components of internal architecture and rhythm in relation to the study of fractals and chaos theory.

There are two types of AITN Chords: Symmetrically Inverted (SI AITN) and Parallel Inverted (PI AITN). Carter's AITN Chords are all self-contained pitch palindromes within palindromes.

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¹ A word or phrase, the letters (or components) of which, when taken in reverse order read the same.

² A design paradigm indicating the existence of object within similar object, originating from the Russian 'nested' dolls design. It is important to note that Matryoshka dolls are traditionally hand painted. They are not exact replications, but self-similar replications. Their subtle differences make each unique ...

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There are two types of AITN Chords: Parallel Inverted (PI AITN) and Symmetrically Inverted (SI AITN). The Symmetrically Inverted (SI) version was chosen as the primary resource for this preparatory analysis because it created a more symmetrical palindrome in score form (melodic and harmonic contours)³.

Carter uses four Hexachord types as the parent chords for his SI AITN:

1. Hexachord 6-1 (012345) <543210> (Carter 4): Chromatic Hexamirror/1st ord. All combinatorial (P6, Ib, RI5)
2. Hexachord 6-8 (023457) <343230> (Carter 5): 1st ord. All combinatorial (P6, Ib, RI5)
3. Hexachord 6-14 (013458) <323430> (Carter 3): Combinatorial P (6)
Hexachord 6-14b (034578) <323430> Combinatorial P (6) (6-14 is the prime form)
4. Hexachord 6-32 (024579) <143250> (Carter 6): Arezzo major Diatonic (2-2-1-2-2-3), major hexamirror, quartal hexamirror, 1st ord. All-combinatorial P (6), I (3), RI (9)

Note:

- i. Hexachord 6-1* (012345) is an all-combinatorial chromatic tritone. The total dissonance should be handled with care (second movement material).
- ii. Hexachord 6-14 (013458/034578) is first movement (and reprise) material.
- iii. Hexachord 6-32* (024579) has tonal/modal origins. This is in keeping with previous research into equidistant and consonant chromatic pitch organisation (third movement material).
- iv. The Complement and Inversion of Hexachords 6-1, 6-14 and 6-32 produces the same Hexachords: They are all palindromes (combinatorial).

All AITN Chords create pitch palindromes, but SI AITN Chords 1, 3, 58 and 60 are the only SI AITN to subsume the All-Triad Hexachord (ATH) in prime form:

³ Carter lists 88 but does not include inversions. Researchers have identified further alternates [Link Chords]

SI AITN 1: 27431 6 E985T 27431 6 E985T (6-14)
SI AITN 3: 27491 6 E 385T 27491 6 E385T (6-1)
SI AITN58: 21497 6 5 38ET 21497 6 538ET (6-14)
SI AITN60: 21437 6 5 98ET 21437 6 598ET (6-32)

Note:

- i. SI AITN 1 and 58 share the same parent Hexachord 6-14 (013458) and therefore share a palindromic relationship in their construction.
- ii. SI AITN 3 is conceived from the parent Hexachord 6-1 (equidistant total dissonance).
- iii. SI AITN 58 shares the same parent hexachord as SI AITN 1.
- iv. SI AITN 60 has the parent Hexachord 6-32* (024579). Both the hexachord and the SI AITN has modal/tonal foundations.

Brief Explanation of AITN Theory:

The lowest pitch of the AITN chord is always considered as 0 or Prime. One can also use AITN in retrograde inversion (not listed by Carter), which essentially flips the palindrome. The RI can also be used alongside its counterpart to essentially double its length (verticality). In SI AITN 1 (below), the 1st interval is 2 semi-tones; the 2nd interval is 7 semi-tones and the 3rd interval is 4. If we start with the pitch of C, then we have: C – D – A – C[#]

SI AITN 1: 274316E985T (6-14)	SI AITN 1 RI: T589E613472 (6-14)
SI AITN 3: 274916E385T (6-1)	SI AITN 3 RI: T583E619472 (6-1)
SI AITN58: 214976538ET (6-14)	SI AITN58 RI: TE835679412 (6-14)
SI AITN60: 214376598ET (6-32)	SI AITN60 RI: TE895673412 (6-32)

The AITN always pivots around the tritone interval (interval class 6 inverts to class 6)

SI AITN 1: 27431 6 E985T (6-14)	SI AITN 1 RI: T589E 6 13472 (6-14)
SI AITN 3: 27491 6 E385T (6-1)	SI AITN 3 RI: T583E 6 19472 (6-1)
SI AITN58: 21497 6 538ET (6-14)	SI AITN58 RI: TE835 6 79412 (6-14)
SI AITN60: 21437 6 598ET (6-32)	SI AITN60 RI: TE895 6 73412 (6-32)

SI AITN Chords 1, 3, 58 and 60 all contain the All-Triad Hexachord (ATH) 6-z17: 012478/014678 (twice) in prime form. The ATH then subsume the All-Interval Tetrachords (AIT) 4-z15: 0146/0256 and 4-z29: 0137/0467: Palindromic Matryoshka Form ...

SI AITN 1: 27431 6 E985T – 27431 6 E985T (6-14): Subsumes 6-Z17 twice

Literal Spelling: 029145 ET7386 = C – D – A – C# – E – F – B – A# – G – D# – G# – F#

Literal Spelling: 029145 ET7386 = C – D – A – C# – E – F – B – A# – G – D# – G# – F#

0	2	9	1	4	5	11	10	7	3	8	6
10	0	7	11	2	3	9	8	5	1	6	4
3	5	0	4	7	8	2	1	10	6	11	9
11	1	8	0	3	4	10	9	6	2	7	5
8	10	5	9	0	1	7	6	3	11	4	2
7	9	4	8	11	0	6	5	2	10	3	1
1	3	10	2	5	6	0	11	8	4	9	7
2	4	11	3	6	7	1	0	9	5	10	8
5	7	2	6	9	10	4	3	0	8	1	11
9	11	6	10	1	2	8	7	4	0	5	3
4	6	1	5	8	9	3	2	11	7	0	10
6	8	3	7	10	11	5	4	1	9	2	0

Note: SI AITN 1 and 58 share the same parent Hexachord 6-14 (013458).**SI AITN 3:** 27491 6 E385T/27491 6 E385T (6-1) Subsumes 6-Z17 twice

Literal Spelling: 0291TE 547386 = C – D – A – C# – A# – B – F – E – G – D# – G# – F#

Literal Spelling: 0291TE 547386 = C – D – A – C# – A# – B – F – E – G – D# – G# – F#

0	2	9	1	10	11	5	4	7	3	8	6
10	0	7	11	8	9	3	2	5	1	6	4
3	5	0	4	1	2	8	7	10	6	11	9
11	1	8	0	9	10	4	3	6	2	7	5
2	4	11	3	0	1	7	6	9	5	10	8
1	3	10	2	11	0	6	5	8	4	9	7
7	9	4	8	5	6	0	11	2	10	3	1
8	10	5	9	6	7	1	0	3	11	4	2
5	7	2	6	3	4	10	9	0	8	1	11
9	11	6	10	7	8	2	1	4	0	5	3
4	6	1	5	2	3	9	8	11	7	0	10
6	8	3	7	4	5	11	10	1	9	2	0

Note: The parent hexachord for SI AITN 3 (6-1) is a chromatic tritone, so one can presume this will dissonant and chromatic material.

SI AITN58: 21497 6 538ET – 21497 6 538ET (6-14) Subsumes 6-Z17 twice

Literal Spelling: 02374E 5T1986 = C – D – D# – G – E – B – F – B^b – D^b – A – G# – F#

Literal Spelling: 02374E 5T1986 = C – D – D# – G – E – B – F – B^b – D^b – A – G# – F#

0	2	3	7	4	11	5	10	1	9	8	6
10	0	1	5	2	9	3	8	11	7	6	4
9	11	0	4	1	8	2	7	10	6	5	3
5	7	8	0	9	4	10	3	6	2	1	11
8	10	11	3	0	7	1	6	9	5	4	2
1	3	4	8	5	0	6	11	2	10	9	7
7	9	10	2	11	6	0	5	8	4	3	1
2	4	5	9	6	1	7	0	3	11	10	8
11	1	2	6	3	10	4	9	0	8	7	5
3	5	6	10	7	2	8	1	4	0	11	9
4	6	7	11	8	3	9	2	5	1	0	10
6	8	9	1	10	5	11	4	7	3	2	0

Note: SI AITN 1 and 58 share the same parent Hexachord 6-14 (013458).

SI AITN60: 21437 6 598ET – 21437 6 598ET (6-32) Subsumes 012478 twice

Literal Spelling: 0237T5 E41986 = C – D – E^b – G – B^b – F – B – E – C# – A – G# – F#

Literal Spelling: 0237T5 E41986 = C – D – E^b – G – B^b – F – B – E – C# – A – G# – F#

0	2	3	7	10	5	11	4	1	9	8	6
10	0	1	5	8	3	9	2	11	7	6	4
9	11	0	4	7	2	8	1	10	6	5	3
5	7	8	0	3	10	4	9	6	2	1	11
2	4	5	9	0	7	1	6	3	11	10	8
7	9	10	2	5	0	6	11	8	4	3	1
1	3	4	8	11	6	0	5	2	10	9	7
8	10	11	3	6	1	7	0	9	5	4	2
11	1	2	6	9	4	10	3	0	8	7	5
3	5	6	10	1	8	2	7	4	0	11	9
4	6	7	11	2	9	3	8	5	1	0	10
6	8	9	1	4	11	5	10	7	3	2	0

Note: The parent hexachord for SI AITN 60: Hexachord 6-32 (024579) has modal/tonal origins and is also closely related to 5-35 (Major Pentatonic) and 7-35 (Modal/Tonal system). 7-35 subsumes and is complemented by 5-35.

List of Pitch-class Sets

SI AITN Chord 1

Literal Spelling: C – D – A – C# – E – F – B – A# – G – D# – G# – F# – C
 27431 6 E985T (6-14)

SI AITN 1 – Trichords:

C	D	A	025	3-7	<011010>	Incomplete minor seventh Chord (035)
D	A	C#	015	3-4	<100110>	Incomplete Major Seventh Chord (045)
A	C#	E	037	3-11	<001110>	Major/Minor Chord (047)
C#	E	F	014	3-3	<101100>	Major-minor Trichord 1 (034)
E	F	B	016	3-5	<100011>	Rite Chord/Tritone Fourth (056)
F	B	A#	016	3-5	<100011>	Rite Chord/Tritone Fourth (056)
B	A#	G	014	3-3	<101100>	Major-minor Trichord 1 (034)
A#	G	D#	037	3-11	<001110>	Major/Minor Chord (047)
G	D#	G#	015	3-4	<100110>	Incomplete Major Seventh Chord (045)
D#	G#	F#	025	3-7	<011010>	Incomplete minor seventh Chord (035)
G#	F#	C	026	3-8	<010101>	Incomplete Dominant Seventh/Italian Sixth (046)
F#	C	D	026	3-8	<010101>	Incomplete Dominant Seventh/Italian Sixth (046)
C	D	A	025	3-7	<011010>	Incomplete minor seventh Chord (035)

Note: 3-12* (048) is not subsumed in prime form within any of the SI AITN chords.

SI AITN 1 – Tetrachords:

C	D	A	C#	0125	4-4	<211110>	Minor Third Tetracluster 2 (0345)
D	A	C#	E	0237	4-14< ⁴	<111120>	Major-second Minor Tetrachord (0457)
A	C#	E	F	0148	4-19	<101310>	Minor-augmented Tetrachord (0348)
C#	E	F	B	0146	4-z15	<111111>	All-Interval Tetrachord AIT 1 (0256)
E	F	B	A#	0167	4-9*[6]	<200022>	Double Tritone – Mode IV Complement
F	B	A#	G	0146	4-z15	<111111>	All-Interval Tetrachord AIT 1 (0256)
B	A#	G	D#	0148	4-19	<101310>	Minor-augmented Tetrachord (0348)
A#	G	D#	G#	0237	4-14<	<111120>	Major-second Minor Tetrachord (0457)
G	D#	G#	F#	0125	4-4	<211110>	Minor Third Tetracluster 2 (0345)
D#	G#	F#	C	0258	4-27	<012111>	Half-diminished Seventh Chord (0368)
G#	F#	C	D	0268	4-25*[6]	<020202>	French Sixth – Mode VI Complement
F#	C	D	A	0258	4-27	<012111>	Half-diminished Seventh Chord (0368)
C	D	A	C#	0125	4-4	<211110>	Minor Third Tetracluster 2 (0345)

Note: 4-28* (0369) is not subsumed in prime form within any of the SI AITN Chords.

⁴ < Indicates set has a complement with the same name ending.

SI AITN 1 – Pentachords:

C	D	A	C#	E	02347	5-11	<222220>	Centre-cluster Pentachord 1 03457
D	A	C#	E	F	01348	5-z17*	<212320>	Minor-Major Ninth Chord
A	C#	E	F	B	01468	5-30	<121321>	Enigmatic Pentachord 1 (02478)
C#	E	F	B	A#	01367	5-19	<212122>	Javanese Pentachord (01467)
E	F	B	A#	G	01367	5-19	<212122>	Javanese Pentachord (01467)
F	B	A#	G	D#	01468	5-30	<121321>	Enigmatic Pentachord 1 (02478)
B	A#	G	D#	G#	01348	5-z17*	<212320>	Minor-Major Ninth (Farben) Chord
A#	G	D#	G#	F#	02347	5-11	<222220>	Centre-cluster Pentachord 1 03457
G	D#	G#	F#	C	01258	5-z38	<212221>	Diminished Pentacluster 1 (03678)
D#	G#	F#	C	D	02368	5-28<	<122212>	Augmented 6 th Pentachord1 02568
G#	F#	C	D	A	02368	5-28<	<122212>	Augmented 6 th Pentachord1 02568
F#	C	D	A	C#	01258	5-z38	<212221>	Diminished Pentacluster 1 (03678)
C	D	A	C#	E	02347	5-11	<222220>	Centre-cluster Pentachord 1 03457

Note: 5-35* (02479) is not subsumed in prime form within any of the SI AITN Chords.

SI AITN 1 – Hexachords:

C	D	A	C#	E	F	013458	6-14	<323430>	Combinatorial (034578)
D	A	C#	E	F	B	013468	6-z24	<233331>	B: 024578 Melodic minor
A	C#	E	F	B	A#	012478	6-z17	<322332>	All-Triad Hexachord 014678
C#	E	F	B	A#	G	013679	6-30	<224223>	Minor-bitonal comb. 023689
E	F	B	A#	G	D#	012478	6-z17	<322332>	All-Triad Hexachord 014678
F	B	A#	G	D#	G#	013468	6-z24	<233331>	B: 024578 Melodic minor
B	A#	G	D#	G#	F#	013458	6-14	<323430>	Combinatorial (034578)
A#	G	D#	G#	F#	C	012469	6-z46	<233331>	6-z46B: 024569
G	D#	G#	F#	C	D	012568	6-z43	<322332>	6-z43B: 023678
D#	G#	F#	C	D	A	013679	6-30	<224223>	Minor-bitonal comb. 023689
G#	F#	C	D	A	C#	012568	6-z43	<322332>	6-z43B: 023678
F#	C	D	A	C#	E	012469	6-z46	<233331>	6-z46B: 024569
C	D	A	C#	E	F	013458	6-14	<323430>	Combinatorial (034578)

Note: 6-7* (012678) and 6-35* (02468T) are not subsumed in prime form within any of the SI AITN Chords.

SI AITN 1 – Heptachords:

C	D	A	C [#]	E	F	B	0134568	7-11	<444441>	7-11B: 0234578
D	A	C [#]	E	F	B	A [#]	0124578	7-z38	<434442>	7-z38B: 0134678
A	C [#]	E	F	B	A [#]	G	0135679	7-28<	<344433>	7-28B: 0234689
C [#]	E	F	B	A [#]	G	D [#]	0135679	7-28<	<344433>	7-28B: 0234689
E	F	B	A [#]	G	D [#]	G [#]	0124578	7-z38	<434442>	7-z38B: 0134678
F	B	A [#]	G	D [#]	G [#]	F [#]	0134568	7-11	<444441>	7-11B: 0234578
B	A [#]	G	D [#]	G [#]	F [#]	C	0124569	7-z17	<434541>	
A [#]	G	D [#]	G [#]	F [#]	C	D	0124689 0135789	7-30	<343542>	Neapolitan-Minor (1222131)
G	D [#]	G [#]	F [#]	C	D	A	0123679	7-19	<434343>	7-19B: 0123689
D [#]	G [#]	F [#]	C	D	A	C [#]	0123679	7-19	<434343>	7-19B: 0123689
G [#]	F [#]	C	D	A	C [#]	E	0124689 0135789	7-30	<343542>	Neapolitan-Minor (1222131)
F [#]	C	D	A	C [#]	E	F	0124569	7-z17	<434541>	
C	D	A	C [#]	E	F	B	0134568	7-11	<444441>	7-11B: 0234578

Note: 7-35* (013568T) is not subsumed in prime form within any of the SI AITN Chords.

SI AITN 1 – Octachords:

C	D	A	C [#]	E	F	B	A [#]	01234578	8-4	<655552>	8-4B 01345678
D	A	C [#]	E	F	B	A [#]	G	0124578T	8-27	<456553>	8-27B 0124679T
A	C [#]	E	F	B	A [#]	G	D [#]	0124678T	8-25*	<464644>	Messiaen VI
C [#]	E	F	B	A [#]	G	D [#]	G [#]	0124578T	8-27	<456553>	8-27B 0124679T
E	F	B	A [#]	G	D [#]	G [#]	F [#]	01234578	8-4	<655552>	8-4B 01345678
F	B	A [#]	G	D [#]	G [#]	F [#]	C	01245679	8-14<	<555562>	8-14B 02345789
B	A [#]	G	D [#]	G [#]	F [#]	C	D	01245689	8-19	<545752>	8-19B 01345789
A [#]	G	D [#]	G [#]	F [#]	C	D	A	01234689	8-z15	<555553>	Complement: AIT
G	D [#]	G [#]	F [#]	C	D	A	C [#]	01236789	8-9	<644464>	Messiaen IV
D [#]	G [#]	F [#]	C	D	A	C [#]	E	01234689	8-z15	<555553>	8-z15B 01356789
G [#]	F [#]	C	D	A	C [#]	E	F	01245689	8-19	<545752>	8-19B 01345789
F [#]	C	D	A	C [#]	E	F	B	01245679	8-14<	<555562>	8-14B 02345789
C	D	A	C [#]	E	F	B	A [#]	01234578	8-4	<655552>	8-4B 01345678

Note: 8-28* (0134679T) is not subsumed within any of the SI AITN Chords.

SI AITN 1 – Nonachords:

C	D	A	C [#]	E	F	B	A [#]	G	01234578T	9-7	<677673>	01234579T
D	A	C [#]	E	F	B	A [#]	G	D [#]	01234678T	9-8	<676764>	01234689T
A	C [#]	E	F	B	A [#]	G	D [#]	G [#]	01234678T	9-8	<676764>	01234689T
C [#]	E	F	B	A [#]	G	D [#]	G [#]	F [#]	01234578T	9-7	<677673>	01234579T
E	F	B	A [#]	G	D [#]	G [#]	F [#]	C	012345789	9-4	<766773>	012456789
F	B	A [#]	G	D [#]	G [#]	F [#]	C	D	01235679T	9-11	<667773>	01235689T
B	A [#]	G	D [#]	G [#]	F [#]	C	D	A	012345689	9-3	<767763>	013456789
A [#]	G	D [#]	G [#]	F [#]	C	D	A	C [#]	012346789	9-5	<766674>	012356789
G	D [#]	G [#]	F [#]	C	D	A	C [#]	E	012346789	9-5	<766674>	012356789
D [#]	G [#]	F [#]	C	D	A	C [#]	E	F	012345689	9-3	<767763>	013456789
G [#]	F [#]	C	D	A	C [#]	E	F	B	01235679T	9-11	<667773>	01235689T
F [#]	C	D	A	C [#]	E	F	B	A [#]	012345789	9-4	<766773>	012456789
C	D	A	C [#]	E	F	B	A [#]	G	01234578T	9-7	<677673>	01234579T

Note: 9-12* (01245689T) is not subsumed within any of the SI AITN Chords. *

SI AITN 1 – Decachords:

C	D	A	C [#]	E	F	B	A [#]	G	D [#]	012345678T	10-2*	<898884>
D	A	C [#]	E	F	B	A [#]	G	D [#]	G [#]	012346789T	10-6*	<888885>
A	C [#]	E	F	B	A [#]	G	D [#]	G [#]	F [#]	012345678T	10-2*	<898884>
C [#]	E	F	B	A [#]	G	D [#]	G [#]	F [#]	C	012345789T	10-5*	<888894>
E	F	B	A [#]	G	D [#]	G [#]	F [#]	C	D	012345689T	10-4*	<888984>
F	B	A [#]	G	D [#]	G [#]	F [#]	C	D	A	012345679T	10-3*	<889884>
B	A [#]	G	D [#]	G [#]	F [#]	C	D	A	C [#]	0123456789	10-1*	<988884>
A [#]	G	D [#]	G [#]	F [#]	C	D	A	C [#]	E	012346789T	10-6*	<888885>
G	D [#]	G [#]	F [#]	C	D	A	C [#]	E	F	0123456789	10-1*	<988884>
D [#]	G [#]	F [#]	C	D	A	C [#]	E	F	B	012345679T	10-3*	<889884>
G [#]	F [#]	C	D	A	C [#]	E	F	B	A [#]	012345689T	10-4*	<888984>
F [#]	C	D	A	C [#]	E	F	B	A [#]	G	012345789T	10-5*	<888894>
C	D	A	C [#]	E	F	B	A [#]	G	D [#]	012345678T	10-2*	<898884>

List of Pitch-class Sets

SI AITN Chord 3

Literal Spelling: C – D – A – C# – A# – B – F – E – G – D# – G# – F# – C
 27491 6 E385T (6-1)

SI AITN 3 – Trichords:

C	D	A	025	3-7	<011010>	Incomplete minor seventh Chord (035)
D	A	C#	015	3-4	<100110>	Incomplete Major Seventh Chord (045)
A	C#	A#	014	3-3	<101100>	Major-minor Trichord 1 (034)
C#	A#	B	013	3-2	<111000>	Phrygian Trichord (023)
A#	B	F	016	3-5	<100011>	Rite Chord/Tritone Fourth (056)
B	F	E	016	3-5	<100011>	Rite Chord/Tritone Fourth (056)
F	E	G	013	3-2	<111000>	Phrygian Trichord (023)
E	G	D#	016	3-5	<100011>	Rite Chord/Tritone Fourth (056)
G	D#	G#	015	3-4	<100110>	Incomplete Major Seventh Chord (045)
D#	G#	F#	025	3-7	<011010>	Incomplete minor seventh Chord (035)
G#	F#	C	026	3-8	<010101>	Incomplete Dominant Seventh/Italian Sixth (046)
F#	C	D	026	3-8	<010101>	Incomplete Dominant Seventh/Italian Sixth (046)
C	D	A	025	3-7	<011010>	Incomplete minor seventh Chord (035)

SI AITN 3 – Tetrachords:

C	D	A	C#	0125	4-4	<211110>	Minor Third Tetracluster 2 (0345)
D	A	C#	A#	0145	4-7	<201210>	Complement: 8-7
A	C#	A#	B	0124	4-2	<221100>	Complement: 8-2
C#	A#	B	F	0137	4-z29	<111111>	All-Interval Tetrachord (AIT) 3 (0467)
A#	B	F	E	0167	4-9*[6]	<200022>	Double Tritone – Mode IV Complement
B	F	E	G	0137	4-z29	<111111>	All-Interval Tetrachord (AIT) 3 (0467)
F	E	G	D#	0124	4-2	<221100>	Complement: 8-2
E	G	D#	G#	0145	4-7	<201210>	Complement: 8-7
G	D#	G#	F#	0125	4-4	<211110>	Minor Third Tetracluster 2 (0345)
D#	G#	F#	C	0258	4-27	<012111>	Half-diminished Seventh Chord (0368)
G#	F#	C	D	0268	4-25*[6]	<020202>	French Sixth – Mode VI Complement
F#	C	D	A	0258	4-27	<012111>	Half-diminished Seventh Chord (0368)
C	D	A	C#	0125	4-4	<211110>	Minor Third Tetracluster 2 (0345)

SI AITN 3 – Pentachords:

C	D	A	C#	A#	01245	5-3	<322210>	Complement: 7-3
D	A	C#	A#	B	01245	5-3	<322210>	Complement: 7-3
A	C#	A#	B	F	01248	5-13	<221311>	Augmented Pentacluster 1 02348
C#	A#	B	F	E	01367	5-19	<212122>	Javanese Pentachord (01467)
A#	B	F	E	G	01367	5-19	<212122>	Javanese Pentachord (01467)
B	F	E	G	D#	01248	5-13	<221311>	Augmented Pentacluster 1 02348
F	E	G	D#	G#	01245	5-3	<322210>	Complement: 7-3
E	G	D#	G#	F#	01245	5-3	<322210>	Complement: 7-3
G	D#	G#	F#	C	01258	5-z38	<212221>	Diminished Pentacluster 1 (03678)
D#	G#	F#	C	D	02368	5-28<	<122212>	Augmented 6 th Pentachord1 02568
G#	F#	C	D	A	02368	5-28<	<122212>	Augmented 6 th Pentachord1 02568
F#	C	D	A	C#	01258	5-z38	<212221>	Diminished Pentacluster 1 (03678)
C	D	A	C#	A#	01245	5-3	<322210>	Complement: 7-3

SI AITN 3 – Hexachords:

C	D	A	C#	A#	B	012345	6-1	<543210>	Chromatic Hexamirror
D	A	C#	A#	B	F	012458	6-15	<323421>	Complement: 4-15
A	C#	A#	B	F	E	012478	6-z17	<322332>	All-Triad Hexachord 014678
C#	A#	B	F	E	G	013679	6-30	<224223>	Minor-bitonal comb. 023689
A#	B	F	E	G	D#	012478	6-z17	<322332>	All-Triad Hexachord 014678
B	F	E	G	D#	G#	012458	6-15	<323421>	Complement: 4-15
F	E	G	D#	G#	F#	012345	6-1	<543210>	Chromatic Hexamirror
E	G	D#	G#	F#	C	012458	6-15	<323421>	Complement: 4-15
G	D#	G#	F#	C	D	012568	6-z43	<322332>	6-z43B: 023678
D#	G#	F#	C	D	A	013679	6-30	<224223>	Minor-bitonal comb. 023689
G#	F#	C	D	A	C#	012568	6-z43	<322332>	6-z43B: 023678
F#	C	D	A	C#	A#	012458	6-15	<323421>	Complement: 4-15
C	D	A	C#	A#	B	012345	6-1	<543210>	Chromatic Hexamirror

SI AITN 3 – Heptachords:

C	D	A	C [#]	A [#]	B	F	0123458	7-3	<544431>	Complement: 5-3
D	A	C [#]	A [#]	B	F	E	0124578	7-z38	<434442>	7-z38B: 0134678
A	C [#]	A [#]	B	F	E	G	0135679	7-28<	<344433>	7-28B: 0234689
C [#]	A [#]	B	F	E	G	D [#]	0135679	7-28<	<344433>	7-28B: 0234689
A [#]	B	F	E	G	D [#]	G [#]	0124578	7-z38	<434442>	7-z38B: 0134678
B	F	E	G	D [#]	G [#]	F [#]	0123458	7-3	<544431>	Complement: 5-3
F	E	G	D [#]	G [#]	F [#]	C	0123458	7-3	<544431>	Complement: 5-3
E	G	D [#]	G [#]	F [#]	C	D	0124568	7-13	<443532>	7-13B: 0234678
G	D [#]	G [#]	F [#]	C	D	A	0123679	7-19	<434343>	7-19B: 0123689
D [#]	G [#]	F [#]	C	D	A	C [#]	0123679	7-19	<434343>	7-19B: 0123689
G [#]	F [#]	C	D	A	C [#]	A [#]	0124568	7-13	<443532>	7-13B: 0234678
F [#]	C	D	A	C [#]	A [#]	B	0123468	7-9	<45342>	Complement: 5-9
C	D	A	C [#]	A [#]	B	F	0123458	7-3	<544431>	Complement: 5-3

SI AITN 3 – Octachords:

C	D	A	C [#]	A [#]	B	F	E	01234578	8-4	<655552>	8-4B 01345678
D	A	C [#]	A [#]	B	F	E	G	0124578T	8-27	<456553>	8-27B 0124679T
A	C [#]	A [#]	B	F	E	G	D [#]	0124678T	8-25*	<464644>	Messiaen VI
C [#]	A [#]	B	F	E	G	D [#]	G [#]	0124578T	8-27	<456553>	8-27B 0124679T
A [#]	B	F	E	G	D [#]	G [#]	F [#]	01234578	8-4	<655552>	8-4B 01345678
B	F	E	G	D [#]	G [#]	F [#]	C	01234589	8-7	<645652>	Complement: 4-7
F	E	G	D [#]	G [#]	F [#]	C	D	01234568	8-2	<665542>	Complement: 4-2
E	G	D [#]	G [#]	F [#]	C	D	A	01235679	8-z29	<555553>	Complement: AIT
G	D [#]	G [#]	F [#]	C	D	A	C [#]	01236789	8-9	<644464>	Messiaen IV
D [#]	G [#]	F [#]	C	D	A	C [#]	A [#]	01235679	8-z29	<555553>	Complement: AIT
G [#]	F [#]	C	D	A	C [#]	A [#]	B	01234568	8-2	<665542>	Complement: 4-2
F [#]	C	D	A	C [#]	A [#]	B	F	01234589	8-7	<645652>	Complement: 4-7
C	D	A	C [#]	A [#]	B	F	E	01234578	8-4	<655552>	8-4B 01345678

SI AITN 3 – Nonachords:

C	D	A	C#	A#	B	F	E	G	01234578T	9-7	<677673>	01234579T
D	A	C#	A#	B	F	E	G	D#	01234678T	9-8	<676764>	01234689T
A	C#	A#	B	F	E	G	D#	G#	01234678T	9-8	<676764>	01234689T
C#	A#	B	F	E	G	D#	G#	F#	01234578T	9-7	<677673>	01234579T
A#	B	F	E	G	D#	G#	F#	C	012345789	9-4	<766773>	012456789
B	F	E	G	D#	G#	F#	C	D	012345689	9-3	<767763>	013456789
F	E	G	D#	G#	F#	C	D	A	012345679	9-2	<777663>	023456789
E	G	D#	G#	F#	C	D	A	C#	012346789	9-5	<766674>	012356789
G	D#	G#	F#	C	D	A	C#	A#	012346789	9-5	<766674>	012356789
D#	G#	F#	C	D	A	C#	A#	B	012345679	9-2	<777663>	023456789
G#	F#	C	D	A	C#	A#	B	F	012345689	9-3	<767763>	013456789
F#	C	D	A	C#	A#	B	F	E	012345789	9-4	<766773>	012456789
C	D	A	C#	A#	B	F	E	G	01234578T	9-7	<677673>	01234579T

SI AITN 3 – Decachords:

C	D	A	C#	A#	B	F	E	G	D#	012345678T	10-2*	<898884>
D	A	C#	A#	B	F	E	G	D#	G#	012346789T	10-6*	<888885>
A	C#	A#	B	F	E	G	D#	G#	F#	012345678T	10-2*	<898884>
C#	A#	B	F	E	G	D#	G#	F#	C	012345789T	10-5*	<888894>
A#	B	F	E	G	D#	G#	F#	C	D	012345689T	10-4*	<888984>
B	F	E	G	D#	G#	F#	C	D	A	012345679T	10-3*	<889884>
F	E	G	D#	G#	F#	C	D	A	C#	0123456789	10-1*	<988884>
E	G	D#	G#	F#	C	D	A	C#	A#	012346789T	10-6*	<888885>
G	D#	G#	F#	C	D	A	C#	A#	B	0123456789	10-1*	<988884>
D#	G#	F#	C	D	A	C#	A#	B	F	012345679T	10-3*	<889884>
G#	F#	C	D	A	C#	A#	B	F	E	012345689T	10-4*	<888984>
F#	C	D	A	C#	A#	B	F	E	G	012345789T	10-5*	<888894>
C	D	A	C#	A#	B	F	E	G	D#	012345678T	10-2*	<898884>

List of Pitch-class Sets
SI AITN Chord 58

Literal Spelling: C – D – D[#] – G – E – B – F – B^b – D^b – A – G[#] – F[#] – C
 21497 6 538ET (6-14)

SI AITN 58 – Trichords:

C	D	D [#]	013	3-2	<111000>	Phrygian Trichord (023)
D	D [#]	G	015	3-4	<100110>	Incomplete Major Seventh Chord (045)
D [#]	G	E	014	3-3	<101100>	Major-minor Trichord 1 (034)
G	E	B	037	3-11	<001110>	Major/Minor Chord (047)
E	B	F	016	3-5	<100011>	Rite Chord/Tritone Fourth (056)
B	F	B ^b	016	3-5	<100011>	Rite Chord/Tritone Fourth (056)
F	B ^b	D ^b	037	3-11	<001110>	Major/Minor Chord (047)
B ^b	D ^b	A	014	3-3	<101100>	Major-minor Trichord 1 (034)
D ^b	A	G [#]	015	3-4	<100110>	Incomplete Major Seventh Chord (045)
A	G [#]	F [#]	013	3-2	<111000>	Phrygian Trichord (023)
G [#]	F [#]	C	026	3-8	<010101>	Incomplete Dominant Seventh/Italian Sixth (046)
F [#]	C	D	026	3-8	<010101>	Incomplete Dominant Seventh/Italian Sixth (046)
C	D	D [#]	013	3-2	<111000>	Phrygian Trichord (023)

SI AITN 58 – Tetrachords:

C	D	D [#]	G	0237	4-14<	<111120>	Major-second Minor Tetrachord (0457)
D	D [#]	G	E	0125	4-4	<211110>	Minor Third Tetracluster 2 (0345)
D [#]	G	E	B	0148	4-19	<101310>	Minor-augmented Tetrachord (0348)
G	E	B	F	0137	4-z29	<111111>	All-Interval Tetrachord (AIT) 3 (0467)
E	B	F	B ^b	0167	4-9*[6]	<200022>	Double Tritone – Mode IV Complement
B	F	B ^b	D ^b	0137	4-z29	<111111>	All-Interval Tetrachord (AIT) 3 (0467)
F	B ^b	D ^b	A	0148	4-19	<101310>	Minor-augmented Tetrachord (0348)
B ^b	D ^b	A	G [#]	0125	4-4	<211110>	Minor Third Tetracluster 2 (0345)
D ^b	A	G [#]	F [#]	0237	4-14<	<111120>	Major-second Minor Tetrachord (0457)
A	G [#]	F [#]	C	0236	4-12<	<112101>	Harmonic-minor Tetrachord (0346)
G [#]	F [#]	C	D	0268	4-25*[6]	<020202>	French Sixth – Mode VI Complement
F [#]	C	D	D [#]	0236	4-12<	<112101>	Harmonic-minor Tetrachord (0346)
C	D	D [#]	G	0237	4-14<	<111120>	Major-second Minor Tetrachord (0457)

SI AITN 58 – Pentachords:

C	D	D [#]	G	E	02347	5-11	<222220>	Centre-cluster Pentachord1 03457
D	D [#]	G	E	B	03458	5-z37	<212320>	Centre-cluster Pentamirror
D [#]	G	E	B	F	01248	5-13	<221311>	Augmented Pentacluster 1 02348
G	E	B	F	B ^b	01367	5-19	<212122>	Javanese Pentachord (01467)
E	B	F	B ^b	D ^b	01367	5-19	<212122>	Javanese Pentachord (01467)
B	F	B ^b	D ^b	A	01248	5-13	<221311>	Augmented Pentacluster 1 02348
F	B ^b	D ^b	A	G [#]	03458	5-z37	<212320>	Centre-cluster Pentamirror
B ^b	D ^b	A	G [#]	F [#]	02347	5-11	<222220>	Centre-cluster Pentachord1 03457
D ^b	A	G [#]	F [#]	C	01457	5-z18	<212221>	Gypsy Pentachord 1 (02367)
A	G [#]	F [#]	C	D	02368	5-28<	<122212>	Augmented 6 th Pentachord1 02568
G [#]	F [#]	C	D	D [#]	02368	5-28<	<122212>	Augmented 6 th Pentachord1 02568
F [#]	C	D	D [#]	G	01457	5-z18	<212221>	Gypsy Pentachord 1 (02367)
C	D	D [#]	G	E	02347	5-11	<222220>	Centre-cluster Pentachord 1 03457

SI AITN 58 – Hexachords:

C	D	D [#]	G	E	B	013458	6-14	<323430>	Combinatorial (034578)
D	D [#]	G	E	B	F	023458	6-z39	<333321>	6-z39B: 034568
D [#]	G	E	B	F	B ^b	012478	6-z17	<322332>	All-Triad Hexachord 014678
G	E	B	F	B ^b	D ^b	013679	6-30 [6]	<224223>	Minor-bitonal comb. 023689
E	B	F	B ^b	D ^b	A	012478	6-z17	<322332>	All-Triad Hexachord 014678
B	F	B ^b	D ^b	A	G [#]	023458	6-z39	<333321>	6-z39B: 034568
F	B ^b	D ^b	A	G [#]	F [#]	013458	6-14	<323430>	Combinatorial (034578)
B ^b	D ^b	A	G [#]	F [#]	C	013457	6-z10	<333321>	6-z10B: 023467
D ^b	A	G [#]	F [#]	C	D	012568	6-z43	<322332>	6-z43B: 023678
A	G [#]	F [#]	C	D	D [#]	013679	6-30	<224223>	Minor-bitonal comb. 023689
G [#]	F [#]	C	D	D [#]	G	012568	6-z43	<322332>	6-z43B: 023678
F [#]	C	D	D [#]	G	E	013457	6-z10	<333321>	6-z10B: 023467
C	D	D [#]	G	E	B	013458	6-14	<323430>	Combinatorial (034578)

SI AITN 58 – Heptachords:

C	D	D [#]	G	E	B	F	0134568	7-11	<444441>	7-11B: 0234578
D	D [#]	G	E	B	F	B ^b	0234589	7-z18	<434442>	B: 0123589/0146789
D [#]	G	E	B	F	B ^b	D ^b	0135679	7-28<	<344433>	7-28B: 0234689
G	E	B	F	B ^b	D ^b	A	0135679	7-28<	<344433>	7-28B: 0234689
E	B	F	B ^b	D ^b	A	G [#]	0234589	7-z18	<434442>	B: 0123589/0146789
B	F	B ^b	D ^b	A	G [#]	F [#]	0134568	7-11	<444441>	7-11B: 0234578
F	B ^b	D ^b	A	G [#]	F [#]	C	0134578	7-z37*	<434541>	
B ^b	D ^b	A	G [#]	F [#]	C	D	0124568	7-13	<443532>	7-13B: 0234678
D ^b	A	G [#]	F [#]	C	D	D [#]	0123679	7-19	<434343>	7-19B: 0123689
A	G [#]	F [#]	C	D	D [#]	G	0123679	7-19	<434343>	7-19B: 0123689
G [#]	F [#]	C	D	D [#]	G	E	0124568	7-13	<443532>	7-13B: 0234678
F [#]	C	D	D [#]	G	E	B	0134578	7-z37*	<434541>	
C	D	D [#]	G	E	B	F	0134568	7-11	<444441>	7-11B: 0234578

SI AITN 58 – Octachords:

C	D	D [#]	G	E	B	F	B ^b	01245679	8-14<	<555562>	8-14B: 02345789
D	D [#]	G	E	B	F	B ^b	D ^b	01345679	8-12<	<556543>	8-12B: 02345689
D [#]	G	E	B	F	B ^b	D ^b	A	0124678T	8-25*	<464644>	Mode VI
G	E	B	F	B ^b	D ^b	A	G [#]	01345679	8-12<	<556543>	8-12B: 02345689
E	B	F	B ^b	D ^b	A	G [#]	F [#]	01245679	8-14<	<555562>	8-14B: 02345789
B	F	B ^b	D ^b	A	G [#]	F [#]	C	01234578	8-4	<655552>	8-4B: 01345678
F	B ^b	D ^b	A	G [#]	F [#]	C	D	01245689	8-19	<545752>	8-19B: 01345789
B ^b	D ^b	A	G [#]	F [#]	C	D	D [#]	01235679	8-z29	<555553>	8-z29B 02346789
D ^b	A	G [#]	F [#]	C	D	D [#]	G	01236789	8-9	<644464>	Mode IV
A	G [#]	F [#]	C	D	D [#]	G	E	01235679	8-z29	<555553>	Complement: AIT
G [#]	F [#]	C	D	D [#]	G	E	B	01245689	8-19	<545752>	8-19B: 01345789
F [#]	C	D	D [#]	G	E	B	F	01234578	8-4	<655552>	8-4B: 01345678
C	D	D [#]	G	E	B	F	B ^b	01245679	8-14<	<555562>	8-14B: 02345789

SI AITN 58 – Nonachords:

C	D	D [#]	G	E	B	F	B ^b	D ^b	A	012345679	9-2	<777663>	B: 023456789
D	D [#]	G	E	B	F	B ^b	D ^b	A	01234678T	9-8	<676764>	B 01234689T	
D [#]	G	E	B	F	B ^b	D ^b	A	G [#]	01234678T	9-8	<676764>	B 01234689T	
G	E	B	F	B ^b	D ^b	A	G [#]	F [#]	012345679	9-2	<777663>	B: 023456789	
E	B	F	B ^b	D ^b	A	G [#]	F [#]	C	012345789	9-4	<766773>	B: 012456789	
B	F	B ^b	D ^b	A	G [#]	F [#]	C	D	012345689	9-3	<767763>	B: 013456789	
F	B ^b	D ^b	A	G [#]	F [#]	C	D	D [#]	01235679T	9-11	<667773>	B 01235689T	
B ^b	D ^b	A	G [#]	F [#]	C	D	D [#]	G	012346789	9-5	<766674>	B: 012356789	
D ^b	A	G [#]	F [#]	C	D	D [#]	G	E	012346789	9-5	<766674>	B: 012356789	
A	G [#]	F [#]	C	D	D [#]	G	E	B	01235679T	9-11	<667773>	B 01235689T	
G [#]	F [#]	C	D	D [#]	G	E	B	F	012345689	9-3	<767763>	B: 013456789	
F [#]	C	D	D [#]	G	E	B	F	B ^b	012345789	9-4	<766773>	B: 012456789	
C	D	D [#]	G	E	B	F	B ^b	D ^b	012345679	9-2	<777663>	B: 023456789	

SI AITN 58 – Decachords:

C	D	D [#]	G	E	B	F	B ^b	D ^b	A	012345678T	10-2*	<898884>
D	D [#]	G	E	B	F	B ^b	D ^b	A	G [#]	012346789T	10-6*	<888885>
D [#]	G	E	B	F	B ^b	D ^b	A	G [#]	F [#]	012345678T	10-2*	<898884>
G	E	B	F	B ^b	D ^b	A	G [#]	F [#]	C	0123456789	10-1*	<988884>
E	B	F	B ^b	D ^b	A	G [#]	F [#]	C	D	012345689T	10-4*	<888984>
B	F	B ^b	D ^b	A	G [#]	F [#]	C	D	D [#]	012345679T	10-3*	<889884>
F	B ^b	D ^b	A	G [#]	F [#]	C	D	D [#]	G	012345789T	10-5*	<888894>
B ^b	D ^b	A	G [#]	F [#]	C	D	D [#]	G	E	012346789T	10-6*	<888885>
D ^b	A	G [#]	F [#]	C	D	D [#]	G	E	B	012345789T	10-5*	<888894>
A	G [#]	F [#]	C	D	D [#]	G	E	B	F	012345679T	10-3*	<889884>
G [#]	F [#]	C	D	D [#]	G	E	B	F	B ^b	012345689T	10-4*	<888984>
F [#]	C	D	D [#]	G	E	B	F	B ^b	D ^b	0123456789	10-1*	<988884>
C	D	D [#]	G	E	B	F	B ^b	D ^b	A	012345678T	10-2*	<898884>

List of Pitch-class Sets
SI AITN Chord 60

Literal Spelling: C – D – E^b – G – B^b – F – B – E – C[#] – A – G[#] – F[#] – C
 21437 6 598ET (6-32)

SI AITN 60 – Trichords:

C	D	E ^b	013	3-2	<111000>	Phrygian Trichord (023)
D	E ^b	G	015	3-4	<100110>	Incomplete Major Seventh Chord (045)
E ^b	G	B ^b	037	3-11	<001110>	Major/Minor Chord (047)
G	B ^b	F	025	3-7	<011010>	Incomplete minor seventh Chord (035)
B ^b	F	B	016	3-5	<100011>	Rite Chord/Tritone Fourth (056)
F	B	E	016	3-5	<100011>	Rite Chord/Tritone Fourth (056)
B	E	C [#]	025	3-7	<011010>	Incomplete minor seventh Chord (035)
E	C [#]	A	037	3-11	<001110>	Major/Minor Chord (047)
C [#]	A	G [#]	015	3-4	<100110>	Incomplete Major Seventh Chord (045)
A	G [#]	F [#]	013	3-2	<111000>	Phrygian Trichord (023)
G [#]	F [#]	C	026	3-8	<010101>	Incomplete Dominant Seventh/Italian Sixth (046)
F [#]	C	D	026	3-8	<010101>	Incomplete Dominant Seventh/Italian Sixth (046)
C	D	E ^b	013	3-2	<111000>	Phrygian Trichord (023)

SI AITN 60 – Tetrachords:

C	D	E ^b	G	0237	4-14<	<111120>	Major-second Minor Tetrachord (0457)
D	E ^b	G	B ^b	0158	4-20*	<101220>	Major Seventh Chord
E ^b	G	B ^b	F	0247	4-22	<021120>	Major-second Major Tetrachord (0357)
G	B ^b	F	B	0146	4-z15	<111111>	All-Interval Tetrachord 1 (0256)
B ^b	F	B	E	0167	4-9*[6]	<200022>	Double Tritone – Mode IV Complement
F	B	E	C [#]	0146	4-z15	<111111>	All-Interval Tetrachord 1 (0256)
B	E	C [#]	A	0247	4-22	<021120>	Major-second Major Tetrachord (0357)
E	C [#]	A	G [#]	0158	4-20*	<101220>	Major Seventh Chord
C [#]	A	G [#]	F [#]	0237	4-14<	<111120>	Major-second Minor Tetrachord (0457)
A	G [#]	F [#]	C	0236	4-12<	<112101>	Harmonic-minor Tetrachord (0346)
G [#]	F [#]	C	D	0268	4-25*[6]	<020202>	French Sixth – Mode VI Complement
F [#]	C	D	E ^b	0236	4-12<	<112101>	Harmonic-minor Tetrachord (0346)
C	D	E ^b	G	0237	4-14<	<111120>	Major-second Minor Tetrachord (0457)

SI AITN 60 – Pentachords:

C	D	E ^b	G	B ^b	01358	5-27	<122230>	Major-Ninth Chord (03578)
D	E ^b	G	B ^b	F	01358	5-27	<122230>	Major-Ninth Chord (03578)
E ^b	G	B ^b	F	B	01468	5-30	<121321>	Enigmatic Pentachord 1 (02478)
G	B ^b	F	B	E	01367	5-19	<212122>	Javanese Pentachord (01467)
B ^b	F	B	E	C [#]	01367	5-19	<212122>	Javanese Pentachord (01467)
F	B	E	C [#]	A	01468	5-30	<121321>	Enigmatic Pentachord 1 (02478)
B	E	C [#]	A	G [#]	01358	5-27	<122230>	Major-Ninth Chord (03578)
E	C [#]	A	G [#]	F [#]	01358	5-27	<122230>	Major-Ninth Chord (03578)
C [#]	A	G [#]	F [#]	C	01457	5-z18	<212221>	Gypsy Pentachord 1 (02367)
A	G [#]	F [#]	C	D	02368	5-28<	<122212>	Augmented 6 th Pentachord1 02568
G [#]	F [#]	C	D	E ^b	02368	5-28<	<122212>	Augmented 6 th Pentachord1 02568
F [#]	C	D	E ^b	G	01457	5-z18	<212221>	Gypsy Pentachord 1 (02367)
C	D	E ^b	G	B ^b	01358	5-27	<122230>	Major-Ninth Chord (03578)

SI AITN 60 – Hexachords:

C	D	E ^b	G	B ^b	F	024579	6-32*	<143250>	Arezzo Major Diatonic Major
D	E ^b	G	B ^b	F	B	014579	6-31	<223431>	Combinatorial I (7) 013589
E ^b	G	B ^b	F	B	E	012478	6-z17	<322332>	All-Triad Hexachord 014678
G	B ^b	F	B	E	C [#]	013679	6-30	<224223>	Minor-bitonal comb. 023689
B ^b	F	B	E	C [#]	A	012478	6-z17	<322332>	All-Triad Hexachord 014678
F	B	E	C [#]	A	G [#]	014579	6-31	<223431>	Combinatorial I (7) 013589
B	E	C [#]	A	G [#]	F [#]	024579	6-32*	<143250>	Arezzo Major Diatonic Major
E	C [#]	A	G [#]	F [#]	C	014579	6-31	<223431>	Combinatorial I (7) 013589
C [#]	A	G [#]	F [#]	C	D	012568	6-z43	<322332>	6-z43B: 023678
A	G [#]	F [#]	C	D	E ^b	013679	6-30	<224223>	Minor-bitonal comb. 023689
G [#]	F [#]	C	D	E ^b	G	012568	6-z43	<322332>	6-z43B: 023678
F [#]	C	D	E ^b	G	B ^b	014579	6-31	<223431>	Combinatorial I (7) 013589
C	D	E ^b	G	B ^b	F	024579	6-32	<143250>	Arezzo Major Diatonic Major

SI AITN 60 – Heptachords:

C	D	E ^b	G	B ^b	F	B	0124579	7-27	<344451>	7-27B: 0245789
D	E ^b	G	B ^b	F	B	E	0234589	7-z18	<434442>	B: 0123589/0146789
E ^b	G	B ^b	F	B	E	C [#]	0135679	7-28<	<344433>	7-28B: 0234689
G	B ^b	F	B	E	C [#]	A	0135679	7-28<	<344433>	7-28B: 0234689
B ^b	F	B	E	C [#]	A	G [#]	0234589	7-z18	<434442>	B: 0123589/0146789
F	B	E	C [#]	A	G [#]	F [#]	0124579	7-27	<344451>	7-27B: 0245789
B	E	C [#]	A	G [#]	F [#]	C	0124579	7-27	<344451>	7-27B: 0245789
E	C [#]	A	G [#]	F [#]	C	D	0124689 0135789	7-30	<343542>	Neapolitan-Minor (1222131)
C [#]	A	G [#]	F [#]	C	D	E ^b	0123679	7-19	<434343>	7-19B: 0123689
A	G [#]	F [#]	C	D	E ^b	G	0123679	7-19	<434343>	7-19B: 0123689
G [#]	F [#]	C	D	E ^b	G	B ^b	0124689 0135789	7-30	<343542>	Neapolitan-Minor (1222131)
F [#]	C	D	E ^b	G	B ^b	F	0124579	7-27	<344451>	7-27B: 0245789
C	D	E ^b	G	B ^b	F	B	0124579	7-27	<344451>	7-27B: 0245789

SI AITN 60 – Octachords:

C	D	E ^b	G	B ^b	F	B	E	01245679	8-14<	<555562>	8-14B: 02345789
D	E ^b	G	B ^b	F	B	E	C [#]	01345679	8-12<	<556543>	8-12B: 02345689
E ^b	G	B ^b	F	B	E	C [#]	A	0124678T	8-25*	<464644>	Mode VI
G	B ^b	F	B	E	C [#]	A	G [#]	01345679	8-12<	<556543>	8-12B: 02345689
B ^b	F	B	E	C [#]	A	G [#]	F [#]	01245679	8-14<	<555562>	8-14B: 02345789
F	B	E	C [#]	A	G [#]	F [#]	C	01245789	8-20*	<545662>	
B	E	C [#]	A	G [#]	F [#]	C	D	0123568T	8-22	<465562>	8-22B: 0123579T
E	C [#]	A	G [#]	F [#]	C	D	E ^b	01234689	8-z15	<555553>	8-z15B: 01356789
C [#]	A	G [#]	F [#]	C	D	E ^b	G	01236789	8-9	<644464>	Mode IV
A	G [#]	F [#]	C	D	E ^b	G	B ^b	01234689	8-z15	<555553>	8-z15B: 01356789
G [#]	F [#]	C	D	E ^b	G	B ^b	F	0123568T	8-22	<465562>	8-22B: 0123579T
F [#]	C	D	E ^b	G	B ^b	F	B	01245789	8-20*	<545662>	
C	D	E ^b	G	B ^b	F	B	E	01245679	8-14<	<555562>	8-14B: 02345789

SI AITN 60 – Nonachords:

C	D	E ^b	G	B ^b	F	B	E	C [#]	012345679	9-2	<777663>	B: 023456789
D	E ^b	G	B ^b	F	B	E	C [#]	A	01234678T	9-8	<676764>	B: 01234689T
E ^b	G	B ^b	F	B	E	C [#]	A	G [#]	01234678T	9-8	<676764>	B: 01234689T
G	B ^b	F	B	E	C [#]	A	G [#]	F [#]	012345679	9-2	<777663>	B: 023456789
B ^b	F	B	E	C [#]	A	G [#]	F [#]	C	012345789	9-4	<766773>	B: 012456789
F	B	E	C [#]	A	G [#]	F [#]	C	D	01235679T	9-11	<667773>	B: 01235689T
B	E	C [#]	A	G [#]	F [#]	C	D	E ^b	01234578T	9-7	<677673>	B: 01234579T
E	C [#]	A	G [#]	F [#]	C	D	E ^b	G	012346789	9-5	<766674>	B: 012356789
C [#]	A	G [#]	F [#]	C	D	E ^b	G	B ^b	012346789	9-5	<766674>	B: 012356789
A	G [#]	F [#]	C	D	E ^b	G	B ^b	F	01234578T	9-7	<677673>	B: 01234579T
G [#]	F [#]	C	D	E ^b	G	B ^b	F	B	01235679T	9-11	<667773>	B: 01235689T
F [#]	C	D	E ^b	G	B ^b	F	B	E	012345789	9-4	<766773>	B: 012456789
C	D	E ^b	G	B ^b	F	B	E	C [#]	012345679	9-2	<777663>	B: 023456789

SI AITN 60 – Decachords:

C	D	E ^b	G	B ^b	F	B	E	C [#]	A	012345678T	10-2*	<898884>
D	E ^b	G	B ^b	F	B	E	C [#]	A	G [#]	012346789T	10-6*	<888885>
E ^b	G	B ^b	F	B	E	C [#]	A	G [#]	F [#]	012345678T	10-2*	<898884>
G	B ^b	F	B	E	C [#]	A	G [#]	F [#]	C	0123456789	10-1*	<988884>
B ^b	F	B	E	C [#]	A	G [#]	F [#]	C	D	012345689T	10-4*	<888984>
F	B	E	C [#]	A	G [#]	F [#]	C	D	E ^b	012345679T	10-3*	<889884>
B	E	C [#]	A	G [#]	F [#]	C	D	E ^b	G	012345789T	10-5*	<888894>
E	C [#]	A	G [#]	F [#]	C	D	E ^b	G	B ^b	012346789T	10-6*	<888885>
C [#]	A	G [#]	F [#]	C	D	E ^b	G	B ^b	F	012345789T	10-5*	<888894>
A	G [#]	F [#]	C	D	E ^b	G	B ^b	F	B	012345679T	10-3*	<889884>
G [#]	F [#]	C	D	E ^b	G	B ^b	F	B	E	012345689T	10-4*	<888984>
F [#]	C	D	E ^b	G	B ^b	F	B	E	C [#]	0123456789	10-1*	<988884>
C	D	E ^b	G	B ^b	F	B	E	C [#]	A	012345678T	10-2*	<898884>

Carter's Original List of SI AITN Chords

1. 274316E985T	45. 45E926T3178
2. 134726T589E	46. 29E5468713T
3. 274916E385T	47. 45E326T9178
4. 194726T583E	48. 23E5468719T
5. 4523E619T78	49. 497126TE538
6. 19T7864523E	50. 217946835ET
7. 4529E613T78	51. 437126TE598
8. 13T7864529E	52. 217346895ET
9. 589T16E2347	53. 358126TE479
10. 1T98567432E	54. 218536974ET
11. 583T16E2947	55. 374ET621859
12. 1T38567492E	56. 218596374ET
13. 347216ET589	57. 538ET621497
14. 127436985TE	58. 214976538ET
15. 385TE612749	59. 598ET621437
16. 127496385TE	60. 214376598ET
17. 3T7816E4529	61. 4791T62E358
18. 187T369254E	62. 2E35864791T
19. 3254E6187T9	63. 4731T62E958
20. 187T963254E	64. 2E95864731T
21. 529416E83T7	65. 479E26T1358
22. 1492567T38E	66. 2E97468531T
23. 523416E89T7	67. 473E26T1958
24. 1432567T98E	68. 2E37468591T
25. 3E8726T5419	69. 4ET73695218
26. 278E369145T	70. 37TE4681259
27. 3145T6278E9	71. 4ET79635218
28. 278E963145T	72. 3521864ET79
29. 491726T5E38	73. 5TE83694127
30. 27194683E5T	74. 38ET5672149
31. 431726T5E98	75. 5TE89634127
32. 27134689E5T	76. 3412765TE89
33. 4137T6259E8	77. 54E2369T187
34. 259E864137T	78. 32E456781T9
35. 4197T6253E8	79. 54E2963T187
36. 253E864197T	80. 3T187654E29
37. 413526T79E8	81. 45T1369E278
38. 2531468E97T	82. 31T546872E9
39. 419526T73E8	83. 45T1963E278
40. 2591468E37T	84. 3E278645T19
41. 4E5326T9718	85. 592E4681T37
42. 235E468179T	86. 4E295673T18
43. 4E5926T3718	87. 4E235679T18
44. 295E468173T	88. 532E4681T97

Note: Carter lists 88 Symmetrically Inverted (SI) AITN chords, but the list **does not include R, I or RI versions**. Carter always pivots his 88 SI AITN chords around the interval of a tritone and the lowest pitch of the chord is always considered as 0 or Prime.

SI AITN Chords – Tritone Pivot

1. 27431 6 E985T	45. 45E92 6 T3178
2. 13472 6 T589E	46. 29E54 6 8713T
3. 27491 6 E385T	47. 45E32 6 T9178
4. 19472 6 T583E	48. 23E54 6 8719T
5. 4523E 6 19T78	49. 49712 6 TE538
6. 19T78 6 4523E	50. 21794 6 835ET
7. 4529E 6 13T78	51. 43712 6 TE598
8. 13T78 6 4529E	52. 21734 6 895ET
9. 589T1 6 E2347	53. 35812 6 TE479
10. 1T985 6 7432E	54. 21853 6 974ET
11. 583T1 6 E2947	55. 374ET 6 21859
12. 1T385 6 7492E	56. 21859 6 374ET
13. 34721 6 ET589	57. 538ET 6 21497
14. 12743 6 985TE	58. 21497 6 538ET
15. 385TE 6 12749	59. 598ET 6 21437
16. 12749 6 385TE	60. 21437 6 598ET
17. 3T781 6 E4529	61. 4791T 6 2E358
18. 187T3 6 9254E	62. 2E358 6 4791T
19. 3254E 6 187T9	63. 4731T 6 2E958
20. 187T9 6 3254E	64. 2E958 6 4731T
21. 52941 6 E83T7	65. 479E2 6 T1358
22. 14925 6 7T38E	66. 2E974 6 8531T
23. 52341 6 E89T7	67. 473E2 6 T1958
24. 14325 6 7T98E	68. 2E374 6 8591T
25. 3E872 6 T5419	69. 4ET73 6 95218
26. 278E3 6 9145T	70. 37TE4 6 81259
27. 3145T 6 278E9	71. 4ET79 6 35218
28. 278E9 6 3145T	72. 35218 6 4ET79
29. 49172 6 T5E38	73. 5TE83 6 94127
30. 27194 6 83E5T	74. 38ET5 6 72149
31. 43172 6 T5E98	75. 5TE89 6 34127
32. 27134 6 89E5T	76. 34127 6 5TE89
33. 4137T 6 259E8	77. 54E23 6 9T187
34. 259E8 6 4137T	78. 32E45 6 781T9
35. 4197T 6 253E8	79. 54E29 6 3T187
36. 253E8 6 4197T	80. 3T187 6 54E29
37. 41352 6 T79E8	81. 45T13 6 9E278
38. 25314 6 8E97T	82. 31T54 6 872E9
39. 41952 6 T73E8	83. 45T19 6 3E278
40. 25914 6 8E37T	84. 3E278 6 45T19
41. 4E532 6 T9718	85. 592E4 6 81T37
42. 235E4 6 8179T	86. 4E295 6 73T18
43. 4E592 6 T3718	87. 4E235 6 79T18
44. 295E4 6 8173T	88. 532E4 6 81T97

Note: Carter lists 88 Symmetrically Inverted (SI) AITN chords, but the list does not include R, I or RI versions. Carter always pivots his 88 SI AITN chords around the interval of **a tritone** and the lowest pitch of the chord is always considered as 0 or Prime.

SI AITN Chords: All-Triad Hexachord (ATH)

1. 27431 6 E985T/27431 6 E985T	45. 45E92 6 T3178
2. 13472 6 T589E	46. 29E54 6 8713T
3. 27491 6 E385T/27491 6 E385T	47. 45E32 6 T9178
4. 19472 6 T583E	48. 23E54 6 8719T
5. 4523E 6 19T78	49. 49712 6 TE538
6. 19T78 6 4523E	50. 21794 6 835ET
7. 4529E 6 13T78	51. 43712 6 TE598
8. 13T78 6 4529E	52. 21734 6 895ET
9. 589T1 6 E2347	53. 35812 6 TE479
10. 1T985 6 7432E	54. 21853 6 974ET
11. 583T1 6 E2947	55. 374ET 6 21859
12. 1T385 6 7492E	56. 21859 6 374ET
13. 34721 6 ET589	57. 538ET 6 21497
14. 12743 6 985TE	58. 21497 6 538ET/21497 6 538ET
15. 385TE 6 12749	59. 598ET 6 21437
16. 12749 6 385TE	60. 21437 6 598ET/21437 6 598ET
17. 3T781 6 E4529	61. 4791T 6 2E358
18. 187T3 6 9254E	62. 2E358 6 4791T
19. 3254E 6 187T9	63. 4731T 6 2E958
20. 187T9 6 3254E	64. 2E958 6 4731T
21. 52941 6 E83T7	65. 479E2 6 T1358
22. 14925 6 7T38E	66. 2E974 6 8531T
23. 52341 6 E89T7	67. 473E2 6 T1958
24. 14325 6 7T98E	68. 2E374 6 8591T
25. 3E872 6 T5419	69. 4ET73 6 95218
26. 278E3 6 9145T	70. 37TE4 6 81259
27. 3145T 6 278E9	71. 4ET79 6 35218
28. 278E9 6 3145T	72. 35218 6 4ET79
29. 49172 6 T5E38	73. 5TE83 6 94127
30. 27194 6 83E5T	74. 38ET5 6 72149
31. 43172 6 T5E98	75. 5TE89 6 34127
32. 27134 6 89E5T	76. 34127 6 5TE89
33. 4137T 6 259E8	77. 54E23 6 9T187
34. 259E8 6 4137T	78. 32E45 6 781T9
35. 4197T 6 253E8	79. 54E29 6 3T187
36. 253E8 6 4197T	80. 3T187 6 54E29
37. 41352 6 T79E8	81. 45T13 6 9E278
38. 25314 6 8E97T	82. 31T54 6 872E9
39. 41952 6 T73E8	83. 45T19 6 3E278
40. 25914 6 8E37T	84. 3E278 6 45T19
41. 4E532 6 T9718	85. 592E4 6 81T37
42. 235E4 6 8179T	86. 4E295 6 73T18
43. 4E592 6 T3718	87. 4E235 6 79T18
44. 295E4 6 8173T	88. 532E4 6 81T97

Note: Only four SI AITN Chords subsume the ATH in prime form: 1, 3, 58 and 60. The ATH subsume the AIT. The AIT subsumes all interval classes: Palindromes within palindromes. Also note that Carter does not list R, I or RI versions of the SI AITN Chords.

SI AITN – Listed Parent Hexachord

- | | |
|--------------------------|--------------------------|
| 1. 27431 6 E985T (6-14) | 45. 45E92 6 T3178 (6-14) |
| 2. 13472 6 T589E (6-14) | 46. 29E54 6 8713T (6-14) |
| 3. 27491 6 E385T (6-1) | 47. 45E32 6 T9178 (6-14) |
| 4. 19472 6 T583E (6-1) | 48. 23E54 6 8719T (6-14) |
| 5. 4523E 6 19T78 (6-8) | 49. 49712 6 TE538 (6-14) |
| 6. 19T78 6 4523E (6-8) | 50. 21794 6 835ET (6-14) |
| 7. 4529E 6 13T78 (6-14) | 51. 43712 6 TE598 (6-8) |
| 8. 13T78 6 4529E (6-14) | 52. 21734 6 895ET (6-8) |
| 9. 589T1 6 E2347 (6-14) | 53. 35812 6 TE479 (6-14) |
| 10. 1T985 6 7432E (6-14) | 54. 21853 6 974ET (6-14) |
| 11. 583T1 6 E2947 (6-1) | 55. 374ET 6 21859 (6-1) |
| 12. 1T385 6 7492E (6-1) | 56. 21859 6 374ET (6-1) |
| 13. 34721 6 ET589 (6-8) | 57. 538ET 6 21497 (6-14) |
| 14. 12743 6 985TE (6-8) | 58. 21497 6 538ET (6-14) |
| 15. 385TE 6 12749 (6-1) | 59. 598ET 6 21437 (6-32) |
| 16. 12749 6 385TE (6-1) | 60. 21437 6 598ET (6-32) |
| 17. 3T781 6 E4529 (6-14) | 61. 4791T 6 2E358 (6-14) |
| 18. 187T3 6 9254E (6-14) | 62. 2E358 6 4791T (6-14) |
| 19. 3254E 6 187T9 (6-8) | 63. 4731T 6 2E958 (6-1) |
| 20. 187T9 6 3254E (6-8) | 64. 2E958 6 4731T (6-1) |
| 21. 52941 6 E83T7 (6-14) | 65. 479E2 6 T1358 (6-14) |
| 22. 14925 6 7T38E (6-14) | 66. 2E974 6 8531T (6-14) |
| 23. 52341 6 E89T7 (6-32) | 67. 473E2 6 T1958 (6-1) |
| 24. 14325 6 7T98E (6-32) | 68. 2E374 6 8591T (6-1) |
| 25. 3E872 6 T5419 (6-32) | 69. 4ET73 6 95218 (6-14) |
| 26. 278E3 6 9145T (6-32) | 70. 37TE4 6 81259 (6-14) |
| 27. 3145T 6 278E9 (6-14) | 71. 4ET79 6 35218 (6-14) |
| 28. 278E9 6 3145T (6-14) | 72. 35218 6 4ET79 (6-14) |
| 29. 49172 6 T5E38 (6-8) | 73. 5TE83 6 94127 (6-8) |
| 30. 27194 6 83E5T (6-8) | 74. 38ET5 6 72149 (6-8) |
| 31. 43172 6 T5E98 (6-14) | 75. 5TE89 6 34127 (6-32) |
| 32. 27134 6 89E5T (6-14) | 76. 34127 6 5TE89 (6-32) |
| 33. 4137T 6 259E8 (6-14) | 77. 54E23 6 9T187 (6-14) |
| 34. 259E8 6 4137T (6-14) | 78. 32E45 6 781T9 (6-14) |
| 35. 4197T 6 253E8 (6-32) | 79. 54E29 6 3T187 (6-8) |
| 36. 253E8 6 4197T (6-32) | 80. 3T187 6 54E29 (6-8) |
| 37. 41352 6 T79E8 (6-14) | 81. 45T13 6 9E278 (6-14) |
| 38. 25314 6 8E97T (6-14) | 82. 31T54 6 872E9 (6-14) |
| 39. 41952 6 T73E8 (6-32) | 83. 45T19 6 3E278 (6-14) |
| 40. 25914 6 8E37T (6-32) | 84. 3E278 6 45T19 (6-14) |
| 41. 4E532 6 T9718 (6-14) | 85. 592E4 6 81T37 (6-8) |
| 42. 235E4 6 8179T (6-14) | 86. 4E295 6 73T18 (6-8) |
| 43. 4E592 6 T3718 (6-14) | 87. 4E235 6 79T18 (6-14) |
| 44. 295E4 6 8173T (6-14) | 88. 532E4 6 81T97 (6-14) |

Note: Carter uses the hexachord sets 012345 (6-1), 023457 (6-8), 013458 (6-14) and 024579 (6-32) for his 88 SI AITN chords. They all invert upon themselves and produce their own complement. Therefore, Carter does not list R, I or RI versions of the SI AITN.

SI AITN Retrograde Inversions

- | | |
|--------------------------|--------------------------|
| 1. 27431 6 E985T (6-14) | 25. 3E872 6 T5419 (6-32) |
| T589E 6 13472 | 9145T 6 278E3 |
| 2. 13472 6 T589E (6-14) | 26. 278E3 6 9145T (6-32) |
| E985T 6 27431 | T5419 6 3E872 |
| 3. 27491 6 E385T (6-1) | 27. 3145T 6 278E9 (6-14) |
| T583E 6 19472 | 9E872 6 T5413 |
| 4. 19472 6 T583E (6-1) | 28. 278E9 6 3145T (6-14) |
| E385T 6 19472 | T5413 6 9E872 |
| 5. 4523E 6 19T78 (6-8) | 29. 49172 6 T5E38 (6-8) |
| 87T91 6 E3254 | 83E5T 6 27194 |
| 6. 19T78 6 4523E (6-8) | 30. 27194 6 83E5T (6-8) |
| E3254 6 87T91 | T5E38 6 49172 |
| 7. 4529E 6 13T78 (6-14) | 31. 43172 6 T5E98 (6-14) |
| 87T31 6 E9254 | 89E5T 6 27143 |
| 8. 13T78 6 4529E (6-14) | 32. 27134 6 89E5T (6-14) |
| E9254 6 87T31 | T5E98 6 43172 |
| 9. 589T1 6 E2347 (6-14) | 33. 4137T 6 259E8 (6-14) |
| 7432E 6 1T985 | 8E952 6 T7314 |
| 10. 1T985 6 7432E (6-14) | 34. 259E8 6 4137T (6-14) |
| E2347 6 589T1 | T7314 6 8E952 |
| 11. 583T1 6 E2947 (6-1) | 35. 4197T 6 253E8 (6-32) |
| 7492E 6 1T385 | 8E352 6 T7914 |
| 12. 1T385 6 7492E (6-1) | 36. 253E8 6 4197T (6-32) |
| E2947 6 583T1 | T7914 6 8E352 |
| 13. 34721 6 ET589 (6-8) | 37. 41352 6 T79E8 (6-14) |
| 985TE 6 12743 | 8E97T 6 25314 |
| 14. 12743 6 985TE (6-8) | 38. 25314 6 8E97T (6-14) |
| ET589 6 34721 | T79E8 6 41352 |
| 15. 385TE 6 12749 (6-1) | 39. 41952 6 T73E8 (6-32) |
| 94721 6 ET583 | 8E37T 6 25914 |
| 16. 12749 6 385TE (6-1) | 40. 25914 6 8E37T (6-32) |
| ET583 6 94721 | T73E8 6 41952 |
| 17. 3T781 6 E4529 (6-14) | 41. 4E532 6 T9718 (6-14) |
| 9254E 6 187T3 | 8179T 6 235E4 |
| 18. 187T3 6 9254E (6-14) | 42. 235E4 6 8179T (6-14) |
| E4529 6 3T781 | T9718 6 4E532 |
| 19. 3254E 6 187T9 (6-8) | 43. 4E592 6 T3718 (6-14) |
| 9T871 6 E4523 | 8173T 6 295E4 |
| 20. 187T9 6 3254E (6-8) | 44. 295E4 6 8173T (6-14) |
| E4523 6 9T781 | T3718 6 4E592 |
| 21. 52941 6 E83T7 (6-14) | 45. 45E92 6 T3178 (6-14) |
| 7T38E 6 14925 | 8713T 6 29E54 |
| 22. 14925 6 7T38E (6-14) | 46. 29E54 6 8713T (6-14) |
| E83T7 6 52941 | T3178 6 45E92 |
| 23. 52341 6 E89T7 (6-32) | 47. 45E32 6 T9178 (6-14) |
| 7T98E 6 14325 | 8719T 6 23E54 |
| 24. 14325 6 7T98E (6-32) | 48. 23E54 6 8719T (6-14) |
| E89T7 6 52341 | T9178 6 45E32 |

49.49712 6 TE538 (6-14)	69.4ET73 6 95218 (6-14)
835ET 6 21794	81259 6 37TE4
50.21794 6 835ET (6-14)	70.37TE4 6 81259 (6-14)
TE538 6 49712	95218 6 4ET73
51.43712 6 TE598 (6-8)	71.4ET79 6 35218 (6-14)
895ET 6 21734	81253 6 97TE4
52.21734 6 895ET (6-8)	72.35218 6 4ET79 (6-14)
TE598 6 43712	97TE4 6 81253
53.35812 6 TE479 (6-14)	73.5TE83 6 94127 (6-8)
974ET 6 21853	72149 6 38ET5
54.21853 6 974ET (6-14)	74.38ET5 6 72149 (6-8)
TE479 6 35812	94127 6 5TE83
55.374ET 6 21859 (6-1)	75.5TE89 6 34127 (6-32)
95812 6 TE473	72143 6 98ET5
56.21859 6 374ET (6-1)	76.34127 6 5TE89 (6-32)
TE473 6 95812	98ET5 6 72143
57.538ET 6 21497 (6-14)	77.54E23 6 9T187 (6-14)
79412 6 TE835	781T9 6 32E45
58.21497 6 538ET (6-14)	78.32E45 6 781T9 (6-14)
TE835 6 79412	9T187 6 54E23
59.598ET 6 21437 (6-32)	79.54E29 6 3T187 (6-8)
73412 6 TE895	781T3 6 92E45
60.21437 6 598ET (6-32)	80.3T187 6 54E29 (6-8)
TE895 6 73412	92E45 6 781T3
61.4791T 6 2E358 (6-14)	81.45T13 6 9E278 (6-14)
853E2 6 T1974	872E9 6 31T54
62.2E358 6 4791T (6-14)	82.31T54 6 872E9 (6-14)
T1974 6 853E2	9E278 6 45T13
63.4731T 6 2E958 (6-1)	83.45T19 6 3E278 (6-14)
859E2 6 T1374	872E3 6 91T54
64.2E958 6 4731T (6-1)	84.3E278 6 45T19 (6-14)
T1374 6 859E2	91T54 6 872E3
65.479E2 6 T1358 (6-14)	85.592E4 6 81T37 (6-8)
8531T 6 2E974	73T18 6 4E295
66.2E974 6 8531T (6-14)	86.4E295 6 73T18 (6-8)
T1358 6 479E2	81T37 6 592E4
67.473E2 6 T1958 (6-1)	87.4E235 6 79T18 (6-14)
8591T 6 2E374	81T97 6 532E4
68.2E374 6 8591T (6-1)	88.532E4 6 81T97 (6-14)
T1958 6 473E2	79T18 6 4E235

Note:

Carter does not consider R, I or RI versions as different chords, so *The Harmony Book* never lists them. SI AITN 1, 3, 58 and 60 are the only SI AITN to contain the ATH as a contiguous subset. The ATH is also subsumed (again within prime form) within the R, I and RI versions. The ATH subsumes the AIT – The AIT subsumes all interval classes ...

PI (Parallel Inverted) AITN Chords – Parent Hexachords

Carter uses the following nine hexachord types for his 60 Parallel-Inverted All-Interval Twelve-Note (PI AITN) Chords:

1. 6-1 (Carter 4): 012345: Chromatic Hexamirror/1st ord. All combinatorial (P6, Ib, RI5) <543210> * [Also used in SI AITN Chords.](#) *
2. 6-2 (Carter 19): 012346: Combinatorial I (b) <443211>
6-2b: 023456: Combinatorial I (1) <443211>
3. 6-8 (Carter 5): 023457: 1st ord. All combinatorial (P6, Ib, RI5) <343230>
4. 6-9 (Carter 20): 012357: Combinatorial I (b) <342231>
6-9b: 024567: Combinatorial I (3) (**Note: Two AIT**) <342231> *
5. 6-15 (Carter 13): 012458: Combinatorial I (b) <323421>
6-15B: 034678: Combinatorial I (5), <323421>
6. 6-16 (Carter 11): 014568: Combinatorial I (3) <322431>
6-16b: 023478: Megha or 'Cloud' Raga/Combinatorial I (1) <322431>
7. 6-31 (Carter 8): 013589: Combinatorial I (7) <223431>
6-31b: 014689: Combinatorial I (b), <223431>
8. 6-32 (Carter 6): 024579: Arezzo major Diatonic, major hexamirror, quartal hexamirror, 1st ord. All-combinatorial P (6), I (3), RI (9) <143250>
* [Also used in SI AITN Chords.](#) *
9. 6-33 (Carter 18): 023579: Dorian Hexachord Combinatorial I (1) <143241>
6-33b: 024679: Dominant-11th/Lydian Hexachord/Combinatorial I (5) <143241>

Note:

- i. Hexachord 6-9 (012357) and 6-9b (024567) are combinatorial chords (self-contained palindromes) subsuming two All-Interval Tetrachords (AIT): 4-z15b (0256) and 4-z29b (0467).
- ii. Hexachords 6-1 (012345) and 6-32 (024579) are also used as the parent hexachords for symmetrically inverted versions of Carter's AITN Chords.

Parallel Inverted All-Interval Twelve-Note (PI AITN) Chords

- | | |
|--------------------------|--------------------------|
| 1. 473E2 6 8591T (6-1) | 13. 4315T 6 89E72 (6-16) |
| T1958 6 2E374 | 27E98 6 T5134 |
| 8591T 6 473E2 | 89E72 6 4315T |
| 2E374 6 T1958 | T5134 6 27E98 |
| 2. 27491 6 T583E (6-1) | 14. 38512 6 947ET (6-16) |
| E385T 6 19472 | TE749 6 21583 |
| T583E 6 27491 | 947ET 6 38512 |
| 19472 6 E385T | 21583 6 TE749 |
| 3. 87T91 6 4523E (6-8) | 15. 3T871 6 9245E (6-15) |
| E3254 6 19T78 | E5429 6 178T3 |
| 4523E 6 87T91 | 9245E 6 3T871 |
| 19T78 6 E3254 | 178T3 6 E5429 |
| 4. 592E4 6 73T18 (6-8) | 16. 835T1 6 4972E (6-15) |
| 81T37 6 4E295 | E2794 6 1T538 |
| 73T18 6 592E4 | 4972E 6 835T1 |
| 4E295 6 81T37 | 1T538 6 E2794 |
| 5. 41952 6 8E37T (6-32) | 17. E3247 6 19T85 (6-15) |
| T73E8 6 25914 | 58T91 6 7423E |
| 8E37T 6 41952 | 19T85 6 E3247 |
| 25914 6 T73E8 | 7423E 6 58T91 |
| 6. 53412 6 798ET (6-32) | 18. 82153 6 4TE79 (6-15) |
| TE897 6 21435 | 97ET4 6 35128 |
| 798ET 6 53412 | 4TE79 6 82153 |
| 21435 6 TE897 | 35128 6 97ET4 |
| 7. 5E423 6 718T9 (6-31) | 19. 9154T 6 3E782 (6-33) |
| 9T817 6 324E5 | 287E3 6 T4519 |
| 718T9 6 5E423 | 3E782 6 9154T |
| 324E5 6 9T817 | T4519 6 287E3 |
| 8. 315T4 6 9E728 (6-31) | 20. 82791 6 4T53E (6-33) |
| 827E9 6 4T513 | E35T4 6 19728 |
| 4T513 6 827E9 | 4T53E 6 82791 |
| 9E728 6 315T4 | 19728 6 E35T4 |
| 9. 59241 6 73T8E (6-31) | 21. 34217 6 98TE5 (6-33) |
| E8T37 6 14295 | 5ET89 6 71243 |
| 73T8E 6 59241 | 98TE5 6 34217 |
| 14295 6 E8T37 | 71243 6 5ET89 |
| 10. 52134 6 7TE98 (6-31) | 22. 53241 6 97T8E (6-33) |
| 89ET7 6 43125 | E8T97 6 14235 |
| 7TE98 6 52134 | 79T8E 6 53241 |
| 43125 6 89ET7 | 14235 6 E8T97 |
| 11. 451T9 6 87E23 (6-16) | 23. 58T31 6 7429E (6-2) |
| 32E78 6 9T154 | E9247 6 13T85 |
| 87E23 6 451T9 | 7429E 6 58T31 |
| 9T154 6 32E78 | 13T85 6 E9247 |
| 12. 81529 6 4E7T3 (6-16) | 24. 28159 6 T4E73 (6-2) |
| 3T7E4 6 92518 | 37E4T 6 95182 |
| 4E7T3 6 81529 | T4E73 6 28159 |
| 92518 6 3T7E4 | 95182 6 37E4T |

25.94271 6 38T5E (6-2)	28.3524E 6 97T81 (6-9) *
E5T83 6 17249	18T79 6 E4253
38T5E 6 94271	97T81 6 3524E
17249 6 E5T83	E4253 6 18T79
26.82137 6 4TE95 (6-2)	29.72419 6 5T8E3 (6-9) *
59ET4 6 73128	3E8T5 6 91427
4TE95 6 82137	5T8E3 6 72419
73128 6 59ET4	91427 6 3E8T5
27.31T85 6 9E247 (6-9) *	30.37421 6 958TE (6-9) *
742E9 6 58T13	ET859 6 12473
9E247 6 31T85	958TE 6 37421
58T13 6 742E9	12473 6 ET859

Note:

Analysts have highlighted further variations of the SI and PI AITN Chords (Link Chords).

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SI AITN 1

Prime Form [C]

Ian Percy

SI AITN 1 Prime [Interval]: 27431 6 E985T. [Literal]: 029145 ET87386

Parent: 6-14: 013458 / 034578 **6-14:** 013458 (all-combinatorial)

M2 P5 M3 m3 m2 Tt M7 M6 m6 P4 m7

0 2 9 1 4 5 11 10 7 3 8 6

pivot

6-z17: 012478 / 014678 (ATH)

6-z17: 012478 / 014678 (ATH)

Trichords: 0&3 = 3-7. 2&7 = 3-4. 9&T = 3-11. 1&E = 3-3. 4&5 = 3-5. 8&6 = 3-8.

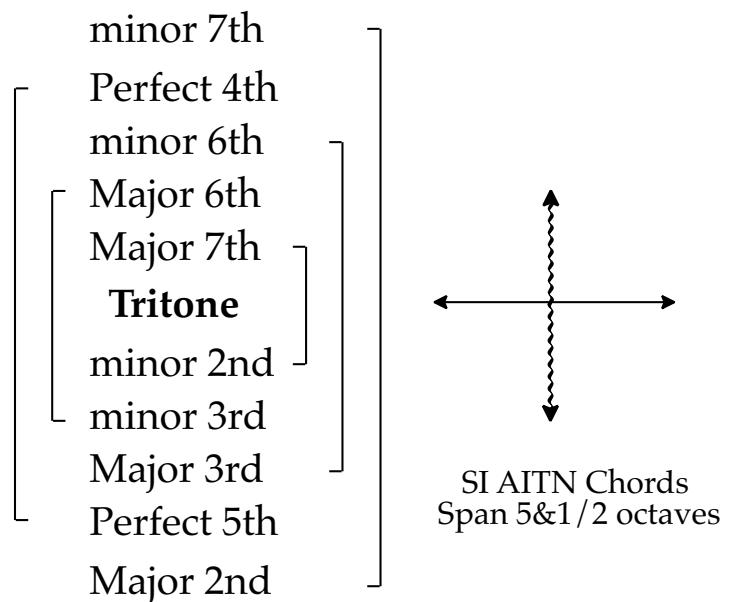
Tetrachords: 0&7 = 4-4. 2&T = 4-14. 9&E = 4-19. 1&5 = 4-z15. 4* = 4-9. 3&6 = 4-27. 8* = 4-25.

Pentachords: 0&T = 5-11. 2&E = 5-z17. 9&5 = 5-30. 1&4 = 5-19. 7&6 = 5-z38. 3&8 = 5-28.

Hexachords: 0&E = 6-14. 2&5 = 6-z24. 9&4 = 6-z17. 1&3 = 6-30. T&6 = 6-z46. 7&8 = 6-z43.

SI AITN 1: (Prime form)

Intervals between notes:



Transposable Bass Tone →

Note: The inversion of SI AITN 1 would be a more idiomatic choice for vertical orchestration and orchestral balance, as then most of the larger interval types would be in the bass register (space for resonance), but this prime form is far more lyrical as a linear line ...

SI AITN 1

Inversion [C]

Ian Percy

SI AITN 1 Inversion [Interval]: T589E 6 13472. [Literal]: 0T3E87 125946

Parent: 6-14: 013458 / 034578 **6-14:** 013458 (all-combinatorial)

4-4: 0125

4-9: 0167

4-4: 0125

3-7: 025

3-3: 014

3-3: 014

3-7: 025

6-30: 013679 (all-combinatorial)

6-30 subsumes both 4-z15 (AIT)

Trichords: 0&9 = 3-7. T&5 = 3-4. 3&2 = 3-11. E&1 = 3-3. 8&7 = 3-5. 4&6 = 3-8.

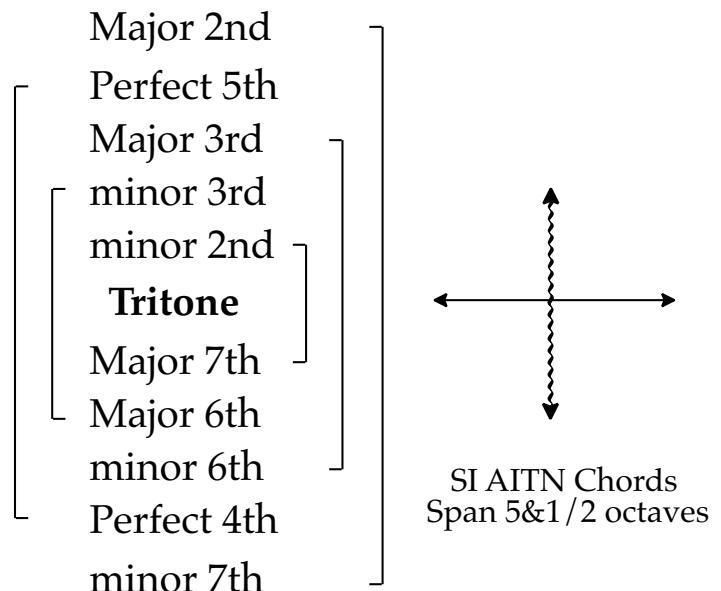
Tetrachords: 0&5 = 4-4. T&2 = 4-14. 3&1 = 4-19. **E&7 = 4-z15.** 8* = 4-9. 9&6 = 4-27. 4* = 4-25.

Pentachords: 0&2 = 5-11. T&1 = 5-z17. 3&7 = 5-30. E&8 = 5-19. 5&6 = 5-z38. 9&4 = 5-28.

Hexachords: 0&1 = 6-14. T&7 = 6-z24. 3&8 = 6-z17. E&9 = 6-30. 2&6 = 6-z46. 5&4 = 6-z43.

SI AITN 1: (Inversion)

Intervals between notes:



Transposable Bass Tone →

Note: This inversion of SI AITN 1 is a more idiomatic choice for vertical orchestration and orchestral balance as most of the larger interval types are in the bass register (allowing space for resonance), but the prime form is more lyrical as a linear line ...

SI AITN 1 Prime [C]: 27431 6 E985T / 029145 ET87386

complement: 06 (tritone)

Decachord 10-6: 012346789T **Messiaen Mode VII**

SI AITN 1 Prime: 27431 6 E985T

complement 4-25: 0268

Octachord 8-25: 0124678T **Messiaen Mode VI** (Subsumes both ATH 6-z17)

SI AITN 1 Prime: 27431 6 E985T

complement 6-30: 013679

Hexachord 6-30: 013679 (Subsumes both AIT 4-z15)

SI AITN 1 Prime: 27431 6 E985T

complement 8-9: 01236789 **Messiaen Mode IV**

Tetrachord 4-9: 0167

SI AITN 1 Prime: 27431 6 E985T

tritone pivot: 06 (complement to 10-6)

SI AITN 1 Prime: 27431 6 E985T

SI AITN 1 Inversion [C]: T589E 6 13472/0T3E87 125946

0 10 3 11 8 7 1 2 5 9 4 6
 Pentachord 5-z17: 01348 Pentachord 5-z17: 01348

SI AITN 1 Inversion: T589E 6 13472

complement 4-25: 0268

0 10 3 11 8 7 1 2 5 9 4 6
 Tetrachord 4-19: 0148 Tetrachord 4-19: 0148

SI AITN 1 Inversion: T589E 6 13472

complement 6-30: 013679

0 10 3 11 8 7 1 2 5 9 4 6
 Trichord 3-7: 025 Trichord 3-3: 014 Trichord 3-3: 014 Trichord 3-7: 025

SI AITN 1 Inversion: T589E 6 13472

0 10 3 11 8 7 1 2 5 9 4 6
 Interval class 1 (min2/Maj7)

SI AITN 1 Inversion: T589E 6 13472

0 10 3 11 8 7 1 2 5 9 4 6
 tritone pivot: 06 (complement to 10-6)

SI AITN 1 Inversion: T589E 6 13472

0 10 3 11 8 7 1 2 5 9 4 6

SI AITN 1

Combined 20-note Scale [C]

Ian Percy

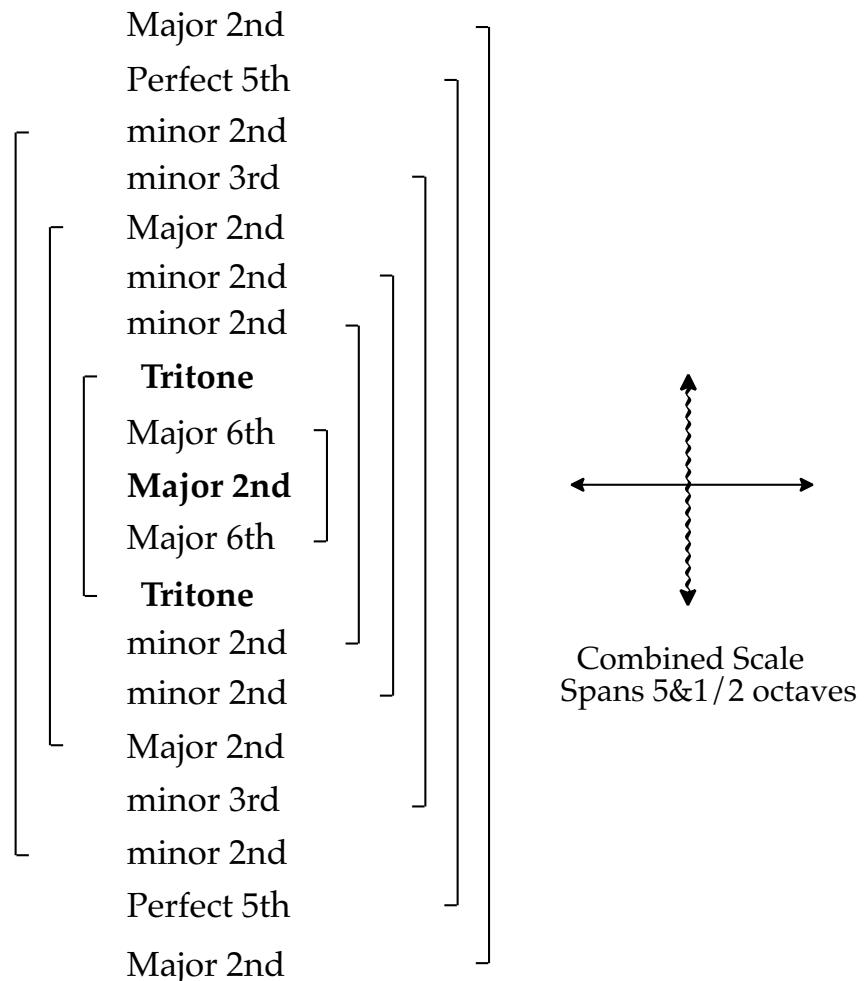
Note: Symmetrically Inverted SI AITN Chords produce Parallel Inverted Combined Scales

Inverted Decachord 10-1: 0123456789

Prime Form Decachord 10-1: 0123456789

SI AITN 1: (Combined Scale)

Intervals between notes:



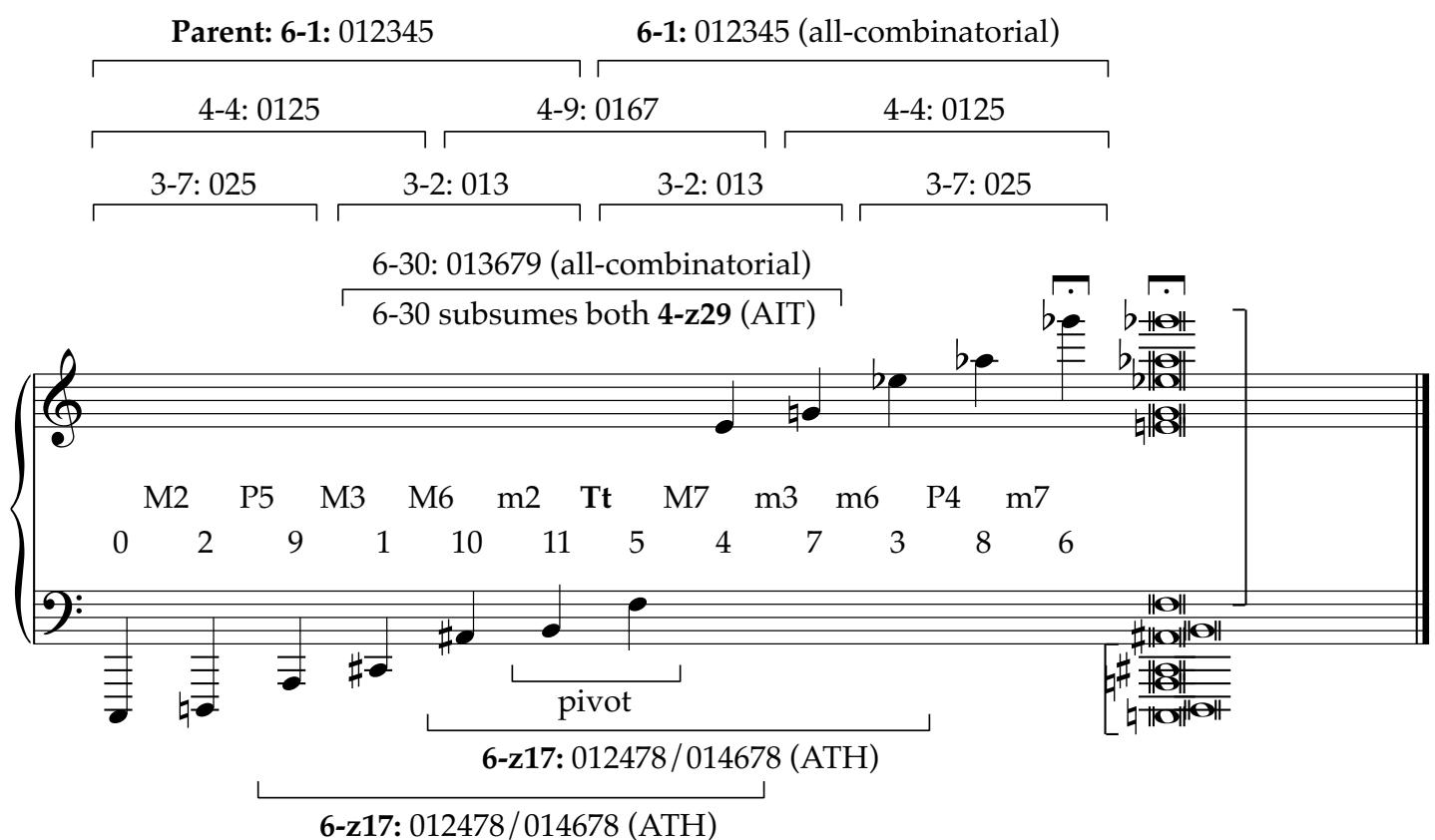
Transposable Bass Tone: →

SI AITN 3

Prime Form [C]

Ian Percy

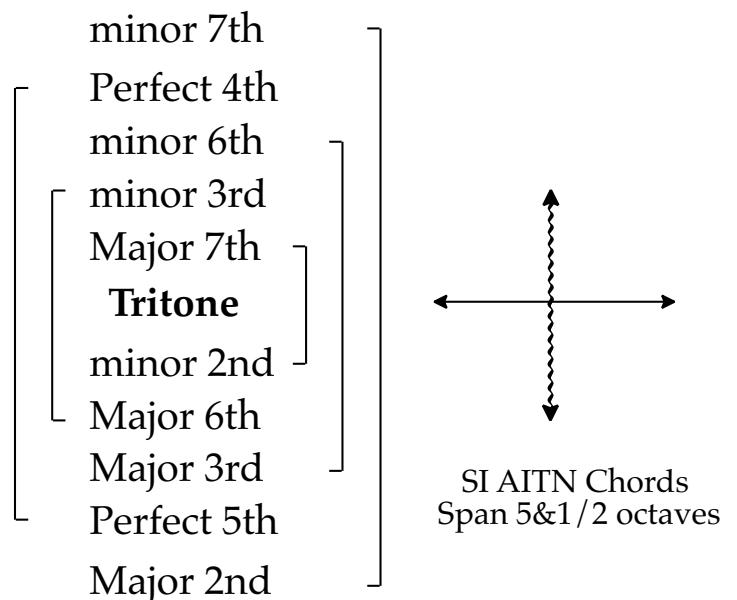
SI AITN 3 Prime [Interval]: 27491 6 E385T. [Literal]: 0291TE 547386



Trichords: 0&3 = 3-7. 2&7 = 3-4. 9&4 = 3-3. 1&5 = 3-2. T&E = 3-5. 8&6 = 3-8.
Tetrachords: 0&7 = 4-4. 2&4 = 4-7. 9&5 = 4-2. **1&E = 4-z29.** T* = 4-9. 3&6 = 4-27. 8* = 4-25.
Pentachords: 025&4 = 5-3. 9&E = 5-13. 1&T = 5-19. 7&6 = 5-z38. 3&8 = 5-28.
Hexachords: 0&5 = 6-1. 2E4&6 = 6-15. **9&T = 6-z17.** 1&3 = 6-30. 7&8 = 6-z43.

SI AITN 3: (Prime form)

Intervals between notes:



Transposable Bass Tone →

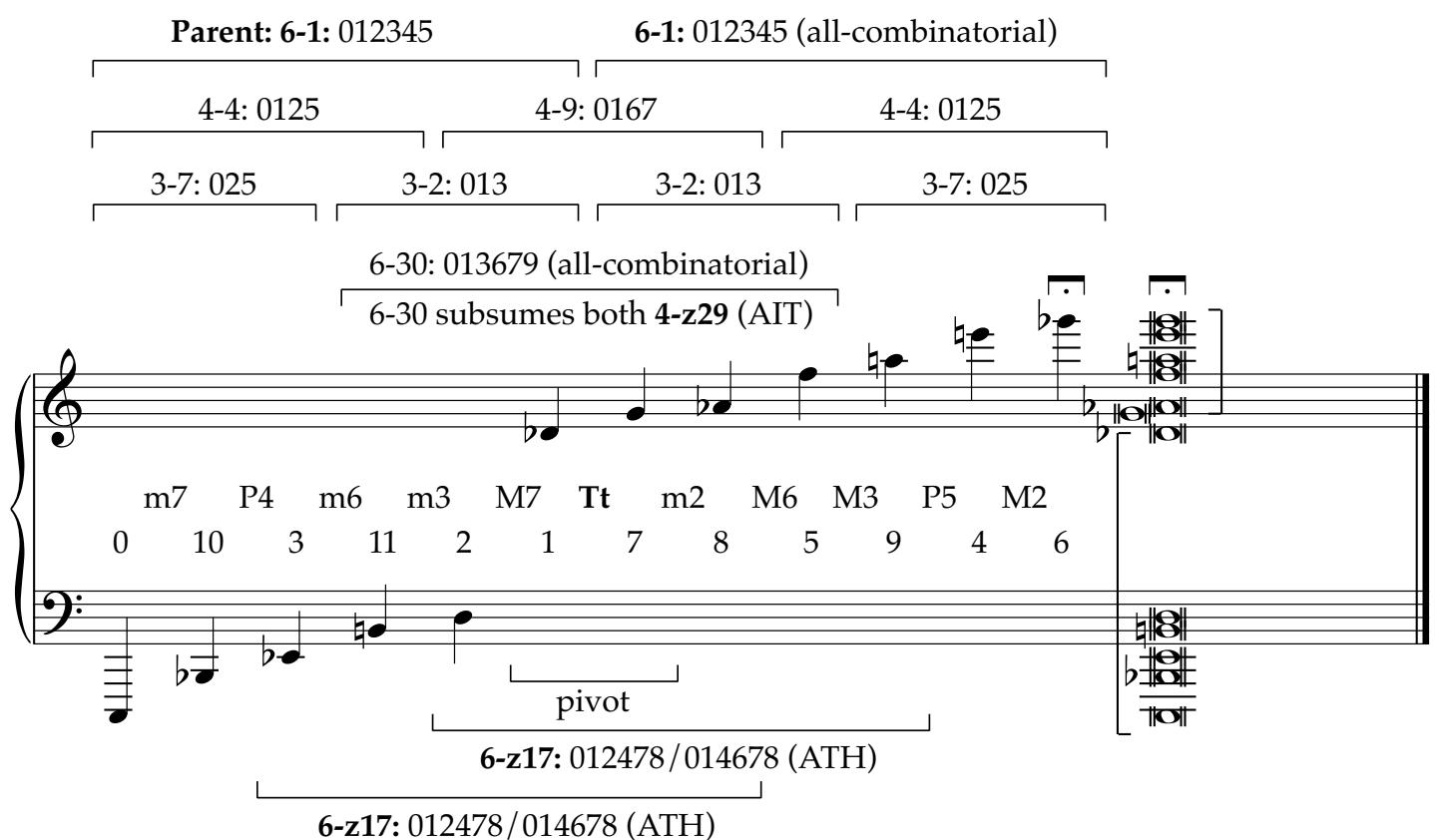
Note: SI AITN 3 only has two intervals changed in comparison to SI AITN 1 (min3/Maj6). Perhaps this is too similar for composition? SI AITN 3 could start from a different prime root to enhance a sense of change: Perhaps use **0 = Eb** [no.3] in the overall pitch scheme?

SI AITN 3

Inversion [C]

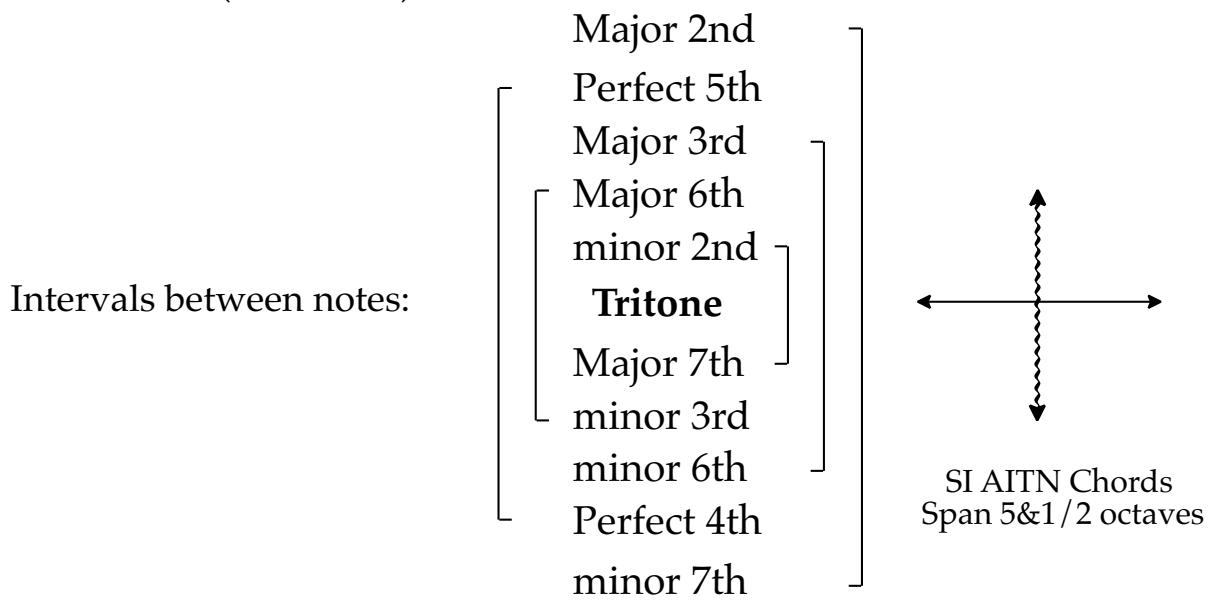
Ian Percy

SI AITN 3 Inversion [Interval]: T583E 6 19472. [Literal]: 0T3E21 785946



Trichords: 0&9 = 3-7. T&5 = 3-4. 3&8 = 3-3. E&7 = 3-2. 2&1 = 3-5. 4&6 = 3-8.
Tetrachords: 0&5 = 4-4. T&8 = 4-7. 3&7 = 4-2. **E&1 = 4-z29.** 2* = 4-9. 9&6 = 4-27. 4* = 4-25.
Pentachords: 0T7&8 = 5-3. 3&1 = 5-13. E&2 = 5-19. 5&6 = 5-z38. 9&4 = 5-28.
Hexachords: 0&7 = 6-1. T18&6 = 6-15. **3&2 = 6-z17.** E&9 = 6-30. 5&4 = 6-z43.

SI AITN 3: (Inversion)



Transposable Bass Tone →

Note: Unlike the other options, SI AITN 3 has a fairly equal balance in division of the larger interval types, so both versions (Prime and Inversion) are suitable for orchestral balance and orchestration. Perhaps use **0 = Eb** [no.3] in the overall pitch scheme?

SI AITN 3 Prime [C]: 27491 6 E385T / 0291TE 547386

complement 06 (tritone)

Decachord 10-6: 012346789T **Messiaen Mode VII**

SI AITN 3 Prime: 27491 6 E385T

complement 4-25: 0268

Octachord 8-25: 0124678T **Messiaen Mode VI** (Subsumes both ATH 6-z17)

SI AITN 3 Prime: 27491 6 E385T

complement 6-30: 013679

Hexachord 6-30: 013679 (Subsumes both AIT 4-z29)

SI AITN 3 Prime: 27491 6 E385T

complement 8-9: 01236789 **Messiaen Mode IV**

Tetrachord 4-9: 0167

SI AITN 3 Prime: 27491 6 E385T

tritone pivot: 06 (complement to 10-6)

SI AITN 3 Prime: 27491 6 E385T

SI AITN 3 Inversion [C]: T583E 6 19472/0T3E21 785946

0 10 3 11 2 1 7 8 5 9 4 6

Pentachord 5-3: 01245 Pentachord 5-3: 01245

SI AITN 3 Inversion: T583E 6 19472

complement 4-25: 0268

0 10 3 11 2 1 7 8 5 9 4 6

Tetrachord 4-2: 0124 Tetrachord 4-2: 0124

SI AITN 3 Inversion: T583E 6 19472

complement 6-30: 013679

0 10 3 11 2 1 7 8 5 9 4 6

Trichord 3-7: 025 Trichord 3-2: 013 Trichord 3-2: 013 Trichord 3-7: 025

SI AITN 3 Inversion: T583E 6 19472

0 10 3 11 2 1 7 8 5 9 4 6

Interval class 1 (min2/Maj7)

SI AITN 3 Inversion: T583E 6 19472

0 10 3 11 2 1 7 8 5 9 4 6

tritone pivot: 06 (complement to 10-6)

SI AITN 3 Inversion: T583E 6 19472

0 10 3 11 2 1 7 8 5 9 4 6

SI AITN 3

Combined 20-note Scale [C]

Ian Percy

Note: Symmetrically Inverted SI AITN Chords produce Parallel Inverted Combined Scales

Note: Does not contain ATH*

Inverted Octachord 8-2: 01234568

4-z15: 0146 (AIT)

m6 pivot

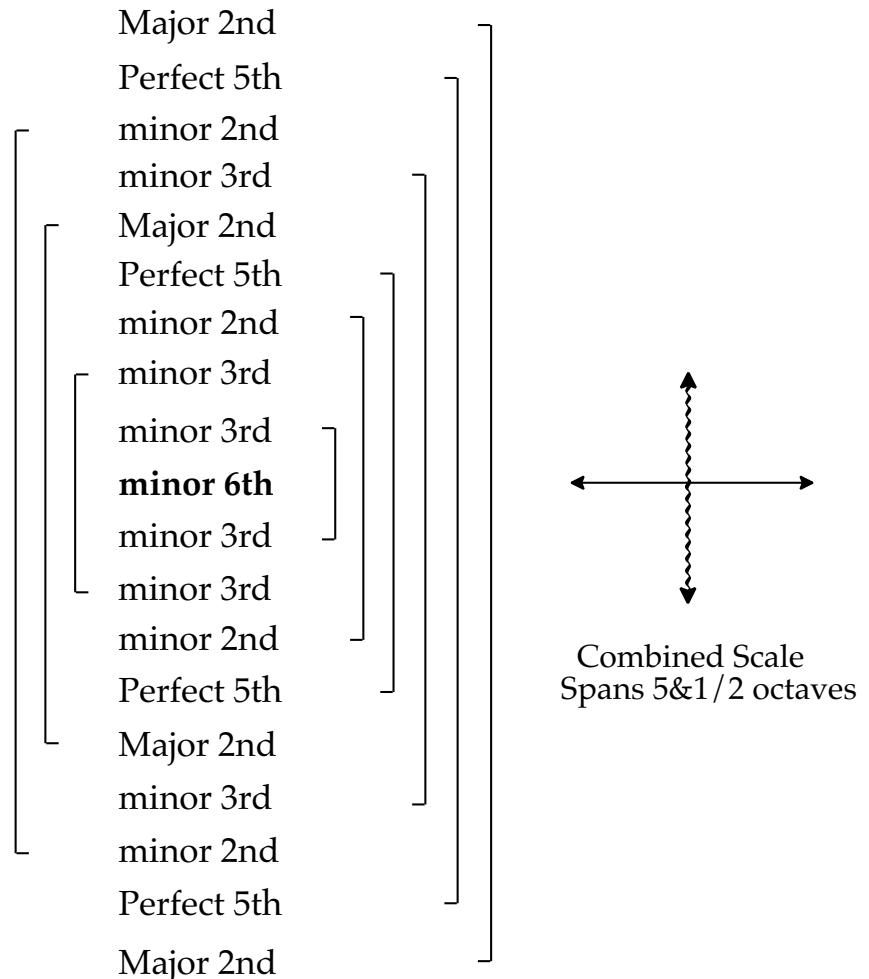
m6 pivot

4-z15: 0146 (AIT)

Prime Form Octachord 8-2: 01234568

SI AITN 3: (Combined Scale)

Intervals between notes:



Transposable Bass Tone: →

SI AITN 58

Prime Form [C]

Ian Percy

SI AITN 58 Prime [Interval]: 21497 6 538ET. [Literal]: 02374E 5T1986

Parent: 6-14: 013458 / 034578

6-14: 013458 (all-combinatorial)

4-14: 0237

4-9: 0167

4-14: 0237

3-2: 013

3-11: 037

3-11: 037

3-2: 013

6-30: 013679 (all-combinatorial)

6-30 subsumes both **4-z29** (AIT)

A musical staff diagram illustrating the prime form of SI AITN 58. The staff consists of two staves: treble and bass. The notes are represented by vertical stems with small horizontal dashes indicating pitch. Below the staff, pitch classes are labeled with their corresponding interval numbers from 0 to 11. The notes are positioned according to these numbers. A bracket labeled "pivot" spans the notes at positions 4 and 5. A bracket below the staff groups the notes at positions 0, 2, 3, 7, 4, 11, 5, 10, 1, 9, 8, and 6. Labels below the staff identify these groups as 6-z17: 012478/014678 (ATH) and 6-z17: 012478/014678 (ATH).

Trichords: 0&9 = 3-2. 2&1 = 3-4. 3&T = 3-3. 7&5 = 3-11. 4&E = 3-5. 8&6 = 3-8.

Tetrachords: 0&1 = 4-14. 2&T = 4-4. 3&5 = 4-19. 7&E = **4-z29**. 4* = 4-9. 9&6 = 4-12. 8* = 4-25.

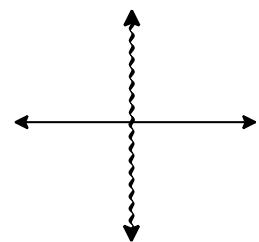
Pentachords: 0&T = 5-11. 2&5 = 5-z37. 3&E = 5-13. 7&4 = 5-19. 1&6 = 5-z18. 9&8 = 5-28.

Hexachords: 0&5 = **6-14**. 2&E = 6-z39. 3&4 = **6-z17**. 7&9 = 6-30. T&6 = 6-z10. 1&8 = 6-z43.

SI AITN 58: (Prime form)

Intervals between notes:

- minor 7th
- Major 7th
- minor 6th
- minor 3rd
- Perfect 4th
- Tritone**
- Perfect 5th
- Major 6th
- Major 3rd
- minor 2nd
- Major 2nd



SI AITN Chords
Span 5&1/2 octaves

Transposable Bass Tone →

Note: The **inversion** of SI AITN 58 would be a more idiomatic choice for vertical orchestration and orchestral balance, as then most of the larger interval types would be in the bass register (space for resonance) ... Perhaps use **0 = Bb** [no.58] in the overall pitch scheme?

SI AITN 58

Inversion [C]

Ian Percy

SI AITN 58 Inversion [Interval]: ET835 6 79412. [Literal]: 0T9581 72E346

Parent: 6-14: 013458 / 034578 **6-14:** 013458 (all-combinatorial)

4-14: 0237

4-9: 0167

4-14: 0237

3-2: 013

3-11: 037

3-11: 037

3-2: 013

6-30: 013679 (all-combinatorial)

6-30 subsumes both 4-z29 (AIT)

m7 M7 m6 m3 P4 Tt P5 M6 M3 m2 M2

0 10 9 5 8 1 7 2 11 3 4 6

pivot

6-z17: 012478/014678 (ATH)

6-z17: 012478/014678 (ATH)

Trichords: 0&3 = 3-2. T&E = 3-4. 9&2 = 3-3. 5&7 = 3-11. 8&1 = 3-5. 4&6 = 3-8.

Tetrachords: 0&E = 4-14. T&2 = 4-4. 9&7 = 4-19. 5&1 = 4-z29. 8* = 4-9. 3&6 = 4-12. 4* = 4-25.

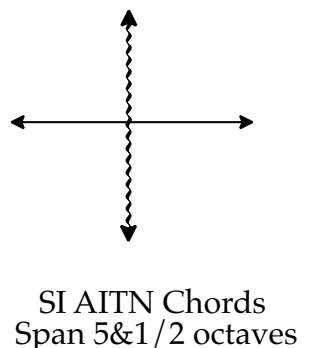
Pentachords: 0&2 = 5-11. T&7 = 5-z37. 9&1 = 5-13. 5&8 = 5-19. E&6 = 5-z18. 3&4 = 5-28.

Hexachords: 0&7 = 6-14. T&1 = 6-z39. 9&8 = 6-z17. 5&3 = 6-30. 2&6 = 6-z10. E&4 = 6-z43.

SI AITN 58: (Inversion)

Intervals between notes:

Major 2nd
minor 2nd
Major 3rd
Major 6th
Perfect 5th
Tritone
Perfect 4th
minor 3rd
minor 6th
Major 7th
minor 7th



Transposable Bass Tone →

Note: This **inversion** of SI AITN 58 is a more idiomatic choice for vertical orchestration and orchestral balance, as most of the larger interval types are in the bass register ... Perhaps use **0 = Bb** [no.58] in the overall pitch scheme?

SI AITN 58 Prime [C]: 21497 6 538ET / 02374E 5T1986

complement 06 (tritone)

Decachord 10-6: 012346789T **Messiaen Mode VII**

Notes shown: 0, 2, 3, 7, 4, 11, 5, 10, 1, 9, 8, 6.

SI AITN 58 Prime: 21497 6 538ET

complement 4-25: 0268

Octachord 8-25: 0124678T **Messiaen Mode VI** (Subsumes both ATH 6-z17)

Notes shown: 0, 2, 3, 7, 4, 11, 5, 10, 1, 9, 8, 6.

SI AITN 58 Prime: 21497 6 538ET

complement 6-30: 013679

Hexachord 6-30: 013679 (Subsumes both AIT 4-z29)

Notes shown: 0, 2, 3, 7, 4, 11, 5, 10, 1, 9, 8, 6.

SI AITN 58 Prime: 21497 6 538ET

complement 8-9: 01236789 **Messiaen Mode IV**

Tetrachord 4-9: 0167

Notes shown: 0, 2, 3, 7, 4, 11, 5, 10, 1, 9, 8, 6.

SI AITN 58 Prime: 21497 6 538ET

tritone pivot: 06 (complement to 10-6)

Notes shown: 0, 2, 3, 7, 4, 11, 5, 10, 1, 9, 8, 6.

SI AITN 58 Prime: 21497 6 538ET

Notes shown: 0, 2, 3, 7, 4, 11, 5, 10, 1, 9, 8, 6.

SI AITN 58 Inversion [C]: ET835 6 79412 / 0T9581 72E346

0 10 9 5 8 1 7 2 11 3 4 6
 Pentachord 5-z37: 03458 Pentachord 5-z37: 03458

SI AITN 58 Inversion: ET835 6 79412

complement 4-25: 0268

0 10 9 5 8 1 7 2 11 3 4 6
 Tetrachord 4-19: 0148 Tetrachord 4-19: 0148

SI AITN 58 Inversion: ET835 6 79412

complement 6-30: 013679

0 10 9 5 8 1 7 2 11 3 4 6
 Trichord 3-2: 013 Trichord 3-11: 037 Trichord 3-11: 037 Trichord 3-2: 013

SI AITN 58 Inversion: ET835 6 79412

0 10 9 5 8 1 7 2 11 3 4 6
 Interval class 5 (P4th/P5th)

SI AITN 58 Inversion: ET835 6 79412

0 10 9 5 8 1 7 2 11 3 4 6
 tritone pivot: 06 (complement to 10-6)

SI AITN 58 Inversion: ET835 6 79412

0 10 9 5 8 1 7 2 11 3 4 6

SI AITN 58

Combined 20-note Scale [C]

Ian Percy

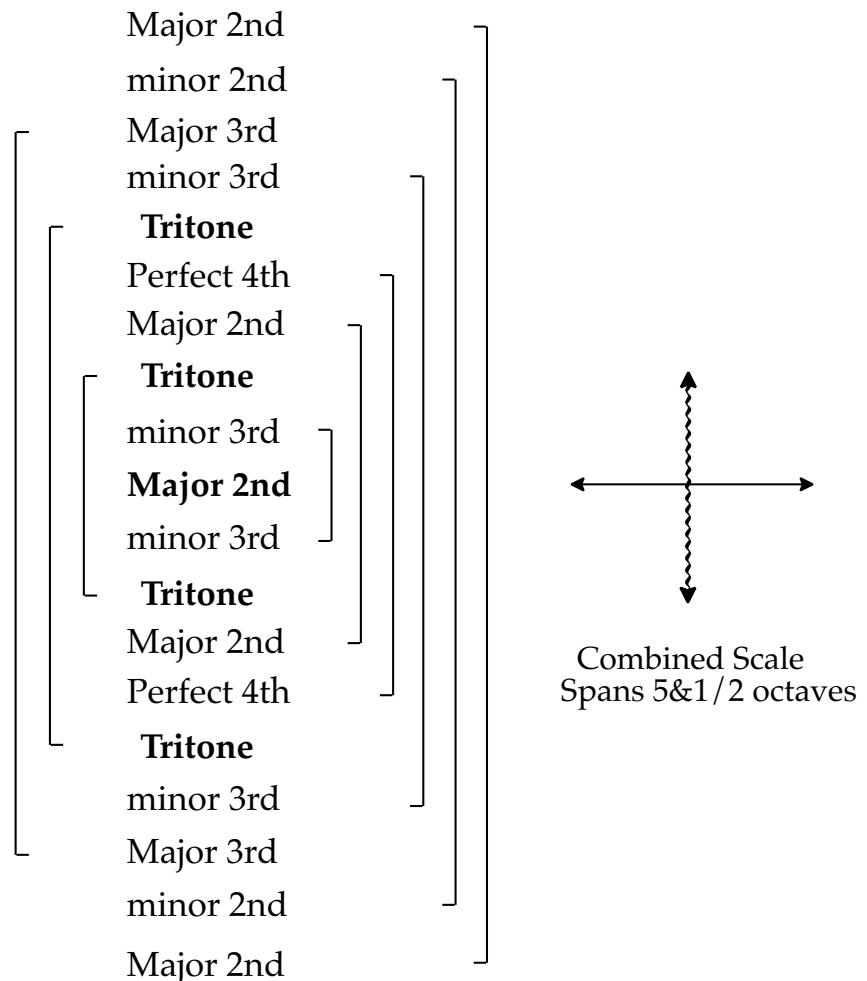
Note: Symmetrically Inverted SI AITN Chords produce Parallel Inverted Combined Scales

Note: Does not contain AIT*

Inverted Decachord 10-5: 012345789T

SI AITN 58: (Combined Scale)

Intervals between notes:



Transposable Bass Tone: →

SI AITN 60

Prime Form [C]

Ian Percy

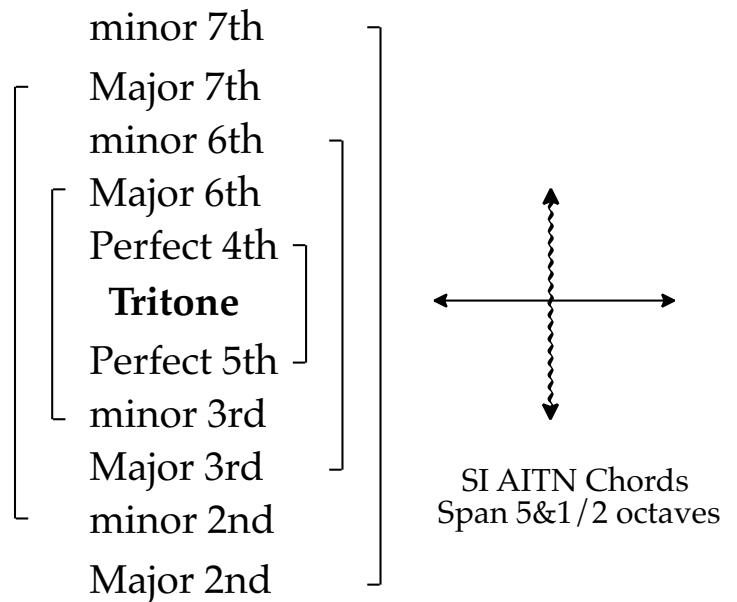
SI AITN 60 Prime [Interval]: 21437 6 598ET. [Literal]: 0237T5 E41986

The diagram shows a musical staff with two staves: treble and bass. The top staff has a treble clef and the bottom staff has a bass clef. The staff is divided into measures by vertical bar lines. Below the staff, note heads are labeled with intervals: M2, m2, M3, m3, P5, Tt, P4, M6, m6, M7, m7. Below these labels are numerical values: 0, 2, 3, 7, 10, 5, 11, 4, 1, 9, 8, 6. A bracket under the notes from 5 to 11 is labeled "pivot". A bracket under the notes from 10 to 11 is labeled "6-z17: 012478/014678 (ATH)". Another bracket under the notes from 11 to 12 is labeled "6-z17: 012478/014678 (ATH)". Above the staff, there are several hierarchical levels of brackets. The top level shows "Parent: 6-32: 024579" and "6-32: 024579 (all-combinatorial)". Below these are "4-14: 0237", "4-9: 0167", and "4-14: 0237". Further down are "3-2: 013", "3-7: 025", "3-7: 025", and "3-2: 013". The bottom-most bracket is labeled "6-30: 013679 (all-combinatorial)" and "6-30 subsumes both 4-z15 (AIT)". The staff itself consists of vertical stems with note heads, some with sharp or flat symbols. The bass staff includes a bass clef, a key signature of one sharp, and a time signature of common time.

Trichords: 0&9 = 3-2. 2&1 = 3-4. 3&4 = 3-11. 7&E = 3-7. T&5 = 3-5. 8&6 = 3-8.
Tetrachords: 0&1 = 4-14. 2&4 = 4-20. 3&E = 4-22. 7&5 = 4-z15. T* = 4-9. 9&6 = 4-12. 8* = 4-25.
Pentachords: 02E&4 = 5-27. 3&5 = 5-30. 7&T = 5-19. 1&6 = 5-z18. 9&8 = 5-28.
Hexachords: 0&E = 6-32. 254&6 = 6-31. 3&T = 6-z17. 7&9 = 6-30. 1&8 = 6-z43.

SI AITN 60: (Prime form)

Intervals between notes:



Transposable Bass Tone →

Note: The inversion of SI AITN 60 would be a more idiomatic choice for vertical orchestration and orchestral balance, as then most of the larger interval types would be in the bass register (space for resonance) ... 3rd mvt. material. Perhaps 0 = C, but up an octave?

SI AITN 60

Inversion [C]

Ian Percy

SI AITN 60 Inversion [Interval]: TE895 6 73412. [Literal]: 0T9527 18E346

Parent: 6-32: 024579 6-32: 024579 (all-combinatorial)

4-14: 0237 4-9: 0167 4-14: 0237

3-2: 013 3-7: 025 3-7: 025 3-2: 013

6-30: 013679 (all-combinatorial)
6-30 subsumes both 4-z15 (AIT)

m7 M7 m6 M6 P4 Tt P5 m3 M3 m2 M2
0 10 9 5 2 7 1 8 11 3 4 6

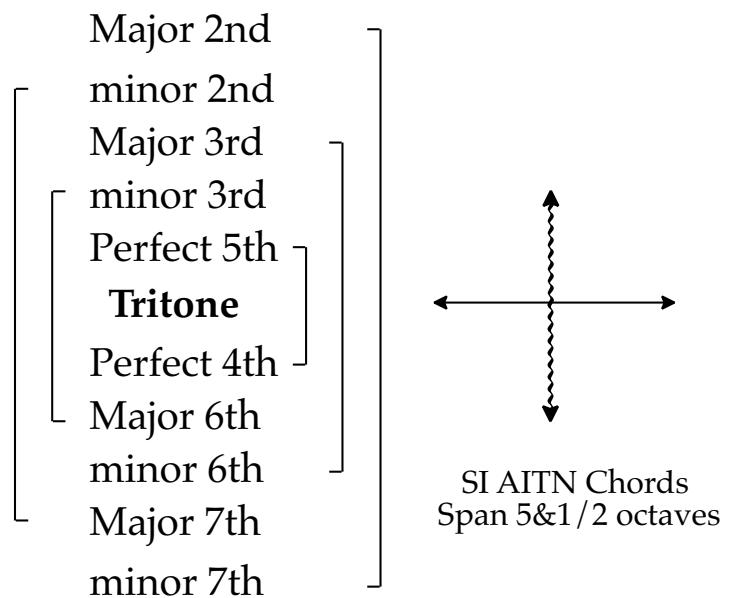
pivot

6-z17: 012478/014678 (ATH)
6-z17: 012478/014678 (ATH)

Trichords: 0&3 = 3-2. T&E = 3-4. 9&8 = 3-11. 5&1 = 3-7. 2&7 = 3-5. 4&6 = 3-8.
Tetrachords: 0&E = 4-14. T&8 = 4-20. 9&1 = 4-22. 5&7 = 4-z15. 2* = 4-9. 3&6 = 4-12. 4* = 4-25.
Pentachords: 0T1&8 = 5-27. 9&7 = 5-30. 5&2 = 5-19. E&6 = 5-z18. 3&4 = 5-28.
Hexachords: 0&1 = 6-32. T78&6 = 6-31. 9&2 = 6-z17. 5&3 = 6-30. E&4 = 6-z43.

SI AITN 60: (Inversion)

Intervals between notes:



Transposable Bass Tone →

Note: This inversion of SI AITN 60 is a more idiomatic choice for vertical orchestration and orchestral balance, as most of the larger interval types are in the bass register ... Consider this as 3rd movement material. Perhaps use 0 = C, but up an octave?

SI AITN 60 Prime [C]: 21437 6 598ET / 0237T5 E41986

complement 06 (tritone)

Decachord 10-6: 012346789T **Messiaen Mode VII**

SI AITN 60 Prime: 21437 6 598ET

complement 4-25: 0268

Octachord 8-25: 0124678T **Messiaen Mode VI** (Subsumes both ATH 6-z17)

SI AITN 60 Prime: 21437 6 598ET

complement 6-30: 013679

Hexachord 6-30: 013679 (Subsumes both AIT 4-z15)

SI AITN 60 Prime: 21437 6 598ET

complement 8-9: 01236789 **Messiaen Mode IV**

Tetrachord 4-9: 0167

SI AITN 60 Prime: 21437 6 598ET

tritone pivot: 06 (complement to 10-6)

SI AITN 60 Prime: 21437 6 598ET

SI AITN 60 Inversion [C]: TE895 6 73412 / 0T9527 18E346

SI AITN 60 Inversion: TE895 6 73412

complement 4-25: 0268

SI AITN 60 Inversion: TE895 6 73412

complement 6-30: 013679

SI AITN 60 Inversion: TE895 6 73412

SI AITN 60 Inversion: TE895 6 73412

SI AITN 60 Inversion: TE895 6 73412

SI AITN 60

Combined 20-note Scale [C]

Ian Percy

Note: Symmetrically Inverted SI AITN Chords produce Parallel Inverted Combined Scales

Inverted Nonachord 9-9: 01235678T

6-z17: 012478 (ATH)

4-z15: 0146 (AIT)

M2 m2 M3 m3 P5 M3 M2 P4 m2 **m6** m2 P4 M2 M3 P5 m3 M3 m2 M2

0 2 3 7 10 5 9 11 4 5 1 2 7 9 1 8 11 3 4 6

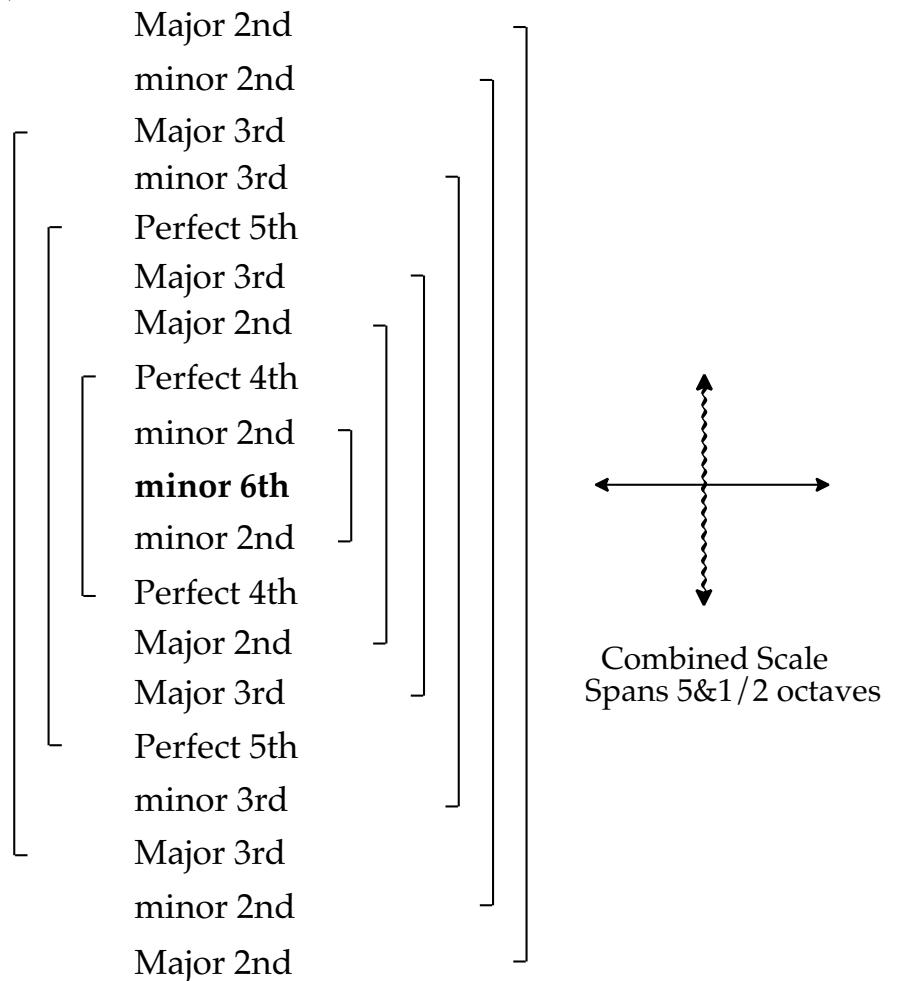
m6 pivot

6-z17: 012478 (ATH)

Prime Form Nonachord 9-9: 01235678T

SI AITN 60: (Combined Scale)

Intervals between notes:



Transposable Bass Tone: →

SI AITN 3

Prime Form [E \flat]

Ian Percy

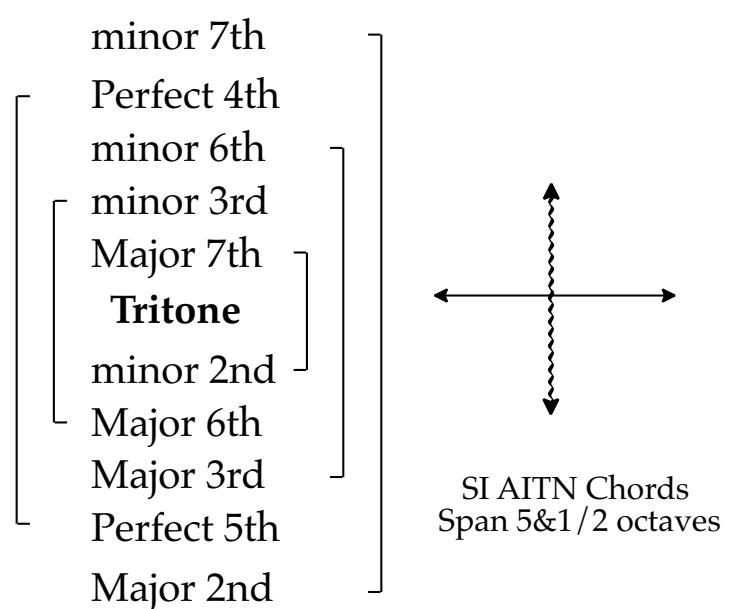
SI AITN 3 [P3] Prime [E \flat] [Interval]: 27491 6 E385T [Literal E \flat]: 350412 87T6E9

M2 P5 M3 M6 m2 Tt M7 m3 m6 P4 m7
3 5 0 4 1 2 8 7 10 6 11 9

Note: If one plays the retrograde (R) row in parallel with the prime (P) row, the resultant vertical interval is always a tritone.

SI AITN 3: (Prime form)

Intervals between notes:



Transposable Bass Tone →

SI AITN 3

Inversion [E♭]

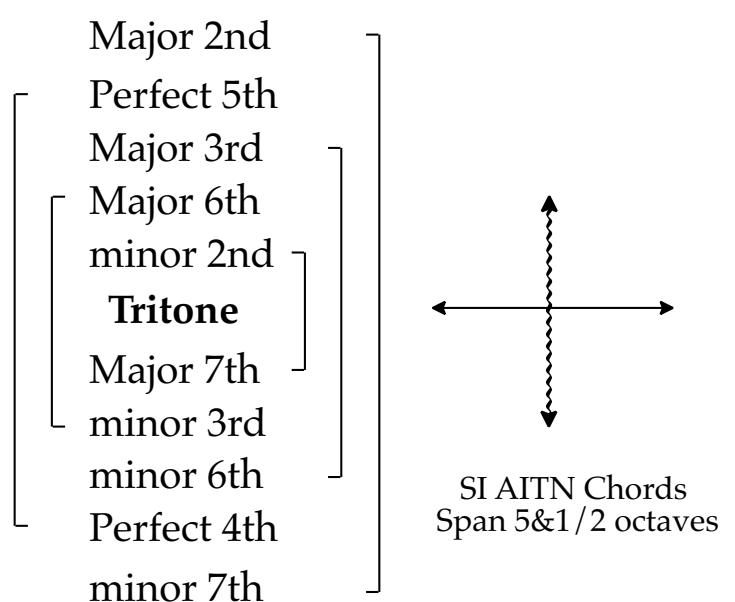
Ian Percy

SI AITN 3 [I3] Inversion [E♭] [Interval]: T583E 6 19472 [Literal E♭]: 316254 TE8079

Note: If one plays the retrograde inversion (RI) row in parallel with the inverted (I) row, the resultant vertical interval is always a tritone.

SI AITN 3: (Inversion)

Intervals between notes:



Transposable Bass Tone →

SI AITN 3 Prime [Eb]: 27491 6 E385T/350412 87T6E9

A musical staff in treble clef with a key signature of one flat. The notes are represented by vertical stems with small circles at the top. Below the staff, the notes are labeled with their corresponding numbers: 3, 5, 0, 4, 1, 2, 8, 7, 10, 6, 11, 9.

SI AITN 3 Prime [Eb]: 27491 6 E385T/350412 87T6E9

A musical staff in treble clef with a key signature of one flat. The notes are represented by vertical stems with small circles at the top. Below the staff, the notes are labeled with their corresponding numbers: 3, 5, 0, 4, 1, 2, 8, 7, 10, 6, 11, 9.

SI AITN 3 Prime [Eb]: 27491 6 E385T/350412 87T6E9

A musical staff in treble clef with a key signature of one flat. The notes are represented by vertical stems with small circles at the top. Below the staff, the notes are labeled with their corresponding numbers: 3, 5, 0, 4, 1, 2, 8, 7, 10, 6, 11, 9.

SI AITN 3 Prime [Eb]: 27491 6 E385T/350412 87T6E9

A musical staff in treble clef with a key signature of one flat. The notes are represented by vertical stems with small circles at the top. Below the staff, the notes are labeled with their corresponding numbers: 3, 5, 0, 4, 1, 2, 8, 7, 10, 6, 11, 9.

SI AITN 3 Prime [Eb]: 27491 6 E385T/350412 87T6E9

A musical staff in treble clef with a key signature of one flat. The notes are represented by vertical stems with small circles at the top. Below the staff, the notes are labeled with their corresponding numbers: 3, 5, 0, 4, 1, 2, 8, 7, 10, 6, 11, 9.

SI AITN 3 Prime [Eb]: 27491 6 E385T/350412 87T6E9

A musical staff in treble clef with a key signature of one flat. The notes are represented by vertical stems with small circles at the top. Below the staff, the notes are labeled with their corresponding numbers: 3, 5, 0, 4, 1, 2, 8, 7, 10, 6, 11, 9.

SI AITN 3 Inversion [Eb]: T583E 6 19472 / 316254 TE8079

A musical staff in G clef and common time. The notes are: B, A, G, F, E, D, C, B, A, G, F, E, D, C, B. Below the staff are the numbers: 3, 1, 6, 2, 5, 4, 10, 11, 8, 0, 7, 9.

SI AITN 3 Inversion [Eb]: T583E 6 19472 / 316254 TE8079

A musical staff in G clef and common time. The notes are: B, A, G, F, E, D, C, B, A, G, F, E, D, C, B. Below the staff are the numbers: 3, 1, 6, 2, 5, 4, 10, 11, 8, 0, 7, 9.

SI AITN 3 Inversion [Eb]: T583E 6 19472 / 316254 TE8079

A musical staff in G clef and common time. The notes are: B, A, G, F, E, D, C, B, A, G, F, E, D, C, B. Below the staff are the numbers: 3, 1, 6, 2, 5, 4, 10, 11, 8, 0, 7, 9.

SI AITN 3 Inversion [Eb]: T583E 6 19472 / 316254 TE8079

A musical staff in G clef and common time. The notes are: B, A, G, F, E, D, C, B, A, G, F, E, D, C, B. Below the staff are the numbers: 3, 1, 6, 2, 5, 4, 10, 11, 8, 0, 7, 9.

SI AITN 3 Inversion [Eb]: T583E 6 19472 / 316254 TE8079

A musical staff in G clef and common time. The notes are: B, A, G, F, E, D, C, B, A, G, F, E, D, C, B. Below the staff are the numbers: 3, 1, 6, 2, 5, 4, 10, 11, 8, 0, 7, 9.

SI AITN 3 Inversion [Eb]: T583E 6 19472 / 316254 TE8079

A musical staff in G clef and common time. The notes are: B, A, G, F, E, D, C, B, A, G, F, E, D, C, B. Below the staff are the numbers: 3, 1, 6, 2, 5, 4, 10, 11, 8, 0, 7, 9.

SI AITN 3

Combined 20-note Scale [E♭]

Ian Percy

Note: Symmetrically Inverted SI AITN Chords produce Parallel Inverted Combined Scales

Note: Does not contain ATH*

Inverted Octachord 8-2: 01234568

4-z15: 0146 (AIT)

m6 pivot

M2 P5 m2 m3 M2 P5 m2 m3 m3 m6 m3 m3 m2 P5 M2 m3 m2 P5 M2

3 5 0 1 4 6 1 2 5 8 4 7 10 11 6 8 11 0 7 9

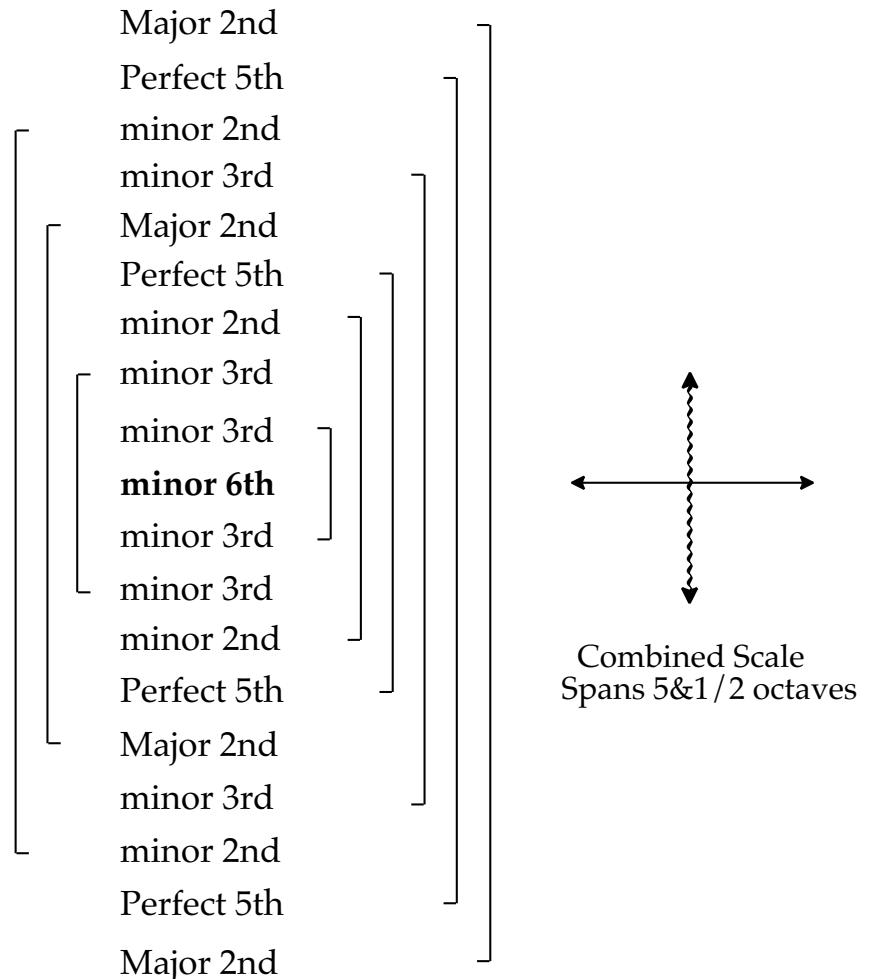
m6 pivot

4-z15: 0146 (AIT)

Prime Form Octachord 8-2: 01234568

SI AITN 3: (Combined Scale)

Intervals between notes:



Transposable Bass Tone: →

SI AITN 58

Prime Form [B \flat]

Ian Percy

SI AITN 58 [P10] Prime [B \flat] [Interval]: 21497 6 538ET [Literal B \flat]: T01529 38E764

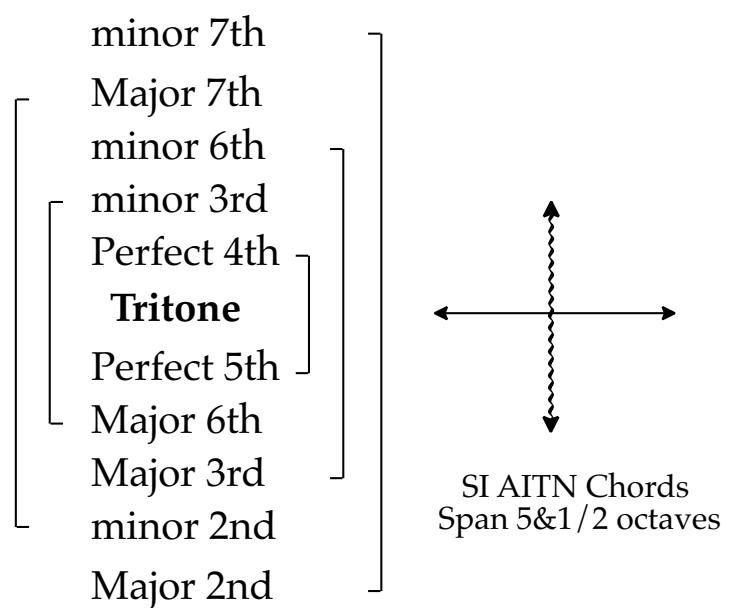
A musical staff with two staves: treble and bass. The notes are represented by vertical stems with small circles at the top. Below the staff, the notes are labeled with their corresponding intervals:

M2	m2	M3	M6	P5	Tt	P4	m3	m6	M7	m7
10	0	1	5	2	9	3	8	11	7	6

Note: If one plays the retrograde (R) row in parallel with the prime (P) row, the resultant vertical interval is always a tritone.

SI AITN 58: (Prime form)

Intervals between notes:



Transposable Bass Tone →

SI AITN 58

Inversion [B♭]

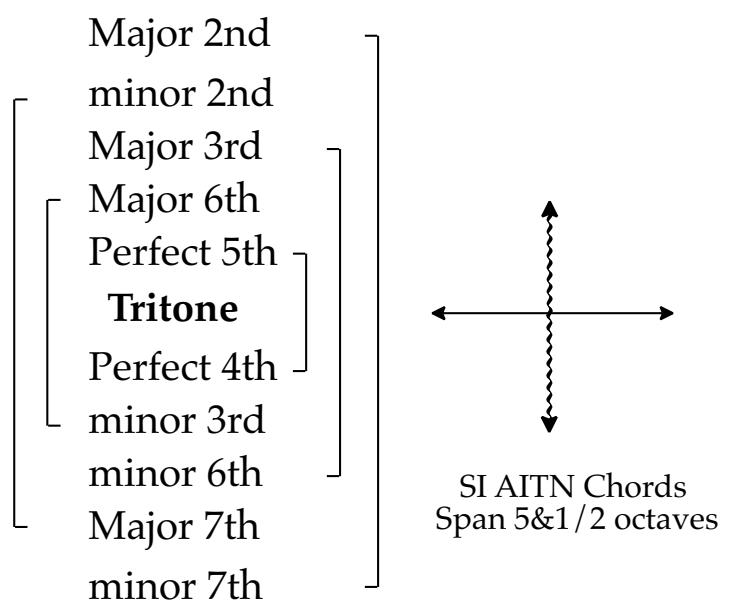
Ian Percy

SI AITN 58 [I10] Inversion [B♭] [Interval]: ET835 6 79412 [Literal B♭]: T8736E 509124

Note: If one plays the retrograde inversion (RI) row in parallel with the inverted (I) row, the resultant vertical interval is always a tritone.

SI AITN 58: (Inversion)

Intervals between notes:



Transposable Bass Tone →

SI AITN 58 Prime [Bb]: 21497 6 538ET / T01529 38E764

10 0 1 5 2 9 3 8 11 7 6 4

SI AITN 58 Prime [Bb]: 21497 6 538ET / T01529 38E764

10 0 1 5 2 9 3 8 11 7 6 4

SI AITN 58 Prime [Bb]: 21497 6 538ET / T01529 38E764

10 0 1 5 2 9 3 8 11 7 6 4

SI AITN 58 Prime [Bb]: 21497 6 538ET / T01529 38E764

10 0 1 5 2 9 3 8 11 7 6 4

SI AITN 58 Prime [Bb]: 21497 6 538ET / T01529 38E764

10 0 1 5 2 9 3 8 11 7 6 4

SI AITN 58 Prime [Bb]: 21497 6 538ET / T01529 38E764

10 0 1 5 2 9 3 8 11 7 6 4

SI AITN 58 Inversion [Bb]: ET835 6 79412/T8736E 509124

10 8 7 3 6 11 5 0 9 1 2 4

SI AITN 58 Inversion [Bb]: ET835 6 79412/T8736E 509124

10 8 7 3 6 11 5 0 9 1 2 4

SI AITN 58 Inversion [Bb]: ET835 6 79412/T8736E 509124

10 8 7 3 6 11 5 0 9 1 2 4

SI AITN 58 Inversion [Bb]: ET835 6 79412/T8736E 509124

10 8 7 3 6 11 5 0 9 1 2 4

SI AITN 58 Inversion [Bb]: ET835 6 79412/T8736E 509124

10 8 7 3 6 11 5 0 9 1 2 4

SI AITN 58 Inversion [Bb]: ET835 6 79412/T8736E 509124

10 8 7 3 6 11 5 0 9 1 2 4

SI AITN 58

Combined 20-note Scale [B♭]

Ian Percy

Note: Symmetrically Inverted SI AITN Chords produce Parallel Inverted Combined Scales

Note: Does not contain AIT*

Inverted Decachord 10-5: 012345789T

6-z17: 012478 (ATH)

M2 Pivot

M2 m2 M3 m3 Tt P4 M2 Tt m3 M2 m3 Tt M2 P4 Tt m3 M3 m2 M2
10 0 1 5 8 2 7 9 3 6 8 11 5 7 0 6 9 1 2 4

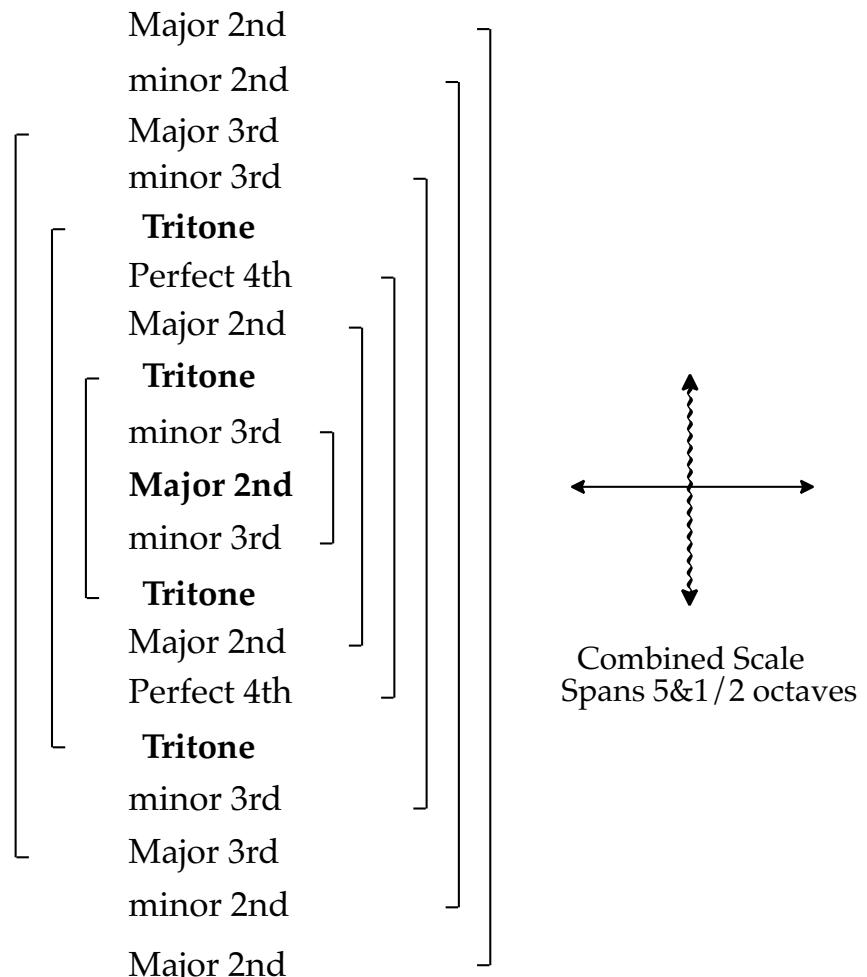
M2 Pivot

6-z17: 012478 (ATH)

Prime Form Decachord 10-5: 012345789T

SI AITN 58: (Combined Scale)

Intervals between notes:



Transposable Bass Tone: →