

Operations available in the Voice-Leading Space for Trichords

SC	operations one by one						same operations two by two						complimentary operations two by two						complimentary operations three by three										
	E1	E2	E3	S	E1+	E1-	E2+	E2-	E3+	E3-	E1+ E2+	E1- E2-	E1+ E3+	E1- E3-	E2+ E3+	E2- E3-	E1+ E2-	E1- E2+	E1+ E3-	E1- E3+	E2+ E3-	E2- E3+	E1+ E2+ E3-	E1- E2- E3+	E1+ E2- E3+	E1- E2+ E3-	E1- E2+ E3+	E1+ E2- E3-	
3-1 (012)	0	1	2	3	112	B12	022	002	013	011	122	B02	113	B11	023	001	102	B22	111	B13	021	003	121	B03	103	B21	B23	101	
3-2 (013)	0	1	3	4	113	B13	023	003	014	012	123	B03	114	B12	024	002	103	B23	112	B14	022	004	122	B04	104	B22	B24	102	
3-3 (014)	0	1	4	5	114	B14	024	004	015	013	124	B04	115	B13	025	003	104	B24	113	B15	023	005	123	B05	105	B23	B25	103	
3-4 (015)	0	1	5	6	115	B15	025	005	016	014	125	B05	116	B14	026	004	105	B25	114	B16	024	006	124	B06	106	B24	B26	104	
3-5 (016)	0	1	6	7	116	B16	026	006	017	015	126	B06	117	B15	027	005	106	B26	115	B17	025	007	125	B07	107	B25	B27	105	
3-6 (024)	0	2	4	6	124	B24	034	014	025	023	134	B14	125	B23	035	013	114	B34	123	B25	033	015	133	B15	115	B33	B35	113	
3-7 (025)	0	2	5	7	125	B25	035	015	026	024	135	B15	126	B24	036	014	115	B35	124	B26	034	016	134	B16	116	B34	B36	114	
3-8 (026)	0	2	6	8	126	B26	036	016	027	025	136	B16	127	B25	037	015	116	B36	125	B27	035	017	135	B17	117	B35	B37	115	
3-9 (027)	0	2	7	9	127	B27	037	017	028	026	137	B17	128	B26	038	016	117	B37	126	B28	036	018	136	B18	118	B36	B38	116	
3-10 (036)	0	3	6	9	136	B36	046	026	037	035	146	B26	137	B35	047	025	126	B46	135	B37	045	027	145	B27	127	B45	B47	125	
3-11 (037)	0	3	7	10	137	B37	047	027	038	036	147	B27	138	B36	048	026	127	B47	136	B38	046	028	146	B28	128	B46	B48	126	
3-12 (048)	0	4	8	12	148	B48	058	038	049	047	158	B38	149	B47	059	037	138	B58	147	B49	057	039	157	B39	139	B57	B59	137	
SC	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF
3-1 (012)	001	013	022	002	013	011	011	013	002	022	013	001	012	B22	000	024	012	003	001	014	013	001	011	014	015	014	033	025	012
3-2 (013)	002	024	013	003	014	012	012	014	003	013	024	002	013	014	001	025	022	004	011	015	014	003	012	016	015	014	036	013	013
3-3 (014)	003	025	024	004	015	013	013	015	004	024	025	003	014	025	002	026	013	005	012	016	015	014	012	016	015	014	036	013	013
3-4 (015)	004	026	025	005	016	014	014	016	005	025	026	004	015	036	003	027	024	006	013	016	016	016	013	016	016	016	025	037	014
3-5 (016)	005	027	026	006	016	015	015	016	006	026	027	005	016	037	004	026	025	007	014	015	016	016	014	015	016	016	036	037	015
3-6 (024)	013	025	014	014	025	013	013	025	014	014	025	013	003	015	012	036	033	015	022	026	004	044	022	026	016	044	026	002	
3-7 (025)	014	036	025	015	026	024	024	026	015	025	036	014	004	026	013	037	014	016	013	004	027	005	013	027	027	005	015	037	003
3-8 (026)	015	037	036	016	027	025	025	027	016	036	037	015	005	037	014	037	025	016	024	026	006	048	024	026	006	026	048	004	
3-9 (027)	016	037	037	016	026	026	026	026	016	037	037	016	006	048	015	036	036	015	025	025	007	037	025	025	007	037	037	005	
3-10 (036)	025	037	026	026	037	025	025	037	026	026	037	025	015	027	024	048	015	027	014	037	016	016	014	037	016	016	037	014	
3-11 (037)	026	048	037	027	037	036	036	037	027	037	048	026	016	037	025	037	026	026	025	036	016	027	025	036	016	027	037	015	
3-12 (048)	037	037	037	037	037	037	037	037	037	037	037	037	027	036	036	027	027	036	026	026	026	026	026	026	026	026	026	026	026

Legend:  
 SC: Set Class  
 E1, E2, E3: First Element, Second Element, and Third Element of a set  
 S: Sum-Class Number (E1+E2+E3)  
 PF: Prime Form  
 Plus and minus signs mean: add or subtract one semitone to the preceding element.

Note:  
 In the upper table all possible operations are applied to elements of each set-class and results are presented in each line. In the lower table, running in the same column one can find prime forms for the results in the upper table.  
 All possible operations were performed: 1) Addition and subtraction of one semitone to each element taken one by one, 2) Addition and subtraction of one semitone to elements taken two by two with the same kind of operation,  
 3) Addition and Subtraction of one semitone to elements taken two but with complementary operations (adding to one and subtraction from the other), and 4) Addition and subtraction of one semitone to elements taken three by three.  
 Multisets (sets in which elements are allowed to be repeated) are presented here but they will not be considered as part of the voice-leading space.