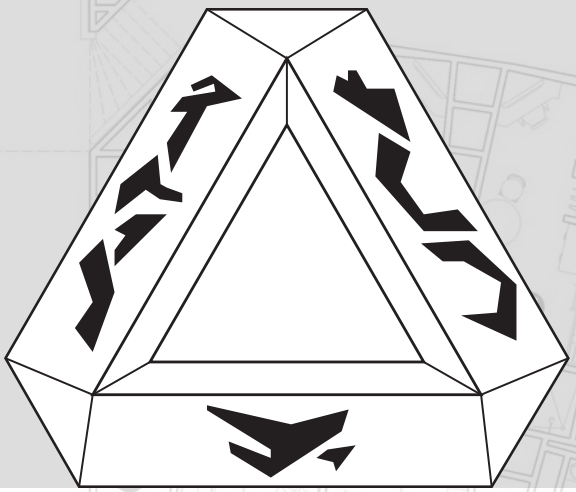

A supplement for use with

STAR TREK®
THE ROLE PLAYING GAME

2204S - Tholian

STARSHIP CONSTRUCTION MANUAL

THOLIAN ASSEMBLY

fasa

COMPUTER CONTROL SYSTEM TYPES

Control Computer Type	System Mass (mt)	Approrpiate Ship Classes	SS Requirement	Maximum WDF Allowed	Availability	Cost (MCr)	Year
TC-1	55	I-III	0.1	2	RRR/46	4	2234
TC-2	490	I-VIII	0.3	17	RRR/35	11	2238
TC-3	515	II-VII	0.9	33	RRR/30	36	2241
TC-4	1,002	III-XI	1.2	46	RRR/28	57	2247
TC-5	5,800	V-XV	1.6	54	RRR/25	68	2249
TC-5A	6,700	V-XVI	2	62	RRR/21	86	2252
TC-6	9,850	VII-XVI	2.5	95	RRR/13	149	2262
TC-7	11,500	VI-XX	3	150	RRR/12	234	2271
TC-8	12,300	X-XX	3.5	210	RRR/10	325	2288
TC-9	7,650	VI-XV	1.1	120	RRR/12	520	2331
TC-9A	9,350	VII-XVIII	1.7	180	RRR/11	670	2332
TC-10	10,300	VIII-XX	2.6	230	RRR/10	1154	2348
TC-11	9,880	VI-XVIII	2.2	195	RRR/11	870	2349
TC-12	13,600	VIII-XIX	2.7	250	RRR/9	1230	2351
TC-12A	15,500	VIII-XX	2.9	275	RRR/9	1465	2360
TC-13	17,260	IX-XX	3.1	310	RRR/8	1575	2363
TC-14	18,500	XI-XX	3.5	360	RRR/7	1658	2365
TC-15	19,700	XII-XX	4.6	380	RRR/6	1789	2369

WARP ENGINE TYPES
Single Nacelle Use

Warp Engine Type	Total Mass (mt)	Power Units Available	Control Computer Required	Stress Column (Eng/SS)	SS Requirememnt	Availability	Cost (MCr)	Year
TWA-1	2,400	8	TC-1	A/B	0.2	III/18	1.8	2238
TWA-2	2,400	10	TC-1	A/B	0.2	III/18	1.9	2243
TWB-1	8,000	14	TC-2	B/H	0.8	III/16	6.3	2241
TWB-2	8,000	18	TC-3	B/H	0.8	III/14	6.6	2247
TWC-1	25,000	18	TC-3	C/E	2	III/14	62	2249
TWC-2	25,000	22	TC-5	C/E	2	III/12	64	2265
TWD-1	30,000	20	TC-2	E/J	2.5	III/13	76	2250
TWD-2	30,000	22	TC-4	E/J	2.5	III/12	77	2267
TWE-1	50,000	20	TC-2	D/H	4.2	III/13	168	2248
TWE-2	50,000	25	TC-2	D/H	4.2	III/11	175	2261
TWF-1	20,000	15	TC-4	G/I	1.7	III/15	32	2252
TWF-2	20,000	22	TC-5	G/I	1.7	III/12	34	2269
TWG-1	28,900	24	TC-3	E/G	2.3	III/11	75	2333
TWG-2	28,900	26	TC-4	E/G	2.3	III/10	76	2343
TWH-1	33,500	28	TC-5	D/F	2.1	III/9	90	2341
TWH-2	33,500	32	TC-5	D/F	2.1	III/8	93	2347
TWI-1	41,500	36	TC-5	E/H	3.2	III/6	119	2346
TWI-2	41,500	37	TC-5A	E/H	3.2	III/5	119	2348
TWJ-1	29,500	25	TC-3	F/J	1.7	III/11	77	2350
TWJ-2	29,500	30	TC-4	F/J	1.7	III/9	81	2355
TWK-1	43,600	40	TC-5A	C/D	4.6	III/4	128	2354
TWK-2	43,600	43	TC-5A	C/D	4.6	III/3	131	2359
TWL-1	61,000	45	TC-5	D/F	5.9	III/2	248	2356
TWL-2	61,000	48	TC-5A	D/F	5.9	III/1	253	2358

WARP ENGINE TYPES
Trinary Nacelle Use

Warp Engine Type	Total Mass (mt)	Power Units Available	Control Computer Required	Stress Column (Eng/SS)	SS Requirememnt	Availability	Cost (MCr)	Year
TWA-1	7,200	9 ea.	TC-2	B/C	0.6	III/18	6	2238
TWA-2	7,200	11 ea.	TC-3	B/C	0.6	III/18	6	2243
TWB-1	24,000	15 ea.	TC-3	D/J	2.4	III/16	21	2241
TWB-2	24,000	19 ea.	TC-4	D/J	2.4	III/14	22	2247
TWC-1	75,000	19 ea.	TC-5	D/H	6	III/14	205	2249
TWC-2	75,000	24 ea.	TC-6	D/H	6	III/12	211	2265
TWD-1	90,000	21 ea.	TC-4	G/L	7.5	III/13	251	2250
TWD-2	90,000	24 ea.	TC-6	G/L	7.5	III/12	254	2267
TWE-1	150,000	21 ea.	TC-4	G/I	12.6	III/13	554	2248
TWE-2	150,000	27 ea.	TC-4	G/I	12.6	III/11	578	2261
TWF-1	60,000	16 ea.	TC-5A	I/K	5.1	III/15	106	2252
TWF-2	60,000	24 ea.	TC-6	I/K	5.1	III/12	112	2269
TWG-1	86,700	26 ea.	TC-5A	F/G	6.9	III/11	248	2333
TWG-2	86,700	28 ea.	TC-5A	F/G	6.9	III/10	251	2343
TWH-1	100,500	30 ea.	TC-6	E/F	6.3	III/9	297	2341
TWH-2	100,500	34 ea.	TC-6	E/F	6.3	III/8	307	2347
TWI-1	124,500	38 ea.	TC-6	F/G	9.6	III/6	393	2346
TWI-2	124,500	39 ea.	TC-6	F/G	9.6	III/5	393	2348
TWJ-1	88,500	27 ea.	TC-6	G/J	5.1	III/11	254	2350
TWJ-2	88,500	32 ea.	TC-6	G/J	5.1	III/9	267	2355
TWK-1	130,800	42 ea.	TC-7	D/E	13.8	III/4	422	2354
TWK-2	130,800	46 ea.	TC-6	D/E	13.8	III/3	432	2359
TWL-1	183,000	48 ea.	TC-7	E/F	17.7	III/2	818	2356
TWL-2	183,000	51 ea.	TC-7	E/F	17.7	III/1	835	2358

MOVEMENT POINT RATIO TABLE: SINGLE WARP ENGINE

Movement Point Ratios

Ship Class	1/2	1/1		2/1			3/1			4/1			5/1	6/1
I	**TWA-1** *23* 8/9 **TWA-2** *28.5* 9/10	**TWA-1** *11.5* 7/9 **TWA-2** *14* 9/10		**TWA-2** *7* 8/10										
II	**TWA-1** *23* 8/9 **TWA-2** *28.5* 9/10	**TWA-1** *11.5* 7/9 **TWA-2** *14* 9/10	**TWB-1** *20* 7/9 **TWB-2** *26* 8/10	**TWA-2** *7* 8/10 **TWB-1** *10* 7/8	**TWB-2** *13* 8/9									
III		**TWB-1** *20* 7/9 **TWB-2** *26* 8/10	**TWF-1** *21.5* 8/9	**TWB-1** *10* 7/8 **TWB-2** *13* 8/9	**TWF-1** *11* 7/9 **TWF-2** *15.5* 7/8		**TWF-2** *10* 6/8							
IV		**TWC-1** *26* 6/7 **TWF-1** *21.5* 8/9		**TWB-1** *10* 7/8 **TWB-2** *13* 8/9 **TWC-1** *13* 5/7 **TWC-2** *15.5* 7/8 **TWD-1** *14* 7/9	**TWD-2** *15.5* 7/8 **TWF-1** *11* 7/9 **TWF-2** *15.5* 7/8 **TWG-1** *17* 8/10 **TWG-2** *18.5* 9/10	**TWH-1** *20* 8/10 **TWH-2** *23* 9/10 **TWJ-1** *18* 8/10 **TWJ-2** *21.5* 8/10	**TWB-1** *6.5* 6/8 **TWB-2** *8.5* 7/9 **TWC-2** *10* 6/8 **TWD-1** *9* 7/8 **TWD-2** *10* 6/8	**TWF-2** *10* 6/8 **TWH-1** *13.5* 8/9 **TWJ-1** *12* 8/9 **TWJ-2** *14* 8/9						
V		**TWC-1** *26* 6/7 **TWF-1** *21.5* 8/9		**TWC-1** *13* 5/7 **TWC-2** *15.5* 7/8 **TWD-1** *14* 7/9 **TWD-2** *15.5* 7/8 **TWE-1** *14* 9/10	**TWE-2** *18* 8/10 **TWF-1** *11* 7/9 **TWG-1** *17* 8/10 **TWG-2** *18.5* 9/10 **TWH-1** *20* 8/10	**TWH-2** *23* 9/10 **TWI-1** *26* 9/10 **TWI-2** *26.5* 9/10 **TWJ-1** *18* 8/10 **TWJ-2** *21.5* 8/10	**TWC-2** *10* 6/8 **TWD-1** *9* 7/8 **TWD-2** *10* 6/8 **TWE-1** *9* 8/10 **TWE-2** *12* 8/9	**TWF-2** *10* 6/8 **TWG-2** *12.5* 8/10 **TWH-1** *13.5* 8/9 **TWH-2** *15* 8/10 **TWI-2** *17.5* 8/10	**TWJ-1** *12* 8/9 **TWJ-2** *14* 8/9 **TWK-1** *19* 8/10 **TWK-2** *20.5* 8/10	**TWK-1** *14* 8/9 **TWK-2** *15.5* 8/9				
VI		**TWC-1** *26* 6/7		**TWC-1** *13* 5/7 **TWC-2** *15.5* 7/8 **TWD-1** *14* 7/9 **TWD-2** *15.5* 7/8 **TWE-1** *14* 9/10 **TWF-1** *11* 7/9	**TWG-1** *17* 8/10 **TWG-2** *18.5* 9/10 **TWH-1** *20* 8/10 **TWH-2** *23* 9/10 **TWI-1** *26* 9/10 **TWI-2** *26.5* 9/10		**TWC-2** *10* 6/8 **TWD-1** *9* 7/8 **TWD-2** *10* 6/8 **TWE-1** *9* 8/10 **TWE-2** *12* 8/9 **TWF-1** *7* 7/8	**TWF-2** *10* 6/8 **TWG-1** *11.5* 8/9 **TWG-2** *12.5* 8/10 **TWH-1** *13.5* 8/9 **TWH-2** *15* 8/10 **TWI-1** *17* 8/10	**TWI-2** *17.5* 8/10 **TWJ-1** *12* 8/9 **TWJ-2** *14* 8/9 **TWK-2** *20.5* 8/10	**TWH-2** *11.5* 8/9 **TWJ-1** *9* 7/9 **TWJ-2** *11* 7/9 **TWK-1** *14* 8/9 **TWK-2** *15.5* 8/9				
VII		**TWC-1** *26* 6/7		**TWC-1** *13* 5/7 **TWC-2** *15.5* 7/8 **TWD-1** *14* 7/9 **TWD-2** *15.5* 7/8 **TWF-1** *11* 7/9 **TWG-1** *17* 8/10	**TWH-1** *20* 8/10 **TWL-1** *32* 9/10 **TWL-2** *34* 8/10		**TWC-2** *10* 6/8 **TWD-1** *9* 7/8 **TWD-2** *10* 6/8 **TWE-1** *9* 8/10 **TWE-2** *12* 8/9 **TWF-1** *7* 7/8	**TWG-1** *11.5* 8/9 **TWG-2** *12.5* 8/10 **TWH-1** *13.5* 8/9 **TWH-2** *15* 8/10 **TWI-1** *17* 8/10 **TWI-2** *17.5* 8/10	**TWJ-1** *12* 8/9 **TWJ-2** *14* 8/9 **TWL-1** *21.5* 8/10 **TWL-2** *23* 8/9	**TWE-1** *7* 8/9 **TWE-2** *9* 7/9 **TWF-2** *8* 6/7 **TWG-2** *9* 8/9 **TWH-1** *10* 7/9 **TWH-2** *11.5* 8/9	**TWI-2** *13* 8/9 **TWJ-1** *9* 7/9 **TWJ-2** *11* 7/9 **TWK-1** *14* 8/9 **TWK-2** *15.5* 8/9		**TWJ-2** *8.5* 7/8 **TWK-1** *11.5* 7/9 **TWK-2** *12* 7/9	**TWK-1** *9.5* 7/8
VIII				**TWC-1** *13* 5/7 **TWC-2** *15.5* 7/8 **TWL-1** *32* 9/10 **TWL-2** *34* 8/10			**TWC-2** *10* 6/8 **TWD-1** *9* 7/8 **TWD-2** *10* 6/8 **TWE-1** *9* 8/10 **TWG-1** *11.5* 8/9	**TWG-2** *12.5* 8/10 **TWH-1** *13.5* 8/9 **TWI-1** *17* 8/10 **TWI-2** *17.5* 8/10 **TWL-1** *21.5* 8/10	**TWL-2** *23* 8/9	**TWD-1** *7* 6/8 **TWD-2** *8* 6/7 **TWE-1** *7* 8/9 **TWE-2** *9* 7/9 **TWG-1** *8.5* 7/9	**TWG-2** *9* 8/9 **TWH-1** *10* 7/9 **TWH-2** *11.5* 8/9 **TWI-1** *13* 8/9 **TWI-2** *13* 8/9	**TWJ-1** *9* 7/9 **TWJ-2** *11* 7/9 **TWK-2** *15.5* 8/9	**TWH-2** *9* 7/9 **TWJ-1** *7* 7/8 **TWJ-2** *8.5* 7/8 **TWK-1** *11.5* 7/9 **TWK-2** *12* 7/9	**TWJ-2** *7* 6/8 **TWK-1** *9.5* 7/8

MOVEMENT POINT RATIO TABLE: SINGLE WARP ENGINE

Movement Point Ratios

Ship Class	2/1	3/1		4/1		5/1			6/1			7/1
IX	**TWL-1** *32* 9/10 **TWL-2** *34* 8/10	**TWD-1** *9* 7/8 **TWD-2** *10* 6/8 **TWL-1** *21.5* 8/10	**TWL-2** *23* 8/9	**TWD-1** *7* 6/8 **TWD-2** *8* 6/7 **TWE-1** *7* 8/9	**TWE-2** *9* 7/9 **TWI-1** *13* 8/9 **TWI-2** *13* 8/9	**TWE-1** *5.5* 7/9 **TWE-2** *7* 7/8 **TWH-1** *8* 7/8	**TWH-2** *9* 7/9 **TWI-2** *10.5* 7/9 **TWK-1** *11.5* 7/9	**TWK-2** *12* 7/9	**TWH-1** *6.5* 6/8 **TWH-2** *7.5* 7/8 **TWK-1** *9.5* 7/8	**TWK-2** *10* 7/8		
X		**TWL-1** *21.5* 8/10 **TWL-2** *23* 8/9		**TWE-1** *7* 8/9 **TWI-1** *13* 8/9	**TWL-1** *16* 8/9 **TWL-2** *17* 7/9	**TWE-1** *5.5* 7/9 **TWE-2** *7* 7/8	**TWI-1** *10* 7/9 **TWI-2** *10.5* 7/9	**TWK-1** *11.5* 7/9 **TWK-2** *12* 7/9	**TWK-1** *9.5* 7/8 **TWK-2** *10* 7/8			
XI		**TWL-1** *21.5* 8/10 **TWL-2** *23* 8/9		**TWL-1** *16* 8/9 **TWL-2** *17* 7/9		**TWE-1** *5.5* 7/9 **TWE-2** *7* 7/8	**TWI-1** *10* 7/9 **TWI-2** *10.5* 7/9	**TWK-2** *12* 7/9	**TWE-1** *5* 7/8 **TWE-2** *6* 6/8	**TWI-1** *8.5* 7/8 **TWI-2** *9* 7/8	**TWK-1** *9.5* 7/8 **TWK-2** *10* 7/8	**TWK-1** *8* 6/8
XII		**TWL-1** *21.5* 8/10	**TWL-2** *23* 8/9	**TWL-1** *16* 8/9	**TWL-2** *17* 7/9	**TWE-1** *5.5* 7/9	**TWL-1** *13* 7/9	**TWL-2** *14* 7/8	**TWE-1** *5* 7/8	**TWE-2** *6* 6/8		
XIII				**TWL-1** *16* 8/9	**TWL-2** *17* 7/9	**TWL-1** *13* 7/9	**TWL-2** *14* 7/8					
XIV				**TWL-1** *16* 8/9	**TWL-2** *17* 7/9	**TWL-1** *13* 7/9	**TWL-2** *14* 7/8					

MOVEMENT POINT RATIO TABLE: TRINARY WARP ENGINE

Movement Point Ratios

Ship Class	2/1		3/1		4/1			5/1			6/1			7/1		8/1
II	**TWA-1** *19* 8/9	**TWA-2** *23.5* 9/10	**TWA-1** *13* 7/9	**TWA-2** *16* 8/10												
III	**TWA-1** *19* 8/9		**TWA-1** *13* 7/9	**TWA-2** *16* 8/10	**TWA-1** *9.5* 7/8											
IV			**TWA-1** *13* 7/9 **TWA-2** *16* 8/10	**TWB-1** *21.5* 8/9 **TWB-2** *27* 9/10	**TWA-1** *9.5* 7/8 **TWB-1** *16* 7/9											
V			**TWB-1** *21.5* 8/9	**TWB-2** *27* 9/10	**TWB-1** *16* 7/9	**TWB-2** *20.5* 8/10										
VI			**TWB-1** *21.5* 8/9 **TWB-2** *27* 9/10	**TWC-1** *27* 8/9 **TWF-1** *23* 9/10	**TWB-1** *16* 7/9 **TWB-2** *20.5* 8/10	**TWC-2** *26* 8/9 **TWF-2** *26* 8/10		**TWC-2** *20.5* 7/9								
VII			**TWC-1** *27* 8/9 **TWD-1** *30* 8/9 **TWF-1** *23* 9/10		**TWB-1** *16* 7/9 **TWB-2** *20.5* 8/10 **TWC-1** *20.5* 7/9 **TWC-2** *26* 8/9	**TWD-1** *22.5* 7/9 **TWD-2** *26* 9/10 **TWF-2** *26* 8/10 **TWG-1** *28* 8/10	**TWG-2** *30* 9/10 **TWJ-1** *29* 8/10	**TWC-2** *20.5* 7/9 **TWD-2** *20.5* 8/10 **TWJ-2** *27.5* 8/10								
VIII			**TWC-1** *27* 8/9 **TWD-1** *30* 8/9 **TWF-1** *23* 9/10		**TWC-1** *20.5* 7/9 **TWC-2** *26* 8/9 **TWD-1** *22.5* 7/9	**TWD-2** *26* 9/10 **TWF-1** *17* 8/10 **TWF-2** *26* 8/10	**TWG-1** *28* 8/10 **TWG-2** *30* 9/10 **TWJ-1** *29* 8/10	**TWC-2** *20.5* 7/9 **TWD-2** *20.5* 8/10 **TWH-1** *26* 9/10	**TWH-2** *29* 9/10 **TWJ-2** *27.5* 8/10								
IX			**TWC-1** *27* 8/9 **TWD-1** *30* 8/9 **TWF-1** *23* 9/10		**TWC-1** *20.5* 7/9 **TWC-2** *26* 8/9 **TWD-1** *22.5* 7/9	**TWD-2** *26* 9/10 **TWF-1** *17* 8/10 **TWF-2** *26* 8/10	**TWG-1** *28* 8/10 **TWG-2** *30* 9/10 **TWJ-1** *29* 8/10	**TWC-2** *20.5* 7/9 **TWD-1** *18* 7/8 **TWD-2** *20.5* 8/10	**TWG-2** *24* 8/10 **TWH-1** *26* 9/10 **TWH-2** *29* 9/10	**TWJ-2** *27.5* 8/10	**TWI-1** *27* 9/10 **TWI-2** *28* 9/10 **TWK-1** *30* 9/10			**TWK-2** *28* 9/10		
X			**TWC-1** *27* 8/9 **TWD-1** *30* 8/9 **TWE-1** *30* 9/10	**TWF-1** *23* 9/10	**TWC-1** *20.5* 7/9 **TWC-2** *26* 8/9 **TWD-1** *22.5* 7/9	**TWD-2** *26* 9/10 **TWE-1** *22.5* 8/10 **TWE-2** *29* 9/10	**TWF-1** *17* 8/10 **TWF-2** *26* 8/10 **TWJ-1** *29* 8/10	**TWC-1** *16* 7/8 **TWC-2** *20.5* 7/9 **TWD-1** *18* 7/8	**TWD-2** *20.5* 8/10 **TWG-1** *22* 8/9 **TWG-2** *24* 8/10	**TWH-1** *26* 9/10 **TWH-2** *29* 9/10 **TWJ-2** *27.5* 8/10	**TWC-2** *17* 7/8 **TWH-2** *24* 8/10 **TWI-1** *27* 9/10	**TWI-2** *28* 9/10 **TWK-1** *30* 9/10		**TWK-2** *28* 9/10		
XI			**TWE-1** *30* 9/10 **TWF-1** *23* 9/10		**TWC-1** *20.5* 7/9 **TWD-1** *22.5* 7/9 **TWE-1** *22.5* 8/10	**TWE-2** *29* 9/10 **TWF-1** *17* 8/10 **TWF-2** *26* 8/10	**TWJ-1** *29* 8/10	**TWC-1** *16* 7/8 **TWC-2** *20.5* 7/9 **TWD-1** *18* 7/8	**TWD-2** *20.5* 8/10 **TWG-1** *22* 8/9 **TWG-2** *24* 8/10	**TWH-1** *26* 9/10 **TWH-2** *29* 9/10 **TWJ-2** *27.5* 8/10	**TWC-2** *17* 7/8 **TWH-2** *24* 8/10 **TWI-1** *27* 9/10	**TWI-2** *28* 9/10 **TWK-1** *30* 9/10		**TWI-1** *23* 8/10 **TWK-2** *28* 9/10		
XII					**TWE-1** *22.5* 8/10 **TWF-1** *17* 8/10			**TWC-1** *16* 7/8 **TWD-1** *18* 7/8 **TWD-2** *20.5* 8/10	**TWE-2** *23* 8/10 **TWF-1** *14* 8/9 **TWF-2** *20.5* 8/9	**TWJ-1** *23* 8/9	**TWC-2** *17* 7/8 **TWG-1** *18.5* 7/9 **TWG-2** *20* 8/9	**TWH-1** *21.5* 8/10 **TWH-2** *24* 8/10 **TWJ-2** *23* 8/9	**TWK-1** *30* 9/10	**TWC-2** *14.5* 6/8 **TWI-1** *23* 8/10 **TWI-2** *24* 8/10	**TWK-2** *28* 9/10 **TWL-1** *29.5* 9/10 **TWL-2** *31* 9/10	**TWK-2** *24.5* 8/10
XIII					**TWE-1** *22.5* 8/10			**TWC-1** *16* 7/8 **TWD-1** *18* 7/8 **TWE-2** *23* 8/10 **TWF-1** *14* 8/9	**TWJ-1** *23* 8/9		**TWC-1** *13.5* 6/8 **TWC-2** *17* 7/8 **TWD-1** *15* 6/8 **TWD-2** *17* 8/9	**TWF-2** *17* 7/9 **TWG-1** *18.5* 7/9 **TWG-2** *20* 8/9 **TWH-1** *21.5* 8/10	**TWH-2** *24* 8/10 **TWJ-2** *23* 8/9	**TWC-2** *14.5* 6/8 **TWH-2** *21* 8/9 **TWI-1** *23* 8/10 **TWI-2** *24* 8/10	**TWK-1** *26* 8/10	**TWK-2** *24.5* 8/10 **TWL-1** *26* 8/10 **TWL-2** *27.5* 8/10

MOVEMENT POINT RATIO TABLE: TRINARY WARP ENGINE

Movement Point Ratios

Ship Class	5/1	6/1			7/1			8/1			9/1			10/1			11/1		
XIV	**TWD-1** *18* 7/8 **TWE-1** *18* 8/9 **TWF-1** *14* 8/9	**TWC-1** *13.5* 6/8 **TWD-1** *15* 6/8 **TWD-2** *17* 8/9	**TWE-2** *19* 8/9 **TWF-2** *17* 7/9 **TWJ-1** *19* 7/9		**TWC-2** *14.5* 6/8 **TWG-1** *16* 7/8 **TWG-2** *17* 7/9	**TWH-1** *18.5* 8/9 **TWH-2** *21* 8/9 **TWJ-2** *19.5* 7/9	**TWK-1** *26* 8/10	**TWI-1** *20.5* 8/9 **TWI-2** *21* 8/9 **TWK-2** *24.5* 8/10	**TWL-1** *26* 8/10 **TWL-2** *27.5* 8/10											
XV	**TWE-1** *18* 8/9	**TWC-1** *13.5* 6/8 **TWD-1** *15* 6/8	**TWD-2** *17* 8/9 **TWE-2** *19* 8/9	**TWJ-1** *19* 7/9	**TWC-2** *14.5* 6/8 **TWG-1** *16* 7/8	**TWG-2** *17* 7/9 **TWH-1** *18.5* 8/9	**TWH-2** *21* 8/9 **TWJ-2** *19.5* 7/9	**TWI-1** *20.5* 8/9 **TWI-2** *21* 8/9	**TWK-1** *22.5* 8/9		**TWK-2** *22* 8/9 **TWL-1** *23* 8/9	**TWL-2** *24* 8/9								
XVI		**TWD-1** *15* 6/8 **TWE-1** *15* 7/9			**TWD-2** *14.5* 7/9 **TWE-2** *16.5* 7/9	**TWJ-1** *16.5* 7/8		**TWH-1** *16* 7/9 **TWH-2** *18* 7/9	**TWI-1** *20.5* 8/9 **TWI-2** *21* 8/9	**TWJ-2** *17* 7/8 **TWK-1** *22.5* 8/9	**TWK-2** *22* 8/9 **TWL-1** *23* 8/9	**TWL-2** *24* 8/9		**TWK-2** *20* 7/9					
XVII		**TWE-1** *15* 7/9			**TWE-2** *16.5* 7/9			**TWH-1** *16* 7/9	**TWH-2** *18* 7/9	**TWK-1** *22.5* 8/9	**TWI-1** *18* 7/9	**TWI-2** *18.5* 7/9	**TWK-2** *22* 8/9	**TWK-2** *20* 7/9	**TWL-1** *20.5* 7/9	**TWL-2** *22* 7/9			
XVIII					**TWE-1** *13* 7/8			**TWE-2** *14.5* 7/8			**TWI-1** *18* 7/9	**TWI-2** *18.5* 7/9	**TWK-2** *22* 8/9	**TWK-2** *20* 7/9	**TWL-1** *20.5* 7/9	**TWL-2** *22* 7/9			
XIX					**TWE-1** *13* 7/8			**TWE-2** *14.5* 7/8			**TWK-1** *20* 7/9			**TWK-2** *20* 7/9			**TWK-2** *18* 7/8	**TWL-1** *19* 7/8	**TWL-2** *20* 7/8
XX								**TWE-1** *11* 6/8			**TWE-2** *13* 6/8						**TWL-1** *19* 7/8	**TWL-2** *20* 7/8	

IMPULSE ENGINE TYPES

Impulse Engine Type	Total Mass (mt)	Power Units Available	Control Computer Required	Ship Classes Powered	SS Requirememnt	Availability	Cost (MCr)	Year
TIA-1	125	1	TC-1	I-I	0.1	RRR/15	2	2234
TIA-2	125	2	TC-1	II-III	0.1	RRR/15	5	2236
TIA-3	125	3	TC-1	II-IV	0.1	RRR/15	6	2240
TIB-1	188	1	TC-1	I-III	0.1	RRR/13	2	2235
TIB-2	188	3	TC-2	I-IV	0.1	RRR/12	5	2241
TIB-3	188	5	TC-2	II-VII	0.1	RRR/10	8	2243
TIC-1	350	4	TC-1	II-IV	0.1	RRR/11	5	2239
TIC-2	350	8	TC-2	III-VIII	0.1	RRR/8	7	2251
TIC-3	350	12	TC-3	IV-IX	0.1	RRR/6	10	2253
TID-1	488	5	TC-2	II-VI	0.1	RRR/9	7	2242
TID-2	488	10	TC-2	IV-VIII	0.1	RRR/7	9	2249
TID-3	488	15	TC-3	V-X	0.1	RRR/3	16	2255
TIE-1	550	10	TC-3	V-IX	0.1	RRR/6	10	2250
TIE-2	550	18	TC-3	VI-XI	0.1	RRR/3	18	2261
TIE-3	550	20	TC-5	VII-XII	0.1	RRR/1	30	2263
TIF-1	790	13	TC-2	III-VII	0.1	RRR/5	14	2257
TIF-2	790	15	TC-5	V-VIII	0.1	RRR/2	17	2257
TIF-3	790	23	TC-5A	VI-XII	0.1	RRR/1	36	2268
TIG-1	1,020	25	TC-4	VII-XII	0.1	RRR/1	41	2271
TIG-2	1,020	30	TC-5	VIII-XIII	0.1	III/1	60	2276
TIG-3	1,020	45	TC-6	IX-XVII	0.1	III/1	82	2284
TIH-1	425	16	TC-2	II-VI	0.1	RRR/4	19	2338
TIH-2	425	19	TC-2	III-VIII	0.1	RRR/2	28	2343
TII-1	326	13	TC-2	II-VII	0.1	RRR/5	15	2342
TII-2	326	14	TC-2	IV-IX	0.1	RRR/3	16	2344
TII-3	326	17	TC-3	V-X	0.1	RRR/2	19	2348
TIJ-1	198	9	TC-1	II-V	0.1	RRR/11	11	2345
TIJ-2	198	10	TC-2	II-VI	0.1	RRR/6	12	2349
TIJ-3	198	13	TC-2	III-VII	0.1	RRR/5	15	2354
TIK-1	615	22	TC-3	VI-XI	0.1	RRR/1	29	2350
TIK-2	615	24	TC-4	VII-XII	0.1	RRR/1	34	2353
TIK-3	615	28	TC-4	VIII-XIII	0.1	RRR/1	38	2356
TIL-1	510	23	TC-3	VI-X	0.1	RRR/1	37	2352
TIL-2	510	29	TC-5	IX-XIV	0.1	RRR/1	40	2357
TIL-3	510	31	TC-4	X-XVII	0.1	III/1	63	2359

MOVEMENT POINT RATIO TABLE: IMPULSE ENGINE

Movement Point Ratios

Ship Class	1/2		1/1		2/1			3/1			4/1			5/1			6/1		
I	TIA-1 *3* TIB-1 *3*	TIB-2 *8.5*	TIA-1 *1.5* TIB-1 *1.5*	TIB-2 *4*	TIA-1 *1* TIB-1 *1*	TIB-2 *2*													
II	TIA-2 *5.5* TIA-3 *8.5* TIB-1 *3* TIB-2 *8.5*	TIB-3 *14* TIC-1 *11.5* TID-1 *14*	TIA-2 *3* TIA-3 *4* TIB-1 *1.5* TIB-2 *4*	TIB-3 *7* TIC-1 *5.5* TID-1 *7*	TIA-2 *1.5* TIA-3 *2* TIB-1 *1* TIB-2 *2*	TIB-3 *3.5* TIC-1 *3* TID-1 *3.5* TIH-1 *11.5*	TII-1 *9* TIJ-1 *6.5* TIJ-2 *7*	TIA-2 *1* TIA-3 *1.5* TIB-1 *1* TIB-2 *1.5*	TIB-3 *2.5* TIC-1 *2* TID-1 *2.5* TIH-1 *7.5*	TII-1 *6* TIJ-1 *4.5* TIJ-2 *5*										
III	TIA-3 *8.5* TIB-2 *8.5* TIB-3 *14* TIC-1 *11.5* TIC-2 *23*	TID-1 *14*	TIA-2 *3* TIA-3 *4* TIB-1 *1.5* TIB-2 *4* TIB-3 *7*	TIC-1 *5.5* TIC-2 *11.5* TID-1 *7* TIF-1 *18.5*	TIA-2 *1.5* TIA-3 *2* TIB-1 *1* TIB-2 *2* TIB-3 *3.5*	TIC-1 *3* TIC-2 *6* TID-1 *3.5* TIF-1 *9* TIH-1 *11.5*	TIH-2 *13.5* TII-1 *9* TIJ-1 *6.5* TIJ-2 *7* TIJ-3 *9*	TIA-2 *1* TIA-3 *1.5* TIB-1 *1* TIB-2 *1.5* TIB-3 *2.5*	TIC-1 *2* TIC-2 *4* TID-1 *2.5* TIF-1 *6* TIH-1 *7.5*	TIH-2 *9* TII-1 *6* TIJ-1 *4.5* TIJ-2 *5* TIJ-3 *6*	TIA-2 *0.5* TIA-3 *1* TIB-1 *0.5* TIB-2 *1* TIB-3 *2*	TIC-1 *1.5* TIC-2 *3* TID-1 *2* TIF-1 *4.5*										
IV	TIA-3 *8.5* TIB-2 *8.5* TIB-3 *14* TIC-1 *11.5* TIC-2 *23* TID-1 *14*		TIA-3 *4* TIB-2 *4* TIB-3 *7* TIC-1 *5.5* TIC-2 *11.5* TIC-3 *17*	TID-1 *7* TID-2 *14* TIF-1 *18.5*	TIA-3 *2* TIB-2 *2* TIB-3 *3.5* TIC-1 *3* TIC-2 *6* TIC-3 *8.5*	TID-1 *3.5* TID-2 *7* TIF-1 *9* TIH-1 *11.5* TIH-2 *13.5* TII-1 *9*	TII-2 *10* TIJ-1 *6.5* TIJ-2 *7* TIJ-3 *9*	TIA-3 *1.5* TIB-2 *1.5* TIB-3 *2.5* TIC-1 *2* TIC-2 *4* TIC-3 *5.5*	TID-1 *2.5* TID-2 *5* TIF-1 *6* TIH-1 *7.5* TIH-2 *9* TII-1 *6*	TII-2 *6.5* TIJ-1 *4.5* TIJ-2 *5* TIJ-3 *6*	TIA-3 *1* TIB-2 *1* TIB-3 *2* TIC-1 *1.5* TIC-2 *3* TIC-3 *4*	TID-1 *2* TID-2 *3.5* TIF-1 *4.5*		TIA-3 *1* TIB-2 *1* TIB-3 *1.5* TIC-1 *1* TIC-2 *2* TIC-3 *3.5*	TID-1 *1.5* TID-2 *3* TIF-1 *4*					
V	TIB-3 *14*		TIB-3 *7* TIC-2 *11.5* TIC-3 *17* TID-1 *7* TID-2 *14* TID-3 *21.5*	TIE-1 *14* TIF-1 *18.5* TIF-2 *21.5*	TIB-3 *3.5* TIC-2 *6* TIC-3 *8.5* TID-1 *3.5* TID-2 *7* TID-3 *11*	TIE-1 *7* TIF-1 *9* TIF-2 *11* TIH-1 *11.5* TIH-2 *13.5* TII-1 *9*	TII-2 *10* TII-3 *12* TIJ-1 *6.5* TIJ-2 *7* TIJ-3 *9*	TIB-3 *2.5* TIC-2 *4* TIC-3 *5.5* TID-1 *2.5* TID-2 *5* TID-3 *7*	TIE-1 *5* TIF-1 *6* TIF-2 *7* TIH-1 *7.5* TIH-2 *9* TII-1 *6*	TII-2 *6.5* TII-3 *8* TIJ-1 *4.5* TIJ-2 *5* TIJ-3 *6*	TIB-3 *2* TIC-2 *3* TIC-3 *4* TID-1 *2* TID-2 *3.5* TID-3 *5*	TIE-1 *3.5* TIF-1 *4.5* TIF-2 *5* TIH-1 *5.5* TIH-2 *7* TII-1 *4.5*	TII-2 *5* TII-3 *6* TIJ-1 *3* TIJ-2 *3.5* TIJ-3 *4.5*	TIB-3 *1.5* TIC-2 *2* TIC-3 *3.5* TID-1 *1.5* TID-2 *3* TID-3 *4*	TIE-1 *3* TIF-1 *4* TIF-2 *4*		TIC-2 *2* TIC-3 *3* TID-1 *1* TID-2 *2* TID-3 *3.5* TIE-1 *2*	TIF-1 *3* TIF-2 *3.5*	
VI			TIB-3 *7* TIC-2 *11.5* TIC-3 *17* TID-2 *14* TID-3 *21.5* TIE-1 *14* TIE-2 *26*	TIF-1 *18.5* TIF-2 *21.5*	TIB-3 *3.5* TIC-2 *6* TIC-3 *8.5* TID-1 *3.5* TID-2 *7* TID-3 *11* TIE-1 *7*	TIE-2 *13* TIF-1 *9* TIF-2 *11* TIF-3 *16.5* TIH-1 *11.5* TIH-2 *13.5* TII-1 *9*	TII-2 *10* TII-3 *12* TIJ-2 *7* TIJ-3 *9* TIK-1 *15.5* TIL-1 *16.5*	TIB-3 *2.5* TIC-2 *4* TIC-3 *5.5* TID-1 *2.5* TID-2 *5* TID-3 *7* TIE-1 *5*	TIE-2 *8.5* TIF-1 *6* TIF-2 *7* TIF-3 *11* TIH-1 *7.5* TIH-2 *9* TII-1 *6*	TII-2 *6.5* TII-3 *8* TIJ-2 *5* TIJ-3 *6* TIK-1 *10* TIL-1 *11*	TIB-3 *2* TIC-2 *3* TIC-3 *4* TID-1 *2* TID-2 *3.5* TID-3 *5* TIE-1 *3.5*	TIE-2 *6.5* TIF-1 *4.5* TIF-2 *5* TIF-3 *8* TIH-1 *5.5* TIH-2 *7* TII-1 *4.5*	TII-2 *5* TII-3 *6* TIJ-2 *3.5* TIJ-3 *4.5* TIK-1 *8* TIL-1 *8*	TIB-3 *1.5* TIC-2 *2* TIC-3 *3.5* TID-1 *1.5* TID-2 *3* TID-3 *4* TIE-1 *3*	TIE-2 *5* TIF-1 *4* TIF-2 *4* TIF-3 *6.5* TIH-1 *4.5* TIH-2 *5.5* TII-1 *4*	TII-2 *4* TII-3 *5* TIJ-2 *3* TIJ-3 *4* TIK-1 *6* TIL-1 *6.5*	TIC-2 *2* TIC-3 *3* TID-1 *1* TID-2 *2* TID-3 *3.5* TIE-1 *2* TIE-2 *4*	TIF-1 *3* TIF-2 *3.5* TIF-3 *5.5* TIH-1 *4* TIH-2 *4.5* TII-1 *3* TII-2 *3.5*	TII-3 *4* TIJ-2 *2* TIJ-3 *3* TIK-1 *5* TIL-1 *5.5*

MOVEMENT POINT RATIO TABLE: IMPULSE ENGINE

Movement Point Ratios

Ship Class	1/1	2/1			3/1			4/1			5/1			6/1			7/1			8/1		9/1		10/1
VII	TIB-3 7 TIC-2 11.5 TIC-3 17 TID-2 14 TID-3 21.5 TIE-1 14 TIE-2 26	TIB-3 3.5 TIC-2 6 TIC-3 8.5 TID-2 7 TID-3 11 TIE-1 7 TIE-2 13	TIE-3 14 TIF-1 9 TIF-2 11 TIF-3 16.5 TIG-1 18 TIH-2 13.5 TII-1 9	TII-2 10 TII-3 12 TIK-1 15.5 TIK-2 17 TIL-1 16.5	TIB-3 2.5 TIC-2 4 TIC-3 5.5 TID-2 5 TID-3 7 TIE-1 5 TIE-2 8.5	TIE-3 9 TIF-1 6 TIF-2 7 TIF-3 11 TIG-1 12 TIH-2 9 TII-1 6	TII-2 6.5 TII-3 8 TIJ-3 6 TIK-1 10 TIK-2 11.5 TIL-1 11	TIB-3 2 TIC-2 3 TIC-3 4 TID-2 3.5 TID-3 5 TIE-1 3.5 TIE-2 6.5	TIE-3 7 TIF-1 4.5 TIF-2 5 TIF-3 8 TIG-1 9 TIH-2 7 TII-1 4.5	TII-2 5 TII-3 6 TIJ-3 4.5 TIK-1 8 TIK-2 8.5 TIL-1 8	TIB-3 1.5 TIC-2 2 TIC-3 3.5 TID-2 3 TID-3 4 TIE-1 3 TIE-2 5	TIE-3 5.5 TIF-1 4 TIF-2 4 TIF-3 6.5 TIG-1 7 TIH-2 5.5 TII-1 4	TII-2 4 TII-3 5 TIJ-3 4 TIK-1 6 TIK-2 7 TIL-1 6.5	TIC-2 2 TIC-3 3 TID-2 2 TID-3 3.5 TIE-1 2 TIE-2 4 TIF-1 3	TIF-2 3.5 TIF-3 5.5 TIH-2 4.5 TII-1 3 TII-2 3.5 TII-3 4 TIJ-3 3	TIK-1 5 TIK-2 6 TIL-1 5.5	TIH-2 4 TII-1 2.5 TII-2 3 TII-3 3.5 TIJ-3 2.5 TIK-1 4.5 TIK-2 5	TIL-1 4.5		TIH-2 3.5 TII-1 2.5 TII-2 2.5 TII-3 3 TIJ-3 2.5 TIK-1 4 TIK-2 4	TIL-1 4			
VIII		TIC-2 6 TIC-3 8.5 TID-2 7 TID-3 11 TIE-1 7 TIE-2 13	TIE-3 14 TIF-3 16.5 TIG-1 18 TIG-2 21.5 TIH-2 13.5 TII-2 10	TII-3 12 TIK-2 17 TIK-3 20 TIL-1 16.5	TIC-2 4 TIC-3 5.5 TID-2 5 TID-3 7 TIE-1 5 TIE-2 8.5	TIE-3 9 TIF-2 7 TIF-3 11 TIG-1 12 TIG-2 14 TIH-2 9	TII-2 6.5 TII-3 8 TIK-1 10 TIK-2 11.5 TIK-3 13.5 TIL-1 11	TIC-2 3 TIC-3 4 TID-2 3.5 TID-3 5 TIE-1 3.5 TIE-2 6.5	TIE-3 7 TIF-2 5 TIF-3 8 TIG-1 9 TIG-2 11 TIH-2 7	TII-2 5 TII-3 6 TIK-1 8 TIK-2 8.5 TIK-3 10 TIL-1 8	TIC-2 2 TIC-3 3.5 TID-2 3 TID-3 4 TIE-1 3 TIE-2 5	TIE-3 5.5 TIF-2 4 TIF-3 6.5 TIG-1 7 TIG-2 8.5 TIH-2 5.5	TII-2 4 TII-3 5 TIK-1 6 TIK-2 7 TIK-3 8 TIL-1 6.5	TIC-2 2 TIC-3 3 TID-2 2 TID-3 3.5 TIE-1 2 TIE-2 4	TIE-3 5 TIF-2 3.5 TIF-3 5.5 TIG-1 6 TIG-2 7 TIH-2 4.5	TII-2 3.5 TII-3 4 TIK-1 5 TIK-2 6 TIK-3 6.5 TIL-1 5.5	TIC-2 1.5 TIC-3 2.5 TID-3 3 TIE-1 2 TIE-3 4 TIF-2 3	TIG-1 5 TIG-2 6 TIH-2 4 TII-2 3 TII-3 3.5 TIK-1 4.5	TIK-2 5 TIK-3 6 TIL-1 4.5	TIH-2 3.5 TII-2 2.5 TII-3 3 TIK-1 4 TIK-2 4 TIK-3 5	TIL-1 4			
		TII-2 10 TII-3 12 TIL-1 16.5 TIL-2 21			TIC-3 5.5 TID-3 7 TIE-1 5 TIE-2 8.5 TIE-3 9 TIF-3 11	TIG-1 12 TIG-2 14 TIG-3 21.5 TII-2 6.5 TII-3 8 TIK-1 10	TIK-2 11.5 TIK-3 13.5 TIL-1 11 TIL-2 14	TIC-3 4 TID-3 5 TIE-1 3.5 TIE-2 6.5 TIE-3 7 TIF-3 8	TIG-1 9 TIG-2 11 TIG-3 16 TII-2 5 TII-3 6 TIK-1 8	TIK-2 8.5 TIK-3 10 TIL-1 8 TIL-2 10.5	TIC-3 3.5 TID-3 4 TIE-1 3 TIE-2 5 TIE-3 5.5 TIF-3 6.5	TIG-1 7 TIG-2 8.5 TIG-3 13 TII-2 4 TII-3 5 TIK-1 6	TIK-2 7 TIK-3 8 TIL-1 6.5 TIL-2 8	TIC-3 3 TID-3 3.5 TIE-1 2 TIE-2 4 TIE-3 5 TIF-3 5.5	TIG-1 6 TIG-2 7 TIG-3 11 TII-2 3.5 TII-3 4 TIK-1 5	TIK-2 6 TIK-3 6.5 TIL-1 5.5 TIL-2 7	TIC-3 2.5 TID-3 3 TIE-1 2 TIE-3 4 TIF-3 4.5 TIG-1 5	TIG-2 6 TIG-3 9 TII-2 3 TII-3 3.5 TIK-1 4.5 TIK-2 5	TIK-3 6 TIL-1 4.5 TIL-2 6	TII-2 2.5 TII-3 3 TIK-1 4 TIK-2 4 TIK-3 5 TIL-1 4	TIL-2 5	TII-2 2 TII-3 2.5 TIK-1 3.5 TIK-2 4 TIK-3 4.5 TIL-1 3.5		
X					TII-3 8 TIK-2 11.5 TIK-3 13.5 TIL-1 11 TIL-2 14	TIL-3 15		TID-3 5 TIE-2 6.5 TIE-3 7 TIF-3 8 TIG-1 9	TIG-2 11 TIG-3 16 TII-3 6 TIK-1 8 TIK-2 8.5	TIK-3 10 TIL-1 8 TIL-2 10.5 TIL-3 11	TID-3 4 TIE-2 5 TIE-3 5.5 TIF-3 6.5 TIG-1 7	TIG-2 8.5 TIG-3 13 TII-3 5 TIK-1 6 TIK-2 7	TIK-3 8 TIL-1 6.5 TIL-2 8 TIL-3 9	TID-3 3.5 TIE-2 4 TIE-3 5 TIF-3 5.5 TIG-1 6	TIG-2 7 TIG-3 11 TII-3 4 TIK-1 5 TIK-2 6	TIK-3 6.5 TIL-1 5.5 TIL-2 7 TIL-3 7.5	TID-3 3 TIE-2 3.5 TIE-3 4 TIF-3 4.5 TIG-1 5	TIG-2 6 TIG-3 9 TII-3 3.5 TIK-1 4.5 TIK-2 5	TIK-3 6 TIL-1 4.5 TIL-2 6 TIL-3 6.5	TII-3 3 TIK-1 4 TIK-2 4 TIK-3 5 TIL-1 4	TIL-2 5 TIL-3 5.5	TII-3 2.5 TIK-1 3.5 TIK-2 4 TIK-3 4.5 TIL-1 3.5	TIL-3 5	
XI					TIK-2 11.5 TIK-3 13.5 TIL-2 14			TIE-2 6.5 TIE-3 7 TIF-3 8 TIG-1 9	TIG-2 11 TIG-3 16 TIK-2 8.5 TIK-3 10	TIL-2 10.5 TIL-3 11	TIE-2 5 TIE-3 5.5 TIF-3 6.5 TIG-1 7	TIG-2 8.5 TIG-3 13 TIK-1 6 TIK-2 7	TIK-3 8 TIL-2 8 TIL-3 9	TIE-2 4 TIE-3 5 TIF-3 5.5 TIG-1 6	TIG-2 7 TIG-3 11 TIK-1 5 TIK-2 6	TIK-3 6.5 TIL-2 7 TIL-3 7.5	TIE-2 3.5 TIE-3 4 TIF-3 4.5 TIG-1 5	TIG-2 6 TIG-3 9 TIK-1 4.5 TIK-2 5	TIK-3 6 TIL-2 6 TIL-3 6.5	TIK-1 4 TIK-2 4 TIK-3 5 TIL-2 5	TIL-3 5.5	TIK-1 3.5 TIK-2 4 TIK-3 4.5 TIL-2 4.5	TIL-3 5	TIK-1 3 TIK-2 3.5 TIK-3 4 TIL-3 4.5
XII					TIL-2 14			TIK-2 8.5 TIK-3 10 TIL-2 10.5	TIL-3 11		TIE-3 5.5 TIF-3 6.5 TIG-1 7	TIG-2 8.5 TIG-3 13 TIK-2 7	TIK-3 8 TIL-2 8 TIL-3 9	TIE-3 5 TIF-3 5.5 TIG-1 6	TIG-2 7 TIG-3 11 TIK-2 6	TIK-3 6.5 TIL-2 7 TIL-3 7.5	TIE-3 4 TIF-3 4.5 TIG-1 5	TIG-2 6 TIG-3 9 TIK-2 5	TIK-3 6 TIL-2 6 TIL-3 6.5	TIK-2 4 TIK-3 5 TIL-2 5	TIL-3 5.5	TIK-2 4 TIK-3 4.5 TIL-2 4.5	TIL-3 5	TIK-2 3.5 TIK-3 4 TIL-3 4.5

MOVEMENT POINT RATIO TABLE: IMPULSE ENGINE

Movement Point Ratios

Ship Class	4/1	5/1		6/1			7/1			8/1			9/1		10/1		11/1
XIII	TIL-2 *10.5*	TIK-3 *8* TIL-2 *8*	TIL-3 *9*	TIG-2 *7* TIG-3 *11*	TIK-3 *6.5* TIL-2 *7*	TIL-3 *7.5*	TIG-2 *6* TIG-3 *9*	TIK-3 *6* TIL-2 *6*	TIL-3 *6.5*	TIK-3 *5* TIL-2 *5*	TIL-3 *5.5*		TIK-3 *4.5* TIL-2 *4.5*	TIL-3 *5*	TIK-3 *4* TIL-2 *4*	TIL-3 *4.5*	TIK-3 *3.5* TIL-3 *4*
XIV	TIL-2 *10.5*	TIL-2 *8*		TIG-3 *11*	TIL-2 *7*	TIL-3 *7.5*	TIG-3 *9*	TIL-2 *6*	TIL-3 *6.5*	TIG-3 *8*	TIL-2 *5*	TIL-3 *5.5*	TIL-2 *4.5*	TIL-3 *5*	TIL-2 *4*	TIL-3 *4.5*	TIL-3 *4*
XV							TIG-3 *9*	TIL-3 *6.5*		TIG-3 *8*	TIL-3 *5.5*		TIL-3 *5*		TIL-3 *4.5*		TIL-3 *4*
XVI							TIG-3 *9*			TIG-3 *8*			TIL-3 *5*		TIL-3 *4.5*		TIL-3 *4*
XVII										TIG-3 *8*					TIL-3 *4.5*		TIL-3 *4*
XVIII															TIL-3 *4.5*		TIL-3 *4*
XIX															TIL-3 *4.5*		TIL-3 *4*
XX															TIL-3 *4.5*		TIL-3 *4*

SHIELD GENERATOR TYPES

Shield Generator Type	Total Mass (mt)	Control Computer Requirement	Shield Efficiency Rating	SS Requirememnt	Availability	Cost (MCr)	Year
TSA	105	TC-1	1	0.1	RRR/26	5	2234
TSB	150	TC-2	2	0.8	RRR/18	11	2238
TSC	165	TC-1	1	0.4	RRR/24	5	2239
TSD	200	TC-3	2	1.2	RRR/17	11	2241
TSE	250	TC-2	1	0.8	RRR/23	6	2242
TSF	265	TC-4	2	1.9	RRR/16	12	2247
TSG	450	TC-5	3	1.4	RRR/9	18	2249
TSH	275	TC-2	1	2	RRR/22	6	2250
TSI	305	TC-5	2	2	RRR/16	11	2252
TSJ	500	TC-5A	3	2.3	RRR/7	18	2256
TSK	350	TC-3	1	2.4	RRR/20	6	2260
TSL	385	TC-5	2	2.3	RRR/13	12	2262
TSM	525	TC-6	3	2.7	RRR/5	18	2266
TSN	685	TC-6	4	3	RRR/2	24	2275
TSO	795	TC-7	4	3.5	RRR/1	25	2287
TSP	418	TC-7	4	2.9	RRR/1	27	2335
TSQ	221	TC-6	3	1.6	RRR/1	21	2337
TSR	312	TC-7	3	1.7	RRR/1	24	2338
TST	358	TC-8	3	2.3	RRR/1	31	2341
TSU	598	TC-9	4	3.1	RRR/1	36	2341
TSV	697	TC-9	4	3.3	RRR/1	48	2343
TSW	760	TC-10	4	3.6	RRR/1	54	2347
TSX	418	TC-5A	3	3.9	RRR/1	51	2348
TSY	426	TC-8	3	4.1	RRR/1	58	2350
TSZ	897	TC-9	4	3.7	RRR/1	60	2350
TSNA	1,530	TC-5A	5	5.2	RRR/1	90	2354
TSNB	1,830	TC-8	5	5.8	RRR/1	98	2356
TSNC	1,996	TC-9	5	5.9	RRR/1	113	2360
TSND	2,131	TC-12	5	6.3	RRR/1	120	2363

MAXIMUM SHIELD POWER
Shield Types/Shield Point Ratios

Ship Class	1/1					1/2					1/3								1/4							1/5			
	TSA	TSC	TSE	TSH	TSK	TSB	TSD	TSF	TSI	TSL	TSG	TSJ	TSM	TSQ	TSR	TST	TSX	TSY	TSN	TSO	TSP	TSU	TSV	TSW	TSZ	TSNA	TSNB	TSNC	TSND
I	12	14	15	15	16	14	14	15	15	16	16	16	16	18	21	27	45	51	16	16	18	24	32	36	40	48	52	60	64
	17	*20*	*21*	*21*	*23*	*10*	*10*	*10.5*	*10.5*	*11.5*	*7.5*	*7.5*	*7.5*	*8.5*	*10*	*13*	*21*	*24*	*5.5*	*5.5*	*6.5*	*8.5*	*11.5*	*13*	*14*	*13.5*	*15*	*17*	*18*
II	11	12	14	15	16	13	13	15	15	16	16	16	16	18	21	27	45	51	16	16	18	24	32	36	40	48	52	60	64
	15.5	*17*	*20*	*21*	*23*	*9*	*9*	*10.5*	*10.5*	*11.5*	*7.5*	*7.5*	*7.5*	*8.5*	*10*	*13*	*21*	*24*	*5.5*	*5.5*	*6.5*	*8.5*	*11.5*	*13*	*14*	*13.5*	*15*	*17*	*18*
III	10	11	13	15	16	12	12	15	15	16	16	16	16	18	21	27	45	51	16	16	18	24	32	36	40	47	51	59	64
	14	*15.5*	*18.5*	*21*	*23*	*8.5*	*8.5*	*10.5*	*10.5*	*11.5*	*7.5*	*7.5*	*7.5*	*8.5*	*10*	*13*	*21*	*24*	*5.5*	*5.5*	*6.5*	*8.5*	*11.5*	*13*	*14*	*13.5*	*14.5*	*17*	*18*
IV	8	10	11	14	16	11	12	14	14	16	16	16	16	18	21	27	45	51	16	16	18	24	32	36	40	47	51	59	64
	11.5	*14*	*15.5*	*20*	*23*	*8*	*8.5*	*10*	*10*	*11.5*	*7.5*	*7.5*	*7.5*	*8.5*	*10*	*13*	*21*	*24*	*5.5*	*5.5*	*6.5*	*8.5*	*11.5*	*13*	*14*	*13.5*	*14.5*	*17*	*18*
V	7	9	10	14	16	9	11	14	14	16	15	16	16	18	21	27	45	50	16	16	18	24	32	36	40	47	50	58	63
	10	*13*	*14*	*20*	*23*	*6.5*	*8*	*10*	*10*	*11.5*	*7*	*7.5*	*7.5*	*8.5*	*10*	*13*	*21*	*24*	*5.5*	*5.5*	*6.5*	*8.5*	*11.5*	*13*	*14*	*13.5*	*14*	*16.5*	*18*
VI	5	8	9	13	15	8	10	13	14	16	15	15	16	18	21	27	44	50	15	16	18	24	32	36	40	46	50	58	63
	7	*11.5*	*13*	*18.5*	*21*	*5.5*	*7*	*9*	*10*	*11.5*	*7*	*7*	*7.5*	*8.5*	*10*	*13*	*21*	*24*	*5.5*	*5.5*	*6.5*	*8.5*	*11.5*	*13*	*14*	*13*	*14*	*16.5*	*18*
VII	4	7	9	13	15	7	10	12	13	15	15	15	16	18	21	27	44	50	15	16	18	24	32	36	39	46	50	57	63
	5.5	*10*	*13*	*18.5*	*21*	*5*	*7*	*8.5*	*9*	*10.5*	*7*	*7*	*7.5*	*8.5*	*10*	*13*	*21*	*24*	*5.5*	*5.5*	*6.5*	*8.5*	*11.5*	*13*	*14*	*13*	*14*	*16*	*18*
VIII	3	6	8	12	15	7	9	11	13	15	15	15	16	18	21	27	44	50	15	16	18	24	31	36	39	45	49	57	63
	4	*8.5*	*11.5*	*17*	*21*	*5*	*6.5*	*8*	*9*	*10.5*	*7*	*7*	*7.5*	*8.5*	*10*	*13*	*21*	*24*	*5.5*	*5.5*	*6.5*	*8.5*	*11*	*13*	*14*	*13*	*14*	*16*	*18*
IX	2	5	7	12	15	6	8	11	12	15	14	15	16	18	21	26	44	50	15	16	18	24	31	36	39	45	49	56	63
	3	*7*	*10*	*17*	*21*	*4*	*5.5*	*8*	*8.5*		*6.5*	*7*	*7.5*	*8.5*	*10*	*12.5*	*21*	*24*	*5.5*	*5.5*	*6.5*	*8.5*	*11*	*13*	*14*	*13*	*14*	*16*	*18*
X	1	4	6	10	14	5	7	10	12	15	14	14	15	18	21	26	44	50	15	16	18	23	31	36	39	45	48	56	63
	1.5	*5.5*	*8.5*	*14*	*20*	*3.5*	*5*	*7*	*8.5*		*6.5*	*6.5*	*7*	*8.5*	*10*	*12.5*	*21*	*24*	*5.5*	*5.5*	*6.5*	*8*	*11*	*13*	*14*	*13*	*13.5*	*16*	*18*
XI	-	3	5	8	14	4	6	10	10	15	14	14	15	18	20	26	44	50	15	16	18	23	31	36	39	44	48	56	62
	-	*4*	*7*	*11.5*	*20*	*3*	*4*	*7*	*7*		*6.5*	*6.5*	*7*	*8.5*	*9.5*	*12.5*	*21*	*24*	*5.5*	*5.5*	*6.5*	*8*	*11*	*13*	*14*	*12.5*	*13.5*	*16*	*17.5*
XII	-	2	4	8	12	3	5	9	10	15	14	14	15	18	20	26	44	50	14	16	18	23	31	36	39	44	48	55	62
	-	*3*	*5.5*	*11.5*	*17*	*2*	*3.5*	*6.5*	*7*	*10.5*	*6.5*	*6.5*	*7*	*8.5*	*9.5*	*12.5*	*21*	*24*	*5*	*5.5*	*6.5*	*8*	*11*	*13*	*14*	*12.5*	*13.5*	*15.5*	*17.5*
XIII	-	1	3	7	10	2	3	8	9	14	12	14	15	18	20	26	44	49	14	15	17	23	31	36	39	44	47	55	62
	-	*1.5*	*4*	*10*	*14*	*1.5*	*2*	*5.5*	*6.5*	*10*	*5.5*	*6.5*	*7*	*8.5*	*9.5*	*12.5*	*21*	*23*	*5*	*5.5*	*6*	*8*	*11*	*13*	*14*	*12.5*	*13.5*	*15.5*	*17.5*
XIV	-	-	2	7	9	1	2	7	9	14	12	13	15	18	20	26	44	49	14	15	17	23	31	36	39	43	47	54	62
	-	-	*3*	*10*	*13*	*0.5*	*1.5*	*5*	*6.5*	*10*	*5.5*	*6*	*7*	*8.5*	*9.5*	*12.5*	*21*	*23*	*5*	*5.5*	*6*	*8*	*11*	*13*	*14*	*12*	*13.5*	*15.5*	*17.5*
XV	-	-	1	6	8	-	1	6	8	14	12	13	15	18	20	26	43	49	14	15	17	23	31	36	39	43	47	54	62
	-	-	*1.5*	*8.5*	*11.5*	-	*0.5*	*4*	*5.5*	*10*	*5.5*	*6*	*7*	*8.5*	*9.5*	*12.5*	*20.5*	*23*	*5*	*5.5*	*6*	*8*	*11*	*13*	*14*	*12*	*13.5*	*15.5*	*17.5*
XVI	-	-	-	6	7	-	-	5	6	14	10	12	14	18	20	26	43	49	14	14	17	23	31	36	39	43	46	53	62
	-	-	-	*8.5*	*10*	-	-	*3.5*	*4*	*10*	*4.5*	*5.5*	*6.5*	*8.5*	*9.5*	*12.5*	*20.5*	*23*	*5*	*5*	*6*	*8*	*11*	*13*	*14*	*12*	*13*	*15*	*17.5*
XVII	-	-	-	5	6	-	-	4	6	14	10	9	14	18	20	26	43	49	14	14	17	23	31	36	38	42	46	53	61
	-	-	-	*7*	*8.5*	-	-	*3*	*4*	*10*	*4.5*	*4*	*6.5*	*8.5*	*9.5*	*12.5*	*20.5*	*23*	*5*	*5*	*6*	*8*	*11*	*13*	*13.5*	*12*	*13*	*15*	*17*
XVIII	-	-	-	4	6	-	-	2	5	14	6	8	12	18	20	26	43	49	13	14	17	23	31	36	38	42	45	52	61
	-	-	-	*5.5*	*8.5*	-	-	*1.5*	*3.5*	*10*	*3*	*3.5*	*5.5*	*8.5*	*9.5*	*12.5*	*20.5*	*23*	*4.5*	*5*	*6*	*8*	*11*	*13*	*13.5*	*12*	*13*	*15*	*17*
XIX	-	-	-	3	5	-	-	1	5	13	4	7	7	17	20	26	43	49	13	14	17	23	31	36	38	42	45	52	61
	-	-	-	*4*	*7*	-	-	*0.5*	*3.5*	*8*	*2*	*3*	*3*	*8*	*9.5*	*12.5*	*20.5*	*23*	*4.5*	*5*	*6*	*8*	*11*	*13*	*13.5*	*12*	*13*	*15*	*17*
XX	-	-	-	3	5	-	-	1	5	13	3	5	4	17	20	26	43	49	13	14	17	23	30	36	38	41	45	51	61
	-	-	-	*4*	*7*	-	-	*0.5*	*3.5*	*9*	*1.5*	*2.5*	*2*	*8*	*9.5*	*12.5*	*20.5*	*23*	*4.5*	*5*	*6*	*8*	*10.5*	*13*	*13.5*	*11.5*	*13*	*14.5*	*17*

PHASER BEAM WEAPON TYPES

Phaser Weapon Type	Total Mass (mt)	Maximum Beam Power	Damage Modifiers +3	+2	+1	Maximum Range (Hex)	Firing Chart	Weapon Damaging Factor	SS Requirements (single / bank)	Availability	Cost (MCr)	Year
TR-1	120	4	(-)	(1-8)	(-)	8	E	1.3	0.5 / 0.9	RRI/30	18	2234
TR-2	140	4	(-)	(1-8)	(9-10)	10	J	2.4	0.8 / 1.2	RRI/28	21	2235
TR-3	150	5	(-)	(1-8)	(9-12)	12	L	3	4.6 / 1.3	RRI/26	22	2237
TR-4	180	6	(1-4)	(5-7)	(8-10)	10	J	3.4	0.6 / 1.1	RRI/22	27	2241
TR-5	160	4	(-)	(1-8)	(9-14)	14	O	2.9	0.9 / 1.3	RRI/29	24	2245
TR-6	190	5	(1-7)	(8-12)	(13-16)	16	R	4.4	1.5 / 1.7	RRI/23	28	2248
TR-7	240	8	(1-6)	(7-10)	(11-13)	13	N	5.2	1.8 / 2.5	RRI/21	36	2254
TR-8	260	6	(1-10)	(11-20)	(21-24)	24	Y	7.3	1.3 / 2.2	RRI/24	39	2259
TR-9	400	7	(1-5)	(6-12)	(13-18)	18	T	5.9	1.7 / 2.4	RRI/18	60	2261
TR-10	480	5	(-)	(1-8)	(9-15)	15	K	2.8	2 / 3.3	RRI/27	72	2264
TR-11	590	11	(1-4)	(5-8)	(9-20)	24	Y	11.7	2.5 / 3.8	III/8	89	2269
TR-12	600	9	(1-12)	(13-16)	(17-19)	22	X	8.8	1.7 / 2.4	III/19	90	2277
TR-13	475	10	(1-5)	(6-12)	(13-18)	18	T	7.8	1 / 1.5	III/12	72	2330
TR-14	580	12	(1-5)	(6-12)	(13-18)	18	T	9.2	1.9 / 2.9	III/10	87	2331
TR-15	710	14	(1-6)	(7-15)	(16-20)	20	U	10.8	2.3 / 3.5	III/7	107	2333
TR-16	695	8	(1-12)	(13-20)	(21-22)	24	Y	9.1	0.9 / 1.4	III/15	105	2341
TR-17	780	17	(1-12)	(13-16)	(17-19)	22	X	15.2	2.5 / 3.8	III/6	118	2343
TR-18	795	18	(1-6)	(7-15)	(16-20)	20	U	13.6	2.9 / 4.4	III/6	120	2344
TR-19	615	22	(1-5)	(6-12)	(13-18)	18	T	15.8	2.6 / 3.9	III/4	93	2345
TR-20	830	20	(1-12)	(13-16)	(17-19)	22	X	17.6	3.5 / 5.3	III/5	126	2347
TR-21	785	13	(1-4)	(5-8)	(9-20)	24	Y	12.7	2.8 / 4.2	III/7	119	2355
TR-22	620	12	(1-12)	(13-16)	(17-19)	22	X	11.2	1.8 / 2.7	III/8	94	2356
TR-23	910	25	(1-6)	(7-12)	(13-18)	20	W	21	3.9 / 5.9	III/3	138	2360
TR-24	970	26	(1-5)	(6-12)	(13-18)	18	T	18.4	3.2 / 4.8	III/2	147	2362
TR-25	1,105	28	(1-6)	(7-12)	(13-18)	20	W	23.3	4.1 / 6.2	III/1	168	2364

PHOTON TORPEDO WEAPON TYPES

Missile Weapon Type	Mass (mt)	Power to Arm	Damage	Range	Firing Chart	WDF	SS	Availability	Cost (MCr)	Year
TP-1	100	1	10	10	J	4	1	RRI/32	15	2238
TP-2	120	1	12	14	O	6.2	1.5	RRI/28	18	2241
TP-3	180	1	18	20	W	13.6	1.7	RRI/12	27	2252
TP-4	150	1	8	15	F	2	0.9	RRI/39	23	2255
TP-5	200	1	6	8	D	1.3	0.5	RRI/36	30	2256
TP-6	240	1	12	16	R	7.1	1.3	RRI/27	36	2266
TP-7	280	1	20	18	T	12.7	2	RRI/14	42	2270
TP-8	310	1	9	12	L	4	0.7	RRI/33	47	2275
TP-9	260	1	16	20	W	12	3	RRI/18	39	2330
TP-10	305	1	25	16	R	14.8	1.5	III/7	46	2341
TP-11	195	1	22	18	T	14	1.5	III/8	29	2346
TP-12	365	1	26	14	O	13.4	1.1	III/6	55	2352
TP-13	400	1	28	16	R	16.6	3.1	III/3	60	2360

WEB PROJECTOR TYPES

Missile Weapon Type	Mass (mt)	Power to Arm	Damage	Range	Firing Chart	WDF	SS	Availability	Cost (MCr)	Year
TTW-1	175	2	**	6	D	N/A	2.1	III/1	26	2243
TTW-2	280	2	**	6	D	N/A	3.5	None	42	2246
TTW-3	395	2	**	6	D	N/A	4.2	None	59	2258
TTW-4	420	2	**	6	D	N/A	5.7	None	63	2260

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