

Permission is granted to print this file for personal use only. Print on 8.5x11" card stock, double sided, duplexed on the long edge (like the pages of a book), with page 2 on the reverse of page 1, and page 4 on the reverse of page 3.
Laminate the cards, and trim to the edge of the gray background.

MOVEMENT GRID

	Vel	Dir	Vel	Dir	Vel	Dir
	Each	Rmd	Each	Rmd	Each	Rmd
1						
2						
3						
4						
5						
6						
7						
8						

FIRE ORDERS

- Launch Seekers
- Fire Beams
- Nuclear Blasts
- Kinetic Impacts

LONG ORDERS

- Set Facing Changes
- Change Thrust
- Zone Defense Fire
- Other

FLEX POINTS

1	RCT	BTTY
2	FLEX POINTS	FLAG POINTS
3	ECM	ECCM
4	HORIZONTAL BEARING	
5		
6		
7		

FLAG POINTS

1000
900
800
700
600
500
400
300
200
100
000
90
80
70
60
50
40
30
20
10
00
9
8
7
6
5
4
3
2
1
0
1/2
0

AVID

180 DEGREE
Subtract the smaller vector from the larger.

120 DEGREE
1) Copy the smaller vector 1 hex side closer to larger vector, add it to any existing vector in that direction.
2) Subtract the smaller vector from both original vectors. This reduces the smaller vector to 0.

UNIT NAME _____

THRUST CHART No displacements while pivoting

2.0	1.875	1.75	1.625	1.5	1.375	1.25	1.125	1.0	0.875	0.75	0.625	0.5	0.375	0.25	0.125
8	7.5	7	6.5	6	5.5	5	4.5	4	3.5	3	2.5	2	1.5	1	0.5

ORBITAL MECHANICS

ALT +	WRAP	CURVE
ALT	VERT FORCE	BLOCK
ALT -	VELOCITY +	A
LAT DIST	+	F/2
LAT OFFSET	-	E/2
LAT	FORCES	D
		+
		-

ATTACK VECTOR: TACTICAL 2e © 2010 AD ASTRA GAMES www.adastragames.com

Special Note To Kinko's: If you need to call someone to verify permission to print this file, call 608 232 7872 and ask for Ken.

1: Record target and launching ship's vectors (including thrust dots) on the targeting AVID's arrows.

2: Shoot the range and bearing to the target with the RALT, record on AVID.

3: Find the Crossing Vector (CV) by consolidating the vectors of the launching ship and target. Vectors in the same arrow add. Record consolidated vectors in the black bordered arrows.

4: Determine the direction of the CV by shooting a bearing using the elements of the CV as horizontal and vertical distances. Put the value of the CV in this AVID window.

5: Course Offset = windows from CV to target bearing.
Use the matching column of the Shot Geometry Table (SGT).
If CV = 0, Course Offset = 6.

6: Coilgun MV from table.
Missile MV = 8 × Burn Duration.

7: Find the largest appropriate CV:MV ratio on the SGT. Look up the Aim Shift, CV Adj, and MV Adj.

8: Fill out the Rate of Closure (RoC) worksheet. Final CV can be negative.

Coilguns:

9: Fill out the shellstar to the range to the target. Ranges run backwards from the HIT box, using alternating rounding of fractions. Record segments from launch range back to the HIT box. Record Impact Window.

Missiles:

9a: Missile Raw Accel = RoC (step 8) × Burn Duration

9b: On the Missile Position Adjustment Table (MPAT), cross-reference Aim with Burn Duration.

Burn Distance = Raw Accel – the blue number on the MPAT for that Burn Duration.

9c: Missile Burnout Range = Target Range – Burn Distance.

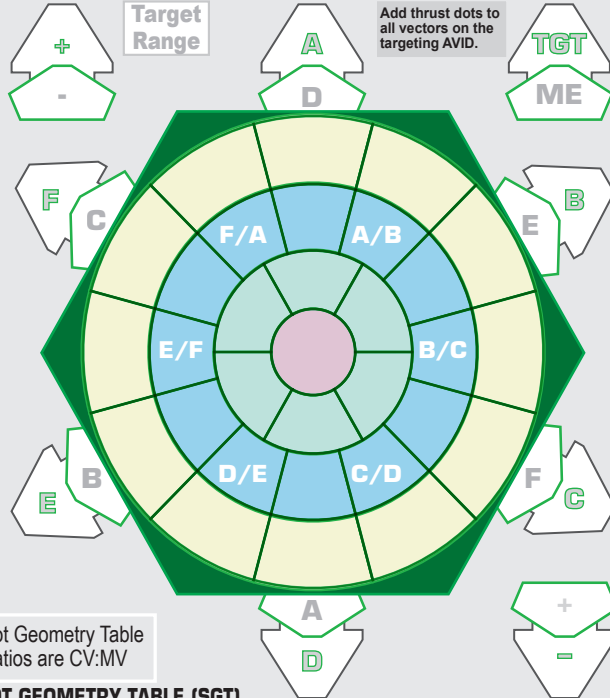
9d: Fill out the shellstar card to the burnout range. Ranges run backwards from the HIT box as coilguns do.

9e: From burnout range to launch range, add the RoC, subtracting the red number for the Aim Adjust row at Burn Duration 1. This repeats for each segment, shifting one column to the left, following the yellow arrows. Underline these ranges on the shellstar, record the segments from launch range back to the HIT box. Record Impact Window.

HEAT MANAGEMENT

RCT ON HEAT SINKS HEAT STORED EXCESS HEAT IN OUT RADIATOR OUTPUT

TARGETING AVID



Shot Geometry Table ratios are CV:MV

SHOT GEOMETRY TABLE (SGT)

Course Offset:	6	5	4	3	2	1	0	CV Adj	100%	90%	50%	0%	-50%	-90%	-100%	MV Adj
Aim: Bearing Window	Always	<1:1	<0.5:1	<0.5:1	<0.5:1	<1:1	<1:1									100%
Aim: Shift 1 Window		<1.5:1	<1:1	<1:1	<1:1											90%
Aim: Shift 2 Windows		<2:1	<1.5:1													50%
Aim: No Shot		≥2:1	≥1.5:1	≥1:1	≥1:1	≥1:1	≥1:1									0%

RATE OF CLOSURE WORKSHEET

CV MV Remainders
 CV Adj MV Adj 1 or 2 round down to 0
 Final CV Final MV 3, 4 or 5 round to 0.5
 RoC (Turn) /8 = RoC (Seg) 6 or 7 round up to 0

DAMAGE CONTROL PARTIES

System Repaired	Turn Done

BURN DUR. TIME/DISTANCE

Target Range Next Range Next Range Next Range Next Range Next Range Burnout Range

RoC (Seg) + RoC (Seg) + RoC (Seg) + RoC (Seg) + RoC (Seg) + RoC (Seg)

BD6: Red# BD5: Red# BD4: Red# BD3: Red# BD2: Red# BD1: Red#

MISSILE POSITION ADJUSTMENT TABLE (MPAT)

Burn Duration	6	5	4	3	2	1						
Aim: Bearing Window	18	5.5	12.5	4.5	8	3.5	4.5	2.5	2	1.5	0.5	0.5
Aim: Shift 1 Window	15.5	5	10.5	4	6.5	3	3.5	2	1.5	1.5	0	0
Aim: Shift 2 Windows	10	3	7	2.5	4.5	2	2.5	1.5	1	1	0	0

MOVEMENT GRID

	Vel	Dir	Vel	Dir	Vel	Dir
	Each	Rmd	Each	Rmd	Each	Rmd
1						
2						
3						
4						
5						
6						
7						
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FLAG POINTS

1000
900
800
700
600
500
400
300
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100
000
90
80
70
60
50
40
30
20
10
00
9
8
7
6
5
4
3
2
1
0
1/2
0

1
2
3
4
5
6
7
8
1
2
3
4
5
6
7
8

AVID SIDE VIEW

Circle markers when they're below the amber ring

If the target is 3x farther away in one map direction than the other, it's visible through that hex edge.

Otherwise, it's visible through the hex corner.

VERTICAL BEARING:
Where H is horizontal distance and V is difference in altitude:

0°	If H ≥ 4xV
±30°	If H ≥ V
±60°	If H < V
±90°	If 4xH ≤ V

1) Copy the smaller vector 1 hex side closer to larger vector, add it to any existing vector in that direction.

2) Subtract the smaller vector from both original vectors. This reduces the smaller vector to 0.

△ Nose Aft △
★ Top Bottom ↓
◀ Port Stbd ▶

UNIT NAME

	MAX THRUST	THRUST BEGAN
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THRUST CHART

No displacements while pivoting

2.0	1.875	1.75	1.625	1.5	1.375	1.25	1.125	1.0	0.875	0.75	0.625	0.5	0.375	0.25	0.125
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ORBITAL MECHANICS

ALT +	WRAP	CURVE
ALT	VERT FORCE	BLOCK
ALT -	VELOCITY +	D
LAT DIST	-	C/2
LAT OFFSET	+	B/2
LAT	FORCES	A
	A	-
	D	+

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5: Course Offset = windows from CV to target bearing.

Use the matching column of the Shot Geometry Table (SGT).

If CV = 0, Course Offset = 6.

6: Coilgun MV from table.

Missile MV = 8 × Burn Duration.

7: Find the largest appropriate CV:MV ratio on the SGT. Look up the Aim Shift, CV Adj, and MV Adj.

8: Fill out the Rate of Closure (RoC) worksheet. Final CV can be negative.

Coilguns:

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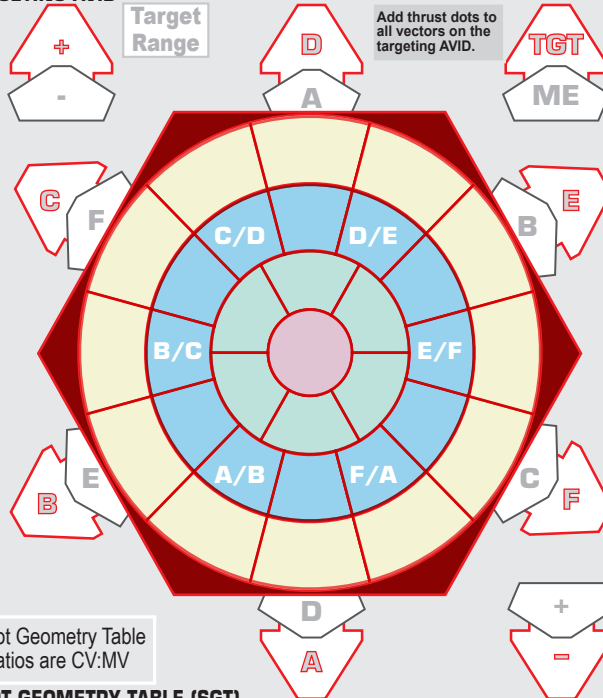
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Aim: Bearing Window	Always	<1:1	<0.5:1	<0.5:1	<0.5:1	<1:1	<1:1		100%
Aim: Shift 1 Window		<1.5:1	<1:1	<1:1	<1:1				90%
Aim: Shift 2 Windows		<2:1	<1.5:1						50%
Aim: No Shot		≥2:1	≥1.5:1	≥1:1	≥1:1	≥1:1	≥1:1		0%
CV Adj	100%	90%	50%	0%	-50%	-90%	-100%		

RATE OF CLOSURE WORKSHEET

CV MV Reminders
 CV Adj MV Adj 1 or 2 round down to 0
 Final CV + Final MV = RoC (Turn) / 8 = RoC (Seg)
 3, 4 or 5 round to 0.5
 6 or 7 round up to 0

DAMAGE CONTROL PARTIES

System Repaired	Turn Done

BURN DUR. TIME/DISTANCE

Target Range → Next Range → Next Range → Next Range → Next Range → Next Range → Burnout Range

RoC (Seg) + RoC (Seg) + RoC (Seg) + RoC (Seg) + RoC (Seg) + RoC (Seg)

BD6: Red# BD5: Red# BD4: Red# BD3: Red# BD2: Red# BD1: Red#

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Burn Duration	6	5	4	3	2	1
Aim: Bearing Window	18 5.5 12.5 4.5 8 3.5 4.5 2.5 2 1.5 0.5 0.5					
Aim: Shift 1 Window	15.5 5 10.5 4 6.5 3 3.5 2 1.5 1.5 0 0					
Aim: Shift 2 Windows	10 3 7 2.5 4.5 2 2.5 1.5 1 1 0 0					