



# Armageddon

For reference, these pages are filled with examples of weapons and defenses interacting.

# Space Battles

## ARMAGEDDON

In this hypothetical battle (or series of attacks) involving dozens of ships and almost every technology available, we can see how the various weapons and defenses work. Examples are shown alphabetically by Weapon Code.

For example purposes, some weapons and some defenses are simplified to the basic model; others include stage and other information.

We assume that weapons operators (and defense operators, if any) are Char=7 Skill=3.

We ignore Agility (which is a Mod in the T+C+S+M formula). Agility = Maximum Power Plant Potential minus current Maneuver Drive Gs.

## Checklist

1. Required Values (for Attacking and Defending Weapons)
  - A. T= Tech Level of Attacking Weapon
  - B. C+S = Characteristic + Skill of Weapon Operator.
  - C. M = Mod.
    - Weapon Mount Mod (from Space Weapon Mounts) Agility.
  - D. Mount.
2. Roll T+C+S+M to potentially HIT. Failure ends attack.
3. Defenses
  - A. AB Mode. Check AB Mode Table (based on Mount).
  - B. AM Mode. Check AM Mode Table (based on Mount).
  - C. Absolute Mode. Compare T+C+S+M.
  - D. Failure ends attack.
4. Armor Penetration
  - A1. Non-Missiles. Determine Hits (based on Mount Size) and roll that number of Dice.
  - A2. Missiles. Determine Hits (based on Missile Types and Effects Chart).
  - B. Subtract Armor.
  - C. Divide by 2 = Final Damage.
5. Hit Location.
  - A. Determine Mods based on Targetting.
  - B. Roll on Hit Location Table.
  - C. If the Location has subcomponents, randomly determine which one takes damage.
  - D. Apply Final Damage as a Damage Severity.
  - E. Check Immediate Action.
6. Additional Damage.
  - A. If the Hit Location (or sublocation) was Destroyed, attack a second location.
  - B. Use Hits from 4A and divide by 2. Subtract Armor. Divide by 2.
  - C. Reconsult Step 5.

### Special Cases

DataCaster. Each Hit (Die) with a result of 1 becomes an inserted Virus in a Sensor on the Target.

CommCaster. Allows multiple ships to participate in Battery Fire.

## A PARTICLE ACCELERATOR

Range	S=5
Attacker	A-11 AR B1 Particle Accelerator-11
Defender	X-9 Vd T3 Hybrid KSM -9
Armor	Armor-5

**Attack and Defense.** The A-11 attacks with Dice = S= Space Range and must roll T+C+S+M or less (the Space Weapon Task HAW). Its B1 Barbette provides no Mod, so Assets = 11 + 7 + 3 = 21.

It rolls 5D (= 25) and misses.

It rolls 5D again the next turn (=20) which is less than 21 and (potentially) hits.

The target has allocated its Sandcaster in Anti-Beam AB Mode. The Defense AB AM Modes Table shows that S can defend against AFJKLPW, so S (contained in the hybrid KSM) can defend against A. The single Sandcaster in the X-9 is treated as T1. The defender must roll 1 or less with 1D to stop the attack. He rolls 3 and fails.

**Armor Penetration.** The A-11 attacks the ship's Armor-5. Hits are determined by the Weapon Mount (Barbette B1 = 3 hits). The attacker rolls 3D = 10 = Damage=10. The first 5 Damage are absorbed by the Armor-5. The ship receives Damage=5.

**Hit Location and Damage.** Hit Location = Flux = +4 - 4 = 0. The Damage impacts the Hull.

Final Damage = Damage/2 (round down) = 2. The Damage Severity Table shows the difficulty of repairing the hit is Average 2D.

The ship has a Damage Control person (Skill=3); Check Skill = roll 2D for 3 or less; he rolls 5 and fails to fix the damage.

**Result.** The target receives Average 2D Hull Damage.

## A PARTICLE ACCELERATOR

Range	R=8
Attacker	A-11 AR B1 Particle Accelerator-11
Defender	X-9 Vd T3 Hybrid KSM -9
Armor	Armor-5

The Defender is a ship on the world surface; the Attacker is in Orbit R=8. A Particle Accelerator in Atmosphere uses World Ranges (as opposed to Space Ranges in Space).

**Attack and Defense.** The A-11 attacks with Dice = R= Range and must roll T+C+S+M or less. Its B1 Barbette provides no Mod, so Assets =  $11 + 7 + 3 = 21$ .

It rolls 8D (= 20) and potentially hits.

Sandcasters are ineffective in atmosphere, so the Target has no Anti-Beam defense.

**Armor Penetration.** The A-11 attacks the ship's Armor-5. Hits are determined by the Weapon Mount (Barbette B1 = 3 hits).

Particle Accelerators in Atmosphere shed 1D per World Range (at R=8, it loses 8D hits) before hitting the target.

The attacker would roll  $3D - 8D =$  less than 1D. The attack has no effect.

## A PARTICLE ACCELERATOR

Range	R=8
Attacker	A-11 AR LBay Particle Accelerator-11
Defender	X-9 Vd T3 Hybrid KSM -9
Armor	Armor-5

The Defender is a ship on the world surface; the Attacker is in Orbit R=8. A Particle Accelerator in Atmosphere uses World Ranges (as opposed to Space Ranges in Space).

**Attack and Defense.** The A-11 attacks with Dice = R= Range and must roll T+C+S+M or less. Its LBay provides Mod+8, so Assets =  $11 + 7 + 8 = 26$ .

It rolls 8D (= 24) and potentially hits.

Sandcasters are ineffective in atmosphere, so the Target has no Anti-Beam defense.

**Armor Penetration.** The A-11 attacks the ship's Armor-5. Hits are determined by the Weapon Mount (LBay = 20 hits).

Particle Accelerators in Atmosphere shed 1D per World Range (at R=8, it loses 8D hits) before hitting the target.

The attacker would roll  $20D - 8D = 13D =$  Damage= 42. The first 5 Damage are absorbed by the Armor-5. The ship receives Damage=37.

**Hit Location and Damage.** Hit Location = Flux =  $+4 - 4 = 0$ . The Damage impacts the Hull.

Final Damage = Damage/2 (round down) = Final Damage=18. This value is more than 9; the Hull is destroyed.

**Result.** The target is destroyed.

## B SLUG THROWER

Range	R=5
Attacker	B-10 Imp Vd T4 Slug Thrower-10
Defender	Slug-2S-UG
Armor	Polymer-5

**Attack and Defense.** The B-9 attacks with Dice = R= Range and must roll T+C+S+M or less. The Quad Turret provides no additional Mod, so Assets =  $10 + 7 + 3 = 20$ .

It rolls 5D (=14) and (potentially) hits.

Although Slugs are technically Missiles, there is no AM Anti-Missile defense against Slugs (they are too small). (A target with T Black Globe or U White Globe would have a defense against Slugs).

The potential hit for a SlugThrower is determined by the weapon mount T+C+S+M. The actual effect against armor is determined by the Slugs.

**Armor Penetration.** The Size-2 Slug Warhead Missile attacks the armor with 1D; he rolls 6. The first 5 Damage are absorbed by the Polymer-5. The ship receives Damage= 1.

**Hit Location and Damage.** Hit Location Chart: Flux =  $+5 - 4 = +1$ . The Damage impacts the Power systems.

Final Damage = Damage / 2 (round down) = 0. The hit is little more than a scratch.

**Result.** The attack hit but inflicted no Damage.

## D DATACASTER

Range	R=7
Attacker	D-12 Adv T3 DataCaster-12
Defender	J-8 Jammer-8
Armor	

The DataCaster is a special case.

### Infection Mode

The DataCaster inserts a Virus which corrupts the internal software.

**Attack and Defense.** The D-12 attacks with Dice = R= Range and must roll T+C+S+M or less. The Triple Turret T3 provides Mod -1, so Assets = 12 + 7+3 -1 = 21.

BUT, the target has its J-8 Jammer-8 active. It applies a Mod (equal to Jammer T+C+S+M – Space Range = 8+7+3+0 – 2 = 16).

The revised Attacker T+C+S+M = 12 +7 +3 -1 – 16 = 5. He must roll 5 or less on 7D, which is not possible. The attack fails.

Some time later, the Defender's Jammer-8 is not operational. The Attacker tries again.

**Attack and Defense.** The D-12 attacks with Dice = R= Range and must roll T+C+S+M or less. The Triple Turret T3 provides Mod -1, so Assets = 12 + 7+3 -1 = 21. He rolls 7D = 19 and the attack proceeds.

**Armor Penetration.** The DataCaster ignores Armor. It proceeds to attack the Target. The Triple Turret T3 produces 3 Hits (this is one attack; three hits are inflicted on one location).

**Hit Location and Damage.** Hit Location = Flux = +4 – 2 = Drives. One drive is selected = Jump Drive. The DataCaster rolls 1D for each Hit = 1, 2, 3. One Virus and two Applets are inserted.

The Virus disables the Jump Drive. The two Applets drop out unable to do any additional damage.

In the Next Turn, the Virus will attack an adjacent Hit Location.

### Confusion (Anti-Missile ) Mode

The DataCaster confuses the missile and it detonates prematurely. The effect is (as in all AM Defenses) based on Mount.

## D DATACASTER

Range	R=7
Attacker	D-12 Adv Main DataCaster-12
Defender	
Armor	

If this DataCaster successfully attacks, it inflicts 30 hits: probably 5 Virus and 25 Applets on a single Hit Location.

## E STASIS PROJECTOR

Range	R=7
Attacker	E-19 Vd T1 Stasis-19
Defender	Q-14 Internal Mag Scrambler
Armor	Hullmetal-11

**Attack and Defense.** The E-19 attacks with Dice = R= Range and must roll T+C+S+M or less. Its Single Turret T1 has Mod -3, so Assets = 19 + 7 + 3 -3 = 26.

It rolls 7D (= 20) and (potentially) hits.

The target has allocated its Q-14 Mag Scrambler in Absolute Mode: the Q-14 Internal Mount provides Mod +1, so its Assets are T+C+S+M= 14+7+3 +1 = 25. The defense is less than the Attacker's 26 and the attack continues.

**Armor Penetration.** The E-19 now attacks the ship's Hullmetal-11. Actually, Stasis ignores Armor, so the Hullmetal-11 is ineffective.

Hits are determined by the Weapon Mount (Turret T1 = 1 hits). The attacker rolls 1D = 6 Damage. The ship receives Damage=6.

**Hit Location and Damage.** Hit Location = Flux = +6 – 4 = +2. The Damage impacts the Drives.

Final Damage = Damage/2 (round down) = 3. The Damage Severity Table shows the difficulty of repairing the hit is Formidable 3D.

The Drives compartment includes J-Drive and M-Drive. The damage is randomly allocated (1-2-3 = Jump; 4-5-6 = Maneuver) = 4 = Maneuver.

The ship has a Damage Control person (Skill=3); Check Skill = roll 2D for 3 or less; he rolls 5 and fails to fix the damage.

**Result.** The target receives Formidable 3D Maneuver Drive Damage.



## F FUSION GUN

Range	S=2 = R=7
Attacker	F-15 Adv G B2 Fusion Gun-15
Defender	S-14 Adv G B2 Sandcaster-14
Armor	Hullmetal-11

**Attack and Defense.** The F-15 attacks with Dice = R = Range and must roll T+C+S+M or less. Its Dual Barbette B2 has Mod +2, so Assets = 15+7+3+2 = 27. It rolls 7D (=22) and (potentially) hits.

The target has allocated its S-14 Advanced Geo Range Dual Barbette Sandcaster-14 in Anti-Beam mode. Dual Barbette in AB Mode must roll 4 or less to stop the attack. The defender must roll 4 or less with 1D to stop the attack. He rolls 5 and the attack continues.

In the next Turn, the F-15 tries again. It rolls 7D (=32) and fails.

In the next turn, the F-15 tries a third time. It rolls 7D (=22) and potentially hits. The target again defends with its S-14, rolls 5 and this time fails to stop the attack.

**Armor Penetration.** The F-15 now attacks the ship's Hullmetal-11. Hits are determined by the Weapon Mount (Dual Barbette B2 = 5 Hits). The attacker rolls 5D = 17 Damage. The Hullmetal absorbs the first 11 Damage, so the ship receives Damage=6.

**Hit Location and Damage.** Hit Location = Flux = +3 - 5 = -2. The Damage impacts the Defenses.

Final Damage = Damage/2 (round down) = 6/2 = 3. The Damage Severity Table shows the difficulty of repairing the hit is Difficult 3D. Because a specific Defense was involved in the attack, it is the one receiving the Final Damage. The S-14 operator tries Immediate Action Damage Control (Skill=3); Check Skill = roll 2D for 3 or less; he rolls 6 and fails to fix the damage.

Result. The S-14 is out of action with Difficult 3D Damage.

## G MESON GUN

Range	S=11
Attacker	G-16 Imp DS Main Meson Gun-16
Defender	G-11 Internal Meson Screen-11
Armor	Hullmetal-11

**Attack and Defense.** The G-16 attacks with Dice = S= Space Range and must roll T+C+S+M or less. Its Main Mount has Mod +10, so Assets = 16 + 7 + 3 + 10 = 36. It rolls 11D (=40) and misses.

It shoots again, rolls 11D (=34) and potentially hits.

Firing from S=11, the attack is marked RINT Resolve In Next Turn. Play proceeds for other activity in the current turn.

In the next turn, the target has allocated its G-11 Internal Meson Screen in Absolute Mode: the G-11 internal mount provides Mod +1, so its assets are T+C+S+M= 11+7+3+1 = 22. The attacker Assets = 36 overwhelm the defenses, and the attack proceeds.

**Armor Penetration.** The G-16 now attacks the Hullmetal-11. Hits are determined by Weapon Mount (Main= 30 Hits). The attacker rolls 30D = 74 Damage. The first 11 are absorbed by the Hullmetal-11, so the ship receives Damage= 64.

**Hit Location and Damage.** Hit Location = Flux = +6 - 1 = +5. The damage impacts the Computer.

Final Damage = Damage/2 (round down) = 32. This result is off the chart: the Computer is destroyed.

**Additional Effects.** When a Component is Destroyed, the attack repeats (at half effect) at another Hit Location.

Inflict half Damage=74 (= Damage 37) minus Hullmetal-11 = Damage=26.

Hit Location = Flux = +5 - 4= +1 = Power Systems. The Damage=26 impacts the Power Plant. The result is off the chart and the Power Plant is destroyed.

Because that target location is destroyed, the damage is halved again and applied to yet another random location.

## H JUMP INDUCER

Range	R=6
Attacker	H-13 Exp VI T1 Jump Inducer-13
Defender	
Armor	Hydrogen-13

**Attack and Defense.** The H-13 attacks with Dice = Range = R=6. Its Single Turret T1 has Mod - 3, so Assets = 13 + 7 + 3 - 3 = 20. It rolls 6D (=19) and potentially hits.

**Armor Penetration.** There is no real defense against an H-13 (not even Armor). Hits are determined by the Weapon Mount (T1= 1 Hit). The attacker rolls 1D = 5, so the ship receives Damage=5.

**Hit Location and Damage.** Hit Location = +4 -1 = +3. The Damage impacts Weapons.

Final Damage = Damage/2 (round down) = 2. The Damage Severity Table shows the difficulty of repairing the hit is Average 2D. The target ship has six Weapons Mounts: assign each a number from 1 to 6 and roll 1D. The specific Weapon receives the Damage.

The weapon operator tries Immediate Action Damage Control (Skill=3); Check Skill = roll 2D for 3 or less; he rolls 6 and fails to fix the damage.

One Weapon Installation receives Average 2D Damage.

## H JUMP INDUCER

Range	R=7
Attacker	H-21 Adv Or Main Jump Inducer-21
Defender	
Armor	Hydrogen-13

**Attack and Defense.** The H-21 attacks with Dice = Range = R=7. Its Main Mount has Mod +10, so Assets = 21 + 7 + 3 + 10 = 41. It rolls 7D (=35) and potentially hits.

**Armor Penetration.** There is no real defense against an H-21 (not even Armor). Hits are determined by the Weapon Mount (Main= 30 Hits). The attacker rolls 30D = 89, so the ship receives Damage=89.

**Hit Location and Damage.** Hit Location = +4 -4 = 0. The Damage impacts Hull.

Final Damage = Damage/2 (round down) = 44. The Hydrogen-13 absorbs 13, and the remaining damage 31 reach the ship. The Hull is damaged beyond repair.

## J K L LASERS

Range	S=4 = R= 9
Attacker	J-8 T1 Mining Laser K-9 T2 Pulse Laser L-15 Adv G T4 Laser-15
Defender	S-14 Adv G B2 Sandcaster-14
Armor	LiteMetal-9

This engagement begins at S=4 = R=9, the J-8 and the K-9 cannot fire.

**Attack and Defense.** The L-15 attacks with Dice = Range= R=9. Its Quad Turret T4 has Mod 0, so Assets = 15 + 7 + 3 = 25. It rolls 9D (= 20) and potentially hits.

The target has its S-14 Dual Barbette B2 in Anti-Beam AB Mode must roll 4 or less to stop the attack. The defender must roll 4 or less with 1D to stop the attack. He rolls 2 and the attack fails.

The Attacker can move one Space Range Band per round between B-1-2-3-4. He moves closer to S=3.

The L-15 attacks (again) with dice equal to Range (now S=3 = R= 8). He must roll 25 or less on 8D (=31) and he misses.

The Attacker can move one Space Range Band per round between B-1-2-3-4. He moves closer to S=2 = R =7. Now, all three weapons J-8 K-9 L-15 can fire.

The J-8 attacks with dice equal to Range (now R=7) and must roll T+C+S+M or less. The Single Turret T1 has Mod -3, so Assets = 8+7+3 - 3 = 15. He rolls 7D (=21) and misses.

The K-9 attacks. T+C+S+M = 9 + 7 + 3 -2 = 17. He rolls 7D = 21 and potentially hits.

The target has its S-14 Dual Barbette B2 in Anti-Beam AB Mode. The defender must roll 4 or less to stop the shot. He rolls 3 and the attack fails.

The L-15 attacks with dice equal to Space Range (S=2 = R=7) and must roll T+C+S+M or less. The Quad Turret T4 has Mod = 0, so Assets = 15 + 7 + 3 = 25. He rolls 7D (=21) and potentially hits.

The defending AB turret has already fired; it cannot fire again in the current turn.

**Armor Penetration.** The L-16 now attacks the Litemetal-9. Hits are determined by Weapon Mount (Quad Turret T4 =4). The attacker rolls 4D = 13 Damage. The first 9 are absorbed by the Litemetal-9, so the ship receives Damage= 4.

**Hit Location and Damage.** Hit Location = +5 - 6 = -1. The damage impacts Life Support. Final Damage = Damage/2 (round down) = 2. Life Support has received an Average 2D damage.

The Engineer (Skill=Engineer-3) sees the hit and tries Immediate Action. Check Skill (2D) and rolls 3. He manages to slap a patch on the problem. It is reduced to Easy 1D and will have to be repaired later, but at least it's still functioning.

## M MISSILE

Range	S=2
Attacker	M-10 Improved LR T3 Missile-10 launches Missile-5X-HW launches Missile-5X-OG launches Missile-5X-SA launches Missile-5X-DL
Defender	L-15 Adv G T4 Laser-15
Armor	two layers of VliteMetal-10

This engagement is relatively close; the missiles impact in the turn they are launched. The launcher will fire one every turn.

**Attack and Defense.** The Missile-5X-HW attacks with Dice = Range = S=2 and must roll T+C+S+M or less. The Triple Turret T3 has Mod -1. The Missile is HW HardWired, so its C+S = 5 (it disregards the C+S of the Launcher Operator). Assets = 10 + 5 +1 = 14. It rolls 2D (=11) and potentially hits.

**Attack and Defense.** The Missile-5X-OG attacks with Dice = Range = S=2 and must roll T+C+S+M or less. The Triple Turret T3 has Mod -1. Because the Missile is OG Operator Guided (which can be used at S=2 or less), C+S is taken from the Launcher Operator. Assets = 10 + 7 + 3 +1 = 19. It rolls 2D (=11) and potentially hits.

**Attack and Defense.** The Missile-5X-SA attacks with Dice = Range = S=2 and must roll T+C+S+M or less. The Triple Turret T3 has Mod -1. The SA Self-Aware guidance system has its own C+S which is used instead of the Launcher Operator C+S. Assets = 10 + 7 + 3 +1 = 19. It rolls 2D (=11) and potentially hits.

**Attack and Defense.** The Missile-5X-DL attacks with Dice = Range = S=2 and must roll T+C+S+M or less. The Triple Turret T3 has Mod -1. The DL DownLoad guidance system transfers the Operators C+S to the Missile Guidance system. Assets = 10 + 7 + 3 +1 = 19. It rolls 2D (=11) and potentially hits.

The target has allocated its L-15 Adv G T4 Laser-15 in Anti-Missile AM Mode. The defender must roll 3 (on 1D) or stop the attack. He rolls 2. The attack fails.

The missile attacks the ship and its two layers of VliteMetal-10.

The Size-5 Explosive Warhead Missile attacks the armor with 5D; he rolls 16. The two layers of VliteMetal-10 absorb the Damage.

## M MISSILE

Range	S=7
Attacker	M-10 Improved LR T3 Missile-10 launches Missile-5X-HW launches Missile-5X-OG launches Missile-5E-SA launches Missile-5N-DL
Defender	L-15 Adv G T4 Laser-15
Armor	two layers of VliteMetal-10

This ship is at Attack Range: far enough away that it can't just shoot missiles and expect them to hit right away.

The ship preplans its strategy: one shot every turn until the battle is over. The first shot will hit in Turn 7.

### Jump ahead to Turn 7

Missile-5X-HW launches with Dice = Range = S=7 and must roll T+C+S+M or less. The Triple Turret T3 has Mod -1, Hard-Wired guidance provides C+S= 5, so Assets = 10+5 -1 = 14. It rolls 7D (= 13) and potentially hits. The target has allocated its L-15 Adv G T4 Laser-15 in Anti-Missile AM Mode. The attacker must roll 3 (on 1D) or less. He rolls 5. The attack fails.

### Jump ahead to Turn 8

Someone made a planning mistake. Missile-5X-OG is Operator Guided; it cannot reach beyond S=2. Someone will be reprimanded after the battle.

### Jump Ahead to Turn 9

The Missile-5X-SA launches with Dice = Range = S=7 and must roll T+C+S+M or less. The Triple Turret T3 has Mod -1, Self-Aware guidance provides C+S= 7+3, so Assets = 10+7+3 -1 = 19. It rolls 7D (= 18) and potentially hits.

The target's L-15 Adv G T4 Laser-15 is in Anti-Missile AM Mode. Defender must roll 3 (on 1D) or less. He rolls 5 and the attack continues. The missile attacks the ship and its two layers of VliteMetal-10. The Size-5 EMP Warhead Missile attacks armor with 5D = 22. Armor absorbs the first 20 points of Damage, so the ship receives Damage=2.

**Hit Location and Damage.** Hit Location = +5 - 6 = -1. The damage impacts Life Support. Final Damage = Damage/2 (round down) = 1. Life Support receives an Easy 1D damage.

### Jump Ahead to Turn 10

Defender tries to stop the next missile: he rolls 5 and the attack continues. The missile attacks the ship and its two layers of VliteMetal-10. The Size-5 Nuke Warhead Missile impacts and creates a Massive Explosion: consult the Massive Explosion Table with Size + 1D = 5+ 3 = 8. The explosion inflicts a Vnear Miss with Blast=30 = 102 (2 layers of VliteMetal-10 absorb 20) Damage = 82. Final Damage = 41, which is off the chart: whatever it hits will be destroyed.

**Hit Location and Damage.** Consult the Hit Location Table: Flux = +1-3 = -2 = Defenses. The target has three defenses: assign each a number 1-2-3 and randomly determine which is Destroyed.

**Additional Effects.** When a Component is Destroyed, the attack repeats (at half effect) at another Hit Location.

Inflict half Damage=102 (= Damage 37) minus two layers of VliteMetal-10 = Damage=17.

Hit Location = Flux = +5 - 4 = +1 = Power Systems. The Damage=17 impacts the Power Plant. The result is off the chart and the Power Plant is destroyed.

## N KK MISSILE

Range	S=2, later S=7.
Attacker	N-14 Adv DS Bay KK Missile-14 Missile-6K-OG Missile-6K-HW
Defender	
Armor	3 layers of LiteMetal-13

**Attack and Defense.** The N-11 attacks with Dice = Space Range and must roll T+ C+S+M or less. Its Bay provides Mod +5, so Assets = 14 + 7 + 3 + 5 = 29. It rolls 2D (= 10) and potentially hits.

The target has deployed no defenses against the KKM.

The missile attacks the ship and its three layers of LiteMetal-10.

The Size-6 KKM hits with  $\text{Speed}^2 = \text{Space Range}^2 = 2^2 = 4$ . He rolls 4D = 16 which is absorbed by the Armor.

Later, the ship launches its KK Missile attack from S=7. It impacts in Turn +7.

The Attacker must roll T+C+S+M = 14+5+5 = 24 or less on 7D. He rolls 23 and potentially hits. There are no defenses, so the Missile directly attacks the ship.

The Size-6 KKM hits with  $\text{Speed}^2 = \text{Space Range}^2 = 7^2 = 49$ . He rolls 49 Dice = 150. The first 39 are absorbed by Armor, but the remaining 111 cause Damage =  $111/2 = \text{Final Damage}=55$ .

**Hit Location Chart and Damage.** Hit Location = +4 - 1 = +3. The damage impacts Weapons. The target has five weapons installations: assign each a number and randomly determine which one = 2 = Laser Turret. The Laser Turret is destroyed.

**Additional Effects.** When a Component is Destroyed, the attack repeats (at half effect) at another Hit Location.

Inflict half of Damage=150 (= Damage 75) minus three layers of LiteMetal-13 = Damage=36 = Final Damage= 18.

Hit Location = Flux = +5 - 4 = +1 = Power Systems. The Damage=18 impacts the Power Plant. The result is still off the chart and the Power Plant is destroyed.

## P PLASMA GUN

Range	R=2
Attacker	P-5 Exp VI B1 Plasma Gun-5
Defender	S-9 T1 Sandcaster-5
Armor	Armor-5

**Attack and Defense.** The P-5 attacks with Dice = R = Range and must roll T+C+S+M or less. Its Barbette B1 has no Mod, so Assets = 5+7+3= 15. It rolls 2D (=10) and (potentially) hits.

The target has allocated its S-14 Advanced Geo Range Dual Barbette Sandcaster-14 in Anti-Beam mode. Dual Barbette in AB Mode must roll 4 or less to stop the attack. The defender must roll 4 or less with 1D to stop the attack. He rolls 5 and the attack continues.

In the next Turn, the P-5 tries again. It rolls 2D (=11) potentially hits. The target again defends with its S-14, rolls 5 and this time fails to stop the attack.

**Armor Penetration.** The P-5 now attacks the ship's Armor-5. Hits are determined by the Weapon Mount (Barbette B1 = 3 Hits). The attacker rolls 3D = 14 Damage. The Armor-5 absorbs the first 5 Damage, so the ship receives Damage=9.

**Hit Location and Damage.** Hit Location = Flux = +3 - 5 = -2. The Damage impacts the Defenses.

Final Damage = Damage/2 (round down) = 9/2 = 4. The Damage Severity Table shows the difficulty of repairing the hit is Formidable 4D. Because a specific Defense was involved in the attack, it is the one receiving the Final Damage. The S-14 operator tries Immediate Action Damage Control (Skill=3); Check Skill = roll 2D for 3 or less; he rolls 6 and fails to fix the damage.

**Result.** The S-14 is out of action with Difficult 3D Damage.

## Q ORTILLERY

Range	R=9
Attacker	Q-15 Geo LBay Ortilery -15
Defender	L-10 Vd LBay Beam Laser-10
Armor	

The standard production Ortilery is designed for R=7, which is impractical in space combat; useful systems require R= 8 Orbit, R=9 Far Orbit, or R=10 Geosynchronous Orbit.

**Attack and Defense.** The Q-15 attacks with Dice = R= Range and must roll T+C+S+M or less. Its Large Bay LBay provides Mod +8, so Assets = 15+7+3 +8 = 33. It rolls 9D = 36 and misses.

The Q-15 attacks again in the next turn. It rolls 31 and potentially hits.

The surface target is defended by L-10 VDistant Range Large Bay Beam Lasers. It must roll 6 or less to stop the attack. The result is automatic; the attack fails.

The admiral rethinks his plans and tries again.

## Q ORTILLERY

Range	R=9 = S=4
Attacker	Q-15 Geo LBay Ortilery -15 Missile-5D-HW
Attacker	M-8 T3 Missile-8 Missile-5X-HW
Defender	L-10 Vd LBay Beam Laser-10
Armor	

**Attack and Defense.** The Missile-5X-HW attacks with Dice = Range = S=4 and must roll T+C+S+M or less. The Triple Turret T3 has Mod -1. The Missile is HW HardWired, so its C+S = 5 (it disregards the C+S of the Launcher Operator). Assets = 10 + 5 +1 = 14. It rolls 4D (=12) and potentially hits.

The surface target is defended by L-10 VDistant Range Large Bay Beam Lasers. It must roll 6 or less to stop the attack. The result is automatic; the attack fails.

**Armor Penetration.** The target is a Single Hex (= 1000 meters in diameter). There is no armor. The Deadfall Missile-5D-HW (the equivalent of a Size-5 Meteorite) creates a Massive Explosion.

Consult the Massive Explosion Table (Size – 1D = 5 -3 = ) 2 = Hit. Blast= 40D (and other effects).

## R RAIL GUN

Range	S=5
Attacker	R-13 LR Main Rail Gun-13 Missile-6X-HW
Defender	F-14 Adv Vd B2 Fusion Gun-14
Armor	Hullmetal-11

**Attack and Defense.** The R-13 attacks with Dice = Space Range and must roll T+ C+S+M or less. Its Main Mount provides Mod +10, so Assets = 13 + 5 + 10 = 28. It rolls 5D (= 24) and potentially hits. It will be resolved in the next turn.

In the next turn, the target has deployed its F-14 Adv Vd B2 Fusion Gun-14 in Anti-Missile AM Mode. The defender must roll 4 or less (on 1D) to stop the attack. He rolls 2. The attack fails.

The attacker tries again. It rolls 5D (=16 ) and potentially hits. The defender rolls in the AM Mode; he must roll 4 or less (on 1D) to stop the attack. He rolls 6. The attack continues.

The Missile attacks the ship and its Hullmetal-11.

The Size-6 Explosive Warhead Missile attacks the armor with 6D; he rolls 30. Hullmetal-11 absorbs 11 and Damage= 19 = Final Damage= 9.

**Hit Location and Damage.** Hit Location = +4 – 4 = 0. The damage impacts Hull, which is Destroyed. The ship comes apart.

**Additional Effects. Normally,** when a Component is Destroyed, the attack repeats (at half effect) at another Hit Location. In this case, the Hull is destroyed; its surviving components are scattered.

## S SANDCASTER

Range	
Attacker	S-9 T1 Sandcaster-9
Defender	
Armor	

Sandcasters are created and installed as Weapons, but they operate only in the Anti-Beam AB defensive mode.

## T JUMP DAMPER

Range	R=8
Attacker	T-15 Orbit B1 Jump Damper-15
Defender	
Armor	

The Jump Damper creates a 100D Field with a radius equal to R=Range.

**Operations.** The target is at R=8 and preparing to Jump. The attacker activates the T-15 which creates a Jump Damping field with R=9. Because the target is within the field; it cannot Jump.



## U TRACTOR/PRESSOR

Range	R=7
Attacker	U-15 T1 Tractor/Pressor-15
Defender	W-17 Internal Grav Scrambler-17
Armor	Hullmetal-11

**Attack and Defense.** The U-15 attacks with Dice = R = Range and must roll T+C+S+M or less. Its Single Turret T1 has Mod -3, so Assets = 15+7+3-3 = 22. It rolls 7D (=27) and misses.

In the next Turn, the U-15 fires again. It rolls 7D (=19) and potentially hits.

The target has allocated its W-17 Internal Grav Scrambler-17 in the Absolute Mode. Attacker T+C+S+M= 22 versus Defender T+C+S+M = 17+7+3+1 = 28. The attack is stopped.

**Armor Penetration.** The T-15 tries against a neighboring ship without a Grav Scrambler. After potentially hitting, it attacks the ship. Tractor/Pressor ignores Armor. The T1 Mount inflicts 1 Hit = 1D = 5. Damage =4.

**Hit Location and Damage.** Hit Location = Flux = +5 - 1 = +4. The Damage impacts the Bridge.

Final Damage = Damage/2 (round down) = 4/2 = 2. The Damage Severity Table shows the difficulty of repairing the hit is Average 2D. 4D. Because a specific Defense was The Bridge has several component Sensor Consoles: number each and randomly select one = Visor. The Visor receives Average 2D Damage.

One of the Bridge Crew tries Immediate Action Damage Control (Skill=3); Check Skill = roll 2D for 3 or less; he rolls 2 (he smacks the side of the Visor; its picture returns). It has an Easy 1D damage that will need to be repaired later.

## V SALVO RACK

Range	S=2
Attacker	V-10 Bay Salvo Rack-10 Missile-3X-OG
Defender	F-11 Ear Vd B2 Fusion Gun-11
Armor	3 layers Hullmetal-11

**Attack and Defense.** The V-10 attacks with Dice = Space Range and must roll T+ C+S+M or less. Its Bay Mount provides Mod +5, so Assets = 10 + 7+3 + 5 = 25. It rolls 2D (= 8) and potentially hits.

In the next turn, the target has deployed its F-11 Ear Vd B2 Fusion Gun-11 in Anti-Missile AM Mode. The defender must roll 4 or less (on 1D) to stop the attack. He rolls 6. The attack proceeds.

The Missile attacks the ship and its 3 layers of Hullmetal-11.

The Size-3 Explosive Warhead Missile attacks the armor with 3D; he rolls 14. The first layer of Hullmetal-11 absorbs 11 and the second layer of Hullmetal-11 absorbs the next 3. The ship is unaffected.

## W DISRUPTOR

Range	R=7
Attacker	W-16 Early B2 Orbit Disruptor-16
Defender	S-9 T1 Sandcaster-9 S-9 T1 Sandcaster-9 S-9 T1 Sandcaster-9
Armor	Armor-6

**Attack and Defense.** The W-16 attacks with Dice = R = Range and must roll T+C+S+M or less. Its Dual Barbette B2 has no Mod, so Assets = 16+7+3 = 26. It rolls 7D (=22) and potentially hits.

The target has allocated three S-9 T1 Sandcaster-9 in the Anti-Beam AB. The defender must roll 1 or less to stop the attack: he rolls 2, 5, and 1. The attack fails.

The W-16 fires again in the next turn. It rolls 7D (=24) and potentially hits.

The target has allocated three S-9 T1 Sandcaster-9 in the Anti-Beam AB. The defender must roll 1 or less to stop the attack: he rolls 2, 3, and 4. The attack proceeds.

**Armor Penetration.** The W-16 now attacks the ship's Armor-5. Hits are determined by the Weapon Mount (Barbette B2 = 5D). Each D reduces armor by -1. 5D reduces ship from Armor-6 to Armor-1.

**Hit Location and Damage.** The Disruptor disregards Hit Location; it applies to the entire ship.

## W DISRUPTOR

Range	R=7
Attacker	W-16 Early B2 Orbit Disruptor-16
Defender	T-16 Internal Black Globe-16
Armor	Armor-6

**Attack and Defense.** The W-16 attacks with Dice = R = Range and must roll T+C+S+M or less. Its Dual Barbette B2 has no Mod, so Assets = 16+7+3 = 26. It rolls 7D (=22) and potentially hits.

The target has a T-16 Black Globe deployed (operating) and defending in Absolute Mode. Compare Attacker T+C+S+M = 16 + 7+3 + 0 = 26 versus Defender T+C+S+M = 16+7+3 + 0 = 26. The Attack fails if less than Defender; the values are equal so the Attack succeeds.

**Hit Location And Damage.** Disruptors ignore Hit Location and Black Globes ignore Hit Location. The W-16 now inflicts Hits against the T-16. Hits are determined by the Weapon Mount (Barbette B2 = 5D = 21. The T-16 receives and stores 21 Hits. When this value exceeds Hull Tonnage times Jump Potential, the T-16 and the Jump Drive would be destroyed.

## 1 Battery Fire

Range	R=6
Attacker	Lead P-10 T3 Plasma Gun-10 P-10 T2 Ear Plasma Gun-10 P-10 Distant T2 Plasma Gun-10 P-10 T1 Plasma Gun-10
Defender	S-9 T3 Sandcaster-5
Armor	Hullmetal-11

Battery Fire allows various weapons of the same Type to fire together with greater effect. One weapon is selected as the Lead Weapon; the other weapons add to its effect if it hits and inflicts damage.

**Attack and Defense.** The Attacker has four P-10 Plasma Gun turrets of various sizes. The Lead P-10 T3 Plasma Gun-10 attacks with Dice = R = Range and must roll T+C+S+M or less. Its Triple Turret T3 has Mod -1, so Assets = 10+7+3 -1 = 19. It rolls 6D (=17) and potentially hits.

The target has allocated its S-9 T3 Sandcaster-5 in Anti-Beam mode. Triple Turret T3 must roll 3 or less to stop the attack. It rolls 2 and the attack fails.

The Lead P-10 fires again in the next turn. This time, the S-9 fails to stop the attack.

**Armor Penetration.** The Lead P-10 now attacks the ship's Hullmetal-11. Because this is Battery Fire, the other Plasma Guns participate as well. The Hits are determined by the Weapon Mounts (T3 = 3 hits; T2 = 2 hits; T2 = 2 hits; T1 = 1 hit) = 8 Hits. The attacker rolls 8D = 28 Damage. The Hullmetal-11 absorbs the first 11; the ship receives Damage= 17.

**Hit Location and Damage.** Hit Location = Flux = +3 - 5 = -2. The Damage impacts the Defenses.

Final Damage = Damage/2 (round down) = 17/2 = 8. The Damage Severity Table shows the difficulty of repairing the hit is Beyond Impossible 8D. Because a specific Defense was involved in the attack, it is the one receiving the Final Damage. The S-9 operator tries Immediate Action Damage Control (Skill=3); Check Skill = roll 2D for 3 or less; he rolls 6 and fails to fix the damage.

**Result.** The S-9 is out of action with Beyond Impossible 8D Damage.

## 2 Battery Fire with CommCaster

Range	R=6
Attacker	Lead P-10 T3 Plasma Gun-10 P-9 T2 Ear Plasma Gun-10 P-9 Distant T2 Plasma Gun-10 C-8 T1 CommCaster-8  P-10 T1 Plasma Gun-10 P-10 T1 Plasma Gun-10 P-10 T1 Plasma Gun-10 P-10 T1 Plasma Gun-10 C-8 T1 CommCaster-8
Defender	J-8 Jammer-8
Armor	Hullmetal-11

### Battery Fire with CommCaster

Each ship equipped with a Commcaster can contribute its weapons to Battery Fire.

Each CommCaster must be within Range of all participating ships.

Each CommCaster must successfully roll T+C+S+M for the R= Range to the farthest participating CommCaster. Ships in the same Range Band are at R=5.

The strongest Defender Jammer is a negative Mod on each T+C+S+M.

**Attack and Defense.** Two ships in the same Range Band work together through their CommCasters for Battery Fire against a target at R=6.

Attacker One has three P-10 Plasma Gun turrets of various sizes. Attacker Two has four P-10 Plasma Gun T1 turrets.

The ships first initiate CommCaster communications. Attacker One is at R=5 from Attacker Two. The Defender Jammer-8 produces a negative Mod = T+C+S+M - Space range = 8+7+3+0 -1 = -17.

Attacker One must roll 10+7+3 - 17 = 3 or less on 6D. This is harder than it looks.

At some time later, the Jammer-8 is not functioning.

Attacker One must roll 10+7+3+0 = 20 or less on 6D. He rolls 18 and his Commcaster is operational.

Attacker Two does the same.

Battery Fire begins with the Lead P-10. It hits and the other Plasma Guns chime in.

**Armor Penetration.** The Lead P-10 now attacks the ship's Hullmetal-11. Because this is Battery Fire, the other Plasma Guns participate as well. The Hits are determined by the Weapon = 11 Hits. The attacker rolls 11D = 38 Damage. The Hullmetal-11 absorbs the first 11; the ship receives Damage= 27.

**Hit Location and Damage.** Hit Location = Flux = +3 - 3 = 0. The Damage impacts the Hull.

Final Damage = Damage/2 (round down) = 27/2 = 12. This result is off the chart: the Hull is Destroyed. The target ship is blown to pieces.