Omega Vector: Space Combat

Battles between spacecraft in role-playing games have traditionally been modeled after wargames, with pieces being maneuvered on a hex grid under the influence of complex rules involving minute details of distance, thrust vectors, and sensor operation. A few systems have gone in the opposite direction and reduced the level of detail down to a series of generic numbers for movement, attack, and defense. Omega Vector is somewhere between the two extremes.

The heart of the system is the Range Table, used for both movement and weapons fire. Movement is simulated by increasing or decreasing the distance between ships on the table, simplifying the complexities of maneuvering in three dimensions by establishing the ships involved as the only necessary points of reference. As range decreases it becomes easier to hit a target as sensors and computer systems are able to more accurately judge it's present position and predict it's future location.

The physics of weaponry is likewise simplified. Beam weapons are extremely accurate because they strike at the speed of light, but rapidly dissipate in strength as range increases. Self-guiding missiles are the weapon of choice for long range combat; able to deliver devastating damage while the launching ship stays well out of range of the opponents close combat weapons. Direct fire kinetic weapons can shred a ship in a single burst, but lack long range accuracy because of the time it takes the projectiles to cover the immense distances to a target.

Setup

Players will need a completed record sheet for each of their ships. Make sure the sheets are filled out correctly and that the ships were built within the rules of the ship construction system. One additional number has to be calculated for each ship: it's Targeting rating. This is the base number used to determine if the ship's weapons hit a target in combat and is equal to the sum of it's Sensor and Computer ratings divided by two (Sensor + Computer/2) and rounded up. Both players will also be sharing a copy of the Range Table.

At the start of battle a marker, either a pencil slash, coin, or counter, is placed on the Range Table for each player. The marker for one arbitrarily chosen player is placed in the "Point Blank" range band while the other player's marker is placed in the "Extreme" range band. This represents the distance between the ships at the beginning of the encounter and determines the To Hit Number and Beam Strength for both players.

Example- Jeff and Jane are in the middle of a scenario involving some corporate skullduggery in the asteroid belt. Jeff will be controlling an up-gunned freighter sprinting for the inner system with a cargo of lethal bioweapons in the hold. Jane takes the helm of a FedCom light cruiser that has to stop him.

Each player gets a completed record sheet for their ship and looks it over to make sure all the information they need is there. Jeff's freighter has a Sensor rating of 12 and Computer rating of 18. He adds them up, divides by two, and writes 15 down as his Targeting rating. Jane's ship is a little better off; it has a Sensor rating of 15 and a computer rating of 25. That gives her a Targeting number of 20.

Once the record sheets are finished they get out a copy of the Range Table. Jeff takes the starting position at the "Point Blank" band and pencils in an "X" for his ship. Jane draws an "O" in the Extreme band for her ship. With all that done it's time to start blowing things up.

Combat Procedure

Combat in Omega Vector takes place in rounds divided into seven phases during which players alternate performing specific actions based on initiative. Combat continues through succeeding rounds until one combatant is destroyed, surrenders, or performs a breakaway.

Phase 1: Initiative

Both combatants roll 1D10 and add it to their ship's Sensor rating and the Spacecraft Piloting skill of its captain or computer. Whoever has the highest total wins initiative for this round. The losing side must declare all it's actions first

during each phase, giving the winner the advantage of knowing his opponents actions before declaring his own.

Example- Jeff's ship captain has a Spacecraft Piloting skill of 8 while the ship has a Sensor rating of 12. He rolls a 4 on a ten-sided die, adds it together with the other numbers, and comes up with a total of 24.

Jane's ship has a Sensor rating of 15, but her captain only has Spacecraft Piloting 5. Even worse, she rolls a 3. That gives her a total of 23 on her initiative roll. Jeff's 24 beats her out and he gets initiative this round.

Phase 2: Launch and Recovery

Each side declares if secondary craft are being launched or recovered and which ships are involved. Launched craft are immediately active and capable of moving and firing during the appropriate phase.

Example- Since Jeff has the initiative this round Jane has to declare if she's launching any small craft first. She decides to keep her shuttle in the launch bay for now.

After taking a look at his ship record sheet Jeff decides he could use a little extra firepower. He launches his transfer vehicle to take advantage of it's laser-5 in the upcoming battle.

Phase 3: Movement

The side with initiative can choose to increase or decrease the range of the battle by one band. If the combatants are at Extreme range the side with initiative can breakaway and end the battle if he has a higher G-rating than his opponent. Breakaway can only be performed after the first full round of combat is completed.

Example- Jeff decides to leave the range of the battle where it is. He could close the distance to "Long" so his direct fire weapons would be more effective against Jane's cruiser, but that would mean committing to a fight he wants to avoid. Instead he decides to keep the range at Extreme. If he can get initiative next round he'll be able to commit a breakaway and escape.

Phase 4: Declare Defenses

Each side declares which defenses are being deployed and what weapons are assigned to point defense for this round. Weapons dedicated to point defense are the only ones that can fire upon incoming missiles during the "Missile Attacks" phase, but can take no other action.

Each anti-laser aerosol canister expended cuts the damage rating of any laser weapon fired upon the target in half. Each chaff/flare cluster fired increases the attackers to hit number by +5. Both defenses last for only one round.

Decoys are indistinguishable from the launching ship unless sensors can spot the difference. When a decoy is launched the opposing player rolls to "hit" on the Range Table using the sum of his Targeting, Sensor Operation skill, and 1D10. On a successful hit the decoy is revealed. If the roll fails the launching ship and decoy are designated as "ship 1" and "ship 2", forcing the attacker to choose between the targets each round until the decoy is revealed. The attacker may make a sensor attempt against each decoy during each succeeding "Declare Defenses" phase. Any hits on the decoy will reveal it.

Example- Since Jeff has initiative Jane must declare her defenses first. Her light cruiser mounts 10 medium missiles, 2 swarmgun-10's, 2 particle beam-20's, 4 anti-laser aerosol canisters and 2 chaff/flare dispensers. She fires off two chaff/flare clusters, increasing the to hit number for attacks against her cruiser by +10 and leaving her with 8 chaff/flare rounds, and dedicates the two swarmguns to point defense. They're the only weapons she'll be able to use against incoming missiles.

Jeff's freighter mounts 4 light missiles, a swarmgun-5, a laser-10, and 1 chaff/flare dispenser. He fires off a chaff/flare cluster, increasing Jane's to hit number against his ship by +5, and dedicates his ship's swarmgun and laser, a long with the laser on the transfer vehicle, to point defense. He knows Jane has a slew of missiles and wants to be able to stop any that get close.

Phase 5: Missile Attacks

Each side declares how many missiles it's launching and determines if they hit. Attacks are resolved by adding the ship's Targeting rating, the operator's Spacecraft Weapons skill, and the result of a 1D10 roll (Targeting + Spacecraft Weapons + 1D10) for each missile; if the result is equal to or greater than the to hit number for the current range the missile hits. The to hit roll is modified by any relevant defenses deployed by the target.

If a hit is rolled the defender may attempt to destroy the incoming missile using point defense weapons. Only weapons dedicated to point defense during the "Declare Defenses" phase may fire and they cannot be used for any other purpose this round. Each point defense weapon may fire only once during the phase, but any number of weapons can fire at an incoming missile.

All point defense attacks against missiles are carried out as a normal attack (Targeting + Spacecraft Weapons + 1D10) with a to hit number of 25. The missile is destroyed if it takes damage equal or greater than it's tonnage. Missiles that are only partially damaged strike as normal with their full damage rating.
When the missile attacks and point defense attempts for both sides have been completed make a note of how many missiles successfully hit and their damage rating.

Example- Jane decides to launch 6 of her medium missiles at Jeff's freighter. Her cruiser has a Targeting number of 20 and her weapon's officer has Spacecraft Weapons-6. At Extreme range she has a to hit number of 30, but Jeff fired off a chaff/flare cluster during the "Declare Defenses" phase that increases that to 35, so she needs to roll a 9 or 10 to hit. She rolls for each missile and determines that four missed and two hit. It's her lucky day.

Things aren't quite so rosy for Jeff. He has three weapons dedicated to point defense: the swarmgun-5 and laser-10 on his ship and the laser-5 on the transfer vehicle. With his ship's Targeting rating of 15 and his captain's Spacecraft Weapons skill of 5 he'd normally need to roll a 5 or better to hit the missiles, but his weapon's have some targeting modifiers: both the lasers are +2 to hit while the swarmgun is -2 to hit. He rolls for the swarmgun first and gets a 6, a near miss. His luck isn't much better with the lasers: he rolls a 9 and 1 and only gets a hit with the laser-10. Since medium missiles mass five tons he blows one incoming missile to smithereens, but the other one gets through.

He briefly thinks about launching a spread of missiles in retaliation, but realizes it wouldn't do any good. With a Targeting rating of 15 and Spacecraft Weapons skill of 5, not to mention Jane's two chaff/flare clusters and their -10 modifier, there's no way for him to hit her.

Phase 6: Direct Fire Attacks

During this phase both sides attack their opponent with ship mounted beam and kinetic weapons. The side that lost initiative declares and determines the success of all it's direct fire attacks first, followed by the side that has initiative doing the same. All fire is resolved with a standard attack roll (Targeting + Spacecraft Weapons + 1D10) with a to hit number derived from the current range, modified by any defenses the target may have deployed. Make a note of the damage ratings of any weapons that successfully hit.

Example- At this range Jane's only effective weapons are her particle beam-20's. Once again she needs a 9 or 10 to hit. She rolls a 2 and a 9, scoring a hit with one particle beam. After looking at the range table she sees that her attack will be at 1/16 strength, rounded down to 1. Not much, but it's better than nothing.

Jeff's unable to attack her in return because he dedicated all his direct fire weapons to point defense. Even if he was able to fire he'd be facing the same dismal to hit chances he encountered during the "Missile Attacks" phase. Things are not looking good.

Phase 6: Damage Resolution

Both sides roll on the damage table to determine the outcome of each successful attack. Most hits result in the elimination of tonnage or rating points equal to the attacking weapon's damage rating from a particular system or location. Damage is

assumed to occur to both ships simultaneously and takes effect at the end of the phase. If neither side is destroyed or surrenders the round ends and the next round of combat begins.

Example- Jane has two attacks on Jeff to resolve: a medium missile with a damage rating of 10 and a particle beam hit with a damage rating of 1. For the missile hit she rolls a 5 and blows 10 points off the ship's computer rating, knocking it down from 18 to 8. The attack from the particle beam gets a +2 modifier to it's damage roll and she rolls an 8, giving her a total of 10 and a Target Destroyed result. Jeff's ship is turned into a rapidly expanding sphere of debris. Ouch.

If the second hit didn't destroy him Jeff would still be in trouble. The sensor hit would have forced him to recalculate his Targeting number, making it even more difficult for him to hit Jane.

Damage Table

D10 roll	Hit Location
1	Living Space
2	Bay/Hold
3	Fuel
4	Engine
5	Computer
6	Communications
7	Sensor
8	Weapon
9	Critical Hit
10	Target Destroyed

Effects

Living Space- Living space equal to the weapon's Damage Rating in tons is rendered uninhabitable until repaired.

Bay/Hold- A randomly selected cargo hold or vehicle bay is hit. In the case of cargo holds, cargo equal to the weapon's Damage Rating in tons is destroyed. If a vehicle bay is hit treat it as an attack directly upon the vehicle at half the weapon's Damage Rating and roll for hit location.

Fuel- The hit destroys a volume of fuel equal to the weapon's Damage Rating in tons.

Engine- The target ships G rating is reduced by an amount equal to the weapon's Damage Rating.

Computer- The attack strikes some portion of the computer system, reducing it's rating by an amount equal to the weapon's Damage Rating. The target ship's Targeting number is adjusted to reflect the reduced capacity.

Communications- The target ship's Communications rating is reduced by an amount equal to the weapon's Damage Rating.

Sensor- The target ship's Sensor rating is reduced by an amount equal to the weapon's Damage Rating.

Weapon- One randomly chosen weapon is destroyed.

Critical Hit- Roll again on the hit location table. Whatever system is hit has half it's current capability destroyed. Living space hits render half the ship's accommodations uninhabitable until repaired. Hold hits destroy half the cargo in a randomly chosen cargo hold. Bay hits subject the vehicle inside to a full strength attack from the weapon that produced the critical hit. Fuel hits destroy half the ship's current fuel supply. Engine hits reduce the ship's current G rating by half. Computer, Communications, and Sensor hits reduce the current rating by half. Weapon

hits incapacitate half the ship's weapons until repaired. If a critical hit or target destroyed result is rolled the ship is destroyed.

Target Destroyed- The target ship is destroyed.

Range Table

Range Band	To Hit Number	Beam Weapon Strength	Approximate Range
Point Blank	10	Full Strength	1-100 km
Close	15	1/2	101-1000 km
Medium	20	1/4	1001-10,000 km
Long	25	1/8	10,001-100,000 km
Extreme	30	1/16	100,001-1,000,000 km