

Metaverse



Starship combat across every universe

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Credits

Project Development

Michael Hoyt

Rules Development

Michael Hoyt

Adam Gow

Phil Wright

Product Editing

Phil Wright

Software Development

Adam Gow

Artwork

Sarah Barnes

Game Testing

Lino Ciaralli

Kevin Orr

James Brooks

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Introduction

The space gaming genre is replete with rules systems designed for games ranging from one-on-one cruiser duels to grand fleet-level battles. Some of these systems are proprietary and focus only on a specific fictional universe while others provide a generic framework for representing a multitude of universes, sacrificing specifics for flexibility.

I have played games covering experiences from one end of this spectrum to the other, experiencing many great and some poor systems. My intention with Metaverse was never to replace or supplant any of those great products but to supplement and, in some cases, improve upon excellent ideas.

I designed Metaverse to be the most flexible rule system on the market with the ability to be bent and twisted to any player's desire, whether that is to replicate another rule systems' paradigm, invent their own tactical environment, duplicate their favorite famous fictional universe, or to mix them all together. The scale of the game is malleable, changeable so that players can simulate the duels between heroic starships in intimate detail or wash over the details and command great fleets of starships in those moments where worlds stood or fell.

I want players to have the experience of tinkering and toying with designs at a level of detail as small as they desire for as long as they want, outside of the game itself. I also want them to have game-play as smooth as possible that rewards both intelligent design and cunning tactical play. Foremost, however, I want to afford players the freedom to build what they want, play with what they want, and imagine what they want in a framework that still functions to provide an entertaining game with as much legitimacy and forethought as possible.

This simple idea allows two different games of Metaverse to be played next to each other; each with different scales, technology assumptions, and backgrounds. They will feel completely different, yet come together and mix seamlessly.

-Michael Hoyt



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1.0.0 Overview

Metaverse is designed as a framework rule set, allowing players to construct and battle in any universe they desire. The design process for a starship can be very detailed, if the player desires, allowing for games to focus on only a few starships or allow great fleets to do battle, as simply as possible. This design process is handled efficiently by the MetaMaker software, such that players need only focus on what they want their starships to do and perhaps what they will cost to bring to a game.

The age of designing starship statistics on napkins is over; the software behind MetaMaker can take into account algorithms and unseen numbers of variables (that are far more complex than a normal person could ever be reasonably expected to handle) in order to compute the combat value and stats of a starship. This also allows players to build their starships with as few restrictions as possible.

A Metaverse starship is not restricted in the numbers or size of weapons and other systems it can carry. A player can cram as much into as small a hull as possible and just assume it is of a more advanced technology level. All that they need take note of is the combat value of that starship, which is calculated for them automatically.

The game-play of Metaverse is designed to cover as many or as few possible interactions as the player desires. One group of players might not wish to use starfighters, indirect weapons, and electronic warfare, and operate solely with cinematic starships. This group would simply not design any of these systems and capabilities into their starships and skip the relevant steps of the turn sequence thereby making a simpler and shorter turn. Another group may wish to include every possible system and capability and thereby have a longer more complex turn. Another group of players may choose to simulate cruiser duels and therefore assumes 1000t per hull hit and scale all of their weapons proportionally, including every possible subsystem in their designs. Another group might desire to command huge fleets and therefore assumes 100,000t per hull hit, scaling their weapons and including only the necessary subsystems. In this way players can twist and bend Metaverse to their will.

Metaverse is littered with examples to assist in the explanation of mechanics. In addition to this, players will find author's notes scattered around the rules giving background explanation on the intent behind a rule or even the best physics explanation possible given the subject matter. None of these are key but do allow for an on-going conversation between the players and the author.

This book is laid out such that players will receive a basic overview of the turn sequence, status displays of the components, and governing movement and combat rules. With this general knowledge, the player will go through a detailed explanation of the steps and phases of the turn sequence, essentially working through an entire turn's play.

When the player has sufficient knowledge of the sequence of events of a turn and the basic rules, a rundown of all the possible components of a starship, their specific rules and exceptions and place in the turn will be provided. This will inevitably be the section to which players refer most. Following this will be rules governing the deployment, terrain, and the encounter system, designed to make pickup games more exciting. At this point the player will have everything he or she needs to play a friday pickup game with friends. Beyond this point the player will be provided with an appendix of charts and play aids.

1.1.0 Turn Sequence

The turn sequence of Metaverse is designed to integrate the varied components of a space battle in a logical sequence with as few exceptions and sequence interrupting actions as possible. The sequence is divided into three phases and organized for gameplay rather than realism.

A phase must be completed before moving to the next one. Each phase is divided into steps which are organized based on reaction times, flight speeds, and tactical flexibility of the relative combat systems to provide a sequence of events as intelligently as possible.

Movement Phase

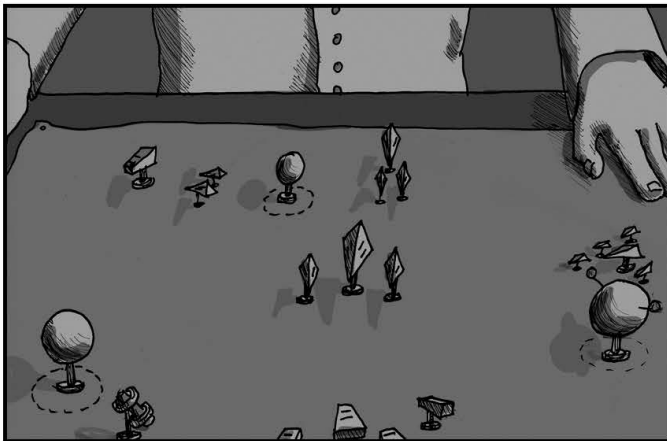
- Plot Movement Step
- Indirect Movement Step
- Starship Movement Step
- Starfighter Operations Step
- Starfighter Movement Step

Combat Phase

- Electronic Warfare Step
- Starship Combat Step
- Starfighter Combat Step
- Indirect Combat Step
- Boarding Combat Step

End Phase

- Repair Step
- Morale Step



Author's Note

Over the course of development of Metaverse, questions were raised on more than one occasion about the reasoning behind the turn sequence. Why do indirect weapons move before starships and starfighters after? And why do starfighters fire before indirect weapons? The answer to this is actually quite simple: gameplay.

The order of movement was designed to provide a bit of a guessing game when using indirect weapons and to provide a counter-balance to their flagrant disregard of the normal use of sensors. Starfighters moving after starships, while representing the tactical flexibility of a lone pilot over an entire starship, is really designed simply so the player does not have to plot their movement.

The design of the combat phase actually has some very practical reasons for its order and was worked out over considerable time and through numerous iterations. Rather than have the combat phase be a jumble of exceptions, I have ordered it such that each component has a chance to strike its target and defend itself.

Starships can defend against incoming starfighters and missiles without interrupting any sequence, starfighters can defend themselves against incoming missiles, and then missiles can strike their targets. This order can be justified on the grounds of engagement ranges and sensor power but fundamentally it is a game play issue.

1.2.0 Movement

Over the course of a Metaverse game, players will plot the intended movement of their starships and then carry out said plots. However, a player cannot simply plot whatever he or she chooses. The movement of a starship is restricted by four factors:

- method of movement
- current momentum
- number of operational STL drives
- number of operational thrusters.

Every starship will have one of two methods of movement. Cinematic movement is used for ships that move like aircraft while newtonian movement is used for starships that move in a manner more respectful of physics. The other three factors of plotting and movement depend on the method of movement. There is no restriction on the interaction of cinematic and newtonian movement systems; both may exist in the same game or even the same fleet.

1.2.1 Cinematic Movement

All cinematic starships have a momentum that is carried over from turn to turn and is expressed in centimetres of movement per turn; thus, a starship with a momentum of eight will move eight centimetres in a straight line every turn until that momentum changes.

All starships have a number of STL drives that determine their capability for adjusting their current forward momentum. Each STL drive will be of a size granting that many drive points.

STL drives placed in the rearward section may be used to increase the starship's momentum at a rate of one centimetre per drive point. STL drives placed in the forward section may be used to decrease the starship's momentum at a rate of one centimetre per drive point. A STL drive does not have to utilize all of its drive points.

All cinematic starships have a maximum forward velocity that is not dependant on their drive capacity but on their tech level.

The maximum velocity a cinematic starship may achieve in reverse is equal to half of this, rounded down.

To alter its heading, the starship must have port or starboard thrusters. Thrusters will be of a given size, granting its size in thruster points. Each thruster allows the starship to make a single heading change of 22.5° per thruster point; port thrusters are used for starboard changes and vice versa. Heading changes must be spread evenly throughout the starship's movement keeping whole numbers.

A thruster does not have to utilize all of its thruster points. A thruster with more than one point cannot be used to perform different actions in the same turn, such as heading changes and evasive manoeuvres.

Example

The USS Einstein currently has a forward momentum of twelve, two size four STL drives in her rearward section, a single size two STL drive in her forward section, two size two thrusters out either side, and has a maximum velocity of twenty.

The simplest option for the Einstein is to simply drift forward twelve centimetres. She could accelerate by eight (2x4) and increase her forward momentum to twenty. This would put the Einstein at her maximum velocity and therefore unable to accelerate further. She could decelerate by two and decrease her forward momentum to ten.

She could also change her heading utilising her thrusters. The Einstein has a total of four thruster points out either side (2x2) allowing for up to a 90° turn either way, or even both. Should the Einstein need to perform other actions, such as evasive manoeuvres, her capability to turn would be hampered.

The Einstein ends up making two turns to the right and not accelerating. Her movement for the turn would be straight 4 – 22.5° turn right – straight 4 – 22.5° turn right – straight 4.

1.2.2 Newtonian Movement

Like cinematic starships, newtonian starships are concerned with momentum but in up to eight directions. These starships must have their momentum recorded using an eight pointed compass rose.

At the beginning of the game, a table edge is declared to be north and the ships momentum compass will have a north direction conforming to the table. Any time the starship utilizes a drive, the momentum compass is updated using the thrust.

Newtonian starships utilize STL drives and can have them placed fore and aft as well as port and starboard. This allows for thrust to be applied in any of four directions. Thrusters may only be placed port and starboard.

Rotational thrust is also recorded for newtonian ships alongside the compass rose as a number and either clockwise (CW) or counter-clockwise (CCW). When a port thruster is fired for one point, it increases the CW momentum by one and vice versa for starboard thrusters.

Newtonian starships make 45° heading changes every turn based on their rotational momentum. A starship cannot add both CW and CCW rotation in the same turn.

The facing of a starship is irrelevant to its current momentum, only the application of thrust based on facing must be considered. Like cinematic starships, drives and thrusters can be of any size.

When applying thrust from drives, the player may opt to perform the thrust at any point in the starships rotation, if it has one. Thus a starship with a current 1CW rotation could fire its drives in either its current facing or its facing after the rotation.

The thrust required to increase a newtonian starship's momentum increases by one for every ten momentum it has in that direction. When this thrust is applied each point of momentum is

considered independently; thus increasing from a momentum of nine to ten requires one point of thrust and increasing from ten to eleven requires two points making an increase from nine to eleven require three points. This will effectively give a starship a maximum velocity in any one direction. When applying thrust opposite to a current momentum it decreases that momentum one point per thrust point.

When moving a newtonian starship its rotational momentum is applied first, then the starship is moved all of its different momentums according to its momentum rose. Thus a ship could be rotated once CW and then move eight north and then five north west. The combination of these two momentums results in the starships actual vector but for gameplay purposes and the sanity of the players it is recorded and conducted in this manner.

Example

The USS Newton is currently facing north with a momentum of eight north and six north west, two size two STL drives in its rearward section, two size one STL drives in its forward section, and three size one thrusters out either side.

The simplest manoeuvre for the Newton would be to simply drift eight north and six north west. With the thrusters and STL drives at her disposal, the Newton has numerous options available to her.

One option for the Newton would be to simply apply its rearward STL drives for four points north. This would increase her north momentum from eight to eleven (from eight to ten would cost one point each while ten to eleven would cost two points each).

As an alternative the Newton could apply two points from one of her rear drives to increase her north momentum to ten. She could then fire one of her starboard thrusters for one point to add a CCW rotation. After firing the thruster the Newton could then fire her other rear drive to add two points to her north west momentum.

1.2.3 Special Manoeuvres

Roll (RL)

A starship may roll using its thrusters to "mirror" the starship's record sheet. This may be useful to bring undamaged sides of a starship to bear. To perform a roll a starship requires one thruster point from each side of the starship (two total). A roll is denoted by RL in the plot. Once rolled, a starship will flip its port and starboard sides on its record sheet until it rolls back. The starship's movement rating is increased by +1 for the turn.

Flip (FL)

A newtonian starship may use its thrusters or drives to flip 180° end to end while keeping the port and starboard sides on their original facing. To perform a flip, a starship requires three thruster points from each side of the starship (six total) or two drive points from the back and the front of the ship (four total). A flip is denoted by FL in the plot. Once flipped, a starship will rotate 180° but it is not considered to have brought its sides around 180°, only its front and back will have changed. The starship's movement rating is increased by +1 for the turn.

Corkscrew (CW)

A starship may perform a corkscrew which will allow weapons from both sides to bear out one side. To perform a corkscrew, a starship requires two thruster points from both sides of the ship (four total). A corkscrew is denoted by CW in the plot. When a corkscrew is performed, weapons in the port and starboard sections may fire out the arc opposite them in the opposite section but may not be volley fired. The starship's movement rating is increased by +2 for the turn. All incoming weapon strikes on the side of the ship must be randomly assigned to the port or starboard sections.

Evasive Manoeuvres (EM)

A starship may perform evasive manoeuvres which will make incoming and outgoing fire more difficult. To perform evasive manoeuvres a starship requires thruster points from both sides of the ship. One evasive manoeuvre (EM) requires two thruster points from both sides (four total);

two EMs require four thruster points from both sides (eight total), three EMs require eight thruster points from both sides, etc. Note that these numbers are not cumulative (i.e. it does not take two thruster points to perform one EM and then a further four to perform a second). The number of thrusters required for a given number of EMs progresses through powers of two. The number of EMs performed determines the modifier to both target rating and movement rating. The modifier to the target rating is equal to the momentum of the starship divided by ten, rounded down, then multiplied by the number of evasive maneuvers. Thus, a starship travelling 22cm per turn ($22/10$ [rounded down] = 2) and performing two evasive maneuvers would add +4 to its target rating (2×2). The modifier to the movement rating is simply equal to the number of evasive maneuvers. Evasive maneuvers can be recorded in the plot by writing EM.

Emergency Power (EP)

A starship may perform emergency power in order to gain additional acceleration out of its drives. When performed, any number of drives may be used at double capacity (providing double the drive points) for the plot. Nothing special is required to perform this manoeuvre. After the movement is completed, roll 1D6; if the result is greater than the starship's crew quality, all the drives used are disabled. Emergency power can be recorded in the plot by writing EP.

Emergency Thrust (ET)

A starship may perform emergency thrust in order to gain additional thrust capacity out of its thrusters. When performed, any number of thrusters may be used at double capacity (providing double the thruster points) for the plot. Nothing special is required to perform this manoeuvre. After the movement is completed, roll 1D6; if the result is greater than the crew quality, all the thrusters used are disabled. Emergency thrust can be recorded in the plot by writing ET.

Ram (RAM)

A starship may conduct a RAM manoeuvre by plotting RAM and a normal movement and designating an enemy starship. Before the starships move, the ramming starship must roll its command quality die; if the result is greater than its crew quality, the RAM is allowed (+1 is applied to this roll for each section of the starship destroyed).

During the movement phase, the ramming starship and its target will conduct their plots in equal percentage segments. If at any moment the two starships come within 5cm, the RAM can be conducted. Each side totals their unused thruster points and adds their crew qualities. These totals are compared and if the ramming starship has a higher total, the RAM is successful.

The damage dealt by a RAM is not received until the target starship is given the opportunity to fire at the ramming starship giving the target the opportunity to destroy the ramming starship. The damage dealt to the target during a RAM is equal to the ramming starship's mass factor multiplied by the closing speed. The damage dealt to the ramming starship is equal to the target's mass factor multiplied by the closing speed.

The closing speed is determined by the arc of the target starship: in the rear it is equal to the ramming starship's velocity minus the target starship's velocity; in the side it is equal to the ramming starship's velocity; in the front it is equal to the ramming starship's velocity plus the target's velocity. The starship's target rating is modified by -2 for the turn.

FTL Warm-up

A starship must warm-up its FTL in order to allow it to perform a tactical FTL jump, FTL retreat, or a strategic FTL jump. The FTL drive will have a rating that determines the number of turns the starship must continuously perform an FTL warm-up before the drive is charged. There are no restrictions on the equipment on the starship, besides a functioning FTL drive,

or on the plot. If a starship that has plotted an FTL warm-up has its FTL disabled during the turn then it immediately receives 1D20 hull hits to the section the FTL drive is in with no carryover to other sections and the FTL drive is destroyed (can never be repaired). If a starship that plotted an FTL warm-up and reached its rating in the previous turn fails to plot a tactical FTL jump, an FTL retreat, or a strategic FTL jump, it receives 1d20 hull hits in the same manner as with a disabled FTL.

FTL Retreat

A starship with any form of FTL drive may perform this manoeuvre after warming up its FTL drive. When conducted, the starship is removed from the game. A commander starship that has performed a FTL retreat is considered destroyed for chain of command and morale purposes.

Strategic FTL Jump

After warming up its basic or advanced FTL drive, a starship may perform a strategic FTL jump. When plotting a jump, no heading changes or acceleration may be plotted. Instead the starship is simply removed from the table for as long as the player wishes.

Upon performing a strategic FTL jump a starship may return to the table, retaining its previous momentum, after a minimum wait time equal to 1D8 (hidden roll) minus the starship/squadron commander's crew quality level (min 1). The starship will return at any point on the table facing any direction, announced during the plotting phase of the turn before its arrival. A starship that returns to the table has a +2 modifier applied to its target and movement rating for the turn.

A command starship that is off table in a strategic FTL jump is considered destroyed for chain of command and morale purposes for any starships it commands that are still on the table. If a squadron performs a strategic FTL jump together, it may return to the table as a whole group using 1D8 for delay but the squadron must return using the same entry point and must all be within 20cm of each other.

Tactical FTL Jump

After warming up its FTL drive, a starship with an advanced FTL drive may perform a tactical FTL jump. When plotting a jump, no heading changes or acceleration may be plotted. Instead the current velocity is recorded along with the number of D10s the starship will jump. When moved, the starship will move its current velocity and also the combined result of the D10 rolls. The player may remove a number of dice up to the starships crew quality level or opt to roll additional dice up to the starship's crew quality level. The starship will have a +2 modifier to its target and movement rating. A minimum 6D10 must be rolled.

FTL Attack

A starship with an advanced or basic FTL drive performing a tactical or strategic FTL jump may also perform a FTL attack at the same time. All the rules for tactical and strategic jumps are performed as per normal, the player simply designates in his plot that he is also performing a FTL attack. The starship must designate the target of its attack (a single starship). If at the end of the jump the starship is within 10cm of its target, the attack proceeds.

A standard sensor roll (1D20) is conducted, utilising a sensor array, with a plus modifier to the target starship's target rating equal to its crew quality. If the result is successful, the attack is successful. A successful attack results in an immediate damage roll on the target.

The attack is considered an energy weapon that hits the target in every external section, including the center, if appropriate. The starship rolls a number of D6s for damage equal to the mass factor of the attacker against each section, taking into account armour and shields. If the attack is unsuccessful, no dice are rolled. A FTL attack can be recorded in the plot by adding -A to a strategic or tactical FTL attack.

Author's Note

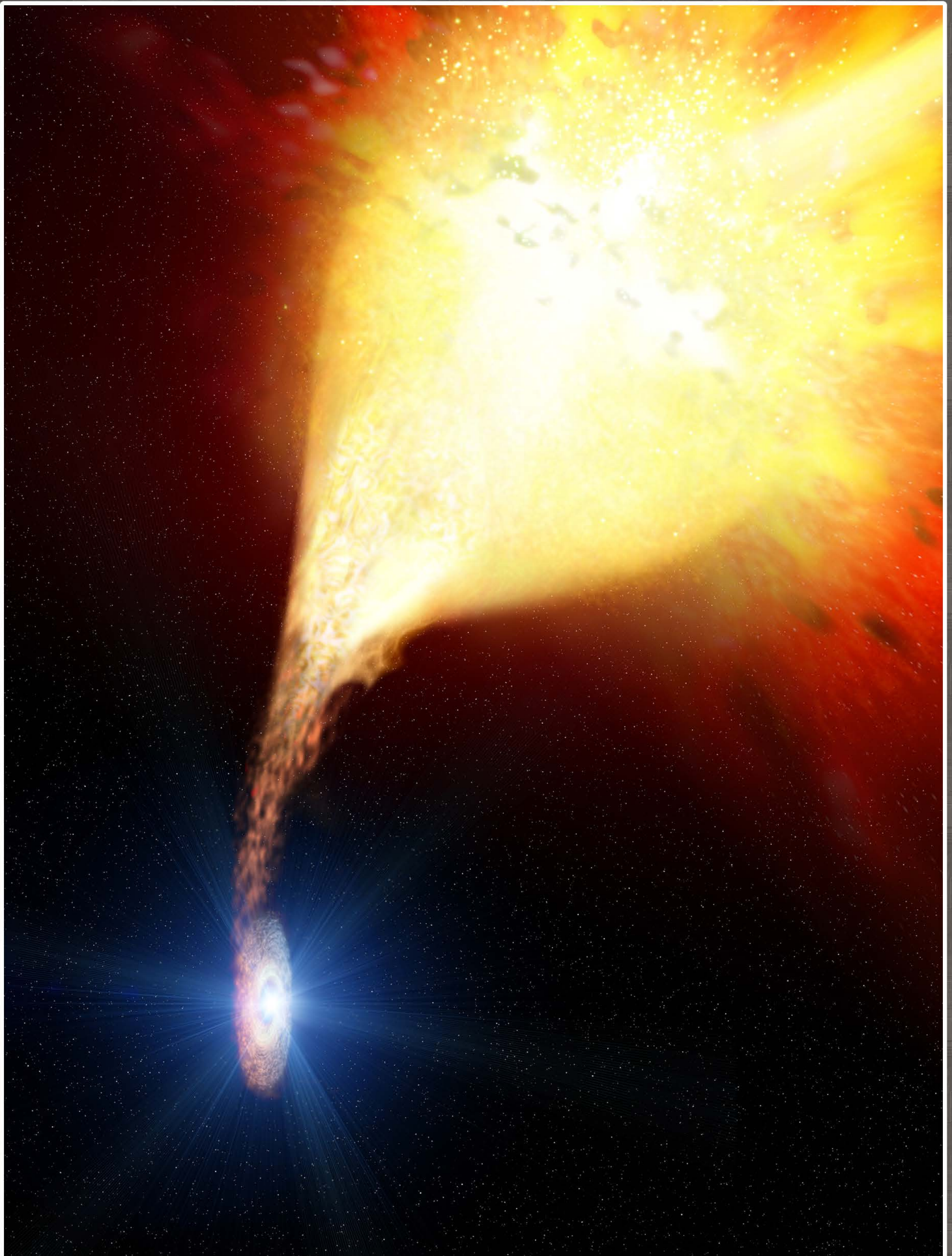
Of all the varied components of Metaverse, as an author I am most proud of the inclusion of both Cinematic and Newtonian movement methods. The way in which a starship moves is integral to the style of many popular science fiction franchises and while many gaming systems have provided the rules for both methods, few have integrated them into the same game.

This one facet makes Metaverse unique. Nothing stops players from utilising fleets of both Cinematic and Newtonian methods in the same game or even the same fleet. To achieve this neither method of movement could seem like an afterthought, the game had to be designed with both in mind from the beginning.

It was also apparent from the beginning of development that choosing Cinematic or Newtonian should not be a consideration of combat value but rather of style and possibly of tactical preference. As such, players are free to choose either method without an effect on the combat value of their starships.

At first this may seem unbalanced, but careful playtesting has revealed that neither method is inherently superior to the other. Both have their distinct advantages and disadvantages, the magnitude of which is primarily determined by what type of starship uses them.

At its base Metaverse is an attempt to provide the tools necessary for players to construct and play within whatever universe they decide. Without these two opposite movement methods that effort would be incomplete.



1.3.0 Combat

All combat in Metaverse can be divided into four categories:

- starship direct weapons fire
- starship indirect weapons fire
- starfighter weapons fire
- boarding combat

Boarding combat is discussed later; the other three are explained below. In order to fire at a target, a weapon or starfighter squadron must be capable of firing on the type of target. The four possible targets are:

- starships
- starfighters
- direct weapons fire
- indirect weapons fire

Starfighters only have two possible targets:

- starships
- everything else

In addition, in order to fire on weapons fire (defensively to intercept them), the weapon must be vulnerable to interception. A target is defined as a single starship, a group of starfighter squadrons assigned to the same mission, all direct fire from a single sensor array, or a defined salvo of indirect weapons.



1.3.1 Direct Weapons Fire

Direct weapons are fired directly at a target in a linear manner. Lasers, railguns, particle accelerators, or any weapon that has no self-guidance or path correction would be classified as a direct weapon.

To fire a direct weapon at a target it must be within 100cm, the maximum firing range in the game. A weapon with a range of 0cm is not fired during starship combat but rather can be fired during either starfighter or indirect combat.

When firing a direct weapon, a sensor roll (1D20) must be made. For salvo fire, each weapon must have an independent sensor roll made for it. To perform a sensor roll a sensor array on the starship must be selected.

All weapons fired at a single starship, starfighter mission, or direct/indirect weapon salvo, require a distinct sensor array. Firing a group of weapons on a target using a single sensor array but making independent sensor rolls is called salvo firing.

This sensor array will be of a given rating, which can be modified through the use of certain electronic warfare systems. The modified result is called the sensor profile and represents the difficulty of the weapons fire in respect to electronic targeting. If a sensor roll result is less than or equal to the sensor profile, a hit is achieved; however, there is another factor to consider.

A starship sensor profile roll (to achieve a hit) takes into account only circumstances in the electronic warfare arena. The relative movement of both firer and target must be considered. Thus, the target profile of a starship is calculated. The first component of a starship's target profile is its target rating. All starships possess a target rating determined during design, with the smallest starships being a three and the rest getting progressively lower target ratings as they increase in mass (even becoming negative).

A starfighter's target rating is also determined during design and ranges from four to nine. A weapon's target rating (direct or indirect) is equal to the maximum roll of its damage die. The target rating of a starship can be modified under a number of circumstances as detailed in table 1. The target rating of starfighters and weapons cannot be modified. Kinetic weapons will receive a +1 to the target rating of any target they fire upon for every range band between the firing starship and the target.

Target Rating	
Condition	Modifier
Drift (blank plot)	-1
Momentum of 0	-1
Current Momentum/ Evasive Manoeuvres	The starship's momentum divided by 10, rounded down, multiplied by the number of evasive maneuvers
RAM Order	-2
Kinetic Weapon	+1 per range band
Tactical/Strategic FTL Jump	+2

Table 1

In addition to the target starship's target rating, the firing starship's movement rating must also be considered. The movement rating of any starship is the sum of any relevant modifiers as listed in table 2.

Movement Rating	
Condition	Modifier
Drift (blank plot)	-1
Momentum of 0	-1
Evasive Manoeuvre	+1/Evasive Manoeuvre
Roll	+1
Flip	+1
Tactical/Strategic FTL Jump	+2
Corkscrew	+2

Table 2

To calculate the target profile in any given firing situation, the target rating of the target starship and the movement rating of the firing starship are added together. If the sensor roll of a firing starship is less than or equal to the target profile, regardless of it being lower than or equal to the sensor profile, the result is a miss. Thus, the success condition of a sensor roll can be declared as being less than or equal to the sensor profile but greater than the target profile. However, should the target profile equal or exceed the sensor profile, a sensor roll equal to the rating of the used sensor is always considered a hit.

Example

The ISS Vengeance is attempting to fire a broadside into the HMS Thunderchild. The Vengeance has a series of direct fire weapons that have the Thunderchild in their arc.

The Vengeance chooses a sensor array with a rating of fifteen to target the Thunderchild. The Thunderchild is carrying an electronic warfare array with a rating of two onboard. The combination of these two systems creates a sensor profile of thirteen (15-2) for these weapons.

The Thunderchild has a target rating of one but has performed an evasive maneuver this turn worth a +2 as it currently has a momentum of 20cm. This results in the Thunderchild having a target rating of three.

The Vengeance plotted a drift this turn to increase its chances and therefore has a movement rating of -1. The target rating of the Thunderchild and the movement rating of the Vengeance, when combined (3-1), produce a target profile of two.

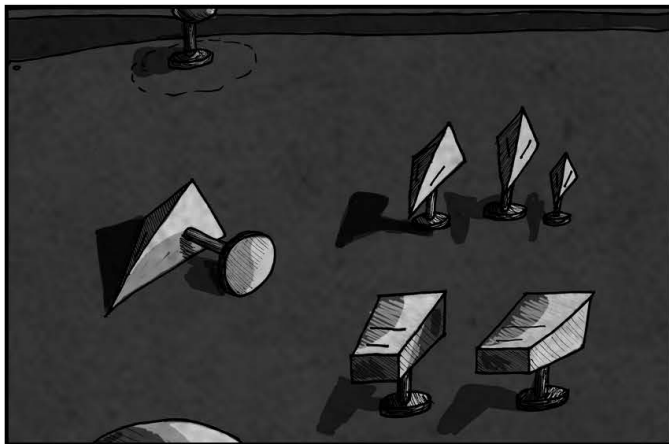
With both the sensor profile and the target profile we can now determine that in order to hit the Thunderchild with its weapons the Vengeance must roll thirteen or less (the sensor profile) and greater than two (the target profile). If any of the Vengeance's weapons were kinetic than they would modify the target profile based on range.

When firing more than one direct weapon, a player may choose to volley fire rather than the standard salvo fire. When weapons are volley fired, a single sensor roll is made for all the weapons fired and they either all hit or miss.

However, a sensor array used to volley fire a group of weapons cannot be used to fire anything else, even at the same target. For each distinct weapon type included in the volley beyond the first, a -1 modifier is applied to the sensor profile. Thus, if all the weapons fired in a volley are the same, no modifier is applied.

Under certain circumstances, players may wish to target specific systems on enemy starships. This form of attack is called surgical fire. To perform surgical fire, the player must nominate a weapon with which to attack, a sensor array with which to make the sensor roll, and a target on the enemy starship (secondary, electronic warfare, propulsion, hanger bay, or weapon system). The targeted system must be in the facing section.

A sensor array used for surgical fire can only be used for the weapon firing, nothing else. Thus, if a player wishes to perform other attacks, including surgical fire with other weapons, more sensor arrays will be required. The sensor roll is performed as normal for the attack; however, should the sensor roll be an odd result, and a hull hit was inflicted, the targeted system is disabled. Whether the sensor roll is odd or even, damage is still dealt as normal.



Author's Note

When it came to designing the mechanics of direct fire I was presented with the same problem that most starship combat game designers are faced with. Compressing the multitude of variables involved in starship weapons fire into a simple and easy mechanic is difficult.

After a time I was able to classify the variables involved into electronic warfare and movement/size. Many rule sets abstract this even further into one class of modifiers but I felt that this was lacking in accuracy. Further still, some games do not even include the electronic warfare aspect of combat.

To make the distinction between these two classes of variables I took the approach of applying them to opposite sides of the die roll. Electronic warfare and the associated systems all conflict at the top of the die roll lowering the upper limit and setting the base chance to hit the target.

Movement and size modifiers I placed on the bottom of the die roll to create an auto miss chance such that regardless of how good the sensors are, certain situations can still result in a miss.

The part of this mechanic that seems to have caused the most confusion and/or tension is the splitting of the target profile between both firer and target. I felt this was necessary to both represent the complexities of the situation and to provide a negative to some maneuvers. I have found the best way to represent this mechanic is with two different colored dice with each starship; one for each of its ratings. In this way when two starships are engaged in combat the players can merely add together each other's opposite colored dice to calculate the target profile.

1.3.2 Indirect Weapons Fire

Unlike direct fire weapons, indirect weapons have at least limited self-guidance and path correction and do not require a sensor roll. Instead, an indirect weapon uses a token or appropriate model to track its path on the table. When fired, the token is moved away from the starship, in firing arc, in a straight line up to its range.

Indirect weapons are listed as being Indirect 1, 2, 3, 4, or 5, which determines the number of turns the weapon may stay on the table. Each turn in the appropriate phase, the token may be moved its range limit again.

Sensor arrays are still required to fire indirect weapons, but not for a sensor roll. A sensor array may be used to fire a number of indirect weapons equal to its rating but may not be used for anything else. All indirect weapons fired with a single sensor array are a single salvo and therefore a single target.

In order to achieve a hit, an indirect weapon must be maneuvered such that it is brought within range of an enemy starship. During the appropriate step of the combat phase, indirect weapons may strike any starship within 15cm of themselves. There is no sensor roll required for this to occur and a hit is automatic.

1.3.3 Starfighter Fire

Because of their independent nature, starfighter squadrons do not need a sensor roll to fire. Rather, similar to indirect weapons, when moved to contact with a target, they automatically achieve hits. In order to fire upon a starship or starfighter squadron, starfighters must be in contact.

Firing on indirect weapons requires starfighters to be in contact as well, but this can occur through their own movement or defensively, either by being targeted or by being in contact with the target of the indirect weapon salvo.

For a starfighter squadron to fire on direct fire weapons, either they must be in contact with the target of those weapons or be fired at by the weapons themselves. Starfighter squadrons will be designed with one or more installed weapons but may only fire a number of weapons equal to their crew quality.

Like direct fire weapons, starfighters are capable of performing surgical strikes. To perform a surgical strike with a starfighter squadron, the player must announce the secondary, electronic warfare, propulsion, hanger bay, or weapon system they intend to attack. The squadron rolls its attack as normal, taking into account any defences the starship has; if the damage roll is odd, and damage would normally be inflicted to the hull, no damage is inflicted but the system is disabled, otherwise damage is dealt as normal.

1.3.4 Electromagnetic Signature (EMS)

All starships, starfighter squadrons, and indirect weapon salvos have an EMS rating, which determines the maximum number of incoming attacks. The EMS rating of a starship is listed on its record sheet.

The EMS rating of a starfighter mission is equal to the number of squadrons within it; however, if a starfighter mission is currently in a furball, its EMS is considered zero.

The EMS rating of an indirect weapon salvo is equal to the total pulse of all weapons involved. Direct weapons do not have an EMS rating and therefore can be fired on by as many attacks as wished.

When a starship, starfighter mission, or indirect weapon salvo attempts to fire upon a target, if the number of other starships, starfighter missions, and separate indirect weapon salvos firing at it added together equals or exceeds the EMS rating of the target, it may not fire on that target.

1.3.5 Dealing Damage

Once a hit has been achieved on a target, a damage roll is made. All weapons have three basic components in common. The damage die determines the die type to be used in the following range: D1, D2, D3, D4, D5, D6, D8, D10, D12 (note: D1s need not be rolled as they are always considered to have rolled a one but this roll is considered to be an even result for any effects).

The pulse determines the number of damage dice rolled for each weapon hit. Finally, the damage modifier provides a positive modifier to the roll of the damage dice (note: the damage modifier is applied to each damage die, not to the sum of all rolled damage dice).

All weapons are designed as either energy or kinetic weapons, which will determine if the target starship's defenses can interact with them and how they affect the damage. Energy weapons receive a -1 modifier to their damage for every range band between the firing and target starships. Indirect weapons always hit at full effect.

The actual facing number of a rolled die is used to determine whether it is odd or even, not the result (i.e. if 1D6 is used in lieu of 1D3, a result of three is odd, even though the result is two). When a player rolls multiple damage dice at once, the rolls are applied in ascending result order.

1.3.6 Recording Damage

Damage must be recorded in a specific manner when it is recorded on a section of a starship. All weapons make use of one of two damage mechanics, raking or penetrating. Starfighter weapons are always raking.

For raking weapons, the damage is recorded along hull layers, from left to right, only damaging the next hull layer when the current one is destroyed. The top most layer is always damaged first.

Penetrating weapons deal their damage vertically by inflicting one damage to each layer; always

hitting the left most box of each layer. Each pulse of a penetrating weapon does this independently, starting with the top layer. When the last hull hit in the final layer of a section is crossed off, the section is destroyed. Any remaining damage is dealt to the core section, in either raking or penetrating pattern as appropriate.

When damage is inflicted on the core section through a destroyed outer section, the core is considered to have an armour rating of one. If the last hull hit in the final layer of the core section is crossed off, the starship is destroyed. If a penetrating weapon deals damage to an outer section of a starship and deals one damage to each layer but damage remains, the damage continues on to the core section, dealing one damage to each layer.

In the event of a penetrating weapon dealing one damage to each layer of the core section and damage remains, the damage continues on to the next section through the starship. It is possible for the damage of a penetrating weapon to go completely through a ship, dealing one damage to each layer and have damage left over; this leftover damage is discarded.

When a hull layer is destroyed, the crew and marine hits associated with that layer must be crossed off, thereby reducing the number of crew and marine parties remaining in that section.

Starfighters do not take damage in the same manner as starships. A starfighter squadron has a strength which determines the number of hits the squadron takes to destroy. Penetrating weapons gain no special effects against starfighters.

Weapons fire (direct or indirect) also does not receive damage in the same manner as starships. In order for a weapon to be intercepted, it must be dealt an amount of damage equal to its damage modifier. This damage must be dealt entirely by weapons fired using the same sensor array, a single starfighter squadron, or a single indirect weapon.

1.3.7 Critical Hits

During the course of receiving damage, starships may also suffer critical hits to their sections. When the final hull hit of a hull layer is crossed off, that section receives a critical hit.

If a penetrating weapon inflicts a damage point to the bottom hull layer of a section (for each point inflicted if the pulse is greater than one), a critical hit is scored on that section. When a section is destroyed, the core section automatically receives a critical hit.

To determine the result of a critical hit, the player must roll two dice and consult the critical chart for the effect: 1D8 for the critical category; and 1D6 for the specific critical. Critical hits are adjudicated at the end of each combat step. If a critical is rolled which cannot be applied the category is upgraded (but only once), if this new critical cannot be applied the critical is ignored.



Author's Note

Another question that comes up often is what exactly is the Electromagnetic Signature, and just what am I trying to achieve with it. There are two sides to that discussion, one based in physics, the other in gameplay.

Any starship (saying fictional would be redundant) from the hardest to the softest of science fiction consumes energy and in doing so emits energy. By extension most sensor systems, the passive ones anyway, are designed around detecting this emitted energy.

This means that as readers of science fiction and as gamers we can expect that the greater power output of a starship the larger it would appear on any such sensor screen. The more weapons, defensive systems, and engines a starship carries the brighter it will appear on the screen.

As a starship is fired upon, as explosions, detonations, EMPs, etc stack up, it will become more difficult to distinguish the original target from the noise of combat. Eventually, with enough firepower on target further shots will have to wait until the noise clears.

The Electromagnetic Signature of a starship in Metaverse is designed to replicate just this phenomenon. Players will notice that as they cram more and more stuff into their starship their reactors will grow and so will their EMS. This can be mitigated by increasing the tech level of the starship but it will certainly be costly.

The second argument for the EMS is one of gameplay. To put it simply I needed to limit the number of starships firing on a single target. Two fleets of a hundred starships each shouldn't each be firing on one starship each.

2.0.0 Phases & Steps

Every turn of Metaverse is divided into a series of phases, each of which is subdivided into steps. These phases and steps are carried out every turn until one player's fleet is destroyed, flees, or a scenario objective is met.

2.1.0 Movement Phase

The movement phase encompasses all pre-combat actions carried out by the players. Both sides in the game will plot the movement of their starships and then move all elements of the game in a particular order.

2.1.1 Plot Movement Step

The first step players will perform in the movement phase is plotting out the intended movement of their starships. This plot is conducted secretly by both sides simultaneously.

Players must strive to write this plot in a consistent and legible format, such that if the actions of a starship are ever called into question, its plot can be referenced. A suggested format for plotting is included on the plotting chart provided in the appendices. At any time, a player may ask an opponent for a starship's previous plot.

2.1.2 Indirect Movement Step

During this step any indirect salvos on the table are moved up to their maximum speed. When an indirect salvo moves, it may move anywhere from zero (still considered a move) to its maximum range. This movement must be in a straight line directly ahead. Indirect weapons will be placed into salvos when fired and must move together until destroyed, they hit their target, or they are removed from the table. Prior to this movement, the salvo may be turned up to 45°.

Indirect weapon salvos are launched, and perform their first movement, from their respective weapons systems, during the normal firing sequence. Once an indirect weapon salvo has made contact with a starship, only that starship, and any starfighters on CAP, may fire on it.

2.1.3 Starship Movement Step

After all indirect weapons have been moved, both sides move their starships in accordance with their plots, simultaneously. If a player questions the integrity or accuracy of a starship's movement, they can ask their opponent to reveal their plotting chart.

2.1.4 Starfighter Operations Step

During this step all players may perform the following actions in the order listed:

- launch new starfighter squadrons
- re-arm loaded starfighters
- recover starfighter squadrons
- establish starfighter missions

Launch Starfighters

Starfighter squadrons may be launched from any starship, which has loaded hangar bays. Each hangar bay may launch a number of squadrons each turn equal to its launch capacity.

When a hangar bay in an outboard section launches squadrons, they are granted a single free move up to their maximum speed in a straight line within the arc of the section. However, hangar bays in the core section (even if no other section exists), place any launched squadrons in contact with the starship.

When launching starfighters, the launching starship must have at least one arc with no kinetic shields. Shields can be voluntarily dropped during the electronic warfare step of the combat phase and voluntarily raised back to their previous level in a later turn's EW step.

Re-arm Starfighters

Any starfighters that were recovered onto a carrier in the previous turn can be readied for launch by combining damaged squadrons into whole ones, discarding any remaining strength. Combined squadrons must be of the same type. Additionally, squadrons can have any one-shot weapons reloaded.

Recover Starfighters

Any starfighter squadrons within 10cm of their carrier may now be loaded back onto the starship. The launch capacity of the onboard hanger bays is used for recovery of starfighter squadrons as well as launching. Thus, if the launch capacity of a hanger bay is used in its entirety to launch squadrons in this phase, it cannot also recover this turn.

Recovered starfighter squadrons are removed from the table. When recovering starfighters, the recovering starship must have at least one arc with no kinetic shields. Shields can be voluntarily dropped during the electronic warfare step of the combat phase and voluntarily raised back to their previous level in a later turn's EW step.

Establish Missions

All starfighter squadrons must be designated in one of three starfighter mission types:

- CAP
- Strike
- Intercept

Any starfighter squadrons that do not have a mission by the end of the starfighter operations step are removed from play. Starfighter squadrons launched from outboard sections that use their free move may be added to an existing mission in which they are in contact.

A starfighter mission may have an unlimited number of squadrons included in it but the entire mission must move together, at the slowest included speed, and are considered one target.

Missions and squadrons within 20cm of the carrier starship may be merged, split, and modified at will. However, to change, combine, or split missions that are further than this distance the player must roll 1D6 and roll lower than or equal to the starship's crew quality level.

A starship is restricted in the number of missions it can have on the table at any time by the rating of its starfighter operations command system.

Missions can be transferred to the command of another starship as long a D6 roll is made for each starship and both roll equal to or lower than their respective crew qualities.

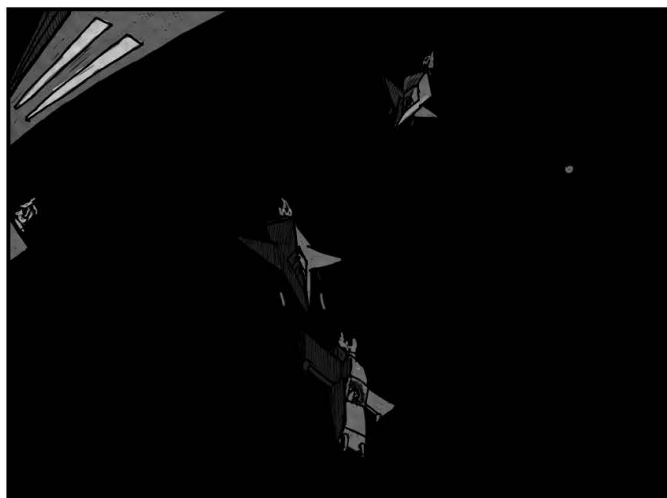
Should a carrier be destroyed its missions will continue on unless transferred to the command of another starship using the crew quality of the starfighters for the D6 roll. Starfighters on CAP of a starship that is destroyed are removed from play.

CAP: Combat Air Patrol missions do not subtract from the carrier's ability to assign missions. While on CAP, squadrons may not move away from the carrier and can only attack strike missions targeted on the carrier or incoming weapons fire.

If a starship with CAP plots a momentum greater than twice the speed of any squadron on CAP, that squadron is lost. If a starship with CAP plots a momentum greater than the speed of any squadron on CAP, that squadron may not fire that turn. The momentums of all compass points of a newtonian starship are added together for this effect.

Strike: A strike mission is targeted against enemy starships and may move at will but may not initiate combat against other starfighter missions or weapon salvos.

Intercept: An intercept mission is targeted against enemy starfighter squadrons and may move at will but may not initiate combat against starships



2.1.5 Starfighter Movement Step

In this step all players may move their starfighter missions. Starfighter missions may move in any direction at the slowest speed of their component squadrons. A mission is not required to move and does not have to move its full speed.

This speed may be doubled at any time but any squadron within the mission that moves more than its listed speed may not fire weapons that turn.

The order of movement is determined by mission type and crew quality of the carrier. All strike missions from both sides must first move, followed by all intercept missions. CAP missions are not moved, as they move with their carriers during starship movement.

Within each grouping, missions are moved by crew quality in ascending order. Thus all quality zero missions will move first, followed by quality one, etc. If both players have missions with the same crew quality than 1D6 is rolled by both players with the loser moving a mission first, then proceeding in an alternating fashion.

Missions must contact their targets to initiate combat. When a mission is moved into contact with an enemy starship it must be declared which section and arc it is attacking. This determines which weapons on the target starship may fire on the component squadrons.

Alternatively, the mission can be said to be making a generalised attack and be fired at by any weapons on the targeted starship but this will give the mission more flexibility when firing back.

Example

Susan is entering the starfighter operations step. She first launches 4 starfighter squadrons from her carrier. She has no starfighters to re-arm nor does she wish to recover starfighters. Her carrier has an SOC of 2 allowing 2 missions. She places 2 squadrons on a strike mission, 1 squadron on an intercept mission, and the last squadron on CAP.

Author's Note

I believe it is necessary for me to explain the order of the movement phase in Metaverse. Like many great rule sets before, Metaverse utilizes a plotting phase for starships. Some games have forgone this common step in favor of back and forth movement.

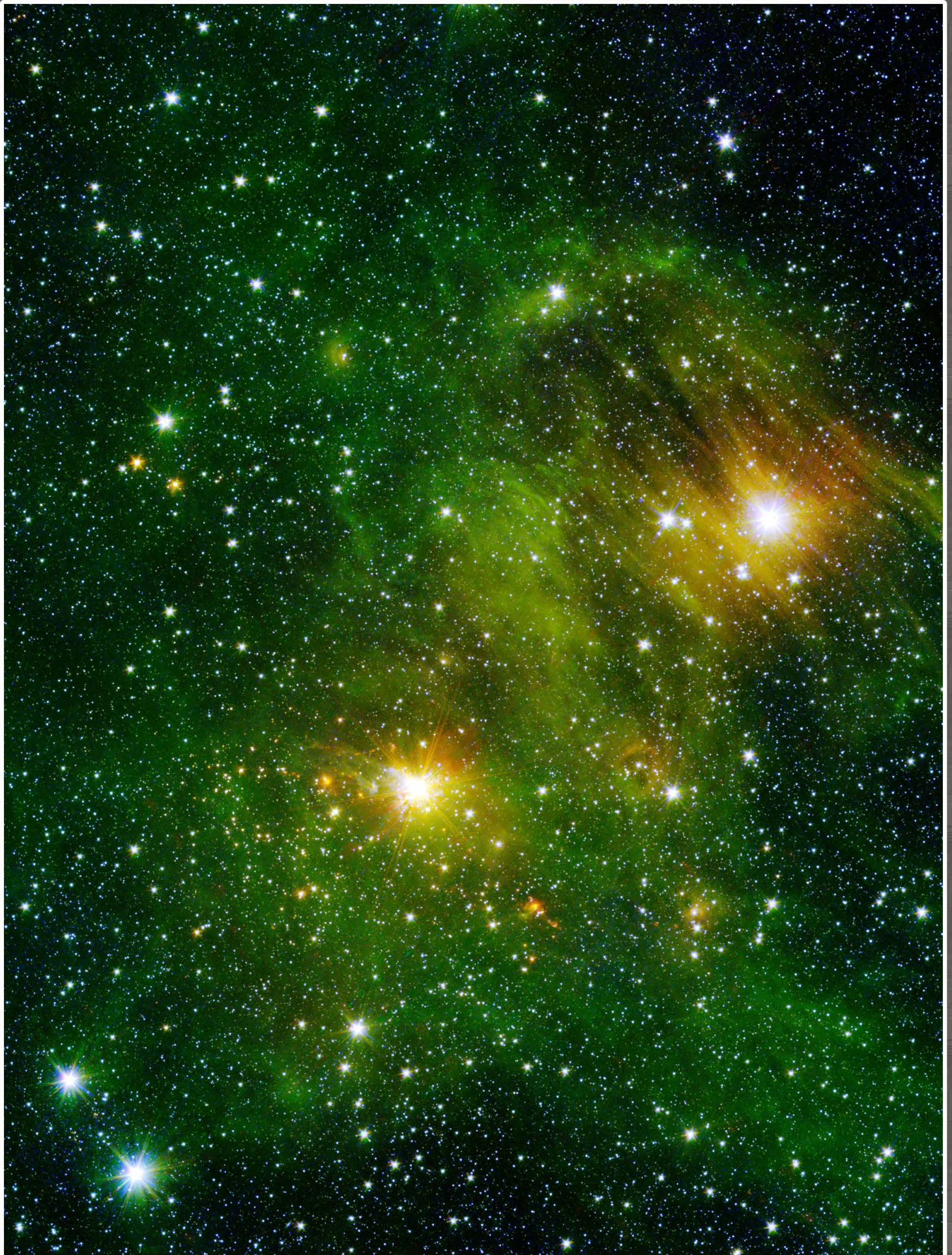
I hold to the concept that having players plot out their movements in an attempt to predict their opponents and throw off their opponents predictions is worth the additional time this takes. Additionally I feel this better creates the tactical balance between the movement and combat phases.

The other steps in the movement phase occur in the order they do primarily for gameplay reasons. Indirect weapons move first to both include another element of prediction and to mitigate their targeting method.

Player's will notice the inclusion of the Starfighter Operations Step in the movement phase. This is an unusual occurrence in starship combat games, one which I believe is a mistake to leave out.

Most games allow for players to move their starfighter squadrons about at will with little or no guidance or control instilled upon them. In reality (the closest analog being naval aviation operations) fighters are not given the freedom of independant movement or target selection.

The failure to include a form of command and control of starfighters leaves out the importance of the carrier vessel and its associated flight directors. Indeed, without the starfighter operations step, starfighters would receive no penalty if their carrier was destroyed.



2.2.0 Combat Phase

The combat phase encompasses all combat actions undertaken by starships and starfighters. The steps are performed sequentially to represent the reaction time, flexibility, and time to target of the various interacting components. Each step must be concluded completely before moving forward.

2.2.1 Electronic Warfare Step

Prior to any firing or damage, players have the opportunity to interact with one another's starships using the various EW systems at their disposal. The actions of each starship in this step are conducted in ascending crew quality order, with any ties decided by an opposed D6 roll, the loser performing all actions first. The specifics of each system are described later.

2.2.2 Starship Combat Step

The first elements to engage in combat are the starships in either player's fleets. Starships fire first to represent that they often have the power, range, and reaction times to engage the enemy before other systems. Both players fire their starships in descending crew quality order, starting with crew quality five and working down to zero. If two players have starships of the same crew quality level, they are fired simultaneously.

When all starships of a given crew quality have fired their weapons then all damage is considered to have been dealt and all effects of that damage inflicted before proceeding to the next crew quality group, including destruction of sections, starships, and critical hits. Critical hits must be rolled for at the same time, after all ships of a given crew quality have fired.

A starship may fire prior to its crew quality group in two circumstances: to fire at a RAM attempt; and to intercept direct fire weapons that have achieved a hit. A player may opt to not fire a starship in its crew quality group and instead fire it in a later group but must declare in which grouping they intend to fire.

Likewise, starfighter squadrons may fire in this phase only to intercept direct fire weapons that have been fired against them or the starship they are in contact with but doing so revokes their ability to fire during the starfighter combat step.

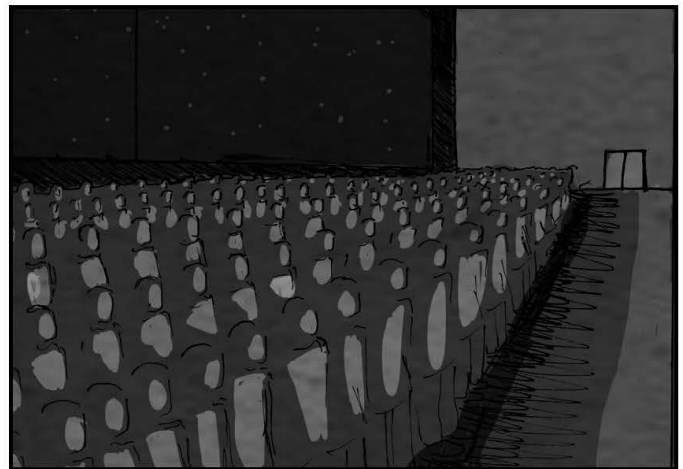
2.2.3 Starfighter Combat Step

After all starships have fired, both sides may fire with any starfighter squadrons capable of doing so. Starship weapons with a range of 0cm may be fired in this step before starfighters make their attacks.

Starfighter squadrons within a furball are fired in descending order of strength with squadrons of the same strength firing simultaneously. If a starfighter squadron has a higher target rating than the squadron it fires upon, it considers its target's defence to be reduced by one.

When a starfighter mission is in combat with another starfighter mission, each component squadron may fire at any other squadron in its opposite mission. When a starfighter mission is in contact with an enemy starship, it may fire into the section/arc it was declared to be attacking during movement.

If the mission was declared to be making a generalised attack, each squadron can be targeted against any section/arc that the player chooses. A starfighter squadron may fire a number of its weapons equal to its crew quality each starfighter combat step. The crew quality of a starfighter squadron is equal to that of its carrier.



2.2.4 Indirect Combat Step

After all other elements have fired, any indirect weapon tokens on the table may hit targets. An indirect weapon token may automatically hit any appropriate target within 15cm. This engagement range is reduced by 1cm per point of EW the target has to a minimum of 1cm. The token is placed in contact with its intended target to indicate the intention.

If the target is a starship and it has any weapons with a range of 0cm they may now be fired on the token as well as defensive fire from starfighter squadrons, assuming they did not already fire during the previous steps. Any indirect weapons that target other indirect weapon tokens roll for their damage first, followed by any other tokens.

The section of a starship that an indirect weapon token damages is determined by which arc the token was located in prior to being moved into contact. After all damage from indirect weapons has been dealt, any indirect tokens that hit a target are removed, along with any tokens on the table that have reached their turn limit.

2.2.5 Boarding Combat Step

With the violent and overt combat of vacuum finished, the final combat step is boarding. Any starship that has had hostile marine or crew parties transported aboard must conduct a boarding combat. Boarding parties will be transported to enemy starship via either teleporters or by starfighter squadrons with the breaching quality.

The intruding parties will have been deposited in a particular section of the starship and it is there that the combat takes place. Both players roll a die for each party they possess in that section and compare them in order from highest to lowest roll.

The defender rolls 1D6 for each marine party and the morale die for each crew party. The attacker rolls 1D5 for each marine party and its command quality die for each crew party, with a -1 modifier. In each dice comparison, the lower roll denotes a casualty. The casualty is determined by the die

rolled (i.e. the defender lost with 1D6, indicating a marine party was lost). Ties indicate mutual casualties. Excess dice on one side do not count.

If both players have parties remaining, the action continues in the next boarding combat step. If the defender no longer has any parties remaining in the section, the attacker may disable a number of systems in the section equal to the number of parties they have remaining in the section.

When a boarding combat is continued from a previous turn the defending player may move as many of their marine and crew parties from other sections to the invaded section. After the defending player has moved parties, if the invaded section had no defending parties remaining at the beginning of the step, the attacking player has the option of moving as many parties as they choose from the invaded section to an adjoining section. An adjoining section would be any section except the one on the exact opposite side of the ship but always the core. Combat in each section is then adjudicated independently.

Example

The ITS Dragon has been boarded in its starboard section by hostile boarding parties. The invading group consists of 3 marine parties while the defending group consists of 1 marine party and 1 crew party.

The attacker rolls 3D5 for his marines and rolls a 5, a 3, and a 1. The defender rolls a D6 for his marine party and a D3 for his crew party (the command quality of the Dragon is D3) rolling a 4 for the marine and a 3 for the crew party.

Comparing the highest dice the enemy's 5 beats the defenders 4 and the defenders 3 beats the invaders 3 (ties go to the defender). The result is a loss of a marine party for the invader and the loss of the marine party for the defender.

The Dragon transfers a marine party from another section into the starboard side to reinforce. The action will continue into the next round.

2.3.0 End Phase

After all combat has been finalized, players will move on to repairing their starships and checking the morale of their starships and fleet.

2.3.1 Repair Step

All players may attempt to repair disabled systems in a section that still has hull hits remaining and does not currently have enemy boarders in it. To do so, crew parties are required from either the relevant section or the core section.

All the crew parties in a section may be used to repair systems; in addition, a number of crew parties from the core (no greater than the current number of crew in the relevant section) may be added to this total if the core has no boarders in it. Crew parties borrowed from the core section may not be used for any other purpose.

The player must decide how many crew to apply to fix any given system. The damage control die is then rolled; a roll less than or equal to the number of crew parties used is required to repair the system.

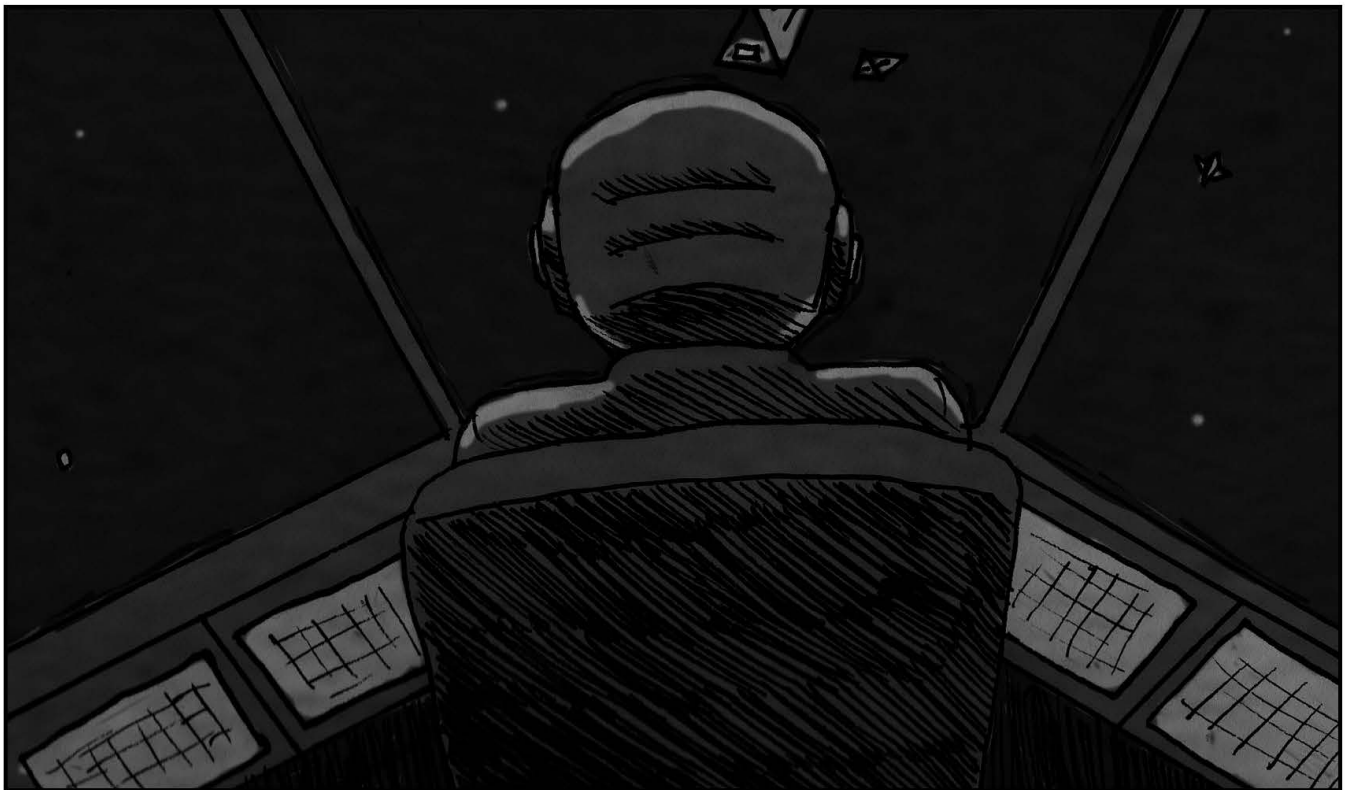
2.3.2 Morale Step

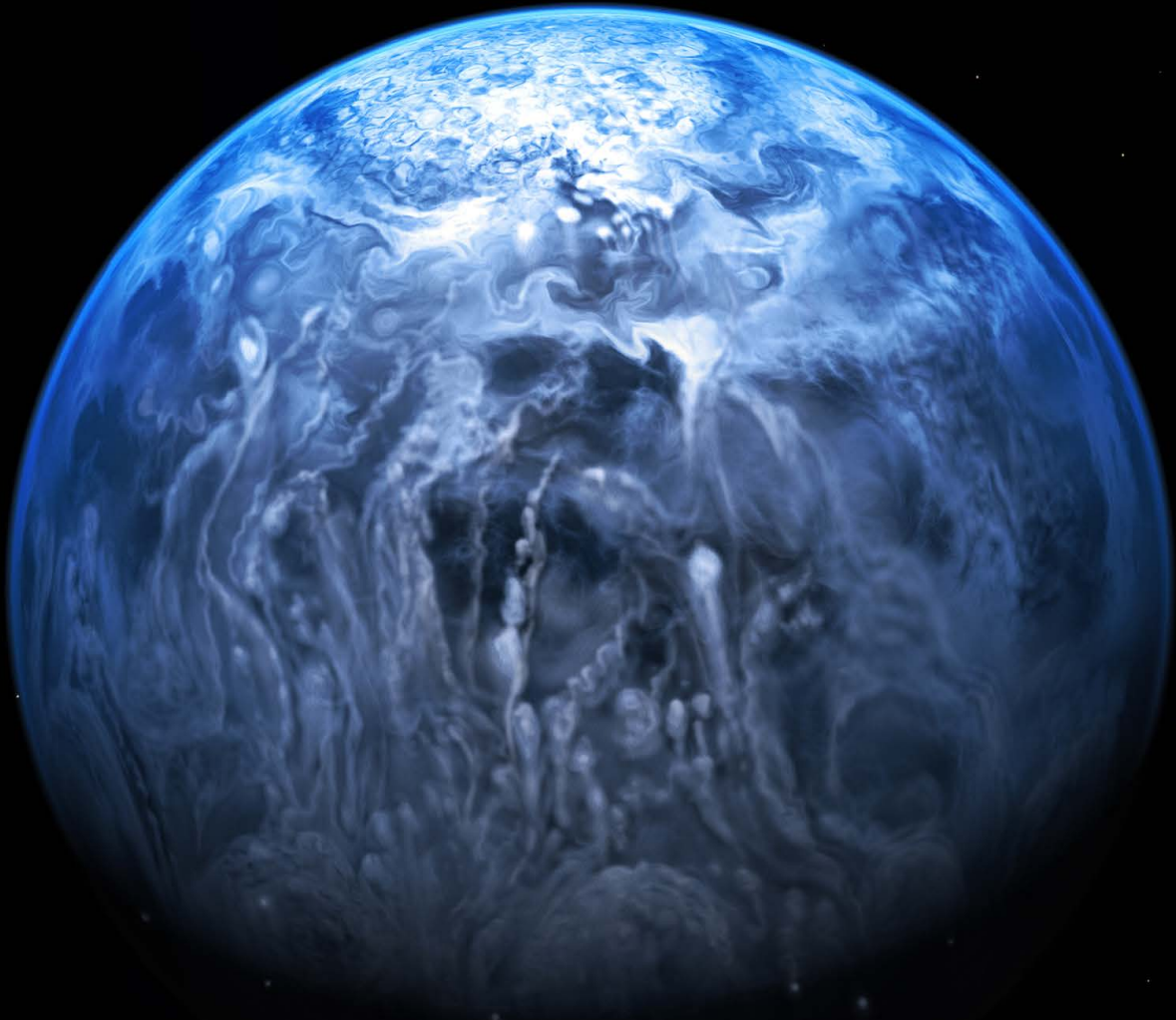
The final step in any turn is to roll any morale checks as required. A morale check is performed by using the starship's command quality die, ranging from D2 to D6. Any starship/starfighter squadron which meets one of the following criteria is required to make a morale check.

Morale Check Conditions

- Flagship Destroyed
- Division Commander Destroyed
- Wing Commander Destroyed
- Squadron Commander Destroyed
- Starship Section Destroyed
- Starfighter Squadron Below Strength
- Carrier Destroyed

Whenever one of these criteria is met, a morale check is made, but not twice for the same set of criteria. However, each of these criteria provides a permanent -1 modifier to every subsequent morale check. If a check ever rolls less than one after modifiers, the starship/starfighters are removed from play. A check is only required for conditions which existed at the beginning of the morale step.





3.0.0 Starship Breakdown

Starships in Metaverse have the capacity to be quite detailed with a plethora of interacting ship's systems. These systems are described in detail in their relevant groupings. All systems and options have an associated tier of gameplay ranging from one to three. The tier system is designed to allow players to limit the more extreme or outlandish systems and effects in their games. In addition to the combat value, players may also set a tier limit. Starships will have a tier based on the highest tier system or option installed.

① ② ③ The tier of a component or option will be displayed using one of these icons.

3.0.1 Starship Record Sheet

In order for a player to bring a designed starship to a game they are going to need a starship record sheet (SRS). A SRS is obtained either from the provided fleets in the appendices of this book, other fleet books available on the metaverse website, or from metamaker. With a metamaker account a player can design a starship and then download a generated pdf for print.

Should a player not have a metamaker account they can browse starships that other players have designed through the public design system.

A SRS is broken up into four basic areas. Running vertically along the left side of the sheet is the ship wide information area. The name of the class will be written as well as information about the starship as a whole such as target rating, EMS, etc.

To the right of this area are the sections of the starship. Each section has its own defined area and the information on a section is always displayed the same. The top bar of a section will display its name as well as a diagram highlighting in green which cardinal section it is.

Below the top bar is the defence area. Within this area the defences of the section will be listed in the order they interact with incoming fire. This will include deflector ratings, shields, and armour.

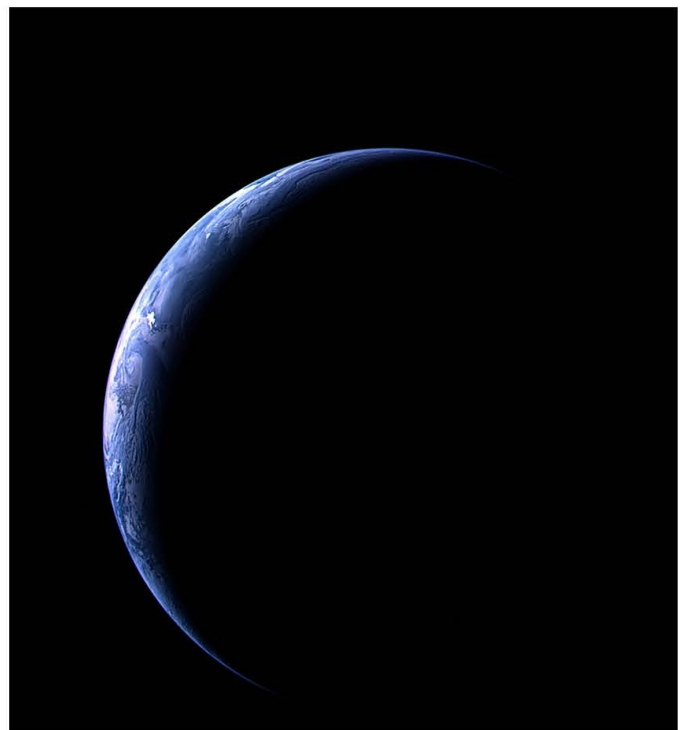
The next area includes the hull hits of the section displayed in their layers as well as the crew and marine parties of the section.

Finally, the systems area will display the systems installed in this section in the same order everytime; primary systems, propulsion systems, secondary systems, electronic warfare systems, tertiary systems, and weapons.

The number of each system installed is displayed to the right of the icon with scratch bubbles. After the last section area, the weapon definitions for the starship will be displayed. The specifics of reading a weapon definition will be explained later.

The last area on the sheet is the hanger and starfighter area. First, any hanger bays installed on the ship will have their definitions shown here. This definition will include the number of that particular hanger, its launch capacity, and its hanger capacity.

If the hanger bay has a permanent loadout or a loadout selected at download, it will be displayed. If the loadout was not selected then all the possible starfighter types for this hanger will be listed along with their cost for purchase at game time. The starfighter definitions will follow this section.



Red Fleet Carrier

Bow Section

1 Ⓛ
 1 Ⓛ
 1 Ⓛ
 1 Ⓛ
 2 Ⓛ
 1 Ⓛ
 1 Ⓛ
 2 Ⓛ
 2 Ⓛ

Port Hanger

1 Ⓛ
 1 Ⓛ
 1 Ⓛ
 1 Ⓛ
 1 Ⓛ
 2 Ⓛ

Starboard Hanger

1 Ⓛ
 1 Ⓛ
 1 Ⓛ
 1 Ⓛ
 1 Ⓛ
 2 Ⓛ

Core Section

2 Ⓛ
 1 Ⓛ
 1 Ⓛ
 1 Ⓛ
 1 Ⓛ
 4 Ⓛ
 4 Ⓛ
 1 Ⓛ
 2 Ⓛ

Red Fleet Carrier

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Engine Section

1 Ⓛ
 1 Ⓛ
 1 Ⓛ
 1 Ⓛ
 3 Ⓛ
 3 Ⓛ
 1 Ⓛ
 2 Ⓛ
 2 Ⓛ

Mk I Gauss Cannon 1×D3+3 → 10 Ⓛ 0 Ⓛ	Mk I Laser Battery 3×D6+0 → 5 Ⓛ 0 Ⓛ	Mk I Missile Cell 3×D8+0 → 25 Ⓛ 0 Ⓛ
---	---	---

3.7 - Red Bomber 2x 2/6 	6.9 - Red Fighter 	6.8 - Red Interceptor
---------------------------------------	------------------------------	----------------------------------

Red Bomber ① Ⓛ 3 Ⓛ ≙ 15 Ⓛ 6 Ⓛ Interceptor Missiles 1×D5+0 → ○●● Ⓛ ↘ ↙	Red Fighter ① Ⓛ 3 Ⓛ ≙ 20 Ⓛ 6 Ⓛ Dual Laser Cannons 2×D5+0 → ○○ Ⓛ ↘ ↙ Interceptor Missiles 1×D6+0 → ○●● Ⓛ ↘ ↙ Anti-Ship Missiles 2×D5+4 → ○●● Ⓛ	Red Interceptor ① Ⓛ 3 Ⓛ ≙ 25 Ⓛ 8 Ⓛ Dual Laser Cannons 2×D5+0 → ○○ Ⓛ ↘ ↙
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24

3.1.0 Ship & Crew

The heart and soul of every starship is the basic hull structure of the starship and the crew that make it up. The following encompass the different factors associated with them.

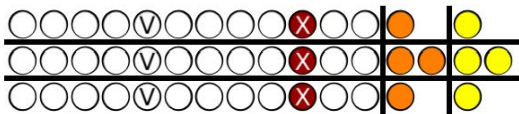
3.1.1 Sections, Hull Hits, and Hull Layers

Every starship is composed of, at minimum, a core section but up to four more sections conforming to the four cardinal directions. Each of these sections is composed of a number of hull hits divided into 1-5 hull layers.

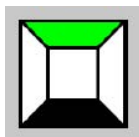
The number of hull hits represents the sum total structure and mass of the section while the number of layers represents the design choices of the section. Fewer hull layers represents a section with systems buried deep and centralized for protection, making them resistant to raking damage but extremely vulnerable to penetrating weapons.

More hull layers represent a section with a honeycomb system, making them less resistant to raking but more protected against the catastrophic effect of penetrating weapons.

Individual hull hits are represented by scratch bubbles with roman numerals inserted for ease of counting. These bubbles are arranged into their layers, seperated by a line. To the right of a layer will be the crew parties and marine parties of that layer in orange and yellow respectively.

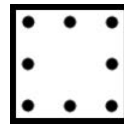


The cardinal direction of a section is denoted through this icon. The direction of the section in question is represented by the green highlighted area. The white areas indicate other designed sections. The black area indicates a section not designed.



3.1.2 Hull Type

The standard starship is assumed to be constructed out of a benign metallic or even ceramic structure called a metallic/ceramic hull. Some starships, however, may be constructed out of a self-repairing nanite like hull called a technological hull. Other starships may even be organic in nature and capable of healing themselves, using a biological hull. Metallic/ceramic hulled starships receive no special rules.



The icon for Metallic/Ceramic Hull

①

Starships constructed using a technological hull may, during the repair step, use crew parties to repair damaged hull hits at a rate of one hull hit per crew party.



The icon for Technological Hull

③

Starships constructed using a biological hull may, during the repair step, cross off a hull hit to repair a disabled system and/or to generate a starfighter squadron inside a hanger bay. The squadron generated must be one the hanger bay is capable of carrying and requires one hull hit per point the squadron costs (rounded, minimum 1).

When recovering starfighter squadrons onto a biological hulled starship, a player may opt to absorb the starfighter squadron and recover a number of hull hits equal to its cost (rounded). Starships with biological hulls may also reload one-shot weapons by sacrificing a number of hull hits in the section of the weapon equal to the maximum die roll of the weapon, plus its damage modifier and multiplied by the pulse.

Finally, a biological hulled starship may automatically recover a number of hull hits each turn in each section equal to the life support rating of that section.



The icon for Biological Hull

③

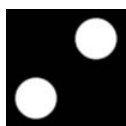
3.1.3 Armour

①

The hull of a starship's sections may be physically armoured to provide protection from incoming fire. This armour rating can range 0-5. The armour of a cardinal arc can also be one of three forms: energy, kinetic, or energy-kinetic, denoting what type of weapons fire it affects.

When damage is rolled against a section with armour in the relevant arc, the damage, per pulse, is reduced by the armour rating. A core section can only have armour facing an arc where no outboard section was designed.

When an outboard section is destroyed and damage is rolled for against the core from the arc of that section, the core is considered to have an armour rating of one.



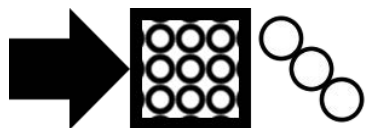
The armour rating icon takes the form of a D6

3.1.4 Ablative Plates

②

In addition to the protection of armour, starships may also make use of ablative plates. A cardinal arc of a starship may have up to five ablative plates installed. Each ablative plate increases the armour rating of the arc by one, allowing for a theoretical maximum armour rating of 10.

However, during the repair step of any turn in which a starship was successfully hit (in the hull, not shields) by weapons fire, one ablative plate is destroyed in every arc that was hit regardless of whether any damage was dealt.



The icon for ablative plates has scratch boxes to the right.

3.1.5 Shields

②

Each cardinal direction of a starship can be protected by one or more shield hits. When an arc with shields receives damage, the damage is dealt to the shields rather than the hull. If all the shield hits are crossed off and damage remains, the rest continues on to the hull. Shields have no rows, receive no critical hits, and do not gain the benefits of armour or ablative plates.

A starship with shields must have a shield generator in each arc with shield hits. Should all the shield generators supporting a given arc be disabled then all the shield hits in that arc are crossed off and must be regenerated by the generator, if it is fixed.

Shields can be designed as energy, kinetic, or energy-kinetic shields each of which is effective only against the type of weapon it describes. Shields can be voluntarily dropped during the electronic warfare step of the combat phase and voluntarily raised back to their previous level in a later turn's EW step.



Shields will feature a number of scratch bubbles preceded by the shield symbol denoting which type it is.



3.1.6 Crew Parties 1

Most of the crew of a starship is not represented directly, rather they are assumed to be a part of the different systems onboard. What are represented are the damage control teams, anti-boarding teams, and any extraneous crew available to assist in a crisis. These stragglers are displayed as crew parties and are used for repairing systems and repelling boarders.

At the end of each layer of hull, one or more crew parties may be displayed as orange scratch bubbles. When the last hull hit of a layer is destroyed, these parties are also lost. The sum of all crew parties represented in all the layers is the total parties available to that section.

Critical hits may require that crew parties be lost. In this case the upper most crew parties are sacrificed. If a hull layer is finished with some of its crew parties already lost, more parties are not lost. If all the crew parties in a section are lost, any installed systems still function.

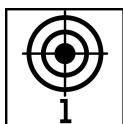
3.1.7 Marine Parties 1

Some starships may have specialised troops trained in boarding tactics. These can be useful both offensively and defensively. Like crew parties, marines are distributed throughout the sections of the starship and the hull layers of those sections as yellow scratch bubbles.

When a hull layer is lost, the marines associated with that layer are also lost. When marines are needed either to load starfighters with the breaching quality or for boarding with a teleporter they can be scratched off from any section.

3.1.8 Target Rating

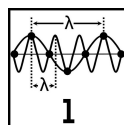
Every starship has a target rating based on its physical size and silhouette. This number represents the base difficulty an enemy starship would have when firing upon it.



The icon for Target Rating

3.1.9 EMS

All starships emit energy and this energy is key to the tracking of enemy weapons systems. As weapons fire and indirect detonations are piled on the starship, it can become difficult to distinguish the starship's electromagnetic signature from the noise of combat. At some point it may become virtually impossible to hit the starship with any more weapons fire. The EMS rating of a starship, as a representation of the total reactor power output, limits the number of enemy starships, starfighter missions, and indirect weapon salvos which may fire upon it in a given turn.



The icon for EMS.

3.1.10 Mass Factor

The sum total of the hull hits on a starship come together to give the mass factor, a number used to represent its size.



The icon for Mass Factor.

3.1.11 Crew Quality

A starship is only as effective as the crew that operates it. The crew quality represents the training, experience, and effectiveness of the starship's crew and is used to determine the firing order. Conversely, the more experienced and battle hardened a crew, the less likely they are to follow a RAM order. Crew quality ranges from one to five.



The icon for Crew Quality.

3.1.12 Command Quality

Even the most highly trained and battle hardened captains may crack under the right circumstances. While most of a starship's crew is oblivious to the larger picture of a battle or even the specific circumstances of their starship, the captain and his command staff are intimately aware of the dangers. The higher the command quality, the less likely the

captain and his officers are to order a retreat in the heat of battle. Command quality is a die type that ranges from D2 to D6.



The icon for Command Quality.

3.1.13 Damage Control Quality

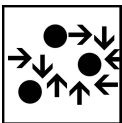
In the heat of combat, key systems are damaged and damage control teams are called upon to fix them. The training and quality of these teams determines how quickly they can bring weapons and other systems back into the fight. The damage control quality is a die type used for repair attempts and ranges from D4 to D6.



The icon for Damage Control Quality.

3.1.14 Movement Method

The universe from which a starship originates determines how much respect for physics its engines hold. Most universes do not care much for the realism of true newtonian movement and opt for cinematic movement instead. The rest that choose newtonian movement are restricted by that choice but also given unique tactical options. Cinematic starships will have their maximum speed listed inside their movement method icon.



The icon for Newtonian Movement.

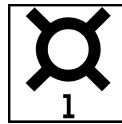


The icon for Cinematic Movement with the max speed listed.

3.1.15 Combat Value

All starships designed for Metaverse come with a built in combat value. This value is used for casual gaming to balance fleets and for certain scenarios. Players should never take the combat value of a starship as immutable truth but as a suggestion. The diverse and unique interactions of systems and mechanics in Metaverse mean that the most expensive and powerful starship can inevitably be defeated by another starship or fleet completely

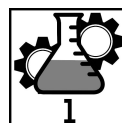
outside its paradigm and even at a lower combat value under the right circumstances. The most important component of any starship or fleet's true combat value is the player wielding it.



The icon for Combat Value.

3.1.16 Tier

Every starship will have a tier based on the highest tier component or option installed on it. The tier of a starship can be used by players as another limiting factor for pick up games like combat value.



The icon for Tier.

3.1.17 Tech Level

When designing a starship players may wish to lower the reactor power levels and by extension the EMS of the design. To do this they may increase the tech level of the starship. Increasing the tech level will, proportionally, lower the power rating of the reactors, and thereby the EMS, but will also increase the combat value. For cinematic starships, tech level is also proportional to max speed. A starship's tech level is not visible on the starship record sheet as it is only relevant during design.



3.2.0 Primary Systems

The primary systems of any starship include the power, life support, and command and control systems required for the starship to function. Primary systems are colored grey for simple identification.

3.2.1 Bridge ①

All starships must be designed with at least one bridge in any one section which controls all the ships functions. Starships may be designed with more than one bridge to give redundancy. A starship with no active bridge may not fill out a plot, drifting instead, and cannot utilise any systems except for shield generators, EW arrays, ECM arrays, life support, and stealth/cloak generators if they are already active.



The icon for a Bridge.

3.2.2 Life Support ①

Any section of a starship that has crew or marines designed into it will automatically have a life support system. This system will have a rating determined by the number of crew/marines it supports. If a life support system is disabled and not repaired within the same turn, all crew and marine parties in that section are lost.



The icon for Life Support.

3.2.3 Reactor ①

A starship will always include a reactor in the core section and may include reactors in other sections if so desired. Any section without a reactor is powered by the core section's reactor. If a reactor is disabled, all systems in that section and in any supported sections, except for life support, do not function.

These systems are not disabled and will resume function if the reactor is repaired. If a shield generator loses power from its reactor, the shield hits must be regenerated when power is restored.

All reactors have a rating based on the size, number, and type of systems it supports. When a reactor detonates from a critical hit it causes damage to its section equal to its rating. If the section is destroyed and damage remains, the remaining damage is dealt to the core. If the core section is destroyed and damage remains, the remaining damage propagates out from the starship in all directions, losing five damage per centimeter, and dealing damage to any other starships within its blast radius with the dissipated strength. Damage from detonating reactors is considered energy.



The icon for a Reactor.

3.3.0 Propulsion Systems

All starships are limited in their movement and plotting options by their installed propulsion systems. Several different forms of STL and FTL drives are possible, each granting expanded tactical options. All propulsion system icons are colored blue for simple identification.

3.3.1 Primitive STL Drive ①

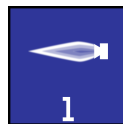
This is the most basic form of STL drive. They can be placed facing any cardinal direction in the appropriate sections. Side facing drives have no effect on cinematic starships.

When using only primitive STL drives, both fore and aft drives are required in order to allow for both increases and decreases of momentum.

Cinematic starships must have the ability to both accelerate and decelerate. A primitive STL drive will have a rating which determines the number of drive points it produces.



The icon for an aft facing Primitive STL Drive.



The icon for a port facing Primitive STL Drive.

3.3.2 Basic STL Drive ②

This is a more developed form of STL drive. A basic STL drive has the capacity to produce changes in momentum in two opposite directions such as fore/aft or port/starboard. They can be placed in any section and face either of these two perpendicular axes. A basic STL drive will have a rating which determines the number of drive points it produces.



The icon for a fore/aft facing Basic STL Drive.

3.3.3 Advanced STL Drive ③

This is the most developed of the STL drives. An advanced STL drive has the capacity to produce changes in momentum in any direction or to be used as a thruster. When used as a thruster an advanced STL produces two thruster points per rating, usable in either or both directions. An advanced STL drive will have a rating which determines the number of drive points it produces.

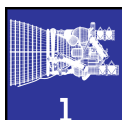


The icon for an Advanced STL Drive.

3.3.4 Thruster ①

Thrusters are used to change the orientation of a starship. For a cinematic starship this results in a change of movement path but for a newtonian starship this results simply in a change of rotational momentum. Thrusters can be designed to face out the port and starboard only, in either of those sections or in the core if one or more side sections do not exist.

A thruster will have a rating determining the number of points it provides. A thruster cannot be used to perform two different actions during the plot. Note that a thruster placed in the port side is used to make starboard turns and vice versa.

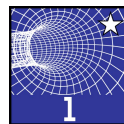


The icon for a port facing Thruster.

3.3.5 Primitive FTL Drive. ①

This is the most basic form of FTL drive. A FTL drive of some kind is required to participate in a pickup game but in a campaign or scenario setting is not necessarily required.

A primitive FTL drive will have a rating of 1-10, indicating the number of turns it takes to charge the drive while plotting an FTL warmup. A primitive FTL drive can be placed in any section and can only be used for FTL retreats.

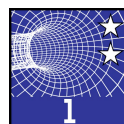


The icon for a Primitive FTL Drive.

3.3.6 Basic FTL Drive ②

This is a more flexible FTL drive. A FTL drive of some kind is required to participate in a pickup game but in a campaign or scenario setting is not necessarily required.

A basic FTL drive will have a rating of 1-10, indicating the number of turns it takes to charge the drive while plotting an FTL warmup. A basic FTL drive can be placed in any section and can be used only for FTL retreats or strategic FTL jumps.

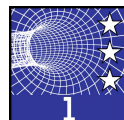


The icon for a Basic FTL Drive.

3.3.7 Advanced FTL Drive ③

This is the most developed and flexible FTL drive. A FTL drive of some kind is required to participate in a pickup game but in a campaign or scenario setting is not necessarily required.

An advanced FTL drive will have a rating of 1-10, indicating the number of turns it takes to charge the drive while plotting an FTL warmup. An advanced FTL drive can be placed in any section and can be used for any FTL action.



The icon for an Advanced FTL Drive.

3.4.0 Electronic Warfare Systems

A starship with the most advanced and powerful weapons systems is nearly useless without the sensor and jamming equipment required to ensure its weapons hit their targets and that enemy's weapons do not hit them. Electronic warfare systems encompass all those technologies intended for the targeting of enemy starships and the confusion of enemy targeting systems. Electronic warfare systems are colored green for simple identification.

3.4.1 Sensor Array ①

A sensor array is the most basic detection and targeting equipment a starship will possess and is required to fire at enemy starships. Every weapon that fires from a starship will utilize some form of sensor array.

When a starship fires direct weapons on a target, it must designate a sensor array for that target. All weapons salvo firing on that target will use that sensor array. When firing indirect weapons, a sensor array is still needed but to determine how many weapons can be fired.

Most starships will be designed with multiple sensor arrays. A sensor array will have a rating which determines the number needed to be rolled, or less, on a sensor roll (1D20).



The icon for a Sensor Array.

3.4.2 Electronic Warfare Array ①

The most basic defensive electronic system a starship can utilize is the EW array. An EW array is used to confuse enemy sensors and make it difficult to hit the owning starship. An EW array will have a listed rating. This number is subtracted from any sensor array's rating that is targeting the starship. In this way the sensor profile of starships can be reduced. Multiple EW arrays do not stack but provide redundancy.

An EW array can be turned on or off during the electronic warfare step of the combat phase.



The icon for an Electronic Warfare Array.

3.4.3 Electronic Intelligence Array ②

An ELINT array is an offensive sensor suite designed to supplement standard sensor arrays. During the electronic warfare step of the combat phase, an ELINT array may target any enemy starship within 100cm. If the starship possessing the ELINT array fires on the target starship, it reduces the target's EW rating by the rating of the ELINT array used. This is useful when using multiple sensors on the same target.



The icon for an Electronic Intelligence Array.

3.4.4 Targeting Array ③

Targeting arrays are specialised sensor suites designed to cut through the electronic noise caused in the heat of combat by weapon detonations and EM spikes. During the electronic warfare step of the combat phase, a targeting array may target any enemy starship within 100cm. If the starship possessing the targeting array fires on the target starship, it considers the EMS of the target to be increased by the rating of the targeting array.



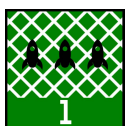
The icon for a Targeting Array.

Example

The HIMS Avenger has targeted the RAS Freedom with a rating two Targeting Array. During the combat phase the Freedom is fired at by three starships other than the Avenger. Given that the Freedom's EMS is three this would mean that the Avenger wouldn't normally be allowed to fire upon it. However, with the use of the Targeting Array, the Avenger considers the Freedom's EMS to be five (3+2) allowing it to fire on it this turn.

3.4.5 ECM Array ②

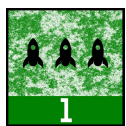
An ECM array is similar to an EW array but on a far larger scale. An ECM array provides an area effect of EW support that raises the effective EW of all friendly ships within its range by one, even if they do not have an EW array. The rating of an ECM array determines the radius of the effect at 5cm per rating. Multiple ECM arrays on a single starship do stack. A starship with an ECM array does benefit from the bonus. Players determine during the electronic warfare step of the combat phase if an ECM array is active.



The icon for an ECM Array.

3.4.6 Electronic Jamming Array ②

An EJ array is similar to an ECM array but less specifically targeted. An EJ array provides an area effect of jamming support that lowers the effective EMS rating of all friendly or enemy ships within its range by one. The rating of an EJ array determines the radius of the effect at 5cm per rating. Multiple EJ arrays on a single starship do stack. A starship with an EJ array does benefit from the bonus. An EJ array cannot lower a starship's EMS rating below 1. Players determine during the electronic warfare step of the combat phase if an EJ array is active. In the case of a conflict between an EJ Array and a Targeting Array, the EJ Array's effect is applied first.

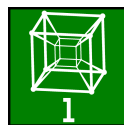


The icon for an Electronic Jamming Array.

3.4.7 Ansible ③

An ansible is a high powered communications platform intended to provide targeting data and EW support to friendly starships. The rating of an Ansible determines the number of friendly starships that can receive this support. Any starships which are plugged into another starship's Ansible gain the benefit of that starship's ELINT and targeting arrays and may use sensor arrays from that ship to perform salvo fire at the same target on which the sensor array was used, if it was

used for salvo fire. Range is still measured from the firing starship. The targets of an Ansible are determined during the electronic warfare step of the combat phase and must be within 50cm of the starship.



The icon for an Ansible.

Example

The IKS Tesla plans on sharing its targeting data with its accompanying squadron of starships. The Tesla is carrying a rating three Ansible onboard but has an escorting squadron of four starships so not all of them will receive this data. During the combat phase the Tesla salvo fires on one target and volley fires on another. The targets of the Ansible may utilise the sensor array that salvo fired on the enemy starship to fire at the same starship. The sensor array that volley fired is not eligible to be shared. Had the Tesla any ELINT or targeting arrays, their data could have been shared as well.

3.4.8 Cloak Generator ③

A cloak generator is a system which renders the starship completely invisible to sensors but also renders the starship blind to the outside universe. While cloaked, a starship's model is not moved the first turn the cloak is active, may not fire, and may not be fired upon. Each turn the ship is moved its previous plot. While writing the first plot of a cloaked starship, a player must plot the next turn as well.

On all subsequent turns the player will plot the next turn's plot. Cloaking and uncloaking must be written into the plot. When a starship is uncloaked, its plots are executed up to the current turn. The maximum number of turns a starship may remain cloaked is equal to the rating of the cloak generator. The cloaking and uncloaking of a starship must be written into its plot.



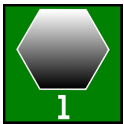
The icon for a Cloak Generator.

3.4.9 Stealth Generator 2

A stealth generator is a system which renders a starship very difficult to detect via sensors. A starship with an active stealth generator may not have active shields.

When attempting to fire on a stealth starship, the firer must make a normal sensor roll with the target having an effective EW strength of four, multiplied by the rating of the stealth generator. If a starship with stealth uses another EW system for any reason while under stealth, its effective EW strength is reduced to one, multiplied by the rating of the stealth generator (starting with the next group of firing). A stealth generator is restored to full functionality if no sensor is used for a complete turn (same phase to same phase, not beginning to end of turn).

Any firing that occurs simultaneously with this, counts the stealth generator to be uncompromised. A stealth generator is turned on or off during the electronic warfare step of the combat phase.



The icon for a Stealth Generator.

1

3.4.10 Countermeasure Pod

A countermeasure pod is a one time use EW system. A starship with installed CM pods may during the electronic warfare step activate a CM pod. An activated CM pod grants a bonus to the starship's EW rating equal to the rating of the CM pod.

During the repair step any activated CM pods are crossed off and may not be used again. Used CM pods may not be repaired in any way. Multiple CM pods may be installed on a starship and even activated in the same turn. Multiple activated CM pods stack their effects.



The icon for a Countermeasure Pod.

Author's Note

The electronic warfare aspect of starship combat is one of the most overlooked and possibly most important areas of starship combat. For this reason I intended from the outset to include and thoroughly flesh out this key step in a Metaverse turn.

The number of options and interactions a player has may seem overwhelming at first but I will remind the reader that the sensor array is the only mandatory component of the electronic warfare systems. Players are free to completely ignore all other EW systems and in fact just skip right over the entire electronic warfare step.

However, I believe that I have provided enough options to satisfy any player who wishes to dabble in the EW arena.

One of the common questions that arises from the EW systems focuses on the difference between Stealth and Cloak and why they are distinct systems. As an author attempting to cover as much Sci-Fi literature as possible I wished to distinguish between those exotic systems which render a starship completely invisible and just very hard to target.

Players will also notice that EW systems are generally divided into offensive and defensive systems. This distinction is further divided into local and area systems. This allows players to create ELINT and AEGIS starships with relative ease.

Through the use of EW systems players can gain a significant advantage over their opponents even if that opponent out guns them. This is an intentional design intended to force players to think beyond just how big their starships are and how much firepower they possess. The suggestion I will leave every player with is don't underestimate the importance of EW systems; big guns mean nothing if you can't hit.



3.5.0 Secondary Systems

Outside of the primary, propulsion, and electronic warfare systems of a starship, the remaining systems are classified as secondary systems. A secondary system is not critical to the individual combat performance of a starship but provide tactical options and secondary command and control functions. Secondary systems are colored violet for simple identification.

3.5.1 Combat Information Centre ①

The basic command functions of a starship's bridge are insufficient to allow the integration and command of other starships. To fulfill this role a CiC is required. A CiC will have a rating which determines the number of units it may command. CiCs can be installed in any section but when disabled, all units under the command of that starship must consider it to be destroyed for morale checks, until it is repaired.



The icon for a CiC.

3.5.2 Starfighter Operations Command ①

As with a CiC, a specialised system is required for the command of starfighter squadrons. A SoC will have a rating which determines the maximum number of starfighter missions it can operate at any one time. If a SoC is disabled or destroyed along with the starship, the starfighter missions under its command may continue on their missions but may not receive any new missions.



The icon for a SOC.

3.5.3 Grapppler ②

The grapppler is a system which allows a starship to tow another starship into battle. This system cannot be used in the course of the game but allows for starships to be brought to a game that do not have an FTL drive. The towing starship must still have an FTL drive. Starships that are towed into the game must be deployed within 5cm of the

mothership at the beginning of the game, unless the scenario dictates otherwise. The maximum size of starship another starship may tow into battle is determined by the towed starship's mass factor. To be brought into the game, each grapppler allows for a starship no larger than the rating of the grapppler, multiplied by the towed starship's mass factor, divided by five. Multiple grapplers may not be combined to tow a starship but do allow for multiple starships to be towed.



The icon for a Grapppler.

3.5.4 Energy Grapppler ③

The energy grapppler is a more advanced form of the basic grapppler. It may perform all the actions of a normal grapppler with the same restrictions. In addition an energy grapppler can be used in game to modify the position of other starships, starfighter squadrons, and indirect weapon salvos.

This can be used on friendly and enemy targets alike, utilising a standard sensor roll to achieve a lock, taking into account the target's EW rating and a +1 modifier to the target's EW rating per 10cm to the target as well as the target rating. A sensor array and a sensor roll are still required to lock on to a target and the sensor array utilized cannot be used for any other purpose. Energy grapplers are used like a weapon during the combat phase. Multiple energy grapplers can use the same sensor to lock on to the same target.

An energy grapppler is granted a number of points equal to the rating of the grapppler with which to modify the position of the target. If the target is larger than the firer than the position of the firer must be changed. The relative mass factor of target and firer can modify the number of points. If one of the two starships is double the mass factor of the other, the points are doubled. If one of the two starships is triple, or more, the mass factor of the other, the points are tripled.

The mass factor of a starfighter mission is equal to the number of squadrons within it. The mass factor

of a salvo of indirect weapons is equal to the total number of pulses. If the mass factor of the target is the same as the firer than the player may choose to move either the target or the firing starship.

Once a lock has been achieved the firing starship moves the target, or itself when smaller, 1cm per point granted in any direction. An energy grapppler cannot be used to move a target into a solid object such as a planet. Moving a target through a gravitational field expends two points per centimetre. Energy grappplers used to target a friendly starship consider its EW rating to be zero before range modifiers.

When an energy grapppler is added to a starship design it will face out a cardinal arc based on the section it is in. An energy grapppler can only target things in its cardinal arc.



The icon for a fore Energy Grapppler.

Example

The SS Clinton is attempting to lock onto an enemy starship with its forward facing rating three energy grapppler. Taking into account the target's EW rating, a +1 to that rating per 10cm to the target, and the target's target rating, the Clinton successfully locks on. The Clinton now compares its mass factor to the mass factor of its target. The Clinton has a mass factor of twelve while the target has a mass factor of five. This means that the Clinton gets to double its number of points as it is at least double the target's mass factor but not triple. With a rating three energy grapppler, the Clinton is granted six points. The Clinton chooses to move its target 6cm closer to itself.

3.5.5 Gravity Well Projector ③

The gravity well projector is a system designed to prevent starships from entering FTL. A single GWP (declared during the electronic warfare step of the combat phase) will, while in use, hinder the functioning of FTL engines within 10cm of the starship, multiplied by the rating of the generator. Additional GWPs do not extend the range of the

field but make it more intense. A tactical or strategic FTL jump that brings the starship within the range of an active GWP will have difficulty penetrating the gravity well.

Every 10cm the starship moves into the gravity well 1D6 is rolled; if the roll exceeds the starship's crew quality than the jump is ended and the starship is placed at the point of failure. For every additional gravity field that the starship is in when making this roll a +1 is added.

A tactical FTL jump that is initiated within a gravity well goes through the same procedure, either deeper into the gravity well or on its way out. A starship returning to the table from a strategic FTL jump in a gravity well must roll 1D6 and exceed the starship's crew quality for each 10cm band inside the gravity well the jump point is located. If a roll is failed, the jump point is moved to the relevant band, towards the nearest table edge.



The icon for a Gravity Well Projector.

3.5.6 Basic Teleporter ②

Teleporters are a method of transmitting physical objects from one point in space to another. There are two applications of this system in Metaverse.

A teleporter may be used to transport marine/crew parties onto an enemy starship, equal to the rating of the teleporter, in lieu or in conjunction with starfighters with the breaching quality.

The initiating starship must use a sensor array and perform a sensor roll for each teleporter (a single sensor array may be used for all the teleporters used in this way but it cannot be used for any other purpose) with a +1 to the target's EW rating for each 10cm to the target.

If the roll fails, the marine/crew party is lost to the void. If the roll is successful, the marine/crew party is transferred into the facing section of the target starship and will participate in boarding actions during the appropriate phase.

A teleporter may also be used to make pinpoint attacks on enemy starships in an attempt to disable systems. A sensor roll is made as normal with the established modifiers but an independent sensor array is required for each teleporter used in this way.

If successful, a critical hit is scored with 1D6 rolled for the critical category rather than 1D8 and the die type for the specific critical being based on the rating of the teleporter (i.e. a rating three teleporter would roll 1D3).

Either use of a teleporter against a starship requires that the target have no shields or deflectors that interact with energy weapons operational in the facing arc as of the time of use. Additionally, the initiating starship must not have active shields that interact with energy weapons in the facing arc (note: shields can be dropped voluntarily during the electronic warfare step of the combat phase and raised back voluntarily to their previous level in a later turn's EW step).



The icon for a Basic Teleporter.

3.5.7 Advanced Teleporter 3

An advanced teleporter acts as a normal teleporter in all respects but may be used with the initiating starship having active shields.



The icon for an Advanced Teleporter.

3.5.8 Basic Shield Generator 2

A shield generator allows for shield hits to be erected around the starship to intercept incoming fire. Shield generators can be placed on any section of the starship. Any section with shield generators can be designed with shield hits facing the appropriate cardinal direction.

All incoming fire on that section must first damage all the shield hits before hitting the hull, assuming the shields are of the appropriate type to block the fire. During the repair phase, a number of shield hits

may be repaired in that section, equal to the number of shield generators multiplied by their rating.

The core section can have shield generators only if at least one other section wasn't designed into the starship; in which case, its generators may be responsible for that arc. If more than one section wasn't designed, core shield generators must be designated to support a given arc during design.

If all the shield generators in a section are disabled, all the shield hits in that section are crossed off. Once the shield generators are restored, the shield hits can be repaired at the normal rate.



The icon for a port facing Basic Shield Generator.

3.5.9 Adaptive Shield Generator 3

An adaptive shield generator follows all the rules for a basic shield generator but is also capable of adapting over time to enemy weapons fire.

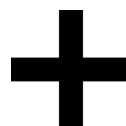
During the repair phase of any turn in which the starship received weapons fire and at least one shield hit was lost, the adaptation level of the shields increases by one, starting from zero.

Each cardinal direction of the starship maintains its own adaptation level but they are all increased if one arc was hit. The maximum adaptation level for an arc is equal to the total rating of all adaptive shield generators supporting that arc.

When receiving weapons fire with an adaptation level greater than zero, all the shields supported by adaptive shield generators on the starship are considered to have an armour rating equal to the adaptation level.



The icon for a fore facing Adaptive Shield Generator.



This icon will have a number of scratch bubbles with it next to the shield hits. It is used to track the adaptation level of an arc.

3.5.10 Modulated Shield Generator ③

Modulated shield generators act like basic generators in all respects except for their ability to modulate. During the repair step when regenerating shield hits, a modulated shield generator can be used to either repair hits in its own facing or half as many hits in an adjacent facing, rounded down.



The icon for an aft Modulated Shield Generator.

3.5.11 Deflector ②

A deflector system is designed to push some or all weapons fire away from or around the ship to prevent damage. A deflector system will be designed as energy, kinetic, or energy-kinetic, which signifies which types of weapons with which it will interact.

When a starship with a facing deflector system is successfully hit by weapons fire, the damage rolls of those weapons are affected. When the result of a weapons damage die is equal to or less than the rating of the deflector system, the damage is ignored. However, the maximum roll of a damage die can never be ignored, even if the deflector system's rating would normally allow it.

The exception to this is the D1. Because a D1 always rolls its maximum, when a D1 weapon achieves a hit on a starship with deflectors, a D2 must be rolled with a result of one signalling the weapon's damage is ignored.



The icons for energy, kinetic, and energy kinetic deflectors.



The deflector rating of an arc will be listed in the defence area of each section using this icon.

Author's Note

Like any good starship combat game, Metaverse has included in it some crazy components and systems. I have lumped these, as well as a few other miscellaneous systems, together in the secondary systems category.

None of these systems are mission critical except for perhaps the CiC and SOC. For the most part players can feel free to ignore this entire section of the book, but if you feel like adding some flavor to your games this is where you will find it.

I have been asked before why I have three different kinds of shield generators in Metaverse. The problem I had when designing a shield mechanic was coming up with a way to encompass "shields" from multiple different universes and sources. There are many variations on this theme throughout fiction that are not always compatible.

I, reluctantly, designed three different mechanics to, hopefully, capture as much as possible. The basic generator should do a decent job for most universes and will inevitably be the most utilised. Adaptive generators are intended for shields that either learn as they go or become stronger over time. Lastly, modulated generators can be used to represent shields whose strength can be shifted around.

When you combine these three types of shield generators with the fact that shields can be built as energy, kinetic, or energy-kinetic shields, you get nine possible variations on shields for players to experiment with.

3.6.0 Weapon Systems

The purpose of any combat starship is its weapons systems. These large and small systems for dispensing violence have a number of restrictive features and unique qualities that alter the way they are used in the combat phase. Weapons systems are colored yellow for easy identification.

3.6.1 Damage Statistics 1

The most basic information of a weapon is its raw capacity for damage. The damage die of a weapon is the die type rolled when determining damage. The pulse is the number of these dice rolled when dealing that damage. Finally, the damage modifier is a possible positive bonus to the result of each damage die rolled. The combination of these three factors allows for a wide range of representative weapons.

3.6.2 Damage Type 1

All weapons must be designed as either energy or kinetic weapons. This displays the basic method through which the firepower of the weapon is delivered. Weapons with significant mass and kinetic energy and longer flight times, such as railguns and torpedoes, are best described as kinetic weapons. Weapons that project their firepower through streams of energy, plasma, subatomic particles, or other exotic effects at significant fractions of the speed of light, such as lasers and particle cannons, are best described as energy weapons.

Energy weapons receive a -1 to the damage output of each pulse per range band between the firing and the target starships. Kinetic weapons always hit for the same damage but incur a +1 to the target rating of the target starship for each range band between the firing and target starships. Some defensive systems affect only kinetic or only energy weapons.



Energy weapons and systems that interact with them use the lightning bolt icon, kinetic weapons and systems that interact with them use the hammer icon.



3.6.3 Damage Effect 1

All weapons deal their damage through either raking or penetrating patterns. Raking weapons deal their damage horizontally along complete hull layers and best represent damage that spreads out easily along the surface of a starship. Penetrating weapons deal their damage vertically through the sections of a starship and best represent damage that punches through the hull of a starship and burrows into the interior.



Raking weapons use the horizontal lines icon, penetrating weapons use the vertical lines icon.



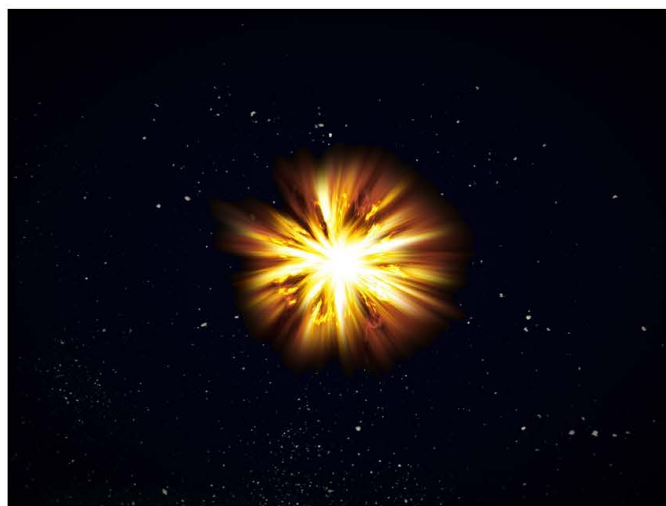
3.6.4 Weapon Arc 1

Every weapon must be designed with at least one sector in which it can fire. The sector of a weapon can be chosen from up to eight sectors that conform to the cardinal arcs of starships with two sectors per arc at 45° each.

A weapon must have at least one sector available but can have up to all eight. A weapon placed in an outboard section of a starship will be restricted to no more than six sectors as the sectors facing the opposite side of the starship are unavailable. Weapons placed in the core section can always choose from all eight sectors.





The icon for a weapon; available sectors are colored yellow.




3.6.5 Target Method ①

Every weapon must be designed as a direct or an indirect weapon. Direct weapons are best described as those with no self-guidance that travel in a linear path to their target. Indirect weapons are best described as those with self-guidance which are capable of taking a non-linear path to their target and have some semblance of internal targeting. An indirect weapon will be designed with a rating 1-5. This rating determines the length of time the weapon will be able to move about the table before being removed.

 Direct weapons use the straight arrow icon; indirect weapons use the wavy arrow icon with the number being its rating. 


3.6.6 Range ①

All weapons must be designed with a range from 0cm to 50cm in multiples of 5cm. For direct weapons, this range determines the range bands the weapon will use. For indirect weapons, this range determines the speed at which the weapon moves about the table. A 0cm weapon is only capable of firing on starfighter squadrons and weapons striking the starship directly. Regardless of the range bands of a direct weapon, the maximum range for any direct weapons fire is 100cm.

 The curved lines icon is used to indicate the range of a weapon





3.6.7 Interception ①

When a weapon is designed, it is vulnerable to interception by default. This means that other weapons capable of firing on it are allowed to target and destroy it prior to it hitting its target. However, a weapon can be designed to be immune to interception. In this case, no weapon can target it for any reason.

 The bullseye icon indicates that a weapon is vulnerable to interception.

3.6.8 Targeting ①

In order for a weapon to fire upon a target it must have that targeting allowed in its design. The possible targets for a weapon are starships, starfighters, direct fire weapons, and indirect fire weapons. Every weapon must have at least one viable target type designed into it.

 The rocket icon indicates the weapon can target starships, the jet icon:  starfighters, the straight arrow:  direct weapons fire, and the wavy arrow:  indirect weapons fire.


3.6.9 Area of Effect ②

All weapons have an AoE of 0cm as a default but may have an AoE of 10, 20, 30, 40, or even 50cm. A weapon with an AoE greater than 0cm strikes its target as normal but in addition the weapon may hit more targets.

If the sensor roll is successful, a die is rolled and the result is the number of starships that can be hit, with the original target always being the first. The die rolled is determined by the AoE range of the weapon. AoE 10cm weapons roll 1D4, 20cm weapons roll 1D6, 30cm weapons roll 1D8, 40cm weapons roll 1D10, and 50cm weapons roll 1D12.


All the targets hit must be within the AoE range of the target and the target must be hit. The remaining targets to be targeted must be the closest targets of the appropriate type, whether friendly or enemy. If any targets of non-viable target types are within range, they cannot be targeted.


The damage of an AoE weapon loses effectiveness over range. For every 5cm (including the first 5cm), the weapon receives a -1 to its damage roll.


 The mushroom cloud icon is used to indicate the weapons AoE along with its die type.

3.6.10 Rate of Fire ①

Not all weapons can fire indefinitely and some are capable of a short burst of fire only. The rate of fire of a weapon determines how often it can fire. Unlimited weapons can fire every turn without interruption. Limited weapons can only fire every other turn and one-shot weapons may only be fired once per game.

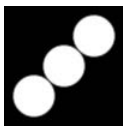
 Three open circles indicate the weapon is unlimited.

 Two open circles indicate the weapon is limited.

 One open circle indicates the weapon is one shot.

3.6.11 Armour Piercing ①

Any weapon may be designed with an AP value ranging 1-5. The AP level of a weapon allows it to ignore that many layers of armour. The armour is ignored for each pulse. This does not grant additional damage and therefore has no effect on an un-armoured target.



The D6 icon indicates the AP rating of the weapon.

3.6.12 Shield Piercing ②

Any weapon may be designed with a SP value ranging 1-5. The SP level of a weapon allows for some of its damage to bleed through shields. When the weapon deals more than five damage, some of the remaining damage will ignore the shields.

This is calculated independently per pulse. The amount of damage that will ignore the shields is equal to the SP value. Any remaining damage (above the five that hit the shields and the damage that hit the hull) is dealt back to the shields again.



The shield icon indicates the SP rating of the weapon.

3.6.13 Deflection Piercing ②

Any weapon may be designed with a DP value ranging 1-11. The DP level of a weapon is subtracted from any deflectors its target may have. Any remaining deflector rating is still applied.



The deflector icon is used to indicate the DP rating of the weapon.

3.6.14 Weapon Qualities

Some weapons have strange or unique qualities which are outside the scope of the basic stats. These weapons may be given one or more appropriate qualities. Each of these qualities has a short code used in the weapon stat line. These qualities and their effects are listed below.

Antimatter (AM) ②

A weapon with this quality receives a bonus to its damage on each pulse, equal to the target's armour rating or defence (not including ablative plates). This bonus cannot exceed the weapon's damage modifier.

Dimensional (DM) ③

A weapon with this quality doubles the damage dealt to the hull or strength on odd rolling pulses. This additional damage is dealt to the next section through the ship. If no section exists beyond the hit section, the additional damage is dealt to that section.

Disruptive (DS) ③

A weapon with this quality gains a bonus to its damage equal to the target's EMS rating on odd rolling pulses. This bonus cannot exceed the weapon's damage modifier. This quality has no effect on starfighters or weapons fire.

Gravitational (GR) ③

A weapon with this quality gains a bonus to its damage equal to the target's mass factor on odd rolling pulses. This bonus cannot exceed the weapon's damage modifier. This quality has no effect on starfighters or weapons fire.

Ionized (IO)

②

When a weapon with this quality rolls odd with any pulse and does damage to the hull, 1D6 is rolled for each pulse that did so. Each result of six inflicts a critical hit on the target section. This quality has no effect on starfighters or weapons fire.

Molecular (ML)

②

A weapon with this quality doubles any damage dealt to hull or strength.

Phased (PH)

②

A weapon with this quality deals damage from any pulses that roll odd directly to the hull, ignoring shields. This quality has no effect on starfighters or weapons fire.

Polarized (PO)

②

A weapon with this quality doubles any damage dealt to shields. This quality has no effect on starfighters or weapons fire.

Proximity (PR)

③

An indirect weapon with this quality has the ability to strike at any time during the movement phase. During any movement step, proximity weapons may be activated at any time allowing them to strike any target currently within 15cm or 20cm with temporal. Proximity weapons are not required to be removed when their indirect turn limit is reached; they simply cannot be moved again.

Quantum (QM)

②

A weapon with this quality doubles the die roll of any pulse that rolls odd. This does not affect the damage modifier.

Reactive (RT)

②

A weapon with this quality has the potential for causing additional damage. When a pulse rolls odd, that pulse can be rolled again for additional damage. This additional pulse ignores the armour rating or defence but includes range modifiers. Additional rolls cannot take into account weapon qualities, including reactive.

Spinal (SP)

③

A weapon with this quality has the potential to hit additional targets along the weapon's flight path. After a successful sensor roll and after inflicting damage a line is drawn between the firing starship and the target. Any valid targets within 5cm of this line are also hit.

The range of the weapon, if it is an energy weapon, is still taken into account at each target. Damage is rolled again for each of these targets but each pulse's damage is halved, rounded down. If the target is destroyed after this weapon has fired then the line drawn continues to 100cm hitting targets as appropriate.

Temporal (TM)

③

When a weapon with this quality misses its target through a failed sensor roll, the sensor roll may be re-attempted, but only once. Indirect weapons with this quality may strike targets within 20cm of themselves.

Unstable (UN)

②

A weapon with this quality will detonate upon being intercepted (thus making immune weapons unstable, pointless). When an unstable weapon salvo is successfully intercepted at 0cm (hit and destroyed) it deals half its normal damage to its target (damage is rolled for and halved, rounded down).

For weapons with an AoE greater than 0cm, it will roll its die to determine the number of targets it hits. The weapon salvo makes its attack from the point it was destroyed. If not on a target, the roll has a -1 modifier. Any unstable weapon without an AoE that is intercepted beyond 0cm has no effect.

3.6.15 Weapon Definitions

On a starship record sheet the starship's weapons will be represented by their arc icon along with all the other systems. The specific information about each weapon will be displayed in a consistent iconographic format after all sections have been displayed.

1: The weapon's name will be displayed here.

2: The weapon's damage type will be displayed here using a lightning bolt for energy and a hammer for kinetic.

3: This is the pulse of the weapon.

4: This is the damage die of the weapon.

5: This is the damage modifier of the weapon.

6: This is the target method of the weapon using a straight arrow for direct fire and a wavy arrow for indirect fire. Indirect weapons will have their turn limit listed as a number in the arrow.

7: This is the range of the weapon in centimetres.

8: This is the possible area of effect of the weapon listed in a radius in centimetres.

9: This the die type of the AoE to determine the number of targets that are hit.

10: If the weapon has a shield piercing value it will be listed inside this shield symbol.

11: If the weapon has an armour piercing value it will be listed here as a D6 symbol.

12: If the weapon has a deflection piercing value is it will be listed here with the deflector symbol above it.

13: The damage effect of the weapon is displayed here. Raking will be represented by three horizontal lines; penetrating will be represented by three vertical lines.

14: If the weapon is vulnerable to interception this target reticle will appear here.

Example Weapon Definition

2 1 3 4 5 6 7 8 9

10 17 11 12 13 14 15 16

15: The rate of fire of the weapon will appear here. One shot will use one white circle; limited will use two white circles; unlimited will use three white circles.

16: The possible targets of the weapon will appear here. Starships are represented by the rocket; starfighters are represented by the jet; direct fire is represented by the straight arrow; indirect fire is represented by the wavy arrow.

17: Any qualities the weapon has will be listed here using their short codes.

Weapon Quality Short Codes

AM	=	Antimatter
DM	=	Dimensional
DS	=	Disruptive
GR	=	Gravitational
IO	=	Ionized
ML	=	Molecular
PH	=	Phased
PO	=	Polarized
PR	=	Proximity
QM	=	Quantum
RT	=	Reactive
SP	=	Spinal
TM	=	Temporal
UN	=	Unstable

Author's Note

Unusual for many starship combat rules, Metaverse features a detailed weapon design system. Some critics will inevitably declare this to be a complicated and far too detailed mechanic.

It is true that this weapon creation system of Metaverse features many options and details for the players to dabble in. However, like many of the detailed portions of the game it must be remembered that the majority of the options may be safely ignored. The most basic parts necessary for functional weapons are the damage characteristics, range, and targeting.

Should a player group wish to keep their games simple they can elect to restrict all weapons to raking energy weapons with no area of effect that are unlimited. They can ignore armour, shield, and deflection piercing and opt to not use any qualities. This would create a much simpler range of weapons.

The inclusion of all these options in the game allows the players to customize their weapons to do exactly what they want them to and to represent nearly any fictional universe with ease.

I realized when writing Metaverse that the inclusion of all these options made reading the statistics of any weapon theoretically quite difficult. What was needed was a form of short hand for weapon information that could be recognized and understood almost at a glance.

The rest of a starship record sheet is already iconographic with little to no language involved. This creates a profile that is easily and quickly deciphered. My intention was to create a weapon definition that achieved the same effect.

The final version you see is the product of that endeavour. Most players have found it an intuitive read that they quickly adapt to.

3.7.0 Starfighter Squadrons

Starfighter squadrons in many ways act like indirect weapons that have the capacity to strike their target multiple times. As with weapons there are a number of attributes that must be considered when designing a starfighter squadron.

3.7.1 Strength

The most important attribute of a starfighter squadron is strength. Strength is the amount of damage that a squadron can take before being destroyed, and determines its fire order, with higher strength squadrons acting first. It's important to note that strength does not necessarily indicate starfighter size or squadron composition. A large collection of small starfighters could have the same strength as a small collection of larger ones, or even the same strength as a previously higher strength squadron that has been damaged in combat.



The icon for the strength of a starfighter squadron will have a number beside it to denote the strength.

3.7.2 Speed

In order for starfighters to move about the table they require a speed rating. This speed is listed as 10cm, 15cm, 20cm, 25cm, or 30cm. During the starfighter movement step of the movement phase, missions may be moved in any direction, up to the listed speed of the slowest component squadron. Squadrons may be moved up to double this speed but may not fire while doing so.

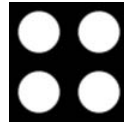


The icon for the speed of a starfighter squadron will have a number beside it to denote the speed.

3.7.3 Defence

The defensive characteristics of a starfighter squadron are combined into the defence attribute. This represents both physical armour and electronic defences, such as shields. When fired upon by anything, the defence works like an armour value, and is subtracted from the damage roll of every pulse. Damage above and beyond the defence

reduces the strength of the squadron. Defence ranges from zero to six.



The icon for the defence of a starfighter squadron takes the form of a D6.

3.7.4 Target Rating

As with starships and weapons fire, starfighter squadrons have a target rating which is included in the target profile calculation. This rating can be used to represent both the manoeuvrability and size of the starfighters within the squadron. The target rating of starfighters ranges from four to nine.



The icon for the target rating of a starfighter squadron will have a number next to it to denote the target rating.

3.7.5 Qualities

Starfighter squadrons may be designed with unique qualities just like weapons. These qualities represent exceptional abilities outside the scope of the normal attributes and are listed below.

FTL



Starfighters with this quality have their own integral FTL drives. When purchased with a carrier vessel, they can be deployed on the table at the start of the game rather than in their hanger bays.

Additionally, FTL capable starfighters do not require a carrier during fleet construction. When constructing a fleet, any number of FTL capable starfighters may be purchased and added to the fleet roster but they must have a crew quality and command quality purchased for them separately from the rest of the fleet (default one and D2).

Starfighter squadrons purchased this way can be assigned to a starship with an SoC at the beginning of the game or be given a starting mission that cannot be changed during the game.



The icon for FTL capable starfighters.

Breaching ②

Starfighters with this quality have the capacity to transport marine or crew parties to enemy starships. A squadron can carry one party for each of its strength. These parties must be loaded on while onboard their carrier. Alternatively, if the squadron is brought in via FTL it can have marines onboard by doubling its cost.

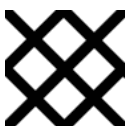
At any time when attacking an enemy starship rather than fire weapons, the squadron can unload its passengers onto the enemy starship in the attacked section. This cannot be done if the attacked side has active shields that interact with kinetic weapons.



The icon for breaching capable starfighters.

ECM ②

Starfighters with this quality have the capacity to provide a passive electronic warfare bonus to all squadrons within the same mission. All squadrons within the same mission as a squadron with ECM, including the ECM squadron itself, raise their target rating by one. Multiple squadrons with ECM in the same mission do not compound their effects.



The icon for ECM equipped starfighters.

3.7.6 Weapons

A starfighter squadron can be designed with one or more weapons but it can only fire a number of those weapons per turn equal to its crew quality. The crew quality of a starfighter squadron is equal to its carrier's crew quality unless brought in by FTL.

A weapon statistic represents all the weapons of that type in the squadron. As with starship weapons, starfighter weapons are designed with a damage die, damage modifier, and pulse, but do not have a range. They must be designed as either unlimited or one shot with no possibility of limited.

Finally, the possible targets of the weapon must be considered. As with starships, the four possible

target types are starships, starfighters, direct weapons, and indirect weapons, with the latter three being grouped into one. A starfighter weapon must have at least one target type designated.

Starfighter weapons cannot be intercepted. Starfighter weapons share the same qualities as starship weapons with the inclusion of indirect as a weapon quality rather than a basic attribute.

During a furball all weapons with the indirect quality are fired simultaneously before the normal firing sequence determined by strength. Additionally, when Starfighters attack a starship weapons with the indirect quality are fired simultaneously with 0cm weapons on that starship.

3.7.7 Hanger Bay

In order to carry starfighter squadrons into battle, a starship must have hanger bays. A hanger bay has three basic qualities: launch capacity, carry capacity, and the types of squadrons it can carry.

The launch capacity of a hanger bay determines the maximum number of squadrons that can be launched from and recovered onto it per turn. The carry capacity of a hanger bay determines the maximum number of squadrons that can be loaded into it at any time.

Finally, the types of squadrons that a hanger bay is designed to handle determines what can be purchased and placed into it at the beginning of the game. A hanger bay cannot recover a squadron type for which it was not designed. Hanger bays are coloured turquoise for easy identification.



The icon for a hanger bay will have a user entered name at the bottom.

2x 2 / 6

Red Bomber

○○○○

At the bottom of the starship record sheet each bay will have specific information listed including the number of instances of that bay, the launch capacity/carry capacity, and the onboard squadrons will be listed with scratch bubbles.

3.7.8 Starfighter Definitions

As with weapons, starfighter squadrons will have a definition that appears at the bottom of the starship record sheet. Many of the icons are similar to the ones found on the weapon definitions.

- 1: The name of the starfighter squadron.
- 2: The tier of the starfighter squadron.
- 3: The strength of the starfighter squadron.
- 4: The speed of the starfighter squadron.
- 5: The defence of the starfighter squadron.
- 6: The target rating of the starfighter squadron.
- 7: The names of the squadron's various weapons.
- 8: The damage type of the weapon using the standard lightning bolt and hammer icons.

- 9: The pulse of the weapon.
 - 10: The damage die of the weapon.
 - 11: The damage modifier of the weapon.
 - 12: This icon indicates if the weapon is indirect through the use of the wavy arrow icon. The straight arrow icon means this weapon is not indirect.
 - 13: This icon indicates whether the weapon is one shot or unlimited using the same format as starship weapons.
 - 14: This area lists the possible targets of the weapon using the same icons as starship weapons.
- If any of the weapons have any special qualities they will be listed after the weapon in the standard short code format from starship weapons.

The diagram shows a record sheet for a "Red Fighter" starfighter squadron. Red lines with numbers 1 through 14 point to specific elements:

- 1: Points to the name "Red Fighter".
- 2: Points to the tier "1" (a green circle with the number 1).
- 3: Points to the strength "3" (represented by three small circles).
- 4: Points to the speed "20" (represented by a wavy arrow icon).
- 5: Points to the defence "3" (represented by three small squares).
- 6: Points to the target rating "6" (represented by a target icon).
- 7: Points to the weapon name "Dual Laser Cannons".
- 8: Points to the damage type "2x D5+0" (represented by a lightning bolt icon).
- 9: Points to the pulse "→" (represented by a straight arrow icon).
- 10: Points to the damage die "O O O" (represented by three white circles).
- 11: Points to the damage modifier "→" (represented by a straight arrow icon).
- 12: Points to the indirect icon "↘" (represented by a wavy arrow icon).
- 13: Points to the one-shot icon "↘" (represented by a wavy arrow icon).
- 14: Points to the target list "→ ↘ ↙ ↚" (represented by four different target icons).

Below the main record sheet, there are two more weapon entries:

- Interceptor Missiles**: Damage type "1x D6+0" (hammer icon), pulse "→", damage die "O ● ●", damage modifier "→", indirect icon "↘", one-shot icon "↘", target list "→ ↘ ↙ ↚".
- Anti-Ship Missiles**: Damage type "1x D5+4" (hammer icon), pulse "→", damage die "O ● ●", damage modifier "→", indirect icon "↘", one-shot icon "↘", target list "→ ↘ ↙ ↚".

3.8.0 Fleets

All of a player's starships brought to a battle are not a part of a fleet until they designate their chain of command. Any starship left out of this chain of command is not considered a part of the fleet. A starship that is not a part of the fleet, whether through design or from having a link in the chain of command destroyed, lowers its crew quality by one.

To create a fleet, the player must identify command ships amongst their starships. A command ship must have a CiC and be designated to a level of the chain of command.

There are four levels of command in a fleet: squadron, wing, division, and fleet. Not all of these levels need to be present; a fleet can consist of a single squadron. The senior most command ship, regardless of level, is referred to as the flagship. Any command ship can command a number of units equal to the rating of its largest CiC. These units can be individual starships and/or sub-commanders.

3.8.1 Squadrons

A commander leading a group of starships directly is called a squadron commander. A squadron commander may be another level of command as well but to the starships in their squadron, they are still the squadron commander.

When the squadron commander's starship fires during the starship combat step, any other starships in the squadron and within 20cm may fire at the same time, regardless of their crew qualities.

3.8.2 Wings

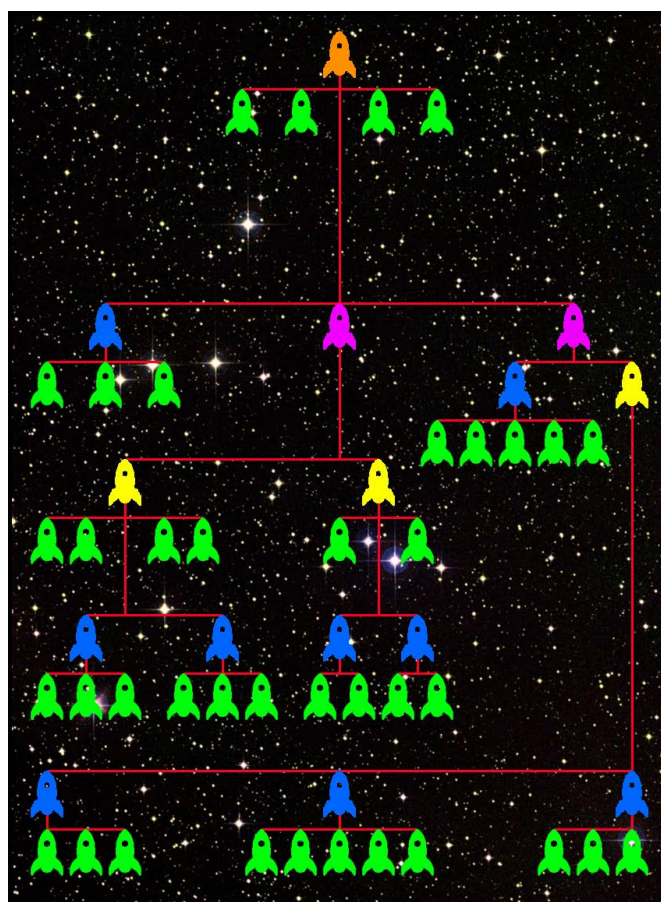
A commander who commands squadron leaders is called a wing leader. A wing leader can still have their own squadron.

3.8.3 Divisions

A commander who commands wing leaders is called a division leader. A division leader can still have their own squadron.

3.8.4 Fleets and Flagships

A commander who commands division leaders is a fleet commander and their starship must be the flagship. A flagship can still have its own squadron. There can be only one flagship in the fleet.



-  Fleet Commander
-  Division Commander
-  Wing Commander
-  Squadron Commander
-  Squadron Member

4.0.0 Encounters

To spice up their standard gaming experience, players can opt to use the encounter system. Both players must design a fleet of equal combat value. To determine who has the initiative, both players roll their respective flagship's command quality die (D1 if they have no flagship) and add two, if their opponent has any ships in their fleet with no FTL drive. The higher roller wins the initiative and the difference in the rolls determines which encounters from which they can choose. If the roll is a tie, the players fight a meeting engagement.

1 = Meeting Engagement

2 = Meeting Engagement, Flank Attack

3 = Meeting Engagement, Flank Attack, Divided

4 = Meeting Engagement, Flank Attack, Divided, Rear Attack

5+ = Meeting Engagement, Flank Attack, Divided, Rear Attack, Surrounded

Upon establishing the type of deployment but before starships are deployed, terrain can be generated randomly. 1D12 is rolled and the terrain generation chart is consulted. The result is the terrain that will be placed on the table. 1D20 can be rolled if the players are feeling adventurous.

The location of terrain must be agreed upon by both players. If one player won the initiative, they have control over the placement of terrain.

Additionally, the winner of the initiative rolls a number of dice equal to the difference in the initiative rolls, plus one, and consults the terrain generation chart. The initiative winner has the option of choosing which of the selected terrain types to utilize or even to combine them but they must choose at least one. Also, they cannot place a terrain piece inside their opponent's deployment zone.

Terrain Generation Chart

1 = Void (no terrain)

2 = Void

3 = Void

4 = Void

5 = Void

6 = 1D6 Asteroid Clusters (max 10cm diameter each)

7 = 1D12 Asteroid Clusters (max 10cm diameter each)

8 = Asteroid Field (10cm to 20cm wide, table edge to table edge)

9 = Asteroid Field (20cm to 40cm wide, table edge to table edge)

10 = Small Planet or Moon (max 20cm diameter)

11 = Medium Planet (20cm to 50cm diameter)

12 = Large Planet (50cm to 100cm diameter)

13 = Protoplanetary Nebula (min coverage is 50cm diameter area, no max)

14 = Planetary Nebula (min coverage is 50cm diameter area, no max)

15 = Dark Nebula (min coverage is 50cm diameter area, no max)

16 = Supernova Remnant (min coverage is 50cm diameter area, no max)

17 = Dwarf Star (100cm to 500cm diameter, may be placed off table, not a deployment edge, no farther than its radius)

18 = Giant Star (min 500cm diameter, may be placed off table, not a deployment edge, no farther than its radius)

19 = Neutron Star, Pulsar, or Magnetar (D6x5cm in diameter)

20 = Singularity (D6x5cm in diameter)

Deployment

When placing their starships on the table, players should roll the command quality die of their flagship (D1 if there is no flagship), with the lower roller placing a squadron on the table within their deployment zone. If there is a tie, whoever did not place a squadron last deploys.

If a player's fleet has starships not in squadrons (i.e. designed without a command structure), they place all of those starships at once as if it were a single squadron. When one player has placed a squadron, the roll is made again. In this way it is possible for a player to be forced to deploy their entire fleet before their opponent.

Starting Velocities

Once all deployments have been completed players must now roll 1D3; the result determines the maximum starting velocities. The roll result is the number of turns of acceleration with which the starships may begin. This means that if a starship can theoretically accelerate by six per turn and a three was rolled, it can begin the game with a velocity of up to eighteen in the direction it is facing. Players may opt to have their starships begin slower than the maximum.

Meeting Engagement

In a meeting engagement, both players have a deployment area opposite each other that covers 80% of the table length, losing 10% either side and covering 10% into the table's width.

Flank Attack

In a flank attack, one player has the same basic deployment area as in a meeting engagement but in addition gains another deployment area along one of the side table edges using the same percentages. They may not deploy more than 50% of their combat value in the flank deployment zone. The other player reduces their deployment area to the 50% of the table length opposite the flank. The starting velocity roll is increased by one for starships deployed along the flank.

Divided

In a divided deployment, one player deploys in two deployment zones along either short side of the table using the same percentages as a meeting engagement. They cannot deploy more than 60% of their combat value in one deployment zone. The other player deploys along a long table edge of the winner's choosing at the center 50% of the length and 10% of the width.

Rear Attack

In a rear attack, one player deploys both behind and in front of their opponent using the same size deployment zones as a meeting engagement. They cannot deploy more than 75% of their value into either zone. The other player deploys in a band 10% of the table width wide down the centre of the table; they can decide which way each of their starships is facing as they deploy them.

Surrounded

In a surrounded deployment, one player has three deployment zones the same size as a flank attack's zones with both flanks as deployment zones. They cannot place more than 40% of their forces in any one zone. The other player has only one deployment zone in the center 50% of the remaining table edge, 10% of the table width wide. The starting velocity roll is increased by one for starships deployed along the flanks.



5.0.0 Terrain

All that is required from your table for normal game play is its existence. However, the bland open battlefield this gives players can become tiresome and repetitive over time. For this reason players may wish to include terrain into their games regardless of the lack of realism it may represent.

Planets

The most common form of terrain in space games is likely to be planets. It is over the control of these bodies that most stellar conflicts are likely to originate. In Metaverse, planets can be of any size.

When representing these bodies on the table, an appropriate model or template must be used. The size of the model or template is based on the imagined size of the planet. Players are free to choose their terrain scale, but the recommended scale is 3000 km per cm (making the maximum range of 100cm equal to one light second), which would make a model of Earth approx. 4cm in diameter; Jupiter approx. 47cm in diameter; and HAT-P-32b (an extra solar planet) 95cm in diameter.

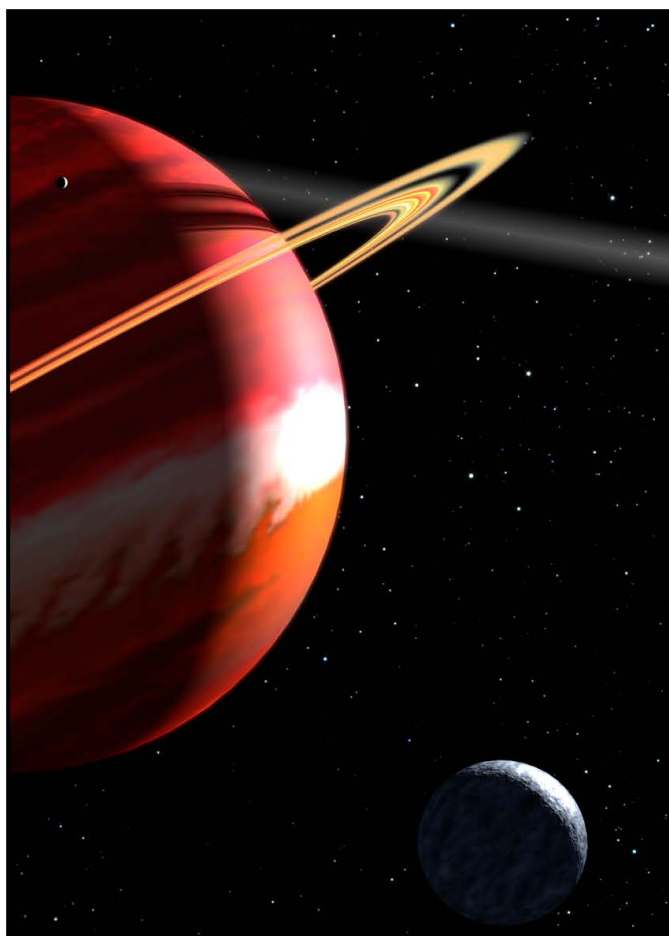
Any starship that transits (ends its movement on or moves across) a planet's model or template is instantly destroyed. Additionally, planets project a gravitational field that prevents the use of FTL drives in the same manner as GWPs. The radius of this field, as measured from the edge of the model or template, is equal to the diameter of the planet.

This field will also have a relative strength. The relative strength of the gravitational field is determined by calculating how far into the field a starship rests. Every 10cm into the field a starship rests (rounding down), the strength increases by one starting at one. Thus, a starship 15cm into a gravitational field (i.e. second ring) will experience a relative strength rating of two.

While inside the gravitational field of a planet, a starship's plot will be modified. For starships with a cinematic drive, any time the planet is in the front 90° arc, the starship will increase its velocity by the relative strength rating of the gravitational field. Any time the planet is in the rear 90° arc, the starship will decrease its velocity by the relative strength rating of the gravitational field.

Any time the planet is in the port or starboard 90° arc, the starship will plot an additional turn towards the planet for each strength (note: this can be cancelled by a plotted turn to the opposite side).

For starships with a newtonian drive, an increase in velocity must be plotted along the direction closest to the planet, equal to the relative strength rating of the gravitational field. Moons use the same rules as planets.



Stars

Although not used very often, players may wish to battle in close proximity to a star. Stars are treated like planets for all rules including the size of the template or model, the size of the gravitational field, and the strength of the gravitational field.

Because of the immense size of most stars (at 3000 km per cm Sol would be 463cm in diameter) it is impractical to represent them as models. The alternative solution is to designate a table edge as the surface of the star.

Additionally, because of the immense strength rating of stars, maneuver and even survival too close to the star can be impossible, especially for newtonian drive starships. Thus, players can even designate the star as being a chosen distance off a table edge to mitigate some of this effect.

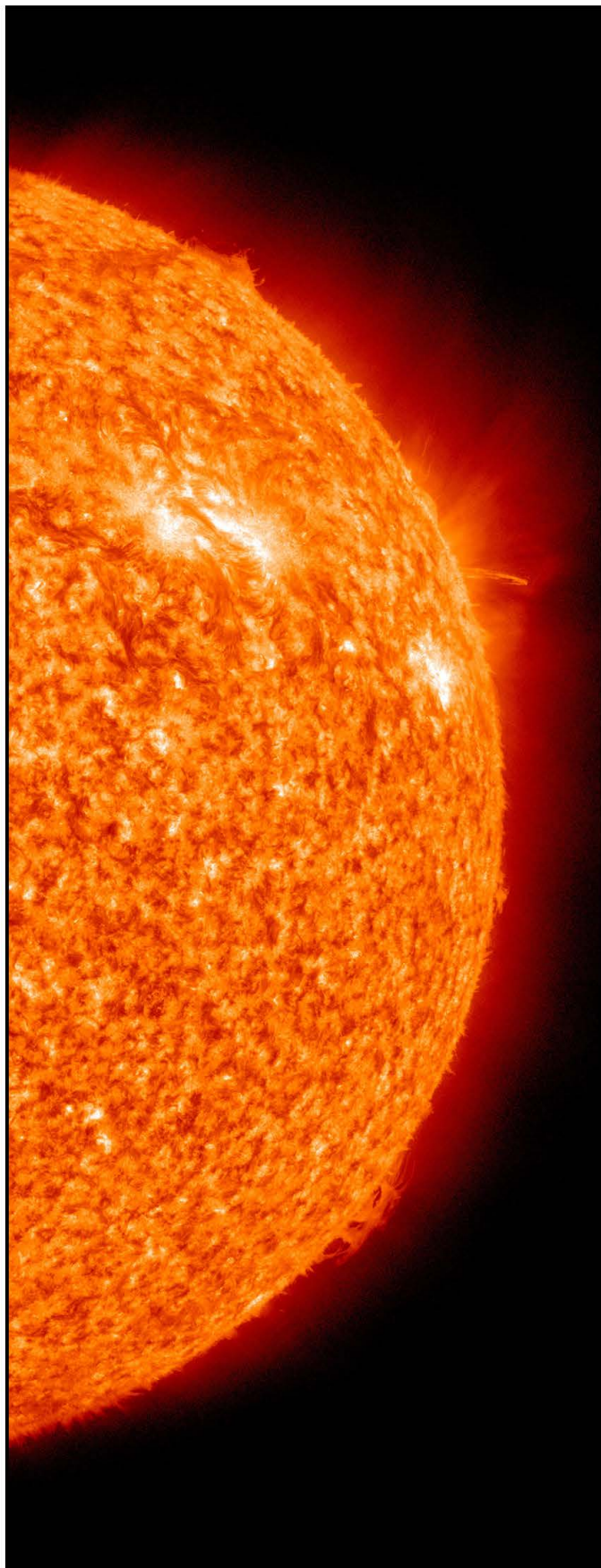
Finally the intense radiation of a star can pose a problem to starships. Every turn a starship resides in the gravitational field of the star it receives damage to its facing arc from the radiation.

This damage dealt is equal to the relative strength divided by five (rounded down). This damage is considered energy; armour and shields affect it as normal and deflectors reduce the damage by their rating.

A neutron star uses all the rules of a normal star but its gravitational field is tripled in size and strength.

For a pulsar, players need only multiply the radiation damage by five.

For a magnetar, any starship receiving radiation damage must also roll a number of D6s equal to the damage received (past shields), with any results of six causing criticals.



Singularities

Any scenario involving a singularity is likely to be a losing proposition for both sides; however, players are free to tempt fate, if they so choose. A singularity, like a planet or star, requires a model or template and follows all the same rules (minus a star's radiation). However, the gravitational field is considerably stronger and more effective.

The diameter of the black hole must be multiplied by ten to determine the size of the gravitational field, with the strength rating being determined from this number. Additionally, the intensity of the time dilation effects must be considered.

For every full multiple ten points of relative strength rating, starships, starfighters, and indirect weapons, must begin to skip entire turns. A starship experiencing a relative strength of ten in the gravitational field would only conduct every other turn; at twenty, every third turn; and so on. A starship, starfighter squadron, or indirect weapon that is currently skipping a turn cannot be attacked in any way.

Asteroids

Asteroids are a controversial topic for the space gaming genre. Famous space opera scenes of freighters outrunning evil empires in dense asteroid fields have incorrectly portrayed real asteroid fields.

On any reasonable gaming table, due to the immense distance between asteroids in a real field, only a single asteroid would be represented. Taking into account the size of this solitary asteroid, the idea of rules to govern the situation is ridiculous.

However, the space gaming genre has a long tradition of discarding physics and reality in the pursuit of entertainment. The following rules are intended to govern the situation of actually going into an asteroid field and properly tell you the odds.

An asteroid field is divided into two components: the field itself and dense clusters. Both of these can exist separately from one another but work best in conjunction.

Players must determine an area of the table that will be the asteroid field. Within this field, starships are in danger of striking or being struck by a rogue asteroid. A starship can avoid this danger by performing an evasive maneuver while in the field.

Every turn that a starship is in the field it receives kinetic damage in its front arc using a number of D6s equal to its velocity (at a minimum of one D6 to a random arc if its velocity is zero).

Newtonian ships receive damage from the arc with the greatest velocity. For velocities which straddle two arcs, the player can choose in which arc the damage is dealt.

To reduce this damage, a starship can fire weapons at the incoming asteroids. A sensor array is required to perform this action. A single weapon can reduce the number of D6s by one, so long as its total possible damage is at least five. Multiple weapons can be combined together to eliminate damage dice.

Clusters of asteroids share the rules of an asteroid field but the damage dice rolled are D12s. They can be of any agreed upon size but require a model or template. Any starship that transits the model or template is subject to damage. A ship can avoid this damage by performing three evasive manoeuvres or firing weapons at the asteroid, although ten damage are required to eliminate a damage die.

The rules for asteroid fields and clusters can be used to represent any debris field from any source.

Nebulae

A nebula is normally a phenomenon which covers the entire table, although players can throw physics out the window and use these rules to represent smaller gas clouds.

Nebulae in Metaverse are divided into four categories with different rules but all share one rule: while in a nebula, all weapons fire is considered to be at double the apparent range. This does not change maximum weapons range.

Protoplanetary/Emission Nebula

These types of nebulae have as part of their makeup strong stellar winds and currents which alter the plot and heading of starships. At setup, the players must randomly determine the direction of the stellar wind using the newtonian momentum compass, and the strength with the roll of 1D3.

While in the nebula, all starships will increase their velocities in the direction of the wind by the strength. Cinematic starships will be required to increase or decrease their velocities, if the direction is in their fore or aft arcs, or plot a number of mandatory turns away from the direction of the wind equal to the D3, if it is in their side arcs.

Planetary Nebula

These types of nebulae have as part of their makeup highly ionised gas which affect the targeting systems of starships. When firing inside the nebula, a starship considers its target to have an increased EW rating at a rate of one per range band, ignoring the first band.

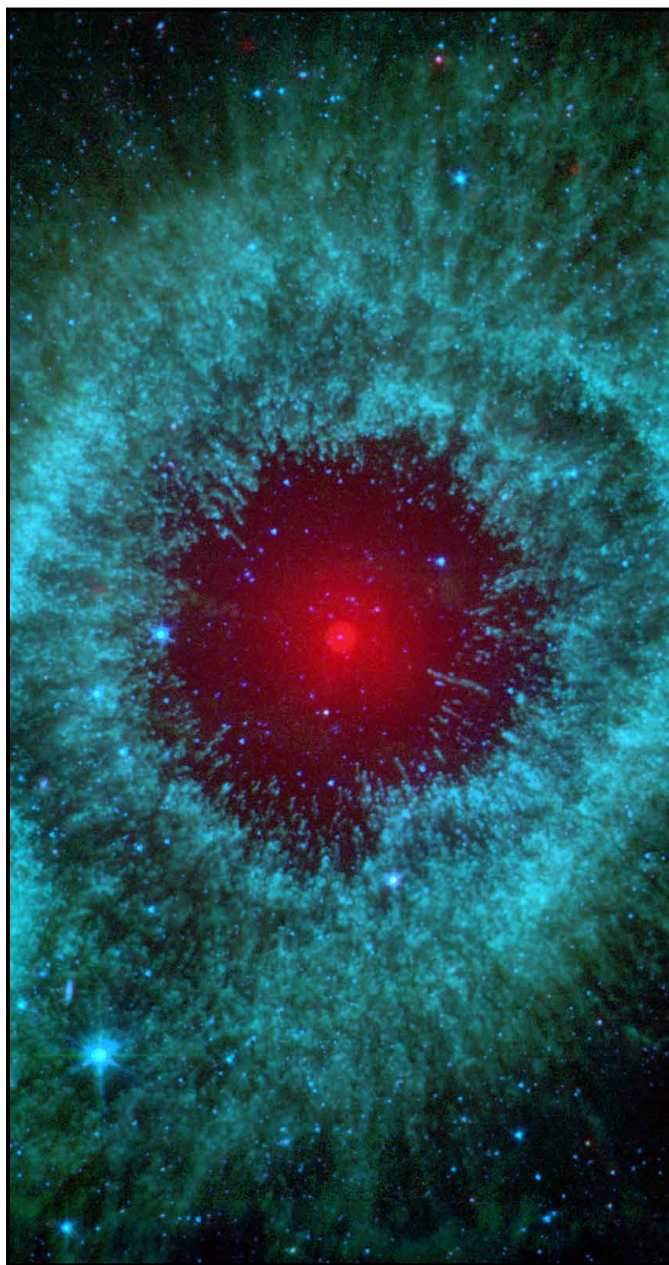
Dark Nebula

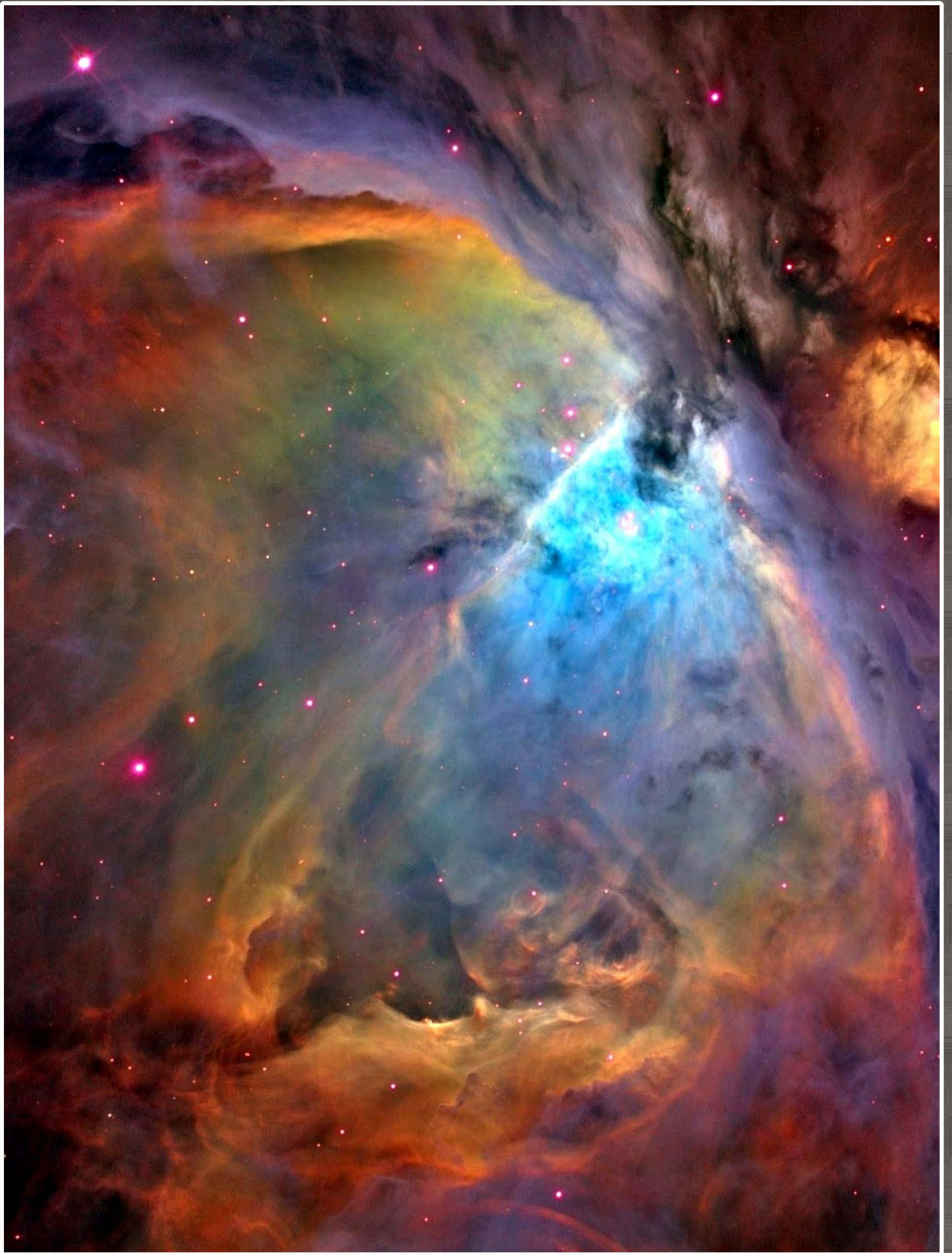
These types of nebulae have as part of their makeup extremely dense gas and/or dust clouds that do not damage the starships but affect their ability to maintain momentum. Any starship conducting a plot within the nebula must roll 1D6 -2 (minimum zero) and subtract this from each velocity it has. This cannot reverse a velocity.

Supernova Remnant

These types of nebulae have as part of their makeup strong chaotic stellar winds and intense radiation that baffle a starship. A nebula of this type uses the rules for the stellar wind in a protoplanetary/emission nebula but the direction and strength of the wind is randomised each turn prior to the plotting phase.

In addition, starships are subject to radiation damage similar to being too close to a star. Every turn each starship in the nebula receives 1D6 energy damage to a random arc.





Appendices

Sample Fleets

Plotting Charts

Critical Chart

Quick Reference Sheet

Icon Recognition

1.0.2

1

36

4

1

20cm

2

04

05

525

1/1

Bow Section

↑ ⚡ ⚔

10 10 10 10 10 10 10 30

1 11 1 10 Mk I Mk I Mk I Mk II

Core Section

← ⚡ ⚔ → ⚡ ⚔

10 10 10 10 10 10 10 10 10 10 10 30 30 30

1 18 1 1 6 13 2 Mk I Mk I Mk II

Engine Section

↓ ⚡ ⚔

10 10 10 20 10 10 10 20 20

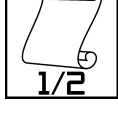
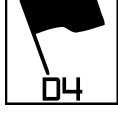
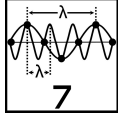
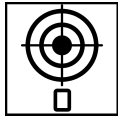
1 28 2 4 10 Mk I Mk I Mk II

Mk I Laser Battery
 ⚡ 3×D6+0 → 5 0 ⚡
 ≡ ○○○ ⚡ ⚔ ⚔

Mk I Missile Cell
 ⚡ 3×D8+0 → 25 0 ⚡
 ≡ ⊕ ○●● ⚡

Mk I Torpedo Tube
 ⚡ 1×D12+2 → 30 0 ⚡
 ≡ ⊕ ○●○ ⚡

Mk II Gauss Cannon
 ⚡ 1×D5+5 → 10 0 ⚡
 ≡ ⊕ ○○○ ⚡



Bow Section

↑ ■ ⚡ ↗

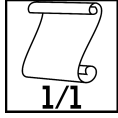
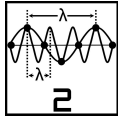
Port Hanger

← ■ ⚡ ↗

Starboard Hanger

→ ■ ⚡ ↗

Core Section



Bow Section

↑ [Shield] [Lightning] [Sword]

[Dice] [Grid]

[Person] 10 [Radiation] 10 [Flame] 20 [Target] 10 [Mk I] 10 [Mk I] 10 [Mk I] 10

Core Section

← [Shield] [Lightning] [Sword] → [Shield] [Lightning] [Sword]

[Dice] [Grid]

[Person] 10 [Person] 10 [Radiation] 10 [Target] 20 [Target] 20 [Missiles] 3 [Target] 10 [Grid] 2 [Mk I] 20 [Mk I] 10 [Mk I] 10

Engine Section

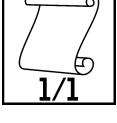
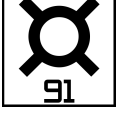
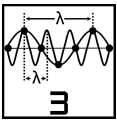
↓ [Shield] [Lightning] [Sword]

[Dice] [Grid]

[Person] 10 [Person] 10 [Radiation] 10 [Flame] 30 [Target] 4 [Mk I] 10 [Mk I] 10

<p>Mk I Gauss Cannon</p> <p>↑ 1×D3+3 → 10 [Shield] 0 [Sword]</p> <p>[Mk I] [Shield] [Target] [Lightning] [Sword]</p>	<p>Mk I Laser Battery</p> <p>⚡ 3×D6+0 → 5 [Shield] 0 [Sword]</p> <p>[Mk I] [Shield] [Target] [Lightning] [Sword]</p>	<p>Mk I Missile Launcher</p> <p>↑ 1×D8+0 → 25 [Shield] 0 [Sword]</p> <p>[Mk I] [Shield] [Target] [Lightning] [Sword]</p>
<p>Mk I Torpedo Tube</p> <p>⚡ 1×D12+2 → 30 [Shield] 0 [Sword]</p> <p>[Mk I] [Shield] [Target] [Lightning] [Sword]</p>		

Red Destroyer



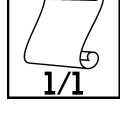
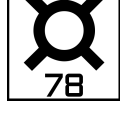
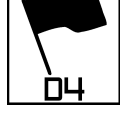
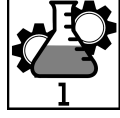
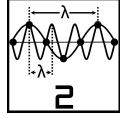
Core Section

Mk I Gauss Cannon
 $1 \times D3 + 3 \rightarrow 10$

Mk I Laser Battery
 $3 \times D6 + 0 \rightarrow 5$

Mk I Missile Cell
 $3 \times D8 + 0 \rightarrow 25$

Red Missile Destroyer

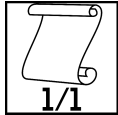
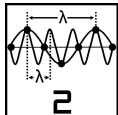


Core Section

Mk I Laser Battery
 $3 \times D6 + 0 \rightarrow 5$

Mk I Missile Launcher
 $1 \times D8 + 0 \rightarrow 25$

Red Torpedo Frigate

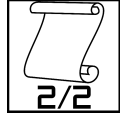
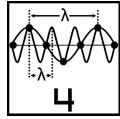




Core Section

Mk I Laser Battery
 $3 \times D6 + 0 \rightarrow 5$

Mk I Torpedo Tube
 $1 \times D12 + 2 \rightarrow 1 \rightarrow 30$

Blue Battlecruiser



 <p>Interceptor Drone ① ☉☉2 ← 30 ◼ ⊕ 8 Particle Cannon ⚡ 1×D8+0 → ○○○ 🚀 ↘ ↙</p>	 <p>Torpedo Drone ② ☉☉2 ← 30 ◼ ⊕ 8 Disruption Torpedo ⚡ 1×D2+4 ↘ ↙ ○○○ 🚀</p>
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Bow Section

↑ ○○○○⊗○○○○⊗○○○○

○○○○○○○○○○
○○○○○○○○○○
○○○○○○○○○○

1 10 2 10 3 10 A 10

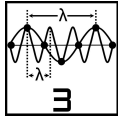


Port Section

← ○○○○⊗○○○○⊗○○○○

○○○○○○○○○○
○○○○○○○○○○
○○○○○○○○○○

1 10 2 20 2 10 14 10 A 10 A 10



Starboard Section

→ ○○○○⊗○○○○⊗○○○○

○○○○○○○○○○
○○○○○○○○○○
○○○○○○○○○○

1 10 2 20 2 10 14 10 A 10 A 10



Engine Section

○○○○○○○○○○
○○○○○○○○○○
○○○○○○○○○○

1 10 10 23 10 3 20 3 10 4 10 1 10 A 10 A 20



Type A Disruption Torpedo ⚡ 1×D3+6 → 50 10 10 ⚡ +D4
 ○○○○ ⚡ ⚡

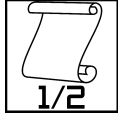
Type A Particle Cannon ⚡ 1×D8+0 → 30 0 0 ⚡
 ○○○○ ⚡

Type A Pulse Battery ⚡ 2×D6+0 → 10 0 0 ⚡
 ○○○○ ⚡ ⚡

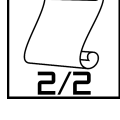
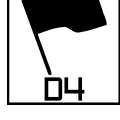
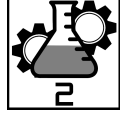
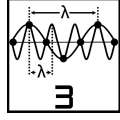




1x 1/2
 ⚡ 5.7 - Interceptor Drone ○○

⚡ 6.5 - Torpedo Drone
 ○○

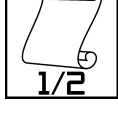
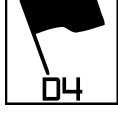
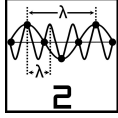


Blue Cruiser



	Interceptor Drone ① ○○2 ← 30 ■ ⊕ 8 Particle Cannon ⚡ 1×D8+0 → ○○○ 🚀 ↘ ↙		Torpedo Drone ② ○○2 ← 30 ■ ⊕ 8 Disruption Torpedo ⚡ 1×D2+4 ↘ ↙ ○○○ 🚀
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Blue Drone Carrier



Bow Section

↑ ○○○○⊗○○○⊗

○○○○○
○○○○○
○○○○○

1 10 2 10 12 10 3 10 10

Port Section

← ○○○○⊗○○○⊗

○○○○○
○○○○○
○○○○○

1 10 1 20 2 10 10

Starboard Section

→ ○○○○⊗○○○⊗

○○○○○
○○○○○
○○○○○

1 10 1 20 2 10 10

Engine Section

○○○○○
○○○○○
○○○○○

1 10 1 10 13 10 2 20 3 10 2 10 3 10 A 10 20

Type A Pulse Battery

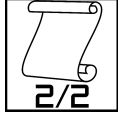
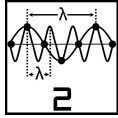
⚡ 2×D6+0 → 10 0



≡ ○○○

1x 1/6
⊗ 5.7 - Interceptor Drone
 ○○○○○

⊗ 6.5 - Torpedo Drone
 ○○○○○

Blue Drone Carrier



 <p>Interceptor Drone ① ☉☉2 ← 30 ◼ ⊕ 8 Particle Cannon ⚡ 1×D8+0 → ○○○ 🚀 ↘ ↙</p>	 <p>Torpedo Drone ② ☉☉2 ← 30 ◼ ⊕ 8 Disruption Torpedo ⚡ 1×D2+4 ↘ ↙ ○○○ 🚀</p>
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Blue Destroyer

1.02

3

10

2

2

25cm

2

04

05

130

1/1

Core Section

○○○○○○
 ○○○○○○
 ○○○○○○

10
 10
 10
 20
 20
 40
 10
 10
 10
 10
 10
 10
 10
 10

10
 10
 20

Type A Particle Cannon
 ⚡ 1×D8+0 → 30 📶 0 🛡️
 III ○ ● ○ 🛡️

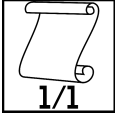
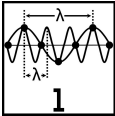
Type A Pulse Battery
 ⚡ 2×D6+0 → 10 📶 0 🛡️
 III ○ ○ ○ 🛡️ 🛡️ 🛡️

1x 1 / 1 1x 1 / 1
5.7 - Interceptor Drone **6.5 - Torpedo Drone**
 ○ ○

Interceptor Drone
 ① 📶 2 ← 30 🛡️ 🎯 8
 Particle Cannon
 ⚡ 1×D8+0 → ○ ○ ○ 🛡️ 🛡️ 🛡️

Torpedo Drone
 ② 📶 2 ← 30 🛡️ 🎯 8
 Disruption Torpedo
 ⚡ 1×D2+4 ↗ ○ ○ ○ 🛡️

Blue Torpedo Frigate



Core Section

○○○○

○○○○

○○○○

10

10

10

30

30

40

10

10

10

10

10

10

10

10

10

20

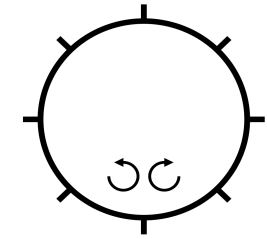
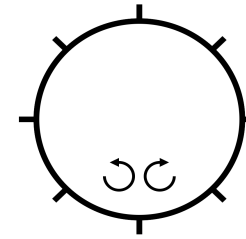
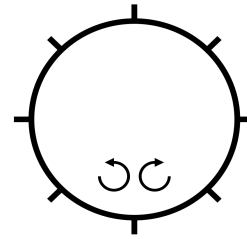
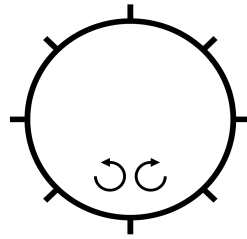
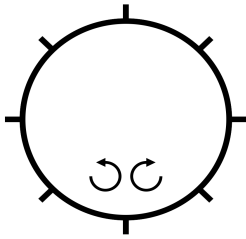
10

Type A Disruption Torpedo
 $1 \times D3 + 6 \rightarrow 10$ 50 10 +D4
 ○ ○ ○ ○

Type A Pulse Battery
 $2 \times D6 + 0 \rightarrow 10$ 0
 ○ ○ ○ ○










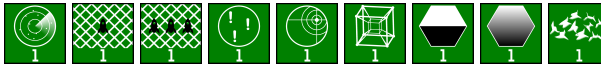

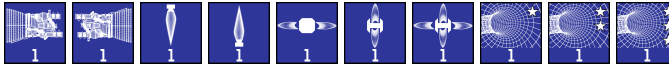



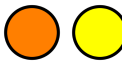



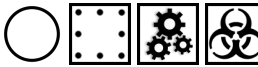


Turn	Red		Blue		Green		Yellow		White	
	Orders	ΔV	Orders	ΔV	Orders	ΔV	Orders	ΔV	Orders	ΔV
0	Starting Speed		Starting Speed		Starting Speed		Starting Speed		Starting Speed	
1										
2										
3										
4										
5										
6										
7										
8										
9										
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11										
12										
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14										
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16										
17										
18										
19										
20										

Change Speed: +# or -#, Turns: R# and/or L#, Evasive Manoeuvres: EM#, Roll: RL, Flip: FL, Corkscrew: CS,
Emergency Power: EP, Emergency Thrust: ET, Ram: RM, Charge FTL: FTL# (turns charged at conclusion of this turn),
FTL Retreat: FTL-R, Strategic FTL Jump: FTL-S, Tactical FTL Jump: FTL-T# (dice), FTL Attack = FTL-S/A or FTL-T/A



Turn	Orders	Orders	Orders	Orders	Orders
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					

Change Speed: +# or -#, Turns: R# and/or L#, Evasive Manoeuvres: EM#, Roll: RL, Flip: FL, Corkscrew: CS,
 Emergency Power: EP, Emergency Thrust: ET, Ram: RM, Charge FTL: FTL# (turns charged at conclusion of this turn),
 FTL Retreat: FTL-R, Strategic FTL Jump: FTL-S, Tactical FTL Jump: FTL-T# (dice), FTL Attack = FTL-S/A or FTL-T/A

						
	SECONDARY SYSTEMS					
	Engineering Systems Disrupted: Disable 1: Teleporter, Grappler, Gravity Well Projector	Secondary Command Net Disrupted: Disable 1: Hangar Bay, Combat Information Centre, Starfighter Operation Command	Standoff Systems Disrupted: Disable 1: Shield Generator, Deflector	Engineering Systems Failure: Disable All: Teleporter, Grappler, Gravity Well Projector	Secondary Command Net Failure: Disable All: Hangar Bay, Combat Information Centre, Starfighter Operation Command	Standoff Systems Failure: Disable All: Shield Generator, Deflector
	ELECTRONIC WARFARE SYSTEMS					
	Secondary EW Overload: Disable All: Cloak Generator, Stealth Generator	Defence Array Overload: Disable 1D2: Electronic Warfare Array, Electronic Countermeasure Array, Countermeasure Pod	Sensor Node Overload: Disable 1D2: Sensor, Electronic Intelligence Array, Targeting Array, Ansible	Defence Array Failure: Disable 1D4: Electronic Warfare Array, Electronic Countermeasure Array, Countermeasure Pod	Sensor Node Failure: Disable 1D4: Sensor, Electronic Intelligence Array, Targeting Array, Ansible	Massive EW Systems Failure: Disable 1D8: Electronic Warfare Systems
	PROPULSION SYSTEMS					
	Drive Housing Damage: Disable 1D3: STL	Thruster Manifold Damage: Disable 1D3: Thruster	FTL Core Disruption: Disable 1: FTL	Catastrophic Drive Damage: Disable All: STL	Massive Thruster Damage: Disable All: Thruster	FTL Core Implosion: Disable Largest: FTL & EMS×1 hull hits
	WEAPON SYSTEMS					
	Mounting Damaged: Disable 1: Weapon	Minor Power Loss: Disable EMS×1: Weapon(s)	Containment Failure: Disable 2: Weapons & EMS×1 hull hit(s)	Power Node Burnout: Disable EMS×2: Weapons	Weapon Feed Detonation: Disable 3: Weapons & EMS×2 hull hits	Cascade Power Failure: Disable EMS×3: Weapons
	CREW SYSTEMS					
	Minor Bulkhead Failure: Lose 1× Life Support Rating in crew and marine parties evenly	Minor Atmospheric Venting: Lose 2× Life Support Rating in crew and marine parties evenly	Major Bulkhead Failure: Lose 3× Life Support Rating in crew and marine parties evenly	Major Atmospheric Venting: Lose 4× Life Support Rating in crew and marine parties evenly	Catastrophic Bulkhead Failure: Lose 5× Life Support Rating in crew and marine parties evenly	Complete Atmospheric Evacuation: All crew and marine parties lost
	PRIMARY SYSTEMS					
	Power Fluctuation: Disable until end of turn: Reactor	Bridge Damage: Disable 1: Bridge	Coolant Leak: Disable: Reactor	Internal Systems Malfunction: Disable: Life Support	Reactor Meltdown: Detonate unless fixed: Reactor	Reactor Implosion: Detonate: Reactor
	STRUCTURE					
	Minor Hull Breach: EMS×1 hull hit(s)	Internal Buckling: EMS×2 hull hits	Major Plasma Fire: Current hull layer destroyed	Structural Failure: EMS×3 hull hits	Major Hull Breach: EMS×4 hull hits	Cascade Structural Collapse: Section destroyed
	COMPOUND CRITICALS					
	Engineering Systems Disrupted: Roll a critical for: Secondary Systems & Electronic Warfare Systems	Secondary Command Net Disrupted: Roll a critical for: Secondary Systems & Propulsion Systems	Major Combat Systems Damage: Roll a critical for: Electronic Warfare Systems & Weapon Systems	Cascade Weapon Destruction: Roll a critical for: Weapon Systems & Structure	Critical Structural Failure: Roll a critical for: Crew Systems & Structure	Internal Explosions: Roll a critical for: Primary Systems & Structure

Turn Sequence		Weapon Quality Codes	Target Rating		
Movement Phase			Condition	Modifier	
Plot Movement Step	Plot the movement orders of all starships simultaneously in secret.	AM	Antimatter	Drift (blank plot)	-1
Indirect Movement Step	Move indirect weapons up to their speed, up to 45° turn first.	DM	Dimensional	Momentum of 0	-1
Starship Movement Step	Move starships in accordance with their plots simultaneously.	DS	Disruptive	Current Momentum/ Evasive Manoeuvres	The starship's momentum divided by 10, rounded down, multiplied by the number of evasive maneuvers
Starfighter Operations Step	Launch, rearm, recover starfighters; establish starfighter missions.	GR	Gravitational		
Starfighter Movement Step	Strike Missions 1st, intercept missions 2nd, in order of ascending crew quality.	IO	Ionized		
Combat Phase		ML	Molecular		
Electronic Warfare Step	Activate/deactivate EW systems, in order of ascending crew quality.	PH	Phased	RAM Order	-2
Starship Combat Step	Fire starships in descending crew quality order.	PO	Polarized	Kinetic Weapon	+1 per range band
Starfighter Combat Step	Fire starfighters in descending strength order.	PR	Proximity	Tactical/Strategic	+2
Indirect Combat Step	Indirect weapons engage targets within range (15cm, -1 per EW rating of target).	QM	Quantum	FTL Jump	
Boarding Combat Step	Conduct boarding combats.	RT	Reactive		
End Phase		SP	Spinal		
Repair Step	Assign crew to systems, roll repair quality die to repair, regenerate shield hits.	TM	Temporal		
Morale Step	Roll morale checks with starships using command quality die.	UN	Unstable		

Special Manoeuvres			Movement Rating	
Manoeuvre	Requirement	Effect	Condition	Modifier
Roll	1 thruster point from both sides (2 total).	Port and starboard sides mirrored, +1 movement rating for the turn.	Drift (blank plot)	-1
Flip	Newtonian, 3 thruster points, both sides (6 total)/two drive points, fore and aft (4 total).	Fore and aft mirrored, +1 to movement rating for the turn.	Momentum of 0	-1
Corkscrew	1 thruster point from both sides of the starship (2 total).	Fire weapons from both sides out one side, incoming fire randomised between side sections, +2 movement rating for the turn.	Evasive Manoeuvre	+1/Evasive Manoeuvre
Evasive Manoeuvres	Thruster points from both sides equal to 2 ^E where E = the number of evasives.	+Modifier to target rating = # of evasive manoeuvres X current speed / 10, +modifier movement rating = # of evasive manoeuvres.	Roll	+1
Emergency Power	STL drives.	Double rating of selected drives, after movement, roll 1D6, if result is greater than crew quality, selected drives are disabled.	Flip	+1
Emergency Thrust	Thrusters.	Double rating of selected thrusters, after movement, roll 1D6, if result is greater than crew quality, selected thrusters are disabled.	Tactical/Strategic	+2
RAM	Roll command quality die, if greater than crew quality (+1 per section destroyed) then allowed.	Refer to page 6.	FTL Jump	+2
FTL Warm-up	FTL drive.	After turns equal to FTL drive's rating, drive ready to be used.	Corkscrew	+2
FTL Retreat	FTL Drive, FTL Warm-up completed.	Starship removed from game.		
Strategic FTL Jump	Basic or Advanced FTL Drive, FTL Warm-up completed.	Starship removed from table, returns after 1D8 turns, see page 6.		
Tactical FTL Jump	Advanced FTL Drive, FTL Warm-up completed.	Add ?D10s to movement this turn, see page 7.		
FTL Attack	Strategic or Tactical FTL jump.	Target starship, if within 10cm, attack target (p7).		

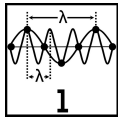
Class Information



Rules



Target Rating



Electromagnetic Signature



Mass



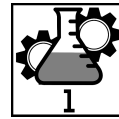
Crew Quality



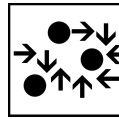
Command Quality



Repair Quality



Tier



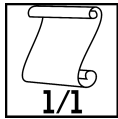
Newtonian Movement



Cinematic Movement

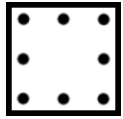


Combat Rating



Page

Ship & Crew



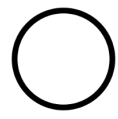
Metallic/Ceramic Hull



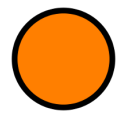
Technological Hull



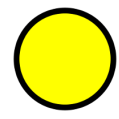
Biological Hull



Hull/Shield Hit



Crew Party



Marine Party



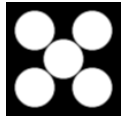
Energy Shields



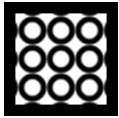
Kinetic Shields



Energy/Kinetic Shields



Armour Rating



Ablative Plate

Weapons



Energy



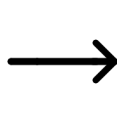
Kinetic



Raking



Penetrating



Direct



Indirect (turns)



Range (cm)



Vulnerable



Target Ships



Target Starfighters



Target Direct Fire



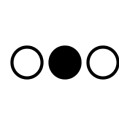
Target Indirect Fire



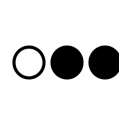
Area of Effect



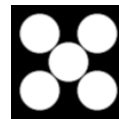
Unlimited



Limited



One Shot



Armour Piercing



Shield Piercing



Deflection Piercing

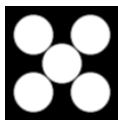
Starfighters



Strength



Speed



Defence



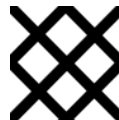
Target Rating



FTL Capable



Breaching



ECM



Launch Bay

Primary Systems



Life Support

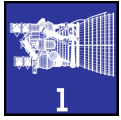


Reactor



Bridge

Propulsion Systems



Thruster



Primitive STL



Basic STL Horizontal



Basic STL Vertical



Advanced STL



Primitive FTL



Basic FTL



Advanced FTL

Electronic Warfare Systems



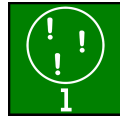
Sensor



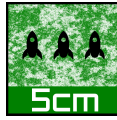
Electronic Warfare Array



ECM



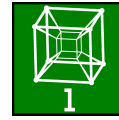
ELINT



Electronic Jamming Array



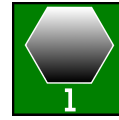
Targeting Array



Ansible



Cloak Generator



Stealth Generator



Countermeasure Pod

Secondary Systems



Basic Shield Generator



Modulated Shield Generator



Adaptive Shield Generator



Energy Deflector



Kinetic Deflector



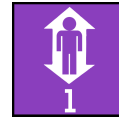
Energy-Kinetic Deflector



CiC



SOC



Basic Teleporter



Advanced Teleporter



Grappler



Energy Grappler



Gravity Well Projector

