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Empires of Dust

A Tabletop Spaceship War-Game

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The Paxian once again call upon humanity to rise boldly against the UrQa. Their hold in this universe is intractable, in others complete and terrifying. The only future free of the UrQa is in the past. In an incredible time when the ancient races drew power straight from the hearts of suns, lived their lives between the stars, hid entire worlds from sight and ascended beyond the corporeal. In a time before all the great empires were ground to dust.

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INTRODUCTION

Empires of Dust is both a core system for spaceship tabletop war-gaming and a story driven campaign. This is an entirely new D20 based system that uses movement and firing templates to simulate real world space flight dynamics. This first book is devoted to the core system rules. The campaign supplemental is made to be used for role-play and has several example fleets.

What You Need to Play

- Empires of Dust rule book
- Movement and firing templates
- Ship miniatures or tokens
- Tape measures or rulers
- Twenty sided dice, D20

This rule book is the first step; it will help if all players familiarize themselves with the rules before starting play. The second is to make the various templates for ship movement, weapon firing and blast damage. The templates can be printed and cut out from the pages in the appendices or made of laser etched acrylic. The ships can be either miniatures or tokens. Miniatures are suggested as they increase the immersion and a fun side hobby to model and paint. They can be bought or made by 3D printing or sculpting. Simple tokens can be printed and cut out from the pages in the appendices. A straight ruler or tape measure is needed for movement and range finding. Some 20 unit rulers can be printed and cut out from the appendices. The last item is a D20, also known as twenty sided dice. While the whole game can be played with one, having several for damage or effect counters and simultaneous rolls is better. Smart phone or computer applications can also be used as random number generators.

Units, which are the measure of movement and range, can be of any unit system. The templates provided use metric centimeters.

A Simple Game

There are endless ways to increase the complexity of gameplay. Here a few quick guidelines to simplify gameplay for new players or quick games. The simplification can also be useful when a more strategic rather than tactical engagement is desired, especially with large fleets.

- No obstacles
- No stealth, all ships detected
- No blast damage
- No equipment or aura generators for ships
- No augmenters for weapons
- No drones
- No specialization system
- Use 'average' fleet or a fleet from the campaign supplemental

GAME SEQUENCE

The game sequence can be determined through turn initiative or turn order.

Initiative

The initiative method allows for chance or conditions of the game to determine the order of players turns. This can give a more interesting and balanced game sequence that removes the need to keep track of which player's turn it is. Each method can change the character of the game, bringing the balance more in favor with heavy ships, light ships or pure chance.

Roll D20

Rolling for initiative gives an element of chance to the order play. The player with the highest value of a D20 roll moves or attacks first. Roll separately for movement and combat phases. Tied rolls are broken with another roll. This is probably this simplest method for a large number of players or a small group that desires an element of chance.

Ship Class

Ships are moved and attack in the order of their hull class. The initiative for the movement phase has lighter ship classes moving last in order to account for their greater speed and ability to out maneuver heavier ships. The initiative of the combat phase has heavy ships attacking first as they are more powerful fighters with the lighter ships counterattacking. For both the movement and combat phase this means that the progression of initiative is from battleships to drones.

This interlaces all of the players turns for each hull class. For each hull class and phase the players roll a D20 for initiative. Tied rolls are broken with another roll. This method gives a very evenly matched gameplay, but all of the intuitive rolls can slow the game.

Turn	Movement Phase	Battleships Move
		Cruisers Move
		Destroyers Move
		Frigates Move
		Drones Move
	Combat Phase	Battleships Attack
		Cruisers Attack
		Destroyers Attack
		Frigates Attack
		Drones Attack

Turns

With 2 player's fleets (or 2 teams of players) the game progresses through alternating turns where each fleet takes turns being the aggressor and defender. Use a roll of a D20 to determine the initial turn order; the winner chooses to attack or defend first.

Turn 1	Movement Phase	Fleet 1 Move
		Fleet 2 Move
	Combat Phase	Fleet 1 Attack
		Fleet 2 Attack
Turn 2	Movement Phase	Fleet 2 Move
		Fleet 1 Move
	Combat Phase	Fleet 2 Attack
		Fleet 1 Attack

With more players the same sort of pattern is used. The following is an example with 3 fleets. This can be expanded for 4 or more fleets, however it can be cumbersome to keep track of the game sequence with more players.

Turn 1	Movement Phase	Fleet 1 Move
		Fleet 2 Move
		Fleet 3 Move
	Combat Phase	Fleet 1 Attack
		Fleet 2 Attack
		Fleet 3 Attack
Turn 2	Movement Phase	Fleet 2 Move
		Fleet 3 Move
		Fleet 1 Move
	Combat Phase	Fleet 2 Attack
		Fleet 3 Attack
		Fleet 1 Attack
Turn 3	Movement Phase	Fleet 3 Move
		Fleet 1 Move
		Fleet 2 Move
	Combat Phase	Fleet 3 Attack
		Fleet 1 Attack
		Fleet 2 Attack

MOVEMENT PHASE

During the movement phase a player moves all of their ships and drones. The player may also launch new drones.

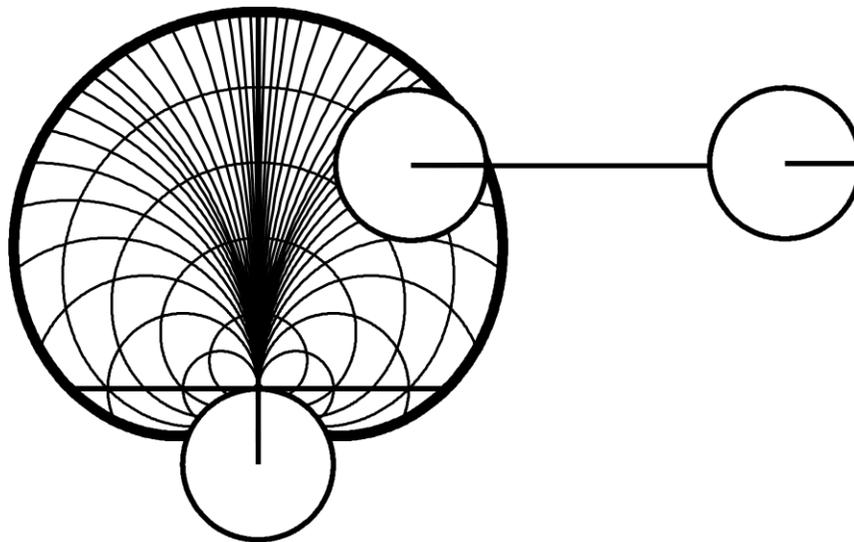
Basic Movement

Ships can move any distance from 5 units to their full speed stat. The minimum movement of 5 units is to account for ships decelerating from full speed, the dynamics of spaceflight, and to keep players from camping behind cover. A ship may make an 'about face' maneuver where they turn 180 degrees and stay in place, effectively moving 0 units, useful if the ships movement is obstructed by an obstacle.

Drones have the simplest movement. They can move 30 units any direction from any edge of their base.

All other ships use one of the turn cardioid templates, the size of which is dependent on the ship class, and then a straight ruler. They all use the forward indicator on the edge of a ships model's base as the origin of the template. Frigate class ships use the 5 unit, destroyers use the 10 unit, and both cruisers and battleships use the 15 unit turn cardioid template. This takes into account the additional fuel and momentum expended in order to turn a ship. The larger templates for the large ships are to account for their lower agility and greater mass.

The following is an example of a frigate class ship making a 90 degree turn on a 5 unit turn cardioid with a forward move of another 5 units. As it can be seen the ship turns along the arks within the cardioid before continuing on in a straight line for a total movement of 10 units.



Afterburner

For when you need a headlong and reckless charge ahead. A ship takes a +5 movement speed modifier, but it will be unable to attack that turn. Indicate which ships will be affected in the combat phase with an afterburner counter.

Off the Edge

If a ship moves off the edge of the game table the player must roll a D20 to see if it can return to the area of play. The ship returns at the same point it left the table.

D20 roll > 10

Obstacles

There are a variety of possible obstacles to movement and firing from asteroids to nebulas. The most obvious obstacle is player ships. You cannot fire or move through your own or enemy ships.

Celestial Bodies

Bodies, such as asteroids, moons and planets all block a ships movement and firing. Stars are considered to not be in the same plane as ships and they do not block movement or firing. Ships move at half speed if at any point in their movement they are within the gravity well diameter. Stars have the additional effect on ships in the gravity well diameter of a -10 stealth modifier and in the suns own diameter -20 stealth modifier.

BODY	DIAMETER	GRAVITY WELL DIAMETER
ASTEROID	2	X
MOON	3	5
PLANETOID	5	8
PLANET	8	13
STAR	13+	2 x Diameter

Nebula

Sparse nebula give ships within the nebula a +10 stealth modifier and a -10 detection modifier. Dense nebulas give those same modifiers as well as all movement in the nebula is at half speed. This means that if a ship has a stat of 15 speed and encounters a dense nebula at 5 units then it may only move 5 units within the nebula. Ships behind a nebula, but not in it, receive no modifiers even though the nebula is in the line of sight.

Moving Obstacles

Define an origin, radius, direction of orbit and the secant speed for each moving object. The secant speed determines the distance moved in units through the arc of the orbit each turn. Use a piece of string for your radius as you measure your secant. Move obstacles before the movement phase.

If a solid obstacle makes contact with a ship it must make an 'off the edge' roll to return to play.

COMBAT PHASE

Each ship may only fire one of its weapons. It is important to note that all combat is considered to be simultaneous. This means that if a ship takes enough damage to be destroyed it is left on the battlefield until the end of the combat phase. That ship can attack, or even be saved from destruction by a transference augmented weapon. The attacks can be performed in any order the player chooses.

Once the combat phase is completed the destroyed ships are removed and hit points of surviving ships are adjusted.

Detecting Targets

While all ships on the board are visible to the player, the ships themselves may not be able to obtain a target lock. The detection of a target for attack is a simple formula, this distance to the target must be less than or equal to 25 units minus the targets stealth stat plus the attackers detection stat.

$$\text{Distance} \leq 30 - \text{Stealth} + \text{Detection}$$

Line of Sight

Line of sight is not taken into consideration when detecting targets for attack. The sensors of attacking ships can detect targets behind obstacles. The attacking ship fire through other ships or obstacles though. It can however target ships that may not have a direct line of site for missile type weapons that can shoot around obstructions.

Determining Range

Each of the weapon types determines range slightly differently. They all use the forward indicator on the edge of a ships model's base as the origin of the measure. Drone weapon's origin can be on any edge of the ship.

Beam type weapon's range is assessed with a straight ruler from the origin. They use no firing template as simple optics or a magnetic field is all that is usually required to redirect beam weapon fire.

Projectile type weapons use the ballistic circle template and then a straight ruler. Use the 15 unit template unless target ships are too close to measure with it. This accounts for the turning time of the cannon turrets and the difficulty of shooting behind your own ship.

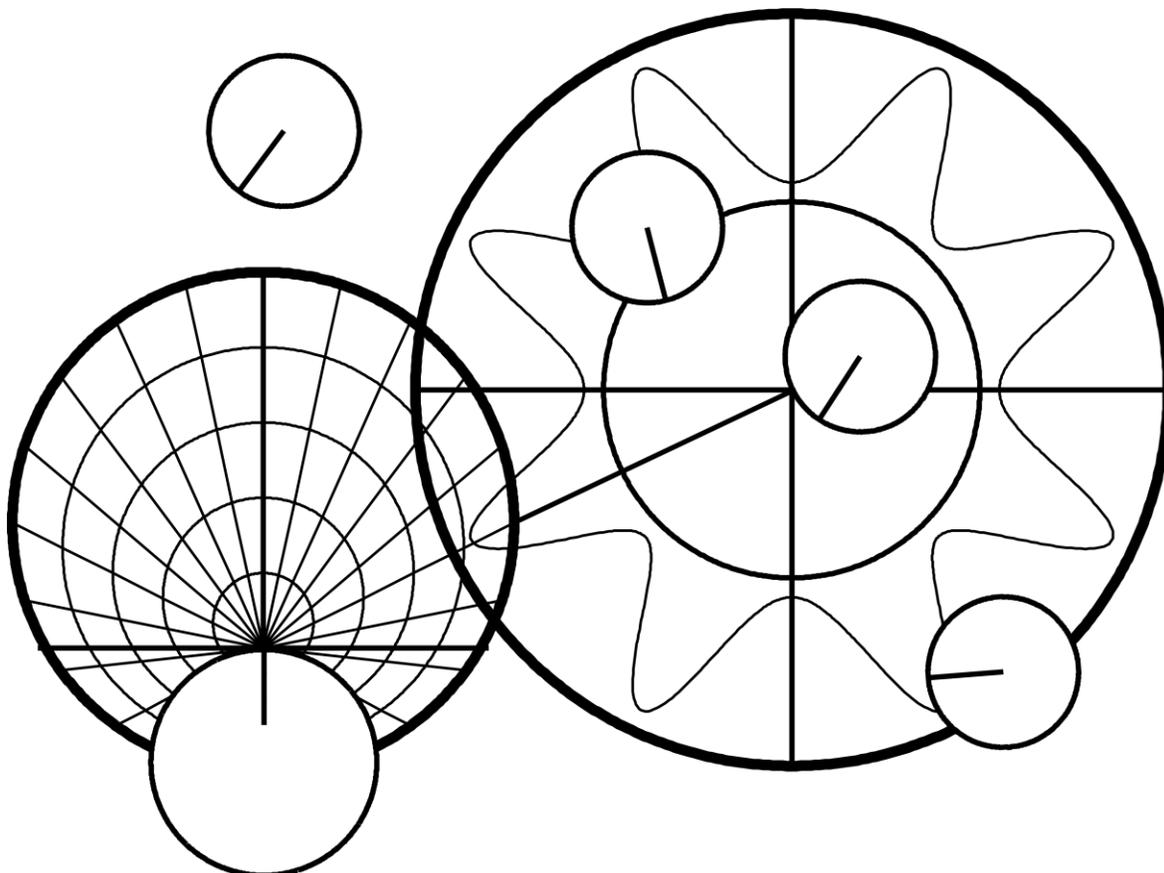
Missile type weapons use the turn cardioid template and then a straight ruler. Use the 15 unit template in all cases. This is to take into account that the missile launch tubes are on the fore of the ship and the missile must turn to impact the target.

Blast Damage

All weapon types deal blast damage (unless their effect overrides). The diameter of the blast is determined by weapon type. Beam type weapons have a 5 unit, projectile type weapons have a 10 unit, and missile type weapons have a 15 unit blast diameter. The epicenter of the blast is determined by where on the base of the target ship the weapon hits. The position of the hit can be controlled by the attacking player as long as the point on the target is still in range.

The attack on the main target is assessed with full weapon penetration and damage stats. Any targets in the blast area are assessed with penetration and damage stats halved, rounding up. Targets touching, but not fully within the blast area is assessed with an armour penetration of 0 and the weapon damage stat halved, rounding up. Blast damage does not damage the attacking or allied ships.

The following image shows an example of a destroyer class ship with a projectile weapon fighting against four enemy frigate class ships. The resulting blast area has a 10 unit diameter and contacts three of the four targets. The main target is hit directly. One is fully within the blast area. Another is partially within the blast and the fourth enemy ship is fully outside of the blast area.



Armour Penetration

The weapon penetration versus armour rating table is used to determine if a weapon hit is effective against its target. This is assessed using the roll of a D20. The penetration stat of the weapon is found on the top row and the first column is the armour rating of the target ship. The intersection of the two values on the table is what the D20 roll must be greater than in order for the attacker to score an effective hit.

If the attacker's weapon type is not the preferred defense type of the target ship's armour, then the armour rating is quartered, rounding up.

>	W E A P O N P E N E T R A I O N																				
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A 0	10	5	5	5	5	5	5	5	4	4	3	3	3	2	2	2	1	1	1	1	0
R 1	15	10	7	7	6	6	6	5	5	4	4	3	3	3	2	2	2	1	1	1	1
M 2	15	13	10	9	8	7	6	6	5	5	4	4	3	3	3	2	2	2	1	1	1
O 3	15	13	11	10	9	8	7	6	6	5	5	4	4	3	3	3	2	2	2	1	1
U 4	15	14	12	11	10	9	8	7	6	6	5	5	4	4	3	3	3	2	2	2	1
R 5	15	14	13	12	11	10	9	8	7	6	6	5	5	4	4	3	3	3	2	2	2
6	15	14	14	13	12	11	10	9	8	7	6	6	5	5	4	4	3	3	3	2	2
R 7	15	15	14	14	13	12	11	10	9	8	7	6	6	5	5	4	4	3	3	3	2
A 8	16	15	15	14	14	13	12	11	10	9	8	7	6	6	5	5	4	4	3	3	3
T 9	16	16	15	15	14	14	13	12	11	10	9	8	7	6	6	5	5	4	4	3	3
I 10	17	16	16	15	15	14	14	13	12	11	10	9	8	7	6	6	5	5	4	4	3
N 11	17	17	16	16	15	15	14	14	13	12	11	10	9	8	7	6	6	5	5	4	4
G 12	17	17	17	16	16	15	15	14	14	13	12	11	10	9	8	7	6	6	5	5	4
13	18	17	17	17	16	16	15	15	14	14	13	12	11	10	9	8	7	6	6	5	5
14	18	18	17	17	17	16	16	15	15	14	14	13	12	11	10	9	8	7	6	6	5
15	18	18	18	17	17	17	16	16	15	15	14	14	13	12	11	10	9	8	7	6	6
16	19	18	18	18	17	17	17	16	16	15	15	14	14	13	12	11	10	9	8	7	6
17	19	19	18	18	18	17	17	17	16	16	15	15	14	14	13	12	11	10	9	8	7
18	19	19	19	18	18	18	17	17	17	16	16	15	15	14	14	13	12	11	10	9	8
19	19	19	19	19	18	18	18	17	17	17	16	16	15	15	14	14	13	12	11	10	9
20	20	19	19	19	19	18	18	18	17	17	17	16	16	15	15	14	14	13	12	11	10

WIN CONDITION

There are innumerable ways to determine a win condition. Roll playing campaigns may have any number or type of objectives for every game. The following are a few you can use.

Checkmate

This win condition is quite simple, destroy the other battleships before yours is. When a player's battleship is destroyed all of their surviving fleet is removed from the play area at the end of the turn, there is no admiral to command them. The winner is the last player with a surviving battleship at the end of a turn. If within a turn all remaining battleships are eliminated it is a draw between the players in that turn.

Turns and Points

In this style of game a set number of turns to play are decided upon. The number of turns depends on players play style, number of players and the play area. Keep track of the ships destroyed by your fleet. Points are awarded based on class of the ship destroyed: drones 0, frigates 2, destroyers 3, cruisers 5, and battleships 8 points. The points are tallied at the end of play. This can be combined with checkmate win condition, so if someone's battleship is destroyed they are eliminated from play.

Capture the Ship

This win condition is based around players vying for control of ships and bringing them back to their base. A ship is spawned in the middle of the battlefield, several spawn sites at once, or a randomly determined spawn site. The spawned ships are stationary until captured. When a player destroys the ship they capture it with full hit points and must fly it to their base. Other players can capture the ship from that player by destroying it. At the end of a set number of turns or ship spawns the player with the most captured ships wins.

Gladiator

In this game each player has only one ship. They can be any hull class or weapon configuration desired. The last player surviving wins. Some slight rebalancing of hit points may be necessary to create a more even, but still interesting game.

Interdiction

The game of interdiction is based on the destruction or survival of a convoy. One team of players defends the convoy and the other attacks. The convoy moves from one end of the board to the other at a constant heading. The attacking player will attempt to destroy as many ships in the convoy as possible while the defender attempts to repel the attacking force. Then switch the role of attacker and defender for the next game. Whoever has the highest combination of convoy ships destroyed and surviving is the victor.

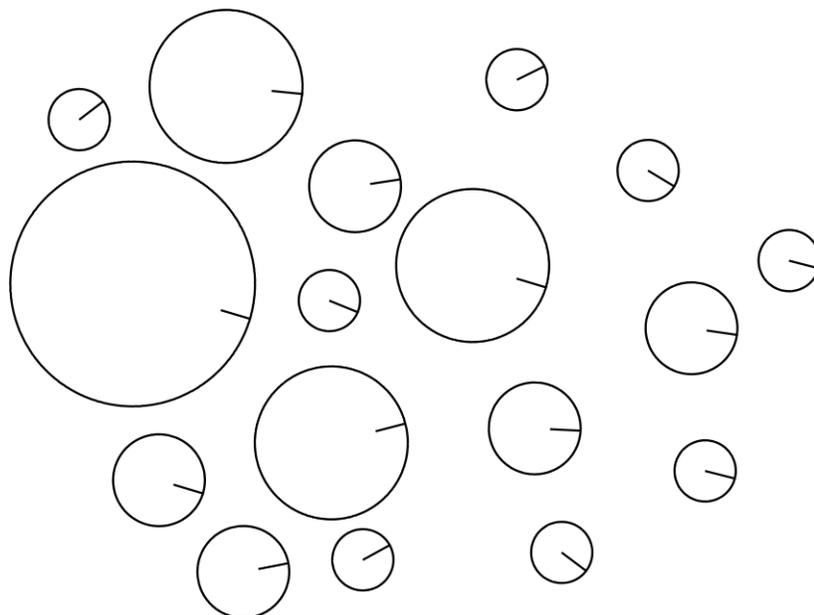
FLEETS

Each player commands a fleet of ships. The following are suggestions for counts of each class of ship to create a balance fleet. The battalion arrangement is the suggested fleet size for an engagement with all ship classes that can be quickly setup and played.

FLEET	FRIGATE	DESTROYER	CRUISER	BATTLESHIP
PATROL	3	2	1	0
ESCORT	5	3	2	0
BATTALION	8	5	3	1
BRIGADE	13	8	5	1
DIVISION	21	13	8	2
ARMADA	54	21	13	3

Each fleet is can be individually designed by the player. For fast gameplay it is easiest just to take the average of the ship and weapon stats to build the fleet. An example of an average fleet can be found in the appendices.

Ship stat sheets can be found in the appendices. The first three rows are for the ships basic stats and equipment. The next ten are for weapons and drones. If a drone launcher is equipped, then indicate in the augmenters section that it is a drone and what type of armour is equipped to the drones.



SPACESHIPS

Ships in the game can be differentiated into five classes, drones, frigates, destroyers, cruisers and battleships. Drones are small fighter ships launched by other ships that add to the fleets firepower, but are also extremely fragile. Frigates are the fast attack ships of the fleet, moving in and out of range and flying in formation to deal maximal damage. Destroyers are a heavier attack ship that is more suited to sitting back a firing from afar. Cruisers are best suited to specialized roles, tanking damage and launching drones. The battleship is the flag ship of the fleet; a very capable combat ship, but very important to the survival of the fleet.

Unique Ships

For certain types of role-play gaming special ship types may be needed. These might include transport ships in a convoy of vital war supplies that must be protected by one player and destroyed by another. These ships might break the stat guidelines set here, but overall should not affect the balance of gameplay as they are intended for special roles.

Ship Stats and Design

Ships can be defined by several basic parameters. The diameter of a ships model base or token is used to describe its hull displacement class; with drones having a 1 unit diameter and battleships an 8 unit diameter. As the size of the ship class increases the health points, weapon slots, and armour slots all increase. The speed, stealth and detection all decrease with increasing ship class size. The four stats, armour slots, speed, stealth and detection, can be adjusted to change the resulting ship. The total of the stats in the four categories plus cost of equipment or auras must equal the stat total.

CLASS	∅	HEALTH POINTS	WEAPON SLOTS	ARMOUR SLOTS	SPEED	STEALTH	DETECTION	STAT TOTAL
DRONE	2	10	1	5	30	0	0	X
FRIGATE	3	20	2	10 - 20	20 - 30	10 - 20	10 - 20	70
DESTROYER	5	30	3	15 - 25	15 - 25	5 - 15	5 - 15	60
CRUISER	8	50	3	20 - 30	10 - 20	0 - 10	0 - 10	50
BATTLESHIP	13	80	4	25 - 35	15	0 - 10	0 - 10	40

The health points stat is a measure of the minimum hull integrity required for the ship to survive. Weapon slots simulate how much armament can be handled by the reactors and space available. The armour slots are governed by the size of the craft, only so many hard-points are available. Speed is a function of how much momentum a ship can exchange in a given turn. Stealth is a rating of the electromagnetic spectral signal from thermals to radiation. The detection stat takes into account the suite of sensors from radar and thermal imaging to signal interception.

Equipment

Each piece of equipment incurs a -5 modifier to the ship's stat total.

Faster Than Light (FTL) Jump Drive

Ships can be equipped with an FLT jump drive. The drives have a cool down time of 2 turns, meaning they can be used every third movement phase. Use a cool down counter to keep track of the turns. FTL drives give ships a chance of an additional jump of 15 units after their movement. They can be used to jump in or out of range of combat depending on the scenario.

D20 roll > 5

Cloaking Device

A cloaking device masks the electromagnetic signature of the ship increasing its stealth. The ship is given a +10 modifier to the stealth stat. Ships with an active cloaking device cannot attack. The cloaking device must be activated or deactivated at the start of the combat phase.

Electronic Counter Measures (ECM)

Ships with an active ECM can only be targeted if a roll is passed; if the attacking ship fails the roll it cannot target additional ships. Ships with an active ECM cannot attack. The ECM must be activated or deactivated at the start of the combat phase.

D20 roll > 5

Tractor Beam

Tractor beams either pull a target towards a ship or push it away. The beam must be defined as push or pull type. All tractor beams have a range of 20. The distance tractor beams push or pull has a chance of being 10 units, otherwise it is 5 units. Tractor beams are assessed at the end of the movement phase.

D20 roll > 10

Overloader

An overloader supercharges a weapon for one combat phase. This gives weapons a +10 damage modifier. The overloaded shot has a cool down time of 2 turns, meaning it can be used every third combat phase. Use a cool down counter to keep track of the turns.

Assassin's Touch

The assassin's touch allow for a precision shot to find the weak point in armour. This gives weapons a +10 armour penetration modifier. The assassin's touch has a cool down time of 2 turns, meaning it can be used every third combat phase. Use a cool down counter to keep track of the turns.

Fine-Tuned Detector

The fine-tuned detectors can be used to target seriously stealthy ships. Pinging the fine-tuned detector gives the ship +20 detection for the turn. The detector has a cool down time of 2 turns, meaning it can be used every third combat phase.

Aura Generators

These are area of effect boons and banes. Each aura incurs a -10 modifier to the ship's stat total. Within 15 units of the center of the ships base auras have a modifier for one stat; +5 to allies or -5 to enemies. Ships must be fully within the auras area to be affected. Drones are not affected by auras. The modifier can be for ship's speed, stealth, or detection. Alternatively it can modify a weapon's range, penetration, or damage. No detection is required for auras to take effect. While this may seem nearly overpowered it leaves the bunched up ships vulnerable to blast damage.

In all there are 12 kinds of aura generators consisting of a boon and a bane for each stat. They are named such a Speed Boon or Damage Bane depending on the effect.

Armour

A ship's armour is broken down into three types, reflective, reinforced and reactive. Armour is assigned to a ship based on the number of armour slots available. The maximum amount of armour that can be equipped of one type is 20. Each piece of armour takes one ship armour slot and contributes one point value to the armour. Drones must have all of their armour be of the same type.

Reflective armour is ideal for protection against beam type weapons. Reflective armour consisting of ablative coatings of reflective micro-material beads are effective versus directed energy weapons such lasers and particle-beams that can be reflected and dispersed.

Reinforced armour is best against ballistic projectile type weapons. Reinforced of ceramic matrix composite plates absorb and disperse the energy of projectiles preventing penetration and defeat high explosive shaped charges.

Reactive armour defends against missile type weapons. Reactive armour is built up of a series of explosive charges that detonate missiles before it can strike the ship or redirect a shaped charges plasma jet away from the hull.

When defending the maximum effective armour rating is used. If the attacker's weapon type is not the preferred defense type of the target ship's armour, then the armour rating is quartered, rounding up.

ARMOUR RATING	BEAM	PROJECTILE	MISSILE
REFLECTIVE	AR	[AR / 4]	[AR / 4]
REINFORCED	[AR / 4]	AR	[AR / 4]
REACTIVE	[AR / 4]	[AR / 4]	AR

WEAPONS

Weapons have three basic types; beam, projectile and missile. Beam weapons cover a spectrum of directed energy weapons such as lasers, masers, plasma cannon, particle-beams and conducted electrical weapons. Projectile weapons are any non-self-propelled ballistic projectile such as cannon, sabots and flack. Missiles are self-propelled guided rockets with various warheads. Each weapon takes one weapon slot on the ship.

Weapon Stats and Design

The stat total is used to govern the balance of each weapons stats. Drones have a -10 modifier for the stat total, this is to show that these are lightly armoured and armed attack craft. Battleships have a +10 modifier for stat total to give them their fleet commanding attack power. The three stats, range, penetration and damage, can be adjusted to change the resulting weapon. The total of the stats in the three categories plus cost of augmentation must equal the stat total.

TYPE	TEMPLATE	BLAST DIAMETER	RANGE	PENETRATION	DAMAGE	STAT TOTAL
BEAM	X	5	25 – 35	5 - 15	5 - 15	50
PROJECTILE	Circle	10	15 - 25	5 - 15	5 - 15	40
MISSILE	Cardioid	15	5 - 15	5 - 15	5 - 15	30

The range templates, as detailed previously, account for the nature of the weapons attack method.

The blast diameter is a measure of the explosive yield of the weapon. Beam type weapons have a low blast diameter resulting mainly from the ablation of the target ships armour that could damage nearby ships. Projectile type weapons have shrapnel, explosive rounds, and armour fragmentation giving them a moderate blast. Missile type weapons have large warheads of very high yield resulting in the large blast area.

The range stat for beams is the largest as they only need to maintain cohesion in a vacuum to arrive on target. Projectiles range is slightly shorter as they do not travel at luminal velocities and may miss the fast moving targets. Missiles have the lowest range as they are self-propelled with limited propellant for guidance.

The penetration and damage stats are all comparable for each weapon type. Any number of tradeoffs could be made to make each weapon more penetrating or damaging. A beam could have tighter cohesion or greater energy levels. A projectile could have a sabot or a squash round. A missile could have a shaped charge or a squash round.

Augmenters

Ship weapons may be augmented twice, but drone weapons cannot be augmented. Each augmentation incurs a -5 modifier to the weapon's stat total. Augmenters give weapons allot of character. Having a good balance of augmenters will give each ship a role to play. They can help to define the strategy and tactics of your fleet.

The blast area penetration and damage values are used as the base stat when assessing the effect of augmentation on targets in the blast area. Therefore if the target is in the blast area, only taking half damage, and has a modifier of an additional half damage then it deals only three quarters of the weapons original base damage. All rounding is done on the final stat values and not in the intermediate steps.

Critical Hit

This indicates that a weapon has not only penetrated the target, but caused significant damage through secondary effect. Inflicts additional damage to the targeted ship amounting to the base damage. Assessed after the armour penetration roll.

D20 roll > 10

Rending

A chance of bypassing the armour penetration roll, causing the weapon to automatically penetrate. If roll is unsuccessful assess the armour penetration roll as normal. Particularly useful against hardened targets. Assessed before the armour penetration roll.

D20 roll > 10

Chain-Hit

Weapon is able to hit additional targets after the main target. If additional targets are in range they can be hit with full armour penetration and halved damage, rounding up. The weapons fire can turn in the same way as it does from the firing ships origin. The new origin is defined at the impact site of the first target. Up to two jumps in addition to the main hit can be made. This is particularly powerful with beam weapons that have long range.

Furtherance

The weapons fire goes 'through' the main target and can hit targets behind it. There can be no turning of the shot after the first hit. The additional targets are hit with full armour penetration and damage.

Scatter-Shot

This splits the armour penetration roll into two separate rolls. A pass on each roll deals damage at half of the base damage, rounding up. This gives a greater chance of dealing some damage every turn at the expense of total stat points.

Suppression

The weapon can be fired while the ships cloaking device is active with the damage halved, rounding up. Otherwise it fires with the normal damage.

Immolation

The weapon hits for an additional damage amounting to the base damage halved, rounding up. The attacking ship also damages its self for half of the base damage, rounding up. The damage to your own ship is assessed with a roll whether the shot penetrates the targets armour or not. Assessed before the armour penetration roll.

D20 roll > 10

Vampirism

If the weapon penetrates the targets armour you have a chance to steal health points. The amount stolen is the damage dealt halved, rounding up. Assessed after the armour penetration roll.

D20 roll > 10

Transference

This gives your weapon the power to repair the health points of your own ships. There is no blast damage with this weapon type. These weapons cannot be used against an enemy or neutral target. An armour penetration roll is made the same as attacking an enemy target. If the shot penetrates then it repairs the health points of the target at full damage and takes health points from the attacking ship at the damage halved, rounding up. Ships cannot be repaired to greater than their initial hit points.

Of note, is when two ships that both have transference weapons attack each other than can rapidly gain back hit points. The can be used to recharge your repair ships between enemy engagements.

Electro Magnetic Pulse (EMP)

Gives the weapon a chance to immobilize the target ship for turn. This effect does not stack if multiple EMP weapons are used on the same target. The target can only coast at the minimum 5 unit speed for the next turn, it may still fire its weapons. Use an EMP counter to keep track of affected targets; remove after the movement turn of the affected ship. Assessed after the armour penetration roll.

D20 roll > 10

Target Designator

This paints a target so that ships that can't detect it, but are still in range can fire at it. The damage of these type of weapons is halved, rounding up. Only takes effect if the shot penetrates. Use these weapons at the start of your combat phase so that all following attacks are able to see the target. The target must be re-designated every turn.

Targets with a cloaking devices active still have the stealth modifier.

Point-Defense

These weapons can be fired in addition to the primary weapon against drones only. Their armour penetration and damage is halved, rounding up. When used as the primary weapon they have full armour penetration and damage.

Burning

Weapons that put plasma fires on enemy ships. For two turns after an armour penetrating attack the fire burns hitting the target for the damage quartered, rounding up. The effect of fires can stack. Use a burn counter to keep track of the turns.

Knockback

These weapons push both the target and your own ship. The target ship is only pushed if the armour is penetrated for 5 units away from the attacking ship. Your attacking ship is pushed 5 units away from the target ship regardless of penetration. Useful for pushing a target out of range, or corralling a targeted ship.

Surge

For the first penetrating shot damage is dealt as normal. Set the surge counter to one. If the next shot also penetrates it inflicts additional damage to the targeted ship amounting to the base damage quartered, rounding up. Set the surge counter to two. If the third shot hits then additional damage dealt to the targeted ship amounting to the base damage halved, rounding up. Set the surge counter to three.

The surge augmented weapon will continue to deal damage at the highest level until it fails to penetrate the target's armour. If the shot fails to penetrate armour, changes targets, or you have to skip a turn attacking with that ship for any reason the surge count resets to zero. Most useful on weapons with high armour penetration against targets where the attacking ship can stay within range for a few turns.

Flak

This gives a weapon the ability to target a point in space instead of a specific ship. At least one ship in in the blast area must be detectable. Flak can be especially useful against bunched up targets or a mix of visible and stealthy ships.

DRONE LAUNCHERS

Drones are ships that launched from other ships. They act like ships, but are unable to have equipment, take aura effects or specializations. Drones are defined by the single weapon they can equip and small bit of armour.

A drone launcher takes up the space of one weapon slot on a ship. Drones are launched during the movement phase; they can use that same phase to move and attack in that turns combat phase. Only one drone can be launched per turn by each ship. The launcher has a predefined type of drone to launch and may only launch that type of drone. Only one drone may be active per launcher. Additional launchers can each launch a different configuration of drones. A new drone may be launched for each launcher once the currently deployed drone is killed.

SPECIALIZATION SYSTEM

The specialization system is a way to create additional differentiation and define roles for your ships. The available specializations are broken down by ship class. Drones do not have a specialization, nor do they inherit one from the ship that launches them.

Speed Demons are the fast fliers and fly-by attackers. Seers can slide up close undetected and deal big damage. Scouts can find the stealthy ships and mark them for death. Snipers can reach out and touch. Berserkers deal maximum damage with multiple weapons. Psy-Ops are cloud the battlefield with auras. Engineers are the carrier ships with fast drone launching capabilities. Juggernauts soak up the agro. Re-constructors keep the fleet running even when heavy damage is taken. Battleships being the flagships of the fleet can take any two different specializations, making it the most potent ship in the fleet.

SPECIALIZATION	SHIP CLASS	MODIFIER
SPEED DEMON	Frigate	+10 speed
SEER		+10 stealth
SCOUT		+10 detection
SNIPER	Destroyer	+10 range
BERSERKER		fire 2 of the same weapon, 2 nd penetrating shot deals half damage, rounding up, +1 weapon slot
PSY-OPS		+1 aura, no negative modifier
ENGINEER	Cruiser	launch 2 drones at a time, +1 drone launcher slot
JUGGERNAUT		+10 armour slots
RE-CONSTRUCTOR		transference weapons +1/2 damage, rounding up, does not deal additional damage to attacking ship
X 2	Battleship	any two different specializations

BASES

Bases are satellites, attached or space elevator tethered structures that can be used as objectives or centers of operation during gameplay. Bases can be player controlled or neutral. Outposts are small bases that might be located on a moon or an advanced post in a hostile asteroid belt. Stations might orbit planets or sit at a strategic nexus in space; they are often the jumping point of a fleet's campaign. Star-ports are massive structures, larger even than battleships. They are the home base of entire armada bristling with defense arrays and enormous dry docks that can hold even the largest vessels.

Base Stats and Design

Base stats are very similar to ship stats. With increasing size they have greater survivability. Bases may take weapons or drones of any type to fill their weapon slots.

CLASS	DIAMETER	HEALTH POINTS	WEAPON SLOTS	ARMOUR SLOTS	STEALTH	DETECTION	DOCKS
OUTPOST	5	50	2	20	10	10	1
STATION	8	80	3	25	5	15	2
STAR-PORT	13	130	5	30	0	20	3

Docking

A ship may only dock with a base that is larger than it and drones cannot dock. Therefore a battleship may only dock in a star-port class base. The number of docks available is how many ships the base can hold at one time. In order to dock a ship must connect with the base during the movement phase. Once the ship is docked it cannot be targeted by any ships or target anything its self. The base may still target the docked ships with its transference augmented weapons; there is no blast damage in this case.

A ship can launch from the base at the start of the movement phase. When launched its edge must touch the edge of the base while facing outward. The ship can then move as normal in that movement phase.

Combat

Bases attack last in the combat phase. Some bases may fire multiple weapons or launch multiple drones per turn. Outpost may only attack once as normal. A station class base can attack twice at two separate targets using different weapons. A star-port class base can attack three times against three different targets.

APPENDIX

Resources needed to play the game.

The scaling of the templates may be slightly off due to the scaling of the printer. This is not an issue as long as the scaling of all of the players' templates is consistent.

Average Fleet

The average fleet uses the average value of ships class and weapon type. There are no specializations, equipment, auras or weapon augmentations to simplify play. Only the battleship has a drone launcher; this can be ignored for further simplification.

Name		Class	Specialization	Hit Points
Avg. F.		Frigate		20
Armour			Speed	Stealth
R _B	R _P	R _M		Detection
5	5	5	25	15
Equipment / Aura Generators				
Weapons / Drones				
Name		Augmenters		
Mediocre Laser				
Type	Range	Penetration	Damage	
Beam	30	10	10	
Name		Augmenters		
Middling Missile				
Type	Range	Penetration	Damage	
Missile	10	10	10	

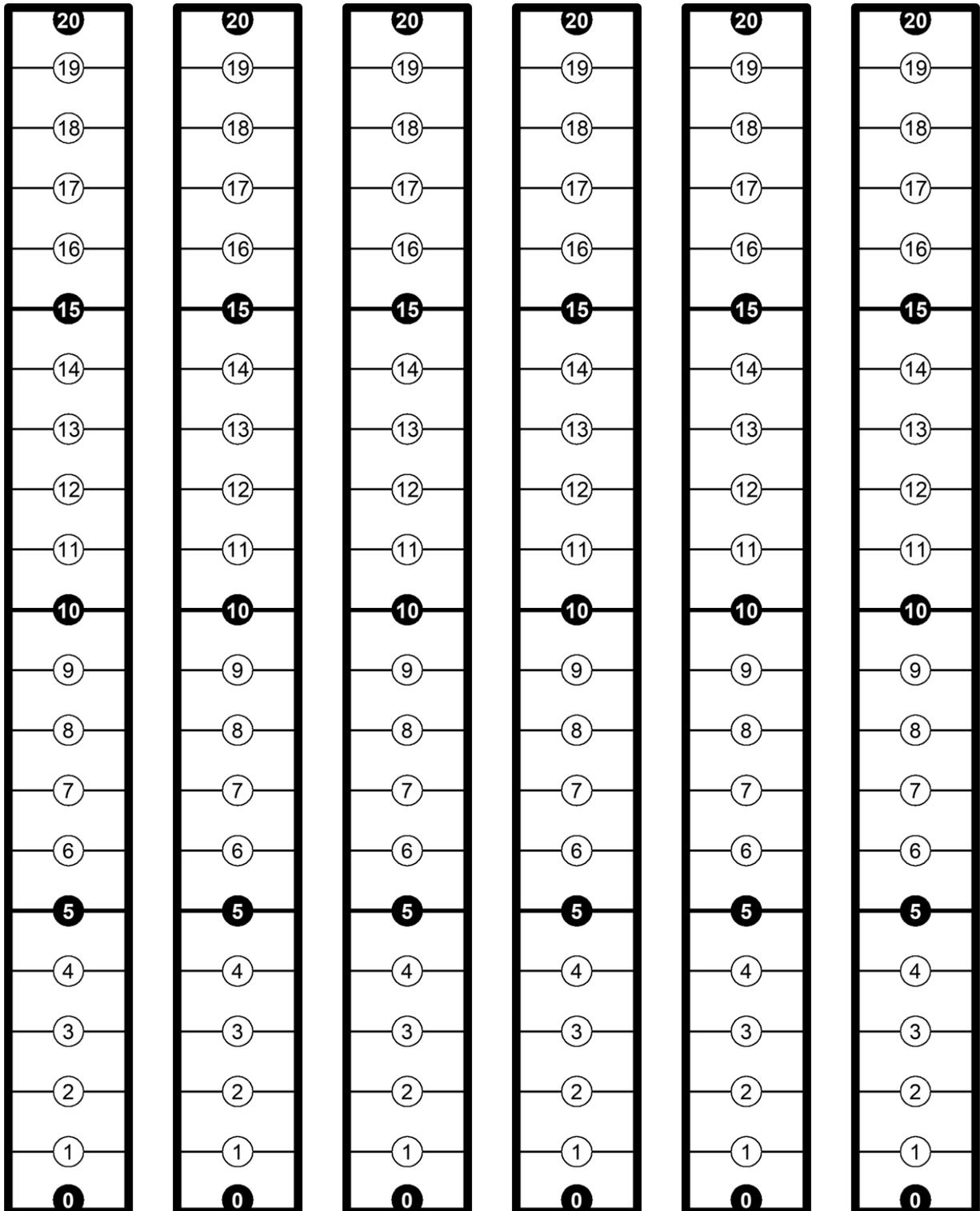
Name		Class	Specialization	Hit Points
Avg. B.		Battleship		80
Armour			Speed	Stealth
R _B	R _P	R _M		Detection
10	10	10	15	5
Equipment / Aura Generators				
Weapons / Drones				
Name		Augmenters		
Mediocre Laser				
Type	Range	Penetration	Damage	
Beam	34	13	13	
Name		Augmenters		
Moderate Rifle				
Type	Range	Penetration	Damage	
Projectile	24	13	13	
Name		Augmenters		
Middling Missile				
Type	Range	Penetration	Damage	
Missile	14	13	13	
Name		Augmenters		
Medium Fighter		Drone	5 R _B	
Type	Range	Penetration	Damage	
Projectile	11	7	7	

Name		Class	Specialization	Hit Points
Avg. D.		Destroyer		30
Armour			Speed	Stealth
R _B	R _P	R _M		Detection
7	7	6	20	10
Equipment / Aura Generators				
Weapons / Drones				
Name		Augmenters		
Mediocre Laser				
Type	Range	Penetration	Damage	
Beam	30	10	10	
Name		Augmenters		
Moderate Rifle				
Type	Range	Penetration	Damage	
Projectile	20	10	10	
Name		Augmenters		
Middling Missile				
Type	Range	Penetration	Damage	
Missile	10	10	10	

Name		Class	Specialization	Hit Points
Avg. C.		Cruiser		50
Armour			Speed	Stealth
R _B	R _P	R _M		Detection
9	8	8	15	5
Equipment / Aura Generators				
Weapons / Drones				
Name		Augmenters		
Mediocre Laser				
Type	Range	Penetration	Damage	
Beam	30	10	10	
Name		Augmenters		
Moderate Rifle				
Type	Range	Penetration	Damage	
Projectile	20	10	10	
Name		Augmenters		
Middling Missile				
Type	Range	Penetration	Damage	
Missile	10	10	10	

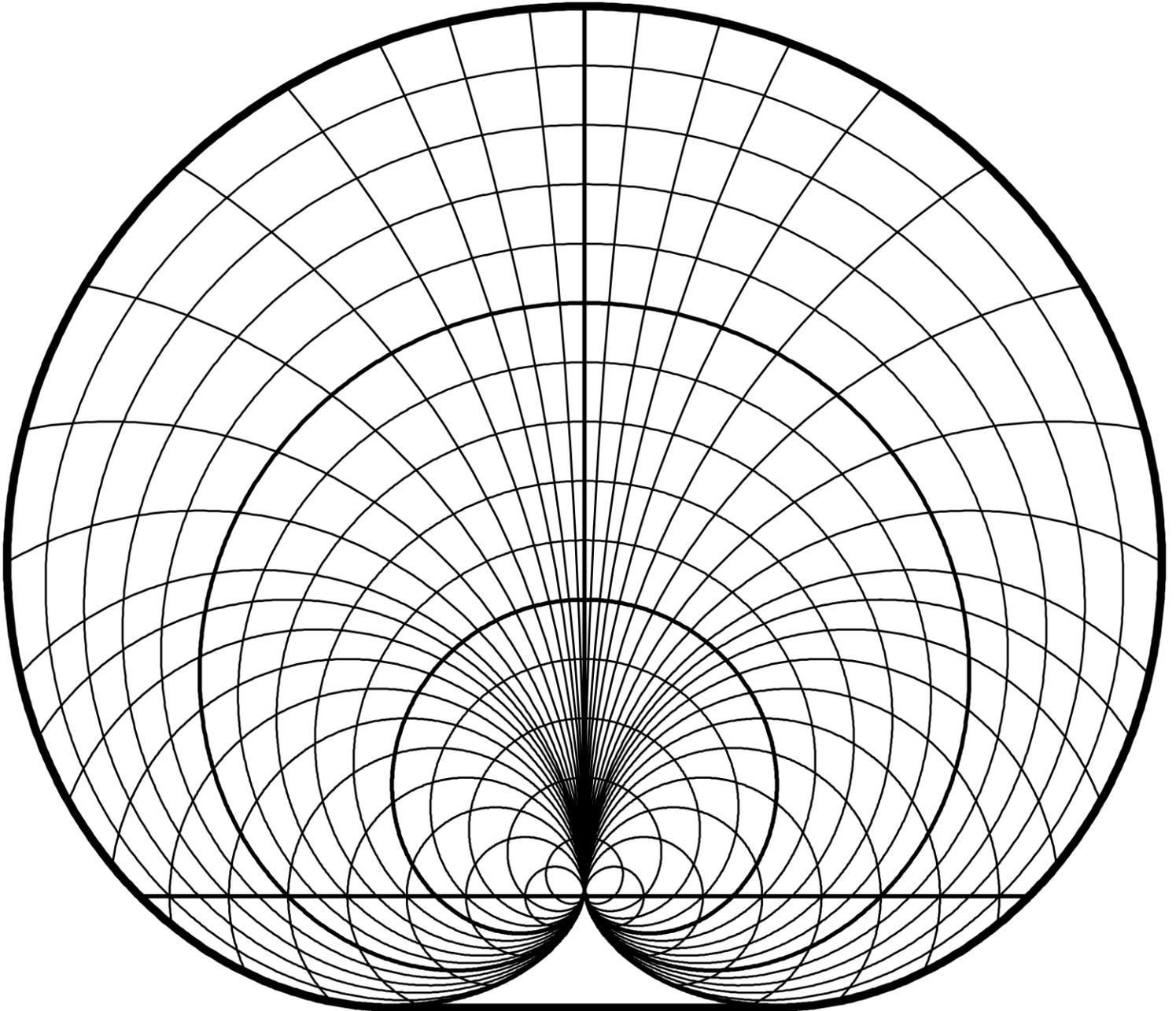
Ruler

20 Unit

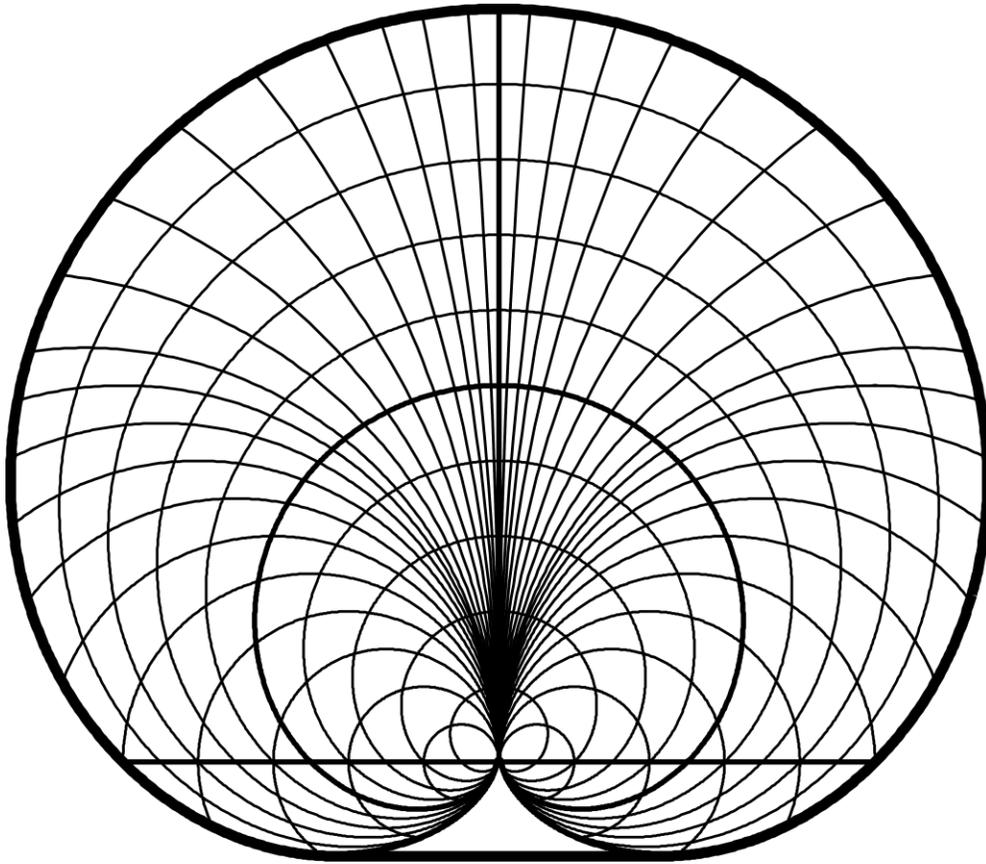


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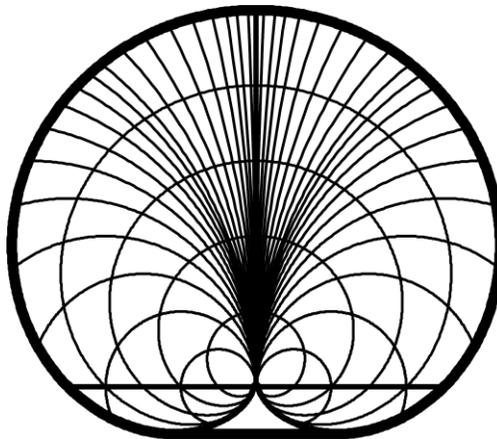
15 Unit



10 Unit

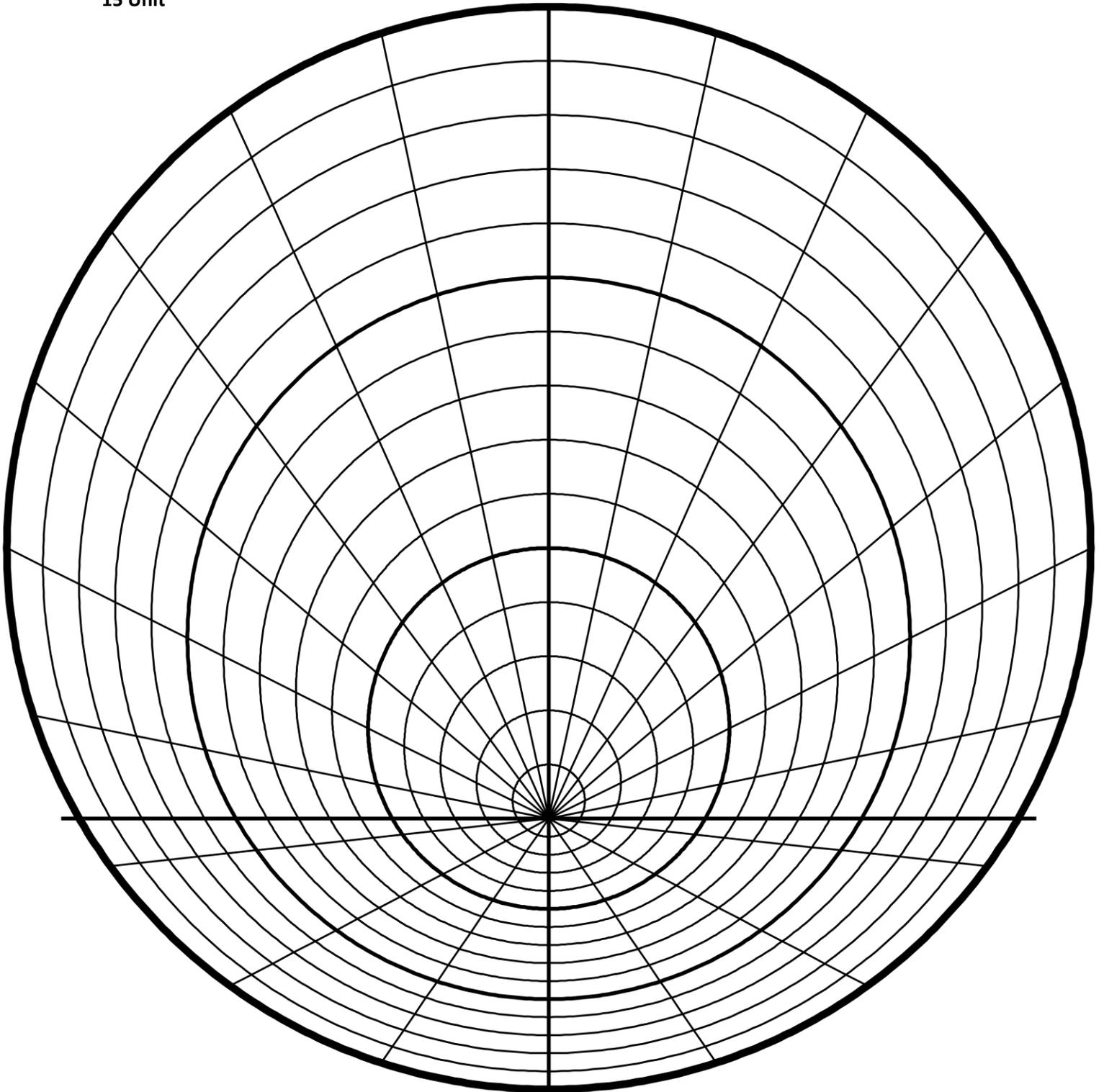


5 Unit

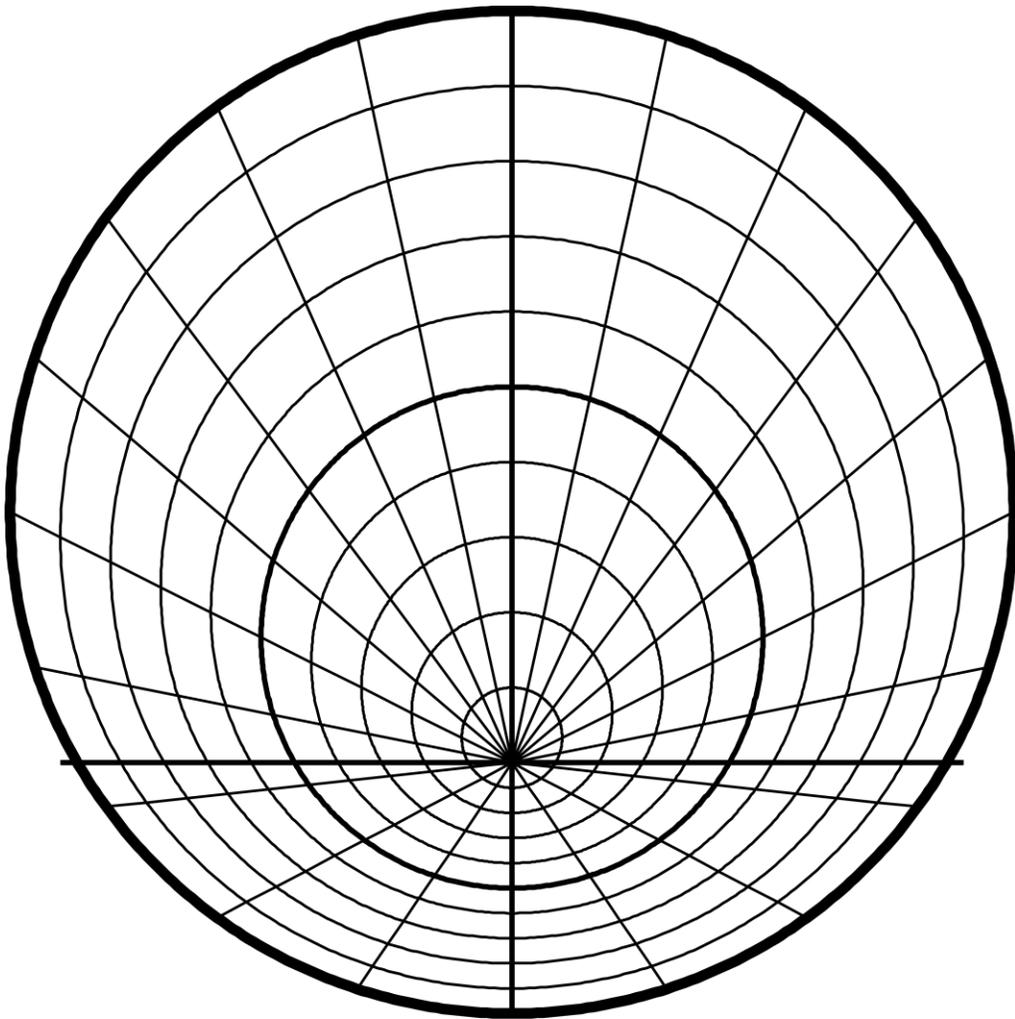


Ballistic Circle

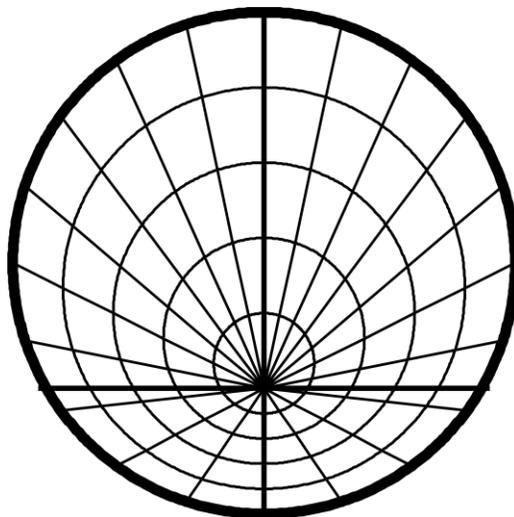
15 Unit



10 Unit



5 Unit

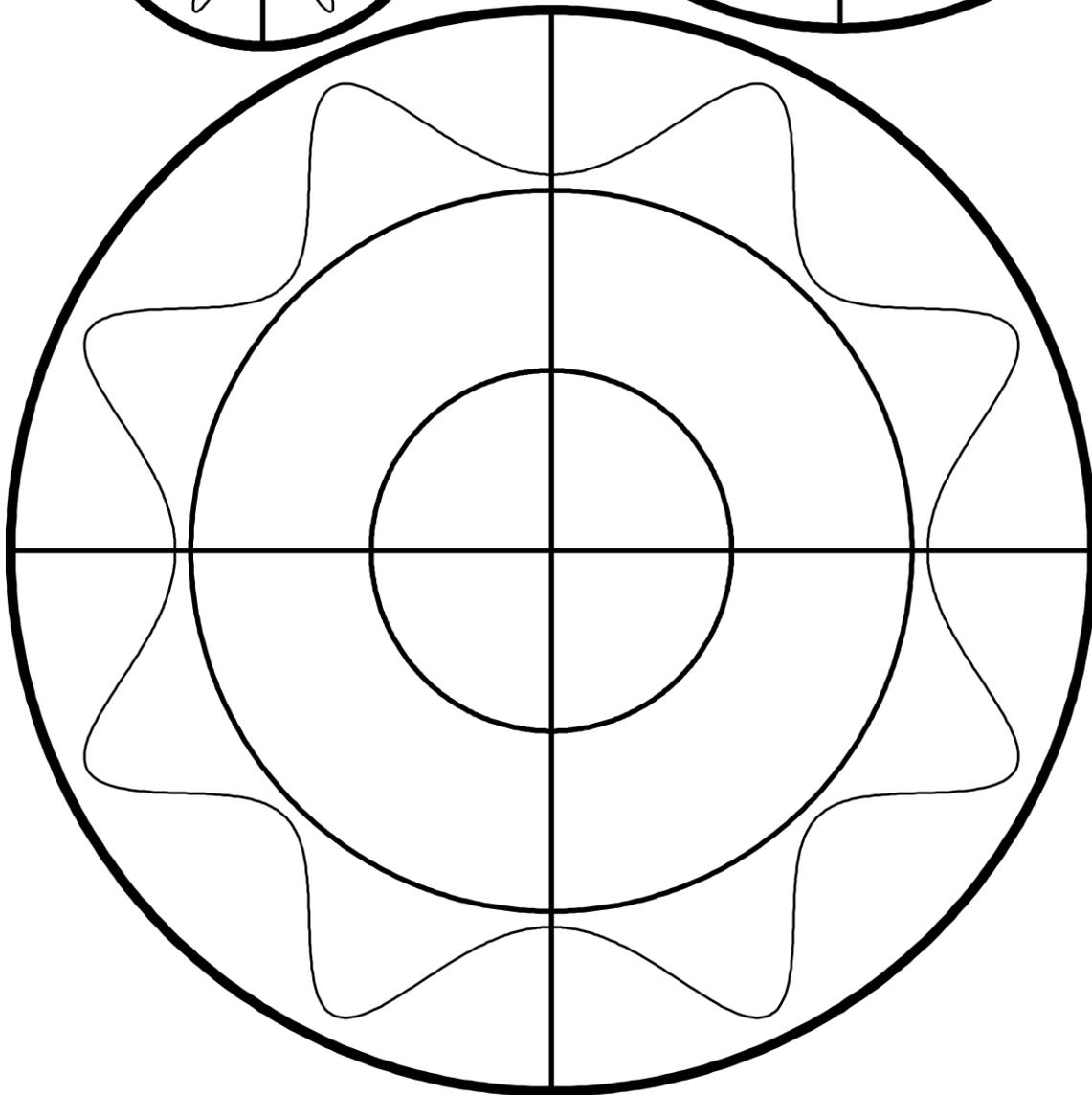
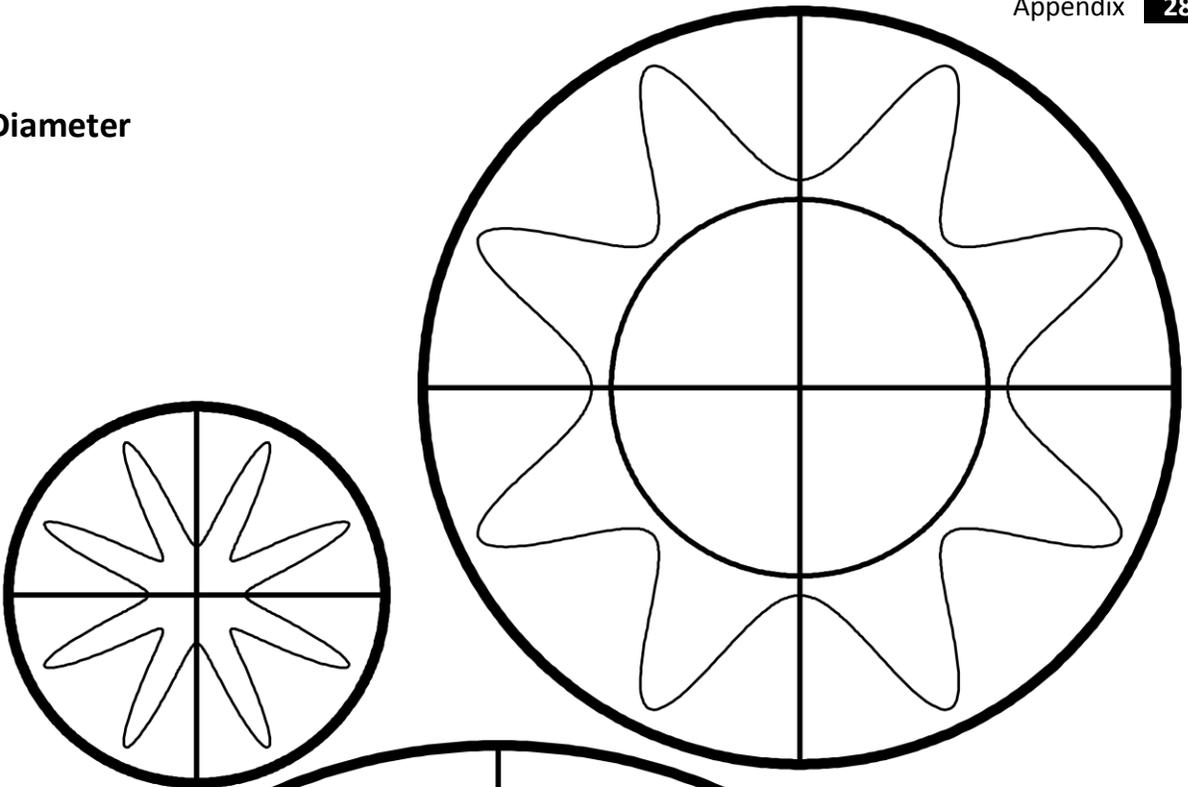


Blast Diameter

15 Unit

10 Unit

5 Unit



Fleet Tokens

