

Vector 3

Tactical Space Combat in Three Dimensions

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[1.0] HISTORY AND RATIONALE

Warfare is almost constant in the densely populated Gilgamesh Cluster. As a result, over the centuries Gilgamesh civilization has developed relatively inexpensive and highly efficient spaceships.

There are three primary ship types. *Vector One* ships carry material from planetary surfaces to orbit; they are streamlined and powerful, yet surprisingly graceful. *Vector Two* ships carry material between the planets of a stellar system; they are slow, relying on the solar winds. *Vector Three* ships carry cargo in the interstellar lanes; they consist of a central cylinder, with attached and replaceable cargo and cabin pods. *Vector Three* prime components and pods are mass-produced throughout the Cluster. The ships' modular design allows pods to be quickly interchanged at short notice, giving them a flexible transport function; each is unique to and dependent on the level of various cargos on a specific trip.

Thus, when war threatens, the merchant marine is recalled. The cargo pods are removed and weapons pods installed in their place. Within a period of months, a nation's entire interstellar fleet can be converted from cargo vessels to men-of-war.

So when the Xandri-Bratcom Coalition struck the strategic base at Aaland, humano-cetacean civilization was prepared...

[2.0] GAME EQUIPMENT









CASES:

[2.1] COMPONENTS

Vector 3 consists of a rules booklet, counters, chartsheet, ship configuration display, and position display. Players should make copies of the position display, as they will be required to draw their ships' positions directly onto the display.

If no die is available, players may use the randomizer chits included in the countersheet. If a die roll is called for, draw one of these chits at random to give a number from 1 to 6.

[2.11] Summary of Unit Types

	Laser Pod		Maneuver Power Marker
	Randomizer Chit		Warp Power Marker
	Torpedo Pod		Power Marker
	Tractor/Pressor Pod		Screen Marker

[2.2] SHIP CONFIGURATION DISPLAY

Players determine the configuration of their ships in *Vector 3* by "purchasing" various capabilities and indicating them on the Ship Configuration Display. Cardboard counters are provided for this purpose.

[2.3] THE POSITION DISPLAY

The position display (game-map) consists of two

separate fields, each with a superimposed square grid. Both fields have a large compass rose printed on them, corresponding to the square grid; the compass rose on one of the fields is labeled "X,Y," while the other is labeled "X,Z." The position of a ship in space on the display is represented by two marks — one drawn on the "X,Y" field, the other on the "X,Z" field. Together, the two marks precisely pinpoint the position of the ship in three dimensions.

Simply put, the "X,Y" section shows how the ships would look were one to look "down" on the battle from above, while the "X,Z" section shows how the ships would look in "profile." The distance from the border between the two sections determines the ship's "height," while its position on the "X,Y" section shows its position in the other two dimensions. It is recommended that Players, when marking their positions on the display, use different color pens to distinguish their respective positions. Players should xerox this display before play if possible.

[3.0] SEQUENCE OF PLAY

GENERAL RULE:

Vector Three is played in *Game-Turns*. Each Game-Turn is divided into a number of *Phases*. During each Joint Phase the Players take actions simultaneously; during all other Phases they alternate taking actions.

(a) **Joint Movement Phase:** The Players actually move their ships and torpedoes on the position display according to the vessels' velocity numbers.

(b) **Detonation Phase:** The Players detonate any mines or torpedoes they desire and apply damage effects.

(c) **Joint Torpedo Salvo Phase:** The Players may have any of their ships with launch pods launch torpedoes.

(d) **Laser Combat Phase:** The Players fire their ships' lasers and apply damage results.

(e) **Tractor-Pressor Phase:** The Players use their ship's Tractor-Pressor Beams.

(f) **Joint Burn Phase:** The Players determine which, if any, of their ships and torpedoes will accelerate and change their velocity numbers.

[4.0] MOVEMENT AND ACCELERATION

GENERAL RULE:

The process of accelerating ships and moving them is split into two Phases in the Sequence of Play. During the Joint Burn Phase, both Players determine which of their ships and torpedoes are to accelerate, and the direction of acceleration. During the Movement Phase, ships and torpedoes are moved in the direction determined by their velocity markers.

CASES:

[4.1] VECTOR COMPONENTS AND MOVEMENT

Movement in *Vector Three* is strictly Newtonian. That is to say, ships have a velocity which carries over from turn to turn; they do *not* expend "Movement Points" while moving. Ships move in the direction and at the speed that they begin the turn with, subject to further acceleration.

The *velocity* of a ship is defined as the direction in and the speed at which it is traveling. A ship's

velocity is represented by three numbers, which the owning Player must keep track of on a piece of scrap paper, or write next to the ship on the display. The Players must let each other know what their ships' current velocities are.

Each of the three numbers represent part of the ship's total velocity — that part of a ship's velocity lies along one axis. The first number represents the component of the ship's velocity "sideways," along the "X" axis; the second represents its component velocity "lengthwise," along the "Y" axis; and the third represents its component velocity "up and down," along the "Z" axis.

Each of the three component numbers of a ship's velocity is a positive or negative integer (whole number). Each number represents the ship's speed in cubes per turn along the appropriate axis. Each axis has a negative and positive end; when a ship has a negative component along one axis, it is considered to be moving towards the negative end of that axis at a speed of as many cubes per turn as the negative number.

[4.2] ACCELERATING

Each ship has an "acceleration technology level." During a Joint Burn Phase, the owning Player of a ship may change the components of that ship's velocity by cross-referencing the technology level with the ship size on the Acceleration Table (4.5), to determine the acceleration capacity of the ship.

Before a ship accelerates, the owning Player of the ship must determine which of the three velocity numbers of the ship he wishes to change, and the magnitude of each change. After he has done so, he refers to the Burn Components Table (see 4.6, chart sheet).

On the Burn Components Table, the Player finds the component changes he wishes to make, then reads across and now determines what his acceleration capacity must be in order to change his velocity numbers as he wishes. **Example:** The Player wishes to change his velocity from -1, -3, 2 to 1, -2, 4. This is a change of 2,1,1. (Order the numbers from the highest to the lowest before consulting the table. A 2,1,2 would be considered thus as a 2,2,1.) Finding "2,2,1" on the Burn Components Table, we find that the ship must have an acceleration capacity of at least three in order to change the velocity numbers as desired.

If the Player wants a ship to change only *one* of its velocity numbers, that ship merely need have an acceleration capacity equal to the change in the value of the number. If the ship is to change *two* velocity numbers, the Player refers to the "two components change" column of the Burn Components Table. If all *three* velocity numbers are to be changed, the Player refers to the "three component change" column of the table.

Players determine the acceleration of their ships and torpedoes during the Joint Burn Phase. At this time, neither Player may examine the other's scrap sheet — i.e., one Player doesn't know how the other Player is accelerating his ships.

[4.3] MOVEMENT

Although velocity numbers are changed during the Joint Burn Phase, the ship marks are not actually moved until the Movement Phase.

During the Movement Phase, both Players *must* move all of their ships and torpedoes as specified by the ships' (torpedoes') velocity numbers.

The ship on the "X,Y" section is moved along the "X" axis on the section (i.e., sideways) as many squares as the *first* number of the ship's velocity indicates, then moved as many squares along the "Y" axis (i.e., lengthwise) as the *second* number of the velocity indicates. The marks should be redrawn at this position. The mark on the "X,Z" section is then moved along the "X" axis (sideways) as many squares as the *first* number of

the velocity indicates, then along the "Z" axis (up and down) as many squares as the *third* number indicates, and finally noted at this new position. Thus, both marks should begin along the same line relative to the "X" axis, and end along the same line relative to the "X" axis.

Example: A ship's velocity is -4, -2, 3. During the Movement Phase, the ship is moved on the "X,Z" section four squares "down" (towards the intersection of the two sections), and two squares to the left. The mark is moved on the "X,Y" section two squares to the left and three squares towards the positive end of the "Y" axis.

[4.4] MAP SHIFTING

Although the actual space represented on the display is limited, the area in which a battle is fought is usually not limited. Therefore, if at any time it becomes necessary, the Players may, by mutual agreement, move all ships, torpedoes, mines, etc. on the display a certain number of cubes along one or more axes in one direction. All of the marks should be moved the same number of cubes in the same direction. **Note:** If this is done (even in one direction) the relative positions of all ships will be unchanged.

In other words, the Players might, for instance, change all the "X" axis velocity numbers by three in one direction. This would mean that all ships would have their first velocity number increased (or decreased) by three. Note that this option *cannot* be used in scenarios with mines, unless the mining Player wishes to keep track of how his mines move each turn.

[4.5] ACCELERATION TABLE (see chart sheet)

[4.6] BURN COMPONENTS TABLE (see chart sheet)

[4.7] SQUARE/SQUARE ROOT TABLE (see chart sheet)

[5.0] WARP MOVEMENT

GENERAL RULE:

Most ships enter and exit the position display by *Warp Movement*; i.e., travel through hyperspace that terminates in normal space. Usually only one Player enters by warp movement, but either Player may decide to leave by this means.

CASES:

[5.1] WARPING IN

After the defending Player places his ships on the display, the attacking Player's ships "warp in," subject to these limitations: (1) each attacking ship must be placed within two cubes of another attacking ship; (2) all attacking ships must be in a single group; (3) attacking ships begin with velocity numbers of 0,0,0; and (4) the attacker's ships may not fire lasers, use tractor-pressor beams, use defensive screens, or salvo torpedoes until *after* the Movement Phase of the second Game-Turn. **Note:** This means that the attacker will usually warp in at twenty-five or more cubes out from the nearest of the defender's ships, that is, out of range.

[5.2] WARPING OUT

At any time during the game, either Player may decide to "Warp Out" (i.e., leave the display via hyperspace) any of his ships whose warp drives have not been destroyed. A Player might decide to warp out ships to prevent their destruction or to leave a hopeless situation. After a Player announces that a ship is going to warp out, that ship must meet these conditions:

- the ship does not end either of the two following Joint Movement Phases within three cubes of any Enemy ship or torpedo;

- the ship is not hit by a laser or torpedo or mine detonation during the following two Laser Combat and Detonation Phases;

- once the above two conditions are met, the ship is removed from the map during the next Joint Movement Phase; it is now considered to have warped out.

Note: If these conditions are not met, the ship attempting to warp out may again attempt to warp out, beginning with the next Game-Turn.

[6.0] LASER COMBAT

GENERAL RULE:

During the Laser Combat Phase, all ships with laser pods are given the opportunity to fire on Enemy ships or torpedoes. The Players fire their ships' lasers alternately — first one Player fires all the lasers on one ship, then the other Player fires all the lasers on one of his ships — until all ships' lasers have been fired.

CASES:

[6.1] DISTANCE DETERMINATION

Before a ship fires on its target, the Players must determine the distance (in cubes) between the firing ship and its target. This is done as follows:

- First, determine the difference in position along the "X" axis by counting the number of squares between the two ships' marks in the "X" direction on the "X,Y" display. Then determine the difference in position along the "Y" and "Z" axes.

- Square each of these three numbers (see Square/Square Root Table).

- Add the three squared numbers together to form a single number.

- Refer to the Square/Square Root Table. Find the total along the left-hand column of the table. Read across to the right-hand column; the number listed in the right-hand column will be the true distance between the two ships.

Example: Ship A is at position 5,3,8 on the position display. Ship B is at 15,7,1. The distance along the "X" axis is 10 (15 - 5 = 10); the distance along the "Y" axis is 4 (7 - 3 = 4); the distance along the "Z" axis is 7 (8 - 1 = 7). Ten squared is 100; 4 squared is 16; and 7 squared is 49. 100 + 16 + 49 = 165. Referring to the Square/Square Root Table, we find that the square root of 165 is roughly 13; therefore, the distance between ship A and ship B is 13 cubes.

[6.2] HITTING TARGETS AND DAMAGE

The range of a ship's laser depends on the technology level for that laser (see 10.0). The range of a laser is its tech level times five. A ship may only fire at a target if the target is within its range. Thus a tech level one laser could fire only at a target within five cubes, and so forth.

If a ship fires at a target, refer to the Laser Hit Probability Table. Find the laser's tech level at the top of the table; read down the column determined by the tech level until you find the range between the firing ship and its target. Once this range is found, read across to the left-hand column of the table, where a number between one and five will be listed. Roll a single die; if the number rolled is *less than or equal to* the number found on the chart, the firing ship has hit its target.

If a firing ship hits its target, refer to the Damage Table. Roll two dice and total the numbers rolled; find the number rolled along the left-hand column of the Damage Table and read across to yield a result. If the target is a torpedo, the torpedo is destroyed if the result is parenthesized, but is unaf-

affected otherwise. The Player who owns the target ship must indicate any damage his ship has taken on its battle record (see Case 12.1).

If the ship suffers a "pod" result, the Players must refer to the Pod Destruction Table. Determine the size of the ship (6,9, or 12-pod) and find it along the top of the Pod Destruction Table. Then, roll one or two dice (as required by the table) to determine which of the ship's pods is destroyed. If a pod which has been previously destroyed is hit again, the section of the ship which it was attached to (warp, maneuver, power plant) is hit instead.

If the result listed is a section (either warp drive, maneuver drive, or powerplant) of the prime component, the marker for that section is advanced one box along the damage track. When a marker has reached the end of its section's damage track, and the section is hit again, the marker is flipped over. Thereafter, the section is considered destroyed. If a destroyed section is hit again, the ship suffers no further result.

[6.3] SEQUENCING OF COMBAT

At the beginning of the Laser Combat Phase, a die is rolled to determine which Player may fire one of his ships' lasers first (one Player may do so if the roll is even, the other if the roll is odd). The indicated Player decides which of his ships is to fire its lasers. He then determines how many laser pods the ship has, and resolves fire from each laser pod separately and independently. A ship may only fire its lasers at a single target, unless the Player has *multi-fire tech level one*, on which case a ship with two or more laser pods could fire at two different targets, or *multi-fire tech level two*, in which case it could fire at three different targets, etc.

Once the first Player has had one of his ships fire all its laser pods, and the other Player has noted any damage his ships take, the second Player may then have one of his ships fire all its lasers. Once this has been completed, the first Player again has the opportunity to have one ship fire, and so forth. The Players alternate firing ships until one Player has fired all his ships, or wishes to fire no more ships, at which time the other Player may have any of his ships which have not fired in the same Combat Phase fire their lasers. Once all ships which can fire their lasers and which their owning Players wish to have fire their lasers have fired, the Laser Combat Phase is over and the next Phase begins. A Player may not "pass" his laser fire during the Combat Phase; if he does not have one of his ships fire its lasers when it is time for him to do so, none of his ships may fire their lasers for the remainder of the Combat Phase.

Note: Each ship may fire only once each Combat Phase.

[6.4] EFFECTS OF COMBAT RESULTS

A ship which has had its power plant destroyed may not fire its lasers or tractor pressors, or salvo any torpedoes for the remainder of the game. A ship which has had its warp drive destroyed may not warp out (see Case 5.2) for the remainder of the game. If a ship's pod is destroyed, that pod may not be used for the remainder of the game.

For each box the maneuver marker has been moved, the ship's *acceleration capacity* is reduced. A 12-pod ship hit in its maneuver drive section has its acceleration capacity reduced by one third (fractions greater than .5 rounded up). A nine-pod ship has its acceleration capacity halved, and a six-pod ship hit has its acceleration capacity reduced to the minimum. The *minimum acceleration capacity* for all ships is one.

Example: A ship with velocity numbers 2,3,-2 which has had its maneuver drive destroyed, could accelerate by one point in any *one* of the numbers. For instance, to 1,3,-2. A ship may accelerate by

this one point, only, for the remainder of the game.

[6.5] MULTI-FIRE

Ordinarily, a ship may fire its lasers at only one target during each Laser Combat Phase, but a Player may purchase (see 10.0) *multi-fire technology* which will allow his ships to fire at more than one target each turn. To find the number of targets that a Player's ships may fire at, add one to the Player's multi-fire tech level. Thus, the ships of a Player with multi-fire tech level three may fire at up to four different targets, while a tech level of zero would allow for one target. A ship may fire each laser only once per turn, so that a tech level of four would not help a ship with one laser.

Note: Multi-fire technology becomes very important in the face of torpedo attacks. A ship with many lasers that can only destroy one of a swarm of torpedoes about to attack is in serious trouble!

[6.6] LASER HIT PROBABILITY TABLE (see chart sheet)

[7.0] TORPEDOES AND MINES

GENERAL RULE:

The main weapons in *Vector Three* besides lasers are torpedoes. Torpedoes may be launched from launch pods in the same way that lasers are fired from laser pods. Launch pods may be of varying tech levels; a given launch pod is capable of carrying as many torpedoes as its tech level. Launch pods may *salvo* either guided torpedoes, unguided torpedoes, or both.

Torpedoes are launched during the Torpedo Salvo Phase. During this Phase, the Players secretly note which of their ships are salvoing torpedoes, how many each ship is salvoing, and what types of torpedoes are being salvoed. Any launching Players subtract their launch pod's tech level from seven, and roll two dice for each torpedo salvoed. If the roll is less than the number obtained above, the torpedo is a dud, and is not placed on the display. Next, both Players' notes are revealed, and marks to represent the torpedoes are drawn on the position display. A torpedo begins in the same cube as the ship which salvoed it. Each launch pod may salvo one torpedo each turn.

Generally, torpedoes move and accelerate in the same way ships do. A torpedo begins with the same three velocity numbers as its salvoing ship. The acceleration capacity of a torpedo depends on the acceleration tech level. Mines are basically torpedoes without engines; they are unable to accelerate. They aren't salvoed and they begin the game "on the board." They cannot be fired upon.

CASES:

[7.1] TORPEDOES

Guided torpedoes move and accelerate normally. Unguided torpedoes accelerate only once, up to their acceleration capacity, during the first Joint Burn Phase after they are salvoed. During the Detonation Phase, the Players may detonate any of their torpedoes.

[7.2] MINES

Mines, unless otherwise indicated in the scenario, are available only to the defender. The locations of any mines are secretly noted by the defender; when one of the attacker's ships or torpedoes comes within the blast radius of a mine, the defender may choose to detonate the mine during the ensuing Detonation Phase. Since mine locations are unknown to the attacker, they cannot be fired

upon with lasers, but they are subject to the effects of torpedoes and other mines.

[7.3] DETONATION

During the Detonation Phase, a die is rolled to determine which Player may detonate a torpedo or mine first; that Player may detonate any one of his torpedoes or mines, if he so wishes and if he has any on the display. Once the effects of his detonation have been resolved, the other Player may detonate one of his torpedoes or mines. The Players alternate detonations in the same manner as laser combat. Players are never required to detonate a torpedo or mine. When a torpedo or mine detonates, it is removed from play.

Torpedoes and mines have a blast radius *equal* to their tech level. Thus, torpedoes and mines of tech level one have a blast radius of one cube on the X,-Y,Z axes (that is, affect all ships within one cube); torpedoes and mines of tech level two affect all ships within two cubes and so forth. Use the procedure outlined in Case 6.1 to determine whether a ship is within a torpedo's blast radius.

If a ship is within a torpedo or mine's blast radius, determine the distance between the ship and the detonating torpedo or mine according to 6.1. Then, subtract the distance from the torpedo's tech level. Add one to the resulting number. Roll on the damage table this number of times, and apply all results to the affected ship. **Note:** Friendly ships, mines, and torpedoes within range of a detonation are also affected. **Example:** A ship is two cubes away from a Tech Level Three torpedo that is detonated. $3 - 2 = 1$; $1 + 1 = 2$. Therefore, roll on the Damage Table twice for the ship.

[8.0] TRACTOR-PRESSOR BEAMS

GENERAL RULE:

Ships equipped with tractor-pressor pods may fire *Tractor-Pressor Beams*. Tractor-pressor beams are a means of: **a)** accelerating Enemy (or Friendly) ships as one wishes; or **b)** using nearby masses to accelerate one's own ship.

During the Tractor-Pressor Phase, the Players alternate having their ships fire tractor-pressor beams in the same way that ships alternate firing lasers during the Laser Combat Phase.

CASES:

[8.1] RANGE

Tractor pressor beams have a range of five times their Tech Level. A ship may use only one Tractor-Pressor pod each turn.

[8.2] EFFECTS OF TRACTOR-PRESSOR BEAMS

During the Tractor-Pressor Phase, a ship equipped with tractor-pressor beams may accelerate another ship (Friendly or Enemy) within range by as many cubes as the tractor-pressor tech level of the Friendly Player. The Enemy ship is accelerated in the same way ships are normally accelerated during the Joint Burn Phase, except that the firing Player is doing the accelerating, and the target ship has no choice in the matter. The firing ship is then accelerated in the *opposite direction* of its target. If a ship with tech level three tractor-pressor beams accelerated an Enemy ship at 3, -1, 0, the firing ship would be accelerated at -3, 1, 0. Thus, when you use tractor-pressor beams to affect an Enemy ship, your own ship is affected to the same extent, being accelerated equally in the opposite direction.

[8.3] LIMITS ON TRACTOR-PRESSOR BEAMS

Torpedoes and mines may never be targets of tractor-pressor beams.



[9.0] DEFENSIVE SCREENS

GENERAL RULE:

Ships with screen generator pods are protected by energy absorbing fields. A screen generator pod affects laser attacks by adding the screen tech level to the firing Player's rolls on the Laser Hit Probability Table. A Player who needs a roll of one, two, or three to hit a ship without a screen would need to roll a one or two to hit if the ship had a screen generator and screen tech level one. A screen generator affects detonations by reducing the number of rolls on the Damage Table by the Player's screen tech level. A ship's screen has no effect upon the ship's own laser fire or torpedo salvoing. Additional screens have no further effect.

[10.0] TECHNOLOGY

GENERAL RULE:

Depending on the scenario being played, the Players will initially have a certain number of *Technology Points*. With these points, the Players secretly and independently determine what the tech levels each will have in the various categories.

There are **nine** categories under which Technology Points may be expended: acceleration; lasers; launch pods; mines; unguided torpedoes; guided torpedoes; multi-fire; tractor-pressor beams; and defensive screens. Each Player determines what his tech level in each of these categories will be by expending Technology Points in the categories. The cost to purchase a tech level in any given category is indicated on the Technology Table.

Example: A Player has 80 Technology Points in a scenario. He decides to allocate 20 points to acceleration, giving him acceleration tech level three; five points to launch pods, giving him launch tech level one; 45 points to guided torpedoes, giving him guided torpedo tech level three; and ten points to lasers, giving him laser tech level two.

Note: A Player is unable to purchase shield, launch or tractor-pressor pods, or torpedoes or mines, unless he purchases *at least* tech level one in those categories. Players automatically have tech level one in acceleration and lasers, unless they expend points to acquire higher tech levels in those categories.

The effects of tech levels in a given category are indicated in the applicable rules. An exception is acceleration. The acceleration capacities of the various ships and missiles are determined by their acceleration tech level. See the Acceleration Table.

[11.0] SHIP POINTS

GENERAL RULE:

In addition to being given Technology Points, each Player is given *Ship Points*. Ship Points are used to purchase prime components, pods, torpedoes, and mines. The costs for these are independent of and bear no relation to the cost of technology. Technology Points are used to purchase technology, and Ship Points to purchase ships. All ships use whatever tech level acceleration the Player purchases with his Technology Points; all lasers use the tech level he purchases, etc.

Each ship must be outfitted with pods. All six-pod ships must have at least four cabin pods; all nine-pod ships must have at least five cabin pods; all twelve-pod ships must have at least six cabin pods. The remaining pods may be of any types, given the technology to build them. A ship must be fitted with pods. Dummy pods may be bought, but the number of pods on a ship *must equal* the total number for that ship. Launch pods must be outfitted with torpedoes. A launch pod may begin the game with as many torpedoes as twice the Player's

launch tech level. (Extra Ship Points are expended to purchase torpedoes).

Each Player allocates his Ship Points to purchase his ships, and places a marker on the battle record for each one. The Players are *not* required to tell each other what technologies they have purchased until the end of the game. If a Player uses a technology higher than he has purchased, he forfeits the game. Similarly, Players are not required to tell each other what pod types each ship is carrying during the game. In fact, the use of cargo pods as fakes does not have to be revealed. However, the Players *must* let each other know the size of each ship, and how many pods it is carrying.

[11.1] SHIP COST TABLE

(see chart sheet)

[11.2] TECHNOLOGY TABLE

(see chart sheet)

[12.0] SHIP BATTLE RECORDS

GENERAL RULE:

Interstellar ships in the Gilgamesh Cluster are, with few exceptions, built along standardized lines. The prime components have either six, nine, or 12 (these being standard) "jacks" along their surface. A pod can be attached to each jack. Since pods are clustered around the exterior of the ship, they are the most vulnerable part of the ship, and most likely to be damaged in combat.

CASES:

[12.1] BATTLE RECORDS

The Battle Record is the illustration of ships, printed on the back of the cover illo. Before the game begins, each Player must place markers representing the pods he has purchased around ships on the Battle Record — use the appropriate section of the Battle Record for 6, 9, and 12-pod ships. Place Warp, Maneuver, and Power Plant markers on the Damage Track of the ship, in the central "prime component" part of the ship display. **Note:** No dummy or cabin pod markers are included with the game. Leave a pod area blank if it contains a cabin pod; if dummy pods are used, place any pod in the pod area, but turn the marker 180°, so that the type on the marker is facing the opposite direction from the type on all other markers around the ship. If they wish, Players may keep the Battle Records secret from one another (so the Players' don't know what each others' ships are armed with).

[12.2] TAKING DAMAGE

When a pod is destroyed, flip the pod marker on the Battle Record upside down (if the pod was a cabin pod, place an upside-down marker in the pod area). Each time a Warp, Maneuver, or Power section takes damage, advance the appropriate marker one box on the Damage Track in the prime component; if the marker is at the end of the track, flip it over (note that markers are always at the end of the track in 6-pod ships). Flipped over markers indicate the section is destroyed.

[12.3] TORPEDOES EXPENDITURE

Players must keep track of the number of torpedoes contained in each launch pod, and the number launched, on a piece of scrap paper.

[12.4] DAMAGE TABLE

(see chart sheet)

[12.5] POD DESTRUCTION TABLE

(see chart sheet)

[13.0] SCENARIOS

GENERAL RULE:

The following scenarios are only a beginning, for

Vector 3 is only as limited as your imagination. It is suggested, however, that Players begin with the learning scenario. Unless otherwise stated, one Player is considered to be the defender and initially places his ships (with a velocity of 0,0,0) on the position display as he pleases. The other Player is considered the attacker and warps into the position display. This occurs during the Movement Phase of the first Game-Turn. **Note:** To speed play, at the loss of some complexity, Players may decide to play a scenario in only the "X,Y" plane, and ignore the third dimension entirely. Thereafter, in all distance calculations, the "Z" component is zero.

CASES:

[13.1] LEARNING SCENARIO

Both the attacking and defending Players receive 25 Technology Points and 48 Ship Points. Torpedoes, multi-fire, mines, defensive screens and tractor-pressors are not used.

[13.2] BASIC SCENARIO

The attacking Player has 60 Technology Points and 130 Ship Points. The defending Player has 70 Technology Points and 110 Ship Points. Mines and unguided torpedoes are not used.

[13.3] INTERMEDIATE SCENARIO

The attacking Player has 100 Technology Points and 200 Ship Points. The defending Player has 120 Technology Points and 170 Ship Points. Mines may not be used.

[13.4] ADVANCED SCENARIO

The attacking Player has 160 Technology Points and 300 Ship Points. The defending Player has 200 Technology Points and 250 Ship Points. All technologies may be used. **Note:** This scenario requires two copies of the game.

[14.0] VICTORY CONDITIONS

GENERAL RULE:

When all of one Player's ships have been destroyed, or have left the position display via warp drive, total each Player's Victory Points (see following schedules). The Player with the greater Victory Point Total is the winner. If both Victory Point Totals are the same, the game is a draw.

CASES:

[14.1] ATTACKING PLAYER SCHEDULE

The attacking Player receives:

- 5 Victory Points for each Enemy ship destroyed.
- 1 Victory Point for each pod destroyed on an undestroyed ship.
- 10 Victory Points if there are no defending ships on the position display at the end of the game.

[14.2] DEFENDING PLAYER SCHEDULE

The defending Player receives:

- 7 Victory Points for each Enemy ship destroyed.
- 1 Victory Point for each pod destroyed on an undestroyed Enemy ship.
- 8 Victory Points if there are no attacking ships on the position display at the end of the game.

DESIGN CREDITS:

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VECTOR 3 TABLES

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[4.5] ACCELERATION TABLE

TECH LEVEL	Vessel Size (pods)			Torpedo	
	6	9	12	G	U
1	2	2	1	3	4
2	3	2	2	4	5
3	4	3	2	5	6
4	5	4	3	6	6

Results are rates of acceleration/deceleration (in terms of cubes). G = Guided; U = Unguided.

[4.6] BURN COMPONENTS TABLE

POINTS EXPENDED	Component(s) change		
	One	Two	Three
1	1	1,1	-
2	2	2,1	1,1,1 2,1,1
3	3	2,2 3,1	2,2,1 2,2,2 3,1,1
4	4	3,2 3,3 4,1 4,2	3,2,1 3,2,2 3,3,1 4,1,1
5	5	4,3 5,1 5,2	3,3,2 3,3,3 4,2,1 4,2,2 4,3,1 4,3,2 5,1,1 5,2,1
6	6	4,4 5,3 5,4 6,1 6,2	4,3,3 4,4,1 4,4,2 4,4,3 5,2,2 5,3,1 5,3,2 5,4,1 5,4,2 6,1,1 6,2,1

[6.6] LASER HIT PROBABILITY TABLE

Hit Nr.	Technology Level				
	1	2	3	4	5
5	1	1-2	1-3	1-4	1-5
4	2	3-4	4-6	5-8	6-10
3	3	5-6	7-9	9-12	11-15
2	4	7-8	10-12	13-16	16-20
1	5	9-10	13-15	17-20	21-25

Cross-reference ranges listed with technology level to determine Hit Nr. Roll one die; a die roll less than or equal to the die roll results in a hit.

[4.7] SQUARE/SQUARE ROOT TABLE

Nr.	Square	Nr.	Square Root
1	1	0	0
2	4	1-2	1
3	9	3-6	2
4	16	7-12	3
5	25	13-20	4
6	36	21-30	5
7	49	31-42	6
8	64	43-56	7
9	81	57-72	8
10	100	73-90	9
11	121	91-110	10
12	144	111-132	11
13	169	133-156	12
14	196	157-182	13
15	225	183-210	14
16	256	211-240	15
17	289	241-272	16
18	324	273-306	17
19	361	307-342	18
20	400	343-380	19
21	441	381-420	20
22	484	421-462	21
23	529	463-506	22
24	576	507-552	23
25	625	553-600	24
		601-650	25

[12.4] DAMAGE TABLE

DICE	damage
(2)	See note.
(3)	Maneuver drive
(4-7)	Pod
8-10	Pod
11	Warp drive
12	Power plant

Note: If a 2 is rolled, roll one die again; a second die roll of 1 = target destroyed; 2-6 = no effect. Parenthesized dice rolls indicate that, if target is a torpedo, target is destroyed; any other result against a torpedo is no effect.

[12.5] POD DESTRUCTION TABLE

DIE #1	6-pod	DIE #2	9-pod	12-pod
1	1	1-3 4-6	1 2	1 2
2	2	1-3 4-6	3 4	3 4
3	3	1-3 4-6	5 6	5 6
4	4	1-3 4-6	7 8	7 8
5	5	1-3 4-6	9 *	9 10
6	6	1-3 4-6	* *	11 12

* = roll again. Results are the number of the pod destroyed.

[11.1] SHIP COST TABLE

Article:	Ship Points (including min. cabin costs)
Prime Components	
6-pod (4 cabins):	16
9-pod (5 cabins):	32
12-pod (6 cabins):	48

Article:	Ship Points
Pods	
Cargo (dummy):	1
Cabin:	2
Laser:	4
Screen:	8
Launch:	5
Tractor-pressor:	6
Expendables	
Guided Torpedoes:	2
Unguided Torpedoes:	1
Mines:	1

[11.2] TECHNOLOGY TABLE

Level	Acc	Las	Lnc	Mine	UT	GT	MF	TP	Scrn
1	0	0	5	5	10	20	10	20	40
2	15	10	10	10	20	30	20	30	90
3	30	20	20	15	30	45	35	45	-
4	60	40	40	20	40	70	55	60	-
5	-	80	80	25	50	90	80	90	-

Acc = Acceleration; Las = Laser; UT = Unguided torpedoes; GT = Guided torpedoes; TP Tractor-pressor; Scrn = Screen. Values represent number of Technology Points required.