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TITLE : STARSHIP COMBAT (HOUSE RULE)
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CREDITS

Goes to Bob Sanders who gave me the idea to write these rules. Much here is actually his idea (I have tweaked them a little). Credits go for inventing the fine game Harpoon, which these rules are based upon play testers: Randolph Arnesen (randolf@sn.no), Bjørn Hallen, and Frode (flinblo@sn.no). The biggest credit goes to the inventor of the greatest game ever made: Marc Miller. Without this game I have had such fine roleplaying games.

DISCLAIMER

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PURPOSE OF DOCUMENT

The main purpose of this document is to make a faster and more exciting starship combat within the existing rules of Brilliant Lances and Battlestar. The purpose is also to make it possible to combine large ship action with smaller ship action into a seamless integrated system. Something BL and BR fails to do. The differences between BL/BR combat and this is the damage system and fire control system. From that most things are as usual.

DO I NEED BL OR BR?

You will need BL for counters and map sheets. Else these rules are self contained and uses many of the rules and features from BL. So are you familiar to Traveller it should be easy to get into. If you got questions you may e-mail me at starwolf@sn.no.

BASIC ASSUMPTIONS

To use these house rules fully you must understand some assumptions about starships and how they are designed. Power plants for instance can have more than one reactor. The reason for this is that when the PP need main power it is possible to have enough power to supply vital systems while one or more are taken off line. It also makes sense in a combat perspective. As a rule

of 100 displacement ton or larger has one reactor for each gee of maneuver +1, or 1 reactor per 2 gee +1 for thruster based crafts. Minimum one more reactor. And we assume that each reactor delivers 1/xth of power. Where x is the number of reactors. Each critical hit brings one reactor offline.

Likewise maneuver drives are divided up in several sub components. This is that most crafts got several exhaust ports or thruster platforms on different portion of the ship to give stability and makes it faster and more maneuverable in any direction.

Another assumption is that the craft do not spin. The reason for this is stability considerations. If some thruster ports get damaged stability will be affected and a vector change is needed.

HULL FACTORS

CRAFT DAMAGE CAPACITY

A craft has hitpoints equal to (HP) = Square root of ship volume (logarithm of ship tonnage). Add 1 percent per armor level and 10 percent per maneuver gee. Round to nearest whole number. A 200 displacement ton craft with 30 points of armor and 2g drive will have 183 damage points.

$$HP = (\sqrt{2800} * \log_{10}(200)) + (30 + 20) = 182.63 \sim 183.$$

If the craft got only a fraction of a gee in maneuver, multiply this number by the maneuver gee and add the number as percent to base hit points.

DAMAGE EFFECTS ON MANEUVER

As the hull structure receives damage, the structural strength of the hull is reduced large enough to maintain full thrust. For each 25% of damage to structure, the maneuver is reduced with 25%. Unless the drive has received any damage there is no effect on maneuver. More on that later. When there is only 10% HP left the drive is not used at all.

Lets take this 200 dt craft as an example: At 183 HP it can give 2g (75%) it can give 1.5g. At 92hp (50%) it can give 1g. And at 46hp (25%) it can give 0.5g. And at 18hp (10%) the craft is dead in space. When calculating for each level round to nearest whole number. For maneuver gee round to nearest .25g.

Jumpdrive are not affected by this.

When the hull receives damage certain areas of the craft will be subject to the referees discretion. However all the ship is considered in vacuum conditions when 50% or less HPs left. Neither may spinal mounts be fired if there is less than 50% left.

HP Left Maneuver left Other effects

100%	100%	
75%	75%	
50%	50%	Atmospheric pressure lost, 10% crew loss
25%	25%	Can't fire spinal mount
10%	0%	Unable to fight. Dead in Space.

FIGHTERS

Fighters may be combined into flights. A typical flight is 10 crafts the fighters should have the same maneuver g rating. Add together to And add up total damage by their fixed weapons firing forward. if th addition add them into a separate value. All forward fixed weapons c attack the same target. Multiply this value with .75, this is the d regular success. On a spectacular success full damage is given. The may be divided up to attack multiple targets, but no more targets t available.

As for single crafts a fighter flight is subject to the same damage limitations. With the exception that when there is only 25% or less unit cease to exist as a combat unit and is removed from play. This all the fighters are lost, but most crafts has gotten too much dama fight.

WEA PON SYSTEMS

LASER TURRETS

When lasers (in general) do damage with their damage value. Don't bo penetration value against crafts. This is used against sand. Laser t combined into batteries. A battery may only be controlled from a MF may be formed in any configuration, and even reconfigured during pla minutes to do so. That means one whole turn without any fire from a

As these rules do not take into account the damage location system are no need to assign hull locations for laser turrets. But there is turrets that may attack a target(s) through a single hex side.

DisplacemenBearing

under 2000	100%
20000	95%
30000	90%
40000	85%
50000	80%
60000	75%
80000	70%
100000	65%

300000	55%
400000	50%
Over 400000	45%

If the craft got turret extenders add 10% to the bearing value for extenders. There is one exception to the table above and that is, the turrets bearing aft. Bay weapons do only have bearing to the sides. If bays are bearing to the sides regardless of size of craft.

Point defense weapons may not be combined into batteries. Neither a

MESON GUNS

Meson guns do their listed damage value. But subtract any meson score any damage is given. Meson guns also do 2 additional critical hit points

PARTICLE ACCELERATORS

They do their listed amount of damage. They are affected by sand, and critical hits.

SANDCASTERS

They work as the BL rules states, but before any firing is declared hex sides. Add up all armor levels to each side defended. The bearing for sandcasters as for laser turrets and barbettes. When lasers hit penetration value from the weapon to see how many damage points got before the laser hits the hull.

Example: A craft is protected by 45 sand points. A laser with the damage 1/8-24 loses 6 points of damage by burning through the sand. The sand does also lose 6 point of protection this turn and goes down to 39

BLACK GLOBES

As BL rules.

NUCLEAR DAMPERS

Nuclear dampers in these rules attack hexes, and has the ability to stop missiles in one shot. However the dampers may only target one missile effort to stop missiles from detonating. Unless otherwise is stated damper got a range of one hex. The hit difficulty is Difficult at all DMs. On a normal success 1D6*1D6 (rounding up) percent of the missiles stopped. On an outstanding success double this.

CREW CONSIDERATIONS

SKILL

The crew skill level will be the main factor that determines whether loose. You may use the skills given to playing characters or the crew solving tasks. There is also two new skill uses in these rules. And and Fleet tactics.

TACTICS POOLS

Both Fleet Tactics and Ship Tactics (FT and ST) should be gathered Which then ships can draw points from and use to various things. Movement and evading.

Determining pools

Pools are administrated like this. ST comes from each individual ship used on that ship. The ship captain provides these. FT can be spent fleet, limited to those in line of communication. The fleet commander However if a fleet is organized in squadrons, each squadron leader on the ship under his command, limited to those in communication, and spend FT points from the fleet commander. In this last example FT points down in the command chain.

Administrating points

In the plotting phase there is determined how many tactics points to the different pools. Tactics points may be used for determining who hand in movement (see below). and evasion manoeuvres. The last may points. However there is a limit to the ST points. Whenever a ship any the skill asset is reduced by one. This will make any evasive manoeuvres more difficult, but this is to simulate that attention gets spread different tasks by the ship captain and the crew.

PROCEDURE

TURN SEQUENCE

Launching phase

Plotting phase

Ship movement phase

Missile movement phase

Sensor declaration phase

Sensor detection phase

Beam weapon fire phase

Critical hit resolution phase

Repair phase

LAUNCHING PHASE

In this phase all missiles and fighters are launched. So are also any launched units (missiles, fighters and pods) has the same direction as the launching craft.

PLOTTING PHASE

In this phase the following items are resolved secretly: Maneuvers, to be active/passive or jamming), evasions, and sand deployment. When a player has decided for what to do proceed to movement phase, and execute all

Plotting movement

At the beginning of each turn players determine order of movement. The most highly skilled ship or fleet tacticians get a upper hand. But not only tactics skill are important. Ship velocity and g-rating also part. To find who moves first subtract available g-rating (as modified from current velocity. (this may be a negative number). Subtract a point used from the ships captain or from the fleet pool. This is the lower the number the better it is. The ship that ends up with the lowest moves first. Then the next highest and so on. In case of a tie the ship with the lowest gravity signature moves first.

Fighter flights follow the same rules as above, but is subject for only part of it. However add one for every second fighter in the fleet. That there is more difficult to coordinate and handle formations in decreasing the initiative potential.

Thrust points may be used for either acceleration, deceleration, vectoring or dodging. To change heading it cost $\frac{1}{2}$ a thrust point per facing direction. E.g. a craft going at speed 4 will need 2 thrust points to turn 30°, which means one facing direction to either left or right. Missiles move the same way as other crafts.

If there is not enough thrust points left to do a complete course change they may be saved up until a course change is possible. Thrust points do not get saved up. (This is due to the damage system). However to increase or decrease only whole thrust points may be used.

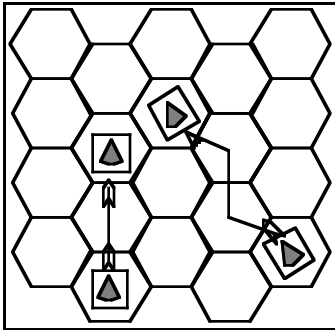
Sensor plotting

Each ship or player decides if they are going to go active or passive. Antennas are either folded or extracted in this phase. Note that ships with folded arrays may not do evasive actions, but may maneuver as usual.

Sand plotting

Sand screens from sandcasters are also decided. Note that any sand : turn is discarded. This sand will follow the ship through the turn. deployed at hex sides. However if an evasive maneuver is failed half each side. On an outstanding failure all the sand is lost.

SHIP MOVEMENT PHASE



Ships are moved according to their plotted courses. changes takes immediate effect and is considered to whole turn. Mid-course corrections are with other possible.

When facing a verticle we move alternately left an the verticles, as shown on the picture to the left movement ended diagonally to the left, the next turn start diagonally to the right. Or vice-versa.

Evasion

Ships may evade to make sensor and firing tasks against them more di Impossible task against starship tactics. The task becomes one level each gee spent on the task. Thus 2G spent make the task Difficult. success all tasks for sensor and weapons become one level more diffi Outstanding success means that all sensor and firing tasks becomes c difficult for every two gee spent rounding down. This 1,2 and three difficulty with one level, while 4 and 5G makes it 2 levels more dif 7G makes it three levels more difficult. On an Outstanding failure t fails so miserably that all sensor and firing tasks to the attempti: one level in difficulty.

Facing

A craft may point its nose in a different direction than it is trav words we differ between heading and facing. Heading is the direction facing is the direction of the nose of the craft. To find the final follow these guidelines:

- ⇒If G-turns were used to accelerate (increase velocity), the base f the craft's heading.
- ⇒If G-turns were used to decelerate (decrease velocity), the base f heading number+6
- ⇒If G-turns were used to change heading to starboard, the base faci number at the beginning of the turn (before the heading change) +3
- ⇒If G-turns were used to change heading to port, the base facing is at the beginning of the turn (before the heading change).
- ⇒If G-turns were used for evasion only, there is no base facing, s

- ⇒ If no G-turns were used for any purpose, there is no base facing,
- ⇒ If G-turns were used for more than one type of maneuver (e.g. acceleration heading change), use the base facing resulting from the purpose for which the G-turns were spent. In case of a tie, the player chooses the base facing for the purposes.
- ⇒ If G-turns were used for maneuver and evasion, use the base facing from the evasion maneuver, and proceed to the next step.

Deviation: Once the base facing is established, determine the amount of deviation from that facing that the player has when choosing the craft's final facing.

Deviation is determined by the number of G-turns used for maneuver (not evasion) as a proportion of the craft's current Grating. (Current G-rating includes damage that has reduced performance from the undamaged G-rating.)

- ⇒ If G-turns equal to the current G-rating were used, final facing must be within base facing ± 4 .
- ⇒ If G-turns equal to more than half of the current G-rating but less than the current G-rating were used, final facing must be within base facing ± 2 .
- ⇒ If G-turns greater than zero but less than half of the current G-rating were used, final facing must be within base facing ± 4 .
- ⇒ No G-Turns Spent. In cases where there is no base facing because no G-turns were spent, the player is not subject to deviation limits and may select any final facing.

Overdrive

Even though the hull has taken damage so that the gee limit is lower, use the maneuver drives to their max. However there is a risk that further damage will result from this. The base difficulty to overdrive is Difficult (Astrogation (TNE skill, Use pilot for T4 or MT) for one 25% step at a time. Increase difficulty for each subsequent step. See table below. All crafts do use all its designated gee, but it takes $(1D6+xG)\%$ damage to the hull HP. On an Outstanding failure it takes double damage, and a Critical failure is spine crack. If the spine crack the craft is effectively DIS. The difficulty to crack is 1 on a D6. Roll one D6 for each overdrive step.

% hull left	Difficulty by drive			
	25%	50%	75%	100%
100%	-	-	-	-
75%	-	-	-	Diff
50%	-	-	Diff	Form
25%	-	Diff	Form	Imp

Example: A craft has 4G drive, and is damaged to 50% of hull structure. This means that the craft can use 2G safely. If the craft decides to overdrive one step (3G), which is at 75% of drive capacity. This is one step up, and the task is then Difficult. Captain fails his task roll and rolls a Critical.

The roll is 3. And we add 3 to this because he used 3G thrust this time. 6% on the remaining hull structure is damaged. Do also check for critical failure.

MISSILE MOVEMENT PHASE

Missiles move just as spacecraft's, with the same rules and limitations. A turret or barbette may control only one missile, while a MFD can control multiple.

One limitation is that controlled and independent missiles may only with a lock on. And independent missiles will coast forward if it do to follow, until it leaves the game board, or gets a track in the se

If a missile (or a swarm of missiles) crosses a path that an opposi the controlling player intends to attack, put both missiles and the back to their starting points and move them towards their ending p propotional movement table below.

Velocity	Propotional movement									
	1	2	3	4	5	6	7	8	9	10
1	-	-	-	-	M	-	-	-	-	-
2	-	-	M	-	-	-	-	M	-	-
3	-	-	M	-	-	M	-	-	M	-
4	-	M	-	-	M	-	M	-	-	M
5	-	M	-	M	-	M	-	M	-	M
6	M	-	M	-	M	M	-	M	-	M
7	M	-	M	M	-	M	M	-	M	M
8	M	-	M	M	M	M	-	M	M	M
9	M	M	M	M	-	M	M	M	M	M
10	M	M	M	M	M	M	M	M	M	M

For craft with a velocity greater than 10, use the line for velocity in excess of 10. For example a craft with speed and 10 line. In step 3 the craft will move twice. Missile on closest approach, so if a craft starts to move away, detonate before additional hexes are moved.

SENSOR DETECTION PHASE

There are basically 2 types of sensors in BL, and this house rule s active and passive sensors. It is necessary to obtain a sensor lock track. For fire resolution for direct fire weapons there is necessa: sensor lock. But it is okay with a passive sensor lock to guide a m own guidance, near to the target so that the missile tracking device

Difficulty levels and modifiers

The base difficulty for short range is Easy, and is increasing with range band. There is not possible to detect anything beyond extreme various modifiers to the task difficulty.

Target Size	Displacement	Diff mod vs Sensors	Diff mod vs fire
SM (Sub-Micro)	Less than 1	+2	+1
MC (Micro)	1-9	+1	+1
VS (Very Small)	10-99	-	-
S (Small)	100-999	-1	-1
M (Medium)	1000-9999	-2	-2
L (Large)	10000-99999	-3	-3
VL (Very Large)	100000-999999	-4	-4
G (Gigantic)	1000000	-5	-5

Ships has 5 types of modifiers that goes against sensors and incoming modifiers are: Radar, Act EMS, HRT, Pass EMS and Fire. Ships with E also have these modifiers: +2,+1,+2, and +1, in the above mentioned

Ships that use thrusters do also got +1 against HRT and +2 against ships that has heplar or fusion rocket as auxiliary drive loses the rounds if these engines has been used just prior to combat or if the the combat.

Planets and asteroids do also increase the difficulty with one level the same hex as one. We assume that the craft takes the best possible planet for coverage.

If a ship goes active it is one level more easy to detect him with Jammers makes it also one level more easy to detect a given target. extended folding arrays are one level more easy to detect with active got one level more difficult to maintain lock if the target got a sa

Jammers

There are two types of jamming; area jamming and deception jamming. detecting attempts that's trace its path through a hex that are within of an area jammer are increased by one level of difficulty.

Deception jamming is an active attempt to deceive the opponent to be craft is heading, facing and accelerating/evading in a different manner sensing unit sees. The difficulty for jamming is Difficult + the difference between the jamming unit and the jammed unit.

Densitometers

A difference to BL, densitometers may be used as a detecting sensor give direction, not range or course. This can be useful for double blind roleplaying sessions. Take the square root of the loaded weight of the down. This is the gravity signature. This signature is halved (rounded for each hex from the unit to the sensing unit. When it reaches 1 it -1, -2, -4, -8 and so on. Detection is regarded as automatic if the The base difficulty is Difficult and is one level more easy for a ship levels if the signature is 2. And increasingly more difficult as the negative numbers.

If one or more ships occupy the same hex, add their weight and find detect that there is multiple targets in the hex is a Formidable target occupy a hex with a planet or asteroid the detection attempt gets 1 if the crafts signature are large enough to reach the sensing unit.

Procedure

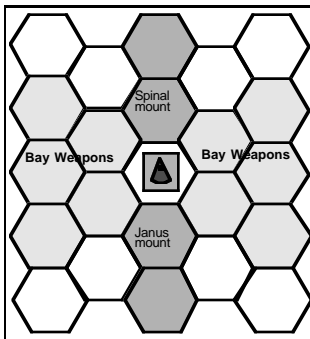
Each player now declares if they are active or passive jamming in or plotted in their plotting phase. Now any jamming attempts may be is detection attempts by active sensors.

Sensing units declares who they try to get a lock on to, and with w The defending unit then declares what kind of modifiers the target g unit then adds these to his modifiers and roll the task. If the uni the task is one level less difficult.

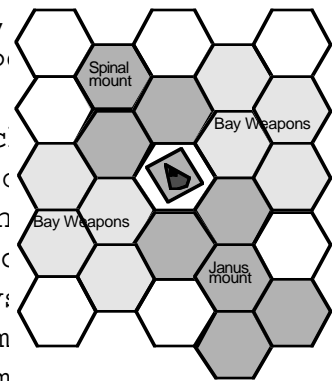
Missile tracking

In order for missiles to hit the target must either the missile or t have a lock on the target. Missiles has the same skill as the firing target tracking and hitting if it is not controlled. Independent mis its track or do not have a track may only move straight forward.

COMBAT PHASE



All combat happens simultaneous, exception. Nuclear dampers and p lasers may try to shot missiles do any damage. Weapons may attac target limited by their range, l The base difficulty to hit anyth range is Average. This may be mo target size, evasive action, phys hexes and so on. MFD's do also m task difficulty, but it cannot m difficult than the base difficulty.



Weapons are limited to their firing arcs (as shown on the above pict turrets that got bearing all around, limited to the rules stated abo

The task difficulty start at Average difficulty at short range and . step for each range band. Physical hex range do also increase the di per 3 hexes. There are no increase in difficulty for range 0 to 2 he level more difficult for hexes 3 to 5, and so on. In addition does t and MFD DMs include in the overall task difficulty. MFDs may not de difficulty, but it may negate a certain number of task difficulty in

Missiles

Missile hit tasks are rolled with fixed difficulty if Difficult, usi controlling character, or the skill of the firing character dependin missile was controlled or not during its flight.

CRITICAL HIT RESOLUTION PHASE

How

Crafts take damage each time they are hit. Lasers use damage rating penetration value. PAWs and Meson guns do straight damage from their rating. These damage numbers are subtracted from the structure HP value.

Critical hits

As a craft receives punishment the chance of a critical hit increases. When you get a critical hit you must find the damage ratio.

Damage Ratio: Total Damage received in a turn is divided by the remaining HP points.

Ratio = Damage received that turn divided by (Damage remaining - Damage that turn) That gives you a ratio. Apply that ratio to the chart below.

Ratio\Die	1	2	3	4	5	6
less than .1						0
.1	0	0	0	0	0	1
.2						2
.3	0	0	0	1	2	3
.4						4
.5	0	1	2	3	4	5
.6						6
.7	2	3	4	5	6	7
.8						8
.9	4	5	6	7	8	9
1.0						10
1.1	6	7	8	9	10	11
1.2				1	1	12
1.3	8	9	10	11	12	**

Meson guns do +2 critical hits and PAWs-2 critical hits. ** means still alive.

Each ship should also have a "personalized" hit chart designed. This is simple. Look at this example below:

Hit loc\Ship	Vol	2800	1D20
Engineer	800		1-6
Weapons	126		7
Quarters	800		8-13
Hold	100		14-19
Electronics	74		20

I have taken the percentage of the main sections and found how much out on a D20. As you see from the table Engineering section is at 80 hit on 1-6 on a D20.

Hits by section

1D10	Engineering	Electronics	Quarters	Hold
	Jump Drive	Def screen	Ship's Troop	Lab/Hangar
2	Jump Drive	ECM	Ship's Troop	Lab/Hangar crew
	FPP	Comm	Sick bay/LI	MES
4	Power Plant	Comm	Life Support	Cargo
	Power Pla	Sensor	Life Suppo	Cargo
6	Power Plant	Sensor	ELS	Cargo
	Man Drive	MFD	DCP	Cargo/Fuel*
8	Eng Crew	Computer	Grav Comp	Cargo/Fuel*
	Eng Crew	Computer	Staterooms	Fuel
10	Contra-Grav	Bridge Crew	Staterooms	Fuel

If the rolled result is not a feature on the ship reroll. *Cargo/Fuel the craft got Thrusters, and a Fuel hit if it uses fusion rocket or

Detailed damage

For detailed damage roll on the tables given in BL with these exceptions. Hits to weaponry will also disable its crew. Or at least 2D6 crew if crew numbers.

If there is scored a hit against weaponry and the craft got a spin roll of 10 on a D10. And thus disabling the gun.

Each critical hit against crew disables or kills 1D6 crew. Meson and disables/kills 2D6 crew.

For each critical against cargo it is lost 1D10 Kl cargo.

Hits to maneuver drive bumps it down 25% in effectiveness.

Each hit to a jump drive reduces the jump distance with one.

Each hit against the powerplant takes down one reactor.

For each fuel hit it is lost 1D10 Kl fuel.

Fuel hits increases the chance of a fuel explosion. Add up all fuel Roll a 1D20. If this roll is equal to or less than the number of fuel

this turn, the fuel tank explodes doing 1D10 times K1 fuel lost damage HP. Recalculate critical hits according to rules mentioned above.

DAMAGE CONTROL

Many of the critical hits may be repaired while in combat or in space systems may be repaired outside dock: Powerplant, maneuverdrive, sensor hits (may not be attempted during combat), weapons. The reason that not mentioned is that the Zuchai crystals are too unstable to be repaired damage, unless there is a supply ship or dock nearby. Damage control: half the engineer crew and all the maintenance crew.

Procedure

There may only be up to 3 damage control crew per repair assignment bring something on-line in combat is formidable. If the combat is over down to difficult. Each crew member assigned to the repair gives -1

An electronic shop reduces the difficulty with one on the following computers and gravity controls. Mechanical shop deals with the rest

Each repair attempt takes one combat turn. If a system is not up in unrepairable until the craft can get to a dock.

Hull structure may be restored to a degree. There is possible to get Eng or Mech skill of PC Eng) of lost structure HP. It takes 8 hours damage control crew is below 50% manned, the time is doubled. If the interrupted in any way, the work has to start all over again. This possible to pressurize the hull again.