TURN AND BURN! — AIR-COMBAT RULES FOR BESM, 3RD EDITION

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Introduction

Here are the basic mechanics of my air-combat rules. Now these rules are geared more towards a small number of aircraft (or spacecraft) that are in head-to-head dogfights rather then large-scale naval or space armada battles, though this doesn’t mean the dogfighting cannot take place within a larger battle.

Throughout this document I shall be referring to the attacker as the "pilot" and the defender as the "opponent". The term "character" is used as a neutral term, for both pilot and opponent.

The Mechanics

Dogfighting is when two or more aircraft, or spacecraft, enter in one-on-one combat. Resolving a dogfight is treated like normal combat, except that each combatant makes use of their piloting skills throughout the scene more then any other instead of other combat skills.

The Piloting Skill

The heart of these rules revolve around the attribute, Skill: Piloting.

Skill Cost

In any campaign that predominately features dogfights as part of the setting has the cost of the attribute Skill: Piloting cost 3 points per level.

Advantage

Each time a pilot performs a maneuver, is to gain an advantage against an opponent, calling for an opposed Skill: Piloting skill check for all those involved in the action. This skill check determines who has the Advantage.

Whoever wins over their opponent by a roll of 3 or more points, has the Advantage. This Advantage modifier is a significant [+3] bonus to further Skill: Piloting skill checks performed against the opponent the pilot currently has an Advantage over. This bonus can only apply to a single opponent at a time and cannot be switched round-by-round without a further Skill: Piloting check.

Maneuverability

Maneuverability is a very important aspect in air-combat. There are two ways to determine maneuverability, 1) by the size difference of the combatants, and 2) an aircraft’s inherently maneuverability. In either case the Advantage bonus (see The Piloting Skill: Advantage for further information) shifts by one step.

Size Rank

When dogfights happen between two or more aircraft of different sizes, the smaller one is usually more maneuverable.

To determine if one aircraft is bigger or smaller then the other, use the differences in their Size Rank. For example, a heavy space-freighter (Size 5) will be less maneuverable against a space-fighter (Size 4). The Advantage bonus of smaller aircraft against larger aircraft is increased by one step (to extreme [+6]). The Advantage bonus of larger aircraft against smaller aircraft is decreased by one step (to slight [+1]).

Inherent Maneuverability

When an aircraft is more maneuverable then the other, the Advantage modifier is in favor of the more maneuverable aircraft.

That is, the modifier becomes an extreme [+6] bonus if the more maneuverable character has the Advantage, but becomes a slight [+1] bonus if the less maneuverable opponent has the Advantage.

Situational Awareness

Being aware of your surroundings is a fundamental factor in dogfights, if you can see your enemy before they see you, you have an advantage.

At the start of each dogfight scene the GM should just simply decide which side, if any, gains a surprise round. A surprise round allows those who got the drop on their enemies a free single action to decide what to do. If the GM thinks it should be more dramatic, roll a combined Mind stat check for each group, whoever wins gets the surprise round.
Dogfighting Maneuvers
Once a character has begun to dogfight, he or she can attempt a few maneuvers on his or her next turn.

Keeping It Simple!
To keep Dogfighting simple, simply just ignore these maneuvers and situations entirely. Or optionally, pick and choose those maneuvers/situations that will be less of a hassle to deal with. After all, it is your game and these are nothing but guidelines.
Another idea is to have each modifier simply for all these maneuvers/situations be a slight (+/- 1) modifier.

Attack Run
An Attack Run is an action where the pilot focuses on a dedicated attack on a target, be it aerial, ground, or space. Treat this as the Total Attack action (see page 151, "Combat Maneuvers — Total Attack").

Defensive Maneuvers
This action is when the pilot concentrates all he or her efforts on defensive maneuvers for the round. Treat this as the Total Defense action (see page 144, "Tactical Actions — Total Defense").

Disengaging
A pilot can break from a dogfight at any time by attempting to disengage.
On the character’s initiative to act, they may attempt to disengage instead of attack, but before disengaging the pilot must currently not be Tailed.
Disengaging calls for an opposed Pilot skill check. If the pilot wins by 3 or more points, they break off from the dogfight. Breaking away from a Tailing opponent is an opposed Pilot skill check, and if the pilot wins, the opponent stops Tailing them.
After the pilot successfully disengages from the dogfight, the GM may require the pilot to stay out of a dogfight for a number of rounds before they are at completely safe distance, representing the time it takes the pilot to get to safely out of range of their opponents.

Tailing
A pilot which has an Advantage can attempt to improve his or her situation during their next action by Tailing their opponent. GMs may treat this the same as the fist dogfighting Pilot skill check. If the pilot succeeds by 3 or more, then the opponent is being Tailed.
Once the pilot is Tailing the opponent, the pilot gains a significant [+3] bonus to their attack rolls, while the opponent suffers a significant [-3] penalty on all rolls attempting to disengage. Also, an opponent being Tailed cannot attack the Tailing pilot, unless they have some attack capable of firing to the rear (i.e. machinegun turrets), and the only way out of being Tailed is through successfully disengaging.
Optional Dogfighting Rules
Here are some more optional rules geared towards making the gameplay more realistic, well as much as can be achieved in such a game.

Altitude
One of the biggest roles in a dogfight is Altitude. For those who are at a higher altitude (by the GM’s decision) gain an advantage over their opponents, that of a significant [+3] bonus. These modifiers are applied to the Pilot skill checks and attack actions for one round only. These modifiers should only be applied when the altitude difference is pretty great, like say a 1,000 foot difference, or higher (or 1 kilometer for modern aircraft or spacecraft).

Changing Altitude
To increase one’s altitude takes a single action on part of the pilot, this action does not allow for the pilot to perform any other actions that round, including attacking.
To decrease one’s altitude takes one free action because it is easier to perform, allowing for the pilot to still take one other action that round, including an attack action.

Attacking-the-Outside
A pilot can sometimes attack aircraft that are outside of the dogfight, getting a surprise attack. This is conducted as a normal one-time free attack against the opponent, the pilot does not have any sort of Advantage over the non-dogfighting aircraft. But there is a downside to this, because as the pilot is going after the non-dogfighting aircraft, opponents gain a slight [+1] bonus to their attacks against the pilot.

Black-Outs
In real life dogfighting is a very taxing activity, on both the mind and body. Black-outs are a very dangerous hazard of dogfights. They come about from the physical stresses that are put upon the body during high-G maneuvers. If a pilot were to fly beyond the limits to which their body cannot handle, they may black-out.

A black-out occurs whenever a GM thinks that the pilot is pushing their plane, and themselves, to hard. A Body stat check is called for with an average [12] difficulty (or what the GM thinks is appropriate). Failure at this roll results in the pilot blacking-out for one round per 3 points they failed the stat check by (one round if they failed by 1 to 3 points, two rounds if by 4 to 6 points, etc).
This time being blacked-out gives ample opportunity for enemies to move in for the kill, or if the GM deems appropriate, the pilot crashes into the ground if they were low enough to begin with.

Keep It Simple! Simplified Black-Outs
Instead of blacking-out for multiple rounds, a failed Body stat check results in a single round. This speeds up play and also doesn’t keep the player out of the game for an undue amount of time.

Escaping an Aircraft
Sometimes an aircraft is hit and rendered inoperable but the pilot is still alive and able to try and escape from the ruined vehicle. It takes one full round to successfully escape a plummeting aircraft. For those aircraft that have a larger compliment of pilots and crew, only two crew members can escape per full round. To see who escapes first, an initiative check is called for.

Hugging the Deck
Hugging the Deck is an action that has the pilot flying at low altitude to gain a defensive advantage but also cannot attack effectively. Pilots hugging the deck have suffer a slight [-1] penalty to all Pilot skill checks, but opponents who attack the pilot have a slight [-1] penalty to their attacks due to the fact that they cannot maneuver into position effectively because of the low altitude.

Hugging the Deck and Crashing
If at any time while Hugging the Deck the pilot roll a natural 2 (the dice come up as 1 and 1) during a Pilot skills check, crashes. See "Impact Damage — Crashing" on page 157 for more information.
Ramming
A pilot can try to ram an opponent. This calls for opposed Pilot skill checks, with the pilot taking an extreme [-6] penalty. If the pilot who is intent on ramming succeeds by 3 or more points, the two collide (see “Impact Damage — Crashing” on page 157 for more information). If the other pilot wins, or loses by no more then 3 points, the ramming attempt does not succeed.

Landings and Mid-Air Refueling
Normally landing and mid-air refueling don’t require skill checks to perform, they are routine actions that all (or most) combat pilots know how to do, like driving a car. But what if the characters are trying to land on the flight deck of a carrier in a rainstorm with a rough sea at night? The GM should only require a Pilot skills check for landing and refueling in situations where failure has major consequences.

Mishaps
Sometimes bad things happen, like mid-air collisions, stalling, or some form of malfunction. Any time a character rolls a natural 2 (the dice come up as 1 and 1), roll again. Compare this new total to the current action’s difficulty, and if it doesn’t succeed, the character has suffered a mishap. If it does succeed, the action is figured as normal, no mishap occurring.
What happens in this event is left up to the GM, but it generally should be something to further the story, not stop it. Example mishaps could be stalling, mid-air collisions, weapon jams, engine malfunctions, maneuverability malfunctions, landing gear doesn’t work, etc.

Range
Along with Altitude, Range plays another big role in dogfights. The standard starting range for dogfights is about 10 km (Range 5 on "Table 10-3: Ranges", page 144). Generally speaking, 10 kilometers is suitable for air-to-air missile combat, while closer ranges of 1 km or less (Range 3), guns are more appropriate.

Stalls
Stalling is when your aircraft reaches it’s altitude limit. When this happens, the aircraft will begin to become less effective because of the thinning air at such altitudes. When the pilot hits this limit, the pilot must make a Soul check with an average [12] difficulty or stall. If they succeed, they can continue for one more round, but must make
another stall check each round thereafter, with an increased penalty per check (first round has no penalty, second round has a slight [-1] penalty, third round has a significant [-3] penalty, etc). Those aircraft with the ‘Spaceflight’ attribute ignores this check.

Stalling is very dangerous as the pilot loses control of their aircraft for a time, time that the enemy has to come after the pilot. Failure on the stall check means that the pilot loses their action this round and the following round as the aircraft plummets down uncontrollably. For each round thereafter the pilot must make a Skill: piloting check (average [12] difficulty) to regain control of their aircraft, with failure meaning they lose yet another round of action.

The attribute Features (high stall-speed) gives a bonus to the characters’ stall checks, while the defect Unique (low stall-speed) gives a penalty.

Keep It Simple! Simplified Stalls
Like black-outs, instead of possible multiple rounds of inactivity, have stalling last only a single round. This speeds up play and also doesn’t keep the player out of the game for an undue amount of time.

Stunts
Sometimes characters will want, or be forced to do a fancy maneuver during air combat. Examples of stunts are like trying to fly in between two close rock formations, or trying a bold maneuver to get the upper hand. Whenever the GM thinks the player is trying something unexpected they should do one of two things: either give a penalty to the pilot skill check, or, have them make a pilot skill check with a difficulty based on the stunt being performed. But which to do? Apply a penalty or call for a new pilot skill check?

Generally speaking, you should only apply the penalty when the pilot tries the stunt as their action, and calling for a new pilot skill check only when the pilot is forced into that situation.

Wingmen
Dogfighting is a challenging task, more so if one has to contend with multiple opponents. When a pilot has a wingmen on their side, they can combine their efforts. Treat this as the "Combining Skill Rolls" rule on page 137, under the Skill Roll section.