

# *Watch Algy Dogfight!*

*Rules for gaming WW1 Aerial Combat*

*using*

*miniatures on a tabletop*

*and*

*beer in a hand*

## **INTRODUCTION**

This is meant to be a lighthearted, beer&pretzel-style game that combines elements of Mike Clinton's "Watch Your Six", TFL's "Algernon Pulls it Off" (et al), and my own "Dogfight!" rules into something that will (hopefully) produce a couple hours of fun rolling dice and pushing little airplane models around on a tabletop --the beer drinking part is optional...I suppose a decent cognac could substitute. Playing the part of Frankenstein, I used: The Pilot Dice from Mike (so that players have to choose a limited amount of actions for each aircraft, ie: you can't do everything equally well in a single turn), the Activation Deck and Big Man from TFL (so that players don't know when they will get a chance to move, and certain key characters play a decisive role in the action), and my own Fog of Movement (so that players --even when they get a turn-- aren't sure that their well-laid plans will be executed with precision by the little fellows under their command) as well as my Engagement Zones that leave the details / specifics of the flying to the little fellows in the models. A fair amount of uncertainty, for sure -- control freaks probably won't like it. For others, the decisions that need to be made (like "Where to go?" or "Who to attack?") are simple enough that they can be tackled with one hand --leaving the other free to hold the beer...

## **DISCLAIMER**

I am not a professional game designer, nor an expert (or even authority) on aircombat --I am an amateur tinkerer who messes with this sort of thing for fun, and only hope that the results of my efforts may bring some fun to others. My use of ( -sounds so much better than "theft of"... ) the ideas of both Mike and the crew at TFL is not, I hope, seen as anything other than flattery --or at the least, that my abuse of their ideas is not seen as an indictment of the value in their own systems. In short: this is all my fault, and if anyone doesn't like what they see here, the blame should be laid at my feet and not spread to those who (whom...?) I credit inspiration to.

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## PIECES - PARTS

Stuff you'll need to play the game...

1. Something to represent the airplanes. Models are assumed --though the game can, I suppose, be played using the counters found in boardgames, or pieces of wood...or very small stones...or a duck. Facets of each aircraft's status that will need to be displayed include: climbing or diving, maneuvering in a hex, and current speed. For the first two, pitching or banking the model, respectively, works well to communicate the ideas --though markers of some sort would suffice. The same goes for speed: an adjustable dial or scale on the stand itself is handy, but something as simple as a die placed next to the aircraft works as well. Each aircraft should also have some sort of identifying label (number, letter, ...?) for use in the turn sequencing draw, as well as a tag or marker to indicate if/when it is attached to a group. As far as the size of the aircraft pieces goes, the bigger the models (or whatever) chosen to play with, the more space will be needed to play, which leads to...

2. Somewhere to play = A surface with a hexgrid laid out upon it to regulate movement. Because any number of aircraft can occupy a single hex (which, in this game, represents an "engagement area" within which all occupying aircraft are assumed to be within effective combat range of one another), the spaces should be fairly large: big enough to hold at least four aircraft comfortably...six or eight is even better. If a mat is already available with a one-plane-per-hex -sized grid, a larger grid can be easily laid out using tape or other somesuch temporary / removable marking at the corners of larger hexes using the existing grid as a guide. Since the grid is not used for line-of-sight or similar thing that would require accurate alignment, a crude drawing / sketch would suffice (chalk on the dining room table, perhaps...?). A minimum of a six-by-six hex area is recommended --though bigger is always better in a genre whose arena is airspace! As to the possible need to fit large numbers of aircraft into a single hex should a popular furball occur during a game: separate, larger hexes can be made / used as sideboards (ala "Axis and Allies" battleboards) to hold the contents of such a hex. Since airplanes can go up and down in addition to side to side, you'll also need to have...

3. Someway to display altitude. This can be stands with telescoping or interchangeable rods, some sort of dial / scale on the stand, or just a die or chit placed next to the aircraft. While recording / tracking altitude can be done in a written log of some sort, the drag this places on play (by having players constantly inquire of each other as to the altitude of this or that aircraft) is worth avoiding at the cost of coming up with something that is open to public viewing. The game could be played without altitude, I suppose --but if that's the road desired I recommend / suggest you take a look at my "Skating Penguins" game that was made to address that very need. As far as other stuff needed for this game, all that's left is...

4. Assorted bits of gaming bric-a-brac = An aircraft log / reference card printed up for each player, dice (six-sided, of at least two different colors), and an activation deck to draw from for turn sequencing. The activation deck can be built from a pair of regular playing-card decks (two needed to get a pair of each card) with a side-sheet to denote which card means what, or a set of same marked to indicate their purpose, or a custom-made / printed set of cards. Since the Factory's brawl tradition includes drawing chits from a battered old hat, I made some chits from an old bingo set that I draw from my flying helmet --helps the ambiance, wot? The details of the cards are covered in the ACTIVATION DECK section of the rules.

## **AIRCRAFT LOG / STATS**

The information contained on the log includes:

Aircraft Type: Name of the plane the model represents (eg: SPAD 7, SE5a, or Fokker D-VII).

Section: Label used to identify the section the Leader / player controls (eg: letter or color).

ID# : Label used to identify the model for turn activation (eg: letter or number).

Name: The pilot's name -this is optional, but recommended JFL for a player's Leader.

Max Speeds: Maximum level and dive speeds for the aircraft type. Range = 3 to 13.  
The speed scale used for the game has 0 = 44mph, and each additional point = ~12mph.

Power / Drag: Modifiers to apply to power or drag rolls. Range = -2 to +1.

Spin: Modifier to spin / stall roll. Range = -1 to +1.

Most aircraft should be a 0. Those with gentle stalls (eg: Fokker D-VII or Dr-I) should be +1, and those that are particularly nasty (eg: Camel) should be -1.

Pilot: Number of Pilot Dice available for use each turn. Range = 1 to 8.

Maneuver: Number of Maneuver Dice available. Range = 1 to 3. (NOTE: Dice to be used only for combat rolls -attack or defense- should be indicated as such with a "c" in the box.)

The best-handling / docile aircraft (eg: Fokker D-VII) should have one die for movement tests, the most difficult / twitchy aircraft (eg: Camel) should have three, and the majority of aircraft should have two. The most stable aircraft (eg: SE5) should have one die for combat rolls, the most agile (eg: Dr-I) should have three, and the majority of aircraft should have two.

Firing: Number of Firing Dice available for attack. Range = 2 to 4.

A single gun is worth two dice. This number can be modified by ammo type --reducing to one if armed with inaccurate incendiary bullets, and/or aircraft stability --reducing by one if unstable (eg: Camel) or increasing by one if stable (eg: SE5).

Ammo: Number of times a limited-ammo gun can fire before requiring reload. Range = 2 to 4. This applies to the Lewis gun. Single drums have two shots, and double ones have four shots.

Damage: Amount of damage taken before suffering result of marked row. Range = 4 to 10. Stronger / sturdier aircraft (eg: SPAD) should have ten, eight, eight, and six boxes (top to bottom rows); weaker / more fragile aircraft (eg: Nieuport) should have eight, six, six, and four boxes; and the majority of aircraft should have nine, seven, seven, and five boxes.

Notes: Space to note results of critical hits or anything else of interest.

The ranges given above are meant as guidelines only: the availability of hard-and-fast data on aircraft of the era is scarce at best. Since this is not intended to be a serious, simulation-style game, historical fidelity in regards to assigning ratings for aircraft should take a back seat to the fun they generate in playing the game. Effort should be directed at creating good relative ratings between the aircraft instead of towards strict accuracy. Anyone interested in my opinion as to what numbers to use may drop me a line and I will provide it. The bottom line is: If all players involved agree on the numbers used, then it's okay.

## **GROUPS**

The forces for each side should be combined into groups of varying sizes. The smallest group is a section comprising two or three aircraft. The Leader is the best pilot in the section, ie: the one with the most Pilot Dice. Two sections of three aircraft, or two or three sections of two aircraft can be combined to create a flight under the control / command of one of the section's Leaders, and two or three flights can be joined to make a squadron in a similar manner. The subgroups (sections and/or flights) retain their identity even if joined together to make a larger group. All aircraft acting as a group must be in the same hex / level and match the facing of the Leader (exception: two or more flights joined to make a squadron may occupy adjacent hexes at the same level). Aircraft are considered detached from their group if/when they move outside the Leader's hex / level and/or enter into combat.

Grouping is not required: aircraft may start / operate independantly, though this is only recommended for one or, at most, two "rogue" pilots per side in a game.

### REMAINING ATTACHED THROUGHOUT MOVEMENT

Each aircraft in a group must succeed in its own required turning and/or maneuver rolls in order to remain attached to the group (see **MOVEMENT** section). Any aircraft in a group that fails to move in the same manner as the Leader is considered detached from the group.

### REFORMING

This can be done to re-establish groups that have been disbanded via entering into combat and/or separated via moving into different hexes / levels. Only those aircraft that began the game in a group may be reformed into that group.

The group's original Leader may order the reform of a dispersed group. When activated, he may pay two Pilot Dice to fire a flare calling for those in his section (or flight or squadron) to reform. The flare remains in play that turn and through the following turn. Any aircraft from the appropriate group may, upon their activation later that turn or in the next, attempt to reform by rolling a 6 on a Pilot Die using as many of its Pilot Dice as it chooses to roll. If successful, the aircraft is considered to be part of the group and activates upon the future draw of the Leader's cards. If not in the Leader's hex / level, the newly attached aircraft must use its full capability on every successive activation to move to that hex / level.

An aircraft that has become separated from its group may rejoin it by moving into the same hex / level occupied by --and be going the same direction as-- its Leader. The Leader may not be engaged in combat or maneuvering at the time of the move. To attempt reforming, the aircraft must, before moving, succeed in spotting the Leader by rolling a 6 on a Pilot Die using as many of its Pilot Dice as it chooses (subtract one die from the total available for every two hexes and/or levels that separate it from the Leader, and add one die if the aircraft begins the turn in the same hex / level as the Leader). If the spotting and movement succeeds, the aircraft is immediately considered attached and activates upon the future draw of the Leader's cards. If either the spot or move failed to satisfy the requirements, the aircraft remains unattached and must, if desired, attempt to reform on a future activation.

### GROUP MARKING

Each aircraft that is attached to a Leader's group should be marked in some way to indicate that status. Example: I use little colored magnet-pieces that are coded to each Leader that can be easily added / removed during the game.

## **ACTIVATION DECK**

The turn sequence is determined by drawing cards from a deck. The deck is built at the beginning of each turn from the cards described below: the description includes when and how many of a particular card to include. A turn equals all the moves / actions taken in the course of drawing down through the entire deck.

Aircraft Cards are for a group's Followers and should be included in the deck if, during the previous turn, they have become or are separated from their Leader (either physically by being in a different hex and/or level, or by entering into combat). The player may also voluntarily choose to detach an aircraft from its group at the beginning of the turn when the deck is built. One Aircraft Card is placed in the deck for each qualifying (unattached) aircraft; a second Aircraft Card may be placed in the deck if the Follower pays three Pilot Dice at the beginning of the turn when the deck is built. When a card is drawn the aircraft is activated: it may move, shoot, reload or unjam guns, and/or reform.

Section Cards are for the Leaders and are always included in the deck (provided he's still alive, of course!) unless his section has attached / subordinated itself to another section (creating a flight) --the same would apply if one or more other flights are joined to create a squadron. A section within a flight (or flight within a squadron) is considered separated from the larger group --or may voluntarily detach itself-- in the same way individual aircraft are/do, and may then act as a group unless/until its own elements (aircraft or sections) separate via movement or combat or choice. Two Section Cards are placed in the deck for each qualifying (unsubordinated) section; a third Section Card may be placed in the deck if the Leader pays three Pilot Dice at the beginning of the turn when the deck is built. When a card is drawn the Leader is activated: he may move, shoot, reload or unjam guns, and/or signal a reform. After the Leader has moved, any aircraft attached to him (either as section or flight or squadron) are also moved. If an aircraft (or subgroup) moves away from the Leader (ie: into a different hex / level / facing) or enters into combat it is immediately detached from the group and therefore will not be activated if, later in the turn, another of the group's Leader's cards is drawn.

Leader Cards (one for each side) are included in the deck if there is at least one Leader in the game for that side. When the card is drawn, the Leader on that side with the highest number of remaining Pilot Dice is activated. If a tie, the one at the greater altitude (or if the same height: greater speed) is chosen. If all factors are equal, resolve with a simple roll-off.

Tally Ho! and Flying Circus Cards (one each) are always included in the deck. When the card is drawn the section, flight, or squadron whose Leader has the highest number of Pilot Dice remaining is activated -ties are resolved as with the Leader Cards. If there is no currently formed group for that side, ignore the draw.

High Flight Card is always included in the deck. When the card is drawn, the group (or if none: aircraft) at the greatest altitude is activated --ties are resolved with Pilot Dice, speed, or roll-off.

Archie Cards are always included in the deck if ground and/or AA fire is part of the scenario. The number and type of cards included is up to the GM / scenario designer. When the card is drawn, any qualifying infantry or AA unit may fire at aircraft within range.

## **PILOT DICE**

Pilot Dice represent the available attention / energy of the fellow in the cockpit for actions / tasks in each turn. The number of dice allotted to any given pilot is indicative of their experience and/or ability: rookies / poor fliers have fewer dice than veterans / hot sticks. One or two should be given to raw rookies / hopeless klutzes, three or four to an average pilot, five or six to a veteran, and seven or eight to an ace / hotshot. The numbers can be varied / adjusted to suit personal taste and/or specific scenario requirements.

How and when a player rolls / pays Pilot Dice indicates what that pilot is concentrating on during that particular turn: either handling the aircraft or lining up a shot or keeping an eye out for bad guys who are trying to put holes in him. Only the best pilots can do all of them in a single turn (and even then with only a so-so degree of effectiveness) --the average pilot can only apply his efforts to one or at best two things each turn, and it is up to the player to choose what those things will be. Without the use of Pilot Dice an aircraft can perform fairly well (given lucky dice rolls...), but will most likely not do anything remarkable and will most certainly fall victim to the first glitch / gremlin that rises up to remind the player that fate / chance is an unfeeling, coldhearted PITA...ie: it pays to have a Pilot Die in reserve for unexpected mishaps.

Each Pilot Die can be used only once per turn for a single task. The uses for the dice include:

- Roll for: Combat (either attack or defence), reloading or unjamming guns, and reforming.
- Pay\* to: Buy extra activation card, avoid maneuver speed loss, avoid maneuver failure, choose post-maneuver exit side, avoid gun jam, and fire reform flare.

*\*to pay a die, no rolling is required: to gain the desired effect, the die is simply removed / lost for the remainder of that turn the same as if it were rolled.*

The full allotment of dice is restored at the beginning of each turn (minus wounds / damage).

The number of dice available / used by an aircraft will have to be tracked through each turn. This can be done on the aircraft log (erasing is a pain...maybe grease pencils on logs-in-sheet-protectors?) or better: with markers / indicators on the stands.

## **MANEUVER DICE**

Maneuver Dice used for testing for success during movement represent the handiness / flying-character of an aircraft: fewer dice mean a more docile, easy-to-control machine, while more dice mean an aircraft that requires a lot of effort by the pilot to go where he wants it to go. More dice is bad.

Maneuver Dice used for attack / defense represent the agility / quickness of an aircraft: fewer dice mean a dull slug, while more dice mean a dervish that can snap to a new facing in the blink of an eye. More dice is good.

Aircraft will not always have the same number of Maneuver Dice meant for each purpose. To distinguish them, boxes on the Aircraft Log that indicate dice that can only be used for combat will be indicated with a "c" written inside them. When rolling for the success of a move (eg: turn or maneuver-in-hex) a player need only roll the number of dice shown that are not marked for combat use.

## **MOVEMENT**

### MOVEMENT POINTS

An aircraft's current speed determines --but does not directly show-- how far an aircraft will move, ie: an aircraft with a current speed of six will not move six hexes. Instead, the number of Movement Points (MP) available is determined randomly upon each activation. Aircraft roll 1d and add the number rolled to their current speed to determine how many MP it must use.

die roll + speed: < 4 = 0 MP, 4 - 6 = 1 MP, 7 - 9 = 2 MP, 10 - 12 = 3 MP, and 13+ = 4 MP

For a group, only one roll is made by the Leader and added to each aircraft's own current speed. If the roll results in an aircraft (that has a different speed) having a different number of MP than the Leader, it must fall behind or go on ahead resulting in detachment from the group, or (if faster) it may pay Pilot Dice to move at the group's pace (see "NOT SO FAST!" below). Exception: An aircraft attached via reforming but distant from the Leader will roll its own MP.

### NOT SO FAST!

An aircraft not wishing to use all of its mandated MP may pay two Pilot Dice to reduce its number of MP by one. This may only be done once per activation.

### HORIZONTAL MOVEMENT: HEX-to-HEX

An aircraft pays one MP for each hex. It must move to the adjacent hex that it is facing.

Turns, if desired, must be done concurrently with a move into a hex (ie: the model is turned when moved into the adjacent hex). Such facings are not always automatic: in some cases a player must roll the aircraft's Maneuver Dice to see if the turn is a success.

60° : Roll if speed greater than six. 120° or 180° : Roll if speed greater than three.\*

\* If turning 120° or 180°, subtract one from each die if speed greater than six.

Any 1s (or 0s) rolled indicate a failure. Each failure results in the aircraft turning one-less hexside than desired. If the number of failures exceeds the number of hexsides in the desired turn, a point of speed is lost for each extra failure. Aircraft turning 180° lose one point of speed. Pilot Dice may be paid (one-for-one) to cancel any failures and/or speed loss.

### MANEUVERING WITHIN A HEX

Instead of moving into the adjacent / faced hex, an aircraft may spend an MP to remain within its current hex. As with turns, an aircraft's Maneuver Dice may need to be rolled: the requirements are the same as for a 180° turn. Any failure not cancelled with the payment of a Pilot Die results in the aircraft moving out of the hex into a randomly-determined adjacent hex and (if more than one failure) an extra loss in speed.

If the roll is successful (or failure avoided by paying Pilot Dice) the model should be banked to indicate its maneuvering status. While maneuvering in the hex in this fashion, the aircraft has no facing. An aircraft may use any number of MP in this manner to remain in a hex, though it must roll its Maneuver Dice for each MP spent to remain in the hex.

To leave the hex, the aircraft must either pay one MP or Pilot Die to "straighten out" and face an adjacent hex of the player's choice (unbanking the model), or pay one MP to move into a randomly-determined adjacent hex.

### VERTICAL MOVEMENT: LEVEL-to-LEVEL

An aircraft pays one MP for each level it moves to.

The speed cost / gain for moving vertically is based on an aircraft's current MP-allowance:

MP 0 = **n/a** (2). MP 1 = **n/a** (2). MP 2 = **3** (1). MP 3 = **2** (1). MP 4 = **1** (0)

An aircraft may, if desired, use the speed cost / gain from an MP less than its own allowance.

The first, bold number is the number of speed points lost / gained by a climb / dive into the adjacent level. An aircraft may move as many levels as it wishes in a single activation (paying the normal cost of one MP per level) --if climbing, it must have the necessary speed points to lose as well, though it may lose all it has and end with a speed of zero if desired.

Instead of moving a full level in a single activation, a player may choose to make two half-level moves in two successive activations. On the first, the model is pitched up or down to indicate its climbing / diving status, and loses / gains the number of speed points shown in parenthesis. The aircraft is still considered to be in its current level. On its next activation (in which more than zero MP are available) the aircraft must complete the move into the adjacent level during the use of its first MP (losing / gaining the half-level speed cost indicated by its current MP allowance as before), and the model is returned to a level state. No MP cost for vertical movement is incurred for such half-level moves. An aircraft may make a normal, full-level move on its second activation to complete the climb / dive, but moves into the next level as if it began in the usual, non-climbing / diving state (ie: losing / gaining speed points and paying one MP for the move) --it does not retain its half-level status after moving to the new level.

An aircraft that attempts to dive using another MP in the same activation after using one for climbing must roll its Maneuver Dice as in a 120° turn --any 1s not cancelled by Pilot Dice prohibit the action and cost the aircraft one speed point. An aircraft that attempts to climb using another MP in the same activation after diving must roll as described above with a -1 penalty on each die --any failures not cancelled by Pilot Dice prohibit the action, and the aircraft must take a Stress Test whether it succeeds or not --and all uncanceled failures are counted as -1 modifiers to the Stress Test.

### STRESS TEST

Stress Tests are required for aircraft that:

- Climb in the same activation after diving.
- End a move at a speed greater than their maximum dive speed.
- Roll Maneuver Dice after all of their damage-box rows are marked.

Roll 2d: <2 = dead. 2 = mark current and next damage rows. 3-4 = mark current damage row.

Modifiers: -1 for each full row of damage boxes, -1 for each point of speed above max dive, and -1 for each uncanceled failure of a climb-after-dive move attempt.

### SPEED GAIN / LOSS

Speed may be gained by diving as detailed in the VERTICAL MOVEMENT section above, and by applying power. To gain speed via power, roll 1d at the end of an aircraft's move and apply its power modifier (including any from current damage): the aircraft gains one point of speed on a roll greater than two, and gains two points of speed on a roll greater than six. Power may not be used to increase speed beyond the maximum level speed.

Speed may be lost by failing a Maneuver Dice roll as detailed in the HORIZONTAL MOVEMENT, MANEUVERING, and VERTICAL MOVEMENT sections above; by climbing as detailed in the latter section; and by applying drag. To lose speed via drag, roll 1d at the end of an aircraft's move and apply its drag modifier\* : the aircraft loses one point of speed on a roll greater than two, and loses two points of speed on a roll greater than six.

\* if the aircraft dove in the current activation, the player must subtract the number of speed points gained in the dive from the drag roll.

### STALL / SPIN

An aircraft that ends its move at speed one or zero (after all speed adjustments via movement and power rolls) must roll to see if it stalls or spins. This roll takes place before any combat.

Roll 1d and modify with aircraft's spin rating: @ speed 1: 1 = spin, 2 - 3 = stall, 4+ = no effect.  
@ speed 0: 1 - 3 = spin, 4+ = stall

A player may pay Pilot Dice to gain bonuses to the roll at the cost of one Die per +1 modifier, or may attempt to spin voluntarily by paying Pilot Dice for penalties to the roll (one Die per -1).

Spinning aircraft are marked as such, their speed is set to zero, and are pitched to indicate a half-level dive (but gain no speed). On subsequent activation(s) the player may attempt to recover. If recovery is not made, move the aircraft down one level and change the pitch to level (no speed gain). On the next activation (if no recovery) pitch the model as in the beginning of the spin and continue the process of pitching / moving on alternate activations until either recovery is accomplished or the aircraft moves down from level 0 (ie: crashes).

Recovery is made by rolling a 6 on a Pilot Die. A player may roll as many of the available Pilot Dice as desired, though only one roll is allowed per activation and all Dice must be rolled at the same time. If three 1s come up on a failed recovery roll the spin worsens (indicate with a second spin marker) and now requires two 6s to be rolled (simultaneously) for recovery.

Aircraft that recover are pitched to a half-level dive or moved down a level the same as if no recovery was made (but do gain one point of speed), and the facing is set randomly. If a Pilot Die is paid, the facing side is randomized between three (adjacent) sides of the player's choice. If two Pilot Dice are paid, the player may choose the facing.

Stalled aircraft are pitched to indicate a half-level dive (but no speed gain). If the aircraft was maneuvering at the time of the stall, its facing is determined randomly as detailed above for aircraft recovering from a spin (including Pilot Dice modifiers). On the aircraft's next activation it is not considered stalled, but it must use its first MP to continue the dive into the next level as detailed previously in VERTICAL MOVEMENT describing half-level moves.

Both spinning and stalled aircraft are immediately detached from any group, and may not perform any other action, including: combat, reloading or unjamming guns, or reforming.

## COMBAT

Combat is done by having the firing aircraft roll its attack dice: any 6s scored are potential hits. The target aircraft may (simultaneously) roll Pilot Dice for defense: any 6s scored would cancel an equal number of hits scored (if any) and/or earn the target aircraft bonus dice.

To attack, an (activated) aircraft must, at the end of its move, be either in the same hex as the target or in an adjacent hex and facing the target's hex. (If in an adjacent hex and maneuvering the aircraft may not fire.) The attacking aircraft must also be in the same level unless it is in a half-level-move dive in the level immediately above the target's level.

## ATTACK DICE

The dice available for the firing aircraft consist of:

- Firing Dice. A player may choose as many as desired up to the maximum available shown in the Aircraft Log. (NOTE: Those aircraft with two distinct guns --eg: SE5a with wing-mounted Lewis-- need to declare which they are firing so that ammo-limitations and jamming can be assessed appropriately.)
- Maneuver Dice. A player may choose as many as desired up to the maximum available shown in the Aircraft Log ONLY IF the aircraft is currently maneuvering in the hex\*.  
\*NOTE: Must have rolled test (regardless of speed) to use Maneuver Dice for attack.
- Pilot Dice. A player may choose as many as desired of the remaining number available. (NOTE: Pilot Dice should be a different color from the others used when rolling an attack.)

The number of dice selected is then reduced by the combat Maneuver Dice of the target ONLY IF the target is maneuvering. The attack dice are then modified by the following factors:

Penalties - Subtract half the number of dice if firer: moved more than one hex or level, is not maneuvering and is taking a front or side-shot, is in an adjacent hex.

Bonuses - Add half of the number of dice if firer: did not move any hexes or levels, dove or is diving this activation.

NOTE: All halving done above should be rounded up. Also: Bonuses and Penalties should offset each other, ie: if one of each is applicable, simply ignore them rather than go through multiple steps of adding / subtracting.

The firing player may add as many of the available Pilot Dice to this total, and roll to attack.

## DEFENSE DICE

The target player may (simultaneously) roll as many of the aircraft's available Pilot Dice in defense.

## BONUS DICE

If a target aircraft rolls more 6s with its defense dice than the firing aircraft does with its attack dice, the difference in numbers is given to the defender in the form of Bonus Dice. These can be used on the next activation (of either firing or target aircraft) as either extra defense dice (if attacked again by the same enemy) or extra attack dice (if the target now attacks the previously-firing aircraft). If they are not used for the target aircraft's next activation for attack or for if the firing aircraft attacks again, they are lost.

## DAMAGE

If the number of 6s rolled on the attack dice are greater than the number of 6s rolled on the defense dice, the difference in the numbers equals the number of hits on the target aircraft. Roll 1d for each hit: a result of 1 - 5 indicates the number of damage boxes to be marked on the target's Aircraft Log, and a result of 6 indicates a critical hit (roll again on table below).

- 1 = Engine.\* Destroyed. No power rolls allowed, and must roll for drag on each activation.
- 2 = Engine.\* -2 to power rolls.
- 3 = Structural. Mark off current row\*\* of damage boxes.
- 4 = Structural. Mark off current and next row of damage boxes.
- 5 = Gun. Mark off half the firing boxes (or all if single-gun aircraft).
- 6 = Pilot. Fill three pilot boxes (if boxes already full pilot is killed).

\* Roll 1d: 4-6 = mark with smoke, mark two Pilot boxes. If smoking, roll 1d now and on every future activation: 6 = mark with fire, mark two more Pilot boxes, and roll 1d fire damage each activation. (NOTE: Damage from fire should be shown by filling in damage boxes completely -once all boxes are filled in this manner the aircraft is destroyed.)

\*\*The current row is defined as the row in which the next box that would be marked is located.

Aircraft that suffer hits should mark off the Damage boxes (if any) before resolving the criticals. The boxes are arranged in rows on the Aircraft Log: the top row should be marked completely before marking any boxes in the row beneath it, and so on down the rows. As each row is completed, the aircraft suffers the effects listed at the end of the row:

- Maneuver. Mark one Maneuver box on the Aircraft Log. The number of Maneuver Dice available for use in combat is reduced by one. If a second box is marked, the number of Maneuver Dice used to test for turns or maneuvering in movement is increased by one.
- Pilot. Mark one Pilot box on the Aircraft Log. The number of Pilot Dice available each turn is reduced by one. NOTE: This damage is different from the "Pilot " critical hit which fills in pilot boxes --this damage represents the greater demand placed upon the pilot due to the damage to the aircraft, while the critical hit is representative of the pilot being wounded. Critical pilot hits should be shown by filling in the boxes completely, and "normal" pilot hits with a mark.
- Dive. Reduce the maximum dive speed by one on the Aircraft Log.

## **JAMMING**

If three 1s are rolled by the firing aircraft on its attack dice, a gun jams. Circle the firing boxes on the Aircraft Log to indicate this status (If a two-gun aircraft, circle half) If four or more 1s are rolled, then both / all guns jam. Pilot Dice may be paid (on a one-for-one basis) to cancel any 1s rolled. (NOTE: Pilot Dice used as attack dice DO NOT count towards jamming.)

To unjam a gun, the player must roll a 6 on a Pilot Die. Any number of the available dice may be rolled, but only one roll may be made per activation and all must be rolled together. While attempting to unjam, an aircraft may take no other action beyond straight-and-level flight. If three 1s are rolled while unjamming, the gun is considered broken and may not fire again for the rest of the game. Pilot Dice (if available) may be used to cancel one or more of these 1s.

## **RELOADING**

If tracking / using-up ammunition is done (this should not apply to belt-fed weapons), the player may attempt to reload the gun. Reloading is done the same as detailed above for unjamming.