MiG Alley Ace

Early Jet Air Combat
By David Schueler

1.0 Introduction
MiG Alley Ace is a quick and easy jet air combat game, it is meant to cover air combat from 1945 to the start of the missile age. The game is based on Avalon Hill's ***Mustangs*** game. *MiG Alley Ace* was created with a hex-mat and miniatures in mind, but could be played a regular hex-map with counters. A hex-map and counter-sheet have been included with these rules. You will have to mount and cut out the counters yourself.

2.0 Game Equipment

Players should have the following equipment available in order to play the game.

2.1 Air Units:

Each miniature represents one aircraft. The information for each type of aircraft is on the Control Card for that aircraft type.

2.2 Gameboard (map):

The game is played on a map with hexes. The playing area should be a minimum of 12 by 18 hexes.

2.3 Control Card:

Each card shows the game information for a specific aircraft type. The cards are used to track the current status of aircraft in the game. Each card has room for keeping track of two aircraft.

2.4 Markers:

You will need the following markers for each aircraft in the game:

- 8 Maneuver Markers: these are placed on the map to show the maneuver an aircraft is doing.
- Several Climb/Dive Markers: these are placed on the map to show when an aircraft is making altitude changes.
- 1 Speed Marker: placed on the Control Card to show an aircraft's current speed.
- 1 Altitude Marker: placed on the Control Card to show an aircraft's current altitude.
- 1 Damage Marker: placed on the Control Card to show the amount of damage an aircraft has taken.
- 1 Ammunition Marker: placed on the Control Card to show how much gun ammunition an aircraft has left.

2.5 Dice:

The game uses six-sided and ten-sided dice. The "0" on the ten-sided die is read as a 10. Unless stated by the specific rule, the normal die rolled is a ten-sided die.

3.0 Sequence of Play

The game starts after setup is complete and is played in a series of Game Turns. Each game turn consists of 10 impulses followed by a Change Phase and Break-Off Phase. The game turn sequence is explained below:

1) Set Speed Phase: Each aircraft adjusts its current speed set for the turn (the speed may change during the impulses). Each aircraft may adjust speed within the amount shown on the Normal Engine or Damaged Engine portion of the Speed Chart on the Aircraft Control Card. An aircraft's speed may not exceed the maximum speed for its current condition (Loaded or Level).

2) Break-Off Phase: During this phase aircraft may attempt to break-off from the fighting.

3) Impulse Phase: There are 10 Impulses in each game turn, each Impulse Phase is broken down into the following Segments:

a) **Movement Segment:** All aircraft moving at the speeds in the columns marked with an X must move one hex. Air units that could have moved, but are Out of Control (OOC) check for recovery. If the do not recover, then reduce their altitude by one level. Aircraft that reach their Maneuver Marker complete their maneuver. Adjust Aircraft Control Cards for any speed and altitude changes.

b) **Fire-Check Segment:** Any aircraft that are on fire (Critical Hit #9) must check to see if the fire goes out or causes damage to the aircraft.

c) **Spotting Segment (optional):** Players attempt to spot enemy aircraft.

d) **Attack Segment:** Aircraft that moved may fire their guns at enemy aircraft that are in range and fire arc. The side <u>with</u> the Initiative Marker fires first. Check pilot ejection for aircraft that are destroyed.

e) **Maneuver Marking Segment:** Aircraft that do not have a maneuver marker on the map must place a marker. The marker is placed at the appropriate maneuver distance from the aircraft. Aircraft that will climb or dive during a maneuver must announce (and place markers for) the number of levels they will climb or dive. The side with the Initiative Marker places maneuver markers first. Aircraft that will climb or dive during movement must announce (and place markers for) that they will climb or dive.

f) **Impulse End:** Go to the next impulse by repeating Step a. If the current impulse is Impulse 10, start a new turn by going to Step 1.

4.0 Initiative

At the beginning a game each side rolls one die to determine who has the Initiative Marker. The die roll is modified and the side with the highest modified number controls the Initiative Marker. If the modified die rolls are the same, re-roll until one side has a higher modified number.

The modifiers for the initiative roll for the side having the following conditions are:

-2 Side has loaded aircraft
+1 Side has ground or airborne controller
+2 Side has Ace Pilot
-2 Side has only Inexp. Or Green Pilots
-1 Side has propeller aircraft

The side that has the Initiative Marker places Maneuver Markers first during the Maneuver Marking Segment of each Impulse (see tailing exception). Also, the side with the Initiative Marker fires guns first in the Fire Segment.
A side may pass the Initiative Marker to the other side at the end of any Impulse or Phase during a game turn.

5.0 Movement

All aircraft movement and combat occurs during the Impulse Phase. During each Movement Segment refer to the Movement Impulse Chart for the current impulse to determine which aircraft will move. All air units moving at the speeds in the columns marked with an X for the current Movement Segment must be moved. Each aircraft is moved into the hex directly in front of it (Exception: aircraft that are out of control do not move). If the aircraft reaches its current maneuver marker and there are no climb/dive markers in the hex, the marker is removed and the aircraft completes the maneuver as described below.

5.1 Setting Speed

At the start of a game, the speed for each aircraft is set. During the Set Speed Phase, each aircraft adjusts its speed for the turn. Each aircraft may adjust speed within the amount shown on the Normal Engine (for aircraft with no engine damage) or Damaged Engine (for aircraft with damaged engines) portion of the Speed Chart on the Aircraft Control Card. When setting speed in this phase, an aircraft's speed may not exceed its maximum level speed. If the aircraft is loaded, it may not exceed the maximum loaded speed.

5.2 Placing Maneuver Markers

During the Maneuver Marking Segment, aircraft without maneuver markers must place a maneuver marker. The side with the Initiative Marker places maneuver markers first, then the other side (Exception: see rule 5.2.1 Tailing Advantage). The number of hexes in front of the aircraft the marker is placed is determined by cross-referencing the aircraft's current speed and the desired maneuver on the Maneuver Chart on the Aircraft Control Card. The number shown on the chart is the number of hexes the marker is placed in front of the aircraft. This number may be modified if the aircraft will climb or dive (see rule 5.4 Climbing and Diving During Movement).

5.2.1. Tailing Advantage

If an aircraft that needs to place a maneuver marker is in the rear arc of an enemy aircraft, facing toward the enemy aircraft and within 3 hexes, it does not place its maneuver marker until after the enemy aircraft has placed its marker. In this case the side with the Initiative Marker places maneuver markers for all other aircraft, then the side without the Initiative Marker places maneuver markers and finally any tailing aircraft place their maneuver markers.

5.3 Maneuvers

There are five basic maneuvers that an aircraft can perform. Not all aircraft can perform all the maneuvers shown below. Each maneuver is explained below.

5.3.1 Straight Maneuver:

If this maneuver is chosen, a "Straight" marker is always placed one hex in front of the aircraft. During the appropriate Movement Segment the aircraft will move into this hex without changing facing.

5.3.2 Normal Turn Maneuver (Right or Left):

If this maneuver is chosen, a "Right Turn" or "Left Turn" marker is placed in front of the aircraft the number of hexes shown on the Maneuver Chart. When the aircraft reaches the marker during the Movement Segment, the marker is removed and the aircraft is turned one hexside left or right (depending on the turn type). The aircraft also loses the number of speed points shown on its Maneuver Chart for this maneuver.

5.3.3 Tight Turn Maneuver (Right or Left):

If this maneuver is chosen, a "Right Tight Turn" or "Left Tight Turn" marker is placed in front of the aircraft the number of hexes shown on the Maneuver Chart. When the aircraft reaches this marker during the movement phase, the marker is removed and the aircraft is turned two hexsides left or right (depending on the turn type). The aircraft also loses the number of speed points shown on its Maneuver Chart for this maneuver. If the pilot of the aircraft has a Green or Inexperienced Pilot Quality Rating, then the controlling player must make a check to see if the pilot loses control of the aircraft (see section 5.5 Losing Control of an Aircraft).

5.3.4 Roll Maneuver (Right or Left):

If this maneuver is chosen, a "Right Roll" or "Left Roll" marker is placed in front of the aircraft the number of hexes shown on the Maneuver Chart. When the aircraft reaches this marker during the Movement Segment, the marker is removed and the aircraft is moved one hex row right or left (depending on the slip type) and back one hex. The aircraft also loses the number of speed points shown on its Maneuver Chart for this maneuver.

5.3.5 Half Loop Maneuver (Climb or Dive):

If this maneuver is chosen, a "Loop" marker is placed in front of the aircraft the number of hexes shown on the Maneuver Chart. The number of hexes the marker is placed in front of the aircraft may be modified if the aircraft will climb or dive. When the aircraft reaches this marker during the movement phase, the marker is removed and the aircraft is turned three hexsides. The aircraft also loses the number of speed points shown on its Maneuver Chart for this maneuver. If the pilot of the aircraft has a Green Pilot Quality Rating, then the controlling player must make a check to see if the pilot loses control of the aircraft (see section 5.5 Losing Control of an Aircraft).

5.4 Climbing and/or Diving During Normal Movement

In addition to plotting the aircraft's move when the maneuver marker is placed, the controlling player may also declare if the aircraft is changing altitude during this maneuver. Whenever an altitude change occurs, the aircraft that changed altitude will also have its current speed adjusted by the amount shown on the Aircraft Control Card for climbing or diving. The change in altitude is done as follows:

- During the Maneuver Marking Phase, the player controlling the aircraft chooses a Maneuver Marker as described above.
- The player then announces if the aircraft is climbing or diving during the maneuver and the number of levels that the aircraft will climb/dive.
- The player places a number of Climb/Dive markers along the aircraft's flight path equal to the number of levels the aircraft will climb/dive. The player then moves the Maneuver Marker for the aircraft, subtracting 1 hex from the placement distance for each level the aircraft will climb or dive.
- During the movement segment in which the aircraft moves into a hex with a Climb/Dive marker, the marker is removed and the altitude and speed of the aircraft are adjusted on the Control Card (if using altitude stands for the aircraft, the altitude stand for the aircraft is also changed to reflect the new altitude).
- This continues until all Climb/Dive markers are removed from the aircraft. The aircraft then continues with normal movement.

5.5 Losing Control of an Aircraft

Because of the strains of combat, poorly trained pilots or those that are not familiar with their aircraft may attempt to do too much in the aircraft and subsequently lose control of it.

5.5.1 Loss of Control Checks

If an Inexperienced or Green Pilot makes a Tight Turn or if a Green Pilot makes a Loop Maneuver, the controlling player must check for a loss of control. The player controlling the pilot rolls one die, if the result is 1 - 6 for an Inexperienced Pilot or 1 - 4 for a Green Pilot then the maneuver is completed and play continues normally. If the die roll is outside this range, the pilot has lost control of the aircraft.
Also, if an aircraft's speed is reduced to 0 or less by a maneuver during a Movement Segment, then the player controlling the aircraft must check for loss of control. The player controlling the aircraft rolls one die, if the result is 1 - 8 for an Ace, Experienced, or Average Pilot, 1 - 6 for an Inexperienced Pilot or 1 -

4 for a Green Pilot then the pilot does not lose control and the aircraft's speed is set at 1. If the die roll is outside this range, the pilot has lost control of the aircraft. The die roll is modified by +1 for each speed point less than zero that was caused by the maneuver.

5.5.2 Loss of Control Effects

An out of control aircraft stays in its current hex at its current speed (an aircraft that had its speed reduced to 0 or less is treated as being at speed 1). During any impulse in which the aircraft would normally move, the controlling player checks to see if the pilot can recover the aircraft (see below). If the pilot recovers, determine the aircraft's heading and speed as follows:

- Roll 1 six-sided die and subtract the number from the aircraft's current speed. This is the aircraft's new speed. If this would reduce the aircraft's speed to ≤ 0, then set the new speed to 1.
- Roll 1 six-sided die to determine the new aircraft facing. The number rolled is the number of hexsides the aircraft is turned from its current heading. Aircraft are always turned clockwise to determine the new heading.

The aircraft then continues play normally.

If the pilot does not recover, then reduce the altitude of the aircraft by one level. If this would take the aircraft below altitude level 0, then the aircraft has crashed and is removed from the game (Note: the opposing side gets credit for a kill, even if the aircraft was not fired on).

5.5.3 Recovery

During any impulse in which the aircraft would normally move the controlling player checks to see if the pilot can recover the aircraft. The player controlling the pilot rolls one die, if the result is 1 - 8 for an Ace, Experienced, or Average Pilot, 1 - 6 for an Inexperienced Pilot or 1 - 4 for a Green Pilot then the pilot recovers the aircraft. If the die roll is outside this range, the aircraft is still out of control.

6.0 Combat and Damage

Gun combat takes place in the Attack Segment of the Impulse. An aircraft can only fire at one target during the Attack Segment. The side that has the Initiative Marker may attack with all of its aircraft that moved during the impulse and then the side without the marker may attack. The effects of a gun attack are determined and executed immediately. In order to be eligible to fire the firing aircraft must meet the following conditions:

- The firing aircraft must have ammunition remaining.
- The firing aircraft must be in a hex and facing as shown in the Gun Firing Position chart within one altitude level of the target OR in the same hex as the target one altitude level above or below the target.
- If in the same hex as the target at the same altitude, the firing aircraft must be facing the same direction as the target and be the last aircraft to enter the hex. If two aircraft enter a hex in the same impulse and are facing the same direction, the slowest aircraft (after all adjustments for maneuvers and climb/dive) may fire.
- If the aircraft climbed during the Movement Segment, it may not fire at aircraft at lower altitudes.
- If the aircraft dove during the Movement Segment, it may not fire at aircraft at higher altitudes.

6.1 Gunfire

If the aircraft is eligible to fire and the controlling player wishes to fire the aircraft's gun, the player announces that the aircraft is attacking and which aircraft is the target. Then the player moves the ammo marker down one to show the expenditure of ammunition.

To determine if gunfire hits the target aircraft the player that fired and the player controlling the target aircraft each roll a die and modify it as follows:

<u>The player that is firing (Attacker) adds:</u>

+x	Gun Attack Value (see specific Aircraft Control Card for this number)
±x	The number shown on the Gun Firing Position Chart
+4	Ace Pilot firing
+2	Experienced Pilot firing
+2	Target is a Large Aircraft
-1	Wounded Pilot firing
-2	Green Pilot firing
-2	Firing aircraft has Turn or Roll marker out
-3	Firing aircraft has Tight Turn or Loop marker out
-2	Firing aircraft is at different altitude than target
+4	If firing aircraft is not spotted (optional)

<u>The player controlling the target aircraft adds:</u>

+x	Defense Factor of aircraft
+2	Ace Pilot defending
+1	Experienced Pilot defending

- If the modified Target die roll is greater than or equal to the modified Attacker die roll, then the attacker has missed
- If the modified Attacker die roll is greater than the modified Target die roll, then the target has been hit.

If the target is hit, the attacking player compares the *difference* between the modified Attacker die roll and Target die roll to the Gun Combat Information Chart on the Control Card for the attacking aircraft. The number shown under the difference is the number of Damage Points the target aircraft takes. Mark this number of hits off on the Control Card of the target aircraft. In addition, the target aircraft may take a critical hit because of the damage done by the gunfire.

6.2 Damage Effects

Each aircraft is rated for a certain amount of damage that it can take. There are no restrictions on aircraft performance or operation due to damage (except for the restrictions imposed by critical hits) until an aircraft exceeds its maximum damage level. Once an aircraft's damage reaches the Excess level shown on the Aircraft Control Card, the aircraft is treated as a loaded aircraft for the remainder of the game (with all the speed and maneuver restrictions). Aircraft are only shot down by critical hits. A critical hit represents major damage to a part of the aircraft, the way that critical hits are received is explained below. The effects of critical hits are explained on the Critical Hit Table.

6.2.1 Critical Hits

There are two ways to score critical hits on the target aircraft:

- For every multiple of 3 damage points to the target, roll once on the Critical Hit Table. (i.e. if 6 damage points are inflicted, the attacker would roll twice on the Critical Hit Table. If 4 damage points are inflicted, the attacker would roll once on the Critical Hit Table.)

- If the damage marker for the target aircraft is in the Excess box (the gray zone in the Damage column) the attacker rolls once on the Critical Hit Table for each damage point inflicted on the target aircraft. (Example: An aircraft that can take a maximum of 8 damage points already has 7 damage points. It is fired on and has 3 more damage points inflicted on it. The attacking player would then roll 3 times on the Critical Hit Table, once for inflicting 3 damage points and two more times for each damage point over the maximum for the aircraft.)

For each critical hit, the attacking player rolls on the Critical Hit Table. Certain results will have no effect on the aircraft (the damage was to a non-vital piece of equipment or the damage was not as bad as it could have been), some results will cause the immediate loss of the aircraft and others will limit the ability of the aircraft. When an aircraft takes a critical hit that limits its ability, mark the hit on the Control Card for the damaged aircraft. The effects of each critical hit are explained on the Critical Hit Table.

6.3 Ejecting

A pilot (or crew) may attempt to eject from an aircraft when it is destroyed. The player controlling the destroyed aircraft rolls one die for the pilot (or crew) and modifies the result. If the modified die roll is greater than or equal to 3, the pilot/crew has successfully ejected from the aircraft. The ejection die roll is modified as follows:

-2	If the pilot is wounded
-3	If the aircraft was on fire when the ejection was attempted
-2	If the aircraft was destroyed by a Major Damage Critical Hit
-4	If the aircraft was destroyed because it was in a Hard Turn/Loop maneuver when it received a Structural Damage Critical Hit.

7.0 Putting Out Fires

After aircraft move in an impulse, all aircraft that are on fire (Critical Hit # 9) check to see if they can put out the fire. The player controlling the aircraft rolls one die and modifies it based on the aircraft's speed and actions (as below). If the result is $\geq$9, then the fire is out and the aircraft continues normal operations. If the result is $\leq$8, then the fire is still burning. If the result is $\leq$5, then the player rolls for damage on the Critical Hit Table (if a second Fire Critical Hit is rolled the aircraft is lost).

<u>Modify the Fire Die Roll as follows:</u>

+3	If current speed is >7
+2	If current speed is 6 - 7
+1	If current speed is 4 - 5
+2	If aircraft dove in the Movement Impulse
+2	If Ace Pilot
+1	If Experienced Pilot
-1	If Green Pilot

8.0 Disengaging and Break-Off Checks

An aircraft can leave the map and the game by flying off the map edge or by making a successful break-off attempt. Aircraft that leave the game in either of these manners may not return to the map for the rest of the game.
Flying off the map to disengage is only allowed if playing with a static map (this is determined at the beginning of the game). If players are not playing with a static map, then the aircraft are all shifted on the map a number of hexes to keep all aircraft on the map.
Break-off checks are done in the Break-Off Phase. In order to attempt a break-off check the aircraft must not have an enemy aircraft in a tailing advantage position. Any aircraft that meets this restriction may attempt to break-off.

To determine if the break-off is successful the player controlling the aircraft that is breaking-off and any enemy player each rolls a die and the player attempting the break-off modifies it as follows:

<u>The player attempting to break-off adds:</u>

+2	If it is Game Turn 1, 2, or 6
+4	If it is game turn 7, 8, or greater
-2	If it is game turn 3, 4, or 5
+1	Ace Pilot
-2	Green Pilot
+5	If aircraft is not spotted (optional)

- If the enemy player's die roll is greater than or equal to the modified break-off die roll, then the aircraft was unable to break-off.
- If the modified break-off die roll is greater than the enemy player's die roll, then the aircraft has broken off and is removed from the game.

9.0 Loaded Aircraft

Loaded aircraft have certain speed and maneuverability restrictions placed on them. In *MiG Alley Ace* a loaded aircraft is any aircraft that is carrying air to ground ordnance, loaded external fuel tanks, or has damage that exceeds its maximum damage level. Aircraft that are carrying air to ground ordnance or loaded external fuel tanks may jettison these during any Maneuver Marking Phase to lose the maneuver and speed restrictions.
Loaded aircraft may not exceed the Max. Load speed noted on the Control Card for the aircraft. Also, they may not do any Tight Turn or Half Loop maneuvers and all other maneuvers have one hex added to the number of hexes needed for the maneuver.

10.0 Pilot Quality

There are five levels of Pilot Quality in *MiG Alley Ace*: Green, Inexperienced, Average, Experienced, and Ace. Each Pilot Quality type and its effects are explained below:

10.1 Green Pilot:

A Green Pilot is one that has minimal training and little to no experience in an aircraft or a poor quality Inexperienced Pilot. This pilot would most likely be found flying for third world nations.
Green pilots must check for loss of control of their aircraft any time that they do a Tight Turn or Loop Maneuver. When trying to get a visual spot, there is a -2 to the attempt. When firing guns, there is a -2 modifier to all shots.

10.2 Inexperienced Pilot:

This pilot has standard pilot training, but no advanced training and little to no experience. This pilot would be found flying for third world nations and possibly as a beginner in more advanced air forces.
Inexperienced pilots must check for loss of control of their aircraft any time they do a Tight Turn.
Inexperienced pilots have no special modifiers for attacks or spotting.

10.3 Average Pilot:

This pilot has standard pilot training, some advanced training and some experience. This would be the standard pilot found in most advanced air forces around the world.
Average pilots have no special modifiers for attacks or spotting.

10.4 Experienced Pilot:

This pilot has a high level of experience, with lots of advanced training and some combat time. Some pilots of this quality would be found in NATO nations and the Soviet Union. Most Israeli pilots would rate as Experienced.
When trying to spot there is a +2 modifier to the spotting attempt. When firing guns, there is a +2 modifier to all shots. When fired at with guns they have a +1 defense modifier.

10.5 Ace Pilot:

This pilot has an extremely high level of experience, with lots of advanced training and several combat kills. Some pilots of this quality would be found in NATO nations, the Soviet Union, and Israel.
When trying to spot there is a +3 modifier to the spotting attempt. When firing guns, there is a +4

modifier to all shots. When fired at with guns they have a +2 defense modifier.

11.0 Spotting (optional)

During the game it is assumed that each side knows that the other side has aircraft in the area and spotting is assumed to occur without any special rules. However, in some cases players may want to use the spotting rules to add realism or show how important it is to know the location of the enemy. It will require extra bookkeeping for players to keep track of which aircraft are spotted.
Visual spotting attempts are made during the Spotting Segment. Each aircraft may only attempt to visually spot 1 enemy aircraft during each Spotting Segment. The maximum range for visual spotting is 10. The range is equal to the number of hexes the spotting aircraft is from the target, plus the difference in altitude between the two aircraft. The player attempting to spot declares which enemy aircraft he will try to spot, then each player rolls a die to check for a successful visual spot. The die roll for each player is modified as follows:

<u>The player attempting to spot (Spotter) adds:</u>
+3 Ace Pilot
+2 Experienced Pilot
-2 Green Pilot
+3 if spotter has an off-map controller (ground or air)
+2 if the spotter aircraft has an all-round vision canopy
+1 if the spotter aircraft has 2 (or more) crew
-2 if the target aircraft is at altitude 0
+2 If target is a Large Aircraft
-1 If target is Small Aircraft

<u>The player controlling the target aircraft (Target) adds:</u>
+x Range between aircraft

- If the modified Target die roll is greater than or equal to the modified Spotter die roll, then a visual spot <u>has not</u> been achieved.
- If the modified Spotter die roll is greater than the modified Target die roll, then a visual spot has been achieved.

An aircraft may have a visual spot on any number of enemy aircraft. Generally, friendly aircraft may not share visual spots, but “wingmen” may share visual contacts. At the beginning of the game a pair of aircraft (of the same type) may be designated as “wingmen”. These two aircraft may share visual contact information as long as both aircraft are 5 or fewer hexes from each other. If they move outside of 5 hexes they lose the ability to share contacts, but still retain all current contacts. The wingmen relationship is re-established when the aircraft move within 5 hexes of each other.

Visual spots are lost in the following situations:
- If the enemy aircraft moves out of the 10 hex range for spotting.
- If an aircraft fires at a target, the aircraft loses the visual spot of all enemy aircraft, except the target. (exception: wingmen rule described above)
- If an aircraft goes into a spin it loses all visual spots.

Consolidated Charts (page 1)

Initiative Die Roll Modifiers (Rule 4.0)

-2 Side has loaded aircraft
+1 Side has ground or airborne controller
+2 Side has Ace Pilot
-2 Side has only Inexp. Or Green Pilots
-1 Side has propeller aircraft

Loss of Control Information (Rule 5.5)

Condition — **Loss of Control Checks** — **Recovery Checks**

Hard Turn:	**Safe**	**OOC**
Green	1 – 4	5 – 10
Inexperienced	1 – 6	7 – 10

Recovered	**OOC**
1 - 4	5 - 10
1 - 6	7 - 10

Loop	**Safe**	**OOC**
Green	1 – 4	5 – 10

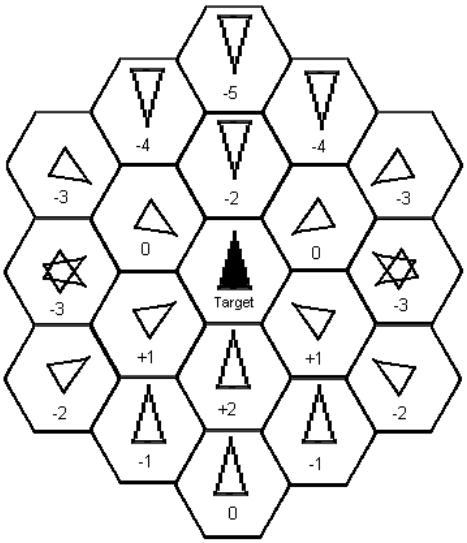
Recovered	**OOC**
1 - 4	5 - 10

0 Speed	**Safe**	**OOC**
Green	1 – 4	5 – 10
Inexperienced	1 – 6	7 – 10
Average/ Experienced/ Ace	1 – 8	9 – 10

Recovered	**OOC**
1 - 4	5 - 10
1 - 6	7 - 10
1 - 8	9 - 10

Combat Firing Modifiers:

+x	Gun Attack Value (see specific Aircraft Control Card for this number)	-2	Firing aircraft has Turn or Roll marker out
±x	The number shown on the Gun Firing Position Chart below	-3	Firing aircraft has Tight Turn or Loop marker out
+4	Ace Pilot firing	-2	Firing aircraft is at a different altitude
+2	Experienced Pilot firing	+4	If firing aircraft is not spotted (optional)
+2	Target is a Large Aircraft	+x	Defense Factor of aircraft (Target only)
-1	Wounded Pilot firing	+2	Ace Pilot defending (Target only)
-2	Green Pilot firing	+1	Experienced Pilot defending (Target only)



Gun Position Firing Chart

Consolidated Charts (page 2)

Critical Hit Table (Rule 6.2.1)

1-3	**Minor Damage**, no effect	7-8	**Engine Hit**, aircraft uses Damaged Engine on Control Card. 2nd hit = Treat as #10
4	**Pilot Wounded**, no Hard Turns or Half Loops (may complete current maneuver, but check for spin as Inexp.), -1 when firing, -2 for ejection. 2nd hit = Pilot Killed, remove aircraft.	9	**Fire**, check to see if put out Fire-Check Segment. Must roll ≥9 to put out fire. If ≤5 roll for critical hit. If second Fire critical hit, aircraft destroyed. -3 for ejection.
5-6	**Structural Damage**, no Hard Turns or Half Loops (if doing one of these maneuvers aircraft breaks up, -4 for ejection). 2nd hit = Treat as #10	10	**Major Damage**, aircraft is lost, remove from game. -2 for ejection.

Ejection Modifiers (Rule 6.3) Ejection Roll: ≥ 3 for safe ejection

-2	If the pilot is wounded	-2	If the aircraft was destroyed by a Major Damage Critical Hit
-3	If the aircraft was on fire when the ejection was attempted	-4	If the aircraft was destroyed because it was in a Hard Turn/Loop maneuver when it received a Structural Damage Critical Hit.

Putting out Fire Modifiers (Rule 7.0)

+3	If current speed is >7	+2	If Ace Pilot
+2	If current speed is 6 – 7	+1	If Experienced Pilot
+1	If current speed is 4 – 5	-1	If Green Pilot
+2	If aircraft dove in the Movement Impulse		

Break Off Modifiers (Rule 8.0)

+2	If it is Game Turn 1, 2, or 6	+1	Ace Pilot
+4	If it is game turn 7, 8, or greater	-2	Green Pilot
-2	If it is game turn 3, 4, or 5	+5	If aircraft is not spotted (optional)

Spotting Modifiers (Rule 11.0)

+3	Ace Pilot	+1	If the spotter aircraft has 2 (or more) crew
+2	Experienced Pilot	-2	If the target aircraft is at altitude 0
-2	Green Pilot	+2	If target is a Large Aircraft
+3	If spotter has an off-map controller (ground or air)	-1	If target is Small Aircraft
+2	If the spotter aircraft has an all-round vision canopy	+x	Range between aircraft (Target Only)

Movement Impulse Chart

Impulse	Speed									
	1	2	3	4	5	6	7	8	9	10
1				X	X	X	X	X	X	X
2			X				X		X	X
3		X				X		X	X	X
4				X	X		X	X	X	X
5	X		X		X	X	X	X		X
6							X	X	X	X
7				X	X	X		X	X	X
8		X						X	X	X
9			X			X	X		X	X
10				X	X	X	X	X	X	X

Game Turn

1	2	3	4	5	6	7	8

<u>Turn Sequence:</u>

1) Set Speed Phase
2) Break-Off Phase
3) Impulse Phase:

a) **Movement Segment**
b) **Fire-Check Segment**
c) **Spotting Segment (optional)**
d) **Attack Segment**
e) **Maneuver Marking Segment**
f) **Impulse End**

F-86A/E **#_____ Pilot Quality _____**

Speed	Altitude	Damage	Ammo
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5 Max Load	5	5	5
6		6	6
7		Excess	7
8 Max Level			8 Gun
9			
10 Max Dive			

Defense vs. Gun = 4
Critical Hits:
Pilot O **Structure O** **Engine O**

F-86A/E **#_____ Pilot Quality _____**

Speed	Altitude	Damage	Ammo
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5 Max Load	5	5	5
6		6	6
7		Excess	7
8 Max Level			8 Gun
9			
10 Max Dive			

Defense vs. Gun = 4
Critical Hits:
Pilot O **Structure O** **Engine O**

Maneuver Chart

Maneuver/ Speed	1 -2	3 - 4	5	6	7	8	9	10	Speed Loss
Roll	1	1	1	2	2	3	4	4	0
Normal Turn	1	1	2	2	3	3	3	4	-1*
Tight Turn	-	2	2	2	3	3	4	5	-2
Half Loop	-	4	4	4	4	5	5	6	-3
When loaded: +1 to all Maneuver numbers, No Tight Turns or Half Loop. *= only at speed≥9									

Speed Chart

Action	Speed Change
Normal Engine	-2 to +4
Damaged Engine	-3 to +2
Climb 1 level	-3
Dive 1 Level	+2

Gun Combat Information: Six .50 Cal Machine Guns **Gun Attack Value: 5**

Die Difference	1	2	3	4	5	6	7	8	9	≥10
Damage	1	1	1	2	2	3	3	3	4	6

Notes: All-round vision canopy

F-86F **#_____ Pilot Quality _____**

Speed	Altitude	Damage	Ammo
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5 Max Load	5	5	5
6	6	6	6
7		Excess	7
8 Max Level			8 Gun
9			
10 Max Dive			

Defense vs. Gun = 4
Critical Hits:
Pilot O **Structure O** **Engine O**

F-86F **#_____ Pilot Quality _____**

Speed	Altitude	Damage	Ammo
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5 Max Load	5	5	5
6	6	6	6
7		Excess	7
8 Max Level			8 Gun
9			
10 Max Dive			

Defense vs. Gun = 4
Critical Hits:
Pilot O **Structure O** **Engine O**

Maneuver Chart

Maneuver/ Speed	1 -2	3 - 4	5	6	7	8	9	10	Speed Loss
Roll	1	1	1	2	2	3	4	4	0
Normal Turn	1	1	2	2	3	3	3	4	-1*
Tight Turn	-	2	2	2	3	3	4	4	-2
Half Loop	-	4	4	4	5	5	6	6	-3

When loaded: +1 to all Maneuver numbers, No Tight Turns or Half Loop. *= only at speed≥9

Speed Chart

Action	Speed Change
Normal Engine	-2 to +5
Damaged Engine	-3 to +3
Climb 1 level	-3
Dive 1 Level	+2

Gun Combat Information: Six .50 Cal Machine Guns **Gun Attack Value: 6**

Die Difference	1	2	3	4	5	6	7	8	9	≥10
Damage	1	1	2	2	3	3	4	4	5	6

Notes: All-round vision canopy

F-84G **#_____ Pilot Quality _____**

Speed	Altitude	Damage	Ammo
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5 Max Load	5	5	5
6		Excess	6
7 Max Level			7 Gun
8			
9 Max Dive			

F-84G **#_____ Pilot Quality _____**

Speed	Altitude	Damage	Ammo
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5 Max Load	5	5	5
6		Excess	6
7 Max Level			7 Gun
8			
9 Max Dive			

Defense vs. Gun = 4
Critical Hits:
Pilot O Structure O Engine O

Defense vs. Gun = 4
Critical Hits:
Pilot O Structure O Engine O

Maneuver Chart									
Maneuver/ Speed	1 -2	3 - 4	5	6	7	8	9	10	Speed Loss
Roll	1	1	2	2	3	3	4	-	0
Normal Turn	1	2	2	2	3	3	4	-	-1*
Tight Turn	-	2	3	3	4	4	4	-	-2
Half Loop	-	4	4	5	5	6	6	-	-3
When loaded: +1 to all Maneuver numbers, No Tight Turns or Half Loop. *= only at speed 9									

Speed Chart	
Action	Speed Change
Normal Engine	-2 to +3
Damaged Engine	-3 to +2
Climb 1 level	-3
Dive 1 Level	+2

Gun Combat Information: Six .50 Cal Machine Guns **Gun Attack Value: 5**

Die Difference	1	2	3	4	5	6	7	8	9	≥10
Damage	1	1	1	2	2	3	3	3	4	6

Notes: All-round vision canopy

F-80 #_____ Pilot Quality _____

Speed	Altitude	Damage	Ammo
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5 Max Load	5	5	5
6		Excess	6
7 Max Level			7 Gun
8 Max Dive			

F-80 #_____ Pilot Quality _____

Speed	Altitude	Damage	Ammo
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5 Max Load	5	5	5
6		Excess	6
7 Max Level			7 Gun
8 Max Dive			

Defense vs. Gun = 4
Critical Hits:
Pilot O Structure O Engine O

Defense vs. Gun = 4
Critical Hits:
Pilot O Structure O Engine O

Maneuver Chart

Maneuver/ Speed	1 -2	3 - 4	5	6	7	8	9	10	Speed Loss
Roll	1	1	2	2	2	3	-	-	0
Normal Turn	1	2	3	3	3	4	-	-	-1*
Tight Turn	-	3	3	4	4	4	-	-	-2
Half Loop	-	4	5	5	6	6	-	-	-3

When loaded: +1 to all Maneuver numbers, No Tight Turns or Half Loop. *= only at speed>8

Speed Chart

Action	Speed Change
Normal Engine	-2 to +3
Damaged Engine	-3 to +2
Climb 1 level	-3
Dive 1 Level	+2

Gun Combat Information: Six .50 Cal Machine Guns Gun Attack Value: 4

Die Difference	1	2	3	4	5	6	7	8	9	≥10
Damage	1	1	1	2	2	3	3	3	4	6

Notes: All-round vision canopy

F-9F **#_____** **Pilot Quality _____**

Speed	Altitude	Damage	Ammo
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5 Max Load	5	5	5
6	6	6	6 Gun
7 Max Level		Excess	
8			
9 Max Dive			

F-9F **#_____** **Pilot Quality _____**

Speed	Altitude	Damage	Ammo
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5 Max Load	5	5	5
6	6	6	6 Gun
7 Max Level		Excess	
8			
9 Max Dive			

Defense vs. Gun = 4
Critical Hits:
Pilot O **Structure O** **Engine O**

Defense vs. Gun = 4
Critical Hits:
Pilot O **Structure O** **Engine O**

Maneuver Chart

Maneuver/ Speed	1 -2	3 - 4	5	6	7	8	9	10	Speed Loss
Roll	1	1	2	2	3	3	4	-	0
Normal Turn	1	2	2	2	3	3	4	-	-1*
Tight Turn	-	3	3	3	4	4	4	-	-2
Half Loop	-	4	4	5	5	6	6	-	-3

When loaded: +1 to all Maneuver numbers, No Tight Turns or Half Loop. *= only at speed 9

Speed Chart

Action	Speed Change
Normal Engine	-2 to +4
Damaged Engine	-3 to +2
Climb 1 level	-3
Dive 1 Level	+2

Gun Combat Information: Four 20mm Cannon **Gun Attack Value: 4**

Die Difference	1	2	3	4	5	6	7	8	9	≥10
Damage	2	2	3	3	4	5	5	6	6	8

Notes: All-round vision canopy

MiG-15 #_____ Pilot Quality _____

Speed	Altitude	Damage	Ammo
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4 Gun
5 Max Load	5	5	
6	6	6	
7		Excess	
8 Max Level			
9 Max Dive			

MiG-15 #_____ Pilot Quality _____

Speed	Altitude	Damage	Ammo
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4 Gun
5 Max Load	5	5	
6	6	6	
7		Excess	
8 Max Level			
9 Max Dive			

Defense vs. Gun = 4
Critical Hits:
Pilot O Structure O Engine O

Defense vs. Gun = 4
Critical Hits:
Pilot O Structure O Engine O

Maneuver Chart

Maneuver/ Speed	1 -2	3 - 4	5	6	7	8	9	10	Speed Loss
Roll	1	1	1	2	2	3	4	-	0
Normal Turn	1	1	2	2	2	3	3	-	-1*
Tight Turn	-	2	2	2	3	4	4	-	-2
Half Loop	-	4	4	4	5	5	6	-	-3

When loaded: +1 to all Maneuver numbers, No Tight Turns or Half Loop. *= only at speed 9

Speed Chart

Action	Speed Change
Normal Engine	-2 to +4
Damaged Engine	-3 to +2
Climb 1 level	-3
Dive 1 Level	+2

Gun Combat Information: 2 23mm and 1 37mm Cannon, Attack Value = 2

Die Difference	1	2	3	4	5	6	7	8	9	≥10
Damage	2	2	3	3	5	6	6	7	7	8

Notes: All-round vision canopy

B-29 #_____ Crew Quality _____

Speed	Altitude	Damage	Ammo
1	1	1	Unlimited
2	2	2	
3	3	3	
4 Max Load	4	4	
5 Max Level	5	5	
6 Max Dive	6	6	
		7	
		8	
		Excess	

B-29 #_____ Crew Quality _____

Speed	Altitude	Damage	Ammo
1	1	1	Unlimited
2	2	2	
3	3	3	
4 Max Load	4	4	
5 Max Level	5	5	
6 Max Dive	6	6	
		7	
		8	
		Excess	

Defense vs. Gun = 3
Critical Hits:
Pilot OO Structure OO Engine OO

Defense vs. Gun = 3
Critical Hits:
Pilot OO Structure OO Engine OO

Maneuver Chart									
Maneuver/ Speed	1 -2	3 - 4	5	6	7	8	9	10	Speed Loss
Roll	2	3	5	-	-	-	-	-	-1
Normal Turn	3	3	4	-	-	-	-	-	0
Tight Turn	-	4	5	-	-	-	-	-	-2
Half Loop	-	-	-	-	-	-	-	-	0
When loaded: +1 to all Maneuver numbers, No Tight Turns or Half Loop.									

Speed Chart	
Action	Speed Change
Normal Engine	-2 to +2
Damaged Engine	-3 to +1
Climb 1 level	-3
Dive 1 Level	+2

Gun Combat Information: 1 20mm Cannon and 10 .50 Cal MG
Roll 1 D10 for each enemy aircraft within 2 hexes, if die roll = 1 roll for damage.
Damage Roll Modifiers: If target speed is 5 -7 subtract 1 from damage roll, If target speed is ≥ 8 subtract 2 from damage roll.

Die Roll	< 1	1	2	3	4	5	6	7	8	9	10
Damage	-	1	1	1	2	2	2	3	3	3	4

Notes: Large aircraft, Multiple crew

Meteor **#_____ Pilot Quality _____**

Speed	Altitude	Damage	Ammo
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5 Max Load	5	5	5 Gun
6		Excess	
7 Max Level			
8 Max Dive			

Meteor **#_____ Pilot Quality _____**

Speed	Altitude	Damage	Ammo
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5 Max Load	5	5	5 Gun
6		Excess	
7 Max Level			
8 Max Dive			

Defense vs. Gun = 4
Critical Hits:
Pilot O **Structure O** **Engine O**

Defense vs. Gun = 4
Critical Hits:
Pilot O **Structure O** **Engine O**

Maneuver Chart

Maneuver/ Speed	1 -2	3 - 4	5	6	7	8	9	10	Speed Loss
Roll	1	1	1	2	2	3	-	-	0
Normal Turn	1	1	2	2	3	3	-	-	-1
Tight Turn	-	2	2	3	3	4	-	-	-2
Half Loop	-	4	4	4	5	5	-	-	-3
When loaded: +1 to all Maneuver numbers, No Tight Turns or Half Loop.									

Speed Chart

Action	Speed Change
Normal Engine	-2 to +4
Damaged Engine	-3 to +2
Climb 1 level	-3
Dive 1 Level	+2

Gun Combat Information: Four 20mm Cannon **Gun Attack Value: 4**

Die Difference	1	2	3	4	5	6	7	8	9	≥10
Damage	2	2	3	3	4	5	5	6	6	8

Notes: All-round vision canopy

Vampire #_____ Pilot Quality _____

Speed	Altitude	Damage	Ammo
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4 Gun
5 Max Load	5	Excess	
6 Max Level			
7			
8 Max Dive			

Vampire #_____ Pilot Quality _____

Speed	Altitude	Damage	Ammo
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4 Gun
5 Max Load	5	Excess	
6 Max Level			
7			
8 Max Dive			

Defense vs. Gun = 3
Critical Hits:
Pilot O Structure O Engine O

Defense vs. Gun = 3
Critical Hits:
Pilot O Structure O Engine O

Maneuver Chart

Maneuver/ Speed	1 -2	3 - 4	5	6	7	8	9	10	Speed Loss
Roll	1	2	2	2	2	3	-	-	0
Normal Turn	1	2	3	3	3	4	-	-	-1*
Tight Turn	-	3	3	4	4	4	-	-	-2
Half Loop	-	4	5	5	6	6	-	-	-3

When loaded: +1 to all Maneuver numbers, No Tight Turns or Half Loop. *= only at speed 8

Speed Chart

Action	Speed Change
Normal Engine	-2 to +4
Damaged Engine	-3 to +2
Climb 1 level	-3
Dive 1 Level	+2

Gun Combat Information: Four 20mm Cannon Gun Attack Value: 4

Die Difference	1	2	3	4	5	6	7	8	9	≥10
Damage	2	2	3	3	4	5	5	6	6	8

Notes: All-round vision canopy, Small aircraft

F4U Corsair #_____ Pilot Quality _____

Speed	Altitude	Damage	Ammo
1	1	1	1
2	2	2	2
3 Max Load	3	3	3
4	4	4	4 Gun
5 Max Level	5	5	
6 Max Dive		Excess	

F4U Corsair #_____ Pilot Quality _____

Speed	Altitude	Damage	Ammo
1	1	1	1
2	2	2	2
3 Max Load	3	3	3
4	4	4	4 Gun
5 Max Level	5	5	
6 Max Dive		Excess	

Defense vs. Gun = 4
Critical Hits:
Pilot O Structure O Engine O

Defense vs. Gun = 4
Critical Hits:
Pilot O Structure O Engine O

Maneuver Chart									
Maneuver/ Speed	1 -2	3 - 4	5	6	7	8	9	10	Speed Loss
Roll	1	1	2	2	-	-	-	-	0
Normal Turn	1	1	1	2	-	-	-	-	0
Hard Turn	1	1	2	2	-	-	-	-	-1
Half Loop	2	2	3	3	-	-	-	-	-1
When loaded: +1 to all Maneuver numbers, No Tight Turns or Half Loop.									

Speed Chart	
Action	Speed Change
Normal Engine	-2 to +2
Damaged Engine	-3 to +1
Climb 1 level	-2
Dive 1 Level	+2

Gun Combat Information: Four 20mm Cannon Gun Attack Value: 4

Die Difference	1	2	3	4	5	6	7	8	9	≥10
Damage	2	2	3	3	4	5	5	6	6	8

Notes: Propeller driven aircraft

MiG-17 #_____ Pilot Quality _____

Speed	Altitude	Damage	Ammo
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5 Max Load	5	5	5 Gun
6	6	6	
7		Excess	
8			
9 Max Level			
10 Max Dive			

Defense vs. Gun = 4
Critical Hits:
Pilot O Structure O Engine O

MiG-17 #_____ Pilot Quality _____

Speed	Altitude	Damage	Ammo
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5 Max Load	5	5	5 Gun
6	6	6	
7		Excess	
8			
9 Max Level			
10 Max Dive			

Defense vs. Gun = 4
Critical Hits:
Pilot O Structure O Engine O

Maneuver Chart

Maneuver/ Speed	1 -2	3 – 4	5	6	7	8	9	10	Speed Loss
Roll	1	1	1	2	2	3	4	4	0
Normal Turn	1	1	2	2	2	3	3	4	-1*
Tight Turn	-	2	2	2	3	4	4	5	-2
Half Loop	-	4	4	4	5	5	6	6	-3

When loaded: +1 to all Maneuver numbers, No Tight Turns or Half Loop. *= only at speed≥9

Speed Chart

Action	Speed Change
Normal Engine	-2 to +4
Damaged Engine	-3 to +2
Climb 1 level	-3
Dive 1 Level	+2

Gun Combat Information: Three 23mm Cannon Gun Attack Value: 4

Die Difference	1	2	3	4	5	6	7	8	9	≥10
Damage	2	2	3	3	4	4	5	6	6	7

Notes: All-round vision canopy

Hunter **#_____ Pilot Quality _____**

Speed	Altitude	Damage	Ammo
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5 Max Load	5	5	5 Gun
6	6	6	
7		Excess	
8			
9 Max Level			
10 Max Dive			

Defense vs. Gun = 4
Critical Hits:
Pilot O Structure O Engine O

Hunter **#_____ Pilot Quality _____**

Speed	Altitude	Damage	Ammo
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5 Max Load	5	5	5 Gun
6	6	6	
7		Excess	
8			
9 Max Level			
10 Max Dive			

Defense vs. Gun = 4
Critical Hits:
Pilot O Structure O Engine O

Maneuver Chart

Maneuver/ Speed	1 -2	3 - 4	5	6	7	8	9	10	Speed Loss
Roll	1	1	2	2	3	3	4	4	0
Normal Turn	1	2	2	2	3	3	4	4	-1*
Tight Turn	-	3	3	3	4	4	4	5	-2
Half Loop	-	4	4	5	5	6	6	6	-3

When loaded: +1 to all Maneuver numbers, No Tight Turns or Half Loop. *= only at speed≥9

Speed Chart

Action	Speed Change
Normal Engine	-2 to +4
Damaged Engine	-3 to +2
Climb 1 level	-3
Dive 1 Level	+2

Gun Combat Information: Four 30mm Cannon Gun Attack Value: 5

Die Difference	1	2	3	4	5	6	7	8	9	≥10
Damage	2	3	4	4	5	5	6	6	7	7

Notes:

Canberra #_____ Pilot Quality _____

Speed	Altitude	Damage	Ammo
1	1	1	None
2	2	2	
3	3	3	
4	4	4	
5 Max Load	5	5	
6 Max Level	6	6	
7 Max Dive		7	
		Excess	

Canberra #_____ Pilot Quality _____

Speed	Altitude	Damage	Ammo
1	1	1	None
2	2	2	
3	3	3	
4	4	4	
5 Max Load	5	5	
6 Max Level	6	6	
7 Max Dive		7	
		Excess	

Defense vs. Gun = 4
Critical Hits:
Pilot O Structure OO Engine OO

Defense vs. Gun = 4
Critical Hits:
Pilot O Structure OO Engine OO

Maneuver Chart

Maneuver/ Speed	1 -2	3 - 4	5	6	7	8	9	10	Speed Loss
Roll	2	4	4	5	5	-	-	-	0
Normal Turn	2	3	4	4	5	-	-	-	0
Tight Turn	-	4	5	5	6	-	-	-	-2
Half Loop	-	-	-	-	-	-	-	-	-
When loaded: +1 to all Maneuver numbers, No Tight Turns or Half Loop.									

Speed Chart

Action	Speed Change
Normal Engine	-2 to +3
Damaged Engine	-3 to +1
Climb 1 level	-3
Dive 1 Level	+2

Gun Combat Information: None

Die Difference	1	2	3	4	5	6	7	8	9	≥10
Damage	-	-	-	-	-	-	-	-	-	-

Notes: Large aircraft, Multiple Crew

Il-28 Beagle #_____ Pilot Quality _____

Speed	Altitude	Damage	Ammo
1	1	1	Unlimited
2	2	2	
3	3	3	
4	4	4	
5 Max Load	5	5	
6 Max Level	6	6	
7 Max Dive		7	
		Excess	

Il-28 Beagle #_____ Pilot Quality _____

Speed	Altitude	Damage	Ammo
1	1	1	Unlimited
2	2	2	
3	3	3	
4	4	4	
5 Max Load	5	5	
6 Max Level	6	6	
7 Max Dive		7	
		Excess	

Defense vs. Gun = 4
Critical Hits:
Pilot O Structure OO Engine OO

Defense vs. Gun = 4
Critical Hits:
Pilot O Structure OO Engine OO

Maneuver Chart									
Maneuver/ Speed	1 -2	3 - 4	5	6	7	8	9	10	Speed Loss
Roll	2	4	4	5	5	-	-	-	-1
Normal Turn	2	3	4	4	5	-	-	-	0
Tight Turn	-	4	4	5	5	-	-	-	-2
Half Loop	-	-	-	-	-	-	-	-	
When loaded: +1 to all Maneuver numbers, No Tight Turns or Half Loop.									

Speed Chart	
Action	Speed Change
Normal Engine	-2 to +3
Damaged Engine	-3 to +1
Climb 1 level	-3
Dive 1 Level	+2

Gun Combat Information: Fwd 2 23mm, Rear 2 23mm Attack Value: Fwd = 1, Rear = 2

Die Difference	1	2	3	4	5	6	7	8	9	≥10
Damage	1	2	2	3	3	3	3	4	4	5

Notes: Large aircraft, Multiple Crew