

IN CLOUDS OF GLORY

A three dimensional miniature air war game.



RULE BOOK
VERSION 1.2

- IN CLOUDS OF GLORY -

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WELCOME TO THE CLOUDS OF GLORY..

Welcome.

You are now reading the core rules for “In Clouds of Glory”, a game that has been 20 years underway. So a short introduction of its history is in place.

The story of the game started in 1992 when the first version was made out of a great interest and love for the first air war and the people that fought in it.

The idea of a dogfight miniature war game working in all three dimensions, with the focus on the airplanes capabilities, the Pilots skill and abilities was born.

It was played and tested with great joy over the next year. The core framework of the game, Movement of the airplanes, speed and turn handling, the players way of interacting thru the Pilot was in place, and have never really changed. But you had to love it too ignore the often time consuming, contradicting and incomplete rules that tied it all together, but we did, and in those days time was not an issue.

In 1994 the game was introduced to a group of new players. Some of them had experience in development of games, and also a big love for the war in the air. The game got a work over that made all the important elements of it work together in a smother way. What was supposed to be game testing soon became actually ongoing campaign gaming. These was also the years where the game was first introduced on game conferences with great success. By the late nineties most of the group of players moved away from town and each others, the game was put on hold for a few year before a new campaign was played.

But then in 2007 the game was dug out again for a single game session. Although it was very fun, we were not satisfied. We had learned a lot about aviation and a lot about game design since the nineties and we wanted to change a lot. And we did. By now we are very proud of the rules, they have evolved over a long time and we have had a lot of fun designing, researching and playing them. And now after 20 years we finally feels that the game is ready to be introduced for a wider audience.

We hope you will have fun playing the game.

What is included in these rules?

What is included in these rules?

These rules are the core rules, provided for free download. They allow you to get started playing ICOG and hopefully enjoying the game. The core rule set, contains the basic rules for creating Pilots, turn order, the airplane movement system and rules for basic air-to-air combat for single-seaters, two-seaters and multi-engined aircraft. The core rules consist of this rule set and the associated Table and hand-outs compendium.

Alongside this rule book is the Expanded rule-set. The expansion includes more mission specific rules for air-to-ground combat, different types of AA-fire, artillery spotting, observation balloons, observer tasks and pilot experience and special skills.

Accompanying the expanded rules is the Campaign and mission compendium. This book contains comprehensive rules for designing and running a persistent campaign in any given period from start 1917 and onwards, including rules for squadron management, replacement aircraft availability, Pilot skill progression, Pilot losses and replacement, and a campaign scoring

system. Also included in the campaign rules are aircraft availability time line tables and a large number of missions spanning from January 1917 to November 1918.

The missions can be played as single missions, split into smaller campaigns or as a massive on-going campaign in the same way the design team plays their campaign.

What is “In Clouds of Glory”.

In Clouds of glory is a board game that can be played by 2 to 8 players at a time. It is a game that puts the player in control of one or more Pilots, fighting out the air war of the first world war.

It differs from most other games in the same genre in that it is truly 3 dimensional. A small model airplane mounted on a flight stand, depict the airplanes actually position and attitude. Each airplane then has its own “Cockpit”, represented with the Cockpit panel, showing an air speed indicator and various limits for the airplanes capability. The Cockpit panel is also holding the individual Pilot records, that shows the skills of the Pilot.

The game runs in turns, each turn consisting of an Initiative phase, a Moving phase and a Shooting phase.

Initiative phase.

The player start each turn with establishing when it is his turn too make a move, this is depending on how much stress his Pilot is under and how aware his Pilot is, Maybe he is an old veteran that can predict the novices move or maybe he is a novice himself that has his hands full with the two enemies behind him. When the move order is sorted out, each player makes his move.

Moving phase.

The move is what ICOG is all about. The task seems simple, the airplane has too move as far as the speed on the Cockpit panel indicates. The player can combine and choose between a set of maneuvers. All he have too do is to announce what moves he chooses, move his airplane, and correct his Cockpit panel for gained or lost speed.

This part is simple, but the tactical decisions the player has to make, the weighing of the odds against the limits of the airplane and the capabilities of his Pilot, makes this phase a nerve wrecking and exciting phase of the game. Acutely this is all what ICOG is about.

Shooting phase.

Now all the players have made their moves and it is time too cash in on that beautiful move, or pay the price for a rookie Pilot that did not quite made that turn as he was supposed too. The shooting is now done and by pure Luck some will probably survive, and some will end there days in flaming wrecks tumbling towards the ground.

Its now time too start the turn over again and see what happens in the next 5 seconds of a fighter Pilots life, up over the muddy trenches in northern france in a cloudy sky , the year 1917.

THE RULES



What do I need to play?

Aside from these rules you also will need the following:

Airplane models in scale 1:350, or a similar small scale.

We recommend 3D printed 1/350 scale plastic airplanes especially made for ICOG, as they are sufficiently light to be used with the high carbon fibre flight stands. Web addresses for companies that can provide these airplane models can be found on the ICOG home page at www.icog.dk.

The models can also be scratch built in cardboard and balsa wood, or for the best result in styrene plastic, but is time consuming. Models cast in white metal can with some modification be used, we don't recommend it though. The metal models are rather heavy for the flight stand system.

Carbon Flight Stands.

A set of high flight stands – Either with heavy bases for use on a table or sharpened in one end for use on Styrofoam terrain. Carbon fibre rods are excellent for this task as they are light and thus can be very high. Web addresses for companies that can provide these carbon fiber rods can be found on the ICOG home page at www.icog.dk.

Styrofoam terrain.

3-4 Styrofoam board the size of 120 cm x 60 cm is what is needed. They can be used as they are, or be painted green or blue. For a the truly immersing 3d feeling it is recommended that a landscape is being formed out of them.

Movement and Turn templates.

On the ICOG home page at www.icog.dk, A free PDF of the Turn templates can be downloaded. The best result is too print the PDF on clear adhesive film, mount it on a clear sheet of plastic, approximately 1 mm thick, and cut the templates out. An Alternative is too print it on cardboard and cut it from that. We are working on an option to order them cheaply and pre made from the web site.

Cockpit control panels for the different airplane types.

On the ICOG home page at www.icog.dk the Cockpit panels can be found as PDF download.

A mission to play

One introduction mission is included in this rule set. A full campaign set with 23 different missions will follow soon on www.icog.dk

Download links to all of the downloadable materials above can be be found at the ICOG home page at www.icog.dk

As you can see there is some building to do before you can start playing. Like all miniatures games the modeling hobby is a part of enjoying the game and you will have to build some of the game materials such as rulers yourself. Most of this is relatively simple. A detailed "how to make a set of ICOG" guide can also be found at www.icog.dk. And it provides inspiration for how you can build terrain as well as provides links to where you can get the different materials needed.



The Rules

About the rules.

About the rules.

The rules can seem rather complex at a first glance, a lot of this comes to describing how you move the miniatures airplane in the unique, hex-free, "what you see is what you get", 3d game-space the game provides. This will become very second nature once you get the hang of it. But the 3d movement will seem fiddly to start with, but the game has a strong collaborative side here, the players will have to collaborate while moving the models during more complex maneuvers.

Notes to the rules.

Before reading these rules it is necessary to define a few of the basic terms used throughout this rules-set.

Player or Pilot.

There is no distinction between the player and the Pilot or Pilots he or she controls. Most often the rules will use the term "Pilot" for describing both the player and the Pilot in question.

Game Terms

All Game terms used to describe or define a specific game mechanism is written with a capital first letter. This will help misunderstandings in sentences like :

"It takes two Pilot actions to repair a malfunctioning machine gun." The word here is "Pilot Action", a term used to describe the number of actions one Pilot can do in the course of one Game turn.

Tests against a game stat:

Often the rules ask the Pilot to make a die roll test against a given game parameter – This could be a test of the Structural strength of the airplane after taking a hit or a Fortitude test taken by a Pilot after being wounded.

Tests in ICOG are made by rolling a twenty-sided die (D20) against a given target number. A die roll result being lower than the target number denotes a successful test. A roll higher than the target number denotes a failure.

Example: A Pilot is wounded, and is told by the Damage table to make a Fortitude test against the Pilots remaining Fortitude in order to be able to stay and fight. After getting hit the Pilot has 9 points left in his Fortitude score. A D20 roll of 9 or less denotes a successful test. The Pilot rolls an "11" on the die and as a result the Pilot has failed the test and must withdraw from the combat.

Calculating successes:

Often when using a D20 for making a test or rolling to hit an enemy airplane, the Pilot are required to calculate the number of success achieved. This is done by subtracting the die roll result, from the needed target number – the resulting number being the amount of success achieved. This number can be negative. Important note: A die roll resulting in hitting the exact target number counts as a positive success.

Example: A SPAD X.III is firing on a Fokker D.VII. The needed target number to hit after all factors are calculated is 13. The D20 die result is a 9. The SPAD Pilot managed to land a hit on the Fokker with 4 successes (Target number 13 minus die roll result of 9 = 4 successes). If the die had ended up on a "13", the exact target number, the Fokker would still have been hit, but this time only with a success number of "0".



The Rules

What do i need to play?



The Pilot

Pilot record

THE PILOT

This game focuses a lot on the pilots. Each player has one or more pilots per game. They have names and the longer you play them, the better you get to know them. As they fly and fight they gain more experience and gets better. Some might end up as renowned aces; others with the same abilities might be jinxed but will survive.

A lot will end their days spiraling to the ground in broken, burning planes. Each pilot is recorded on a "Pilot record" describing his skills, experience, special abilities, missions flown and kills.. The game also has Gunners and Observers in it, but for convenience they are also referred to as pilots in the following sections.

1.1 The Pilot record

An old hand or a new victim..

- Rule 1.1.1** If a Pilot gets wounded, the number of wound points received is subtracted from the Pilots Fortitude score.
- Rule 1.1.2** If a Pilots Fortitude score drops to 0 or less as a result of Rule 1.1.1 the Pilot is dead and the airplane crashes.
- Rule 1.1.3** If a Pilot gets wounded, the number of points subtracted from the Fortitude score is subtracted as a modifier from all skill rolls. Exception to this rule: Pilots with the "Hard as nails" special ability ignores negative modifiers due to wounds.
- Rule 1.1.4** If a Pilots Flying skills drops to 0 or less as a result of rule 1.1.3, the Pilot is unable to control the aircraft and will enter a Spin and crash out of control. Exception to this rule: Airplanes with dual controls where the Observer or second Pilot can take over the controls.

The Pilot record

Name:

Pilot's name. Optional and decided by the player.

Aircraft:

This indicates what type of aircraft the Pilot flies. The aircraft type affiliated with the Pilot has most relevance in campaign games where the aircraft type follows the Pilot from match to match.

Air Victories:

The number of enemy aircraft the Pilot or Observer/Gunner has shot down. When the Pilot achieves five victories, he is called an ace.

Experience points:

The more the Pilot flies, the more experience he gets. Experience is expressed as points the Pilot receives in various situations such as shooting down an enemy airplane or partaking in a victorious air mission.

Special abilities:

The more experience the Pilot has earned the greater the chance that he gets various skills special abilities such as "Duck Hunter" or "Aerobatics" and later possibly also Ace abilities. See 1.2 Pilot generation

Skills and Attributes:

Each Pilot has three basic skills describing their combat ability: Awareness, Flying and Gunnery skill. Each Pilot also has two Attributes describing inherent characteristics in the Pilot: Fortitude and Luck. A number of die rolls is used to decide all abilities and Attribute scores when the Pilot is created. See 1.2 Pilot generation.

Skills:

Awareness:

The Awareness score describes the Pilot's ability to assess the surroundings, take the Initiative and respond quickly. Awareness can also be regarded as the Pilot's situational aware-

Pilot Record Royal Flying Corps		
Name Bobby Priest		
Airplane Sopwith Camel fl		
Air Victories 	Experience 	Missions
Special abilities Old duckhunter +3 on side shots		Skills Awareness 16 Flying 12 Gunnery 14 Fortitude 9 Luck 10 Re-rolls 1
Notes		
Attributes		

The Pilot

Pilot generation

ness, his ability to observe and mentally track enemy aircraft and predict where they're headed. Awareness is perhaps the most important ability of the Pilot, and is used directly, in conjunction with a die roll to determine the move order of the airplanes. An Observer uses the Awareness ability as their Observer skill when needed.

Flying skills:

Describes the Pilot's ability to control his aircraft. Flying skills are used to make tight turns, to get out of stalls and Spins and to make a successful crash landing. A good Flying skill is important for the Pilot, especially if he flies an airplane that is hard to handle, to get the best out of a maneuverable machine or if he needs to get out of a pinch.

Gunnery skill:

The Gunnery skill is used for firing the fixed machine guns, and for Observers to fire a flexible mounted machine gun and for dropping bombs on a ground target. The Gunnery skill is obviously important for the Pilot if he wants to shoot down an enemy aircraft.

Fortitude:

The Fortitude Attribute describes the Pilot's courage and gen-

eral stamina. Fortitude tests is performed when asked the Pilot is injured to determine if the Pilot will have the grit to stay in the fight or if he will leave the combat area due to his injuries.

If the Fortitude score drops to 0 or less the Pilot is dead and the airplane is normally removed from the playing area, except in cases where the airplane has dual controls and there is an Observer or second Pilot to take over the controls.

Subtractions in the Fortitude attribute due to wounds is always subtracted from the Pilots skills point for point.

Example: A Pilot is hit and takes four points of damage in Fortitude. He loses the same amount of points in his Awareness, Flying and Gunnery skills.

Luck:

The Luck attribute describes Pilots "personal" Luck. You get the Luck score by rolling 3d6 when the Pilot is created. see 1.2 Pilot Generation. Luck test rolls is mostly used when two airplanes are in danger of colliding. A high Luck also provides Pilot with 1 or more dice Re-rolls on certain die rolls.

Re-rolls:

Is a function of the Luck ability and can be used to Re-roll a single D20 die on specific actions. See next chapter.

1.2 Pilot generation

A promising talent?..

- Rule 1.2.1** A Pilot's skills are decided by rolling three times 2D6+6 for the Awareness, Flying skill and Gunnery skill scores. The 3 values rolled can be applied to the three abilities as the player chooses. The attributes Fortitude and Luck is determined by rolling 3d6, the results cannot be exchanged and are definitive.
- Rule 1.2.2** If a Pilots three main skills, Awareness, Flying skills and Gunnery skill, overall, is equal to or below 35, the Pilot is deemed unsuitable as a Pilot and the player must create a new Pilot. This minimum does not apply to Observers and Gunners.
- Rule 1.2.3** The number of available Re-rolls is determined by the Luck score. If the Luck attribute is 6 or less, no Re-rolls. A score of 7-14 gives the Pilot 1 Re-roll. A score above 15 gives the Pilot two Re-rolls. The number of Re-rolls applies to each mission played. The Re-rolls will re-generate the next mission the Pilot will fly. The Re-roll can be used on all 20 sided dice the player rolls that applies to the Pilots airplane such as Structural strength tests, Collisions and shooting.

Rolling Pilot skills

When generating a Pilot you determine his abilities with six sided dices.

Start by rolling the scores for the first three skills. Awareness, Flying skills and Gunnery skill. To determine these stats roll three times 2D6+6, noting the score as you go.

After rolling all ability scores you can freely apply the 3 results to the abilities as you see fit. You choose which abilities to prioritize.

Add the three results together, if the result is 35 or below is the Pilot is deemed unfit as a Pilot. You could say that he has failed the flight test. If this happens you just start over again and roll a new Pilot.

For Gunners or Observers the 35 minimum score does not apply and the Observer will have to make do with the abilities rolled, but you can still apply the results freely.

Rolling Pilot Attributes

After determining and applying abilities, determine the Pilots Luck and Fortitude attribute scores by rolling 3d6 for each at-

tribute. The die rolls are not interchangeable and apply for the abilities they are rolled for.

Re-rolls and Luck

The Luck score decides the number of Re-rolls available to the Pilot during a single mission.

Luck score is:

6 or less, no Re-roll.
7-14 provides the Pilot with 1 Re-roll
15 or more results in 2 Re-rolls
Note the number of Re-rolls on the Pilot sheet.

This sums up how you roll a Pilot. Pilot progression and progression of special skills for the Pilots, can be found in the campaign rules. You can however decide to use special skills when playing single games as you see fit. Rear Gunners and aces has their own special ability table.

Old saying :

"Truly superior pilots are those who use their superior judgment to avoid those situations where they might have to use their superior skills."

GAME PROPS

Game props are all the things you need to play ICG. Cockpit panels for the different airplane types, Movement templates and turn templates for moving the airplane, Dices and especially miniatures planes and their flight stands.

In the game each player controls one or more pilots.

Each pilot is described on the Pilot Record sheet. The plane data and the current condition of the plane are described on the Cockpit panel. The plane itself is represented on the table top by a small model which is mounted on a long flight stand made out of carbon fibre.

2.1 Cockpit panel

Closest thing to being there..

The Cockpit panel contains most information about the condition and capabilities of the aircraft you fly in.

Here is where the current speed, any damage, remaining ammunition is recorded.

In the following rule segments the different components of the Cockpit panel is described.

Each 10 Km/h on the Airspeed indicator corresponds to one Move unit. Thus 150 km/h is a move of 15 Move units, 185 km/h give an allowance of 18.5 Move units and so on.

2.1.1 Airspeed indicator

Speed is life..

The Airspeed indicator is used to keep track of the airplanes current speed. It is always showing the current airspeed.

Before moving the airplane the speed is registered from the Indicator needle and the airplane is moved the corresponding number of Move units. Remember that 10 km/h corresponds to 1 Move unit. After the airplane is moved the Airspeed indicator is adjusted for speed loss or gains.

Airspeed Indicator needle

The Air speed Indicator needle is used to record the current speed of the airplane as the airplane gains or loses speed.

The Air speed indicator consists of a clear rotating disc on which the Indicator needle is printed. On the disc is also printed a number of red markings called Energy units.

See more in section 5.7.

Speed steps

The outer three colored rings is divided by a series of black increment steps

these are called Speed steps. The distance between the Speed steps denotes how a specific airplane type loses or gains speed in conjunction with the Energy units noted on the moveable Airspeed indicator disc. Speed steps is only found from 0 Km/h up to the airplanes Top speed. Above that, when moving from the green band into the yellow, every 5 Km/h increment count as a Speed step.

The Indicator needle should always point on a specific Speed steps, or if the speed is higher than the Top speed, on a 5 Km/h increment.

See more in section 5.7

5 Km/h increments.

From 0 - 300 Km/h the Airspeed indicator is divided into 5 Km/h speed increments.

These are used to read the speed accurately, Example: 185 Km/h corresponds to 18.5 Move units. They are also used as Speed steps, when the airplanes speed is above Top speed.

See more in section 5.7

Stall speed.

The yellow, green and red colors on the ring show the base speed zones indicating 3 different general situations:

The low range yellow zone indicates speeds below the airplanes Stall speed. It covers the area from 0 Km/h up to the Stall speed, which is marked with a black "S". This band holds two Speed steps, one at 0 Km/h and another Speed step just below the Stall speed mark. If the airplane ends its move on either of these two,

the airplane has stalled and will have to dive to regain normal flying speed. If the airplane end up exactly on the Stall speed mark, between the yellow and green zone, the airplane is flying on its Stall speed, and the Pilot must make a successful Flying skill test not to stall the airplane.

See more in section 5.5.11 and 5.5.12

Stall speed, when carrying bombs.

Some Airplanes have a second Stall mark, marked with a red "S". This is only Airplanes carrying bombs that use these, and only when they still have a bomb load onboard. As soon as the bombs are dropped the ordinary Stall mark is used.

See more in section 5.5.11 and 5.5.12

Top speed.

The airplanes Top speed is the fastest speed the airplane can go by its own power.

An airplanes Top speed is the Speed step placed where the green zone ends, and the second yellow zone starts. Some airplanes also have a red Speed step close to the end of the green zone. This is used as the airplanes Top speed when it is carrying bombs.

See more in section 5.7.4

Wind drag modifier.

Flying faster than the Top speed, the Wind drag will try to slow the airplane down. The faster it fly the greater the resistance.

In the second yellow zone a series of small negative numbers denote the modification for the Wind drag. The figure is what the airplane lose in Energy units each round the airplane is flying at that speed. The Wind drag will rise as the airplanes goes faster. These modifications are used in the Energy adjustment phase. Between each Wind drag modifier in the yellow zone a small steel gray mark shows where the next modifier starts to counts.

See more in section 5.7.8

Maximum speed.

At the end of the second yellow zone a red "M" marks the start of the red zone.

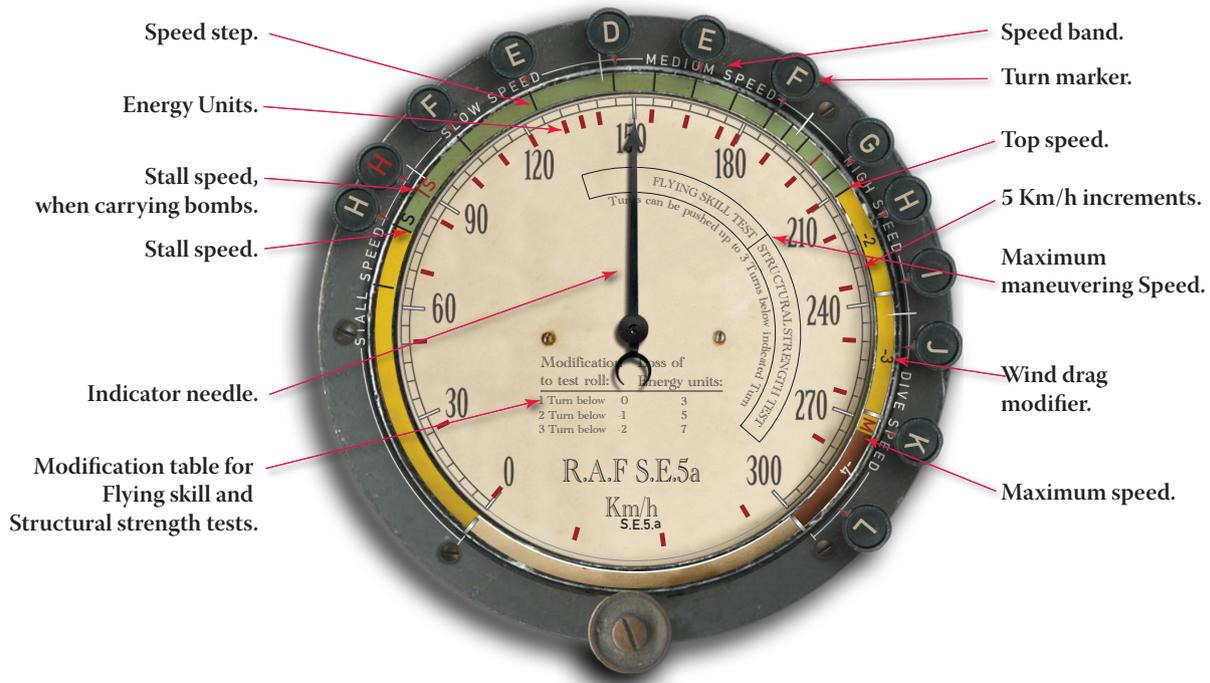
This is the airplanes Maximum speed. Flying this fast can result in catastrophic structural collapse of the airplane. If the airplane end up at speeds exceeding this speed and the Indicator needle is in the red zone, the player have to make a successful Structural strength test for his airplane.

See more in section 5.7.6

Energy units:

Energy units are the red lines on each side of the moving transparent speed indicator disk. They are used when diving or climb-

- Airspeed indicator -



ing the airplane. Depending on how many Move units your airplane has climbed or dived the Airspeed indicator disk is turned up or down: For every Move unit the airplane ascends the same number of red Energy units is subtracted on the indicator disk. And because the airplane loses momentum, it count towards the units to the left of the needle. In the same way the indicator disk is turned up when descending, and the Indicator needle is moved to the right. There is also modifications for different maneuvers that will cost Energy units. If the needle end up between two Speed steps you round up to the next Speed step. See more in section 5.7

Speed band

On the rim of the Airspeed indicator is a small band with white text. This is called the Speed band and is used to establish the approximated speed range where in the airplane is flying. The Speed band is divided into Stall, Slow, Medium, High and Dive speed. This is used mostly during the shooting phase, where the difference in the airplanes speed is a factor. Notice that the Speed band is used only in relation to a table lookup. See more in section 6.3.4 and 6.3.5

Turn markers.

On the border of the Airspeed indicator a series of round markers, each with a letter inside, shows the Turn template the airplane can safely take at the corresponding speed. The Turn templates are rated from A to O. A is the Turn template with the lowest turn radius while O has the largest turn radius. More maneuverable airplanes can turn in tighter curves at a given speed than their adversaries. Each turn marker is noted just above a corresponding Speed step. This is the speed that the airplane can fly in a given turn without risking the airplanes structural strength or challenge the Pilots Flying skill. So using the Turn template corresponding to the airplanes speed will save the Pilot from either making a Flying skill test at low speeds or making a Structural strength test at higher speeds. If there is no Turn markers exactly at the

Speed step the airplane is flying, the next Turn markers clockwise is used. The type of test needed in a given speed area can be seen on the Cockpit panel where it is noted "Flying skill test" and "Structural strength test" See more in section 5.5.6

Maximum maneuvering Speed.

If an airplane tries to make a turn with a tighter Turn template, than the one indicated from the airspeed, the Pilot has to make a skill test. Which type of test is decided by the speed of the airplane. If it goes too fast, there is a risk that the wings will collapse under the strain from the gravity load in the turn. If the airplane is below the speed where it will risk a collapse, it will instead risk a stall that will throw the airplane out of its intended route, with a loss of altitude and speed.

To establish what kind of test is needed, Flying skill or Structural strength test, the Airspeed Indicator needle is used. Below it, on the face of the Airspeed indicator there is a scale that shows if the speed is so low that it is the Pilots Flying skill that is in question, or if the speed is so high, that it is the airplanes Structural strength that needs to be tested.

The actual airspeed where the two kind of tests change is called Maximum maneuvering Speed, and is essential the maximum speed where full deflection of any flight control can be done without the risk of damage to the aircraft structure. But still the airplane will risk a stall at this speed and lower. See more in section 5.5.6

Modification table for Flying skill and Structural strength tests.

On the face of the Airspeed indicator is a small table. This table shows the relevant modifiers to either a Flying skill test or a Structural strength test. The table is only used when an airplane tries to make a turn with a tighter Turn template. Besides the modifiers, the table also hold the corresponding energy loss in Energy units. See more in section 5.5.6

2.1.2 Info Box and notes

All you need to know..

To the left of the Airspeed indicator is an Info box. This box contains the following information.

Type:

The name and version of the airplane the Cockpit panel represent.

Structural strength:

Structural strength is an expression of how durable the airplane is built. If

the airplane gets damaged the Structural strength will in most cases decrease.

When the airplane is receiving damage, there is a risk that the Pilot have to test the airplanes Structural strength with a die roll. If this fails, the result is then found with another die roll on the Structural failure table.

See more in section 6.3.10

Roll:

Roll is an expression of an aircraft's ability to roll around its longitudinal axis.

A Roll is a maneuver used to bank the airplane towards the direction it wants to turn.

The number denoted under Roll, is the Move units the airplane have to move straight ahead in order to roll up to 180° around its longitude axis.

See more in section 5.5.3

Throttle

The engine in an airplane in ICOG is assumed to normally run at full speed, But the Pilot can decide to throttle the engine back. This is done in the Energy adjustment step of the Moving phase.

The value, denoted under "Throttle", is the value each airplane can subtract in Energy units each Moving phase. The amount of Energy units that is subtracted is optional but cannot exceed the value of "Throttle"

See more in section 5.7.5

Engine Out:

Engine Out is the number of Energy Units the airplane loses each round the engine is dead or turned off. Note that airplanes with rotary engines have a higher "Engine out" number than "Throttle". This is because the rotary engines cannot be throttled all the way down to idle. Airplanes with two engines will have two numbers for "engine out", one for one engine, and another figure that is used if both engines is out.

See more in section 5.7.5

+ / - Flying Skill:

Planes is different. Some were easy to fly, and other unstable requiring attention at all times. The Flying skill modification is used whenever a Pilot makes a Flying skill test.

See more in section 1.1

+ / - Gunnery skill:

Some planes such as the Sopwith Camel, are unstable and difficult to shoot from as they dance around in the air, others such as the SPAD XIII, are stable gun platforms and are easy to shoot from. This figure on the Cockpit panel is a modification to the Pilots Gunnery skill and is applied when firing the fixed Machine gun armament on an airplane. If the airplane have extra Gunners onboard, these will have a +/- Gunnery skill of their own.

See more in section 6.3.1

Weapons:

The kind of weapons the airplane is equipped with and how many.

The number of possible bombs and their type is also listed here. Special rules on the possible armament of a given airplane type can be found on the note sheet below the Pilot record to the left on some types such as the SE5a.

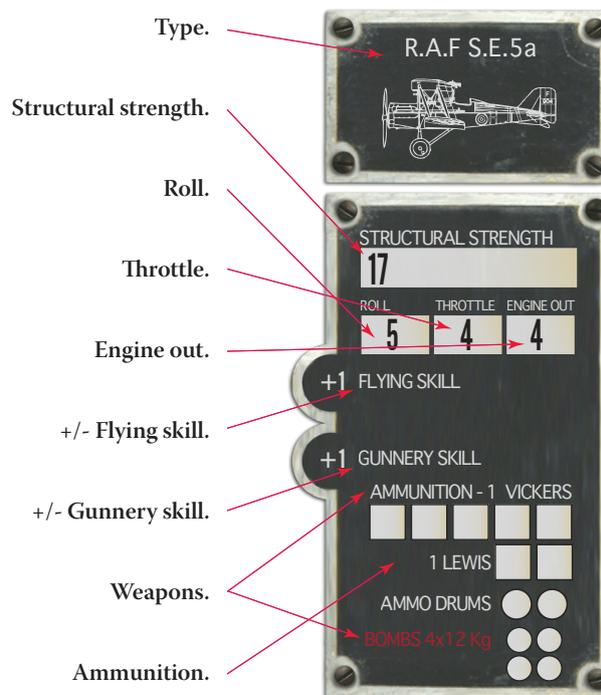
If the airplane is a two seater, details regarding the Observer or rear Gunners armament is to be found on the note sheet below their record.

Ammunition:

The ammunition boxes denote how many bursts of ammunition the noted machine gun carries. The Pilot deletes ammunition boxes after each salvo. A normal burst is a full box, and is marked with an "X". A Short burst is half a box, and is marked with a "/", and a Sustained burst uses up 1 ½ box of ammo. If the machine guns gets a malfunction it will still use the same amount of ammunition in the Game turn where the malfunction occurs.

See more in section 6.3.7

INFO BOX



Airplane note:

On the Cockpit panel there is one or two small notes, to the left of the Info box.

These notes describes the specialties an airplane may have. It can be special weapons, modifications, special rules for bombs or photographic equipment and so on.

The notes are placed in such a way that the Pilot record and the Observer / Gunner record will cover them when the records are placed on the Cockpit panel.



Observer / Gunner:

Place the Observer or Gunner record here. Under the record is shown a small illustration showing in what extent, the rear gunner can shoot. It's called the Arc of fire and is detailed in Arcs of fire in section 6.2.2

Pilot:

Place the Pilot record describing the Pilot here. Under the Pilot record is a text describing the specialties plane may have. It may be special weapons, modifications, special rules for bombs or photographic equipment and so on.

2.2 Airplanes and flight stands

The secret about flight..

The Airplanes used in ICOG are small models at 1:350 scale. These can either be hand built in balsa or paper, or styrene plastic. The best result however is to get 3D printed models specifically made for ICOG. See the web page www.icog.dk for more information on models and where to order.

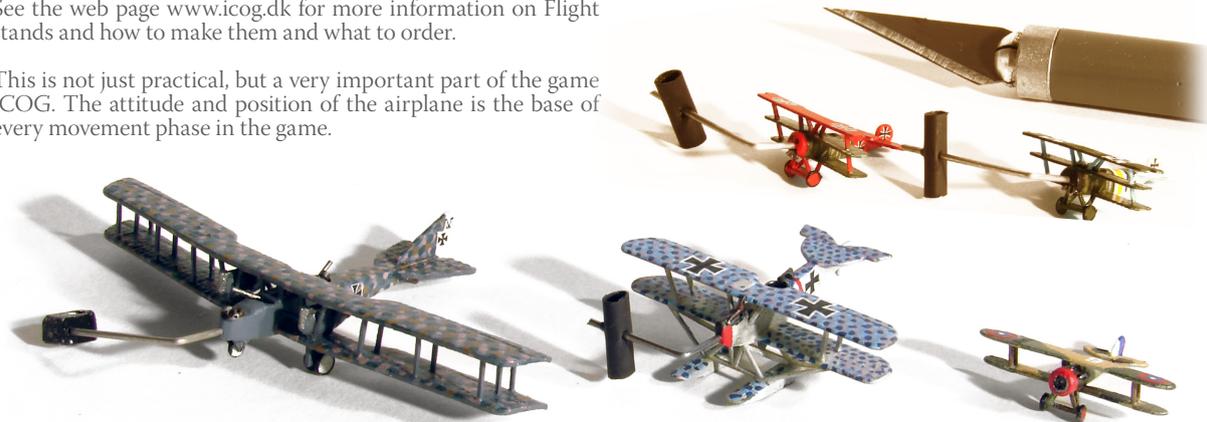
On a carbon fiber rod a small mount holds the airplane in place. The mount allow the airplane to be rotated around its longitude and pivot around its nose. The mount can also be moved up and down the carbon fiber flight stand. All this ensures that the airplane can be placed in every imaginable attitude, and at any altitude, only limited by the length of the flight stand. The carbon rods used is 1.8 mm in diameter and a length of 85 cm. (For the non metric believers, that will be 33" in length and 0.071" in diameter)

See the web page www.icog.dk for more information on Flight stands and how to make them and what to order.

This is not just practical, but a very important part of the game ICOG. The attitude and position of the airplane is the base of every movement phase in the game.

To the left, a close up of a airplane mount. A piece of 0.8 mm piano wire poked thru a heat-shrink tube. The mount can rotate around the carbon rod, and slide up and down the rod.

Below is a selection of airplanes used in ICOG. The front row is 3D printed models, the back row is homemade polystyrene models. The X-Acto knife show the size of the models.



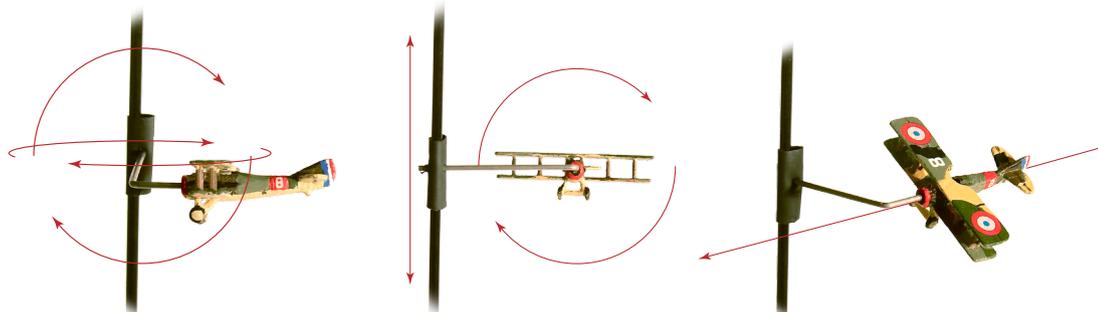
Game Props

Turn templates

There is no "steps" or "grids" defining the planes position. What you see is what it is. When playing the game, the maneuver rules will help define the attitude of the plane. The models line of flight is the base of the next move.

Therefore it's recommended to play the game on Styrofoam boards. With the carbon rod flight stand sharpened in the bottom, they will poke right in and hold the flight stand and the airplane firmly in place.

Playing with the carbon rod mounted in heavy bases is also possible, but should it happen that a base and flight stand is moved accidental, there is no way of restoring the airplanes position again.



Show here is how all 3 axis of rotation and the sliding motion up and down is possible with the airplane mount. The last picture on the right, shows how the actually flight direction of the model is used in game.

2.3 Turn templates

Never tight enough..

Turn templates.

On the ICOG home page at www.icog.dk, A free PDF of the Turn templates can be downloaded. The best result is to print the PDF on clear adhesive film, mount it on a clear sheet of plastic, approximately 1 mm thick, and cut the templates out. An alternative is to print it on cardboard and cut it from that.

The template set used in ICOG consist of:

Arc template

The arc template is used for checking angles in game. The maneuver rules and shooting rules uses increments of 45° too establish attitudes and different zones regarding the airplanes.

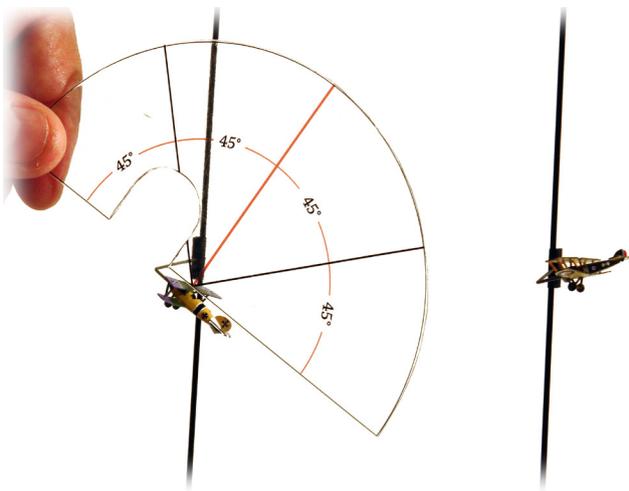


Photo showing the Arc template in action.

Eight Turn templates

Each Turn template holds two turns with different radius, one turn on the inside of the template and one on the outside. A letter denounce the radius of the turn, starting with **A** for the smallest radius ending with **P** for the turn with the largest radius. These letters is called Turn markers.

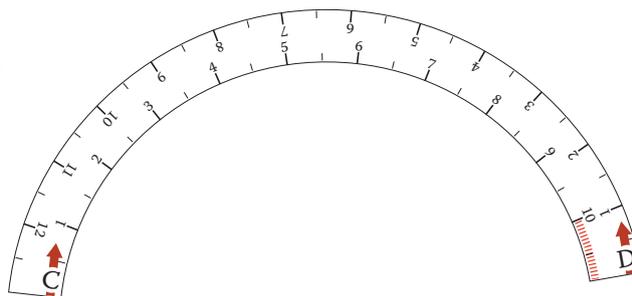
In all there is 16 different turns all with different radices to choose from.

Next to the letter is a red arrow, this is used for aligning the Turn template with the airplanes flight direction, or aligning two turn templates with each other.

Notice that the two turns on any template starts in each end of the template. The templates is divided into Move units, but the last Move unit on one of the turns is not to be used, since it is not a full Move unit and thou will give a false reading.

This is marked with red stripes.

During play a Turn template may never be bend or twisted at all. If a player feel he needs to bent the template to archive his goals, he is using the wrong template or maybe his airplane is not capable of performing his wish, but bending the Template is not allowed.



Turn template C-D (Not to scale)

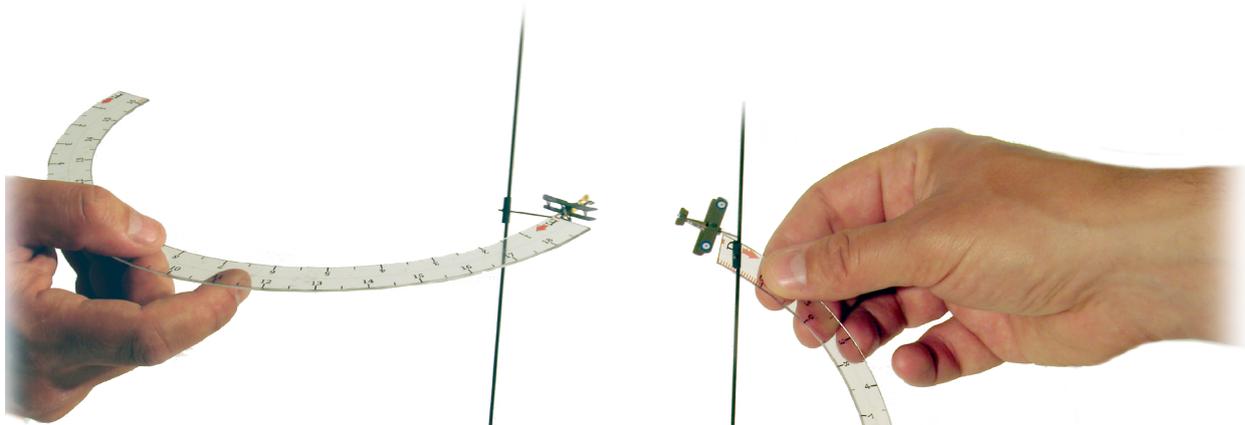


Photo shows a Turning template aligned with the flight direction of the airplane.

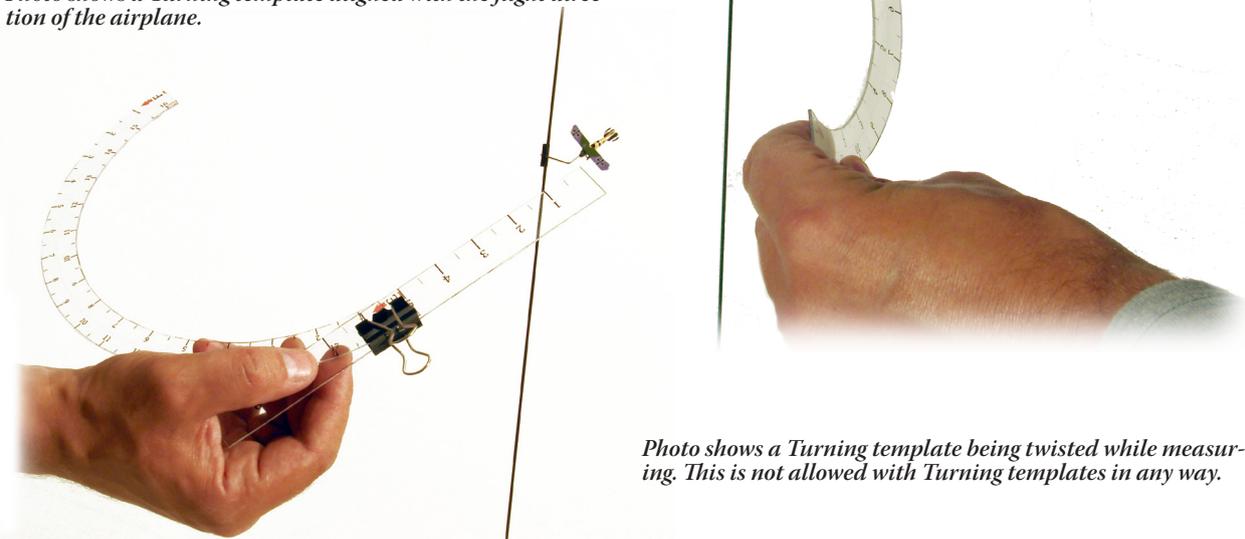


Photo shows a Turning template being twisted while measuring. This is not allowed with Turning templates in any way.

Photo shows a Turning template combined with straight template. A small binder clip is used as a holding aid.

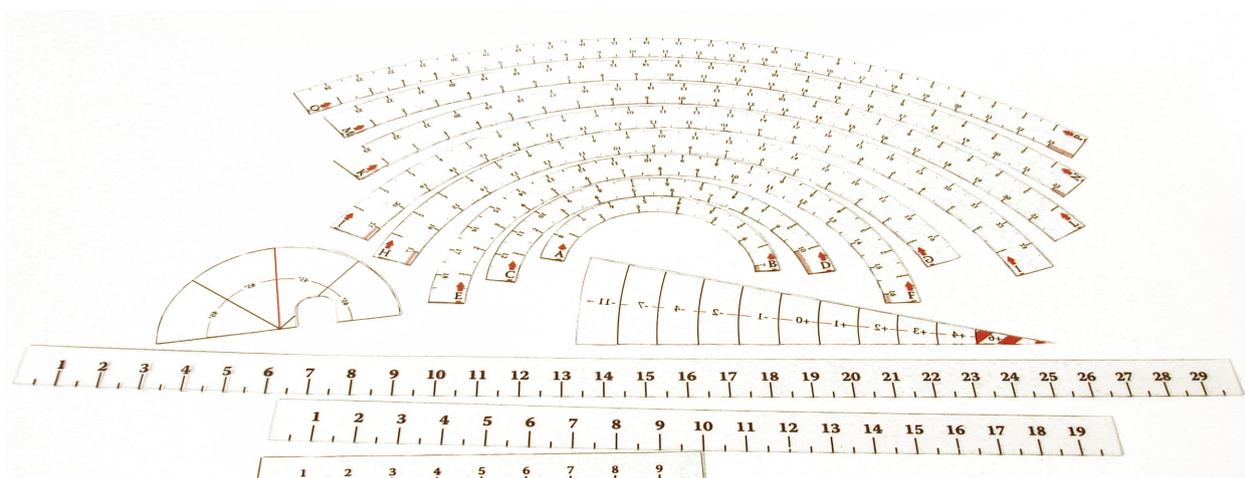


Photo shows a full set of ICOG Templates.

Game Props

Turn templates

Straight Moving templates.

The straight moving templates is used for every straight maneuver and to measuring the airplanes altitude before a move. Three straight moving templates is used, there is no difference between the three, besides the length. Allowing the player to use the one most appropriate to his move.

Contrary to the Turning templates, the Straight templates may be bend but not twisted during play and measuring. When bending the Straight template it is considered as a Turning template. The cockpit panel will tell the player what minimum turn template the airplane can perform. So by bending the Straight moving template it can be used as a Turning template by simply checking the radius of the bend with an ordinary turn template., If there is any doubt that the plane is able to take the turn. This will make measuring a lot easier,

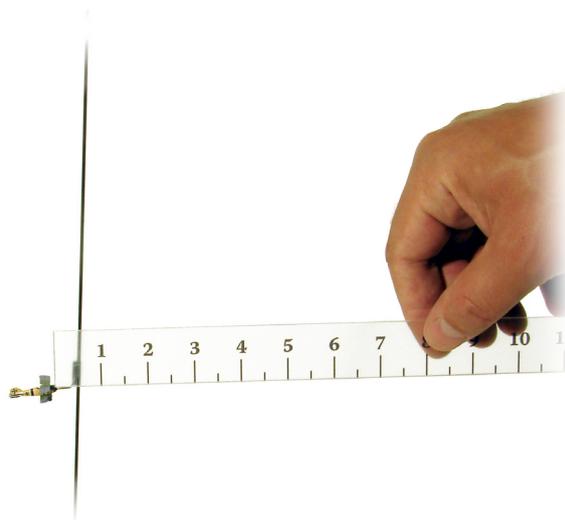


Photo showing the straight template aligned with the airplanes flight direction.

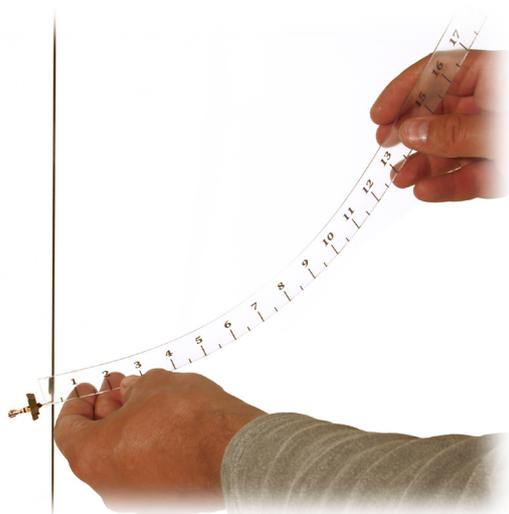


Photo showing a straight template bend to form a turn.

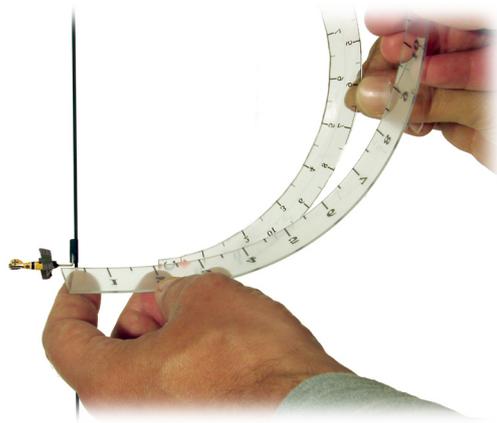


Photo showing a Turn template held close to a bent straight template to check the radius of the straight template.

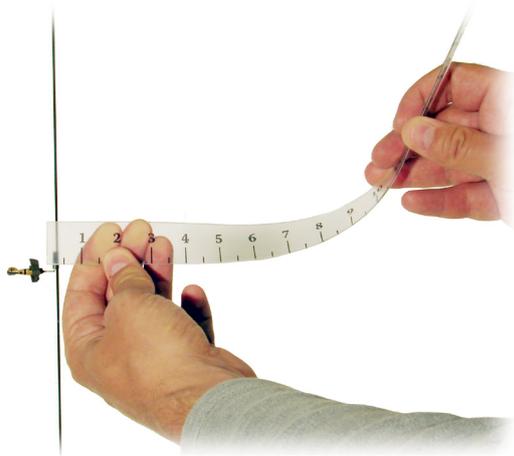
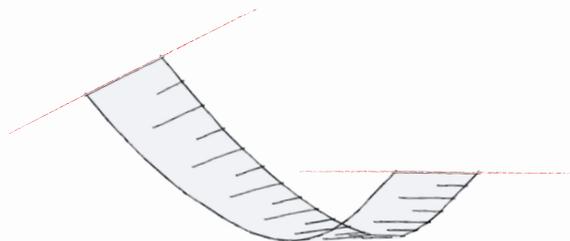


Photo showing a straight template bend and twisted to form a turn. This is not allowed, and a wrong way to use the straight template.



Drawing showing a straight template bend the right way. Notice how the two ends of the template stays parallel.



Drawing showing a straight template bend in a wrong way. Notice how the two ends of the template is not parallel.

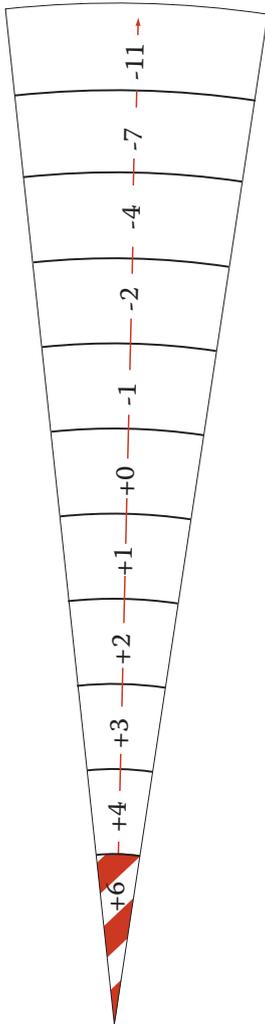
Game Props

Game board

Gunnery template.

The gunnery template is used for finding if a target is within firing range and giving the distance modifier used for shooting. Like the Turn templates the red arrow is used for lining the template up with the airplanes flight direction.

At the "+6" section of the Gunnery template, red warning stripes tells that to get this distance modification, the airplane is now automatically within collision distance of his target (See 5.5.16). The template is cone shaped, and the area it occupies is also used to establish if friendly planes is in danger of getting hit when shooting.



Game turn order

Chart

GAME TURN ORDER

In Clouds Of Glory is a multi player game. It can be played at its simplest, as a dogfight between 2 players, each with one airplane. Or it can be played by 6-8 players with 18-20 airplanes, in a mission where the flak is thick, supply trucks are trying to escape enemy bombers and friendly fighter cover is desperately trying to keep them at bay. In Clouds of Glory missions are played over

a number of Game turns, usually 10. Each Game turn consists of a fixed number of phases, which must be done in a fixed order, as the effect of any action takes place immediately, and therefore influences all following actions. The Game turn Order outlines the exact sequence of actions.. A full size version is found in the Table compendium.

GAME TURN ORDER	
INITIATIVE PHASE	
Modifiers	Modifiers from threatening airplanes are noted on the Initiative sheet Threatening enemies in a Side Arc: -2, threatening enemies in the rear arc: -4. maximum of -6
Roll for Initiative	1D10 + Pilot's Awareness. On a roll of '10', keep rolling and add 10 to the total.
Determine the order of Initiative	If two or more Pilots have the same Initiative total, the Pilot with the higher die roll has the higher Initiative If two or more Pilots are still tied, they roll again. The higher roll has the higher Initiative. The Initiative order is noted on the Initiative sheet.
MOVEMENT PHASE	
Move land units	All trucks, tanks, trains, troops, etc
Move all airplanes on fire or in a spin.	Resolve effects of fire or Flying skill test for spin.
Planes move in Initiative order	Lowest Initiative moves first.
5.4 Declaring the maneuver:	How many maneuvers? Turn direction? Where is the airplane expected to finish its move, and what target will it be engaging? Description of the maneuver
5.5 Measuring out the move	Use of Turn templates and rulers, to determine the airplanes final position
5.5 Test for Maneuvering	If an airplane has used a tighter turn than the one indicated for its current speed, make a Flying skills test or a Structural strength test, as appropriate. an airplane may attempt to turn up to 3 templates tighter than the indicated Turn template
5.6 Moving the airplane	Physically moving the airplane. It is considered good gamesmanship to have an opponent assist with this to confirm the final position of the airplane.
5.7 Energy adjustment.	Calculate speed loss/gain from altitude change, acceleration and maneuvers. Turns and Rolls are -1 Energy Unit or more, per maneuver performed. Climbing cost -1 Energy Unit per Move unit climbed. Diving yields +1 Energy Unit per Move unit Dived. If no maneuvers or other speed loss or gain has occurred, and the airplane is flying slower than its Top speed, the airplane accelerate 1 Energy Unit
5.5.11-13 Test for Stalls	If the airplane is at Stall speed or below, immediately follow the stall rules
Next airplane in the Initiative order moves	
SHOOTING PHASE	
Ground to air - No particulate order	All anti aircraft guns, ground units etc. fires first.
Air to air and Air to ground- Shooting in reverse Initiative order	Highest Initiative fires first. Air gunners make a Awareness roll as per 4.2 to find their Initiative order.
Modifiers to Base shot	Distance modifier. Determined by the Air gunnery template. Measure from guns to Pilot. Firing angle modifier. The angle is found by the Arc template, if any doubts exist, and by consulting the appropriate table. Airplane modifier. Most airplanes have a gunnery modifier, depending on their quality as a firing platform. Sustained fire. Optional +3, if continuing fire against the same target, and placed behind the enemy and firing into the rear arc.
Gunnery skill test	Modifiers from distance, angle, airplane and Sustained fire are totaled and added to the Pilots or Air gunners Gunnery skill. This is referred to as the Base shot. 1D20 rolled
Determine Hit effects	If the shot has hit, add 1D20 to the number of successes, and consult the Damage table Damage is noted on the Cockpit panel and tests are performed as mandated by the damage result
Mark ammunition used	Mark one box of the ammunition used. Sustained fire marks off two boxes. Short burst 1/2 box.
Next airplane in the Initiative order fires	Following the Initiative order, from high to low.
Observation and artillery direction	All relevant test for Observation, artillery or other mission specific actions are made.

INTRODUCTORY FIGHTER MISSION

All you need to know about flying missions can be found in the coming appendix "ICOG Missions and Campaigns". The following illustration shows an introductory fighter mission for 2-4 players.

Once the players have chosen their Pilots, prepared the Cockpit panels and set up the airplanes as described in the mission, the game can begin.

The fighter patrols.

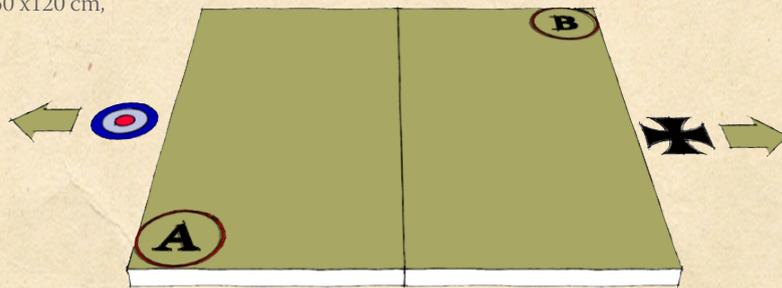
April 1917. Above the front lines at Arras.

The Allies need to know where the German front is strongest. Small patrols are sent out over a wide section of the front, to determine where reconnaissance planes can get through. The German fighters are in place and ready, and pounce on the allied patrols wherever they are encountered.

In the early years of the air war, doctrine for fighting in large formations had not been developed and most often dog-fights were small affairs, and more like man-to-man duels than organized fighting.

Game board layout.

2 board sections 60 x120 cm,



Forces and set up.

2 players, 2 planes per side.

Luftstreitkräfte

2 German fighters.

The Germans set up on the game board, in Area B.

Area B is a circle with a radius of 5 move units, set 5 move units from the center of the edge of the game board Heading and Speed as desired, up to Top Speed. Altitude of 20 move units

Allied Air Forces

2 allied fighters

The Allies set up on the game board, in Area A.

Area A is a circle with a radius of 5 move units, set 5 move units from the center of the edge of the game board. Heading and Speed as desired, up to Top Speed. Altitude of 20 move units

Mission conditions

Game length is 10 turns. If a plane is threatening another plane in the rear arc at the end of turn 10, the game will continue for one more round.

Victory is determined by point score. To win one side must have 2 victory points more than the opposing side. Any other result is a draw.

Enemy plane destroyed

2 Game point

Enemy plane forced home

1 Game point

To win one side must have a surplus of at least two Game points over the opponent side. All other results is a draw. This mission ends after turn 10.

Initiative phase

Threat arcs

INITIATIVE PHASE

The Initiative phase is the beginning of each new Game turn of ICOG. In this phase the order of the airplanes for movement and shooting is determined. Before rolling for Initiative, each Pilot checks to see if any other Pilots are threatening him, as this modifies his Initiative. See about Threat Arcs in 4.1. Initiative is rolled for each Pilot once per Game turn by rolling 1D10. If the die roll is '10', keep rolling and add 10 to the total roll, then add the Pilot's Flying skill and the modifiers for

Threat Arcs. The player who is updating the Initiative sheet enters both the die roll and the final Initiative order for each Pilot. If two or more Pilots end up tying, the Pilot with the higher die roll has the higher Initiative order. Should two or more Pilots still be tied, each will roll again, and the higher roll will have the higher Initiative order of the tied Pilots. The order of movement is always: Lowest Initiative order moves first, followed by the second lowest, and so forth.

4.1 Threat Arcs

Fokkers to the right of me, Fokkers to the left of me and Albatroses behind...

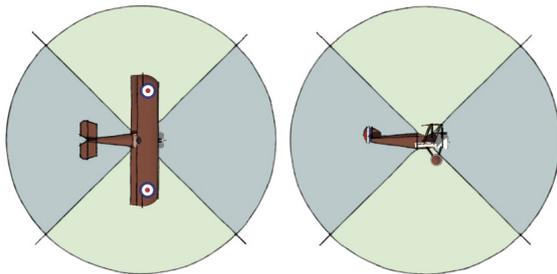
Rule 4.1.1 An airplane that has an enemy airplane inside his front 90° arc, within the distance of the Air gunnery template, imposes a negative modifier to that airplane's Initiative, as it is threatening to attack the enemy airplane. If the airplane is within the enemy airplane's 90° rear arc the modifier is -4, if the airplane is within the enemy airplane's 90° Side Arc, the modifier is -2. More than one airplane can threaten the same enemy airplane at the same time, but the cumulative modifier cannot exceed -6.

Threat Arcs are about stealing a Pilot's attention. A Pilot has to be aware of many factors during a dogfight. Awareness is the Pilot's ability to keep an eye on everything at once. The higher his Awareness, the higher his ability to take it all in. If enemy airplanes are close to him, possibly even in a position where they might have a shot on him, this automatically takes a larger part of a Pilot's attention. These are the Threat Arcs. If one or more enemy airplanes maneuver into these arcs, the

Pilot receives a negative modifier to his Initiative. The Threat Arcs are assessed during the Initiative phase. Two things must be fulfilled in order to trigger the modifier: 1: The attacking airplane must have the defending airplane within its own 90° Front Arc and inside the distance of the Air gunnery template and 2: The defending airplane must have the attacking airplane inside its 90° Side Arc or 90° rear arc. These zones can be checked by using the Arc template.

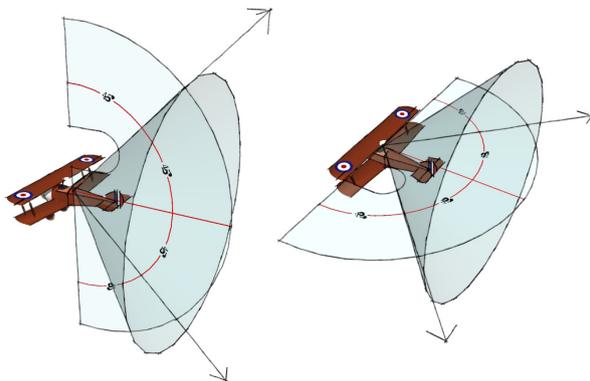
90° Arcs seen from above

The green areas are the Side Arc
The blue areas are respectively Front and Rear Arc



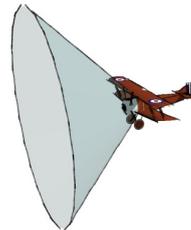
Front and Rear Arcs

Both these zones are cone-shaped with an angle of 90°, centered on the longitude axis of the airplane. The area between the Front and Rear Arcs is the Side Arc.

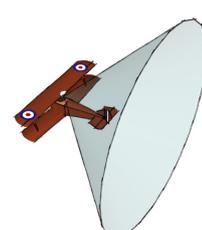


Seen here is how the Arc template is used to define the Cone shaped area that makes up for the Front and Rear Arcs.

Seen here is the cone shaped Front arc.

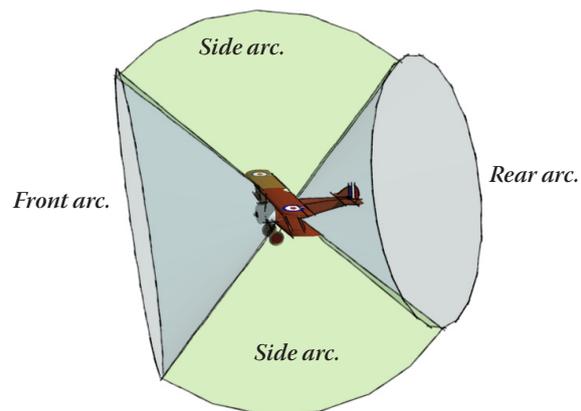


Seen here is the cone shaped Rear arc.



The Side Arc

The green area is the Side Arc. It lies as a band around the airplane, with an angle of 90°. So basically, when holding a Arc template on the airplane the Areas divided by 45° on the template will define the various Threat arcs. In most cases it will be obvious which Threat arc to use for modification.

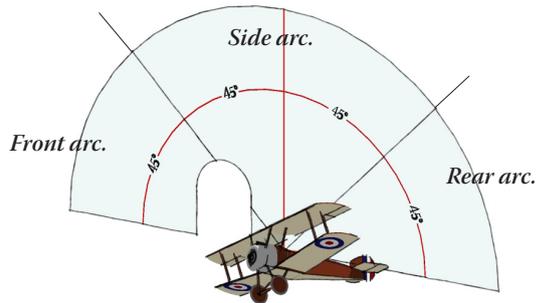


Initiative phase

Threat arcs

The Arc template

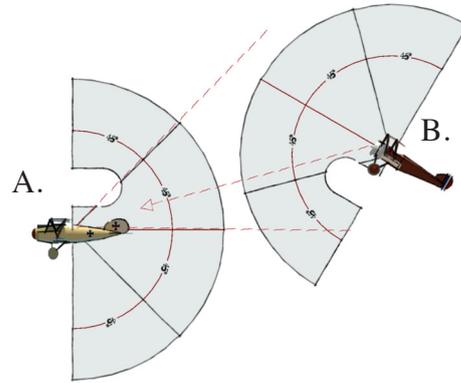
The Arc template is divided into slices of 45°. It is used to determine which arc an enemy airplane occupies, if there is any doubt. An airplane does not have to point directly at an enemy airplane, in order to threaten it. It is sufficient if the airplane is within the Front Arc of the threatening airplane.



An Arc template is placed on top of the airplane. Lined up with the Airplanes flying direction. The 45° areas on the template shows the boundaries between Front, Side and Rear Arc.

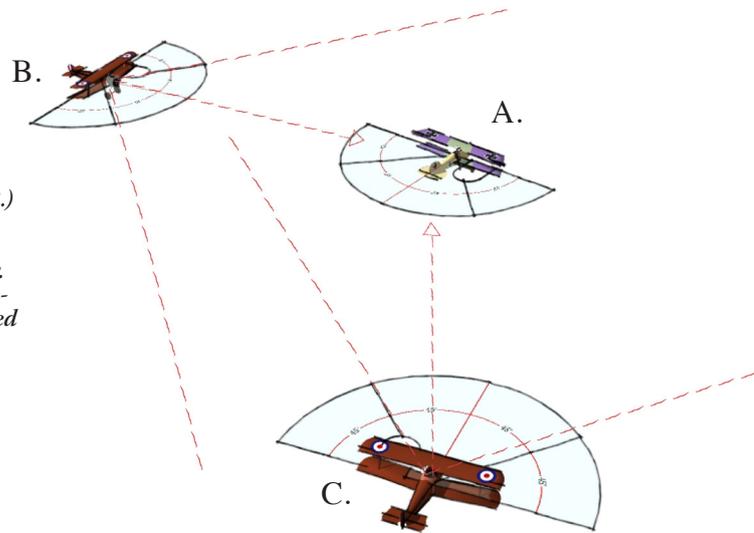
Example 1

The Sopwith Camel's (Airplane B.) Front Arc is overlapping the Albatross DVa (Airplane A.) and is within range. Measuring from the Albatross, the Camel is seen to occupy the Rear Arc, giving the Albatross a -4 modifier to its Base Initiative.



Example 2

The Albatross (Airplane A.) is being threatened from two sides. The left hand Camel (Airplane B.) occupies the Side Arc of the Albatross, giving a -2 modifier, while the right hand Camel (Airplane C.) is in the Albatross's Rear Arc for a -4 modifier. Even if more airplanes were threatening the Albatross, the combined modifier would still not exceed -6, as -6 is the maximum modifier allowed.



4.2 Initiative roll

Possibly the most important roll of the game..

Rule 4.2.1 Each Pilot's Initiative is determined by rolling. If the die roll is '10'; keep rolling and add 10 to the total roll, then add the Pilot's Flying skill and the modifiers for Threat Arcs. This total is the Base Initiative.

Rule 4.2.2 If two or more Pilots end up with the same Base Initiative, the Pilot with the higher die roll has the higher Initiative order. Should two or more Pilots still be tied, each will roll 1D10, and the higher roll will have the higher Initiative order of the tied Pilots. Note: The Base Initiative is not changed, only the Initiative order.

Initiative is determined once per Game turn, and regulates the order in which the airplanes move and shoot. The player who is updating the Initiative sheet enters the die roll for each Pilot. The Initiative sheet already has each Pilot's Awareness score, which is added to the die roll, along with modifiers from Threat Arcs, to form the Base Initiative, which is also noted for each

Pilot on the Initiative sheet. When this is complete for all Pilots, the Initiative order is calculated with the lowest Base Initiative getting the Initiative order '1', the second lowest getting '2', and so forth. The Initiative order is also noted on the Initiative sheet.

Initiative phase

Initiative sheet.

4.3 Initiative sheet

..managing the move order.

- Rule 4.3.1** The Initiative sheet contains the following information for each airplane: Pilot name, airplane type, airplane identification marking, number of available Pilot Re-rolls and the actual Pilot Awareness skill.
- Rule 4.3.2** The individual airplane move sequence established by the Initiative roll described in 4.2 is recorded on the Initiative record sheet for each turn in the game. The Initiative record sheet is also used to record changes in Pilot Awareness skills, if a Pilot becomes wounded, as well as recording Re-rolls used by individual Pilots. See rule 1.1.3.
- Rule 4.3.3** The move sequences of the individual airplanes should be marked on the Game board by placing a numbered marker at the base of the airplane in question. The number on the marker should correspond to the airplanes number in the move sequence – airplane number 1 moves first. When an airplane is moved the corresponding marker is removed in order to provide a good overview of airplanes that has already moved and the move sequence of the remaining airplanes.
- Rule 4.3.4** In the case of a discrepancy between a recorded use of a Re-roll on a Pilots record and on the Initiative record sheet, the latter takes precedence in case of doubt.

The Initiative record sheet is used to record and convey information to all the players in a game. This allows players to quickly get an overview of Pilot names and airplane markings – “Is Baron von Schmiecke flying the yellow nosed D.VII or the blue and red one?” The responsibility of actually recording and calculating the move sequence should be given to a single player whose responsibility it is to “keep the books”. The bookkeeper should, prior to players rolling their Initiative dice, note down eventual Threat arc modifiers for all airplanes that apply, on the Initiative record sheet. The Threat arc modifiers are subtracted from the Initiative die roll as per rule 4.2.1. Read more about Threat Arcs in 4.1. The bookkeeper should also write down any negative modifiers

in Pilot base Awareness when a Pilot gets wounded, so that only the actual Awareness skill number appears on the Initiative record sheet. See rule 1.1.3.

When the numbered move order has been established the bases of the individual airplanes should be marked with the corresponding number chits. This creates a good overview of the game and helps keep the pace going in larger games with more than two players, as the players can see when they are expected to move one of their airplanes. A sheet with the chits, ready to print, is included in the Table and handouts compendia.

This column is used for the actual 1d10 Initiative roll.

This column is used for the Initiative roll + Pilots Awareness score + modifiers from Threat arcs. The small number is the Threat arc modifiers noted on the sheet.

This column is used for the sorted Initiative order.

INITIATIVE SHEET										
Pilot name	Aircraft	Marking	Reroll	Awareness	Turn 1		Turn 2		Turn 3	
Bobby Priest	Camel	2 white stripes		16	8	20 ⁻⁴	3	4	20	3
Albert Jones	Se5a	"F"		15	3	18	1	8	19 ⁻⁴	1
Johan Stahl	Alb DVa	Red tail		14	7	21	4	14	28	4
Reinhard Ritter	Fok DVII	'white moon'		17	4	19 ⁻²	2	3	20	2

Johan Stahl rolled a 10 on his initiative roll And therefore he could roll again, this time a 4. Which gives him a total of 14.

Reinhard Ritter and Bobby Priest Both has a total initiative score of 20. But Priests die roll of 4 is higher than Ritters of 3. So Priest gets the higher place in the Initiative order.



Movement phase

Index.

MOVEMENT PHASE

After the Initiative phase has decided the order in which the Pilots and their airplane move, it's time to move them. In the Movement phase every player takes turns moving their airplane. Every Movement phase consists of an Announcement step where the player explains how he would like the airplane to move. Until he has announced his intentions the player may not use the templates nor measure distances.

When the plan is announced it must be followed. Then the move can be measured out in detail with the templates and corresponding Flying skill tests, if any, are rolled. After that the player adjust the Cockpit panel for any speed loss or gain the airplane experiences during the move. Before any airplane is moved, all airplanes which have no Initiative are moved.

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5.1 Move land units

All vehicles without propellers is moved..

In some missions there will be balloons, trucks, tanks and trains involved. In each Mission it is noted how much and how each many Move units.

5.2 Move airplanes on fire, in Spin or in a stall

Airplanes out of control first..

Rule 5.2.1 Airplanes on fire, in Spins or below their Stall speed, have no Initiative and move before airplanes with Initiative.

Airplanes on fire, in a Spin or in a stall have no Initiative. This means that the Pilot is too busy extinguishing a fire or desperately trying to regain control of his airplane.

Therefore all these airplanes move before all other airplanes. Note however, not all types of stall that make you lose the Initiative. (See Stall 5.5.11 and 5.5.12)

5.3 Airplane moves after Initiative

The last shall be first..

Rule 5.3.1 The airplane with the lowest Initiative moves first. Then the airplane with the second lowest Initiative moves and so on.

Next is airplane movement. The airplane with the lowest Initiative moves first and the one with the highest Initiative moves last. The player in charge of the Initiative sheet calls out in which order the airplanes move. A player can always ask in which order other airplanes are moving in comparison to his own.

It is a good idea to use small chits with numbers to mark each airplanes place in the Initiative order. Place them at the base of the flight stand holding the airplane, and remove them when an airplane has made its move.

5.4 Announcement of move

The player is explaining his move, and describes it with his hands.

Rule 5.4.1 Before an airplane can be moved the player announces his intentions to the other players. No rulers or templates may be used before the Announcement. The Announcement is binding and must be followed in the Movement phase.

Rule 5.4.1 The player cannot be forced to take chances that pushes the airplane over its limits, or demand a Flying skill test to comply with an Announcement of move.

Included in an Announcement are (as a minimum):
How many maneuvers are to be performed.
How the Pilot is using his actions
In which direction the airplane is turning.
Description of the scheduled flight path.
Where the player expects the airplane will end is move.
Which targets the airplane will shoot at, if the airplane can manage a shot.

Example:

The player of a Sopwith Camel F.1 wants to take a sharp right turn and then get to a shooting position on an Albatross D.Va. The Camel is banked to the left before the move.

The Player now announces his plan:
First to roll the airplane over to the right, that will cost 3 Move units (Sopwith Camels roll to the left) That was one action, then a sharp turn to the right, until pointing at the Albatross with the second action. After that continue straight ahead to get as close to him as possible. While explaining the move, the player shows with his hands where he expects his move will end.

The Player has now announced his move and can now measure it with templates and move the airplane.

From now on the player cannot change his move. He has now declared in which direction he is flying and what his goal is (to

get to a firing position on the Albatross).
If it turns out that the player cannot complete the maneuver in the way he thought, and the airplane will end up in a position other than he planned, he must still move the airplane in the announced direction. He can't change his plan.

However the player cannot be forced to take chances that push the airplane out over its limits, or demand a Flying skill test to comply with an Announcement.

It will always be the players choice if he wishes to take the chance. If not, the move is executed with the save Turn template that the airplanes speed indicate.

Example:

It may be that the Turn template the Pilot needs to get a shot on the Albatross is so tight that it requires a Structural strength test.

The Pilot did not expect the turn was that tight, and doesn't want to risk it. He must now use a larger Turn template and that will put the Camel to the left of the Albatross, without being able to get into a firing position, but must still make the turn in the same direction he announced.

Movement phase

Maneuvers and Pilot actions

5.5.1 Maneuvers and Pilot actions

The templates and the dice comes out.

Rule 5.5.1.1 A Pilot has two Pilot actions in a Movement phase. A successful Flying skill test of the Pilot can increase this to three Pilot actions in a Movement phase. The Flying skill test is performed after the Announcement and will always apply to the last action.

Rule 5.5.1.2 If the Flying skill test is failed, the airplane continues on its course after the second action.

A move consist of a series of maneuvers which together defines the route the airplane flies. All Pilots have two Pilot actions each Game turn which they can use for different maneuvers or other tasks during the Movement phase.

If the Pilot has a good Flying skill, he can choose to make a Flying skill test. A successful test means he now has three actions in the Movement phase, instead of two. The Flying skill test may only be made after the Announcement of planned maneuvers in the Movement phase.

In the list of maneuvers below, it is marked which maneuvers

count as Pilots actions, and those which do not.

If the Pilot fails his Flying skill test the airplane will continue its course from its second maneuver in the Movement phase. What is described here is only maneuvers regarding the airplanes movement. Other things can require the Pilot's attention, and will count as Pilot actions. Movements of the airplane always take priority over other maneuvers.

Example: if the airplane machine gun has a malfunction it may require one or more Pilot actions to fix it. See the shooting phase 6.3.9

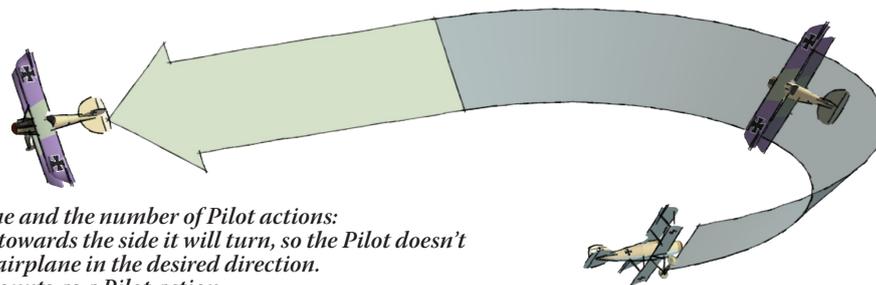
MANEUVER LIST			
MANEUVERS		Pilot Actions	Energy unit loss
Straight ahead	The airplane continues its direction of flight straight ahead.	0	0
Roll	The airplane rolls up to 180° around its longitude axis.	1	1
Vertical dive	The airplane is dived vertical down.	1	1
Turn	The airplane is turning in any direction.	1	1+ ★★
Side slip	The airplane is side slipped to either side.	1	1-5
Bank after turn	The airplane is banked up to 45° after the move.	0	0
Stall	The airplane stalls, either on purpose or as a consequence of maneuver.	0	0★
Immelman	The airplane is stalled on purpose too perform the Immelmann turn.	1	0★
Spin	The airplane is in a spin, either on purpose or as a consequence of maneuver or damage.	0	0★
Landing	The airplane is landing.	2	0
Take off	The airplane is taking off.	1	0
Restart	The pilot tries to restart his engine	1	0
Other actions	Pilot repairs his Machine gun, Pilot operates a radio or camera etc.	1+	0

★ Note that the these maneuvers do not have a normal Energy unit loss, Instead the Energy loss is dictated by the maneuver.
★★ Note that if an airplane is using a tighter Turn Template the Energy unit loss will be higher See. 5.5.6

Example 1.

The movement of the airplane and the number of Pilot actions: A Sopwith Camel is banked towards the side it will turn, so the Pilot doesn't need a maneuver to roll the airplane in the desired direction. Then it takes a turn, which counts as a Pilot action. In the last part of the move the Camel is going straight ahead, Straight ahead is a "free" action, and doesn't count towards the Pilots permitted number of actions.

Total: One Action



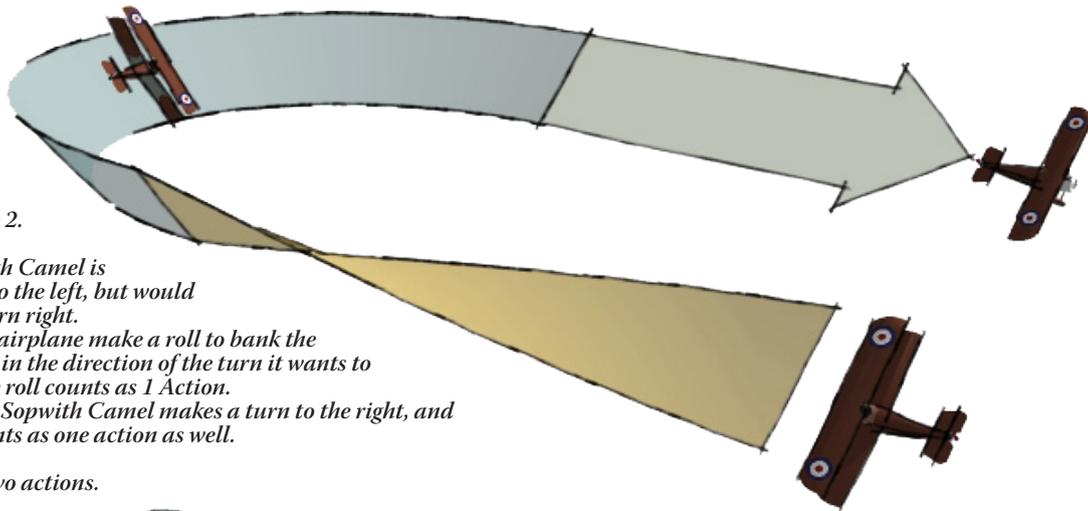
Movement phase

Maneuvers and Pilot actions

Example 2.

A Sopwith Camel is banked to the left, but would like to turn right. First the airplane make a roll to bank the airplane in the direction of the turn it wants to take. The roll counts as 1 Action. Then the Sopwith Camel makes a turn to the right, and that counts as one action as well.

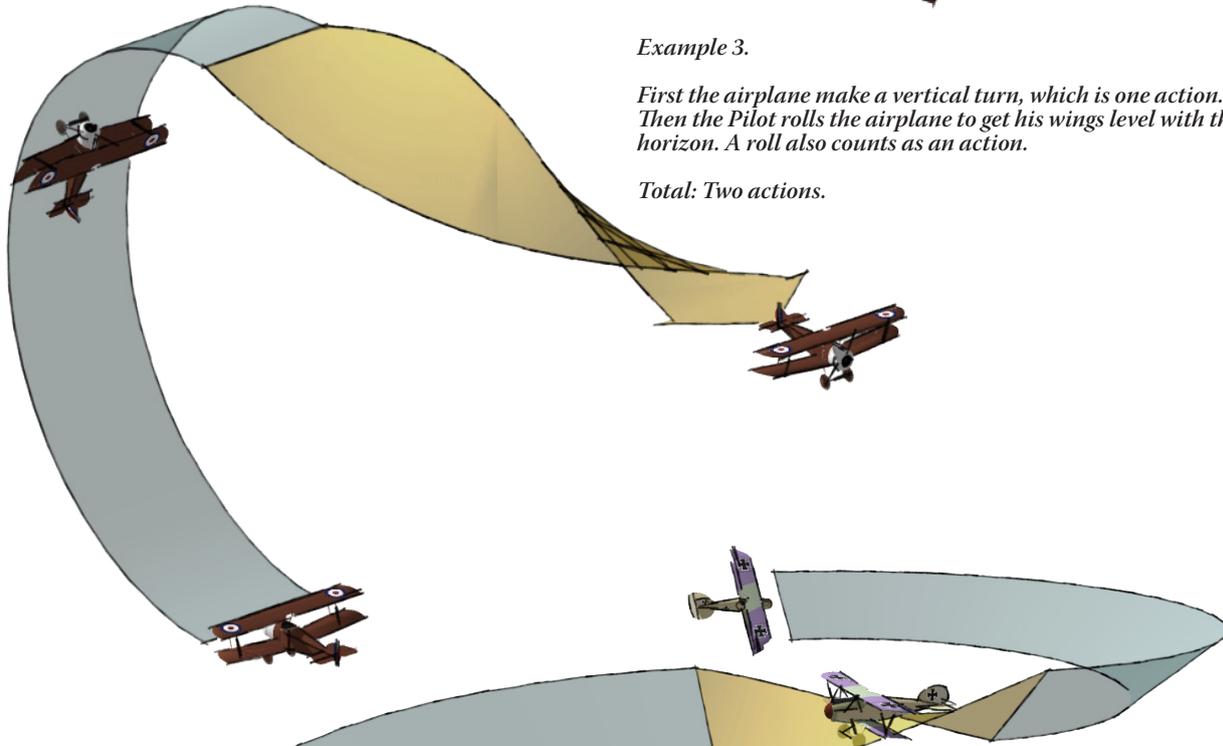
Total: Two actions.



Example 3.

First the airplane make a vertical turn, which is one action. Then the Pilot rolls the airplane to get his wings level with the horizon. A roll also counts as an action.

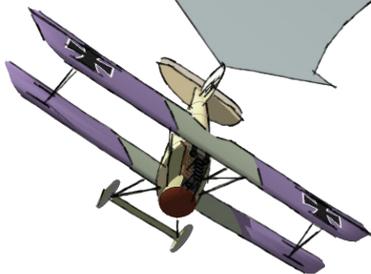
Total: Two actions.



Example 4.

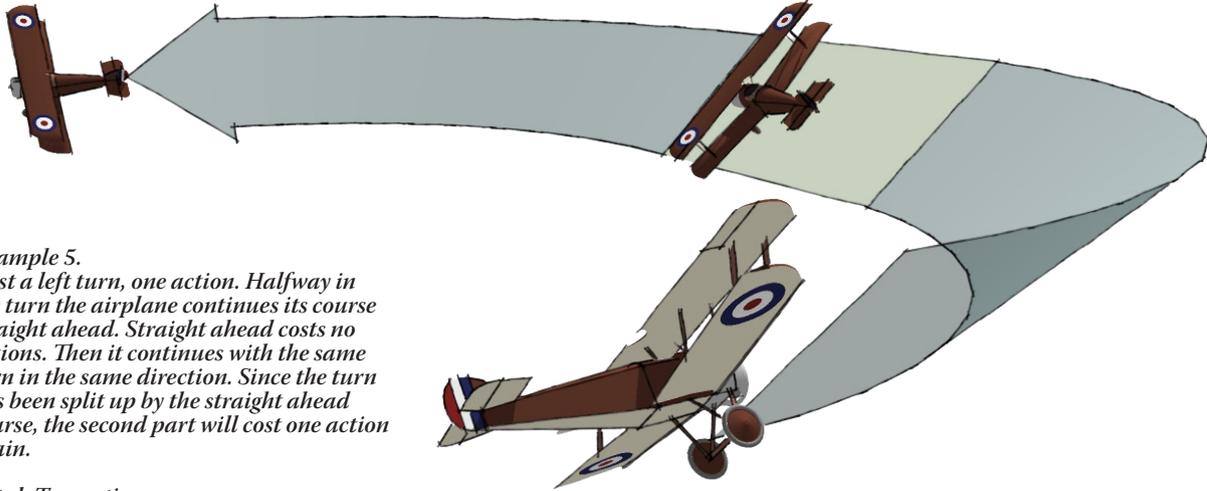
First a turn, thus one action. Then a roll to be able to turn to the opposite direction. The roll counts as one more action. Finally a turn which also counts as an action. If the Pilot fails his Flying skill test to do three actions, the airplane will continue straight ahead after the roll.

Total: Three actions.



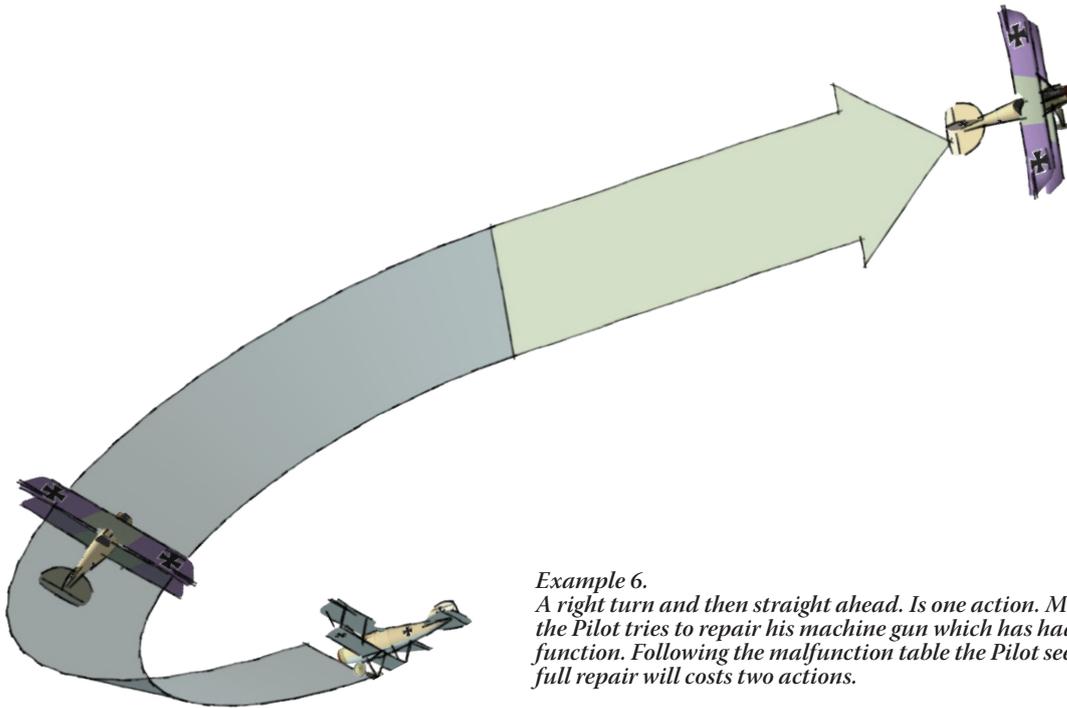
Movement phase

Maneuvers and Pilot actions



Example 5.
First a left turn, one action. Halfway in the turn the airplane continues its course straight ahead. Straight ahead costs no actions. Then it continues with the same turn in the same direction. Since the turn has been split up by the straight ahead course, the second part will cost one action again.

Total: Two actions.



Example 6.
A right turn and then straight ahead. Is one action. Meanwhile the Pilot tries to repair his machine gun which has had a malfunction. Following the malfunction table the Pilot sees that the full repair will cost two actions.

The Pilot rolls a Flying skill test to see if he is such a good Pilot that he can repair a machine gun while he controls his machine around a turn, but he fails the test. He can now only use two actions this Movement phase, so he only repairs one of the two actions on his machine gun, he must repair the remainder in the next Movement phase. He will get around in his turn, because flying maneuvers always takes priority over other actions.

Total: Two, one flying action plus one repair action.

5.5.2 Maneuvering / Straight ahead

forward, forward..

Rule 5.5.2.1 Flying straight ahead does not count as a Pilot action.

To fly straight means to continue on the course the airplane has. Note that it is the airplane's attitude which decides what the course is, so straight ahead can be in all directions including vertical, etc.

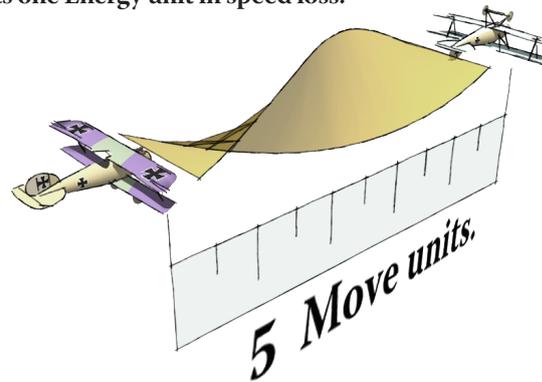
5.5.3 Maneuvering / Roll

Rolling, rolling, rolling..

Rule 5.5.3.1 A roll around the airplane's own axis up to 180°, requires a move of Move units, corresponding to the airplane's value in Roll. See Cockpit panel 2.1.2

Rule 5.5.3.2 A roll counts as one Pilot action, and costs one Energy unit in speed loss.

The maneuver is called a Roll and counts as one Pilot action. A Roll costs one Energy unit in speed loss. A Roll around the airplane's longitude axis may be needed to bank the airplane in the direction the Pilots want to turn. A Roll is up to 180°. The roll value of an airplane is printed on the plane's cockpit panel. "Roll" is the number of Move units the airplane must move straight ahead to make a roll of 180°. Each time the airplane uses the Roll maneuver, the airplane must at least move the airplane value in Roll straight ahead, even if the airplane doesn't roll all 180°.



Example:

An Albatross DVa will conduct a roll of 180°. It has a Roll value of 5 Move units.

5.5.4 Maneuvering / Vertical dive

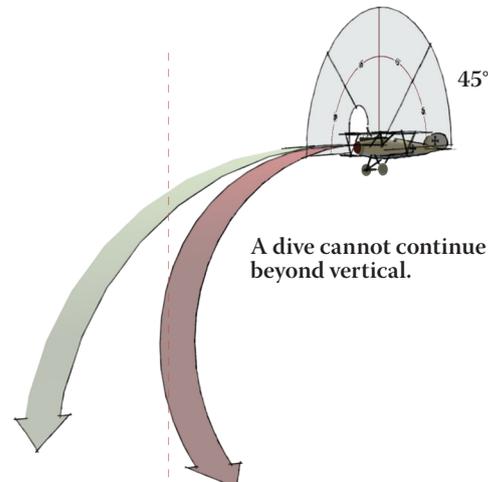
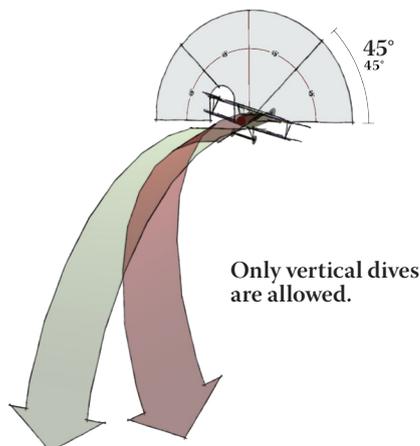
Diving vertically is always vertical..

Rule 5.5.4.1 A vertical dive can only be performed when the airplane's wings and body are within 45° of the horizontal airplane. The only direction a vertical dive can take is true Vertical. The normal Turn templates and turn rules are used.

Rule 5.5.4.2 A vertical dive counts as one Pilot action, and costs one Energy unit in speed loss.

A Vertical dive cannot be continued further than vertical. This means that the airplane cannot fly and end up on its back with this maneuver. A vertical dive costs one Energy unit of speed loss. A vertical dive is a turn towards the ground. It is the only turn maneuver an airplane can take where it turns below its wing line. See Turn direction 5.5.5. The direction off the dive is always vertical. To use the maneuver the airplane must be within 45° of the horizontal airplane. Use the Arc template if there is any doubt. The 45° regards both the attitude of the wings and the body of the airplane.

Example: An Albatross is banked slightly to the right. Using the Arc template it is checked if the airplane's attitude is within 45° of horizontal. If it is within 45° the airplane can use the Vertical dive maneuver. It can only dive straight down. Turn templates, as in a usual turn, are used to plot the move. The airplane cannot continue the turn further than vertical so it can never end up on its back with this maneuver.



Movement phase

Maneuvering / Turn direction

5.5.5 Maneuvering / Turn direction

below the wing or over the wing..

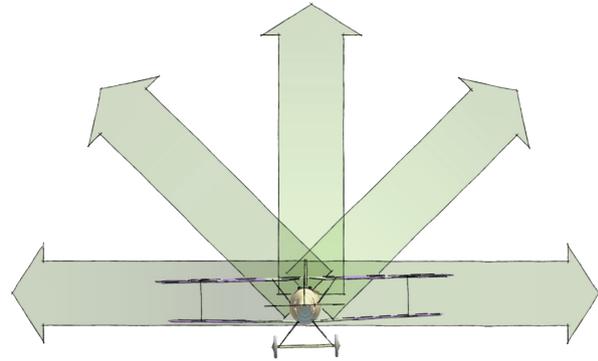
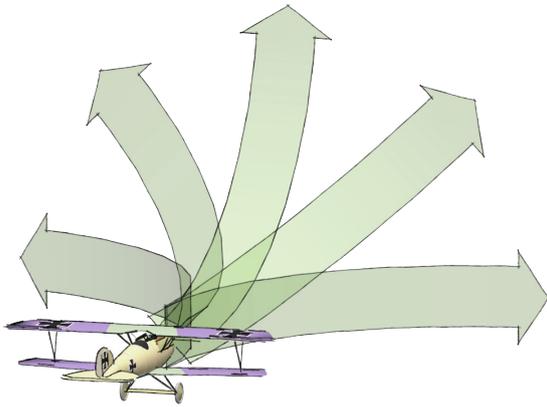
Rule 5.5.5.1 An airplane may only turn in directions above its wing line. A ruler laid flat on the upper wing, defines the area in which an airplane may turn. The area of turn is from the wing line and upwards.

The Pilot has to make sure that his airplane is rolled in the direction he wants to turn.

An airplane can turn in all directions that are "above" its wing. A turn in ICGO can be in any upwards or sideways direction from the airplane's nose. Therefore turns are not just horizontal turns. If the Pilot makes a loop or a dive, it is also a turn. Note that a Vertical dive is the only instant where an airplane can use a turn below its wing line. See 5.5.4 Vertical dive.

Illustration:

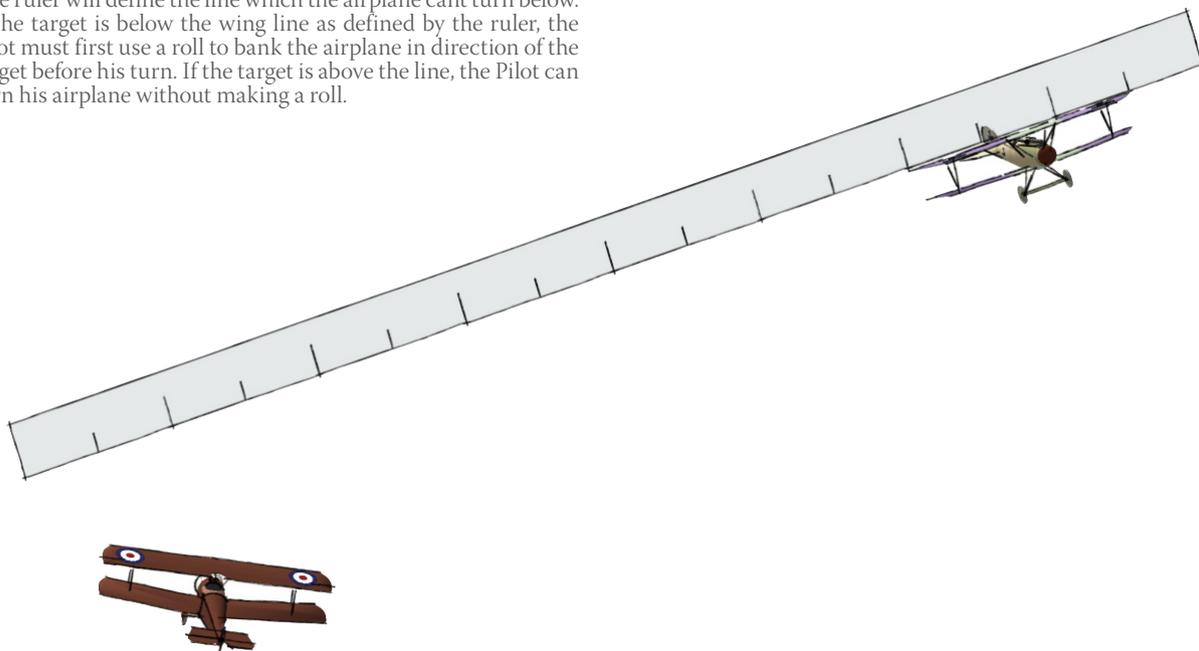
An airplane can turn in all directions that are "above or horizontal with" its wing.



If in doubt about whether a target is above or below the wing, use a ruler as a guide.

Place the ruler on top of the Airplane, parallel with the wings. The ruler will define the line which the airplane can turn below. If the target is below the wing line as defined by the ruler, the Pilot must first use a roll to bank the airplane in direction of the target before his turn. If the target is above the line, the Pilot can turn his airplane without making a roll.

Example: *In this situation the right hand airplane (an Albatros) can not turn towards the Camel below without having to roll the Albatros first.*



5.5.6 Maneuvering / Turns

Hand me a B template, then i'll make it..

- Rule 5.5.6.1** An airplane can use a Turn template up to three turns tighter than the turn that is indicated from the current speed the airplane is flying at. The Pilot must then pass a Flying skill test, if he is flying slower than Maximum maneuvering speed, or a Structural strength test if he is flying faster than Maximum maneuvering Speed. The relevant test is modified with 0 for 1 turn tighter, -1 for 2 turns tighter and -2 for 3 turns tighter.
- Rule 5.5.6.2** When a Pilot fails a Flying skill test in an attempt to take a tighter turn, he will stall the airplane in the middle of the turn he made the test for. See 5.5.14 for the result.
- Rule 5.5.6.3** When a Pilot fails a Structural strength test in an attempt to take a tighter turn it means that the airplane has been enduring too great a G Load during the maneuver, The strain will damage the airplane and a result roll on the Structural failure table must be made immediately.
- Rule 5.5.6.4** A turn always count as one Pilot action, and costs a minimum of one Energy unit.

There are 8 turns templates to choose from. Each one holds two turns, one on the inside and one on the outside, all are marked with a letter from A-P. The A turn has the smallest radius, The P turn has the largest radius. On the Cockpit panel, on the rim of the Airspeed indicator, a row of Turn markers shows which Turn templates is safe to use with the corresponding speed. If there is no Turn markers exactly at the Speed step the airplane is flying, the next Turn markers clockwise is used.

All Turn templates is varying in length. They are divided into Move units. How far or how many Move units the aircraft will use for any turn is always up to the Pilot. If he only needs a small part of a Turn template to turn the airplane as he wants, he can do just that. It will still count as a turn maneuver and cost one Pilot action and one Energy unit to perform. In the same way the Pilot can also extend the turn if the circumference of a Turn template is not enough, and it will still only count as one turn maneuver.

Its possible to fly a tighter radius turn than the Turn markers shows. It will demand a test of either the Pilots Flying skill or the Structural strength of the airplane.

An airplane can always attempt to use a Turn template three Turn markers tighter than the one indicated by the current speed. Simply count counter clockwise on the Turn markers to see which turns is available. The test the Pilot has to make is always modified by one or more points. The modification can

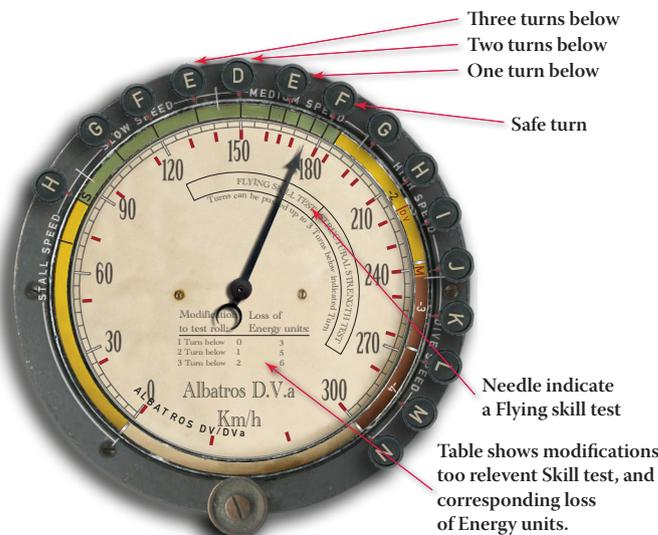
be found on the small table on the face of the Airspeed indicator. The tighter the chosen turn is, the greater the modification will be.

If a Pilot tries to make a turn with a tighter Turn template, than the one indicated from the speed, he has to make a skill test. Which type of test is decided by the speed of the airplane. If it goes too fast, there is a risk that the wings will collapse under the strain from the gravity load in the turn. If the airplane is below the speed where it will risk a collapse, it will instead risk a stall that will throw the airplane out of its intended route, with a loss of altitude and speed.

To establish what kind of test is needed, Flying skill or Structural strength test, the Airspeed Indicator needle is used. Below it, on the face of the Airspeed indicator there is a scale that shows if the speed is so low that its the Pilots Flying skill in question, or if the speed is so high its the airplanes Structural strength needs to be tested.

Remember that the radius of a turn does not say everything about the maneuverability of an airplane. Only how tightly they can turn.

How quickly the airplane comes around the turn is also very important. So when comparing two airplanes also look at what speed they can safely maintain through the turn.



Example 1.

An Albatross D.V.a is flying 175 Km/h. The Turn markers at 175 Km/h shows that the airplane can use a F turn at that speed. If the Pilot wants to use a tighter template he can choose between E, D, or a E turn. Below the Airspeed Indicator needle the Pilot can see how he is in the speed zone where a Flying skill test is needed. The Pilot wants to use a D Turn template instead of the F Turn template. The modification to the Flying skill test is also noted on the face of the instrument. The D Turn template is two templates tighter than the F template, so the modification to the Flying skill test is -1. If the Pilot succeed the Flying skill test, The airplane will now fly the D Turn template with a speed of a 175 Km/h. Note that the pilot cannot benefit from pushing the plane any further as the Albatros can perform its tightest turn at 150 km/h.

Movement phase

Maneuvers / Turn

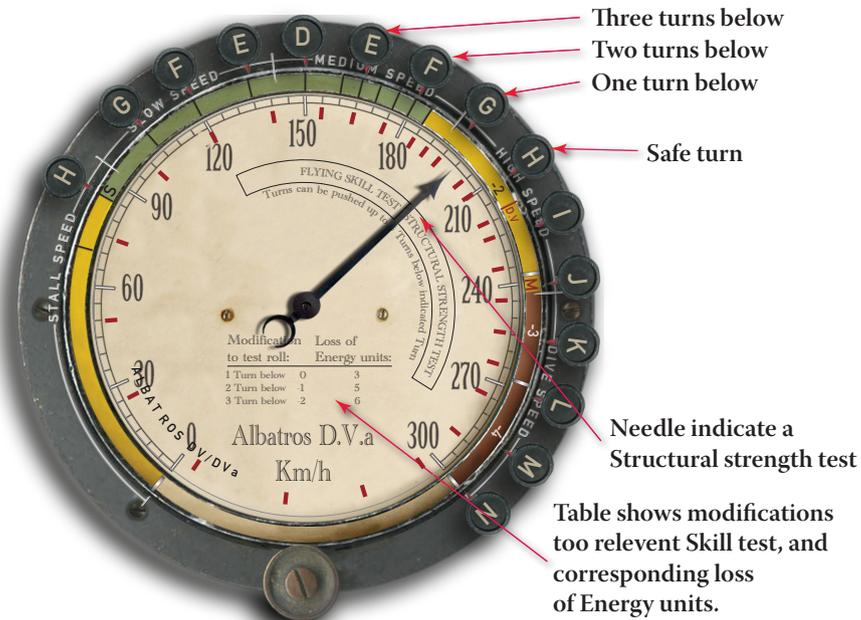
Example 2.

An Albatross DVa flies at 200 km/h. The Pilot reads from the Cockpit panel that the Albatross can do a H turn at 200 Km/h, H being the next Turn marker clockwise.

If the Pilot chooses to use a H turn, he can do it safely and without any skill or Structural strength tests.

If he wants to make a G turn instead, he can see it is the next Turn marker, counter clockwise, next to 195 km/h. On the Cockpit panel he can see that his speed is above Max Maneuvering speed, in the area marked with "Structural strength test" so if he tries to use the G turn he must first make a Structural strength test with a 0 modification.

He tries with an F turn, which is two Turn templates tighter, the modification, shown by the table, will be -1 to the Structural strength test. If he pushes the airplane to the limit and use the E turn, it means that he must succeed a Structural strength test with a -2 modification.



Flying skill test.

The Flying skill test is made with a 1d20.

If the result is equal to or below the Pilots Flying skill score, the test is a success. A Success means that the airplane can use the Turn template in question at the speed indicated on the Airspeed indicator, and the Pilots skill was good enough too take the airplane to the limit of a stall, and not over.

If the Pilot rolls a result higher than his Flying skill score, The test is failed, meaning that the Pilot was not able to keep his airplane within the limits of a stall.

The airplane will now stall in the middle of the turn and the airplane is thrown out of the turn and downwards before the Pilot can regain control again.

Any planned maneuvers after the turn is now dismissed and the airplane has to move the remaining Move units at an angle of 45° toward the ground. See 5.5.14 Maneuver / Stall in turns.

Structural strength test.

A Structural strength test is made with a 1d20.

If the result is equal to or below the airplanes Structural strength score, the test is a success. A success means that the airplane can use the Turn template in question at the speed indicated on the Airspeed indicator, and that the airplane structure was strong enough too withstand the strain and G Load imposed by the maneuver.

If the Pilot rolls a result that is higher than his airplanes Structural strength score, the test is failed, meaning the airplane could not stand the stress and is now in great danger of a fatal collapse, or in best case will be substantial damaged.

The Pilot now have to make a roll on the "Structural failure table" with a 1d6.

This table is used whenever the airplanes structure is in danger.

Structural failure 1D6	
1	At first the wings is ripped from the fuselage, then the engine leaves it mount and the whirling prop shreds the remains in pieces.
2	The main spar collapses and one wing are torn off. The remains whirls to the ground.
3	A loud crack is heard from the top wing and the fabric is bulging in a strange way.. Structural strength is reduced with 3d6.
4	One inter plane strut breaks loose and disappear behind the airplane together with a large piece of fabric. Structural strength is reduced with 2d6.
5	The wings are flexing and the fabric is torn more than one place, two flyings wires breaks and is hanging lose. Structural strength is reduced with 1d6 +3
6	Better bend than break! Surprisingly nothing happens.

5.5.7 Maneuvering / Speed loss in turns

The sharper the more..

Rule 5.5.7.1 An airplane doing a turn loses minimum one Energy unit. If an airplane is using a smaller Turn template than the one indicated by the airplanes speed, it will loose more Energy units in the maneuver. The exact loss of Energy units can be found on a small table on the face of the Air speed indicator. The table shows both the relevant modification to either the Flying skill test or the Structural strength test and the corresponding energy loss in Energy units.

When an airplane is turning, it will loose Energy, and therefore speed. All gain and loss of Energy and speed, is measured in Energy units.

After sorting out the maneuver and the physical move of the airplane, the Energy units is used to correct the airplanes speed on the Cockpit panel. See 5.7 Energy adjustment.

Example 2
A Se5a flies 225 km/h and will use the F Turn template instead of the I Turn template indicated by the speed. The player checks the small table on the Airspeed indicator, and finds his Structural strength test has a -2 modification and that the Energy loss is -7 Energy units.

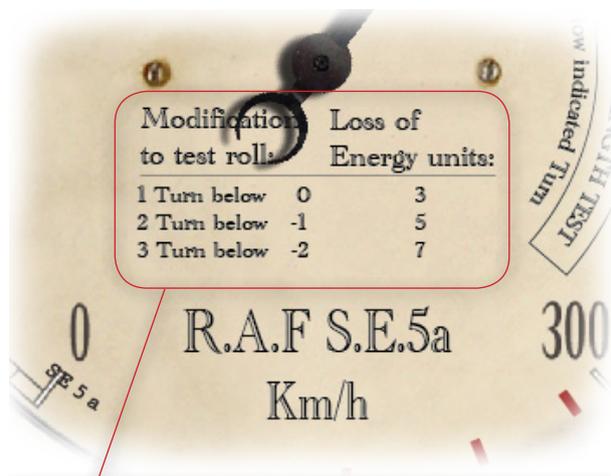


Illustration. The Modification Table found on the Cockpit panel of the S.E.5a

Example 1
A Se5a flies 190 km/h and will use the E Turn template instead of the G Turn template indicate by the speed. The player checks the small table on the Airspeed indicator, and finds his Flying skill test has a -1 modification and that the Energy loss is -5 Energy units.



The small scale on the face of the airspeed indicator, shows what kind of test that is required when smaller turn template is used. The indicator needles position indicates the kind of test.

In example 1. a Flying skill test is required.

In example 2. a Structural strength test is required.



Movement phase

Maneuvering / Banking in turns

5.5.8 Maneuvering / Banking in turn

bank, then pull..

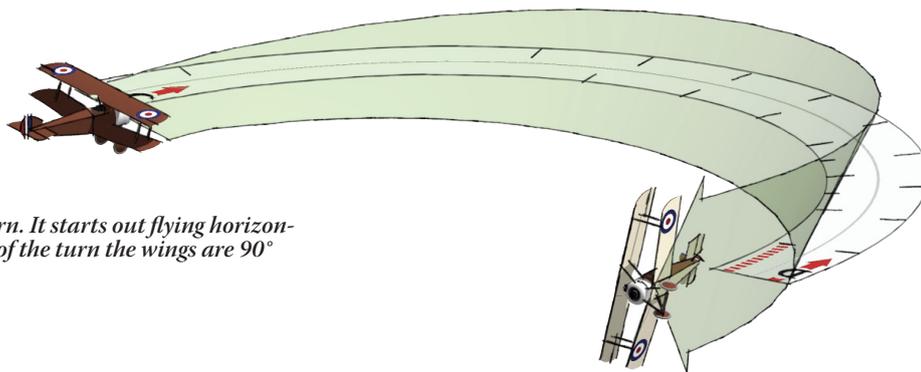
Rule 5.5.8.1 An airplane will always have its wings 90° perpendicular to the turn when it comes out of the turn. Regardless of its attitude or bank angle when it enters the turn. How far the airplane has flown around the turn doesn't matter. As long as it has moved equal to, or more than, its value in Roll.

When an airplane is turning it will roll into the direction it swings. The aircraft doesn't have to be banked before the turn is started. See 5.5.5 Turn direction. It will always be banked 90° perpendicular to the turn, after the turn is completed. The only exception is if the airplane has moved less than its value in Roll, if so the airplane is banked in the same attitude that it started with.

It doesn't matter how many Move units the aircraft stays in the turn, it is always 90° at the end of the turn when it comes out of it. After the airplane is placed at 90° to the turn, the pilot can bank his airplane up to 45° in each direction, this is called "Banking after movement" (See 5.5.9),but can only be used after the move is complete. This can be of significance for the

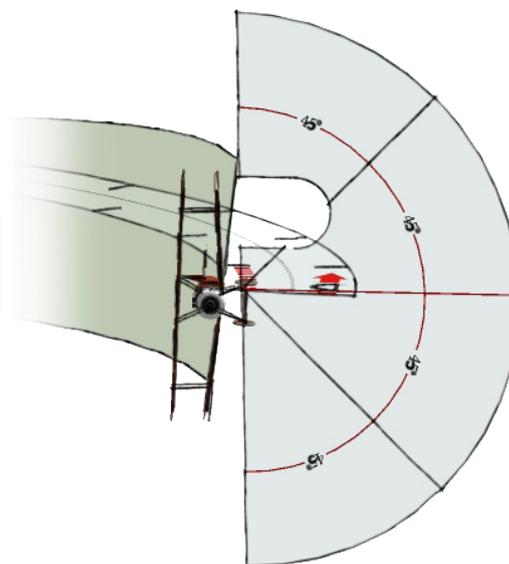
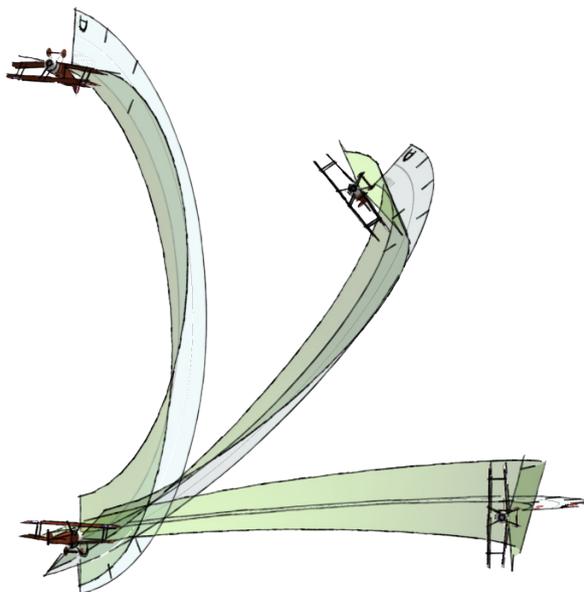
next maneuver the airplane may do. Note that this applies to all turns in all directions.

The Aircraft model is almost never placed physically in these positions during play. The rule is mainly used to define if an aircraft can continue straight over in another turn, or if it has to put in a roll maneuver between two turns in different directions. After all the maneuvers in a Movement phase is decided, and the airplane is moved physically on the Game board, the Aircraft is placed in an attitude that follows the move. If the move ended up with a turn, longer than Roll value, the aircraft is placed 90° perpendicular to that turn. After that the Pilot can adjust his aircraft 45° to each direction, along the aircraft's longitude axis. See. 5.5.9 Bank after movement.



Example.1
A Sopwith Camel takes a turn. It starts out flying horizontally, but when it comes out of the turn the wings are 90° perpendicular to the turn.

Example 3
This shows how the 90° perpendicular rule applies in all cases. However, it is usually not something that is measured, only if there is any doubt.



Example 2
Here is how angles are measured relative to the turn, by using the Arc template.

5.5.9 Maneuvering / Bank after movement

Straighten the kite up..

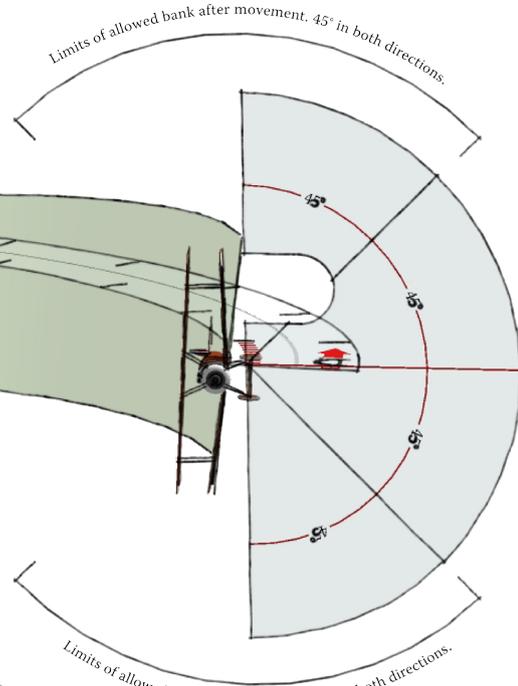
Rule 5.5.9.1 After an airplane has been moved, it is allowed to be banked 45 degrees in either direction around its longitude axis.

Rule 5.5.9.2 “Bank after movement” doesn’t count as a Pilot action, and costs no Energy units in speed loss.

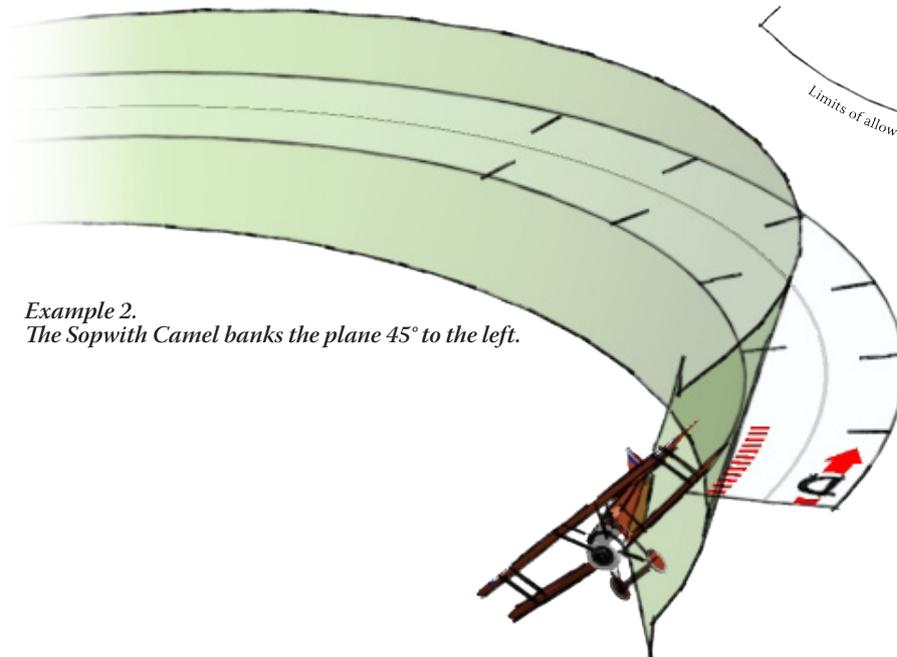
“Bank after movement” is a maneuver which isn’t part of the Announcement or can be used when planing a series of maneuvers. It is only used to adjust the aircraft’s bank after a series of maneuvers. “Bank after movement” can only be used as a attitude correction after all planned maneuvers. It is the Pilot’s choice if he wants to adjust the bank angle. However it can have a great tactical influence on the next Movement phase to come.

“Bank after movement” functions somewhat like a roll, but the aircraft can only bank 45°, and can only be used at the end of a series of maneuvers. It can never be used as a maneuver before or between other maneuvers. Which way the aircraft will roll is optional. How much the aircraft will bank is also optional, as long as it doesn’t exceed more than 45°. Note how “Bank after the movement” is not only intended to be a roll to get the wings level with the ground, it can just as well be used to roll the airplane to the inverted, so its ready for a dive the next Movement phase.

Example 1.
A Sopwith Camel takes a turn. After the turn the Pilot can correct the airplane’s bank attitude up to 45° in both directions.



Example 2.
The Sopwith Camel banks the plane 45° to the left.



Movement phase

Maneuvering / Side slip

5.5.10 Maneuver / Side slip

the art of flying sideways..

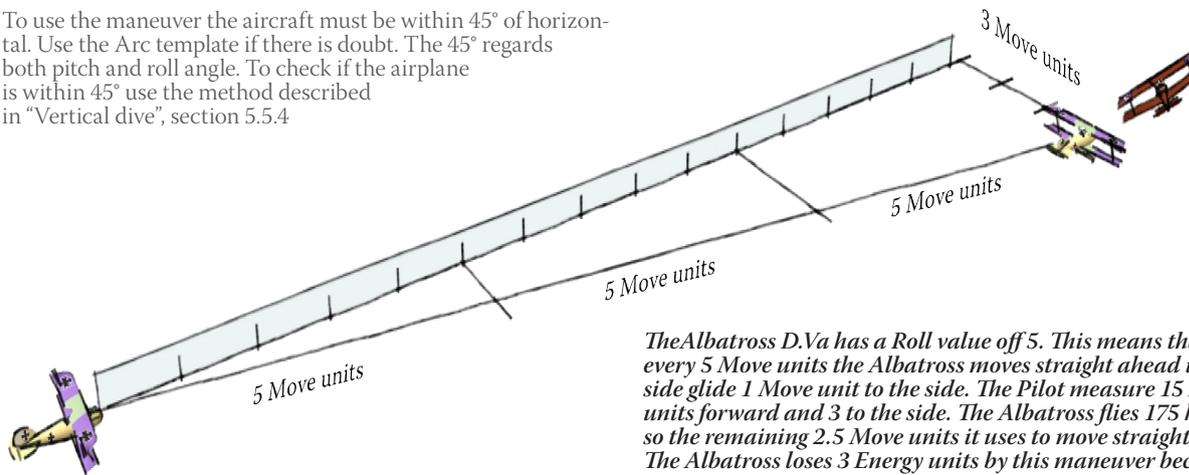
Rule 5.5.10.1 An airplane in a Side slip will maintain its direction but will displace its position horizontally to either side. An aircraft can Side slip one Move unit to the side, for each time it covers a distance corresponding to its value in Roll. But not more than 5 Move units in total in each Movement phase. For every Move unit the aircraft Side slips to one side, it loses one Energy unit. Side slip counts as one Pilot action.

Rule 5.5.10.2 Side slip can only be performed when the airplane's wings and body are within 45° of horizontal.

A Side slip is a maneuver which forces the aircraft sideways through the air, it retains its flight direction but shifts its position to the side. The maneuver can be used to set up a better firing position or as a preparing maneuver for a turn. Often used before landing to slow the aircraft down, as Energy loss by this maneuver can be substantial.

The aircraft can move one Move unit to the side every time it moves its value in Roll straight ahead. This means that aircraft with low Roll value can side glide more to the side than aircraft with high Roll values, when they are covering the same distance. An aircraft can only Side slip 5 Move units in total in the same Movement phase.

To use the maneuver the aircraft must be within 45° of horizontal. Use the Arc template if there is doubt. The 45° regards both pitch and roll angle. To check if the airplane is within 45° use the method described in "Vertical dive", section 5.5.4



The Albatross D.Va has a Roll value of 5. This means that for every 5 Move units the Albatross moves straight ahead it can side glide 1 Move unit to the side. The Pilot measures 15 Move units forward and 3 to the side. The Albatross flies 175 km/h, so the remaining 2.5 Move units it uses to move straight. The Albatross loses 3 Energy units by this maneuver because it has Side slipped 3 Move units to the side.

5.5.11 Maneuver / Below Stall speed

transformation from airplane to piano..

Rule 5.5.11.1 The Pilot must make a Flying skill test immediately. If he succeeds the airplane is moved as described in 5.5.11.2, if he fails his Flying skill test the airplane will enter a spin, but is still moved as 5.5.11.2 but with its nose pointing vertical down. From next Game turn it is moved as described in the Spin rules, See 5.5.15
The Pilot can choose to fail the Flying skill test on purpose and let the airplane spin.

Rule 5.5.11.2 An airplane that at the end of the energy adjustment has ended up below its Stall speed, is stalled and must be immediately moved vertically down. The distance in move units, of this vertical move is equal to the number of energy units the speed is below the Stall speed, or a minimum of two move units.
The airplane retains its flying direction, but its nose is pointed from vertical down to 45° from the ground. The air speed is increased with two Energy units. The Pilot cannot use its weapons this Game turn. Any extra Air gunners on board get a -6 penalty to their Gunnery skill test. Enemy airplanes that fire on a stalled airplane get a +3 bonus to their Gunnery skill test.

Rule 5.5.11.3 Below Stall speed is a result of other maneuvers, and cost no Pilot actions.

This section is for airplanes whose speed is below their Stall speed. The airplane's Stall speed is the Speed step marked with an "S" on the Cockpit panel.
For an airplane to fly it requires for air to move over the wings fast enough to generate enough lift to carry the airplane's weight. The slower the airplane flies the more the Pilot has to

pull back on his controls to ensure enough lift to keep flying. At some point the wings angle into the airflow, called angle of attack, is so steep that the air can't keep flowing smoothly over the wings. At that point the wing stalls, all lift is gone, and until the airplane picks up speed again, and gets its wing into the airflow again, it's only a falling object. This is called a stall.

Movement phase

Maneuvers / Below Stall speed

A Pilot that during the Energy adjustment phase can see that his airplane will end up on the first Speed step below stall speed, knows he is going to stall no matter how good a pilot he is. (See Energy adjustment phase 5.7)

The first thing to do is to move the airplane vertical down the flight stand the same number, or minimum two Move units that the airplane went below the stall speed in Energy units. Or put in another way, The airplane can never climb more than it have Energy units left before the first speed step below Stall speed on the Cockpit panel.

Example 1.

An Se5a is making a steep climb from a speed of 170 Km/h.

The airplane is climbing 11 Move units, and using one maneuver, that mean a loss of 12 Energy units in total.

When the pilot count 12 Energy units backwards, he sees that number 9 is the last energy unit that still would have let him stay on stall speed.

But since he has to lose 12 energy units, he still have 3 below the stall speed. The airplane is now moved these 3 move units vertically down.

9 Energy units, down to stall speed.



3 Energy units, equals the amount of Move units the airplane have to move down vertical.

The Pilot can choose to pitch the airplane from vertical down and upwards with up to 45° from vertical, in all cases the airplane retains its flight direction, and will have its wings level with the ground.

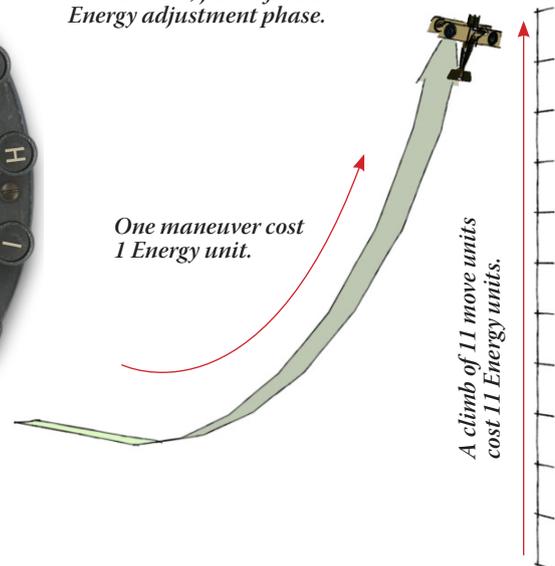
Notice that the indicator needle always end up on the Speed step below Stall speed during the Energy phase. Even if the airplane has lost so many energy units that when counting them it seems that the indicator needle should have ended up on zero, or even lower.

After the airplane is moved the Pilot adjusts the speed again by adding two Energy units, and moving the air speed Indicator needle accordingly. This will almost ensure that the airplane is back on Stall speed starting from next game turn. After all, the airplane has now dropped and picked up speed again. Note that any other modifications the airplane could have to its Energy is not in effect here.

Now the Pilot has to make a Flying skill test. If the Pilot fails his Flying skill test, the result is a Spin instead of a stall. The airplane is moved no further and is in a spin from the next Game turn. See 5.5.15 for rules about Spins and how to move the airplane.

The Se5a is seen here in the steep climb, climbing 11 Move units in its maneuver.

This is where the airplane end its move, just before the Energy adjustment phase.



A successful Flying skill test means the pilot lets the airplane stall, regains speed, and is ready for the next Movement phase. The pilot can also choose to let the airplane enter a spin as if the test was failed.

All this is executed in the Energy adjustment step, before the next airplane in the Initiative order is to move.

Since the last part of the airplane's move has been a stall, it makes for an easy target as it hang in mid air speed, therefore all enemy airplanes shooting at a stalled airplane get a +3 bonus for their Gunnery skill test. As the Pilot has no real control over his flight direction he can not shoot in this Game turn. This only applies to the Pilot, If the airplane is a two seater, any Air gunners can still shoot, but they get a negative modifier of -6 to any Gunnery skill tests.

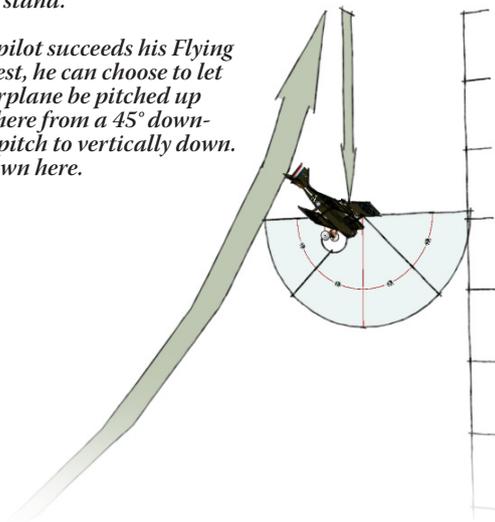
If the airplane ended up in a spin instead of a stall. The airplane is rotating and very hard to hit., therefore all enemy airplanes shooting at a airplane in spin get a -6 modifier on their Gunnery skill test. See 5.5.15 for rules about Spins.

Movement phase

Maneuvering / Below Stall speed

Here is shown how the Se5a is moved 3 Move units down the Flight stand.

If the pilot succeeds his Flying skill test, he can choose to let the airplane be pitched up anywhere from a 45° downward pitch to vertically down, as shown here.



After the move, the indicator needle is adjusted 2 energy units up from the first speed step on the indicator (shown here), up to the Stall speed step.



Example 2.

An Se5a flying at 145 Km/h has climbed 8 Move units. In the Energy adjustment phase, when the pilot counts 8 energy units backwards, he realize that the move will bring his speed down below stall speed, at exactly 65 Km/h. This is one energy unit below stall speed. He now moves the airplane down the flight stand. But since he is ended exactly on 65 Km/h, he has to move the minimum of two move units, and not just the one he went below stall speed.

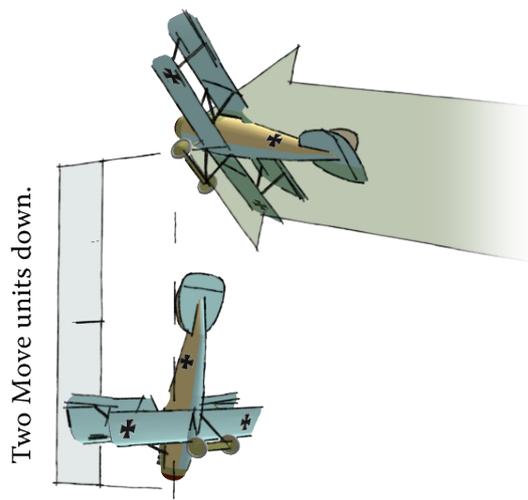


Before he moves the airplane he makes his Flying skill test, If he succeeds he will just have finished his stall, and he can place his airplane from vertical down up to 45°, wings level with the ground. The stall is now over, the airplane has dropped and gained speed, the pilot can adjust the indicator needle two energy units up, and will end up on stall speed at 85 Km/h. He is now ready to move normally the next Game turn.

If he fails his Flying skill test, the airplane will end up in a spin. See 5.5.15 for spin rules.

Example 3.

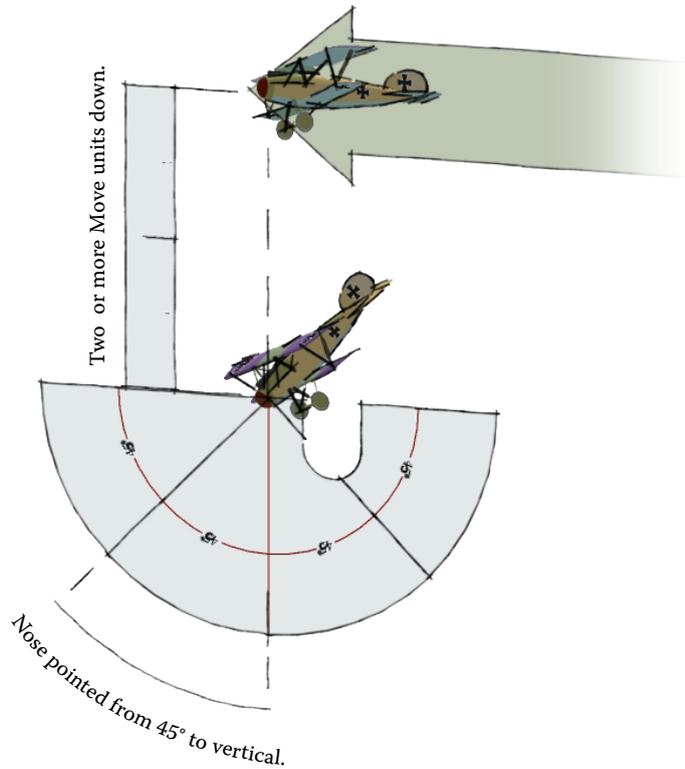
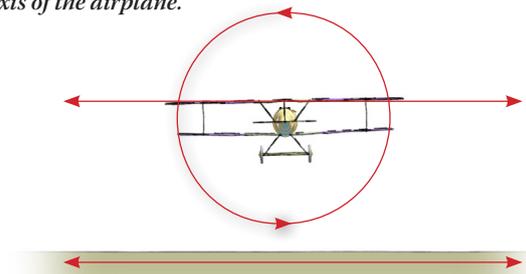
A Albatros is in the same situation as the Se5a in example 2. The airplane is moved two Move units down the flight stand, nose pointing almost vertically toward the ground, the airplane must retains its flight direction. The Pilot could choose to pitch the airplane up with 45°, but in this case he want to be in a position that can give him some speed next Game turn. Then the Pilots adjust his Energy with two units, and move the needle up to 85 Km/h. This is right on the Albatros Stall speed, but the Pilot figures that he can get some more speed next Game turn, so he would end up in the next Energy adjustment phase with more speed. Now the Pilot just hopes that nobody will try too take a shot at him, since he is an easy target hanging in midair.



Example 4.

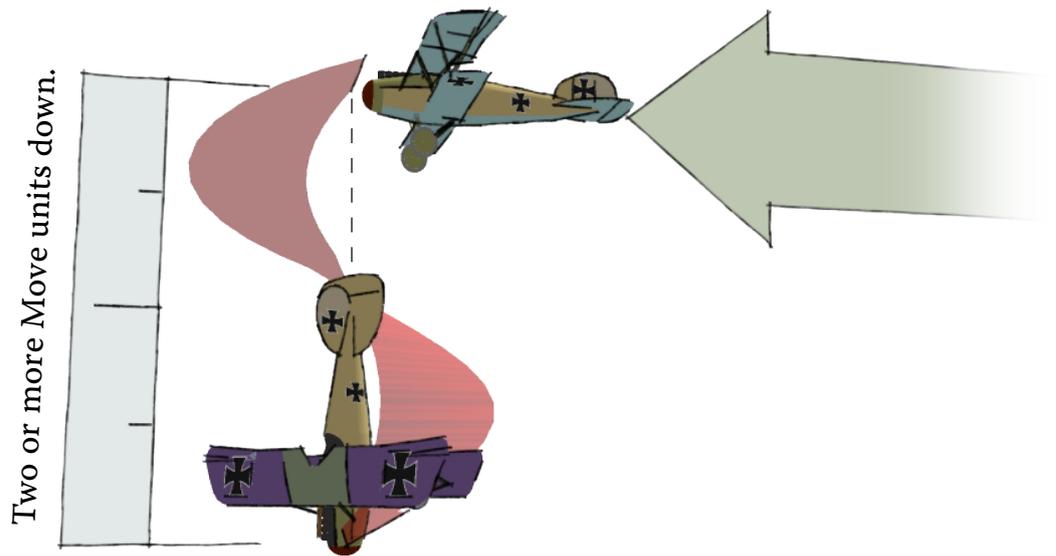
Here is shown in detail how to measure the vertical to 45° angle. The Albatros from example 3, is shown here after a drop of 2 move units. The pilot uses the Arc template to find the maximum of 45°. The airplane must also have its wings level with the ground. That only apply to the roll axis of the airplane. See illustration below.

Wings have to be level with the ground, around the Roll axis of the airplane.



Example 5.

If the Pilot fails his Flying skill test, the airplane is in a Spin and is moved down, and pointed vertical down. See. 5.5.15 for spin rules.



Nose pointed vertical down.
Direction of flight, random.

Movement phase

Maneuvering / Flying at Stall speed

5.5.12 Maneuver / Flying at Stall speed

just at the edge..

- Rule 5.5.12.1** An airplane which has moved and made the Energy adjustment step, and is on its Stall speed, is close to a stall and the Pilot must make a Flying skill test immediately. If the Pilot succeeds the test he has three options.
1. The airplane can keep flying on Stall speed in the next Game turn.
 2. The Pilot can use the incipient stall condition for a special maneuver called “The Immelmann turn” (See 5.5.13)
 3. The Pilot can let the airplane enter a deliberate spin. (See 5.5.15)
- If the Pilot fails his Flying skill test the airplane will stall, and is moved as described in 5.5.12.2
- Rule 5.5.12.2** A stalled airplane is moved two Move units down. The airplane retains its flying direction, and its nose is pointed 45° down towards the ground. The airplane is banked so the wings are level with the horizon. The speed is increased with two Energy units. The Pilot cannot use his weapons this Game turn. Any Air gunners on board get a -6 penalty to their Gunnery skill test. Enemy airplanes that fire on a stalled airplane get a +3 bonus to their Gunnery skill test.
- Rule 5.5.12.3** A stall following flying at Stall speed is a result of other maneuvers, and costs no Pilot actions. An Immelmann turn following flying at Stall speed costs one Pilot action.

Note that this section is for airplanes which speed is on their Stall speed. The airplanes Stall speed is the Speed step marked with an “S” on the Cockpit panel.



The airplanes speed is exactly on Stall speed.

When an airplane is on its Stall speed it is not actually stalled yet, but close. The speed is low and the wings are buffeting, a good Pilot knows that he is very close to a stall, and will gain some more speed as fast as possible. The Pilot unaware of his airplanes speed and the physical warnings will end up in a stall. There is only one solution, Point the nose down, full throttle, until speed picks up, and control is regained.

But the very best Pilots will welcome the approaching stall, as it can be the start of a special maneuver called the Immelmann turn, that will allow the Pilot to completely alter his flying direction. The condition can also be used for a deliberate spin.

In ICOG a Pilot can still keep flying if his airplane is on the Stall speed, by succeeding a Flying skill test. If the Pilot succeed the test he can keep flying on the Stall speed with no penalties. A successful Flying skill test also allow the Pilot to do a Immelmann turn, where he can turn the airplane around with the rudder in the stalled condition, and come out of the maneuver pointing in an optional desired direction. See 5.5.13 The Immelmann turn.

With a successful Flying skill test the Pilot can also put the airplane in a deliberate spin. If the Pilot wish to do that, the airplane is moved as a normal spin. See 5.5.15 Spin

If the Flying skill test is failed, it means that the Pilot have no choice other than let the airplane stall. The airplane is moved following rule 5.5.12.2.

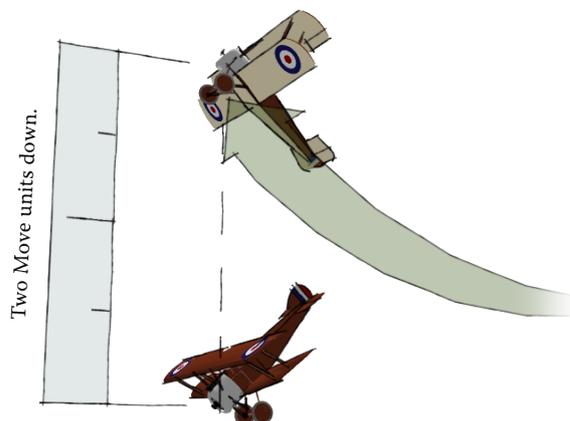
The airplane is moved two Move units down the flight stand. The aircraft retains its flight direction, wings are set level with the horizon and the airplane is pitched down towards the ground at 45°.

After the airplane is moved the Pilot adjust the speed by adding two Energy units, and moving the air speed Indicator needle accordingly. Note that any modifications the airplane could have to its Energy is not in effect here.

All this is executed in the Energy adjustment step, before the next airplane in the Initiative order is to move.

Since the last part of the airplanes move was a stall, it makes for an easy target as it hangs in mid air with no speed, therefore all enemy airplanes shooting at a stalling airplane get a +3 bonus for their Gunnery skill test. And because the Pilot has not real control over which direction his airplane is going, besides down, he cannot shoot in this Game turn.

This only regards the Pilot, If the airplane is a two seater, any Air gunners can still shoot, but they get a negative bonus of -6 to any Gunnery skill tests.



If the Pilot fails his Flying skill test, the airplane will stall. Move the airplane according to rule 5.5.12.2

5.5.13 Maneuver / The Immelmann turn

make Max proud..

Rule 5.5.13.1 The Immelmann turn can only be executed when the airplane is flying on its Stall speed and after a successful Flying skill test. See 5.5.12.1

Rule 5.5.13.2 An airplane that execute a Immelmann turn is moved two Move units down. The Pilot can freely choose a new flying direction, and the airplane can be pitched from vertical up to 45° from the ground. The airplane is banked so the wings are level with the horizon. The air speed is increased with two Energy units. The Pilot can use his weapons without penalty this Game turn. Any extra Air gunners onboard gets a -6 penalty to their Gunnery skill test. Enemy air planes that shoot on a stalled airplane get a +3 bonus to their Gunnery skill test.

Rule 5.5.13.3 Performing a Immelmann turn cost one Pilot action.

A good Pilot can use a stall for a special maneuver called a Immelmann turn in ICOG. The maneuver represent all the different maneuvers that start out with the airplane in a stalled condition, such as the French reversement, The Immelmann turn, the hammerhead, and many others.

The maneuver is named after Max Immelmann, a German Pilot who possibly invented the maneuver as a way of changing the direction on his airplane faster than he could turn it around by a normal turn. The maneuver takes advantage of the stall, which for a moment lets the airplane begins a free fall. In the free fall where the wings don't supply lift anymore, the airplane is turned in a new direction with the rudder. When the airspeed returns and the airplane starts acting as a normal airplane again, the flying direction can be the opposite of what it started out with. To use this maneuver it requires that the airplane flies at its Stall speed and the Pilot can succeed with a Flying skill test.

If the Pilot fails his test, the airplane will stall in a normal manner. See 5.5.12.2

Example :

A Sopwith Camel F.1 is placed in front and too the left of a Albatros Dva. The pilot realize that if he is going for a straight right turn to get a side shot on the Albatros he will likely overshoot the target and end up on the opposite side of the enemy. Therefore he announce a Immelman turn behind the Albatros with the purpose too get behind the Albatros and get a good shot and a better position the next Game turn.

The Pilot first check his Cockpit panel and see that the Camel have a speed of 130 Km/h and that he have to lose 7 Energy units to get the airplane down to stall speed. He plan out a right turn followed by a climb of 3 Move units. That will make him lose 1 Energy unit for each turn, 1 for the Immelmann maneuver itself and 3 Energy units for the climb. The last Energy units needed too hit stall speed, the Pilot get by throttle the engine back. The Camel can throttle back and lose a maximum of 3 Energy units. All This will place the Camel about 4 Move units higher, and behind the Albatros.

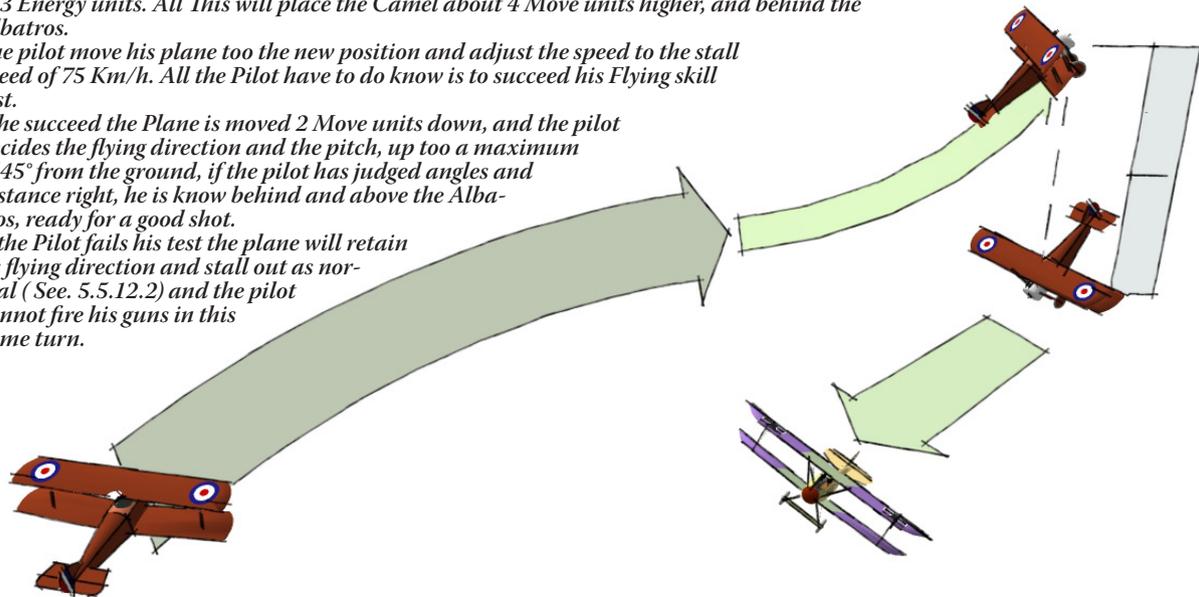
The pilot move his plane too the new position and adjust the speed to the stall speed of 75 Km/h. All the Pilot have to do know is to succeed his Flying skill test.

If he succeed the Plane is moved 2 Move units down, and the pilot decides the flying direction and the pitch, up too a maximum of 45° from the ground, if the pilot has judged angles and distance right, he is know behind and above the Albatros, ready for a good shot.

If the Pilot fails his test the plane will retain its flying direction and stall out as normal (See. 5.5.12.2) and the pilot cannot fire his guns in this game turn.

The trick with this maneuver is to plan it already in the Move Announcement.

The Pilot knows he have to end up on Stall speed in the end of the Movement phase to execute the Immelmann turn. So what he does is to count how many Energy units the airplane will have to lose before it hits the desired Stall speed. The Pilot has three ways of slowing the airplane down. He can climb, which will cost him one Energy unit for each Move unit the airplane climbs. Each maneuver the airplane do in the move, cost typical one Energy unit each as well. Finally the Pilot can throttle the engine back and lose two to four Energy units in the Movement phase. All the Pilot has to do is to find a combination of these factors, that will put him in the right spot at the right speed, in the end of the Movement phase.



5.5.14 Maneuver / Stall in a turn

a turn to tight..

- Rule 5.5.14.1** (5.5.6.2) When a Pilot fails a Flying skill test in attempting to take a tighter turn, he will stall the airplane in the middle of the turn he made the test for. The planned flight path for the airplane stops halfway through the turn in question, and the airplane is moved the remaining Move units straight ahead and down in a 45° angle, towards the ground. Then wings are banked level with the horizon.
- Rule 5.5.14.2** An airplane which stalls in a turn gets an additional Energy loss of 4 Energy unit. The airspeed can however never go below the marked Stall speed on the Airspeed indicator.
- Rule 5.5.14.3** An airplane which stalls in a turn cannot use its weapons in the same Game turn. It regards both fixed and flexible mounted weapons.

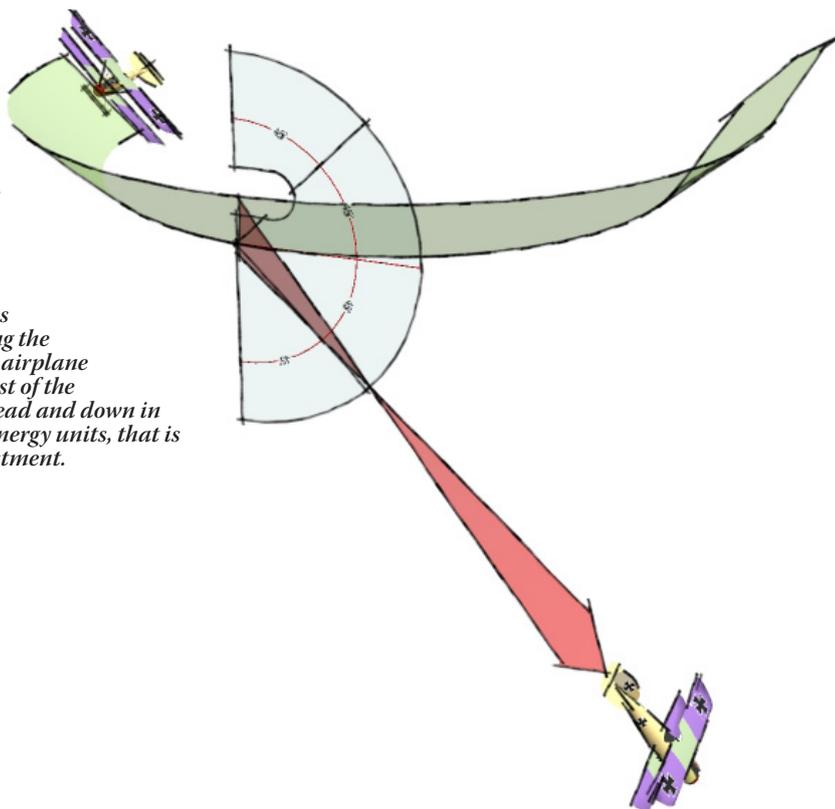
Note that this section is for airplanes whose speed is over their Stall speed when the Pilot has failed a Flying skill test in the attempt to tighten the turn of his airplane.

For an airplane to fly it requires that air moves over the wings fast enough to generate enough lift to carry the airplane's weight. When the airplane at high speed is trying to decrease its turn radius, it pulls more G-force. The airplane in effect gets heavier, and then the minimum speed for enough lift increases. When that minimum meets the speed the aircraft is flying, a stall occurs. That stall will differ from a normal stall in that it happens at a higher speed, the airplane is turning and one wing will stall before the other. For a brief moment the airplane will act like it lost one wing. The airplane gets thrown around in a snap roll, loses altitude, and the Pilot only gains control again when the airplane is unloaded and the speed is regained. When a Pilot fails his Flying skill test in an attempt to tighten a turn, See 5.5.6 Maneuver / Turn. He has now pushed the airplane over its limit and has stalled the airplane.

When an airplane stalls in a turn it always happens halfway through the turn, no matter how many Move units the turn might be. If the plan was for the airplane to fly 10 Move units through the turn, it will now stall at 5 Move units. From this point and the remaining Move units left, the airplane is moved straight ahead and down towards the ground in a 45° angle. And the airplane is banked so the wings are level with the horizon. This fixed movement is always the case, no matter in what direction the original turn was conducted.

The Pilot hereafter regains control of the airplane and continues the next Movement phase from this position. In the Energy adjustment step, the airplane loses 4 Energy units for the stall, but cannot go below the marked Stall speed on the Cockpit panel. So even if the Energy adjustment step leaves the airplane at a speed below ordinary Stall speed, the Air speed Indicator needle is adjusted up to Stall speed.

Example.
An Albatross D.Va is pushed through an D turn at 175 km / h. That means a Flying skill test with a -1 modification is to be rolled by the Pilot. See 5.5.6 Maneuver / Turn. The Pilot fails his test, so he now loses control of his airplane halfway through the turn, and goes out in a stall. Instead of completing the turn, the Pilot must now move the airplane from the middle of the turn, the rest of the remaining Move units straight ahead and down in a 45° angle. The airplane loses 5 Energy units, that is added to the normal Energy adjustment.



5.5.15 Maneuver / Spin

Round and round and round..

- Rule 5.5.15.1** An airplane in Spin has no Initiative and is moved before airplanes with Initiative. A Spin occurs if a Pilot has failed a Flying skill test below the Stall speed, or if a Pilot deliberate chooses to put the airplane in a spin. Some result from the Damage table and Collision table can also put an airplane in a spin. Any enemy shooting on a spinning airplane gets a -6 modifier to the Gunnery skill tests.
An airplane in Spin cannot use its weapons, and neither can any Air gunners on board the airplane.
- Rule 5.5.15.2** In the Game turn where the airplane enters a Spin it is moved two Move units down the flight stand, or more if it enters a spin from "Below stall speed" (See 5.5.11)The airplane is placed with its nose pointing vertical down. Any enemy shooting on a spinning airplane gets a -6 modifier to the Gunnery skill tests.
- Rule 5.5.15.3** Any Game turn where an airplane starts the Game turn in Spin, the airplane is moved vertical down. Following the move of the airplane the Pilot must make a Flying skill test. If he succeeds the airplane is out of the Spin, and will start the following Game turn as normal. The Pilot can choose to keep the airplane spinning, and dismiss the Flying skill test.
- Rule 5.5.15.4** If the Pilot succeed his Flying skill test, and the airplane is out of the Spin, a 1d12 dice is rolled. This will give the direction the airplane is facing, when it leaves the Spin .The dice is read as a horizontal "clock", 12 o'clock being the direction the airplane is faced already.
- Rule 5.5.15.5** The speed of a spinning airplane will eventually settle on the first Speed step above the Stall speed. If the airplanes speed is above or below this step when the airplane enters the Spin the speed is adjusted by 6 Energy units per Game turn until this Speed step is reached. During the Spin all other Energy adjustments is canceled.

In a Spin, one or both wings are in a stalled condition. This will cause the airplane to rotate in a corkscrew downward path. The Spin will continue until the Pilot gets the airplane out of the spin. The speed in a Spin is not high, but due to the rotating the airplane is very hard to hit. That's why some Pilots may deliberately force their airplane into a spin.

In ICOG there is two ways to get unintentionally into a spin. The first is a failed flying test while flying below Stall speed and the second is a result of a Collision or a result from the Damage table. There is also two ways to deliberately get into a Spin. One is an option the Pilot has if he succeeds a Flying skill test during flying below Stall speed, flying on the airplanes Stall speed also gives the option of deliberate Spin if the Flying skill test is succeed.

If an airplane goes into a Spin, it will always happen at the end of a Movement phase. The first time an airplane in Spin is moved, rule 5.5.15.2 apply. Next Game turn, and all Game turns thereafter the airplane is in Spin, rule 5.5.15.3 apply.

If the airplane gets out of the Spin, it will always happen in the end of the Movement phase.

Next Game turn will be a normal one. A 1d12 is used to find the direction the airplane is facing when the Spins stop. Use the 1d12 as a "clock" and use the airplanes current position as "12". A roll of 6, as a example, means that the airplane will start the next Game turn facing the opposite direction. Note that the airplane will still be pointing straight down, as a result of the Spin, but its flying direction is indicated by its top wing, meaning the way it can pull out of the dive.

The speed in a Spin will always settle at the Speed step above the airplanes Stall speed.

Every Game turn the airplane is spinning, it makes an Energy adjustment with 6 units either up or down, depending on the airplanes speed, until it reach the first Speed step above Stall speed, where it will stay until the airplane is out of the Spin. No other Energy adjustments are used when the airplane is in a

spin. All the usual adjustments for altitude, Wind drag, engine power, etc is dismissed as long as the airplane is in a spin.

Luckily for the Pilot the airplane is a very difficult target when it is in a spin. A -6 modification on Gunnery skill tests is given to any enemy shooting on the spinning airplane. That is why the Spin sometimes is used as a defensive maneuver.

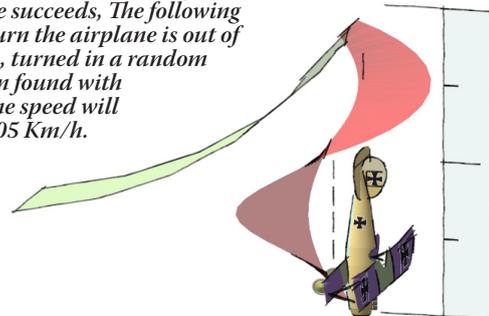
As an offensive move, its a poor choice, since neither the Pilot or any Air gunners can use their weapons during the spin.

Example:

A Alabartos DVa is in a Spin after a machine gun salvo has hit the cockpit, and ripped the control column out of the hand of the Pilot.

The Aircraft now enters a Spin. The airplane is placed as described in 5.5.15.2, that is two Move units down the flight stand with the nose straight down. The Pilot now reduces his speed by 6 Energy units, That brings him from 180 Km/h down to 145 Km/h. The airplane is now in Spin, but is fortunately hard to hit for attacking airplanes as it Spins around in the air.

In the next Game turn the Pilot has no Initiative, and moves his airplane down with 14.5 Move units since his speed is 145 Km/h. He adjusts the speed again with -6 Energy units, and ends on 105 Km/h. After the move and Energy adjustment the Pilot rolls a Flying skill test, which he succeeds, The following Game turn the airplane is out of the Spin, turned in a random direction found with 1d12. The speed will be the 105 Km/h.



Movement phase

Maneuvering / Collision

5.5.16 Maneuver / Collision

Luck or skill?

Rule 5.5.16.1 An airplane which after its move ends up closer than two Move units to another airplane which has already been moved creates the danger of a Collision. The Pilot who moved last, from now on called the aggressive party, must make all the Luck tests he can, using his Re-rolls if any, until he succeeds the Luck test. If the Pilot fails his Luck tests, the airplane which moved first, from now on called the victim, then has to roll a Luck test, using his Re-rolls if any, in hope of passing the Luck test. A Pilot cannot refuse to use an Re-roll in a Luck test for Collision. If all the Luck tests are failed, a roll on the Collision table is then made by the victim. If any of the Luck tests are successful, the Collision is avoided and nothing happens.

In the case of three airplanes or more, The Collision is settled beginning with the airplane which moved first

Rule 5.5.16.2 An airplane is not allowed to move closer than 2 Move units to another airplane, unless the purpose is to get a shot.

Rule 5.5.16.3 An airplane which gets closer than 2 Move unit to the ground, land units, balloons, balloon cables or other fixed objects must make a Flying skill test to avoid a Collision. If the Flying skill test is failed, a roll on the Collision table must be made. Excluded from this rule are landings and Emergency landings.

Often when moving the airplanes in ICOG two airplanes flight path will cross each others and it can be argued that maybe the two was occupying the same airspace at the same time. But there is no way of knowing or even measure such a situation. So for game-plays sake there is no collision between airplanes during the move. But when the move of the airplane is done and two airplane is close to each other there is a chance of collision. The rules of collision is in effect every time a airplane is within 2 Move units of another airplane, ground, balloons or airships. It is always the closest distance that is measured on the models,

so even if its just a wing tip that is within 2 Move units of say a tree or another airplane, the collision rules is in effect.

It is only allowed to move within collision distance of another airplane if the purpose is to get a shot. So suicide ramming is not possible. Note that if a airplane is moved in for a shot, even friendly planes can be caught up in a collision, also if the target that is being shot at is out of collision distance.

There is no restriction for moving to close to the ground. That decision is entirely up to the Pilot and his judgement, or lack of the same.



COLLISION TABLE 1d20			
The die roll is modified by the airplanes speed, indicated by the Speed band.		Stall speed	-3
		Slow Speed	-1
		Medium speed	0
		High speed	+1
		Dive speed	+3
	Airplane Vs. Airplane	Airplane Vs. Balloons and Airships	Airplane Vs. Ground
18-20	Both airplanes explode in a big orange fireball, smoke and debris. All airplanes within 3 Moving units is to roll an unmodified 1d20 on the Damage table. All onboard the airplanes is killed.	Both the airplane and the balloon explodes and is falling while burning to the ground. All airplanes within 3 Moving units is to roll an unmodified 1d20 on the Damage table. All onboard the airplanes is killed.	The airplane hits the ground with the engine first, the engine slices back thru the gas tank and end up in the face of the pilot, before it all explode in a sea of flames. All onboard the airplanes is killed.
15-17	Both airplanes is crushed and the crew is killed on the spot. (The aggressive part gets decapitated by his own propeller)	The airplanes wing is ripped off in the collision and is tumbling towards the ground. The crew is trapped in the wreck and is killed in the following crash. The ballon is damaged and receives 1d20+5 on the Balloon damage table. If its the cable of the balloon that is hit the cable is cut, and the balloon is drifting away.	The airplane is destroyed on impact and debris is scattered over a vast area. All onboard the airplanes is killed.
12-14	The airplane hit each other and both enters a spin towards the ground. (see 5.5.15) Both airplanes is damaged in the collision and receive 5d6 Structural damage. All turns from now on are three templates wider than indicated from airspeed indicator.	The airplane collide with the balloon and enters a spin towards the ground (see 5.5.15) The collision cause the aircraft to take 3d6 in Structural damage. The Balloon takes 1d20+8 damage on the Balloon table or the Airship table. If the airplane hit the Balloon cable , the cable is now stocked, and the Balloon can not be pulled down anymore.	The airplane hits the ground with on wing and is whirled around until there is nothing left still in one piece. The pilot and crew may survive if they can sustain the 4d6 in Fortitude damage they receive.
8-11	The airplane hit each other and both enters a spin towards the ground. (see 5.5.15) Both airplanes is damaged in the collision and receive 3d6 Structural damage. All turns from now on are two templates wider than indicated from airspeed indicator.	The airplane collide with the balloon and enters a spin towards the ground (see 5.5.15) The collision cause the aircraft to take 2d6 in Structural damage. The Balloon receives 1d20 damage on the Balloon table or the Airship table. If the airplane hit the Balloon cable, the cable is now stocked, and the Balloon cannot be pulled down anymore.	The airplane hits the ground and plows its way thru the soil for a while before its stops. The airplane is wrecked and every crew member onboard takes 3d6 Fortitude damage.
4-7	In the last moment both airplanes break hard and avoid the collision. Both pilot have to make a successful Flying skill test, if failed the airplane enters a spin. (See. 5.5.15)	In the last moment the pilot breaks hard and avoid a collision. The pilot have to make a successful Flying skill test, if failed his airplane will enter a spin. (See. 5.5.15)	The pilot just barely avoids a deadly accident, by pushing the plane to its structural limits. The pilot have to roll a Structural strength test. (This only count if the airplane can maneuver its way out of the situation, If not, the result of 8-11 on this table is used)
1-3	The "aggressive" part hits the undercarriage of the "victim" airplane and is thrown into a spin. (See 5.5.15) It also suffers a structural damage of 4d6. The "victim" airplane will now have to make an emergency landing later, but can stay and fight the game out.	The pilot just barely avoids a deadly accident, by pushing the plane to its structural limits. The pilot have to roll a Structural strength test.	Just barely do the pilot avoids the collision, Only the wingtip makes contact and the plane suffers 2d6 in structural damage. (This only count if the airplane can maneuver its way out of the situation, If not, the result of 8-11 on this table is used)

5.5.17 Maneuver / Landing

If the Pilot survives it is a good landing.

Rule 5.5.17.1 Landings must be made at Stall speed and on a runway. For all other kind of landings, roll for the result on Emergency landing table.
To land an airplane in ICOG the Pilot can simply maneuver his airplane down to the point he wants to touch down and ensure the airplane's speed ends at Stall speed in the same Game turn. If the Pilot touches down at Stall speed on a runway, he does not roll any tests, the landing is automatically successful. The rules of Collision with the ground does not apply if the Pilot has announced a landing.

If the airspeed is above the Stall speed when attempting to land on a runway, consult the lower part of the Emergency landing table. This gives the result of the landing, a modification of +4, for landing on a runway, and -1 for each Speed step above Stall speed is in effect on the Flying skill test.

If the Pilot lands his airplane anywhere other than on a runway, he rolls on the Emergency landing table with the modification found in the upper part of Emergency landing table.

Emergency landings may be necessary in several different situations. If the airplane cannot get to its operational base or if the airplane has received damage which specifically provides that it must make an Emergency landing test when it lands.

If an airplane makes an Emergency landing on the Game boards, the terrain is judged and the most appropriate modifier is applied from the upper part of the Emergency landing table, and used in the following Flying skill test. If the airplane lands outside the Game boards a Luck test is used to find the modification to the Flying skill test.

Example 1

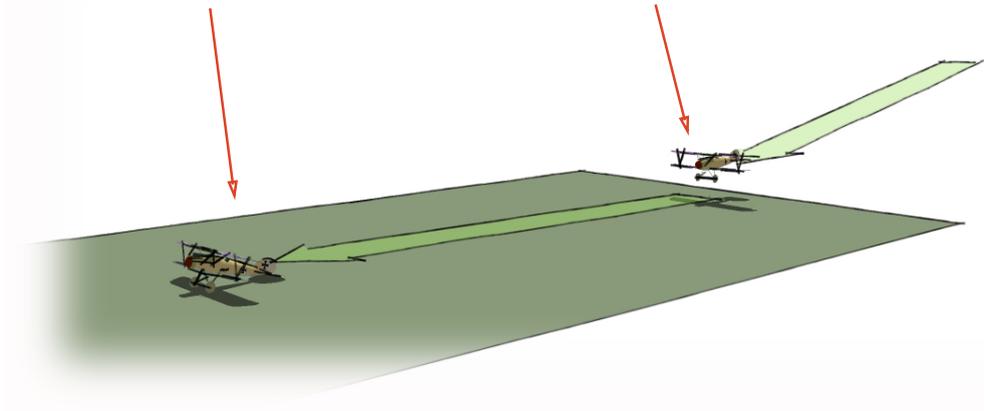
An Albatross comes in for landing. The Pilot announces a landing and plans a move which will bring him down at the beginning of the runway. He ensures the throttle is back so that his speed is on Stall speed when he touches down.

Therefore he won't have to roll a Flying skill test to land the airplane, at the end of the Movement phase the airplane touches down on the runway.

The next Game turn the airplane moves 8.5 Move units, corresponding to the Albatross Stall speed. In the end of the Movement phase the Pilots loses the remaining speed, and the airplane is now stationary.

*Second Game turn.
Airplane is moved its Stall speed and stops there.*

First Game turn. Landing is announced, the airplane ends the turn on Stall speed



Movement phase

Maneuvering / Landing

Example 2

An Albatross has been hit, and the engine is dead. The Pilot is looking for a place to make an Emergency landing on the Game boards. The Pilot finds a field which resembles a soft meadow with a few ditches. He finds the description which fits best in the upper part of the Emergency table and it gives a modification of -3. The Airplane speed is too high, it flies at one Speed step more than Stall speed, it yields a further modification of -1. The Pilot moves the airplane and rolls the test on the Landing result table. The Pilot has a value of 14 in Flying skill, modified with -3 for the location and -1 for the airplanes speed. He rolls 11 and thus get -1 success. So the Albatross gets a rough landing where the Pilot is wounded with 1d4, and the airplane takes 1d6 +3 in Structural strength damage.

EMERGENCY LANDING TABLE 1d20 LUCK TEST

If the game is taking place on Game boards with modeled terrain, the terrain that the aircraft lands on will decide the modification. Choose the most appropriate modification on the table below.

If the emergency landing is taking place outside the Game board or if the game is conducted without Game boards, a Luck test is made for the Pilot, and the modification is found on the table below.

The modification is used on the following die roll on the Landing result table.

† If the airplane have enough engine power to keep flying, it will always make the emergency landing on a aerodrome.

Successes	Place of landing	1d20 Luck test	Modification for Landing result table.
†	Aerodrome		+4
0+	Firm grassy field.		+2
-1 to -3	Field with a few cows, and a hedge in the end.		0
-4 to -5	Soft meadow with crossing ditches.		-3
-6 to -8	Old battle field with shell holes and rusty barbed wire.		-5
-8 +	Wooded area with crooked oak trees		-8

LANDING RESULT TABLE 1d20 FLYING SKILL TEST

The landing result die roll is modified according to the landing place.

If the airplane is on fire, add - 3 to the modifier.

If the airplane has lost its undercarriage, add -1 to the modifier.

For each Speed step above Stall speed, add -1 to the modifier.

Flying boats and airplane with floats add - 4 to the modifier when making an emergency landing on land, but add +4 if the emergency landing is taking place on water.

Successes	Result, emergency landing on land.	Result, emergency landing on water.
0+	Perfect landing.	Perfect landing. The airplane is floating.
-1 to -3	Rough landing, the airplane tips over in the end. The Pilot is wounded. Fortitude minus 1d4. The airplane is damaged and loses 1d6 in Structural strength.	Rough landing, the airplane is sinking. The Pilot is wounded. Fortitude minus 1d3. A successful Luck test is needed to get out of the airplane before its sinks.
-4 to -5	A wing hits the ground and the airplane ground loops one or two times before it stops moving. The Pilot is wounded. Fortitude minus 1d6. The airplane is damaged and loses 1d6+3 in Structural strength.	One wing hits the water and the plane gets thrown over. The Pilot is wounded. Fortitude minus 1d4. A successful Luck test, modified with -2, is needed to get out of the airplane before its sinks.
-6 to -8	Everything is fine until the airplane hits an obstacle with great force. The Pilot is wounded. Fortitude minus 2d6. The airplane is damaged and loses 2d6 in Structural strength.	Everything is fine until the airplane hits an wave with great force. The Pilot is wounded. Fortitude minus 2d4. A successful Luck test, modified with -5, is needed to get out of the airplane before its sinks.
-8 +	The airplane somersaults across the ground. The Pilot is wounded. Fortitude minus 3d6. The airplane is damaged beyond repair.	The airplane somersaults across the surface. The Pilot is wounded. Fortitude minus 2d6. A successful Luck test, modified with -7, is needed to get out of the airplane before its sinks.

Movement phase

Maneuvering / Take off

5.5.18 Maneuver / Take off

Full throttle and watch the cows ..

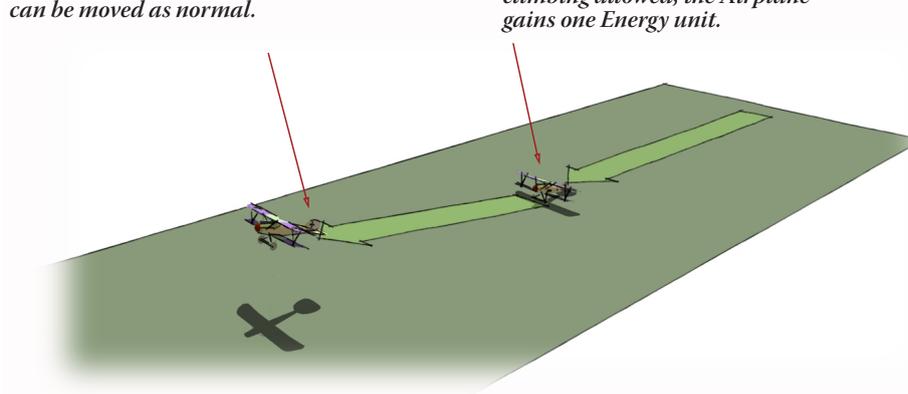
Rule 5.5.18.1 In the Game turn where the airplane takes off, the speed is set to Stall speed. In the end of the Movement phase the speed is adjusted with +1 Energy unit. The airplane cannot gain altitude in the Game turn where it takes off. From next Game turn the airplane is airborne.

When an airplane is taking off it has to build up speed before it can lift off. In the Game turn where a take off is announced the airplane is placed on the spot where it will start from, if its not already placed there. The Pilot then have to spend the first Moving phase by letting the plane accelerate to take off speed. This is done by starting the airplane at Stall speed, and use the Stall speed as the amount of move units the airplane has to

move the first Moving phase. Since the airplane don't climb or maneuver in any other way it will gain 1 Energy unit at the end of the Moving phase, and there by will accelerate to the first Speed step above Stall speed. (See 5.7.4). The following movement phase the airplane is air born and moved as usual.

Second Game turn. The Airplane is airborne and can be moved as normal.

First Game turn the airplane starts with stall speed. No maneuvers or climbing allowed, the Airplane gains one Energy unit.



5.5.19 Maneuver / Inverted flight

Fasten your seat belt and pump pressure in the tank..

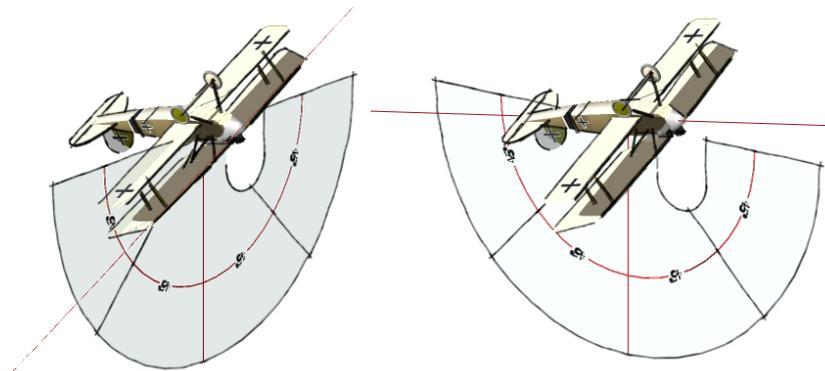
Rule 5.5.19.1 Inverted flying is when an airplane flies upside down and the angle of the wings and the body is less than 45° relative to the ground.

Rule 5.5.19.2 If an airplane ends its Movement phase inverted, in two or more consecutive Game turns, there is a risk of engine failure. The Pilot must roll a Flying skill test, if the test is failed, the engine stops. See 5.7.5.2. The airplane will lose Energy units corresponding to its Engine out value, on the Cockpit panel. In the next Maneuver phase the Pilot can try to restart his engine. See 5.7.5.3

When an airplane flies inverted there is a risk that the carburetor will drown, the oil pump cannot pump oil to the cylinders or the fuel tank is unable to feed gasoline to the engine. Its not healthy for an engine to be turned upside down, but if an airplane is flown so it is constantly exposed to positive G's, or

the Pilot is very cautious and knows his engine, he might stay out of trouble. It is represented by a Flying skill test, the Pilot has to roll if he in two or more consecutive rounds has ended his move with the airplane in an inverted position.

Example.
To measure if an airplane is inverted the Arc template is used. If both the wings and the body is less than 45°, relative to the ground, the Airplane is inverted. If just one of the axis is more than 45°, the airplane is not flying inverted.



5.5.20 Maneuver / Formation flying

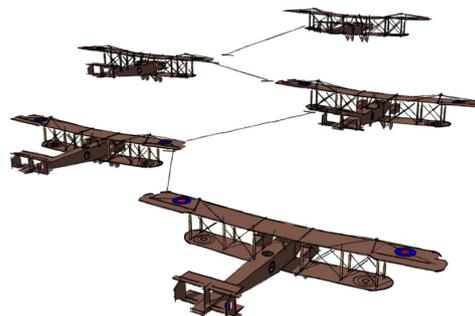
Stay close to me..

- Rule 5.5.20.1** Formation flying can only be used by two or more airplanes with extra Air gunners on board. Formation flight is declared before the Initiative roll. Airplanes flying in Formation will not roll Initiative and automatically get the lowest Initiative, so that they will move first in the Movement phase, but after airplanes on fire or in a stall. All airplanes in the Formation are moved simultaneously and have to stay within 4 Move units from each other.
- Rule 5.5.20.2** Airplanes in Formations cannot do any maneuvers. Airplanes in Formation may only deviate from their course with a maximum of 4 Move units in both vertical and horizontal airplane.
- Rule 5.5.20.3** Air gunners on airplanes flying in Formation do not roll an Initiative roll in the Shooting phase. See 6.1 Shooting order. They automatically fire on a better Initiative than any attacking airplanes. In the case of several attacking airplanes, the Air gunners shoot immediately before the first of the attacking airplanes.
- Rule 5.5.20.4** Air gunners on airplanes flying in Formation, who want to shoot at airplanes not attacking the Formation do not roll Initiative roll in the Shooting phase. See 6.1 Shooting order, They automatically shoot at the end of the Shooting phase.

Formation flight can be used by all two seaters and airplanes with Air gunners on board. When airplanes fly in Formation they fly so close to each other that they are able to protect each other with their Air gunners. It does, however, restrict maneuverability because all airplanes have to keep their places in Formation.

The rule of Formation flying is used when two, or more, Airplanes want to mutually protect each other. Airplanes in a Formation must be a maximum of 4 Move units apart.

The great advantage for Air gunners in Formation is the ability to shoot before any attacking airplanes. The drawback is that due to their focus on protecting the Formation, they will be the last airplanes to shoot in the Shooting phase, should they want to shoot on any other targets, and that a formation always moves first so the flight path is predictable for all enemies.



Distances between airplanes in formation is maximum 4 Move units.



Movement phase

How to move an airplane

5.6 How to move an airplane

Fiddling with small models..

After all the necessary calculations are done and the end position is established, it is time to move the airplane. There are no rules of how to move the airplane only some advice.

Get help

Let your opponent help with the physical move either by holding the templates, or in moving the airplane when the new position is found. Beside the social benefits the positive side is there should be no disagreement about a move.



Use the straight Move template.

Instead of trying out 4 different Turn templates to establish which turn to use start out with the Straight template. Bend it to fit the turn the airplane has announced, then try to fit a Turn template on it, and it is easy too see what kind of turn is used.



Movement phase

How to move an airplane

Remember to measure altitude.

Measure the altitude before the airplane is moved. Surprisingly often one forgets to measure altitude before a move. When the move is done and the Energy adjustment step starts, there is no way of knowing exactly how much the airplane has climbed or dived.



Poke it in.

Hold the airplane at the position its supposed to end up at, and with the other hand take the pointed end and push it into the Game board. The hand used for inserting the flight stand should be held close to the game board. If the hand is held too high the pole will bend slightly when its pushed into the Game board, and then when releasing the carbon flight stand will straighten out, and the position of the airplane will be gone.



Movement phase

Energy adjustment / Energy units

5.7 Energy adjustment

The art of counting red dots..

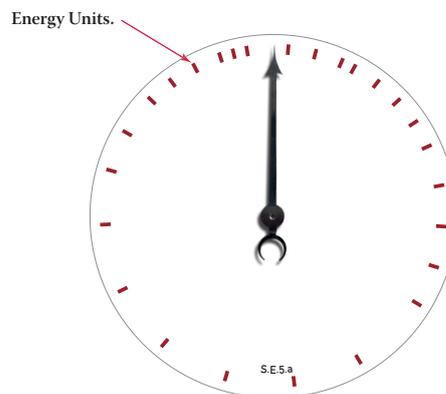
Speed is a very important factor of flying as it keeps the airplane flying. The more speed the more lift is created and thus more room for maneuvers. Too much speed can damage the airplane, the canvas can be ripped off, the wings start fluttering and turning at too high a speed can impose a deadly G-Load on the airplane. Not enough speed, and the airplane will stop flying. The speed of an airplane is closely connected to its altitude. Altitude is effectively a "speed bank", speed can be traded for altitude, and altitude can be traded back for speed. If the airplane is at low speed, it can't buy much altitude, but it can always dive and thereby regain speed. But once the airplane is at low altitude, at low speed, its options are running out. Remember, the ground has a very high kill ratio.

This is why speed loss and gain is not expressed in Km/h in ICOG. It is always connected to the airplanes altitude change during a Game turn. The ICOG measure for this change in the kinetic Energy of an airplane is called Energy units.

Every maneuver and change in altitude adds or subtracts a number of Energy units. At the end of the Movement phase, all these changes are added together, and the result is a number of Energy units that the airplane will gain or lose speed from.

On the clear disc on the Cockpit control panel which holds the Airspeed Indicator needle, a number of small red dots are

printed on each side of the needle. These red dots are Energy units, and are used for converting the Energy in to speed in Km/h.



After the cost in Energy units from maneuvers, altitude changes and throttle setting is added up, the airspeed is adjusted by moving the Airspeed Indicator needle the number of Energy units the airplane lost or gained.

5.7.1 Energy Adjustment / Energy units

Two dots forward..

Rule 5.7.1.1 Immediately after the movement of the airplane, the change in its Energy is adjusted on the air speed indicator. All gains and losses in Energy units are to be calculated before the Airspeed Indicator needle is adjusted. With a negative result, the needle is moved counter clockwise, for a positive result the needle is moved clockwise.

Rule 5.7.1.2 If the Airspeed Indicator needle, after Energy adjustment, is between two Speed steps, it is rounded up to nearest Speed step. If the airplanes speed is above its Top speed, every 5 km/h increment counts as a Speed step.

Energy units are marked by red dots, printed on the clear disc with the Airspeed Indicator needle. Energy units are spaced differently from airplane to airplane. The difference in distance between the Energy units designates the airplane's ability to increase or decrease speed and is a combined measure of engine power, drag, weight and everything else which affects the airplanes acceleration or deceleration.

Later in this section it is specified exactly how many Energy units are lost or gained by various maneuvers, altitude changes and other factors. Common to them is that all Energy units affecting the airplane are added together before the Airspeed Indicator needle is moved.

To move the Indicator needle, simply take the adjustment in Energy units, and count the same number of red dots on either side of the Indicator needle. Count counter clockwise if its a negative number, clockwise if its a positive adjustment. Note which speed the Energy unit is lined up with. Now move the indicator to that speed.

For example an airplane has lost 4 Move units in altitude and uses 2 maneuvers, in the same Moving phase, it has gained 4 Energy units for the dive and lost 2 Energy units by the maneuvers. It can be tempting to move the Indicator needle 4 Energy units forward and then 2 back, but it may give a wrong result. The correct way is to count them first. That is 4 Energy units won, minus the 2 that is lost resulting in the total of 2 Energy

units won. Then move the Indicator needle 2 Energy units.

If the Airspeed Indicator needle, after the adjustment, is between two Speed steps, it is rounded up to nearest Speed step. If the airplanes speed is above its Top speed, every 5 km/h increments counts as a Speed step.

This have the effect that most airplanes can use more Energy units at low speed without losing speed. And at high speed, loss of Energy units will cost considerable more speed.

The airplane gains 2 Energy units. The needle is moved to 120 Km/h, and then rounded up to the next Speed step at 125 Km/h.



Movement phase

Energy adjustment / Energy units

Example 1

A Se5a, flying at 185 Km/h, has made a climbing turn to gain altitude. The Se5a climbed 5 Move units and have used 1 maneuver. It makes a total loss of 6 Energy units. The Pilot now counts 6 red dots of Energy units back and it is down too 135 km/h. 135 km/h is between two Speed steps so it must be rounded up to the nearest Speed step. The player moves the Indicator needle up to 145 km/h.

The airplane loses 6 Energy units.
The needle is moved from 185 Km/h to 135 Km/h
And then rounded up to next Speed step at 145 Km/h



Example 2

A Se5a dives 2 Move units, and at the same time makes a turn. That sums up to 2 Energy units gained for the dive and 1 lost for the maneuver. A total of 1 Energy unit gained, it means that the Indicator needle moves up to 145 km/h.

The airplane gains a total of 1 Energy unit.
The needle is moved from 125 Km/h to 130 Km/h
And then rounded up to next Speed step at 145 Km/h



Movement phase

Energy adjustment / Maneuvering

5.7.2 Energy Adjustment / Maneuvering

Where did the speed go?..

Every time an airplane is doing a maneuver it loses Energy. The loss in Energy units is minimum 1 Energy unit for each turn. A turn is defined as anything not straight ahead, it don't have to be a Turn template, even an ever so slightly deviation from straight ahead is regarded as a turn. When a turn is pushed to a tighter radius the Energy loss can be substantial higher.

Rolls, Dives, Side slips and many other maneuvers cost one or more Energy unit to perform. The exact Energy loss for maneuvers is discussed in detail in section 5.5. Shown here is a list of the price in Energy units for each maneuver.

MANEUVER LIST			
MANEUVERS		Pilot Actions	Energy unit loss
Straight ahead	The airplane continues its direction of flight straight ahead.	0	0
Roll	The airplane rolls up to 180° around its longitude axis.	1	1
Vertical dive	The airplane is dived vertical down.	1	1
Turn	The airplane is turning in any direction.	1	1+ ★★
Side slip	The airplane is side slipped to either side.	1	1-5
Bank after turn	The airplane is banked up to 45° after the move.	0	0
Stall	The airplane stalls, either on purpose or as a consequence of maneuver.	0	0 ★
Immelman	The airplane is stalled on purpose too perform the Immelmann turn.	1	0 ★
Spin	The airplane is in a spin, either on purpose or as a consequence of maneuver or damage.	0	0 ★
Landing	The airplane is landing.	2	0
Take off	The airplane is taking off.	1	0
Restart	The pilot tries to restart his engine	1	0
Other actions	Pilot repairs his Machine gun, Pilot operates a radio or camera etc.	1+	0

★ Note that the these maneuvers do not have a normal Energy unit loss, Instead the Energy loss is dictated by the maneuver.

★★ Note that if an airplane is using a tighter Turn Template the Energy unit loss will be higher See. 5.5.6

5.7.3 Energy Adjustment / Change in altitude

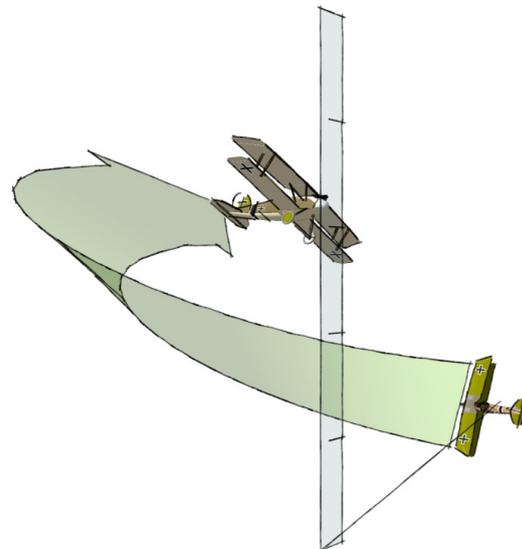
up hill, down hill..

Rule 5.7.3.1 For each Move unit an airplane climbs in a Movement phase, it loses 1 Energy unit. For each Move unit an airplane dives in a Movement phase, it gains 1 Energy unit. If the airplane after the move is positioned between two Move units its always rounded up to the next hole Move unit. Note that its the amount of Move units that is altered, not the physical position of the airplane.

Remember to note the altitude of the airplane before it is moved, that way it is easier to measure the altitude change afterward.

When moving the airplane its not necessary to move it exactly so it hits a whole Move unit, in climb or dive, which is why the amount is rounded up afterward, instead of moving the airplane. And it is always rounded up. So for example a dive of 6.5 Move units gets rounded up to 7, and therefore the Energy gain is 7 Energy units.

Example.
A Halberstadt CL.II has climbed 3.5 move units. The loss in Energy units is rounded up from 3.5 to 4.



5.7.4 Energy Adjustment / Acceleration

from 0 to 200 in 10 rounds..

Rule 5.7.4.1 An airplane may only accelerate 1 Energy unit per Movement phase. And only if it has not performed any maneuvers, nor climbed or dived, and the speed is below Top speed.

An airplane in ICOG is always flying at full throttle, unless the Pilot chooses to throttle back. Since the engine is already at full throttle, the only time it can accelerate by engine force is if the airplane flies slower than its Maximum speed, and the airplane

neither gains or loses any Energy units in any other way. The Energy gain from a dive, as an example, already takes into account that the engine is running full throttle.

5.7.5 Energy Adjustment / Throttle

airplanes can also drown and starve..

Rule 5.7.5.1 The Pilot can incur losses in Energy units by revving the engine down. The loss in Energy units is optional but cannot exceed the value of "Throttle" on the Cockpit panel.

Rule 5.7.5.2 The Pilot can also turn his engine off. That will incur a loss of Energy units equal to the value of "Engine out" on the Cockpit panel.

Rule 5.7.5.3 If the engine has been turned off, it requires a roll equal too or below 16 with 1d20 to restart the engine. The test is done in the start of the next Movement phase. If the test is failed another try can be made in the next Movement phase.

For each extra try at a restart there is a modification of -3 to the test. After 3 tests the restart cannot be tested anymore, and the engine is dead. A restart costs two Pilot actions. See 5.5.1.1

An engine can also cut out if the airplane is flying inverted for two or more consecutive Game turns. (See 5.5.19)

If a restart is failed the Pilot can try again the next Game turn, in the Movement phase. But for every restart attempt the chance to succeed decreases with -3. So the first restart is a test against 16, the next test will be 13, and the last one will be 10. After 3 attempts the engine cannot be restarted anymore.

5.7.6 Energy Adjustment / Over Maximum speed

wooh.. slow down !.

Rule 5.7.6.1 If the airplane end the Game turn with the speed in the red speed zone, and therefore over its Maximum speed, a Structural strength test is made immediately. If this is missed the Structural failure table is consulted.

Any airplane has a Maximum speed, only reached in a steep dive. But at this speed the airplane is at a great risk of something breaking off due too the high wind pressure. Some airplanes had faulty wings, some had canvas not attached properly, some Pilots saw their ailerons and elevator disappear behind them at this speed.

On the Airspeed indicator a red M, marks the Maximum speed. At the same place the red speed zone starts. If the Indicator needle is in the red zone, then the airplane is above its Maximum speed.

5.7.7 Energy Adjustment / Engine Damage

Vroumm .. splut.splutt. vroumm..

The engine on an airplane can be damaged if shot at. In section 6.3.11 "Damage to crew and airplane" you can see the table where all damage to the airplane is found.

A number of the Damage tables results will give a engine damage, expressed in Energy units. For example: 1 Energy unit loss per Game turn. This means every Game turn from now on, 1 Energy unit is subtracted in the Energy adjustment step. A damage result of "1d4" is a variable damage. That means that the Pilot rolls 1d4 in the Energy adjustment step every round, and subtract the results from the Energy unit calculation. Damage to engines is cumulative if more than one damage result is taken. If the loss of power for each round is more than the total amount of the noted value of "Engine out", the engine seizes and stops. Note: this does not include variable engine damage (but the engine is sputtering a lot then)



Movement phase

Energy adjustment / Wind drag

5.7.8 Energy Adjustment / Wind drag

more speed, more wind ..

Rule 5.7.8.1 If the Airspeed Indicator needle is in the yellow band, above Top speed, before the Energy adjustment step begins. The value of Wind drag, the number in the yellow band, is subtracted in the Energy adjustment step.

The faster the airplane goes the more Wind drag, or drag, affects the airplane. Wind drag is only a factor when you fly faster than the airplane's Top speed. On the Cockpit panel a series of small numbers is printed in the yellow band. Each number affects a certain part of the yellow band, and a small gray line shows where the next part takes over, and therefore another modification. The numbers indicate the number of Energy units the airplane loses in the Energy adjustment step.

The airplane will only lose Energy units from wind drag if the Airspeed Indicator needle is in the yellow band before the Energy adjustment step. If the airplane starts the Movement phase at or below its Top speed, the wind drag has no effect. Only when the airplane starts the Movement phase with the Airspeed Indicator needle in the yellow band does Wind drag count in the Energy adjustment step.

Example 1

A Se5a is flying 205 km/h, During the Movement phase the Se5a dives 2 Move units. In the Energy adjustment step the Airspeed Indicator needle is moved the 2 Energy units forward, and ends up at at 205 km/h. Since the Airspeed Indicator needle was not in the yellow band when the Energy adjustment step started, there is no loss in energy from wind drag.

The airplane gains 2 Energy units.
The needle is moved from 205 Km/h to 220 Km/h
No wind drag modification applies, since the needle started in the green band.



Example 2

A Se5a is flying 220 km/h, In the Movement phase the Se5a dives 1 Move unit. In the Energy adjustment step the Se5a gains 1 Energy units for the dive, but loses 2 units for the wind drag. Therefore the Se5a's Airspeed Indicator needle is moved 1 Energy units backwards, and end up at 205 km/h. Since the Airspeed Indicator needle was in the yellow band, in the part of -2 modification, when the Energy adjustment step started, that was the modification. In short, the Se5a have to dive more than 1 Move unit each Game turn, when flying at 220 km/h to accelerate or just sustain the speed.

The airplane gains 1 Energy units from the dive.
But loses 2 from the wind drag modification.
In total -1 Energy unit, and the needle is moved back to 205 Km/h



5.8 Next airplane in Initiative order move

who is next? ..

Now the Airplane is moved, The Energy is adjusted, the speed has been corrected and its time for the next airplane in the Initiative order to move. Remove the chit that denoted the

airplanes position in the Initiative order. When all airplanes are moved the game enters the Shooting phase.



Shooting phase

Index.

SHOOTING PHASE

All shooting between airplanes, bombing and strafing of ground targets, anti-aircraft fire is handled in the shooting phase. This phase is also where Observers tests for spotting of targets and direction of artillery fire. The order of shooting is

determined by Initiative order, and results take effect immediately. If an airplane is shot down or takes damage that makes it impossible for it to shoot, before its turn in the Initiative order, it will not get to shoot.

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6.1 Shooting order

the last shall be the first..

- Rule 6.1.1** Shooting is done in the following order, by Initiative order, with the highest Initiative order shooting first:
- Anti-aircraft and Ground units
 - Air-to-Air and Air-to-Ground (bombing, strafing)
 - Observation and Artillery direction
- Rule 6.1.2** Any damage Sustained in the shooting phase takes effect immediately. This means that a target can be affected before it itself gets to shoot, if it has a lower Initiative order.
- Rule 6.1.3** After all movement is completed, but before any shooting occurs, Air gunners roll their Initiative, in the same manner as for Pilots. The result determines the Air gunner's place in the Initiative order. See also rule 4.2.1. Exception to this is Gunners on planes flying in formation. See Rule 5.5.20.3
- Rule 6.1.4** An Air gunner in an airplane that is being threatened is subject to the same modifiers to Initiative, though in the case of the Air gunner, the modifier is positive, as long as the Air gunner targets the airplane that triggered the modifier. Even if the airplane is subject to more than one threatening airplane, the Air gunner can only select one target, he will receive the modifier from. See more on Threat Arcs in 4.1
- Rule 6.1.5** If two or more Air gunners and Pilots end up with the same Base Initiative, the highest die roll shoots first. If two or more crew members are still tied, Roll 1D10, with the highest roll shooting first. Note: The Base Initiative is not changed, only the Shooting order. Exception to this is Gunners on planes flying in formation. See Rule 5.5.20.3

All shooting in the Game turn is resolved in the Shooting Phase. It is a clear advantage to shoot first, as you might get lucky and eliminate an opponent before he gets to shoot. Therefore it is important to follow a strict order of firing:

1. Anti-aircraft fire and Ground units
2. Air-to-Air and Air-to-Ground
3. Observation and Artillery direction

First all anti aircraft guns and any ground units that can fire may fire at the airplanes,

Then all airplanes may fire, provided they have a valid target. This is done in the opposite order of movement, i.e. The airplane that moved last, gets to shoot first, etc.

Air gunners do not have the same Initiative order as their Pilots. Instead they roll their own Initiative order, in the same manner as for Pilots, with one exception: If an airplane with an Air gunner is being threatened by enemy airplanes, the Initiative of the Air gunner is subject to the same modifiers, only positive. This is on the condition that the Air gunner has to target the specific enemy airplane, in order to trigger the modifier, and thus cannot attack other airplanes.

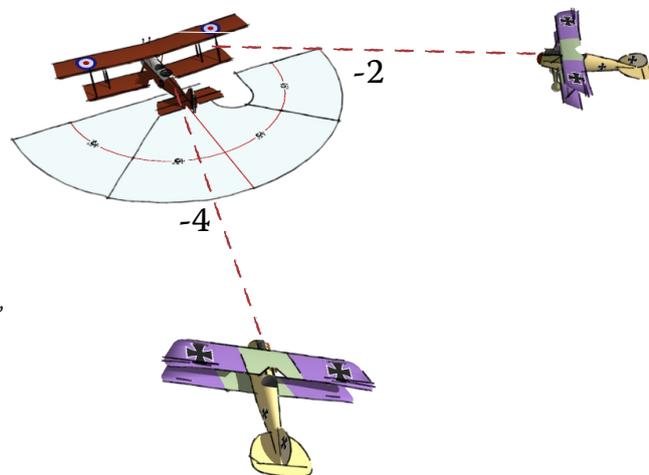
Example:

A English RAF RE8 is being chased by 2 German Albatrosses, one in the Rear Arc, the other has maneuvered into the Side Arc. This means that for determining Initiative in the next Game turn, the Pilot gets a -6 modifier to his Base Initiative. In the shooting phase, the RE8 will shoot last, as it moved first, with a Base Initiative of 17. The Albatross in the Rear Arc has a Base Initiative of 19, and the one attacking from the side has a whopping 22.

At the beginning of the shooting phase, the Air gunner in the RE8 rolls for his Initiative, to determine where in the order

he will shoot. He chooses the Albatross in the rear arc as his target, and gets the +4 modifier to his roll. The Air gunner rolls a '5' on 1D10, and adds his Awareness of 12 and the +4 modifier for a total of 21. As he chose the Albatross in the rear arc, to get the full +4, he cannot shoot at another target. The order of shooting now looks like this:

The Albatross in the Side Arc shoots first, at 22, then the Air gunner in the RE8 at 21, then the Albatross in the Rear Arc at 19, and finally the Pilot of the RE8 at 17, provided he has a valid target.



Shooting phase

Firing arcs / Pilots

6.2.1 Firing arcs For Pilots

Do I have a shot?

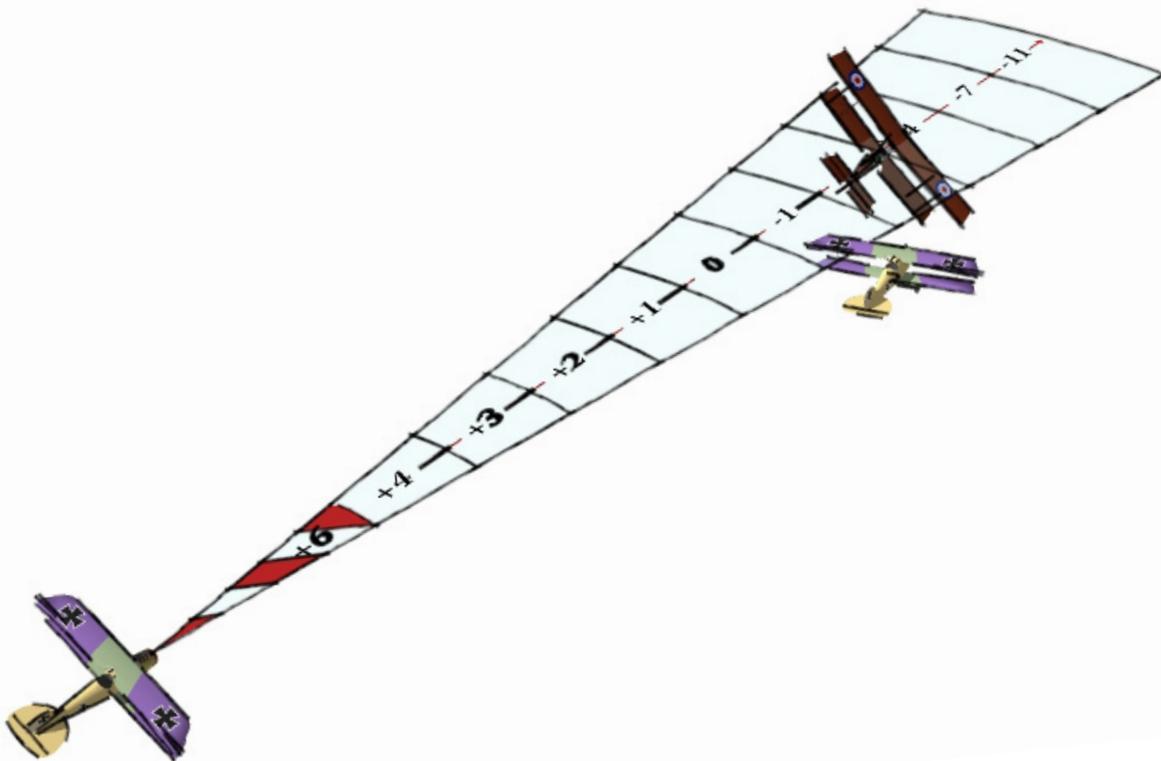
- Rule 6.2.1.1** An airplane can only shoot at a target if the target is within the Air gunnery template.
- Rule 6.2.1.2** Only targets declared as such during the Movement phase are legal targets, except when an airplane moves into the Air gunnery template of an airplane that has already been moved. By doing so, the last airplane to move becomes a legal target, and the Pilot may choose to shoot at this new target, regardless of what other target, if any, was declared during movement. (See also 5.4)
- Rule 6.2.1.3** Even if a friendly airplane is inside the Air gunnery template the shooting Airplane can still shoot. It will thou have to make a extra Gunnery skill test against his allied. The Gunnery test is always a Base shot of 2. There is no modifications to shot.

For an airplane to be able to shoot at another airplane, the target must be in a position within the area defined by the Air gunnery template. The Air gunnery template is placed next to the nose of the firing airplane, with the red arrow flush with the airplane's line of flight. If the head of the Pilot in the target airplane is inside the Air gunnery template, the shot is valid. Note that the Firing arc is cone-shaped, so it may be necessary to measure from more than one angle, to establish if the shot is valid or not. If there is a friendly airplane inside the Firing arc the pilot can

still take his shot. But he is forced to make an extra Gunnery skill test against his own allied. The extra Gunnery skill test is made with a Base shot of 2, representing the chance of hitting ones own allied. The extra Base shot is not modified by anything. A pilot can always choose not to shoot if he change his mind. Maybe he is low on ammunition, or a friendly plane has got between him and the target. If more than one valid target is inside the Firing arc, the Pilot may choose freely among them.

Example:

Two Albatrosses are chasing a RAF RES. The Pilot uses the Air gunnery template and sees that the RES is within reach, and that since the enemy pilot is inside the template its a valid shot. But his wing man is also within the Air gunnery template and therefor the Pilot have to make an extra Gunnery skill test against a fixed value of "2" towards the friendly airplane caught in his fire cone. If he chooses to take the shot.



6.2.2 Firing arcs for Air gunners

I can't see him? Where'd he go?

Rule 6.2.2.1 The Firing arc for Air gunners and Pilots with trainable weapons is determined by the Arc template.

Like Pilots, Air gunners have a Firing arc, used to determine if they have a valid shot at an enemy airplane. The term Air gunner covers all armed crew members aboard the airplane and includes tail-, side- and nose Gunners. Their defining feature is that they man a weapon that is mounted in a way that allows it to be aimed in a wider arc than normal forward firing guns.

The range of fire for Air gunners is determined by the Air gunnery template. Like Pilots, Air gunners may fire at a target if a friendly airplane is inside the Air gunnery template, if they are willing to take the risk of hitting the friendly plane. (See 6.2.1.3)

Note: When determining range and the presence of friendly airplanes, the Air gunnery template must be placed from the

Air gunner's position, pointing straight at the Pilot of the target airplane. It is not allowed to aim at another part of the target to gain a shorter range or avoid friendly airplanes inside the template.

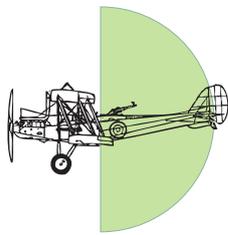
Besides considerations of range and friendly airplanes, Air gunners have a defined area within which they can aim their weapons. Due to the layout of the different airplanes, and the placement and mounting of the weapons, the Air gunners may have one or more Arcs into which they may fire. These arcs are defined on the Cockpit panel.

The different Firing arcs are:

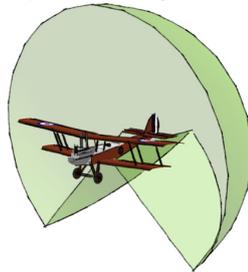
Aft

The Aft firing arc covers the area to the rear of the airplane. The gunner cannot target anything in front of the airplane's wing line. An angle of 90° from the trailing edge of the wing defines this area.

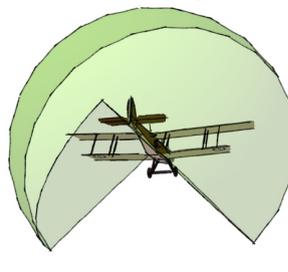
The gunner cannot hit targets below the airplane's fuselage. An angle of 45° down following the line of the fuselage defines this area. This is the typical arc for most airplanes with a gunner aboard. On the Cockpit panel the Aft arc is shown like this:



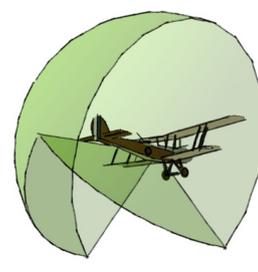
On the Cockpit panel the Aft arc is shown like this



Seen from the front.



Seen from below.



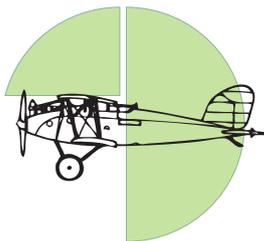
Seen from the side.

Over the wing

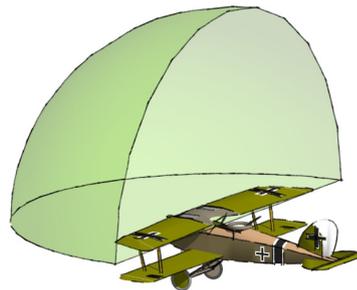
The Over-the-wing firing arc covers the front area above the upper wing. The arc does not cover to the rear. An angle of 90° forward from the trailing edge of the upper wing and straight up defines the area.

The gunner cannot hit targets below the upper wing. The horizontal airplane is measured from the upper wing. Note that, by definition, the gunner cannot hit the same target as the Pilot (If the Pilot can hit the target it is, by definition, outside the gunner's Firing arc, even though overlaps might occur when measuring with the Air gunnery template). Nose Gunners may also have this Firing arc for their weapon, only pointing aft instead of forward, but otherwise the same.

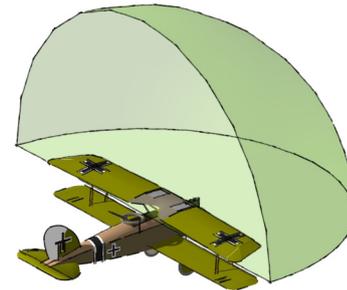
This illustration shows the Halberstadt Cl.II, which has both Aft and Over-the-wing Arcs.



On the Cockpit panel the Over-the-wing arc is shown like this. Notice that the Halberstadt Cl. II Also have the Aft arc.



Over-the-wing, seen from behind



Over-the-wing, seen from behind

Shooting phase

Firing arcs / Air gunners

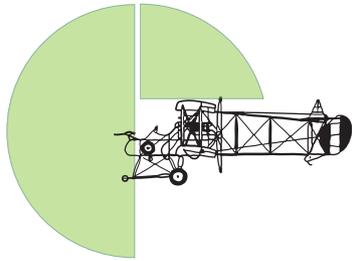
Nose

The Nose firing arc covers the area to the front of the airplane for Gunners placed in the nose of the airplane. The gunner cannot hit targets behind the wing line. An angle of 90° from the front edge of the wings defines this arc. The gunner cannot hit targets under the nose of the airplane, either. An angle of 45° down and around the nose defines this arc.

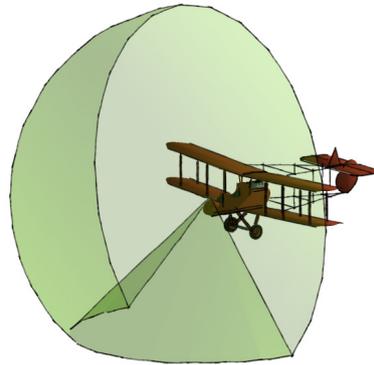
This Firing arc is typically seen on airplanes with pusher propellers or as nose Gunners on the big bombers.

On the Cockpit panel the Nose firing arc is shown like this.

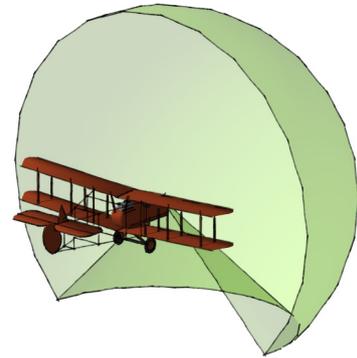
This illustration shows the F.E.2b, which has both a Nose and rearward-facing Over-the-wing firing arc.



On the Cockpit panel the Nose-firing-arc is shown like this. Notice that the F.E.2b also have the Over-the-wing arc, but facing backwards.



Nose-firing-arc, seen from the front.



Nose-firing-arc, seen from behind.

Belly

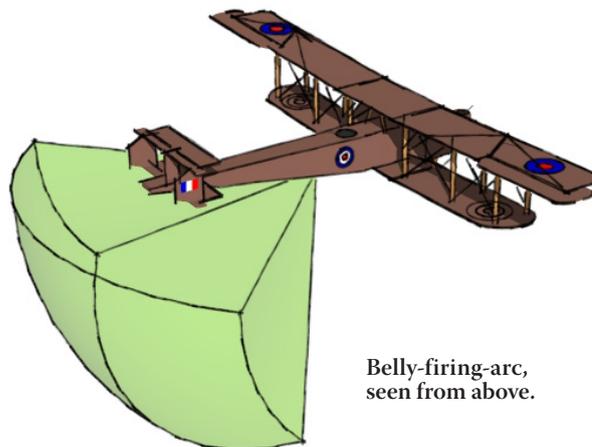
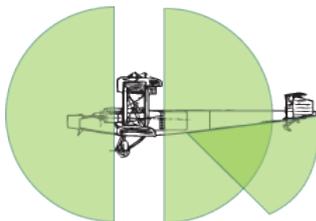
The Belly firing arc covers an area below and to the rear of the airplane. The gunner can hit targets in an angle of 45° to either side of the rear of the airplane and between the airplane's fuselage and 45° down. The gunner cannot hit any targets above the airplane's lower wing.

The Belly firing arc is typically seen on the big bombers. Often the same gunner has to man both an upper and lower Gunnery station.

On the Cockpit panel the Belly firing arc is shown like this.

This illustration shows the Handley Page O/400, which has several Firing arcs, including the Belly firing arc.

On the Cockpit panel the Belly-arc is shown like this. Notice the HP O/400 also have the Nose and Aft firing arc.



Belly-firing-arc, seen from above.

6.3 Air to air

Time to shoot!

When an airplane shoots at another airplane, it must be in range, i.e. Inside the Air gunnery template. There cannot be any friendly airplanes inside the template, and if the shooter is an Air gunner, the target must be within the Firing arcs for the weapon. When it is determined that the shot is valid, the Base

shot must be calculated. To determine how well the shot hits, a Gunnery skill test is made. The Gunnery skill test is modified by 4 factors: Distance, angle of deflection, length of the burst, and the stability of the airplane the shot is taken from.

6.3.1 Gunnery skill test

eagle-eyed or bug-eyed?

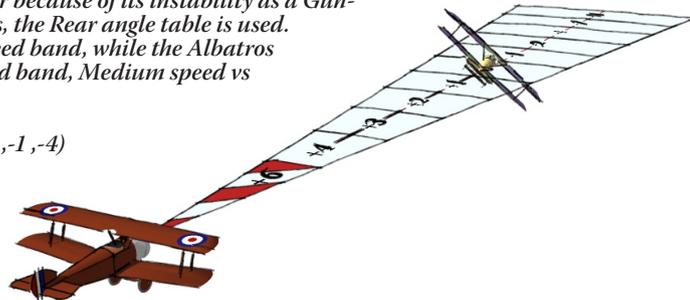
Rule 6.3.1.1 The Gunnery skill test consists of: The Gunnery skill of the shooter, the airplane's Gunnery skill modifier, the Distance modifier, the Firing angle modifier and a modifier if using a Short burst or Sustained shooting.

The modifiers for Distance, Firing angle, airplane Stability and Burst Length are all added to the Gunnery skill of the shooter. This is called the Base shot, and to hit, the player must roll equal to or less than the Base shot on 1D20. The lower the roll, the better. The roll is subtracted from the Base shot, and the result is the number of successes. This is a

measure of how well the burst hit. If the result is -1 or less, the shot missed completely. At 0, the target is hit, barely. Note that no matter how difficult a shot is, as long as it is a valid shot, the shooter will always hit on a natural '1' on the die, even if the modifiers add up to more than he has in Gunnery skill.

Example 1:

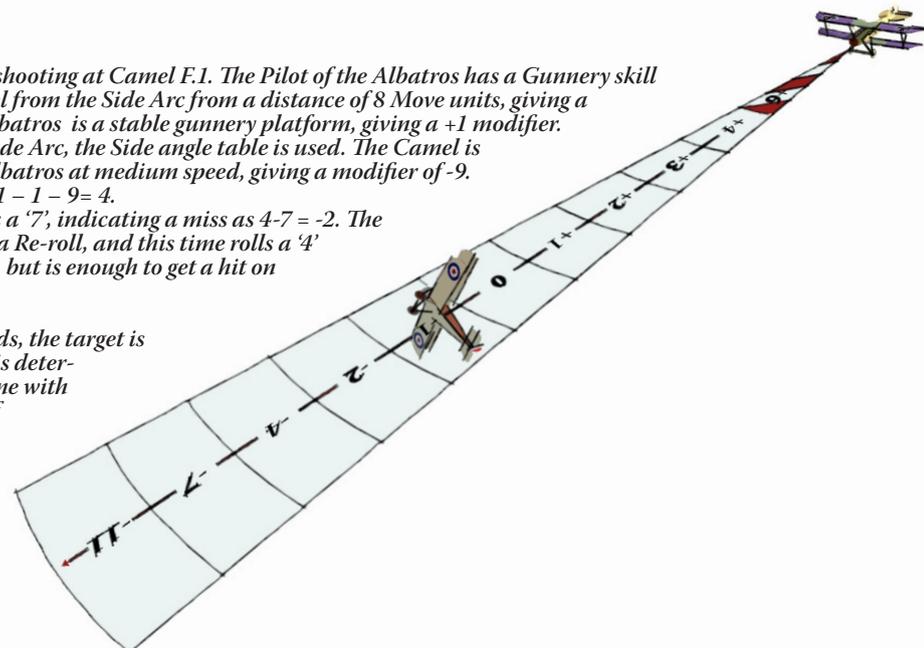
The Pilot of an Camel is firing at a Albatros DVa. The Pilot has a Gunnery skill of 15, is at a distance of 7 Move units straight behind the Albatros. The Camel fires a Full burst. The Distance modifier is -4, the Camel has a -1 modifier because of its instability as a Gunnery platform. As the Camel is behind the Albatros, the Rear angle table is used. The Camel is flying at 185km/h, in the Medium speed band, while the Albatros is down to 140km/h, and therefore in the Slow speed band, Medium speed vs Slow speed is looked up in the table, and yields a modifier of 0. So the Pilot of the Camel has a net modifier of -5 (0,-1,-4). The Pilot has a Gunnery skill of 15, giving him a base shot of 10. The player rolls a D20, and gets a 7. 10 minus 7 is 3, this means the burst hit with 3 successes.



Example 2:

The Pilot of a Albatros DVa is shooting at Camel F.1. The Pilot of the Albatros has a Gunnery skill of 13, and is firing at the Camel from the Side Arc from a distance of 8 Move units, giving a Distance modifier of -1. The Albatros is a stable gunnery platform, giving a +1 modifier. As the shot is taken from the Side Arc, the Side angle table is used. The Camel is flying at high speed, and the Albatros at medium speed, giving a modifier of -9. This yields a Base shot of $13 + 1 - 9 = 4$. The player rolls a D20 and gets a '7', indicating a miss as $4 - 7 = -2$. The player, however decides to use a Re-roll, and this time rolls a '4' exactly. This yields 0 successes, but is enough to get a hit on the Camel, barely!

If the Gunnery skill test succeeds, the target is hit, and the resulting damage is determined immediately. This is done with a roll of $1D20 +$ the number of successes from the Gunnery skill test



Shooting phase

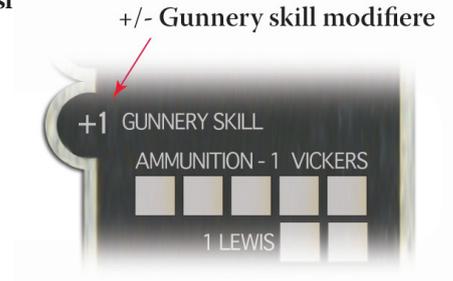
Air to air / Airplane Gunnery Skill modifier

6.3.2 The airplane's Gunnery skill modifier

Steady crate or as slippery as a fish?

Rule 6.3.2.1 The modifier for the stability of the airplane as a firing platform is noted on the Cockpit panel, and is included in the calculations for every shot.

Planes handle differently. Some types from the Great War were very docile and stable, and thus made good platforms to shoot from, while others were very maneuverable and difficult to point in the same direction for longer periods of time. In ICOG all airplanes have a modifier to Gunnery skill for this stability, or lack thereof, noted on the Cockpit panel. This modifier is included in every shot taken. Note that an airplane may have different modifiers for the Pilot and other crew members.



6.3.3 Distance modifier

Fly so close, you can see the white in his eyes...

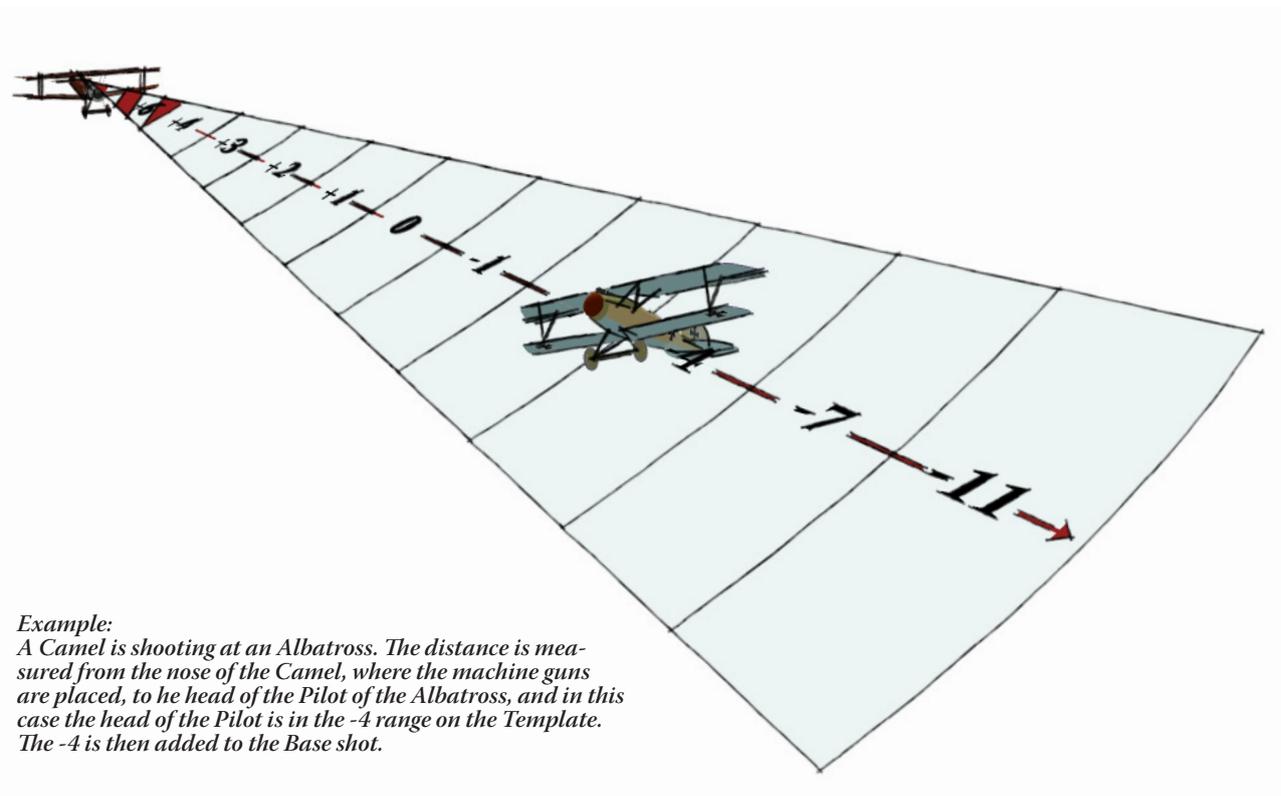
Rule 6.3.3.1 The Distance modifier is found using the Air gunnery template. The measurement is taken from the firing weapon to the Pilot of the target airplane.

Distance is an important factor of gunnery. The closer, the better. The Air gunnery template is graded into range bands, each with an accompanying modifier. This modifier is added to the Base shot.

The distance is measured from the weapon of the Pilot or crew member taking the shot, to the head of the Pilot of the airplane being targeted. If the Pilot is outside the template, the target is

out of range, and no shot can be taken.

Remember that the airplane models scale is about twice of the actual moving scale. This can result in situations where the models positions to each others is slightly awkward. This is why the measurement goes to the Pilots head, and not the nearest point on the target.



6.3.4 Firing angle modifier for fixed weapons

Help! He's right behind me!

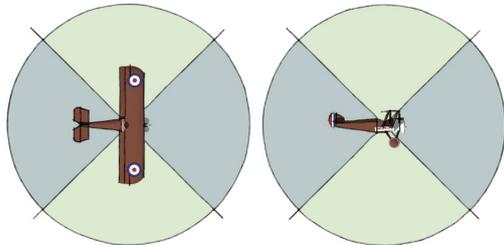
Rule 6.3.4.1 The "Firing angle" modifier is found on the three Firing angle tables. The firing angle is determined using the Arc template. The speed indicated of the speed band of both the attacking airplane and the target airplane are read on the respective Cockpit panels, the result is then cross referenced on the correct Firing angle table to give the modifier.

When shooting at a moving target the relative movement of the shooter and target is very important. The shooter has to take into account any difference in speed between the two and the angle the target is attacked from, to compute how much to lead his target. The angle also determines how wide the shooter's window of opportunity is. The larger the angle from the tail of the target is, the shorter the time span before the target has disappeared from the shooter's sights. The shooter has to perform all these calculations in a split second, all the while flying his own airplane and keeping an eye out for enemies.

This makes the Firing angle a very important factor in determining the Base shot. The first thing to do is to determine from what angle you are shooting at the target from. The shot can come from the Front, Rear or Sides. If there is any doubt, the Arc template is used to determine the angle. The procedure for determining the angle is the same as for determining Threat Arcs (See Section 4.1)

Seen from above:

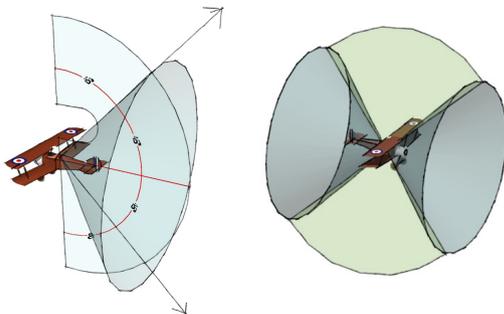
The green arcs are Side angles, while the blue arcs are Front and Rear, respectively.



The Rear Angle is within 45° of the tail of the target, describing a cone, measured from the Pilot of the target

The Frontal Angle is within 45° of the nose of the target, describing a cone, measured from the Pilot of the target

The Side Angle is everything not Rear or Frontal Angle.



The Arc template can be used for establishing the 45° cone in Front and Rear of the airplane. The space between these

two cones is the side angle.

Once the Firing angle has been found, the corresponding table is consulted to find the Firing angle modifier, as directed in the table header. The speeds from the Speed band are found on the Cockpit panels. (See 2.1.1)

Each airplanes speed is established as Stall, Slow, Medium, High or Dive speed. On the Cockpit panel a band with white text on the rim of the Air speed indicator, called the Speed band, shows which speed range the airplanes is at.

When firing from the Rear angle, the difference in speed between firer and target is what matters, as the angle of deflection is relatively small. The smaller the difference, the easier the shot will be.

When firing from the side, target speed is the key factor. The slower the target the easier the shot.

When firing from the front, the combined speed of shooter and target is considered. The higher the combined speeds, the harder it will be to get in a good shot.

Rear Angle						
Attackers speed						
	STALL	SLOW	MEDIUM	HIGH	DIVE	
Targets speed	STALL	+1	+2	-1	-4	-6
	SLOW	0	+2	0	-2	-4
	MEDIUM	-1	0	+1	0	-2
	HIGH	-4	-3	-1	-1	-1
	DIVE	-8	-5	-3	-2	-3

Side Angle						
Attackers speed						
	STALL	SLOW	MEDIUM	HIGH	DIVE	
Targets speed	STALL	-2	-1	-2	-3	-4
	SLOW	-5	-3	-4	-5	-6
	MEDIUM	-8	-6	-7	-8	-9
	HIGH	-11	-8	-9	-10	-11
	DIVE	-14	-10	-11	-12	-14

Frontal Angle						
Attackers speed						
	STALL	SLOW	MEDIUM	HIGH	DIVE	
Targets speed	STALL	+3	+4	0	-4	-8
	SLOW	+1	+2	-2	-6	-10
	MEDIUM	0	0	-4	-8	-12
	HIGH	-3	-2	-6	-12	-16
	DIVE	-7	-6	-10	-14	-20

Shooting phase

Air to air / Firing angle, Air gunners

6.3.5 Firing angle modifiers for Air gunners

aiming at empty spots in the sky.

- Rule 6.3.5.1** The Firing angle for Air gunners is found using the Arc template, and the modifier is looked up in the corresponding Air gunner table. The speeds of the firing air gunners airplane and the target are indicated on the relevant Speed band on the Cockpits panels of the involved airplanes.
- Rule 6.3.5.2** The “Parallel flight” table is used if the direction of flight of the target airplane is within 45° of the direction of flight of the firing airplane.
- Rule 6.3.5.3** The “Attacking airplane” table is used if the targeted airplane is able to shoot back at the firing airplane, using its fixed forward firing weapons. The “Attacking airplane, Rear angle” table, found on the “Attacking airplane” table is used for firing at targets that are attacking the firing airplane from the Rear angle.
- Rule 6.3.5.4** The “Other situations” table is used in all other situations than those covered by the “Parallel flight” and “Attacking airplane” tables. Air gunners have their own tables to find their Firing angle modifier. Firing arcs are determined a little differently, as the Air gunners’ weapons can be aimed at their targets, independently of the airplane’s direction of flight.

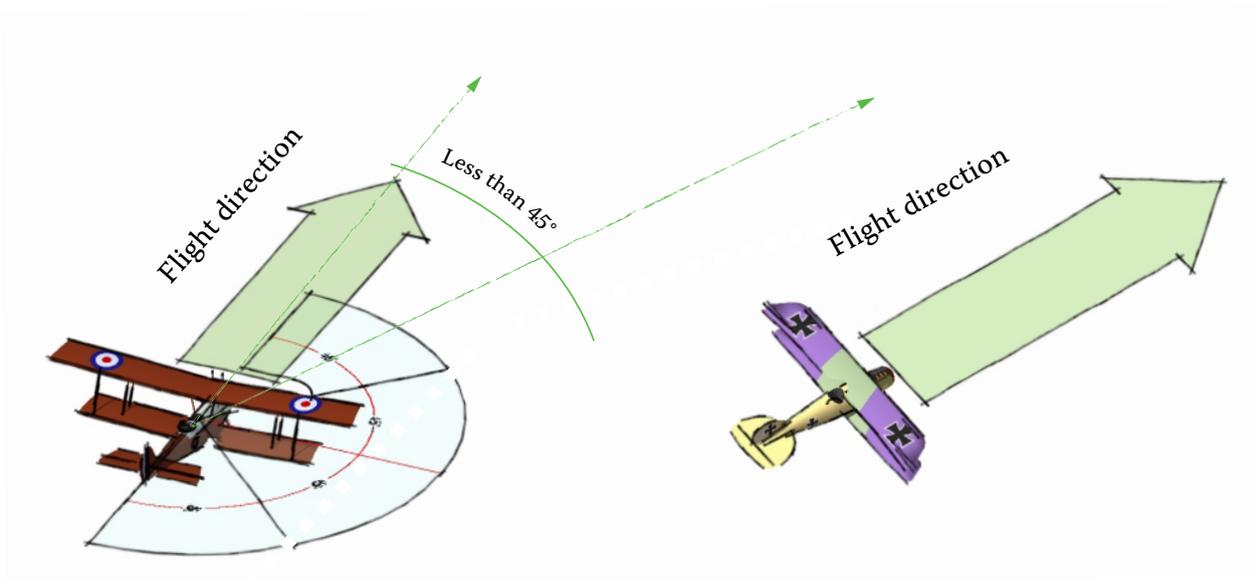
When a pilot in a single seat airplane fires his weapons, the line of fire is always identical with the direction of flight. This is not the case with Air gunners using flexible weapons, and why Air gunners have their own set of Firing angle tables.

The three arcs the Air gunners can engage in are:

Parallel flight:

The target is flying roughly parallel and in the same direction as the firing airplane. The definition of parallel is that the directions of flight between air gunners airplane and the target must be within 45° of each other. This applies both to the horizontal and the vertical plane.

Air gunner - Parallel flight						
Air gunners airplane speed						
Attacking airplane	STALL	SLOW	MEDIUM	HIGH	DIVE	
	STALL	-5	-7	-7	-8	-9
	SLOW	-6	-8	-9	-9	-10
	MEDIUM	-8	-9	-9	-10	-11
	HIGH	-10	-11	-10	-10	-11
	DIVE	-13	-14	-13	-12	-12



The air gunner will use the Parallel flight table for angle modification. Since the flight direction of both airplanes is within 45°.

Shooting phase

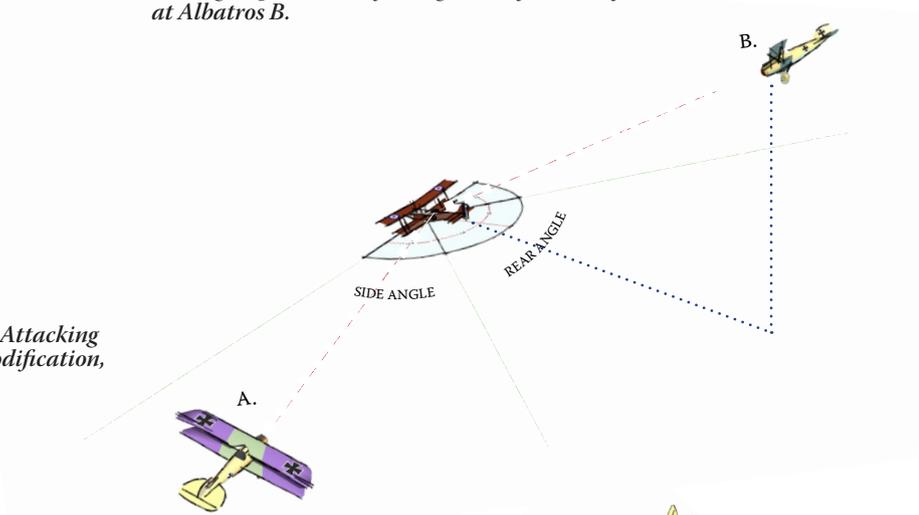
Air to air / Firing angle, Air gunners

Attacking airplane:

Is applicable when shooting at an airplane that has a valid shot on the firing airplane using its fixed, forward firing guns. This helps the Air gunner predict the flight path of the enemy airplane. Note that if two Air gunners are dueling in this way, neither of them can use this table. Also note that the table is split in two sub tables. If the target is threatening the firing airplane from behind, this red colored modifications on the table is used. The Arc is determined by using the Arc template in case of doubt. Remember that a threatening airplane will trigger the corresponding modifier to the Air gunner's Base Initiative. See rule 6.1.4

Air gunner - Attacking airplane						
		Air gunners airplane speed				
		Red numbers = Attack from behind				
Attacking airplane		STALL	SLOW	MEDIUM	HIGH	DIVE
	STALL	+3 / +5	-4 / 0	-6 / -2	-8 / -6	-10 / -11
	SLOW	-3 / +4	-6 / 0	-8 / -3	-10 / -7	-12 / -10
	MEDIUM	-6 / +1	-9 / -2	-11 / -4	-12 / -6	-15 / -8
	HIGH	-9 / -2	-11 / -4	-13 / -5	-14 / -7	-17 / -9
	DIVE	-11 / -4	-13 / -6	-15 / -7	-17 / -8	-20 / -11

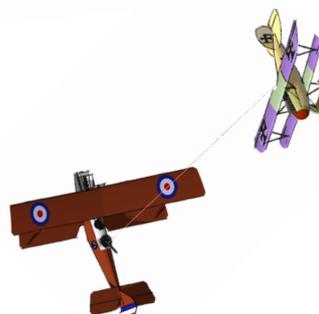
The air gunner will use the Red modifications on the Attacking airplane table for angle modification, if he shoots at Albatros B.



The air gunner will use the Attacking airplane table for angle modification, if he shoots at Albatros A.

Other situations: This table covers all situations not covered by the other two.

Air gunner - All others situations						
		Air gunners airplane speed				
Attacking airplane		STALL	SLOW	MEDIUM	HIGH	DIVE
	STALL	-5	-6	-7	-8	-9
	SLOW	-7	-8	-9	-10	-11
	MEDIUM	-10	-11	-12	-13	-14
	HIGH	-12	-13	-14	-15	-16
	DIVE	-13	-15	-16	-17	-18



The air gunner will use the Other situations table, since the situation don't fit neither Attacking airplane or Parallel flight.

6.3.6 Sustained Firing

Shoot until the barrel glows red..

Rule 6.3.6.1 If an airplane, for two or more consecutive Game turns, is able to fire at the same target, both times from the Rear Arc, the firing airplane may choose to use Sustained Firing. Sustained Firing gives +3 modifier to the Base shot on the second and following shots, but doubles the chance of a malfunction (see Rule 6.3.7), and uses 1,5 boxes of ammunition.

Sustained Firing is an option available to Pilots that have been in the Rear Arc of the same enemy airplane for two consecutive Game turns. The Pilot simply keeps the trigger down, and trusts God and ballistics to fill the target with lead. The downside is that the chance of the machine guns malfunctioning is doubled (See rule 6.3.7). The upside is that the Pilot gets a

+3 modifier to his second and following Base shots, if he is good enough to keep 'in the saddle'. Sustained fire uses up ammunition in a hurry; For every Sustained shot (2nd and following), cross out 1 and a half Ammunition Box in the Cockpit panel (Thus 2 rounds of Sustained fire uses up 3 boxes of ammunition)

Shooting phase

Air to air / Burst length and ammunition

6.3.7 Burst length and ammunition

Belts of 500 or drums of 100?

- Rule 6.3.7.1** The firer can choose to fire a Long or a Short burst. A Long burst gives no modification to the Base shot. A Short burst gives a -2 modifier to the Base shot, but the machine gun cannot malfunction. See rule 6.3.9
- Rule 6.3.7.2** A Long burst uses one full Box of ammunition. A Short burst uses a half Box of ammunition. Sustained firing uses one and a half Box of ammunition.
- Rule 6.3.7.2** Reloading a Pilot's machine gun takes 2 Pilot actions, and no shots can be fired in the Game turn where the reloading takes place.
- Rule 6.3.7.3** Reloading an Air gunner's machine gun takes one Game turn where no shots can be fired

The Gunner can choose between firing a Long burst using up a lot of ammunition, or a Short burst, conserving precious bullets. A Short burst has the added advantage that the machine gun won't malfunction. This means that rolling a '20' won't cause the machine gun to malfunction. The fewer bullets do mean that it is harder to hit the target, resulting in a -2 modifier to the Base shot. Note that it also is possible to fire an even longer burst, but, Sustained fire requires the firer to have been firing at the same target from the Rear Arc for two or more consecutive turns. See rule 6.3.6
Use of ammunition is marked by crossing out the boxes marked 'Ammunition' on the Cockpit panel. Even if an airplane has 2 forward firing machine guns, only one set of boxes will be present, as the two guns fire at the same time. The only exceptions are airplanes with one synchronized and one unsynchronized

machine gun (Such as the Se5a and Nieuport 17), where one machine gun will run out of ammunition before the other. On these airplanes, each machine gun will have its own ammunition track.
Most machine guns for Air gunners, and some fixed machine guns use magazines, that will only hold 100-150 bullets. Normally the Pilot or Air gunner will bring along spare magazines, making it possible to reload during the fight. For Air gunners, reloading takes a full Game turn, where he cannot fire the gun. For Pilots, in addition to the Game turn, reloading also requires 2 Pilot actions to replace the magazine. These 2 Pilot actions count against the number of maneuvers the Pilot can take to maneuver his airplane.
Used magazines are crossed out on the Cockpit panel, as they are changed. Any unused shots in a changed magazine are lost.

Example 1.
A SE5a have used one long burst and a short one. The vickers still have ammo left. But the Lewis gun is only able to shoot a short burst before it is empty.

Example 2.
A Albatros DVa have used two long burst and a short one. The ammo box with only one "dash" in it is the half box marked for the short burst.



6.3.8 Number of Machine guns

More guns equals more lead..

- Rule 6.3.8.1** Firing with one machine gun results in a -3 modifier to the number of successes after a successful shot. It is possible to go to the Damage table with a negative number of successes.

During World War I, and especially the latter half, most fighter airplanes flew with 2 machine guns. In ICOG this is considered the default, and therefore there are no modifiers for firing with 2 machine guns.
As the rate of fire for these early machine guns wasn't very high, this doesn't affect the ability to actually hit the enemy, but with fewer bullets flying, the potential to cause damage is reduced, giving a -3 to the number of successes on the Damage

table. This means that all Pilots and Air gunners using only one machine gun subtract 3 from the number of achieved successes, if the shot hits the target. Note that this may result in a negative number of successes, but the shot still hits, and inflicts damage. Other types fire 3 or more machine guns at the same time, gaining a +1D4 to the number of successes.
All these modifiers will be listed on the Cockpit panel for the type.

6.3.9 Malfunctions

BuddabuddabudKlonk!

Rule 6.3.9.1 Every time a burst is fired, there is a chance the firing weapon(s) will malfunction. When a natural '20' is rolled on a Gunnery skill test when firing a single machine gun, the weapon has malfunctioned. When firing double machine guns, the malfunction occurs on a roll of '19-20'. When using Sustained fire, the risk of a malfunction is doubled, i.e.: '20' becomes '19-20' and '19-20' becomes '17-20'. Ammunition is always used, whenever a malfunction occurs, and must be marked off on the Cockpit panel.
Note: When firing Short burst, no malfunction will take place, no matter the roll on the die.

Rule 6.3.9.2 When a malfunction occurs, roll 1D6 and consult the "Machine gun Malfunction Table"

The machine guns used in World War I were infamous for their low reliability when they were connected to the synchronization gear, that allowed them to fire through the propeller arc without striking the propeller blades. Furthermore the canvas belts that held the bullets would freeze at altitude, making it hard for the feed mechanisms to work properly. A malfunction can mean anything from a simple problem that can be fixed straight away, to one or two machine guns in need of major repair back at the depot. A rolled '20' triggers a malfunction to a single machine gun. A rolled '19' or '20' triggers a malfunction to double machine guns. When using Sustained

Firing, the chances of a malfunction doubles. Whenever any burst is fired, the corresponding amount of ammunition must be crossed off, even if a malfunction occurred. When a malfunction occurs, roll 1D6, and consult the Machine gun Malfunction Table (below). The table has several entries that allow the Pilot or Air gunner to attempt to repair his weapons. For Pilots, a repair takes up one or two Pilot actions. This means that the number of Pilot actions the Pilot uses to repair his weapon counts against the available number of Pilot actions for flying the airplane. It is possible to spread out repairs over more than one Game turn.

MACHINE GUN MALFUNCTION 1D6	
Malfunctions occur when rolling high on your Gunnery skill check in the shooting phase. The more machine guns the gunner have the higher the chance for a malfunction.	
If there are multiple machine guns, it is possible to still use the unaffected machine guns.	
No shooting is allowed in the Game turn where machine gun are repaired	
1 machine gun = malfunction on a natural 20 3 machine guns = malfunction on 20,19,18	
2 machine guns = malfunction on 20 and 19 4 machine guns = malfunction on 20,19,18,17	
Continued shooting doubles the chance for malfunction. Example, 2 machine guns used for continued shooting, will malfunction on 20,19,18 and 17. Short bursts will not trigger malfunctions.	
1	The bolt has been wedged stuck, and the weapon can not be repaired. If the gunner have multiple machine guns, roll on this tabel for the next machine gun.
2	Cartridge belt / magazine has been damaged. Unable to use this machine gun further. (Magazine can be changed for 2 Pilot actions and 1 Game turn. ★)
3	Cartridge loaded wrong. Repair takes 2 Game turns and cost 4 Pilot actions ★
4	A cartridge is stuck. Repair takes 1 round and cost 2 Pilot actions. ★
5	The bolt didn't return. A couple of jerks corrects the malfunction. Repair cost 1 Pilot action. ★
6	A small jerk corrects the malfunction. Able to shot from the next Game turn. ★
★ Unable to shoot with this machine gun this round. Next time it is available is the Game turn after it have been repaired.	

6.3.10 The Damage table

One magic bullet or a undamaged barn door.

All damage from airplanes firing on other airplanes is found on the Damage table. After a shot successfully hits its target, the number of successes is calculated by subtracting the die roll from the Base shot. Then roll another 1D20 and add the number of successes and consult the table to find the result.

All results on the Damage table take effect immediately and the result affects all subsequent events. This means that an airplane might lose its own shot or the opportunity to bomb a target, if it is hit before its own turn in the Initiative Sequence.

DAMAGE TABLE - SINGLE ENGINE AIRPLANES	
Results 1-20. 1d20 + achieved number of successes	
1	You hit the pilots silk scarf. The luck score of the victim is permanently raised by one. This counts even if the attacker chooses to re-roll the damage die.
2	A few scattered holes in the canvas. -2 in Structural Strength
3	Larger holes in the canvas. -3 in Structural strength
4	Landing gear shot up. When landing the pilot is forced to roll on the Emergency landing table, -3 in structural strength.
5	Wires and spars are hit. The plane loses 1d3 + 2 in Structural strength
6	Wing strut hit. The plane loses 1d3 + 3 in Structural strength.
7	Canvas fabric torn up. The plane immediately loses 2 Energy units. And will loose 2 Energy units each game turn from now on. -3 in Structural strength.
8	Control surfaces hit. All turns are from now on one template wider than indicated from airspeed indicator. The planes loses 1d3 + 3 in Structural strength.
9	A wire is cut! It might be important! Make a Structural strength test against remaining Structural strength.
10	Tailplane is hit, The plane loses 1d4 + 2 in Structural strength + make a Structural strength test against remaining Structural strength.
11	Wing hit, you hear wood splintering.... The plane loses 1d4 + 3 in Structural strength. Structural strength test against remaining Structural strength.
12	Tailplane hit. Something is stuck! All turns are from now on two templates wider than indicated from airspeed indicator. And the airplane loses 1d4 + 3 in Structure strength and roll a Structural strength test against remaining Structural strength.
13	Weapon hit. Roll 1d6: 1-4 one weapon disabled. 5-6 two weapons disabled - Only counts for weapons mounted side by side, with guns positioned apart, only one gun is disabled.
14	Engine hit. Roll 1d4 <ol style="list-style-type: none"> 1. Engine runs unevenly. The plane loses 1d4 Energy units in step 5.6 in all following movement phases. First loss happens immediately. 2. Bits of the propellor are shot off. The plane loses 2 energy units in step 5.6 in all following movement phases. For each movement phase where the speed exceeds 150 km/h roll a Structural strength test. 3. One cylinder is hit.. The plane loses 3 Energy units in step 5.6 in all following movement phases. First loss happens immediately. 4. Smoke erupting! Unless the speed of the plane reaches 200 km/h or more within the following two turns the engine will catch fire at the end of the second turn. +
15	Fuel lines hit. Roll 1d6+2. This is the remaining turns worth of fuel left . If the result is 8 the plane burst into flames as hit roll 27. +
16	Pilot or gunner hit in an arm or a leg. Fortitude minus 1d6. (In the case of an aircraft with one or more crew members on board - Roll a die dividing the chance of a hit evenly Eg: Pilot 1-3 and gunner 4-6 on a D6) ♥
17	Pilot wounded in an arm or a leg. Fortitude minus 1d6 ♥
18	Long burst in cockpit. The Pilot and one Gunner is hit. In the case of an aircraft with one or more gunners on board - Roll a die dividing the chance of a hit evenly Eg: gunner one 1-3 and gunner two 4-6 on a D6. The gunner loses 2d6 in Fortitude. ♥ For the pilot roll the following sub result with 1D4 for his damage: <ol style="list-style-type: none"> 1. The MG ammunition is hit and cooks off. The pilot loses 1d10 in Fortitude. The main armament (such as twin forward MGs) is rendered useless. 2. An aileron control wire is severed. The roll rate of the plane is doubled from now on. 3. The control column is hit and jerked from the hand of the pilot. The pilot must make a successful piloting test or enter a spin. The spin rules must then be performed immediately. (see 5.5.15 Spin) 4. Everything is shot up! Splinters and instrument glass hits the pilot. The pilot loses 1 Fortitude. The pilot flinches and loses his calm. -4 is added to the next initiative roll. Note this on the initiative record
19	Several wires are hit. Roll a Structural integrity test each time a manoeuvre is performed - Roll the first test immediately when receiving this hit. Firing fixed MGs counts a a maneuver in this regard as the pilot adjusts pitch and yaw. Turns size P or larger do not count as a manoeuvre in this case. When landing the plane it must perform an emergency landing. (See 5.5.17 Landings)
20	Stray shot! Roll again on this damage table, ignoring successes but this time using 2d20. But if the target plane carries bombs a bomb is hit and the plane explodes and all planes within 4 Move units receive an unmodified roll on this table.

DAMAGE TABLE - SINGLE ENGINE AIRPLANES

Results 21-30 1d20 + achieved number of successes

21	Spars and wires are hit. The plane loses 2d4+3 in Structural Strength. Make a Structural strength test against remaining Structural Strength.
22	Pilot and Gunner hit in the torso. Both get Fortitude -2d6. (In the case of an aircraft with more than one gunner on board - Roll a die dividing the chance of a hit evenly Eg: Gunner one 1-3 and Gunner two 4-6 on a D6) ♥
23	Wing main spar gets hit. The plane loses 3d6 in Structural Strength. Make a Structural strength test against remaining Structural Strength. All turns are from now on three templates wider than indicated from airspeed indicator.
24	Pilot hit in the head! He loses 3d6 in his fortitude score. If he survives, he blacks out the following game turn. The airplane will have to fly straight ahead on its current course the next moving phase ♥
25	Engine hit. Roll 1d6: 1-2 The engine is dead! 3-6 Fire! + Same as result 27.
26	Engine hit. The engine stops immediately. Roll 1D6: on a result of 3-6 the fuel catches fire in the same manner as result 29. +
27	The fuel tank is hit. The plane catches fire. After 2D6 turns the fire reaches the cockpit and the pilot dies. +
28	The wing is torn up. It then removes itself from its mounting and disappears rearward. The plane enters an unrecoverable spin. Look to the spin rules but ignore the Flying skill test as the spin is unrecoverable. If the pilot is lucky enough to carry a parachute he gets a -2 on his parachute roll.
29	Fuel tank burst into flames and the pilot catches fire. He throws himself from the plane and plummets to the ground as a human torch. All pilots within 4 movement units must roll a Fortitude test to stay in the combat. Any missed test results in a forced home result as the pilot has had enough and loses his nerve.
30	The cockpit area is riddled. The pilot and all crew members in the cockpit area (including the observer position) are killed outright.

Air victories:

1. Planes that explode, burst into flames, hit the ground, break up in the air or where the pilot is killed, are credited as an air victory to the last pilot (or gunner) who shot at the plane within the last 2 rounds regardless of the plane getting hit or not. ★
2. Pilots who get wounded or whose engine involuntary stops must roll a Fortitude against the remaining Fortitude in order to stay in combat. In the case of a missed test the plane counts as "forced home" and is credited as such to the last pilot hitting the plane. ★
3. Planes making an emergency landing on the playing area are credited as an air victory to the last pilot hitting the plane. Planes that make an emergency landing outside of the playing area are not credited as an air victory. ★

Notes:

- ★ Planes that are damaged and thus not able to reach their home base, must be moved even after the combat ends, in order to determine the results of an emergency landing. If the airplane make the emergency landing on the game board, even after the mission has ended, the rules of air victories is still in force.
- + For all planes that are on fire the following rule applies: Once per Game turn, after each Moving phase, roll 1D6. A result of 1 means the fire dies out. A result of 6 means the plane explodes in a ball of flames killing all crew instantly. For results of 2-5 apply the rolled amount as damage to the planes Structural integrity. A plane on fire does not have an initiative and thus moves first. The burning plane cannot shoot and follows the same rules as a plane that is "forced home".
- ♥ For all hits on pilot and crew causing loss of Fortitude the wounded individual will have to test against his remaining Fortitude to remain in combat:(See 6.3.13 and 6.3.12.2) For all hits on pilot and crew causing loss of Fortitude the wounded individual gets a corresponding negative modifier on his Awareness, Flying and Shooting ability as per rule 1.1.3

Shooting phase

Air to air / The Damage table for multi engine airplanes

6.3.11 Damage table for multi engine airplanes

A very big barn door.

If the target has two or more engines, the Damage table for multi-engined airplanes is used. After a shot successfully hits its target, the number of successes is calculated by subtracting the die roll from the Base shot. Then roll another 1D20 and add the number of successes and consult the table to find the result.

All results on the Damage table take effect immediately and the result affects all subsequent events. This means that an airplane might lose its own shot or the opportunity to bomb a target, if it is hit before its own turn in the Initiative Sequence.

DAMAGE TABLE - MULTI ENGINE AIRPLANES	
Results 1-20. 1d20 + achieved number of successes	
1	You hit the pilots silk scarf. The luck score of the victim is permanently raised by one. This counts even if the attacker chooses to re-roll the damage die.
2	A few scattered holes in the canvas. -2 in Structural Strength
3	Larger holes in the canvas. -3 in Structural strength
4	Landing gear shot up. When landing the pilot is forced to roll on the Emergency landing table, -3 in structural strength.
5	Wires and spars are hit. The plane loses 1d3 + 2 in Structural strength
6	Wing strut hit. The plane loses 1d3 + 3 in Structural strength.
7	Canvas fabric torn up. The plane immediately loses 2 Energy units. And will lose 2 Energy units each game turn from now on. -3 in Structural strength.
8	Control surfaces hit. All turns are from now on one template wider than indicated from airspeed indicator. The planes loses 1d3 + 3 in Structural strength.
9	A wire is cut! It might be important! Make a Structural strength test against remaining Structural strength.
10	Tailplane is hit, The plane loses 1d4 + 2 in Structural strength + make a Structural strength test against remaining Structural strength.
11	Wing hit, you hear wood splintering... The plane loses 1d4 + 3 in Structural strength. Structural strength test against remaining Structural strength.
12	Tailplane hit. Something is stuck! All turns are from now on two templates wider than indicated from airspeed indicator. And the airplane loses 1d4 + 3 in Structure strength and roll a Structural strength test against remaining Structural strength.
13	Air gunner closest to attacker hit. Fortitude minus 1d6. Engine hit. Roll 1d6 1-3 Left engine, 4-6 Right engine. Roll 1d3
14	<ol style="list-style-type: none"> 1. Engine runs unevenly. The plane loses 1 Energy units in step 5.6 in all following movement phases. First loss happens immediately. 2. Bits of the propellor are shot off. The plane loses 1 energy units in step 5.6 in all following movement phases. For each movement phase where the speed exceeds 100 km/h roll a Structural strength test. 3. Smoke erupting! Unless the speed of the plane reaches 200 km/h or more within the following two turns the engine will catch fire at the end of the second turn. ♣ The Pilot can shut down the smoking engine to avoid a fire, but will not be able to restart it.
15	Fuel lines hit on one engine. Roll 1d6 1-3 Left engine, 4-6 Right engine. Roll again, 1d6+2. This is the remaining turns worth of fuel left. If the result is 8 the plane burst into flames as hit roll 27. ♣
16	Pilot or gunner hit in an arm or a leg. Fortitude minus 1d6. (In the case of an aircraft with one or more crew members on board - Roll a die dividing the chance of a hit evenly Eg: Pilot 1-3 and gunner 4-6 on a D6) ♥
17	Pilot wounded in an arm or a leg. Fortitude minus 1d6 ♥
18	<p>Long burst in cockpit. The Pilot and one Gunner is hit. In the case of an aircraft with one or more gunners on board, Roll a die dividing the chance of a hit evenly Eg: gunner one 1-3 and gunner two 4-6 on a D6. The gunner loses 2d6 in Fortitude. ♥</p> <p>For the pilot roll the following sub result with 1D4 for his damage:</p> <ol style="list-style-type: none"> 1. Pilot hit in shoulder. loses 1d6 in Fortitude. ♥ 2. An aileron control wire is severed. The roll rate of the plane is doubled from now on. 3. The control column is hit and jerked from the hand of the pilot. The pilot must make a successful piloting test or enter a spin. The spin rules must then be performed immediately. (see 5.5.15 Spin) 4. Everything is shot up! Splinters and instrument glass hits the pilot. The pilot loses 1 point of Fortitude. The pilot flinches and loses his calm. Next maneuver phase must start with a P turn in a optional direction for at least half the airplanes moving units. ♥
19	Several wires and struts are hit. All turns are from now on two templates wider than indicated from airspeed indicator. And the airplane loses 2d4 + 3 in Structure strength and roll a Structural strength test against remaining Structural strength.
20	Stray shot! If the airplane is carrying bombs they are hit, and the airplane explodes instantly. Every airplane within 4 Moving units are to roll a unmodified roll on the Damage table. If no bombs is onboard roll again on this damage table, ignoring successes but this time using 2d20.

Shooting phase

Air to air / The Damage table for multi engine airplanes

DAMAGE TABLE - MULTI ENGINE AIRPLANES	
Results 21-30 1d20 + achieved number of successes	
21	Spars and wires are hit. The plane loses 2d6 in Structural Strength. Make a Structural strength test against remaining Structural Strength.. And the airplane must make another Structural strength test every time it makes a turn with less radius than O and every time it drops bombs. When landing the pilot is forced to roll on the Emergency landing table.
22	Engine hit. Roll 1d6: 1-3 Left engine, 4-6 Right engine. Engine stops immediately. Roll another 1d6. 1-3 Nothing further happens besides a lot of black smoke. 4-6 Engine and fuel tank catches fire as hit roll 27 on this table.
23	Wing main spar gets hit. The plane loses 3d6 in Structural Strength. Make a Structural strength test against remaining Structural Strength. All turns are from now on three templates wider than indicated from airspeed indicator.
24	Pilot and one gunner hit in body! Fortitude minus 2d6. (In the case of an aircraft with one or more crew members on board - Roll a die dividing the chance of a hit evenly Eg: Pilot 1-3 and gunner 4-6 on a D6) ♥ ♥ ♥
25	Engine hit. Roll 1d6: 1-3 Left engine, 4-6 Right engine. Engine stops immediately. Roll another 1d6. 1-2 Nothing further happens besides a lot of black smoke. 3-6 Engine and fuel tank catches fire as hit roll 27 on this table.
26	Pilot hit in the head! He loses 3d6 in his fortitude score. If he survives, he blacks out the following game turn. The airplane will have to fly straight ahead on its current course the next moving phase ♥
27	The fuel tank is hit. The plane catches fire. After 1D6 turns the fire reaches the cockpit and the pilot will sustain 1d6 damage in Fortitude each Game turn. +
28	The wing is torn up. It then removes itself from its mounting and disappears rearward. The plane enters an unrecoverable spin. Look to the spin rules but ignore the Flying skill test as the spin is unrecoverable. If the pilot is lucky enough to carry a parachute he gets a -2 on his parachute roll.
29	Fuel tank burst into flames and the pilot catches fire. He throws himself from the plane and plummets to the ground as a human torch. All pilots within 4 movement units must roll a Fortitude test to stay in the combat. Any missed test results in a forced home result as the pilot has had enough and loses his nerve. The fire will not die out and the plane is unrecoverable.
30+	The cockpit area is riddled. The pilot and all crew members in the cockpit area (including the observer position) are killed outright. The plane enters an unrecoverable spin.
<p>Air victories:</p> <ol style="list-style-type: none"> 1. Planes that explode, burst into flames, hit the ground, break up in the air or where the pilot is killed, are credited as an air victory to the last pilot (or gunner) who shot at the plane within the last 2 rounds regardless of the plane getting hit or not. ★ 2. Pilots who get wounded or whose engine involuntary stops must roll a Fortitude against the remaining Fortitude in order to stay in combat. In the case of a missed test the plane counts as "forced home" and is credited as such to the last pilot hitting the plane. ★ 3. Planes making an emergency landing on the playing area are credited as an air victory to the last pilot hitting the plane. Planes that make an emergency landing outside of the playing area are not credited as an air victory. ★ <p style="text-align: center;">Notes:</p> <ul style="list-style-type: none"> ★ Planes that are damaged and thus not able to reach their home base, must be moved even after the combat ends, in order to determine the results of an emergency landing. If the airplane make the emergency landing on the game board, even after the mission has ended, the rules of air victories is still in force. + For all planes that are on fire the following rule applies: Once per Game turn, after each Moving phase, roll 1D6. A result of 1 means the fire dies out. A result of 6 means the plane explodes in a ball of flames killing all crew instantly. For results of 2-5 apply the rolled amount as damage to the planes Structural integrity. A plane on fire does not have an initiative and thus moves first. The burning plane cannot shoot and follows the same rules as a plane that is "forced home". ♥ For all hits on pilot and crew causing loss of Fortitude the wounded individual will have to test against his remaining Fortitude to remain in combat:(See 6.3.13 and 6.3.12.2) For all hits on pilot and crew causing loss of Fortitude the wounded individual gets a corresponding negative modifier on his Awareness, Flying and Shooting ability as per rule 1.1.3 	

Shooting phase

Air to air / Damage to crew and airplane

6.3.12 Damage to crew and airplane

Is that blood or oil on the windscreen?

The result from the Damage table takes effect immediately, and the consequences are described in the table. In general there are three types of damage: Crew, Structural and Engine.

The damage result does not directly indicate if the damage is enough to down the airplane or force it to abort. For this to happen, the conditions in 6.3.12 or 6.3.13 must be fulfilled.

Remarks to the Damage results:

Crew Injured.

When a Pilot or Air gunner is hit, his Fortitude and Awareness scores, as well as Flying and Gunnery skills, are reduced by the amount of damage taken. If the Pilot's Fortitude score is reduced to '0' or less, he is dead, and the airplane will Spin towards to ground.

If the Pilot's Flying skill is reduced to '0' or less, he can no longer control his airplane, and it will Spin towards the ground.

Reductions in the Awareness score affects future Initiative rolls. This is noted on the Cockpit panel and on the Initiative Sheet.

In most cases, a wounded Pilot will be required to make a Fortitude test to stay in the fight. This represents the ability to take the pain and remain focused, or conversely lose the grip on the situation, believing that death is at hand, and the only thing that matters is getting to safety and home, sweet home. See 6.3.14: airplane Forced home

Engine Damage

Several different kinds of damage may affect the engine(s). Most results make the engine lose energy units in every Speed adjustment Step. Other results give a variable loss of power, for example 1D4 points, which is rolled in each Speed Adjustment Step from then on forward.

Damage to engines is cumulative, if more than one damage result is taken. If the loss of power for each round is more than the total amount of power available, the engine seizes and stops. Note: this does not include variable engine damage (but the engine is sputtering a lot by then).

Structural Damage

Most damage results mean a reduction in the airplane's Structural strength score. The Cockpit panel lists the Structural strength score for the airplane, and the damage received is subtracted from this.

Note that most twin-seaters and other large airplanes have a fixed number, due to their size, that is subtracted from the damage taken, before subtracting from the Structural strength. If the Structural strength reaches '0', the amount of damage the airplane can sustain has been reached, and the airplane simply falls apart, with the parts spinning towards the ground. If the damage result demands a Structural strength test, a roll with 1d6 is made on the Structural failure table if the test is failed.

Structural failure 1D6	
1	At first the wings is ripped from the fuselage, then the engine leaves it mount and the whirling prop shreds the remains in pieces.
2	The main spar collapses and one wing are torn off. The remains whirls to the ground.
3	A loud crack is heard from the top wing and the fabric is bulging in a strange way.. Structural strength is reduced with 3d6.
4	One inter plane strut breaks loose and disappear behind the airplane together with a large piece of fabric. Structural strength is reduced with 2d6.
5	The wings are flexing and the fabric is torn more than one place, two flyings wires breaks and is hanging lose. Structural strength is reduced with 1d6 +3
6	Better bend than break! Surprisingly nothing happens.

6.3.13 Crediting Victories

This is what its all about

Rule 6.3.13.1 Planes that explode, catch fire, impact the ground due to maneuvers, break up in the air, or where the Pilot is killed, are considered shot down. The 'Victory' is credited to the last Pilot or Air gunner to fire at it within the last two Game turns, whether the fire hit the target or not

Rule 6.3.13.2 Pilots who are wounded, or are flying an airplane with a seized engine, must pass a Fortitude test. If this fails, the airplane is 'Forced home.' The result is credited as an 'Enemy Forced home' to the last Pilot or Air gunner to fire at the target within the last two Game turns, whether the fire hit or not.

Rule 6.3.13.3 Any airplane that makes an Emergency landing while still on the Game board, is considered shot down. The 'Victory' is credited to the last Pilot or Air gunner to hit the airplane. Airplanes that make an Emergency landing outside the Game board are not credited, as long as the airplane leaves the Game board from the same edge as the one where it entered play, unless the condition listed in rule 6.3.13.1 is met.

Damaged airplanes unable to return home under own power must always complete their movement, to resolve any Emergency landings. This still applies if the scenario is over. If the airplane is forced to make an Emergency landing while still on the Game board, the rules for being shot down apply. Any airplane that catches fire will take an additional 1D6 struc-

tural damage each Game turn it is on fire. On a roll of '1' the fire is put out and no further damage from the fire is taken. On a roll of '6' the airplane explodes and the entire air crew is killed instantly. an airplane with an on board fire cannot fire any of its weapons, and follows the same rules as an airplane that has been Forced home.

6.3.14 Forced home

Stalwart Hero or Lowly Coward?

- Rule 6.3.13.1** If a Pilot is wounded or his engine seizes, he is required to pass a Fortitude test to keep fighting. If he fails this test, the Pilot and the airplane is considered Forced home, and must maneuver the airplane to leave the fight for home immediately.
- Rule 6.3.14.2** If an Air gunner is wounded, he is required to pass a Fortitude test to keep fighting. If he fails this test, he cannot fire his weapon or drop bombs for the rest of the game.
- Rule 6.3.14.3** Any airplane that is Forced home is prohibited from firing its weapons or drop bombs from the moment the result is incurred. The airplane must maneuver towards its side's edge of the Game board, and leave the Game board as soon as possible.
- Rule 6.3.14.4** If an airplane that is Forced home has any Air gunners aboard that are not out of action, they are only allowed to attack enemy airplanes that are attacking their own airplane, and thus only airplanes fulfilling the conditions for the "Attacking airplane" and "Attacking airplane from behind" Air gunner Arc Tables.

If a Pilot is wounded and loses points in his Fortitude score, he must pass a Fortitude test against his remaining Fortitude score. This test determines how he deals with the shock and pain: If he passes the test, he grits his teeth and continues to fight – though with the reduced scores in his stats the wound has incurred – the player may decide to send the Pilot home to fight another day, though. If the Pilot fails his test, the pain and shock is too much or the prospect of dying too terrible, and the Pilot decides that discretion is the better part of valor, and turns for home. This will normally award the opposing side with a mission victory point.

Like Pilots, there is a limit to how much Air gunners can endure before they lose the will to fight. If an Air gunner is wounded, they too must make a Fortitude test. If they pass, they can still participate in the fight with the penalties incurred

from the wound. If the Gunner fails his test, he is too busy losing consciousness from loss of blood or tending to his wounds to perform any other tasks. In effect he is out of the fight. The same applies if the engine of an airplane seizes. The Pilot must pass a Fortitude test. If he passes he may fight on in his new glider-fighter, while looking for a place to put down. If he fails, he must break off immediately and try to make it home across the edge of the Game board to save his bacon. If the Pilot fails his test due to an engine seizure it also affects the Air gunner. Being very much aware of how dangerous their situation is, he will only engage enemies that are directly attacking his own airplane, i.e. have announced an attack on his airplane and fulfill the condition in the Attacking airplane Arc tables. Any airplane that is Forced home due to an engine seizure will normally earn the opposing side a mission victory point.



EXAMPLE OF AN ICOG GAME

The following is an example of a game session in ICOG. Thomas Løfgren (Loeffe), a member of the game-testing group, has written this after action report. The game was played as part of an on going campaign in ICOG. There can be refer-

ences to rules not covered by this rule set, mainly the upcoming campaign rules. But nonetheless it should give a good feeling of what ICOG is all about. Enjoy.

April 1917 (“Bloody April”) - Sector Patrol Above Nueville St. Vaast

In this exiting battle German fighters try to intercept Allied recon planes crossing the frontlines, and returning home with saucy photos.

Allied fighter groups have been ordered to patrol the specific sectors where their recon planes will cross, hoping to intercept any German fighters out to disrupt the recon flights.

Setup:

- 4 Allied (French) fighters
- 4 German fighters.
- 1 Allied recon plane appearing at the beginning of round 2
- 1 Allied recon plane appearing at the beginning of round 6

The recon planes will be, randomly, outgoing or returning home, starting from random places along the board edges. They must exit the board opposite their start positions no more than 5 rounds later. If they do so they will score 1 point (each) for the Allied side.

Regular scoring also applies;
2 points for a downed plane and
1 point for a “driven home” plane.

Each side consists of 2 players controlling 2 fighter planes each. French: Andreas and Jakob, Germans: Loeffe and Lars. The pilots/planes are randomly selected from the players’ squadron rosters by rolling a die (each player’s squadron has 8 pilots so a 1d8 is used). Pilots are tied to a specific plane they will be using until issued a new one.

Allied pilots/planes rolled:
- Pelardon (Nieuport 17) - Andreas
- Comisard (Nieuport 24) - Andreas
- Dupont (Nieuport 17) - Jakob
- Franck (SPAD S.VII) - Jakob

Germans pilots/planes rolled:
- Schmiel (Albatros DIII) - Thomas
- Von Glück (Albatros DIII) - Thomas
- Vernichthofen (Albatros DIII) - Lars
- Stürmdrang (Albatros DIII) - Lars

The French are flying a variety of planes, while the Germans are all in the able and stable Albatros DIII platform. The French Nieuport 17 and 24s are not quite as powerful, but can outturn the Germans at lower speeds. They are also less heavily armed with only one MG. The lone SPAD S.VII is an “energy-fighter”, with powerful engine and good climb and diving abilities.

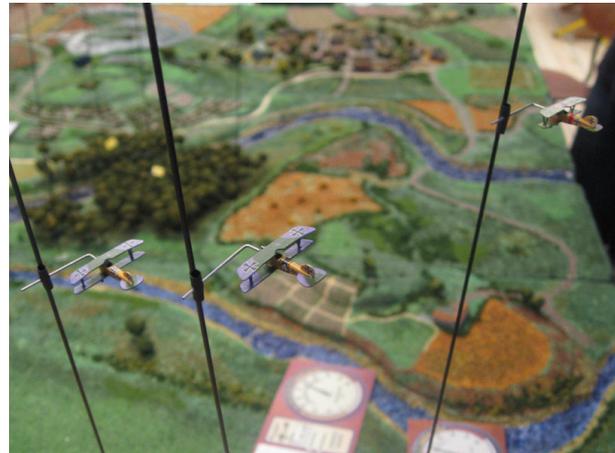
Set-up rules vary from scenario to scenario, but in this one The French choose to set up where they want. They have to fly in formation, but will be flying in a random direction.

French choose to set up in the middle of the board, which forces us Germans to basically “choose a corner”, since we have to keep a minimum distance to their group. Both groups are flying at medium altitude at the beginning of the battle.

We Germans know that a recon plane will be arriving just 2 turns from the start, which we will have to stop in order to prevent the French from scoring points, but we have no idea whether this plane will be out-going or returning home, or where along the wide frontline it will appear.

Turn 1

The Germans split in two groups in order to better cover the board when the recon plane arrives on game turn 2. The groups are my pilots Glück/Schmiel on the left flank, and Lars’ two fighters Vernichthoven and Stürmdrang on the right.



The French group make wide fanning turns to spread out in

a wide arc and face the Germans arriving from two different angles.

There is no contact as the planes are still too far apart, but next turn will definitely see the planes starting to pass each other.

Turn 2

A British recon plane arrives! The pilot, Lieu Upton and his observer arrives in an outgoing B.E.2c, a pretty useless two-seater with low speed and inability to fire straight ahead or to the sides (!) due to the placement of the gunner in front of the pilot and between the two sets of wings.

Unfortunately for the Germans it arrives almost opposite their setup positions and it will be a hard chase to catch it, before it can exit the game board

Planes all roll for initiative, which is done with an open-ended D10 (10's are rerolled and result added again and so on). This roll is added to the pilots' Reaction stat (usually around 13-18, new pilots roll 2D6+6 to get this stat, but it can later be raised with experience).

The worst initiative move FIRST, so the best pilots have the advantage of moving last, so they can better engage the enemies. You always have to be careful about enemies moving AFTER you, as they can maneuver to get shots on you that turn.



The Initiative Score is modified if the plane is being threatened by other planes from the rear or sides. If an enemy plane threatens your plane from the Rear Arc, you get a -4 penalty. If the plane threatens from the Side Arc the penalty is -2.

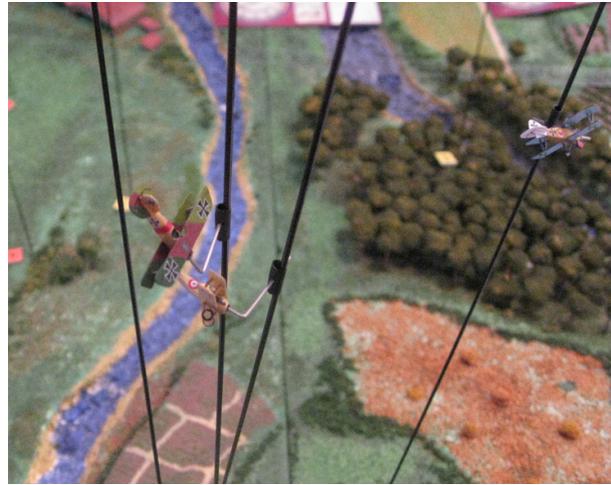
The penalties are cumulative, so you can get up to -6 on your roll! No penalties apply in turn 2, as the planes are just starting to get close to each other.

On to the action:

Schmiel/Glück has the French beat in their sector by having a superior initiative order, so the French are forced to move first. The French planes try to get as close to the German fighters as possible to force an "overshoot" when they move, ...but Franck gets a little too brave, trying to circle his beige SPAD VII around and anticipate where Glück will end up, so he can better chase him next round.

Glück sees this coming and makes the old pull/push on his stick, to first first climbing above the SPAD, then dive directly downwards to shorten his flight path towards Franck. He manages to get incredibly close (which calls for a "collision check" made against the Luck stat of each pilot).

Both pilots fail the check! This forces Glück to spend one of his precious re-rolls to avoid collision (he makes the reroll). Bad luck, but now he is at killer distance for a side shot on Franck.



Meanwhile Schmiel dives below the French planes to build speed, in order to catch the Recon plane, slowly bumbling across the frontlines in the opposite corner of the battlefield.

On the other flank German Vernichthofen charges into battle towards the French planes, which dodge and turn before him, avoiding getting in his cross hairs, while Stürmdrang has to take a more wide circling approach to crossing the board.

Shooting Phase (turn 2)

Shots in ICOG are FRONT, SIDE or REAR shots, depending which sector the incoming plane is shooting from. Side shots are most difficult as the enemy quickly passes by your sights. Difficulty is based mostly on the enemy's speed. Front shots can be very hard too, based on the two planes combined speeds as they blast past each other. Rear shots are obviously the best with big bonuses if you can match your opponent's speed and get right on his tail.

Only one shot this round - Glück hangs few meters from Franck's side and lets off a salvo. It's a side shot.

The difficulty of a SIDE shot is calculated based on

- Distance - in this case VERY close, the maximum of +6 to hit.
- The enemy's speed - Dupont is flying medium speed, Glück is flying at low speed, which on the SIDE table give a -6 to hit.
- The plane may have a -1/+1 modifier based on its stability as a gun platform (+0 in this case).
- The pilot's Shooting skill - Glück is a very skilled pilot with 16 in his Gunnery stat.

The total to hit is $a+b+c+d = (+6)+(-6)+(0)+(16) = 16$ to hit (on a D20)

Glück rolls 11 and hits! The number of successes is then calculated based on how far below your mark you rolled: rolling "11" on a 16-to-hit roll equals 5 successes (5 below the required number).

The 5 successes are added to a "Damage roll" (another D20) and summed on the Damage Table. Glück only rolls a "3" which is added to the 5 successes and the total of 8 is then referenced on the Damage table (anything above 20 will usually be an instant kill).

The result for 8 is: "Rudder hit - structural damage to the plane (1D3+3) and slight decrease in turning ability (-1 turning)"^b Not a lethal shot, but Glück chokes not to reroll it as he already used one of his 2 re-rolls during the collision check against Dupont.

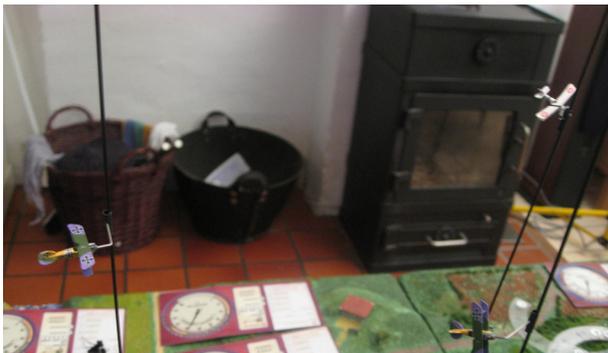
Turn 3

Only Franck has a penalty to his initiative this round, as Glück still threatens him from the side arc (-2), but his other French colleagues don't fare much better when it comes to rolling. The French are apparently startled by the early gunfire and all have lousy reflexes this round. "Mon Dieu, they are using live ammo! Infâmes Boche!"

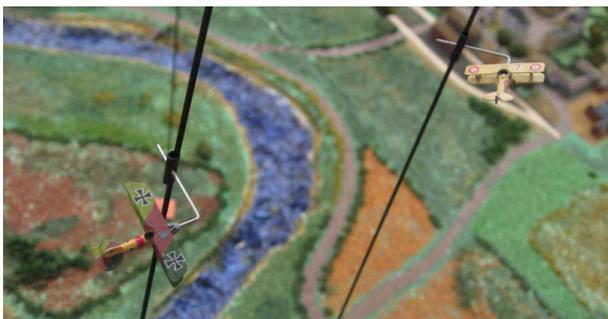
The cheese-eaters try to evade the passing German fighters, who are still heading across the board towards the Recon plane. However, a good opening to attempt shooting down a French plane is definitely looked for, and the French know this, and dodge as well as they know.

The French make use of excellent defensive flying, leaving neither Stürmdrang nor Schmiel any easy targets, when it becomes their turn to move.

Vernichthofen gets Commisard in his sights, but he is at the far end of efficient shooting distance, and the German pilot decides to save his ammo for a better shot. (Most likely this would have been a 1 or 2 to hit on D20, and 19-20 are jam results with 2 MGs, so it's not worth it.)



Franck, however is not as lucky. As he tries to escape Glück by flying straight away from him and then turning last second to "present side" to the German fighter, he underestimates the maneuverability of the Albatros DIII. He ends up with the German veteran zooming down right behind him, ready to take another shot at him. This time from the rear!



Shots from behind are far deadlier than from the side. The differences in speed is looked at, but turns out to be very low. Both planes are flying at medium speed, which is close to optimal. This time Glück has a whopping 16-to-hit, gets 8 successes and thus adds 8 to the d20 damage roll for a total of 16:

The pilot has been hit! Franck and his cockpit are strafed by MG fire, but incredibly he is only hit in the shoulder. Franck now has to make a "Fortitude" check (1d20 against remaining Fortitude score) to stay in battle, but fails. His reroll also fails. Too much pain!

Franck "decides" this battle isn't worth dying for, and turns his plane towards home. The plane may now only fly defensively for the rest of the game, and Germans score 1 point for a "driven home" plane!

Turn 4

In a string of bad luck and cursed D10-rolls the French botch their initiative once AGAIN, and have to move all their planes first. The -2 to Commissard (with Vernichthofen threatening from the Side Arc) and -4 to Franck (as he is wounded -4 on his Fortitude) doesn't help the results either.

On the bright side for the Allied side the British Recon B.E.2c plane is now only one round from exiting the map and scoring them 1 point. It has been diving to gain speed and turning away from the action as much as possible, but at least 2 Albatros DIII's are closing in at over 200 km/h, and will likely get off a shot next round.

Franck clutches his bleeding shoulder and dives his beige SPAD VII out of the battle, heading for home, while his two buddies in their silver-grey Nieuports have been left somewhat behind by all their evasive flying the last turn. Now they both turn to get to where the action is obviously going to be: Around the escaping recon plane.

Schmiel who has been diving to build speed manages to get within striking distance of the recon plane, but is sadly too far away to hit anything. The recon plane has been building speed (around 175 km/h) and is hard to hit from the side. He misses a long-odds Base Shot of 6, but is banked around properly in



order to circle the plane for another shot next round. Glück meanwhile positions himself upside-down to be able to easily pull-down and face the recon plane next turn, while Vernichthofen covers its rear. It is now "boxed in" from 3 sides by Albatros DIII's and faces a tough challenge escaping next turn.

Turn 5

The French initiative luck finally turns! Incredibly, the recon plane rolls an open-ended D10 roll for 14 total, to beat both Vernichthofen and Schmiel's great rolls. Glück however, lives up to his name and also manages an open-ended 16-roll, and will perhaps get a chance to engage it before it escapes.

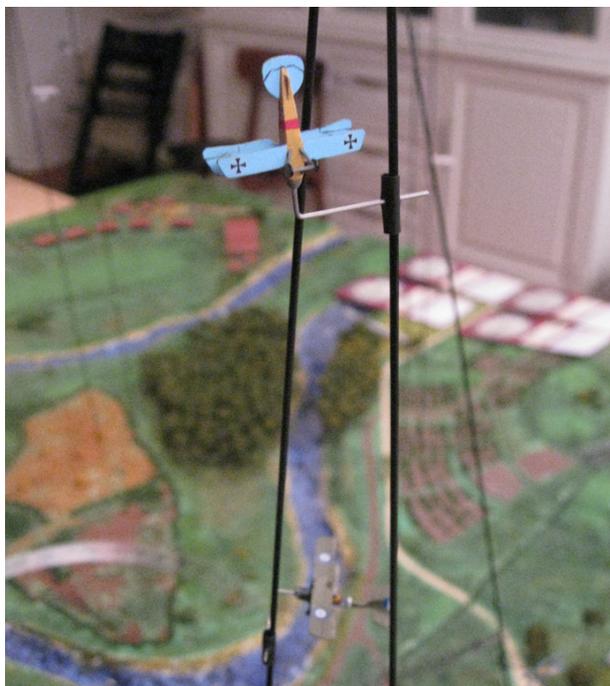
While the Germans curse their luck, they try to maneuver around so that Lieu Upton in the recon plane will somehow magically "end up" in their sights, after he moves, but it's far too easy to avoid their firing-cones for the recon pilot. He instead chooses to climb and fly very close to Glück, forcing him to overshoot.

But that won't do! Glück decides it's time to become a legend or die trying - Glück tries to pull a departure-from-flight move out of his bag of tricks.

Departure from flight involves bringing the plane to stall speed, basically letting it drop out of the sky! Then the pilot hopefully regains control of the plane and starts flying again. This allows for moves such as the famous Immelmann turn, which is the only thing that can bring Glück behind an enemy so close to him.

Pulling back on his stick Glück climbs to stall-speed, the plane drops, staring directly down on the top of the recon plane! Triumphant flying. Now all that's needed is to regain control of the stalling plane. Glück is an excellent pilot with 16 in his Flying stat. He just needs to roll below that on a D20. But fails! A clean 20 is rolled. He uses his last reroll to gain control, but alas his luck has run out, a 19! Gott im Himmel!

Gluck is now perfectly placed, but the plane is utterly out of his control and starts a violent spin down past the recon plane! Verdammt noch mal! It would have been a perfect shot.



Meanwhile Dupont has joined in chasing the Albatrosses and turns his Nieuport 17 around for a side shot on Strürmdrang. It hits but only manages to pierce the veneer of the fuselage, doing no great damage.



Turn 6

Lieu Upton in the outgoing recon plane says "so long and thank for all the attention, Huns!" and exits the map, continuing on his recon mission. The Allied score 1 point, and the score is now tied at 1-1.

Simultaneously a new recon plane arrives! This time, a returning Fe2b pusher, with pilot Brunswick behind the stick and observer Bonham manning the guns. The plane also happens to be loaded with valuable recon photos of German troop movements and positions. It starts in yet another unlucky position for the Germans, right where they initially set up! The 3 Albatrosses that were chasing Lieu Upton will have to fly back again.. and FAST!

Glück still cursing his luck, manages to bring the DIII out of spin (phew!), and steer it toward the new recon plane. Having lost speed on the Immelmann and stall, he is quickly overtaken by his two Kameraten at much higher speeds, also plotting an intercept course of the recon plane.

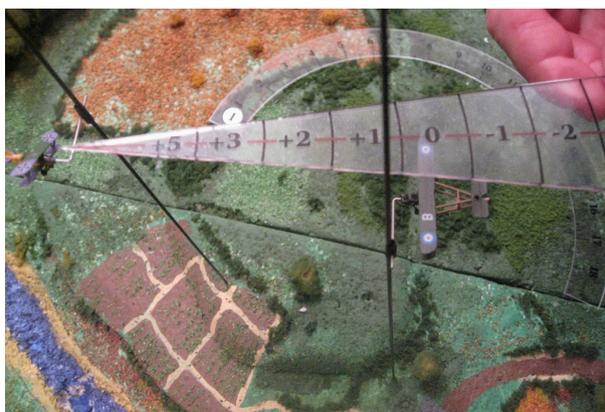
The Germans ponder if it was a tactical blunder to commit so



many planes to chase the first recon plane, as they are now out of the fight for a few rounds, as they speed across the map to catch up.

Only Stürmdrang has lingered in the middle of the map, and now sees his opportunity to swoop down and face Brunswick/Bonham head on. Luckily the French fighters in his sector are not any threat this round.

The recon plane turns and dives to build speed, but Stürmdrang has it right in his sights, ready to let of a salvo. The Fe2b grabs his swivel-mounted Lewis and aims at the incoming German, but Strürmdrang gets his shot off first (rear gunner rolls a new initiative against the incoming plane when attacked)



Stürmdrang's front salvo hits the Fe2b's engine, reducing its speed and maneuverability! This will really help the Albatrosses catch up.

Now Bonham returns fire, but misses the Albatros as it thunders past him with 230 km/h.
Turn 7

Allied once more have bad luck on their initiative. However the 3 German Albatrosses are still far away, and Stürmdrang, the last German fighter, has just passed the recon plane at very high speeds and need to turn around to chase it, leaving him out of the action.

The chasing German Albatrosses all dive to gain speed, and close in on Brunswick/Bonham, with the damaged engine, but will it be soon enough?

The French Nieuports meanwhile circle the British recon plane, ready to intercept any incoming German fighters next round.

Franck, wounded in round 3, exits the map and returns his SPAD VII home to fight another day.

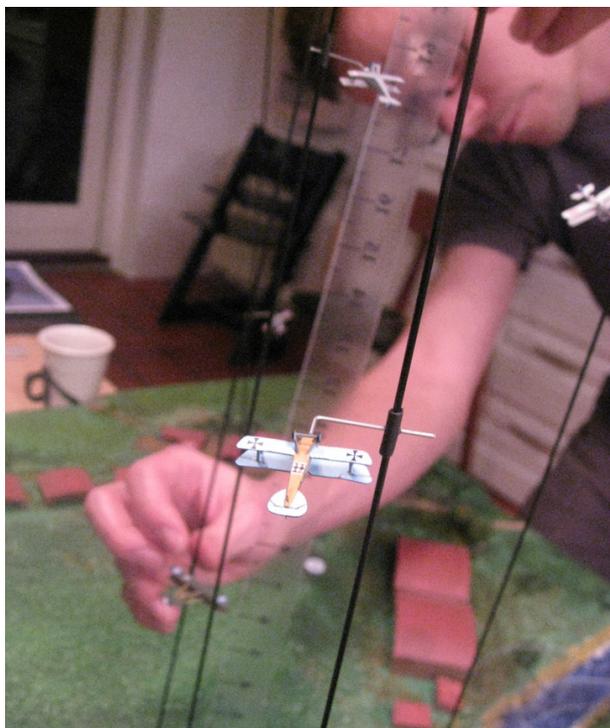
Turn 8

Glück, Schmiel and Vernichthofen are all still chasing the Fe2b with the naughty photos. Glück a bit further behind, still trying to build momentum from losing speed during the stall.

Schmiel dives but is faced by Comisard in the white Nieuport 24, who turns around in front of him for a far (-5) front shot. It hits and totals 13 criticals, managing to hit Schmiel's guns, knocking out one of the MGs (a D6 is rolled to determine damage to the guns, and both could have been knocked out as well as none).

Vernichthofen meanwhile sees an opportunity and zooms up to get a long rear shot on Pellardon in one of the circling grey Nieuports.

Another hit! This time to the engine. Smoke erupts from the unsuspecting Nieuport 17, as flames slowly start to build



around the leaking fuel!

Pellardon now knows he must DIVE quickly to try and put out the fire. He needs to build up to 200 km/h in order to extinguish the smoke, or risk setting his entire plane on fire!



Turn 9

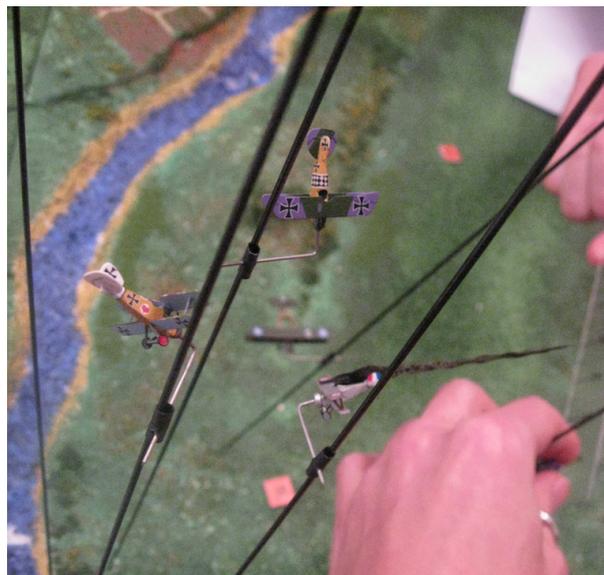
Rolling initiative, the worst-case happens once again, for the Germans. During the turn in which 3 German planes are closing in on the recon plane, ready for the kill, the recon plane gets lucky and beat them all. Just like it happened with the out-going plane!

Germans curse their luck, for the second time. But having won so many initiative rounds they can hardly complain. It's not stopping them, doing so. Curses fill the air.

They will not be able to catch this recon plane this time either. For all their earlier luck in seizing the initiative they have once again failed when it really mattered.

The recon plane now only needs one more turn to leave the map and score an additional 1 point for Le Aéronautique Militaire.

Glück realizes he won't be able to reach the Recon plane. Feeling his luck all but spent, he decides to disengage and leave the more eager pilots to duke it out in the last round.



With his engine going up in smoke Pellardon dives his Nieuport violently towards the ground, trying to reach 200 km/h, but only gets to around 180 km/h. He will have to continue diving in order to reach the speed next round and keep the engine erupting in fire.

Vernichthoven now faces a hard choice; keep chasing Pellardon in the smoking Nieuport 17 and most likely get Comisard in the Nieuport 24 after him - or disengage and let Pellardon get away. Not thinking twice, Vernichthoven bravely chooses to keep up the chase, and banks down for a very close shot on Pellardon.

This makes Schmiel's choice that much easier, as he has also been fearing Comisard's superior positioning and initiative. As Vernichthoven now presents a much better target for Comisard he also chooses to swoop in very close to Pellardon and help finish him off.

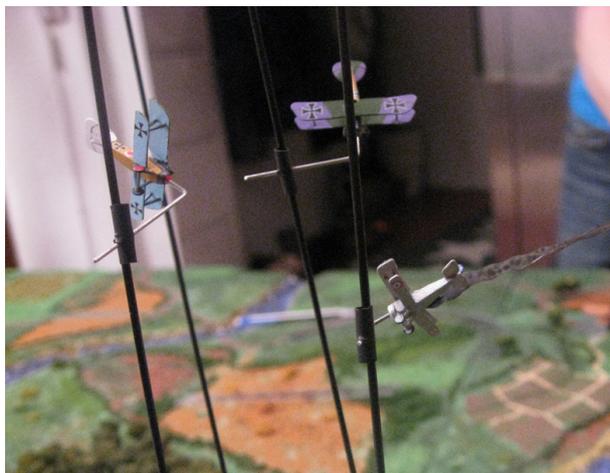
Pellardon now has two angry Germans ready to bite his left flank to pieces, plus a burning engine to worry about!

Comisard sees his friend in trouble and as expected loops back down to engage Vernichthoven from the rear. He has to press the plane to its furthest, but manages to swing up right behind Vernichthoven.

A classic closure to an ICOG game, 3-4 planes in very close dogfight, as all sides press their planes to the breaking point, trying to settle the game in their favour.

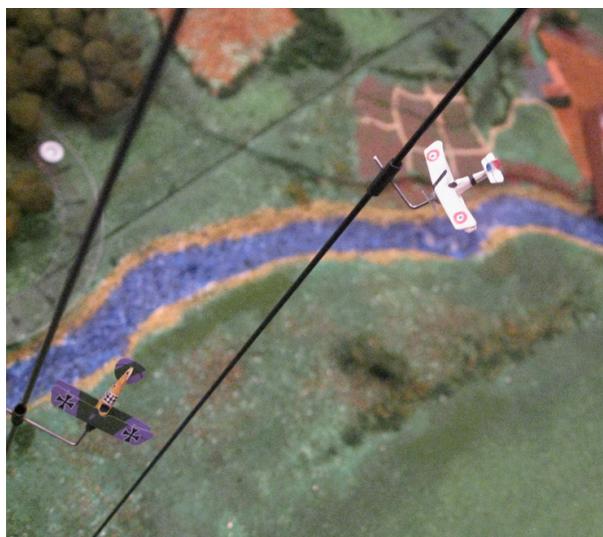
A question is raised: Is there a friendly plane in Comisard's line of fire? If Pellardon is in his fire-cone when he is aiming at Vernichthoven he will have to make a roll to see if he will hit his friend!

Some detailed measuring (and a lengthy discussion) closes the question. Pellardon is not in the way, and Comisard pulls the trigger! ... but misses the rear shot! What bad luck for the French.



Schmiel now takes his shot at the smoking Nieuport 17 piloted by Pellardon. The rudder is hit and the integrity of the plane is lowered. Pellardon must make a structural strength check or risk the plane collapsing, but he succeeds and keeps flying, the few seconds until Vernichthoven takes his shot.

The salvo tears up the left wing forcing the Nieuport to take a second integrity check, at even harder difficulty, which it fails. The wings of the Nieuport collapse mid-air, the remains tumbling down towards the French countryside



This was a clean kill for the Germans. Pellardon is KIA and the Germans receive 2 points. The score is now 3-1 to the German side.

Turn 10

Brunswick exits the map, returning home with some hot, sleazy recon material, scoring the allies another point. The score is now 3-2 to the Germans.

Comisard misses his opportunity to chase after Vernichthoven, as the German performs an impressive departure-from-flight move; He presses his airplane up into the air until it stalls, and then quickly lets the plane drop over his left wing, and ends up pointing downwards at an angle.

Dupont who has remained anonymous for the most of the game finally gets his chance, and zooms up very close to Vernichthoven as he is dropping out of the sky in a controlled stall. The planes almost collide mid-air, but their luck saves them both.

Stürmdrang who has spent the last few turns chasing the recently vanished recon plane, and is now eager to save his buddy. He makes a desperate loop back up to the two fighters above.



He presses the plane almost beyond its capacity, but manages to clear the structural strength checks which allow him the tight turns, and voila! Ends up right behind Dupont.

Stürmdrang fires on Dupont, with a lethal 17-to-hit shot. But

he rolls 18 and misses! This is too good to let go so Stürmdrang spends his lone reroll on the shot and manages to hit. The tail rudder is hit and something gets stuck in the steering, but alas no kill for the Germans in the final round.

Comissard makes an attempt on getting behind Schmiel, as Vernichthofen's immelmann left him without a target, but he overshoots as his plane can't turn tightly enough to catch the German.



The last shot of the scenario was fired by Dupont, who only manages to knock a few wires free on Vernichthofen's wing. However it could be crucial, as Vernichthofen must make a structural strength check, but the plane only creaks a bit and stays airborne.

All surviving pilots disengage and return home. That's enough fighting for one day.

Conclusion

The game ended 3-2 for the Germans, which in ICOG terms means a DRAW, since you must have at least 2 points lead in order to gain a victory.

It was a fun and exiting scenario, dominated by the uncertainty of the entering recon planes, which ended up with the Germans spending most of their time chasing one recon plane after the other.

The French had really bad luck on their initiative rolls, especially in rounds 2-4, but they got the good rolls when they needed them most: As both of their recon planes were cornered and just about to get pounced on they managed to make the critical roll.

It could easily have swung both ways; Glück might have gotten a kill if he hadn't stalled during the Immelmann, or Stürmdrang in the last round. Likewise, the French missed a few deadly rear shots, which might also have resulted in kills.

It might have been a mistake for the Germans to commit 3 Albatrosses to chasing the 1st recon plane, but that would not have reflected negatively on them if they had managed to actually kill it, score 2 points and prevent the Allied side from getting 1.

Even though the Germans did not manage to stop any of the recon planes, they still went out and got almost enough points to win the battle, and at times showed panache piloting the Albatrosses. The French on the other hand, showed how to fly defensively with skill and patience, and await the opportunity to strike.

My hat is off to the French pilots for keeping up the spirits in spite of losing initiative for 3 rounds in a row, and even more for excellent flying. They never lost focus or became easy prey during those rounds.

Unfortunately "Bloody April" was not nearly as bloody as it might have been.

In Clouds of Glory is a miniature air wargame that can be played by 2 to 8 players at a time. It is a game that puts the player in control of one or more Pilots, fighting out the air war of the first world war.

It differs from most other games in the same genre in that it is truly 3 dimensional.

A small model airplane mounted on a flight stand, depict the airplanes actual position and attitude. Each airplane then has its own "Cockpit", represented with the Cockpit panel, showing an air speed indicator and various limits for the airplanes capability. The Cockpit panel is also holding the individual Pilot records, that shows the skills of the Pilot.

These rules are the core rules, provided for free download. They allow you to get started playing ICOG and hopefully enjoying the game. The core ruleset, contains the basic rules for creating Pilots, turn order, the airplane movement system and rules for basic air-to-air combat for single seaters, two seaters and multi-engined aircraft. The core rules consist of this rule set and a accompanying Table and handouts compendium.

