

WING LEADER

AIR COMBAT 1939 - 1945

Rule Book

Second Edition v2.3



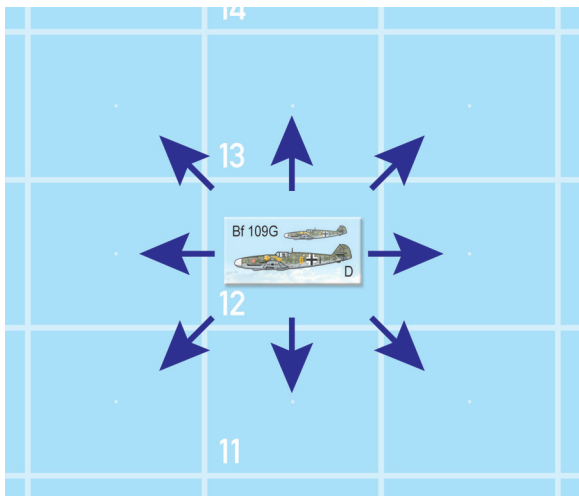
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Wing Leader Series. *Wing Leader* is a series of games. There are two core volumes. *Wing Leader: Victories 1940-1942*, covers the aircraft and battles of the early war, while *Wing Leader: Supremacy 1943-1945*, takes the series up to the war's end. Further expansion sets, the first of which was *Wing Leader: Blitz*, fill in gaps in the aircraft inventory and add more scenarios.

Language. The rules use British English in preference to American usage.

Living Rules. 'Living rules' with errata and corrections can be found at www.gmtgames.com and www.airbattle.co.uk



Adjacent. The arrows point to the eight squares adjacent to this Bf 109 squadron. This squadron is in level flight.

1.0 INTRODUCTION

Wing Leader is a game of Second World War aerial combat, with a focus on large-scale air battles.

The basic unit in *Wing Leader* is the squadron or flight. Unlike conventional air games, where the world is viewed from above, *Wing Leader* views the air battle from the side.

1.0.1 Rule Book

This rule book describes the rules of the game. Rules are numbered. Cross-references to other rules are listed in [square brackets]. Material in the sidebars include design notes, examples, illustrations, and other useful information.

The advanced rules and rules for surface units and bombing [13.0-15.0] are recommended only when players have tried a few of the early scenarios and picked up the basics of play.

1.0.2 Scenario Book

The scenario book lists various historical situations to set up and play.

1.0.3 Rules Editions

The *Wing Leader* series employs a common set of rules. This version is the revised second edition, incorporating changes that supersede earlier editions of the rules.

1.1 GLOSSARY

The following are important terms used in the game.

Adjacent. An adjacent square on the map is one of the eight squares next to the square a squadron occupies. Adjacency exists diagonally as well as orthogonally.

Alerted. An alerted fighter squadron is aware of the presence of enemies. A squadron that is not alerted is unalerted.

Altitude/Height. Altitude is the number of squares a squadron is above the ground. Altitude levels are printed on the map and go from 0 to 19.

The words altitude and height are used interchangeably. The terms 'higher', 'lower', 'above', and 'below' describe the relationships between heights. A squadron at altitude 7 is higher than one at altitude 6 and below one at altitude 8.

Available. A fighter squadron is available if it is unbroken and does not occupy the same square as an enemy squadron that has tallied it. A fighter squadron that does not meet these requirements is unavailable.

Basic Speed and Turn. A squadron's speed or turn ratings, as printed on its Aircraft Data Card, modified by weapon load, climbing, and diving. (See also Combat Speed and Turn.)

Bomber. Bombers are squadrons marked with Bombing, Recce, Strafing, or Transport mission markers.

Broken. A broken squadron has lost strength, is scattered, or has been rendered ineffective. The opposite of broken is unbroken.

Climb. A squadron increases altitude.

Combat Speed and Turn. A squadron's basic speed or turn values modified by additional factors that only apply to combat. (See also Basic Speed and Turn.)

Disrupted. A disrupted squadron has become less organised and some aircraft have gone home, making it harder for the remaining aircraft to provide mutual support.

Distance. Distance on the map is measured by counting the number of squares from one square to another, by the shortest route. Squares can be counted diagonally. Count the destination square but not the start square.

Dive. A squadron decreases altitude.

Enemy. All squadrons and surface units belonging to the opposing player are termed the enemy. Scenarios usually define one map edge as the enemy map edge. (See also Friendly.)

Fighter. Fighters are squadrons marked with Escort, Intercept, Sweep, or CAP mission markers.

Fighter-bomber. Fighter-bombers are fighter-class squadrons that carry bomb loads and are marked with Bombing or Strafing mission markers. They start a scenario as bombers, but change to fighters as the scenario progresses.

Flight. See Squadron.

Formation. A formation is a group of friendly squadrons, clustered in the same or adjacent squares, flying together in the same direction.

Friendly. All squadrons and surface units belonging to a player are regarded as friendly to that player. Scenarios usually define one map edge as the friendly map edge. (See also Enemy.)

Initiative Order. The order in which squadrons move in the Movement Phase.

Level Flight. A squadron faces directly toward the left or right map edge and is not angled to face upward or downward.

Line of Sight. A line between two squadrons on the map, or between a surface unit and a squadron, that, when unblocked, permits the squadron to tally an enemy squadron or the surface unit to direct fire flak at it.

Loss. A loss is a shot-down aircraft. Though units are squadron-sized, the game measures casualties as individual aircraft losses.

Modifier. Die rolls in the game are subject to modifiers. Apply positive or negative modifier values to the roll to get the final total. Modifiers are cumulative.

Squadron. A squadron is a unit of aircraft flying together. A flight is a unit roughly half the size of a squadron.

For the sake of brevity these rules use the term 'squadron' to refer to squadrons *and* flights. All rules that apply to squadrons also apply to flights except where specifically indicated.

Straggler. A straggler is an aircraft that has become separated from its squadron, making it vulnerable to attack.

Tally/Tallied. A tally means that a squadron has spotted an enemy and is engaging it. The enemy squadron is referred to as 'being tallied'.

Unalerted. See Alerted.

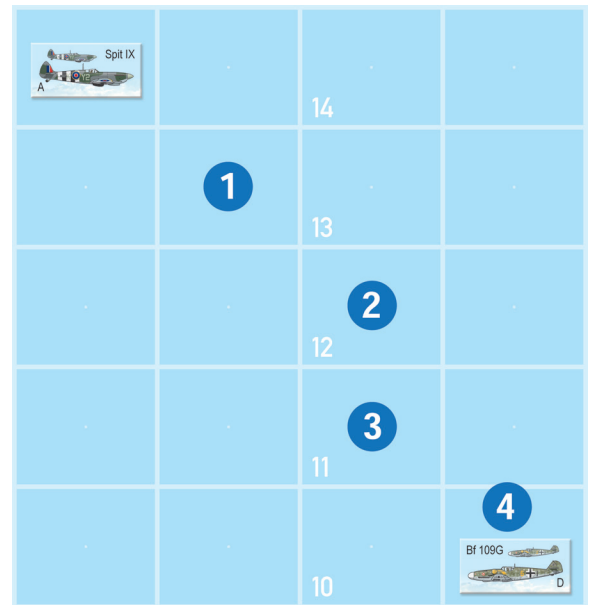
Unavailable. See Available.

Unbroken. See Broken.

1.2 FRACTIONS

Some rules require the players to multiply or divide numbers. After division all fractional values are rounded to the nearest whole number (as zero is also a whole number, round to that if it is the nearest). Fractions of 0.5 are always rounded up.

Where asked to divide then divide again, round fractions after each operation.



Distance. The Bf 109 squadron is a distance of four squares from the Spitfire squadron.

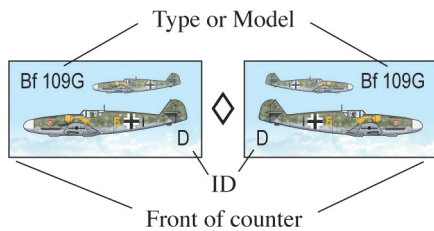


PHOTO: A squadron of Hawker Hurricane fighters in the kind of tight formation that the game treats as rigid doctrine [5.1].

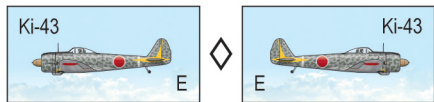
Multiple Division Example. Half of 5 would be 2.5, rounded to 3. If halved again the result would be 1.5, rounded to 2.

The box should contain the following components:

- Rule book
- Scenario book
- Map
- Sheets of counters and markers (5 sheets)
- Sheets of Aircraft Data Cards (6 sheets)
- Player aid cards (2 Combat Cards, 1 Bombing Card)
- 1 Battle Display
- 2 Wing Displays
- 2 six-sided dice



Squadron Counter. This illustration shows both sides of a squadron counter.

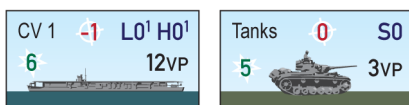


Flight Counter. Flight counters show one aircraft, rather than the two shown on squadron counters.

ID Letters. As a rule of thumb, ID letters A to S are reserved for fighters and T to Z for bombers, though the counter-mix includes a few bombers in the A to S range.



Flying Upside Down. Try not to fly squadrons upside down, because it looks wrong. If a squadron counter goes inverted, simply flip it over to right it.



Surface Units. Surface unit counters are described in detail in rule section 14.0.

2.0 COMPONENTS

This section describes the components used in the game.

2.1 COMPONENT NOTES

Scenario Book. This book has a number of exciting scenarios, each describing a different historical situation, with information for set-up and play [5.1]. Additional scenarios are published in game expansions, in magazines, or online.

Map. The map shows a grid 26 squares in length by 20 squares high. (Okay, the squares are rectangular, but we call them squares anyway.) Each square has a centre dot, used to determine whether cloud blocks line of sight [4.6.1].

The long bottom edge of the map is marked with the ground. This is 'down'. The opposite map edge is 'up'. So the map shows movement from side to side and in height above the ground.

The row of squares nearest the ground is marked as altitude 0 (zero). Squadrons cannot fly any lower than this. Each row above this is numbered up to altitude 19, which is the highest any squadron can fly.

Each vertical column on the map is lettered, from A to Z. The position of a counter on the map grid is noted by writing its column and altitude as follows: B5, G13 and so on. The squares in column A of the map have spaces for placing the Turn marker [6.0].

Squadron Counters. Counters show silhouettes of aircraft from the side and indicate the unit size. Counters with one aircraft on them represent flights, while those with two aircraft represent squadrons.

Each squadron counter has the name of the aircraft model [3.2] and an ID letter to distinguish it from other squadrons.

The edge of the counter nearest the nose of the aircraft is the front and indicates the direction of flight. Squadron counters are double sided. If the aircraft looks as if it is flying upside down on the map, flip the counter over so that it is right side up again.

Surface Unit Counters. Some counters represent surface units. These are printed with various values used in flak attacks and bombing [14.0].

Balloon Counters. Balloon counters depict barrage balloons [14.3].

Markers. Markers note the status of squadrons and the environment.

The following markers are placed on the map:

The **Turn** marker indicates the current game turn [6.0].

The **GCI** marker indicates the current GCI rating [5.1, 9.2.4].

The **Sun** marker indicates the Sun arc [4.2].

The **Haze** marker indicates the highest altitude for haze [4.3].

The **Contrail** marker indicates the lowest altitude for contrails [4.4].

Cloud markers indicate the presence of cloud in a square [4.5]. There are three types of cloud markers: Wispy, Broken and Dense.

Climb markers mark a squadron when it climbs [8.5]. On the reverse, **Dive** markers mark a squadron when it dives [8.5].

Slow Climb markers mark squadrons that are climbing but have not changed altitude [8.5.1].

Slow markers mark squadrons that are taking off [13.7] or are slowed by torpedo attacks [15.3.5.1].

Dogfight markers mark squadrons engaged in a dogfight [10.8.1].

Lufbery markers mark squadrons in Lufberys [13.4.3].

Circling markers indicate circling squadrons [8.3.1].

Tally markers mark enemies that have been tallied [7.2.1]. The ID letter of the marker indicates the tallying squadron. On the reverse is the **Vector** marker for the same ID [9.2.4].

Battle markers indicate battles taking place on the map [10.0.1].

Bombing modifier markers mark the effects of flak fire on bombing attacks [14.2.5]. They show -1 on the front and -2 on the reverse.

Defence Modifier markers mark where target defences have been modified by scenario special rules [14.0].

Barrage markers mark flak zones [14.2.2].

Hits markers come in various denominations and mark the cumulative bombing hits applied to surface targets [14.1.1, 15.4].

The following markers are placed on the Wing Display:

ID markers are placed in the circle of a Wing Display to indicate the squadron the neighbouring track belongs to [5.2]. ID markers A to S indicate whether the squadron is alerted (front side) or unalerted (reverse side) [7.1]. ID markers T to Z simply show the ID letter.

Loss markers mark the number of losses in a squadron [10.6].

Straggler markers on the reverse side of Loss markers mark the presence of straggling aircraft in a squadron [10.6.1].

Disrupted and **Broken** markers mark the status of squadrons [10.7].

Return To Base markers mark squadrons returning to base [9.2.6].

Ammo markers mark those squadrons with low (front side) or depleted (reverse side) ammo [10.7.2].

Rockets markers mark squadrons that have AARs (air-to-air rockets, front side) or are depleted (reverse side) [13.5.3].

Gun Pod and **AT Pod** markers mark squadrons that are carrying these pods [13.5.6].

Mission markers for **Bombing**, **Strafing**, **Transport**, **Recce**, **Escort**, **Sweep**, **Intercept**, and **CAP** mark squadron missions [9.2].

Green and **Veteran** markers mark aircrew quality [5.2.1].

Experte markers indicate outstanding individuals [5.2.1].

Wing Leader markers indicate the commanders of wing formations [5.2.1, 9.5.1].

Rigid and **Loose Doctrine** markers mark a squadron's doctrine [5.1].

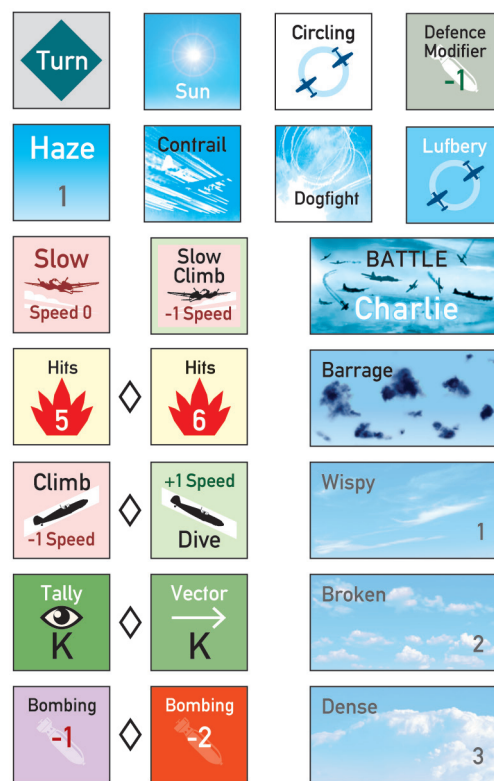
Bomb Load markers mark squadrons carrying bombs [9.2.1]. Variants of these are **Parafrag Load**, **Torpedo Load**, and **ATGR Load** markers [15.1]

Drop Tank markers mark squadrons carrying drop tanks [13.2].

Aircraft Data Cards. Each Aircraft Data Card (ADC) represents one or more models of aircraft and their ratings [3.3].

Player Aid Cards. The player aid cards (Combat Card and Bombing Card) contain memory aids and tables for resolving combat and other game functions. Note the version number in the bottom front corner.

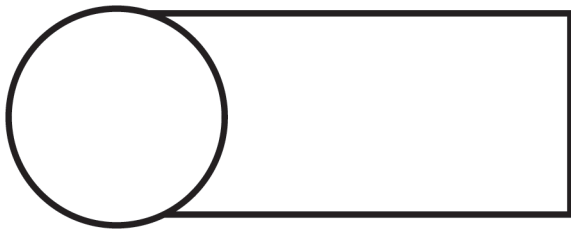
Battle Display. When squares become crowded with counters and markers, they can be moved to the Battle Display to declutter the map. The Battle Display has three boxes for placing counters and markers [10.0.1].



Map Markers. These are used to mark statuses on the map.



Wing Display Markers. These are used to mark squadron statuses on the Wing Display.



Wing Display Track. Place markers on the track to indicate a squadron's status. Note the circular space for the squadron's ID marker and mission marker.

Unit Size

Squadrons and flights vary in terms of composition. British squadrons may be 12 aircraft strong while a German *Staffel*, despite its establishment strength of 12, might often be nine aircraft or less. A flight in the game may be a British flight of six or section of three, or a German *Schwarm* of four, or even as few as one or two aeroplanes.

The seven classes of squadron are:

Fighters	Light Bombers
Dive Bombers	Medium Bombers
Torpedo Bombers	Heavy Bombers
Transports	

Bombers and Fighters. A squadron's class can sometimes affect its behaviour—see 15.3.4 for an example—but its mission defines whether it is a bomber or fighter for rules purposes.

For example, a squadron of medium bombers can become fighters by tasking them with an intercept mission. Such a unit would not carry bombs and would behave like a fighter, not a bomber.

Fighter-bombers are a special case in which fighter-class units start play as bombers and later switch to being fighters.

Note that variant missions, such as recce, strafing, and transport, are still bombing missions for the purposes of this rule. Similarly, close escort and CAP missions confer fighter behaviour.

Bomb Load markers may be replaced with other weapon loads, per 15.1.

Wing Display. Players each have a Wing Display to keep track of the status of their squadrons. Wing Displays have a number of tracks. Place a squadron's ID marker and mission marker in the leftmost circle. Place markers for the squadron's losses, stragglers, ammo, Experten, weapon load, etc. on the track next to its ID and mission [5.2].

Dice. At various points the rules instruct players to roll one or two six-sided dice and check the result. Where the rules say to roll two dice, total the numbers to get the result.

3.0 SQUADRONS

The basic player-controlled unit is the squadron. A squadron represents a group of aircraft flying as a team.

3.1 UNIT SIZE

There are two sizes of unit: squadrons and flights. Rules that apply to squadrons also apply to flights except where specified.

Squadrons usually represent seven to 12 aircraft. Flights represent smaller units of two to six aircraft (or even a single aircraft [13.6]). Sometimes a squadron may split into two flights [9.3].

3.2 AIRCRAFT CLASSIFICATION

Squadrons are identified by the class and model of aircraft that make them up.

Classes are broad categories of aircraft, describing their role. There are seven classes of aircraft (see the list in the sidebar).

In addition to classes, the game distinguishes between models of aircraft. Each aircraft model has its ratings listed on a separate Aircraft Data Card (ADC) [3.3]. Some ADCs carry information for more than one model; these are listed as variants on the reverse of the card, along with any data modifications.

Some squadron counters, such as the Bf 109E, are identified by model, while others, such as the counters for the Spitfire, may be used to represent different models.

3.2.1 Bombers and Fighters

Different rules apply to bombers and fighters. The definition of whether a squadron is a bomber or fighter is determined not by its class, but by its mission [9.2], as follows:

Bombers. Squadrons with a bombing mission [9.2.1] are bombers and start play carrying a Bomb Load marker.

Fighters. Squadrons tasked with an escort, sweep, or intercept mission [9.2.2, 9.2.3, 9.2.4] are fighters and do not carry a Bomb Load marker.

Fighter-bombers. Fighter-class units with a bombing mission carry a Bomb Load marker. While carrying bombs they are termed 'fighter-bombers' and behave as bombers up to the moment they jettison or drop their bombs, after which they revert to behaving like fighters. Fighter-bomber behaviour is described in more detail in 15.2.4.

Fighter-class units tasked with a recce mission [15.2.1.2] are bombers throughout the scenario and do not revert to being fighters.

3.3 AIRCRAFT RATINGS

Squadrons have different ratings depending on the model of aircraft; these are listed on the ADC. Aircraft are rated for the following factors.

Class. The aircraft class [3.2] is listed at the top of the ADC.

VP. The Victory Point (VP) value scored for each aircraft loss [12.1].

Nationality and Date. The manufacturing nation and the date it entered service are listed at the foot of the ADC.

Version Number. Each ADC has a version number in case of updates.

Speed. The squadron's effectiveness in a hit-and-run attack [10.5].

Turn. The squadron's effectiveness in a turning fight [10.5].

Climb. The Movement Point cost for the first altitude level climbed during movement [8.3]. A squadron marked 'S' must slow climb [8.5.1].

Bomb. The bomb value of the squadron when resolving bombing [15.4]. The value varies with the squadron's starting altitude. A dash ('-') means that no bombs can be carried and also means that the squadron cannot climb to this altitude while carrying a Bomb Load marker.

Firepower. This is a value from 0 to 5, representing the power of the squadron's gun battery. A value of 'U' means the squadron is unarmed for air combat [10.5.3] and cannot strafe [15.3.7].

If there are two figures listed, separated by a slash, the first is the squadron's firepower when strafing [15.3.7] and the second is its firepower in air combat [10.5].

Protection. This rating represents the squadron's resistance to critical damage. Some aircraft have two numbers listed [10.6].

Some bomber models are particularly vulnerable in head-on combats, as noted by values with an 'h' after them [10.3, 10.6].

Bombsight. This letter indicates the aircraft's bombsight [15.4].

Defence. Some aircraft have a defence rating, expressed as a dice roll modifier of 0 or 1, representing the aircraft's crew-served guns [10.5.2].

Abilities. Abilities are listed on the lower right portion of the ADC:

AAR. The squadron can attack with AARs (air-to-air rockets) [13.5.3].

AT Gun (value). The squadron has improved strafing strength against specified targets [15.3.7.1]. The value is the bomb value used for strafing.

AT Pod. The squadron can carry AT pods [13.5.6, 15.3.7.1].

ATGR (value). The squadron can attack with ATGR (air-to-ground rockets) [15.3.6]. The value is the bomb value of the ATGR.

Dive Brakes. The squadron can make dive-bombing [15.3.2] and steep-angle bombing [15.3.3] attacks.

Drop Tanks. The squadron can carry drop tanks [13.2].

Edge ▶ The aircraft has increased effectiveness in air combat [10.5].

Gun Pod. The squadron can carry gun pods [13.5.6].

Gyro. The squadron is equipped with gyro gunsights if the scenario special rules specify it [13.5.4].

Heavy Gun (value). The squadron uses heavy guns. The value is the firepower used against bombers [13.5.2] and for strafing [15.3.7.1].

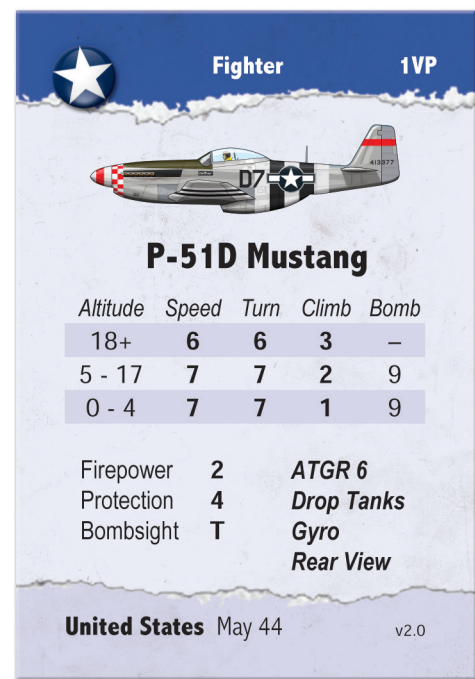
Jet. The squadron uses jet movement allowances [8.2].

Low Drag. The squadron does not reduce its speed or turn values for carrying a bomb load [3.3.2].

Max Load (value). Scenario special rules might specify that the squadron has an increased bomb value up to this value.

Rear View. The squadron has an improved view that negates the 'behind' modifier in tally rolls [7.2.1] against targets at higher altitude.

Rocket. The squadron is rocket-powered [13.8.2].



Aircraft Data Card. The front of the P-51D Mustang ADC. The version number at bottom right indicates an updated card.

Two Protection Values. An aircraft marked as having Protection 4-5 has protection values of 4 and 5.

Firepower

Firepower is a measure of the weight of fire and destructive capabilities of guns.

The special abilities for heavy guns and AT guns represent specialist large-calibre weapons with low rates of fire, firing High-Explosive or Armour-Piercing ammunition.

Protection

The protection rating reflects the employment of pilot armour and self-sealing fuel tanks. Multi-engined aircraft enjoy the benefit of redundant systems, which is why they are given two values.

Bombsights

The bombsight letters stand for:

- T** Telescopic sight (and fighter gunsight)
- S** Swedish automatic dive-bombing sight
- V** Vector sight
- G** Gyrostabilised tachometric sight

Edge ▶ The speed and turn ratings reflect generational improvements in combat performance. The Edge ▶ ability helps distinguish those aircraft that sit near the boundaries between the generations.

Speed Brakes

Speed brakes are just another term for dive brakes. But we use it here to differentiate between smaller dive bombers and large aircraft that cannot dive as steeply.

Altitude

Though the game limits squadrons to altitudes of 19 or less, many aircraft can fly higher than this. However, these regions of sky (above 33,000 feet) were the altitudes at which reconnaissance aircraft would fly, and rarely saw large formations operate.

Warning. Players should be careful not to confuse the speed values presented here with Movement Points. See the sidebar to rule 8.2 for a discussion of the difference.

Basic Speed and Turn. The terms ‘basic speed’ and ‘basic turn’ appear a number of times in these rules. This is the speed or turn rating printed on the ADC, modified as listed in rule 3.3.2. Basic speed and turn values should not be confused with the ‘combat speed’ and ‘combat turn’ values used to resolve combat.

Combat Speed and Turn. Apply modifiers to the basic speed or turn value to calculate the combat speed or turn value [10.5.1]:

- +1 for each additional armed fighter squadron or flight on the player’s side in the combat [10.2]
- +1 squadron is veteran [5.2.1]
- 1 squadron is green [5.2.1]
- 1 unit is a flight, not a squadron [3.1]
- 1 squadron is disrupted or broken [10.7]
- 1 squadron is defending using rigid doctrine [5.1]
- 1 unit is a single-aircraft unit [13.6]

Crashes. You may not fly your squadrons into the ground. Squadrons at altitude 0 that are pointed at the ground must turn before they next move [8.1.1] to avoid a crash.

Speed Brakes. The squadron can make steep-angle bombing attacks [15.3.3].

Torpedo (value). The squadron can launch torpedo attacks [15.3.5]. The value is the attack modifier [15.4]. If the torpedo is listed as Slow, the squadron is marked with a Slow marker while attacking [15.3.5.1].

Background. The back of the ADC has some general background on the aircraft and its role in the war.

Variants. This lists variant models and any differences between these and the main model represented by the ADC. If a scenario lists a variant model, use the changes listed for that variant [3.2].

3.3.1 Altitude Effects on Performance

Speed, turn, and climb values vary with altitude. The ADC lists values for different altitude bands. Use the values for the band the squadron currently occupies.

There is no maximum altitude for any aircraft. All aircraft can fly up to altitude 19.

3.3.2 Speed and Turn Values

Speed and turn values vary with altitude [3.3.1] and the situation. To calculate a squadron’s basic speed or turn value, take the printed rating from its ADC and modify it as follows:

Speed and turn values decrease by 1 if the squadron is carrying a bomb load [9.2.1] (including ATGR, torpedo, or parafrag load [15.1]), drop tanks [13.2], gun/AT pods [13.5.6], or AARs [13.5.3]). If the squadron has the Low Drag ability, do not reduce its speed or turn values for carrying a bomb load.

Speed values (only) increase by 1 if the squadron is marked with a Dive marker [8.5].

Speed values (only) decrease by 1 if the squadron is marked with a Climb or Slow Climb marker [8.5, 8.5.1].

Speed and turn values are 0 if the squadron is marked with a Slow marker (ignore all other modifications) [13.7, 15.3.5.1].

Basic speed and turn values apply to all situations involving speed or turn ratings, including initiative [6.1.1], mutual attack [10.1.2], dogfight [10.8], evasion [13.4.2], and flak attacks [14.2.5].

Combat speed and turn values are only used in air combat [10.5]. To calculate the combat speed and turn values, take the basic speed or basic turn value and modify it as listed on the Air Combat Table [10.5.1].

Speed and turn values can never be reduced below 0 by modifiers.

4.0 ENVIRONMENT

The map is not featureless sky. There is the environment and weather to consider.

4.1 THE GROUND

The bottom edge of the map is the ground. The ground can represent land or sea, but for game purposes it is all ‘the ground’.

All surface units are on the ground in the square they occupy [14.0]. Squadrons at altitude 0 may not dive.

4.2 THE SUN

The direction of the Sun is defined as a number of arcs radiating out from each squadron. (See the back page of these rules for an illustration of the arcs.) The arcs are named: Left Horizon, Left Upper, Above, Right Upper, Right Horizon. The scenario will specify which arc the Sun is in.

An enemy occupying a square in the Sun's arc relative to a squadron is said to be 'in the Sun' [4.6.2]. An enemy in a squadron's own square is not 'in the sun.'

A Sun display is printed in map square D17. Note the Sun arc by placing the Sun marker in the square indicating the arc listed in the scenario.

4.3 HAZE

Haze is present only when indicated in a scenario. Place the Haze marker at the edge of the map at the upper altitude for haze. Squadrons at that altitude or below are affected by haze.

4.4 CONTRAILS

Contrails are present only when indicated in a scenario. Place the Contrail marker at the edge of the map at the lowest altitude for contrails. Squadrons at that altitude or above are affected by contrails.

4.5 CLOUD

There are three types of cloud:

Wispy. A thin layer or scattered puffs of cloud.

Broken. A layer of cloud with numerous gaps.

Dense. A uniform layer of cloud with intermittent gaps.

A scenario will list the squares affected by cloud. Where two squares are listed separated by a dash, those squares, and all squares between them, are filled with cloud.

Placing a cloud marker in a square fills that square with cloud. If there are insufficient cloud markers to cover large areas of the map, they can be placed on the borders between two squares, or on the corner of four squares, to note that all those squares are affected by cloud.

4.5.1 Rain

If a scenario specifies rain, all the squares beneath the bottom-most dense cloud layer down to the ground are affected by rain. Rain functions exactly like broken cloud for all purposes.

4.6 LINE OF SIGHT

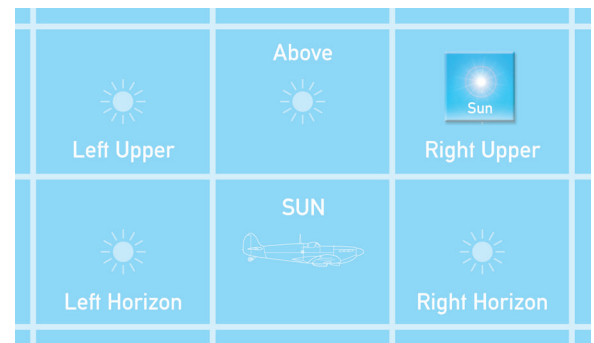
Line of sight determines whether the environment affects the interactions between squadrons and surface units. If there are weather effects in the target or intervening squares, weather modifiers might apply. If the line of sight to a target is blocked, then certain actions are not allowed.

Line of sight is reciprocal. If a squadron can see into a square, then it can be seen from that square.

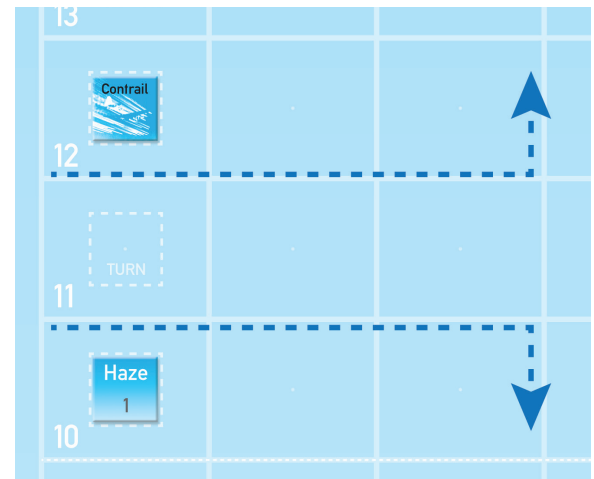
4.6.1 Cloud

Draw a straight line from the centre dot of a squadron or surface unit's square to the centre dot of the square occupied by an enemy squadron or surface target. If at any point the line enters or exits a square containing cloud, that line of sight is affected by cloud. A line of sight that touches a corner of a cloud square without entering is not affected by cloud. A squadron tracing a line of sight to a target in the same square as itself is affected by cloud in that square.

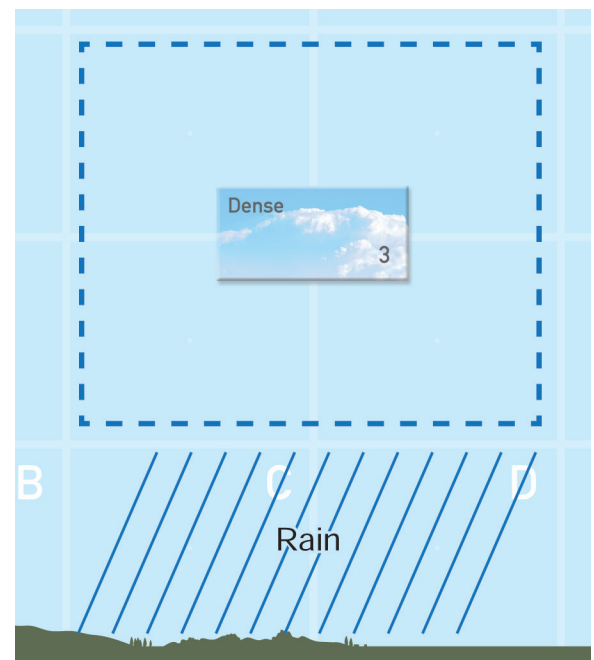
Cloud outside of a squadron or surface unit's square can block line of sight to more distant squares. If the intervening cloud is dense cloud,



Sun Display. Place the Sun marker to indicate the Sun arc for the scenario.



Haze and Contrails. Place these markers at the edge of the map. Haze affects all squares at the marker's altitude and below. Contrails affect all squares at the marker's altitude and above.



Cloud and Rain. The Dense cloud marker sits at the junction of four squares, filling all of them with cloud (dashed line). As rain is in effect, all squares beneath the cloud are filled with rain.



Cloud Blocks the Sun Example. The Sun arc is Right Upper. The Spitfire squadron attempts to tally the Bf 109 squadron. The Bf 109s are in the Sun arc, but if the line of sight is extended to the edge of the map, it is blocked by a dense cloud layer, so the 'in the Sun' modifier does not apply.



PHOTO: B-24s bomb the oil refineries at Ploesti in Romania.

then a line of sight can enter the cloud square but is blocked to all squares beyond that square. If the intervening cloud is broken cloud, then a line of sight can enter two broken cloud squares but is blocked to all squares beyond the second broken cloud square.

4.6.2 'In the Sun'

When tallying, check whether the target is in the tallying squadron's Sun arc [4.2]. If the target occupies a square in the Sun arc, it is 'in the Sun' and the tally roll is subject to a modifier.

If an attacking squadron enters its target's square for air combat [10.5] (or when bombing a ship [14.1.3]), the squadron qualifies as attacking 'out of the Sun' if both of these conditions apply:

- (1) It enters the target square from a square in the target's Sun arc.
- (2) In the Movement Phase that it enters the target square, it enters at least two squares that are in the target's Sun arc. Each MP spent circling in the Sun arc counts as an additional square entered.

Attacking 'out of the Sun' may qualify as a bounce [13.4.1].

If a target is 'in the Sun', take the line of sight to the enemy and extend it to the edge of the map. If this extended line of sight is blocked (for example, by higher cloud layers), the target is in fact not 'in the Sun'.

Similarly, if an attacker is attacking 'out of the Sun', take the line of sight to the square from which the attacker entered the defender's square and extend it to the edge of the map. If this extended line of sight is blocked, the attacker is in fact not attacking 'out of the Sun'.

4.7 WEATHER MODIFIERS

Apply these weather modifiers to die or dice rolls, as detailed below:

- 1 affected by wispy cloud
- 2 affected by broken cloud or rain
- 3 affected by dense cloud

Weather modifiers are not cumulative. If different modifiers apply, use the worst one. A modifier of 1 is best and 3 is worst.

Combat and Cohesion. Subtract the modifier from air combat [10.5.1] and cohesion [10.7] rolls if combat occurs in a weather-affected square.

Bombing. Subtract the modifier from bombing rolls [15.4] based on the weather flown through during the bombing profile or affecting the line of sight to the target at the moment the bombs drop, whichever is worse.

Tally. Subtract the modifier from tally rolls [7.2.1] if the line of sight to the target squadron is affected by weather.

Reaction. Subtract the modifier from reaction rolls [10.4] if the line of sight from the escort to the targeted bomber is affected by weather.

Escape. Subtract the modifier from the opponent's escape roll [11.0] if the line of sight from the opposing squadron to the escaping squadron is affected by weather.

Direct Fire Flak. Subtract the modifier from the flak attack roll [14.2.5] if the line of sight from the flak unit to the target is affected by weather.

4.7.1 Haze Modifier

Apply a weather modifier of 1 if a squadron affected by haze [4.3] is attempting a tally, is the target of a tally attempt, or is attempting to escape. Also apply this modifier to reaction rolls when the targeted bomber is affected by haze.

5.0 SET-UP

Players pick a side and set the game up as follows.

5.1 SCENARIOS

The scenario book contains a number of different scenarios to set up and play. Pick a scenario and look at the information there.

Scenario Title and Number. Each scenario has a title and a number.

Background. The historical background describes the battle.

Order of Battle. One side consists of raiders and the other of defenders. The scenario lists the nationality of each side, whether they are raiders or defenders, and which side sets up first.

The scenario lists the number of squadrons and flights on each side, their model, their mission, and where they set up on the map. If the listed model is underlined, that aircraft is a variant, with data modified from the front of the ADC [3.3]; check the reverse of the data card for details. Squadrons start facing left or right on the map. A squadron's left or right facing in the order of battle indicates the direction in which it sets up.

Some units are not set up at start but enter on later turns as indicated by the set-up instructions [5.3.1].

Max Losses. This is the maximum number of losses a squadron can take [10.6] and is listed separately for squadron- and flight-sized units.

Alert Status. The scenario describes which squadrons start alerted. All other squadrons begin unalerted [7.1].

Quality. This lists the number of Veteran, Green, and Experte markers that should be placed on squadrons or flights on the Wing Display [5.2.1].

Map Edges. One map edge belongs to one side and the other edge to the opponent. The scenario assigns the right or left edges of the map to each side.

Doctrine. Doctrine applies to fighters only and is either 'loose' or 'rigid'; if no rating is listed, then doctrine defaults to loose. Unless stated otherwise doctrine applies to all fighter squadrons on that side. Rigid doctrine modifies the defender's combat speed and turn values [3.3.2]. Doctrine markers can be used as a reminder of squadron doctrine.

GCI Control. In scenarios with GCI control this lists which side has GCI control and what the GCI rating is [9.2.4]. Place the GCI marker in the Turn space on the map corresponding to the rating.

Radio. By default, all squadrons have radios, unless the scenario specifies that they do not.

Radio Nets. The scenario describes the radio nets and which squadrons are on each net. GCI control, if any, will also be assigned to one or more radio nets. Squadrons assigned to a radio net with GCI control are under GCI control [9.2.4].

Sun Position. The scenario lists the Sun arc. Place the Sun marker accordingly [4.2].

Cloud. The scenarios lists the location and type of any cloud, as well as the presence of rain. Place cloud markers accordingly [4.5].

Haze. In scenarios featuring haze this lists the uppermost altitude for haze. Place the Haze marker on a map edge at that height [4.3].

Contrails. In scenarios featuring contrails this lists the lowest altitude level for contrails. Place the Contrail marker on a map edge at that height [4.4].

Scenario Design. Players are encouraged to create their own historical scenarios and publish them online. If we see a great 'home brew' scenario, we may contact the author to ask if we can publish it as an 'official' scenario.

Variants. Where the listed model is a variant with NO modified data (i.e. only the model name changes), we do not bother to underline it on the scenario order of battle.

Wings. If squadrons are grouped together in the order of battle, in a coloured box, that group of squadrons is a wing. Assign a Wing Leader marker to one of the squadrons [5.2.1, 9.5.1].

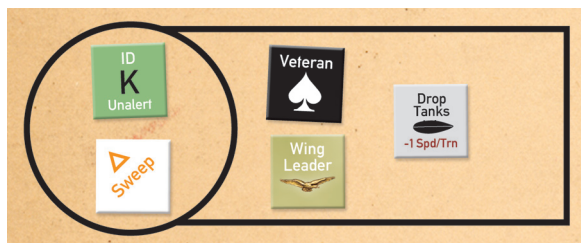
Map Edges. Some air combat games feature an 'endless' map, where if an aircraft flies off the edge, all aircraft are shifted to accommodate the move. This is not true of *Wing Leader*. Squadrons that fly off the map edge are removed from the game.

Doctrine

Rigid doctrine applies to those early war formations that proved unwieldy and vulnerable, such as the three-aircraft Vic. Loose doctrine applies to more adaptable formations such as the four-aircraft *Schwarm* or 'finger four'.

Split Limit. The split limit does not always list a limit for every aircraft model in a scenario. It only lists where limits must be applied to particular models.

Do not be confused if a scenario lists split limits for squadrons not listed in that scenario's special rule on tactical flexibility [9.3.2]. Remember that squadrons in wings can be ordered to split [9.5.5].



Wing Display Set-up. This Wing Display is set up for play, with the ID and mission markers in place and the other markers on the track.

Aircrew Quality

Quality levels in the game are:

Green. The squadron is under trained or tactically inept.

Trained. The squadron is trained.

Veteran. The squadron is well trained or tactically adept.

Wing Leaders and Experten. Unlike Veteran and Green markers, which indicate the training of a group of pilots, Experte and Wing Leader markers represent individual pilots.

Experten

Whether you call them 'Aces' in the Allied nations or 'Eagles' (*arawashi*) in Japan, *Experten* are the 4% of pilots who contributed some 40% of fighter kills in the air war.

Split Limit. Some scenarios list the maximum number of flights that can be created in that scenario by splitting squadrons [9.3].

Surface Units. Some scenarios list which surface units [14.0] are present and in what squares they set up.

Special Rules. Any special rules unique to the scenario are listed here. Special rules take precedence over rules in this rule book.

If the bombing attack rules [15.0] are used, this is noted here.

Victory Conditions. This section describes how victory is determined when the scenario ends [12.1].

Gameplay Advice. Some scenarios give advice for new players.

Aftermath. The historical aftermath of the battle is given to add context.

5.2 WING DISPLAY SET-UP

The order of battle indicates which player sets up first. In order, each player takes a Wing Display, which should be placed so that both players can view its contents, then takes the ID markers and the associated Tally/Vector markers of one colour.

For each squadron in the order of battle, pick a squadron counter of the appropriate model and place a matching ID marker in the circle of a Wing Display track to mark it as belonging to that squadron. If a squadron is a fighter, also find the Tally/Vector marker that corresponds to its ID and keep it close to hand.

Place the appropriate mission marker in each squadron's circle [9.2].

Mark bombers with a Bomb Load marker [9.2.1] (or Torpedo, Parafrog, or ATGR Load marker [15.1]). Mark squadrons carrying AARs with a Rockets marker [13.5.3], and squadrons carrying drop tanks with a Drop Tanks marker [13.2]. Mark squadrons carrying gun pods or AT pods with a Gun Pod or AT Pod marker [13.5.6].

5.2.1 Aircrew Quality

Assign Veteran, Green, Wing Leader, and Experte markers to squadrons on the Wing Display.

The order of battle lists the number of Veteran or Green markers the player assigns to his fighter and bomber squadrons. Place no more than one per track. Any squadron not so marked defaults to being trained.

Place wing leaders on the track of a squadron in their wing. Experten cannot be assigned to squadrons that already have an Experte. An Experte assigned to a wing leader's squadron becomes the wing leader and is placed on its reverse side with the wing leader icon [9.5.1].

5.3 MAP SET-UP

Place any markers for GCI, Sun, cloud, haze, and contrails on the map, as indicated by the scenario [5.1]. Place the Turn marker in the altitude 1 Turn space (square A1). Place surface units on the map, as indicated.

The players, in turn, place each squadron in the indicated location, set up in level flight, facing left or right as directed by the order of battle. Squadrons with intercept missions place Vector markers on the map when they set up [9.2.4].

Close escorts set up in the same square as a bomber, with the same facing. Escorts set up within three squares of a bomber, with the same facing. Escorts cannot set up ahead of the lead bomber, nor can they set up more than one altitude level below the lowest bomber [9.2.2].

If squadrons set up in wings, place them in formation with the wing leader's squadron [9.5.1, 9.5.2].

5.3.1 Set-up on Subsequent Turns

Scenarios may specify that squadrons enter the map after the game has started. These units set up during the Set-up Phase of the designated turn. If both sides enter squadrons in the same turn, the side that sets up first in the scenario also sets up first in the Set-up Phase.

If the scenario specifies a squadron enters in a square, simply place the squadron in that square. If the scenario specifies entry via a map edge, it will indicate the edge and altitude the squadron can enter. Place the squadron at the edge of the map next to its entry square; it is considered to occupy the entry square for the purposes of determining initiative. The squadron moves into the entry square during the Movement Phase [8.4.1]. If a squadron enters by taking off [13.7], place it in its airfield or carrier square with a Slow marker.

A squadron with an intercept mission places its Vector marker anywhere on the map in the Set-up Phase [9.2.4] (roll for height errors [13.1]).

6.0 SEQUENCE OF PLAY

Once set up, the game is played in turns. The current turn is marked by the Turn marker in column A of the map. At set-up, place it in the altitude 1 space, move it into the altitude 2 space for Turn 2, and so on.

Each turn is divided into a number of phases, which are played in order:

Set-up Phase. Set up squadrons that enter play this turn in their entry square or on the map edge next to their entry square [5.3.1, 8.4.1]. Squadrons taking off set up in their airfield or carrier square [13.7]. Place a Vector marker for each intercept squadron entering play [9.2.4] (roll for height errors [13.1]).

Tally Phase. The raider player does the following in any order: squadrons attempt to tally enemies [7.2] (any squadron with a tally must drop that tally before rolling a new one [7.2.2]); unalerted squadrons become alerted if warned by radio [7.1, 9.4]; wing leaders issue orders [9.5.5]; fighter-bombers that tally must immediately jettison their bombs [15.2.4]. After the raider player has completed all tallying, alerting, and issuing orders, it is the defender player's turn to tally, alert, and issue orders.

Movement Phase. Squadrons move [8.0] and, during movement, can jettison bomb loads and drop tanks [9.2.1.1, 13.2] and make bombing attacks [15.3]. Escorts react to enemies attempting to move into the same squares as bombers [10.4]. Resolve barrage fire flak attacks [14.2.3].

Combat Phase. Resolve direct fire flak attacks [14.2.4]. Resolve bombing attacks [15.4], after which remove Bomb Load markers from targets. Resolve air combats in an order determined by the raider player [10.5]. Jettison bomb loads and drop tanks following combat [9.2.1.1, 13.2, 15.2.4].

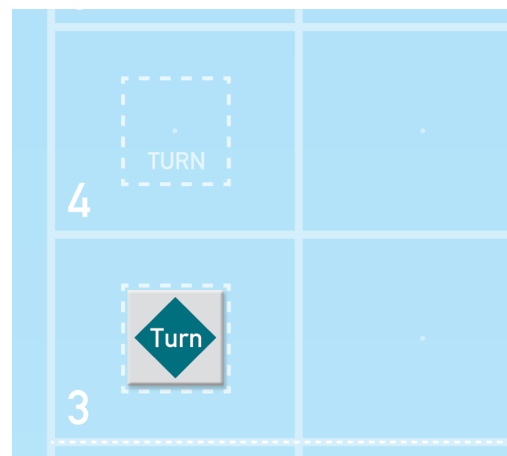
Administration Phase. Squadrons roll to escape [11.0]; the raider player rolls first, then the defender. Place or change vectors for squadrons under GCI control [9.2.4] (roll for height errors [13.1]). Place Escort mission markers on eligible squadrons [9.2.2.2]. Change escorts to sweep [9.2.2.2, 15.2.2]. Place/remove flak Barrage markers [14.2.2].

End Turn. The turn ends; move the Turn marker up one space. Proceed to the Set-up Phase of a new turn.

Continue playing turns until the game ends [12.0].



PHOTO: A mass of B-17 bombers, flying in a 'box' formation that allowed their defensive guns to provide mutual support.



Turn Marker. The Turn marker indicates it is Turn 3. At the end of Turn 3 the marker is moved up to the altitude 4 space.

Move Order. As described in 6.1, squadrons move in the following order:

1. Dogfights
2. Escorts
3. Bombers
4. Unalerted fighters (*move in initiative order*)
5. Alerted fighters (*move in initiative order*)

Combat Phase. Combats in the Combat Phase are resolved in the following order:

1. Direct fire flak attacks
2. Bombing attacks
3. Air combats

Escorts and Move Order. Escorts (i.e. fighters marked with an Escort mission marker) move before bombers so that they are in place to react after bomber movement. Escorts that have changed to sweep missions no longer move before bombers, but later in the move order.

Move Order and Air Combat. The move order in the Movement Phase can affect attacker and defender determination in the Combat Phase [10.1.2, 10.1.3].

Initiative Rule Example. German squadron D and two British squadrons, A and B, are all at the same height and speed. The players roll for each squadron. Squadron D rolls 2 and squadrons A and B roll 4 and 2, respectively. So A will go last, while B and D will have to roll again for initiative. They both roll a 6, which does not resolve the initiative. So they roll again, with D rolling a 5 and B a 2. B will move first, then D then A. (Note that although D eventually rolled a value higher than A, it came after the initial roll. The second and third rolls only determine the order between B and D, not A.)

Chain of Tallies Example. Squadron C tallies squadron B which has tallied squadron A. Squadron A has no tally, so moves first; squadron B moves immediately after its tallied target; then C moves in response to B.

Chains with Multiple Tallies Example. If squadrons B and C tally squadron A, but squadron D has tallied squadron B, what is the order of movement? Squadron A (which has no tally) moves first, but B and C must both move before D can move. The initiative rule [6.1.1] is used to determine which of B and C moves first.

Circle of Tallies Example. Squadron C tallies squadron B which tallies squadron A, which in turn has tallied C to create a circle. Checking the initiative order [6.1.1], squadron B moves first, so the order of movement is B, then C, then A.

Alert State. Alerted squadrons are aware of the proximity of enemies and so can respond in ways that unalerted squadrons cannot. Aside from sweep behaviour [9.2.3], many of these responses are detailed in the Advanced Rules.

6.1 MOVE ORDER

In the Movement Phase, squadrons move in the following order:

1. Dogfights
2. Escorts
3. Bombers
4. Unalerted fighters (*move in initiative order*)
5. Alerted fighters (*move in initiative order*)

Two rules modify the movement order: the initiative rule [6.1.1] and the tally rule [6.1.2].

6.1.1 The Initiative Rule

Where asked to move in initiative order, move in the following order:

- (1) Lower altitude squadrons move before higher altitude squadrons.
- (2) If at the same altitude, the squadron with the lowest basic speed value [3.3.2] moves first.

When fighter squadrons have the same altitude *and* basic speed value, roll a die for each squadron to determine initiative. The lowest roll moves before the next higher roll. If any squadron rolls are tied, the tied squadrons (only) roll the dice again to determine the order between them. If the dice are still tied, keep rolling until there is a result.

6.1.2 The Tally Rule

When a squadron (including a squadron in a dogfight) moves, all fighters with a tally on that squadron move immediately afterwards, before any other squadron can move [7.2.3]. If two or more squadrons have a tally on the same target (or on different targets in the same dogfight) determine initiative order [6.1.1] and then move them in that order. If a squadron with a tally is also tallied, this creates a chain of movement.

If a squadron has tallied another squadron, it does not move until its target has moved, even if the initiative rule would mean it normally moves first. If there is a chain of tallies, the squadron without a tally moves first, then each member of the chain follows in order of its target's movement.

If two squadrons have a tally on each other, they determine initiative order [6.1.1] and then move in that order.

In the rare event that a chain of tallying is arranged in a circle of tallies, determine initiative order to find the squadron that moves first and then the rest of the chain follows.

6.1.3 Dogfights

Opposing units in a dogfight [10.8] are all considered to move at the same time and so there is no move order to distinguish between them. If there are multiple dogfights, the raider player decides the order in which each dogfight stack is moved, before rolling for movement [10.8.2].

6.1.4 Escorts and Bombers

When escorts or bombers move, move them in any order the raider player desires. If both sides have escorts and/or bombers on the map at the same time, the raider player moves before the defender moves.

7.0 SITUATIONAL AWARENESS

Players only track the situational awareness of fighters, not bombers. Situational awareness is expressed in two ways: by alert state and tallies.

7.1 ALERT STATE

Fighter squadrons are either alerted or unalerted. Bombers (and fighters acting as fighter-bombers [15.2.4]) do not have an alert state.

Squadrons immediately become alerted in three ways:

- (1) When they tally an enemy squadron [7.2.1, 7.2.4].
- (2) When they are alerted by radio in the Tally Phase [9.4].
- (3) After they resolve an air combat [10.5].

When a squadron is alerted, flip its ID marker on the Wing Display to the Alerted side. Once alerted the squadron never reverts to unalerted.

A squadron must be alerted to be able to jettison drop tanks [13.2], declare evasion [13.4.2], or enter a Lufbery [13.4.3].

Unalerted squadrons are vulnerable to being bounced [13.4.1].

7.2 TALLIES

Fighter squadrons (and fighter-bombers [15.2.4], but not bombers) can tally enemy squadrons so as to pursue and attack them.

Each fighter squadron on the map that does not have a tally can choose to roll a tally attempt each Tally Phase. Specify a target squadron on the map to which it has a line of sight [4.6] and which is less than ten squares away, then roll. The raider player rolls all his tally attempts before the defender player rolls his.

If a squadron occupies the same square as an unbroken enemy squadron, it can only roll tallies against squadrons in its own square.

A squadron can never have more than one tally and cannot make more than one tally roll in a Tally Phase.

7.2.1 Tally Roll

To tally, roll one die and modify it as indicated on the Combat Card. Measure the distance in squares to the target by the shortest route. The target is tallied if the modified die roll total is greater than the distance.

If the tally roll is successful, take the Tally marker matching the ID and colour of the tallying squadron's ID marker and place it on the map on the target squadron. (The Tally marker is on the reverse side of the Vector marker, so placing it removes the squadron's vector, if it had one [9.2.4].)

7.2.2 Retaining Tallies

Tallies are retained until:

- (1) The target squadron is removed from the map.
- (2) There is no line of sight to the target squadron in the Tally Phase.
- (3) The target is ten or more squares distant in the Tally Phase.
- (4) The tallying squadron is broken.
- (5) The tallying squadron voluntarily drops the tally. A squadron can drop a tally in the Tally Phase; it can then roll a new one in the same phase. A squadron in a dogfight cannot drop its tally [10.8.1].
- (6) A squadron switches its tally following resolution of an air combat [7.2.4.1].

If a squadron's tally is lost or dropped, remove the Tally marker from the map. The squadron immediately reverts to its mission behaviour (sweep or intercept [9.2.3, 9.2.4]). If the tally is lost in the Movement Phase before the squadron can move, it moves in step 5 of the move order [6.1].

7.2.3 Tallies and Movement

Squadrons with tallies move immediately after their target moves [6.1.2]. Squadrons with tallies move freely [9.2.7], but if a squadron moves into the same square as its target it must stop movement and attack that target in the Combat Phase [10.0].

Bomber ID Markers. ID markers T to Z are reserved for bombers and so don't have an alerted or unalerted side. Should a bomber unit need to use an ID marker between A and S, ignore the alerted/unalerted status.

Tallies

The term 'tally' comes from the British radio call 'Tally Ho!', meaning that an enemy had been sighted and the squadron was in pursuit. The German equivalent was 'Pauke-Pauke!'.

In the game a tally means a squadron has spotted an enemy and has committed to the attack. So tallies are a combination of awareness and intent. A squadron that fails to tally might not have seen the enemy, or has spotted it but lacks the resolve to attack.

Tallies in the Same Square. The distance is 0 if the tallying squadron is in the same square as the target.



Tally Example. The Hellcat flight attempts to tally the Zeroes. The distance is two squares, meaning a die roll of 3 or more is needed.

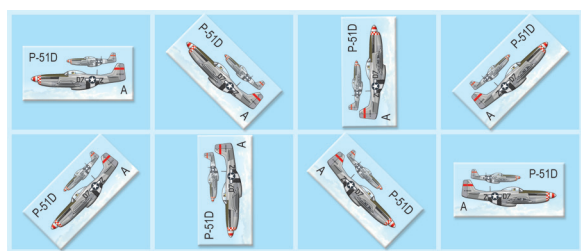
However, the Zeroes are behind the Hellcats (-2 die modifier) and the line of sight is affected by a layer of Wispy cloud (-1 die modifier). With modifiers totalling -3 the Hellcat will need a roll of 6 to successfully tally.

If the Sun arc is Right Upper, the Zeroes would be 'in the Sun' (a further -1 modifier), meaning the Hellcats would need a roll of 7 on the die—an impossibility.

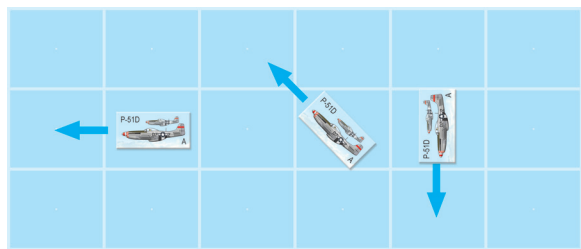
Same Square Tallies Summary. If a fighter squadron occupies the same square as its tallied target, it cannot move out. There are exceptions where a head-on situation applies, but otherwise being in the target's square locks those squadrons into combat.

The only way out of this would be to drop the tally in the Tally Phase [7.2.2]. However, while occupying an enemy's square it cannot tally squadrons outside that square [7.2]. Note that if a squadron in the same square as an enemy dropped its tally it would be able to move freely in the Movement Phase [9.2.7].

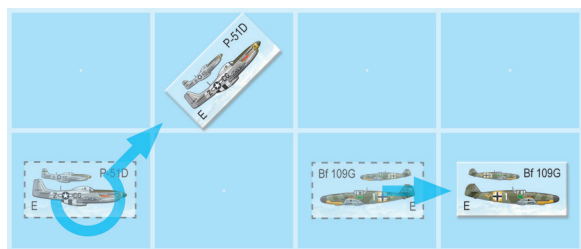
Tallies After Combat. This rule is intended to handle situations where a squadron enters combat with no tally or with a tally on a squadron in a distant square. However, it can also be used to switch targets after combat, particularly if a squadron's target has broken.



Facing. Squadrons can face up to eight directions.



Moving. A squadron may only move into the adjacent square it faces. The squadron retains its facing after it moves.



Turning Example. The P-51 squadron turns 45 degrees before climbing into the adjacent square. There's no MP cost for this turn.

The Bf 109 squadron turns 180 degrees before moving into a square. This turn costs it 1 MP.

Movement Points and Speed. A squadron's speed rating and its Movement Point allowance are unrelated. It is important not to confuse the two. A squadron's speed value determines its effectiveness in combat and a variety of game functions [see 3.3.2] but has no effect on the number of MPs it has.

If a squadron starts its move in the same square as its tallied target, it must stay in that square and attack that target in the Combat Phase.

If a squadron moves into the same square as its target from one of the three squares ahead of it, meeting the criteria for a head-on combat [10.3], it does not have to stop moving, provided it uses its next MP to leave the square. If it reenters the square of its target in the same Movement Phase, it is no longer a head-on combat.

Similarly, if a squadron starts its move in the same square as its target because the target entered the square from ahead earlier in that Movement Phase, it can move, provided it uses its next MP to leave the square.

7.2.4 Automatic Tallies

It is possible to obtain a tally without making a tally roll. This happens if the tally is the result of a wing leader's order [9.5.5], or when a squadron rolls a successful or late reaction [10.4.2, 10.4.3].

7.2.4.1 Tallies After Air Combat

After an air combat is resolved [10.5] and any dogfight determined, a fighter squadron must tally an enemy squadron that took part in that combat. Place its Tally marker on any enemy squadron in the combat, if necessary switching it from a previous target. If it already has a tally on a participant, it can keep that tally. However, if the squadron finishes combat in a dogfight, its target must also be in that dogfight [10.8.1].

8.0 MOVEMENT

Squadron counters are placed in squares. Any number of squadrons on either side can stack in or move through the same square. In the Movement Phase squadrons move in the order set forth in 6.1.

8.1 FACING

A squadron can only move into the adjacent square it faces, defined as the direction its nose is pointed. There are 8 directions a squadron can face. Diagonal facings and moves are permitted.

8.1.1 Turning

A squadron can turn (i.e. change its facing) immediately before entering a square. A turn of 180 degrees costs 1 Movement Point [8.3]; a turn of less than this costs nothing. A squadron that spends MPs to circle can turn any amount without leaving the square [8.3].

8.1.2 Aspect

A squadron can be ahead of or behind another squadron. The illustrations opposite depict the squares that are ahead or behind. Squadrons in a Lufbery do not have an ahead or behind aspect [13.4.3].

8.2 MOVEMENT POINTS

The number of squares a squadron can move is determined by its Movement Point (MP) allowance. A squadron must move its full MP allowance in the Movement Phase. (EXCEPTION: A squadron with an unspent 0.5 MP remaining does not have to spend it.)

For each square moved spend a number of MPs [8.3]. A squadron cannot move into a square if it would cost more than its remaining MPs. Movement Point allowances are as follows:

- 2 MPs Bomber squadrons, escorts, and unalerted fighter squadrons.
- 3 MPs Alerted fighter squadrons. Fighter-bombers near enemy surface units [15.2.4]. Jet bomber squadrons and their escorts.
- 4 MPs Jet fighter squadrons, regardless of alert state. (For rocket-powered Me 163 flights, see 13.8.2.)

+1 MP If a squadron declares it is diving during its movement, add 1 MP to its allowance, but it must dive at least 1 altitude level. Declaring and claiming this bonus is optional. In some circumstances this cannot be claimed [9.5.6, 15.2.1].

8.3 MOVEMENT COSTS

It costs 1 MP to move into an adjacent square at the same or lower altitude. If a squadron dives to the square directly below (not diagonally), it spends 0.5 MP (half a Movement Point), not 1 MP.

If a squadron moves into an adjacent square at a higher altitude, it costs MPs equal to the climb value on the aircraft's ADC. Use the climb value for the altitude it starts from. This cost applies only to the first square the squadron climbs into during a Movement Phase; if it climbs into a second square in that phase, it costs 2 MPs, regardless of the climb value.

A turn of 180 degrees costs 1 MP [8.1.1].

A squadron can spend 1 or more MPs to stay in its current square; this is termed circling. A squadron that circles can also turn within the square by any amount [8.1.1]. Circling does not end a squadron's movement; squadrons can expend MPs to circle before entering another square.

It costs 2 MPs to enter or exit a Lufbery [13.4.3].

8.3.1 Circling

Some mission behaviours instruct squadrons to circle for indefinite periods of time [9.2.4, 9.2.4.1, 13.4.3, 15.2.1.3, 15.2.3]. While circling they do not leave the square, though they may turn within that square [8.1.1]. Circling markers may be used to mark these squadrons.

8.4 MOVE RESTRICTIONS

Squadrons can move into, out of, and through the squares of other squadrons, even enemy ones. (EXCEPTION: Tallied targets, see 7.2.3).

Squadrons cannot move lower than altitude 0 or higher than altitude 19.

Some missions mandate that squadrons must move a set number of MPs without changing altitude, turning, or circling [9.2.1, 9.2.2, 9.2.3].

8.4.1 Entering and Exiting the Map

Squadrons entering the map through a map-edge square should be set up in imaginary squares beyond the map edge. The entry square is the first square they move into and costs 1 MP.

If the scenario states that multiple squadrons enter a square 'in trail', use the following procedure: the first squadron enters the square and moves its full MP allowance. The second squadron enters the same square and moves its MP allowance less one. The third squadron enters the same square and moves its MP allowance less two. If it has no MPs remaining, then it remains off map and enters the following turn.

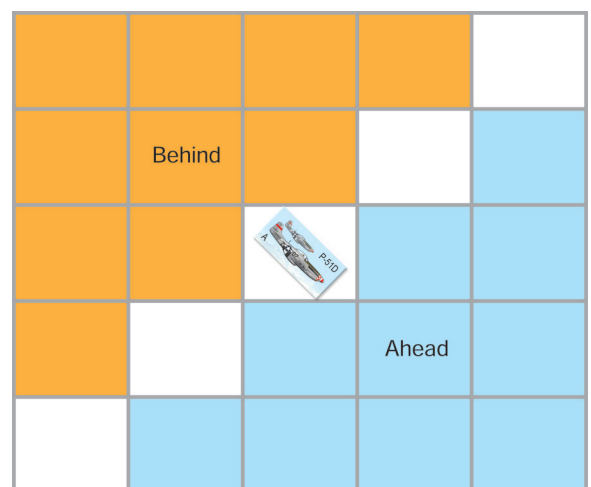
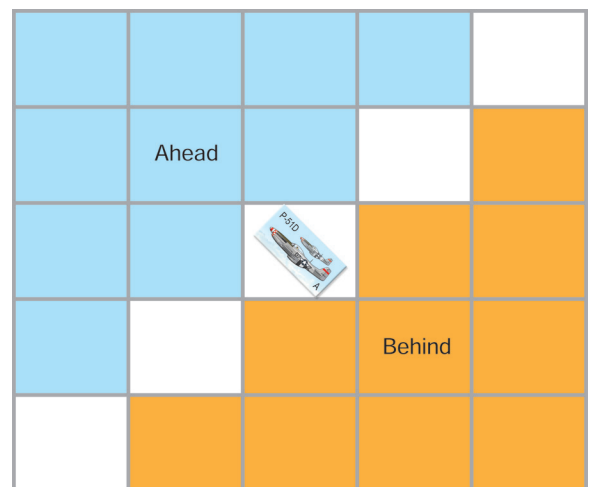
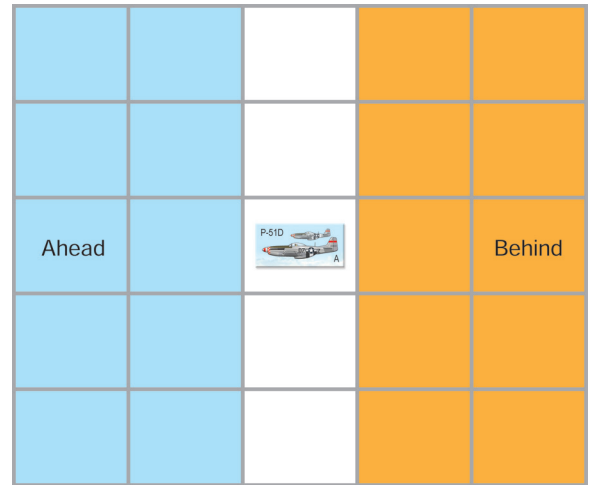
Squadrons may not exit the map except by the right or left edges. A squadron that exits does so by spending 1 MP to move into an imaginary square beyond the map edge. It is then removed from play.

8.4.2 Dogfights

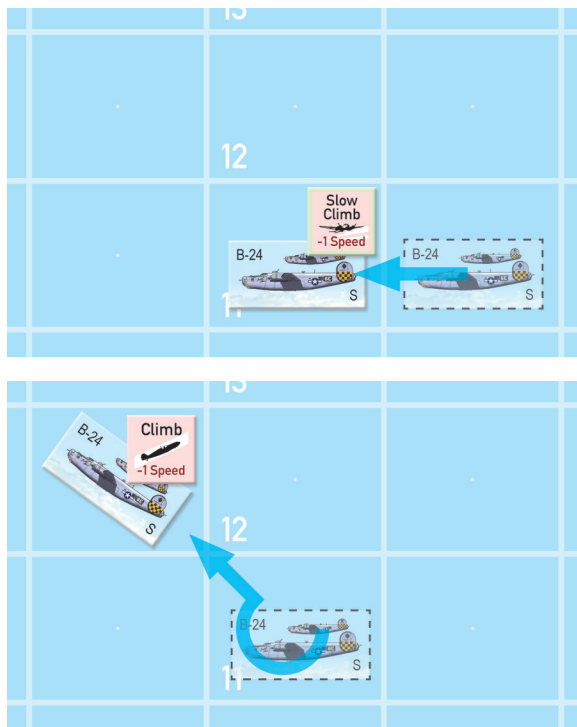
Squadrons in a dogfight move as described in rule 10.8.2.

8.5 CLIMBING AND DIVING

When moving, a squadron may increase altitude (climb) or decrease altitude (dive), but cannot climb and dive in the same Movement Phase. If the squadron moves to a lower altitude, mark it with a Dive marker; if it moves to a higher altitude, mark it with a Climb marker. A squadron that climbs but does not change altitude due to having an 'S' climb value has a Slow Climb marker placed on it [8.5.1].



Aspect. These illustrations show the squares ahead and behind a squadron. The areas ahead and behind extend indefinitely in each direction. The white spaces are neither ahead nor behind.



Slow Climb Example. The B-24 squadron begins a slow climb to altitude 13. On the first turn it spends all its MPs in level flight and does not climb. It moves one square forward (optionally, it could have stayed in its starting square). The squadron is marked with a Slow Climb marker.

On the second turn, the squadron spends all its MPs, turns, and completes the climb into the adjacent square above and ahead of it. The Slow Climb marker is removed and replaced with a regular Climb marker.

Mission Behaviours. The behaviour rules do not cover all situations and there is considerable wiggle room to get around them. Please abide by the spirit of the behaviour, as found in each mission's summary listed in the sidebar. If you come across an unusual situation, use common sense to resolve it.

Variant Missions. Some missions have variations which alter the rules for the mission slightly:

Bombing Mission Variants. Transport [9.2.1.2], Strafing [15.2.1.1], Recce [15.2.1.2].

Escort Mission Variant. Close Escort [9.2.2.1].

Intercept Mission Variant. Combat Air Patrol [9.2.4.1].

Once placed, a Climb or Dive marker is not replaced or removed until the squadron moves in the next Movement Phase. A squadron marked with a Climb marker replaces it with a Dive marker if it dives. Similarly, a squadron marked with a Dive marker replaces it with a Climb marker if it climbs. If a squadron starts a Movement Phase marked with a Climb or Dive marker and moves (or circles) without climbing or diving, remove this marker.

Place Climb and Dive markers on squadrons that change altitude during reaction [10.4.2, 10.4.3].

While marked with a Dive marker, a squadron is considered to have its basic speed value increased and, while marked with a Climb or Slow Climb marker, it has its basic speed value decreased [3.3.2].

8.5.1 Slow Climb

A squadron with an 'S' for its climb value climbs very slowly. The first turn it tries to climb it flies level without turning but spends all its MPs towards climbing. It may either remain in place or move one square. Place the Slow Climb marker to note that the squadron has been climbing but has not changed altitude that turn.

On the second consecutive turn of climbing it spends all its MPs again, then turns 45 degrees to face the adjacent square above and ahead of it, and moves into that square. The Slow Climb marker is removed and replaced with a regular Climb marker. To climb again, repeat the cycle of a turn of slow climbing with no altitude change then a turn of climbing.

If a squadron starts a slow climb but on the subsequent turn it does not finish the climb, remove the Slow Climb marker.

9.0 COMMAND & CONTROL

A squadron's movement is restricted by its mission [9.2]. These restrictions can be lifted when returning to base [9.2.6] or when free movement is allowed [9.2.7]. Wings apply additional restrictions [9.5].

9.1 FORMATIONS

A formation is a group of squadrons flying together. A squadron is automatically in formation if it is in the same or adjacent square to one or more friendly squadrons, facing in the same direction. Formations can form long lines or chains of squadrons spread across many squares.

Wings are a special formation that provide benefits to squadrons that begin the scenario in the wing and have not left formation [9.5].

9.2 MISSIONS

During set-up, each squadron is assigned a mission that determines that squadron's behaviour. Place a mission marker in the circle of each squadron's Wing Display track to indicate its mission.

The basic missions are:

Bombing. Assigned to bombers [9.2.1, 15.2.1]. If assigned to fighter-class squadrons, they become fighter-bombers [3.2.1, 15.2.4].

Escort. Assigned to fighters [9.2.2].

Sweep. Assigned to fighters [9.2.3].

Intercept. Assigned to fighters [9.2.4].

A bomber-class squadron assigned an escort, sweep, or intercept mission behaves as a fighter [3.2.1].

The following sections describe the behaviour expected of squadrons depending on their mission. The summary sidebar outlines the spirit of the rule while the rule section describes the behaviour in detail.

9.2.1 Bombing

Squadrons tasked with bombing carry bombs. Place a Bomb Load marker on the squadron's Wing Display track.

Bombers fly to the far edge of the map and then exit [8.4.1]. They move two squares each turn, costing 2 MPs, without changing altitude, turning, or circling. Jet bombers move three squares each turn, costing 3 MPs.

9.2.1.1 Jettisoning Bombs

A bomber squadron may jettison bombs during movement or after air combat is resolved [10.5]. Remove the squadron's Bomb Load marker from the Wing Display; it no longer modifies the squadron's basic speed or turn values. A bomber squadron that jettisons bombs must return to base [9.2.6] and may not make strafing attacks [15.3.7].

Fighter-bombers immediately jettison bombs and change their mission to sweep if they tally an enemy squadron [15.2.4].

9.2.1.2 Transport

Transport is a variant of a bombing mission, except that the Bomb Load marker represents cargo. Cargo can never be jettisoned.

9.2.2 Escort

Fighters with an Escort mission marker usually start play unalerted [7.1].

Escort squadrons set up within three squares of a bomber squadron, with the same facing (they can set up in the same square). They cannot set up ahead of the bomber (if the bombers are in formation, they cannot set up ahead of the lead bomber squadron). They cannot set up more than one altitude level below the lowest bomber squadron.

Escorts fly to the far edge of the map and then exit [8.4.1]. They move two squares each turn, costing 2 MPs, without changing altitude, turning, or circling.

If escorting jet bombers, escorts move three squares each turn, costing 3 MPs.

If an enemy attempts to move into a nearby bomber's square, any available escorts may react [10.4].

9.2.2.1 Close Escort

Close escort is a variant of escort. Close escorts function the same as escorts, but must set up in the same square as a bomber squadron.

9.2.2.2 Detaching Escorts

Escorts change their mission to sweep in the following circumstances:

- An escort places a Tally marker [7.2, 10.4.2, 10.4.3] OR resolves an air combat [10.5].
- An alerted escort chooses to enter a Lufbery [13.4.3].
- A bomber formation switches its escorts to sweep [15.2.2].
- When there are no bombers left to escort.

Replace the Escort mission marker with a Sweep marker; thereafter the squadron behaves as a sweep squadron [9.2.3].

An ex-escort on a sweep mission can form up as a bomber escort [9.2.3 (e)]. During movement select a destination square that meets the criteria for setting up as an escort (i.e. within three squares of a bomber squadron, etc.), then fly the shortest route to that square [9.2.5]. If it occupies that square in the Administration Phase, and matches the bomber's facing, swap its Sweep mission marker for an Escort marker. Do not place Escort markers on squadrons that have a tally or are unavailable.

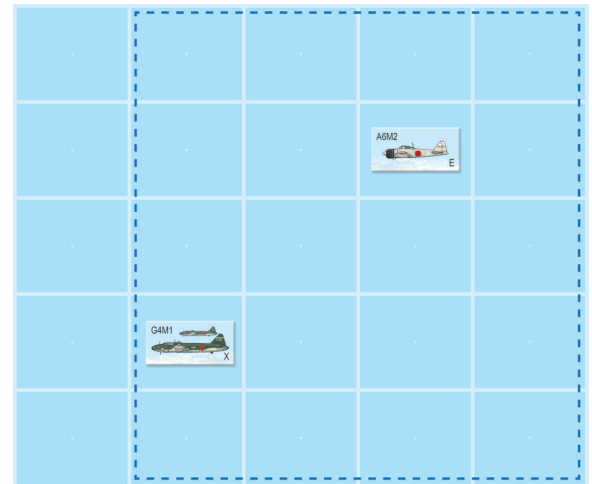
Bombing Summary. Bombing squadrons are loaded with bombs. They fly directly to the far edge of the map at a steady two squares each turn and exit. They maintain their course regardless of enemy fighter attacks and only turn back if they jettison their bombs.

If using the bombing attack rules, this behaviour is modified per 15.2.1

Escort Summary. Escorts fly with or near the bombers, moving at the same rate. Escorts can react to approaching interceptors or tally and pursue them, at which point they are no longer escorts. If it survives combat, a squadron can re-join the bombers and resume escorting; otherwise it behaves like a sweep squadron.

Close escort is basically a set-up instruction that forces a squadron to start in the same square as a bomber.

If using the bombing attack rules, this behaviour is modified per 15.2.2



Escort Set-up. The dashed line shows the area within which an escort may set up relative to a bomber squadron. Note that close escorts must set up in the bomber's square.

Detaching Escorts When There Are No Bombers Left. If all bomber squadrons escape [11.0], take losses equal to their Max Losses value [10.6], or change their mission from bombing to sweep [15.2.4], leaving no bombers left to escort, the escort changes its mission to sweep.

Sweep Summary. Sweep squadrons usually fly above or ahead of the main body of a bomber force. Their job is to clear a path for the bombers or provide high cover against attack. Sweep squadrons can also engage any enemies they tally, fly to the aid of friendly squadrons, or return home.

If using the bombing attack rules, this behaviour is modified per 15.2.3

Intercept Summary. Intercept squadrons are directed towards a spot in the sky where they try to tally enemies and attack them. If under ground control (GCI), their direction may be updated each turn.



GCI Marker. The GCI marker can be used to indicate the current GCI rating. Place it in the Turn box on the map that matches the rating.

Height Errors. If using the advanced rules, after placing the Vector marker the opponent can roll for height errors [13.1].

GCI

GCI stands for Ground Control Intercept. Squadrons under GCI control take orders from controllers on the ground, or aboard ships, who pass on the direction and height of enemy raiders from radar plots and ground observers.

Shortest Route Summary. The shortest route is approximately a direct line towards a destination square.

Minimum Move. The shortest route rule asks a squadron to reduce the distance to its destination by *at least* one square (note the emphasis). The corollary of this is that it is not required to reduce the distance by more than one square.

9.2.3 Sweep

Fighters with a Sweep mission marker usually start play unalerted [7.1]. Sweep squadrons fly to the far edge of the map and exit. They move two squares each turn, costing 2 MPs, without changing altitude, turning, or circling. A sweep squadron can also do the following:

- (a) **Pursuit.** Move 3 MPs per turn if it has tallied an enemy.
- (b) **Support.** Move 3 MPs per turn via the shortest route [9.2.5] towards any friendly fighter squadron on the same radio net that has a tally.
- (c) **Continue.** Move two squares per turn toward the far map edge without changing altitude, turning, or circling.
- (d) **Return to Base.** Declare, at the start of its movement, that it is returning to base [9.2.6]. Move 3 MPs per turn until it exits.
- (e) **Form Up.** An ex-escort on a sweep mission can move 3 MPs per turn to form up with the bombers as an escort [9.2.2.2].

Jet fighter squadrons always move 4 MPs [8.2]. When they continue they move four squares per turn.

9.2.4 Intercept

Fighters with an Intercept mission marker begin play alerted [7.1] and can move 3 MPs each Movement Phase.

During set-up each intercept squadron specifies a destination map square by placing a Vector marker corresponding to its ID marker anywhere on the map. The squadron must move to the vector square via the shortest route [9.2.5]. When the squadron reaches the vector square, remove the Vector marker; it stops moving and stays in that square, circling [8.3.1].

When an intercept squadron tallies an enemy, place its Tally marker, which is on the reverse of its Vector marker, on the enemy squadron [7.2.1]. The squadron may now move freely [9.2.7].

An intercept squadron without a Vector marker or a tally cannot move independently. It must either circle in place [8.3.1] or, at the start of movement, declare that it is returning to base [9.2.6].

A squadron without a tally can attempt to place a Vector marker or change its vector in the Administration Phase, provided it is under GCI control. A squadron is under GCI control if the scenario specifies a GCI rating AND the squadron is on the same radio net as the GCI [9.4]. Roll one die. On a roll equal to or greater than the GCI rating, place its Vector marker in any square on the map; otherwise the vector does not change.

In a wing, only the wing leader places a Vector marker [9.5.3]; the other squadrons maintain formation on the wing leader [9.5.2]. A squadron in a wing that gets a tally places its own Tally marker on the target.

9.2.4.1 Combat Air Patrol

Combat Air Patrol (CAP) is a variant of the intercept mission. A CAP squadron sets up in a square but does not place a Vector marker. It circles in that square [8.3.1] until either it tallies an enemy or places a Vector marker.

9.2.5 Shortest Route

Where instructed to move by the shortest route, a squadron must try to reduce the distance to its destination by at least one square by the end of each Movement Phase. It cannot increase the number of squares to the destination. If its altitude is below the destination square, it must climb at least one altitude level during movement or spend MPs to climb if it must slow climb [8.5.1]. If above the destination square, it must dive at least one altitude level. If at the same height, it cannot climb or dive.

9.2.6 Return to Base

Where squadrons are instructed to return to base they must turn and fly toward the friendly map edge [5.1]; they can no longer circle. On reaching the map edge they must exit the map [8.4.1].

If the bombing rules [15.0] are in effect, raider squadrons can exit either map edge. Declare which edge they'll exit on commencing their return.

Within these restrictions, bombers and fighters returning to base move freely and benefit from the +1 MP bonus for diving [8.2].

Unbroken fighter squadrons can tally and attack enemies they encounter *en route*. If they lose their tally, they resume returning to base. Fighter squadrons returning to base cannot enter a Lufbery [13.4.3].

Escorts continue to accompany bombers that are returning to base. The escorts should conform to the bomber movement and change altitude or the number of squares moved to match the bombers, per 15.2.2.

9.2.7 Free Movement

There are situations in which fighter squadrons can ignore their mission behaviours and move freely—that is to say, move anywhere. These are:

- (a) A squadron with a tally starts its move in a different square from its target. It moves freely that turn, but must stop moving on entering the same square as its target (except in head-on encounters) [7.2.3].
- (b) An alerted squadron with no tally starts the Movement Phase in the same square as an enemy. It moves freely that turn.

9.3 SPLITTING SQUADRONS

A player may split a squadron into two flights. Replace its counter with flights of the same model and set up markers for the flights on the Wing Display. Only squadrons that are not disrupted or broken can split; flights cannot split. Splits are allowed in the following circumstances:

- (a) In the Tally Phase a wing leader may split a squadron to which he issues an order [9.5.5].
- (b) If a fighter squadron has tactical flexibility [9.3.2], it may split in any Tally Phase in which it successfully rolls a tally [7.2.1].
- (c) If an escort squadron with tactical flexibility [9.3.2] successfully reacts, it may split and send one flight to attack [10.4.2, 10.4.3].
- (d) In the Tally Phase a bomber squadron carrying a torpedo load may split, though not while flying a torpedo attack profile [15.3.5].

Once split, flights cannot reform into a squadron. The countermix limits the number of splits; a squadron cannot split if there are insufficient flight counters available. If the scenario lists a split limit, that is the maximum number of new flights that can be created during a scenario.

9.3.1 Flights After Splitting

After splitting both flights have the same alert state [7.1] and the same aircrew quality as the original squadron. If the squadron has an Experte or a wing leader, assign him to a specific flight. Divide losses and stragglers between the flights in any proportion, provided neither total exceeds that flight's Max Losses limit [5.1].

Both flights share the same radio net [9.4] and any low or depleted ammo status [10.7.2]. If the squadron carried bombs (or any weapon load [15.1]), AARs, gun/AT pods, or drop tanks, so do the flights.

If the original squadron had a tally, choose which flight retains a tally on the target; the other flight has no tally and cannot roll a tally this phase, though it can be issued an order [9.5.5]. If an escort squadron splits due to tallying, the flight with the tally changes its mission to sweep [9.2.2.2], while the other flight remains an escort.

Return to Base Summary. The squadron should head to a map edge, without circling. Squadrons can move freely to avoid obstacles such as cloud, flak barrage, or balloons.

Return to Base and Escorts. If a bomber formation splits, with some bombers continuing while others return to base, escorts may have to choose whether they stay with the formation or escort the returning bombers.

Free Movement Summary. Squadrons with tallies do not have to move towards their tallied target, though they must stop on entering the same square.

Free Movement Tips. Enemy squadrons that start a turn in the same square with mutual tallies must stay in that square according to 7.2.3. To avoid this trap, a squadron can drop its tally in the Tally Phase [7.2.2] and then freely move in the Movement Phase, per 9.2.7 (b). (Note that both squadrons can do this.)

Squadrons that are unable to move, such as intercept squadrons without vectors or tallies [9.2.4], can move freely if they start the Movement Phase in the same square as an enemy, per 9.2.7 (b). The free movement is only for that turn.

Flight Counters. In a split ensure both flight counters have the same model designation. For example, do not use Bf 109F flight counters when a Bf 109G squadron splits.

Torpedo Squadron Splits. Torpedo squadrons may split so as to conduct anvil attacks [15.5.1].

Splitting and Alert State. As tallies, orders, and reaction are determined before splitting, both fighter flights created by a split will be alerted after a split.

Tactical Flexibility

Air forces with flexible doctrine and an aggressive spirit, such as the early-war Luftwaffe or the late-war Western Allies, could break into smaller formations, to divide their attention between different tasks such as providing cover while a part of a formation attacked.



PHOTO: Tactical flexibility was based on the versatile Schwarm formation developed by the Luftwaffe and copied by the Allies, who renamed it the 'finger-four'. These USAAF P-51s fly a finger-four for the camera.

Radio Clutter

As fights got underway, radio control became more difficult due to pilot chatter. GCI control was particularly affected by overloaded channels.

Radio Clutter in the Tally Phase. Since combat happens after tallying, radio clutter only affects the Tally Phase when a squadron on the radio net is in a dogfight.

Defenders – German (set up first)

Elements of JG 26 and 27, Luftflotte Reich



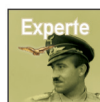
II./JG 26 (Add wing leader)

x3



Fw 190D-9 – Sweep mission
Set up wing leader in J6

Wings. Wings are indicated by these special shaded boxes.



Wing Leaders. On the left is a Wing Leader marker. On the right is an Experte marker depicting Adolf Galland, flipped to indicate that he is also a wing leader.

If an intercept squadron with a vector tallies and then immediately splits, one flight retains the tally and the other continues to its vector.

If an enemy has tallied the splitting squadron, the enemy player chooses which flight he retains the tally on. He does this after the splitting squadron has assigned losses, wing leaders, and Experten, and selected which flight retains any tally it might have.

9.3.2 Tactical Flexibility

If a scenario specifies that a fighter squadron has tactical flexibility, it can split in any Tally Phase when it successfully rolls a tally [7.2.1], or in any Movement Phase in which it reacts [10.4.2, 10.4.3].

9.4 RADIOS

The scenario will specify what radio networks exist and which squadrons are on each net. Squadrons without radios do not have access to a radio net. Squadrons with radios get a number of benefits.

Unalerted squadrons are immediately alerted in any Tally Phase if another squadron on the same radio net is alerted [7.1].

A squadron gets a bonus to its tally roll if it gets a radio call. A radio call comes whenever one or more of the following applies to a squadron:

- (1) Its target occupies the square of a squadron on the same radio net.
- (2) Its target is tallied by a squadron on the same radio net, even if that tally was obtained earlier in the same Tally Phase.
- (3) It is under GCI control [9.2.4].

In addition, wing leaders may issue any number of orders to squadrons on the wing's radio net [9.5.5].

9.4.1 Bomber Radios

If a scenario specifies that bombers are on a radio net with fighters, those fighters are alerted [7.1] if a bomber squadron on the net is attacked.

9.4.2 Radio Clutter

If one or more squadrons on a radio net are in a dogfight, or were in combat that turn, that radio net is cluttered. When a radio net is cluttered, the following effects apply:

- (1) **Tally Phase.** Squadrons on that net cannot apply the radio call bonus [9.4] to tally rolls.
- (2) **Tally Phase.** Wings are limited in the number of tally rolls they can make, orders that can be given, and squadrons that can split. [9.5.5.1].
- (3) **Administration Phase.** Changing a vector requires a die roll of 6 rather than a roll based on the GCI rating [9.2.4].

9.5 WINGS

A wing is a group of fighter squadrons displayed in a shaded box in a scenario order of battle. Wings are set by the scenario and never form after play starts. Squadrons in a wing start a scenario in formation. A squadron that leaves formation leaves the wing and no longer gets its benefits. Though it is possible for wings to operate without radios, where they have radios all squadrons in a wing operate on the same radio net [9.4].

9.5.1 Wing Leaders

During set-up, place a Wing Leader marker on the Wing Display track of one of the wing's squadrons [5.2.1]. Experten can function as wing leaders by placing an Experte marker on its reverse side, with the wing leader icon. The other squadrons in the wing set up in formation with the wing leader's squadron [9.5.2].

9.5.2 Wing Formation

Fighter squadrons assigned to a wing are in the wing when they:

- (a) Are either the wing leader's squadron or in formation with it. Squadrons do not have to be in or adjacent to the wing leader's square, merely in the same formation [9.1].
- (b) Do not have tallies and have not commenced a bombing profile.
- (c) Are available [1.1].

A squadron that does not comply with these conditions at the end of any phase leaves the wing and cannot return to it, even if it formates on the wing leader again. However, it remains on the wing's radio net [9.4].

If the wing leader tallies an enemy or becomes unavailable, the wing breaks up and all squadrons leave the wing. If this happens in the Tally Phase, the wing leader can immediately issue orders to squadrons in the wing [9.5.5] (he cannot issue orders if the break-up occurs at any other time).

9.5.3 Wing Intercept Missions

In a wing only the wing leader places a Vector marker [9.2.4]. All other squadrons in the wing maintain formation on the wing leader. If the wing breaks up [9.5.2], squadrons not issued orders place a Vector marker in the square previously occupied by the wing leader's Vector marker.

9.5.4 Wing Sweep Missions

In wings assigned a sweep mission, squadrons continue their sweep behaviour [9.2.3] even if some squadrons leave the wing formation. If the wing breaks up [9.5.2], squadrons not issued orders continue their sweep behaviour but are no longer in the wing.

9.5.5 Orders

In the Tally Phase a wing leader can select any available squadron in the wing (including his own) and issue it an order. The recipient of the order automatically places its Tally marker on an eligible target; no tally roll is required [7.2.4].

To issue an order, the wing leader's squadron must be available. He can give orders to any number of squadrons in the wing formation, against the same or different enemy squadrons. The recipient must have a line of sight to the target, which must be less than ten squares away. It can be given an order even if it failed a tally roll earlier in that Tally Phase.

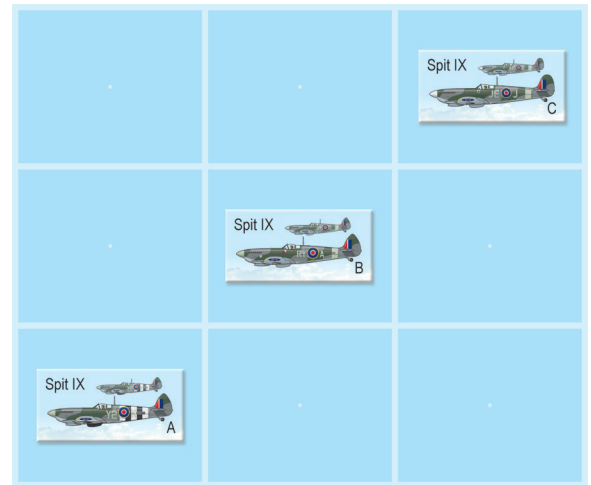
The target must be either an enemy squadron tallied by a squadron on the wing's radio net OR any squadron in the same formation as the tallied enemy squadron. Only the recipient of the order must be in the wing formation. The squadron with the original tally does not have to be in the wing (though it must be on the same radio net).

The wing leader can split a squadron [9.3] he gives an order to, even if it does not have tactical flexibility. One flight is assigned the tally, while the other remains in the wing formation or can be given its own order.

9.5.5.1 Orders and Radios

If the wing operates without radio OR is affected by radio clutter [9.4.2], the following effects apply:

- (1) If one squadron is alerted, then all wing squadrons are alerted.
- (2) Only one squadron in the wing can roll for a tally each turn.
- (3) Only one order can be given each Tally Phase. Alternatively, ALL available squadrons in the wing (including the wing leader's) can be given the order to tally the same enemy squadron or different squadrons in the same enemy formation.
- (4) The wing leader may only split his own squadron.



Wing Formation Example. A Balbo [9.5.6] of Spitfires. The wing leader could be in any one of the squadrons; wing leaders are not required to be the leading squadron nor do they have to be adjacent to all squadrons in the wing.

Orders. An order is a way for a wing leader to give another squadron in the wing an automatic tally without needing to roll, provided a squadron on the radio net has a tally.

Because the squadron with the tally does not have to be in formation, a separated squadron can act as a scout for the wing. The wing can then send reinforcements through orders.

If a large enemy formation is encountered, orders can be used to distribute tallies against different targets in that formation.

Note that a squadron can receive an order from the wing leader even if it failed a tally roll in that phase.

Wing Formations. As 9.5.2 (a) implies, it is possible for the wing leader's squadron to remain in the wing even if the formation is reduced to just his squadron. A wing leader with a radio has the ability to order his own squadron to split and then issue a second order to his own flight to tally a different target.

Orders and Radios

Squadrons without radios communicate via a variety of hand signals, wing rocking, flags, and signal flares.

Radioless Order Example. A radioless wing leader orders one squadron to tally a target that is tallied by another squadron in the wing. Alternatively, he orders the entire wing to tally that target. If that target was part of a formation, he could distribute tallies against different targets in that formation *and* split his own squadron and send them against different formation targets.

Balbos

Balbos were named after Italo Balbo, a fascist aviator famous for his record-breaking feats with large aircraft formations. In the Battle of Britain the term came to be used to describe 'Big Wings' of three or more squadrons.

Combat Summary. A summary of the combat process is:

- (1) Determine the attacker [10.1].
- (2) Determine which rating is used in combat [10.5].
- (3) Determine the combat differential of the attacker and defender [10.5].
- (4) The attacker and defender roll to determine the number of hits on the opponent [10.5.1].
- (5) Distribute hits between enemy squadrons [10.2.2].
- (6) Confirm hits on the opponent and apply losses [10.6].
- (7) Participants roll a cohesion check which may disrupt or break squadrons [10.7].
- (8) Place or flip Ammo markers [10.7.2].
- (9) Unalerted defenders are alerted [7.1]; squadrons place or switch Tally markers [7.2.4.1].
- (10) Check if a dogfight begins [10.8].

Mutual Attacks. The determination of the attacker is based on the move order in the previous Movement Phase and not on whether a squadron actually moved. For example, squadrons A and B have tallied each other. Squadron A has to move first, and it moves into squadron B's square, preventing B from moving. However, since squadron B is last in the move order, it still gets to be the attacker.

Where mutually tallied squadrons start the Movement Phase in the same square and do not move out, the attacker is determined by the squadron with the highest basic speed value, breaking ties with a die roll.

If the squadrons are in a dogfight, the highest basic turn value is used, again breaking ties with a die roll.

Tally Chains Example. A B-17 bomber squadron, two Bf 109 squadrons, and two P-51 squadrons occupy a square. Both Bf 109s have tallied the bomber. One Bf 109 is tallied by one of the P-51 squadrons. The remaining P-51 has no tally. The subsequent combat between the squadrons chained by tallies is rolled as a single air combat, with the Bf 109s as the attackers. However, the P-51 squadron without a tally is excluded.

9.5.6 Balbos

If a wing formation comprises more than two squadrons, counting flights as half a squadron, the following rules apply to movement. Squadrons that break these rules immediately leave the wing formation:

- (1) No squadron may climb or dive more than one level per turn.
- (2) No squadron may claim the 1-MP bonus for diving [8.2].
- (3) All turns of more than 45 degrees cost 1 MP for each squadron, regardless of the magnitude of the turn.

10.0 AIR COMBAT

Air combat takes place in the Combat Phase when squadrons occupy the same square as a target they have tallied. Only squadrons that have a tally or which have been tallied take part in air combat. A squadron only participates in one air combat each turn.

Fighter squadrons that occupy the same square as their tallied target must attack in the Combat Phase. If multiple air combats take place in a turn, they are resolved separately in an order decided by the raider player.

10.0.1 Battle Display

Combats may involve unwieldy stacks of counters and markers. Players can declutter the map by marking a square with a Battle marker and then moving all counters and markers in that square to the corresponding box on the Battle Display. Players can move a square's contents to or from the Battle Display at any time. However, they should not mix the contents of different squares in the same box.

10.1 ATTACKER AND DEFENDER

In a combat, the side with the tally is the attacker and the side without the tally is the defender. Sections 10.1.1 to 10.1.4 give the exceptions to this.

10.1.1 Bombers on Defence

The side that includes bombers [3.2.1] is always the defender.

10.1.2 Mutual Attack

If both sides are fighters which have tallied each other, the side scheduled to move *last* in the previous Movement Phase's move order [6.1, 6.1.1, 6.1.2] is the attacker and its opponent is the defender.

EXCEPTION 1: If all squadrons began the previous Movement Phase in the same square, the side with the squadron with the highest basic speed value is the attacking side. In case of a tie, roll randomly to determine the attacker.

EXCEPTION 2: If in a dogfight [10.8], the squadron with the highest basic turn value is the attacking side. In case of a tie, roll randomly to determine the attacker.

10.1.3 Chains of Tallies

It is possible for the squadrons in a square to be in a chain of tallies [6.1.2], so that a squadron has tallied a second squadron, which in turn has tallied a third, etc. The result would be a single combat involving all the squadrons [10.2]. Determine attacker and defender as follows:

Bombers. If one of the squadrons in the chain is a bomber, the side with the bomber is the defender and the opposing side the attacker.

Fighters. If all the squadrons are fighters, determine the attacker as for mutual attacks [10.1.2]. Use move order, basic speed value, or basic turn value, as appropriate, to determine the attacker.

The squadron used to determine the attacking side does not have to be the primary combatant [10.2.1]. It just needs to participate in the combat.

10.1.4 Reaction

In a combat triggered by a successful reaction roll [10.4.2], the reacting squadron is the attacker and its opponent the defender. However, if the reacting squadron reacts late [10.4.3] and must resolve combat in the bomber's square, then the opponent is the attacker and the reacting squadron's side is the defender, per 10.1.1.

10.2 MULTIPLE SQUADRONS IN COMBAT

Multiple squadrons can find themselves in combat in a square in the Combat Phase. Possible causes include:

- (a) Two or more friendly squadrons attack a lone enemy.
- (b) There is a chain of tallies so that one squadron is being attacked by a second, which is in turn being attacked by a third, and so on [10.1.3].
- (c) An escort rolls a late reaction so that it must participate in the defence of a bomber [10.4.3].

Only squadrons that are connected by tallies or chains of tallies can participate in a combat. Any squadrons in a square that are not connected by a tally do not take part. It is possible to have multiple combats in a square if they are unconnected by tallies (see the Multiple Fights sidebar).

If more than two squadrons are involved in the same combat in a square (i.e. not a one-on-one matchup but two-versus-one or two-versus-two, etc.), do not roll combats separately but instead make one combat roll for each side, in which all squadrons participate.

Before declaring which rating is used [10.5], the defender and then the attacker each choose one squadron to be the primary combatant [10.2.1]. This combatant can be a bomber or fighter squadron. The players figure out the combat differential using the primary combatants' combat values. Additional squadrons in the fight may contribute to the combat. Each additional fighter squadron or flight modifies that side's combat value (turn or speed) by +1. It cannot modify the combat value if unarmed [10.5.3].

Additional bomber squadrons (including fighter-bombers carrying bomb loads) do not modify the combat value, though they contribute any defence rating to modify the defender dice roll [10.5.2].

All participants in the combat, regardless of whether or not they are the primary combatant, must check for cohesion, place Ammo markers, etc.

10.2.1 Determining Combat Situations

The primary combatant determines any special combat situations that apply. An attack is a bounce [13.4.1] or a head-on combat [10.3] only if the attacking primary combatant is making a bounce or head-on combat on its tallied target. However, evasion requires ALL defending squadrons to meet the criteria set out in rule 13.4.2.

10.2.2 Distributing Hits

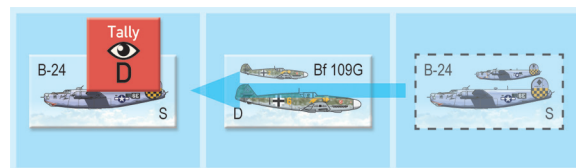
If a side inflicts hits [10.5.1], it can decide which enemy squadrons take those hits. That side's player distributes hits among enemy squadrons as he wishes. However, each enemy squadron must take one hit before a second (or third, fourth, and so on) can be assigned to that unit. Hits must be assigned before losses are confirmed [10.6].

10.3 HEAD-ON COMBATS

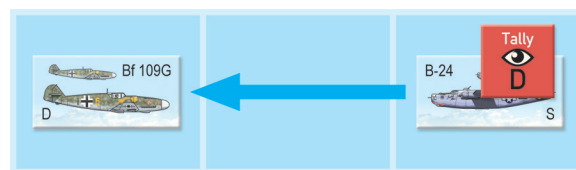
A head-on combat is one where the attacking primary combatant has, that turn, moved into its tallied target's square from one of the three adjacent squares ahead of the target. It can also be a head-on combat if the defender finished its move in the attacker's square, entering from one of the three adjacent squares ahead of the attacking primary combatant.

Multiple Fights in a Square. It is also possible for more than one combat to occur in a single square. If squadron A tallied squadron B, and squadron G tallied squadron H in the same square, you would get two separate combats, A vs. B and G vs. H.

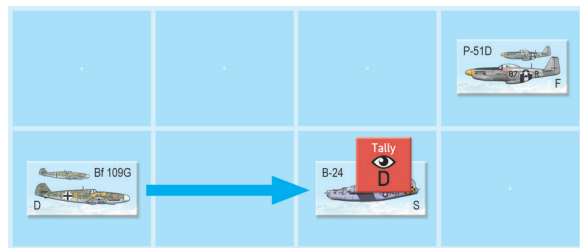
Primary Combatant Example. Two squadrons attack the same target. One enters from the front to make a head-on combat, while the other comes 'out of the Sun' to qualify as a bounce. Depending on the choice of primary combatant, the attack is either a head-on or a bounce, but not both. If the player chooses the squadron that conducts the bounce, then the head-on squadron only contributes +1 to the attacking primary combatant's combat value.



Bomber Passes Through. If the tallied bomber moves through the fighter's square without ending movement there, then there is no head-on combat.



Head-on Combat. The tallied bomber in this illustration finishes movement in the fighter's square. If the fighter chooses not to move, it will attack as a head-on combat.



Head-on and Reaction. In this head-on situation, the P-51 escort cannot react. However, if the escort tallies the attacker, it changes its mission to sweep, then it moves immediately after the attacker moves. In the subsequent head-on combat the P-51 can be chosen as the primary combatant [10.2].

No Reaction. An escort that fails to react this turn might succeed next turn. An intercepting squadron that attacks this turn must re-enter the bomber's square in the next, giving escorts a second opportunity to react.

Reaction Movement. The reaction attack rule demands that the reacting squadron move a square closer to the enemy with each MP. If this is not possible because a squadron must turn 180 degrees and there is no other way to reach the enemy square without spending an MP on a 180-degree turn, then make that turn. This is the only exception to the rule.

Reaction and Bounce. Note that a successfully reacting squadron automatically qualifies as bouncing the enemy, because the enemy has tallied a bomber in a different square [13.4.1]. A late-reacting squadron would not qualify for the bounce because it is defending.

If head-on conditions apply, attacks must be resolved as head-on combats. Head-on combats are always made as hit-and-run attacks [10.5].

Head-on combats prevent escorts from reacting [10.4] and give bonuses to firepower when resolving hits against some aircraft [10.6].

10.4 ESCORTS AND REACTION

Fighter squadrons marked as escorts can react to protect bombers. Reaction takes place during an enemy squadron's movement and interrupts it.

In the Movement Phase, if an enemy fighter squadron attempts to move from a square adjacent to a bomber it has tallied into that bomber's square, escorts may react. To react, the escorts must be within three squares of the targeted bomber and no more than one altitude level below it.

Escorts cannot react if head-on conditions apply [10.3], they have no line of sight [4.6] to the targeted bomber, or they are unavailable [1.1].

The moving player must announce that he is moving his squadron into the square and pause to give the escorts time to declare their reaction. If the escorts do not declare a reaction, the squadron completes its movement into the square.

If a reaction is declared, the reacting player identifies which escort squadron (or squadrons [10.4.5]) is reacting. Then he rolls two dice, modified as indicated on the Combat Card. The results can be No Reaction, Late Reaction, or Successful Reaction.

10.4.1 No Reaction

If No Reaction is rolled, there is no effect. The moving squadron completes its move into the bomber's square. The escort that rolled for reaction may roll again should another enemy attempt to move into a bomber's square.

10.4.2 Successful Reaction

If Successful Reaction is rolled, the reacting squadron immediately tallies the enemy [7.2.4] and changes its mission to sweep [9.2.2.2]. The reacting squadron then performs one of these actions:

Attack. The enemy stops moving and is prevented from entering the bomber's square. The reacting squadron moves into the enemy's square (it effectively moves a second time in that Movement Phase). There is no MP allowance for reaction—spend as many MPs as necessary—but each MP must be spent moving the squadron a square closer to the enemy or into the same square. (EXCEPTION: where a 180-degree turn is required, see sidebar.)

Mark the reacting squadron with a Dive marker if its movement took it to a lower altitude. Mark it with a Climb marker if its movement took it to a higher altitude [8.5].

In the Combat Phase it will conduct a combat. The reacting squadron is the attacker and the enemy squadron the defender [10.1.4].

Split Squadron. If the reacting squadron has tactical flexibility [9.3.2], it may split into two flights. One of those flights stops the enemy's movement and moves to the enemy square (see Attack, above). The other flight stays where it is, as an escort.

10.4.3 Late Reaction

If Late Reaction is rolled, the reacting squadron immediately tallies the enemy [7.2.4], changes its mission to sweep [9.2.2.2], and can choose to attack or split the squadron, just as with a successful reaction [10.4.2]. However, instead of stopping the enemy's movement, the moving squadron completes its move into the bomber's square and the reacting squadron then joins it in the same square.

In the Combat Phase, a combat is resolved involving the bomber, the reacting squadron, and the opposition (along with any other squadrons involved through chained tallies). The reacting squadron's side is treated as the defender and the opponent is the attacker [10.1.4].

10.4.4 Reaction During Bomber Movement

It is possible for a bomber squadron to finish its movement in the square of an enemy that has tallied it. If this happens, the escort may roll to react the moment the bomber's movement finishes, provided the encounter is not head on [10.3]. However, any successful reaction must be treated as a late reaction in the combat that follows [10.4.3].

10.4.5 Multiple Reactions

Multiple escorts can react to the same enemy movement. Roll separately for each escort. If a Late or Successful Reaction is rolled for any escort squadron, take the best result and apply it to all reacting squadrons.

10.5 COMBAT RESOLUTION

To resolve combat, the attacker and the defender each roll dice on the Air Combat Table. First, the attacker declares which rating he will use in the combat. The defender must use the same type of rating the attacker chooses. The attacker can declare either:

- (1) **Turning Fight.** Use the squadron's combat turn value [3.3.2].
- (2) **Hit-and-Run Attack.** Use the squadron's combat speed value [3.3.2].

In certain circumstances a particular attack type must be selected:

- (a) In head-on combats [10.3] a hit-and-run attack must be selected.
- (b) In dogfights [10.8.1] a turning fight must be selected.

Use the combat values for the attacker and defender primary combatants [10.2]; additional squadrons or flights of fighters modify this. The combat column used on the Air Combat Table is based on the differential between the attacker's and defender's combat values.

To find the attacker's differential column, subtract the defender's combat value from the attacker's.

To find the defender's differential column, subtract the attacker's combat value from the defender's.

If a primary combatant has the Edge ► ability *and its opponent does not*, it rolls on the column to the immediate right of its differential column.

Differentials greater than +4 or -4 use the +4 and -4 columns, even for aircraft with the Edge ► ability.

10.5.1 Air Combat Table

Each side rolls two dice. The attacker applies the attacker dice roll modifiers and the defender applies the defender dice roll modifiers, as indicated by the Air Combat Table.

Only use attacker and defender dice roll modifiers that apply to the *primary combatants* [10.2] (EXCEPTION: Apply the defence rating modifier even if the participating squadron with the defence rating is *not* a primary combatant [10.5.2]).

On the Air Combat Table the players each cross-reference their modified dice roll with the column being used in the combat to find the result. Results are as follows:

- A dash result means no hits are scored on enemy aircraft.
- # A numbered result means that hits equal to the number are scored. Check for losses [10.6].

Multiple Reactions Example. Squadrons A, B, and C all react against the same enemy. They roll a No Reaction, Late Reaction, and Successful Reaction, respectively. Since squadron C was successful, all of the reacting squadrons are successful.

Attacks

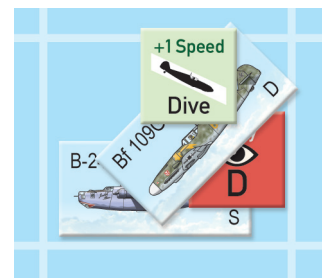
The hit-and-run attack represents the use of speed and energy to slash through enemy formations. Against bombers this means a high side attack that reduces exposure to defensive guns.

The turning fight leverages an aircraft's manoeuvrability to generate stern attacks. However, against bombers fighters are vulnerable to coordinated defensive fire.

Differential Example. The attacker's combat value is 5 and the defender's is 6. The attacker rolls on the -1 column. The defender rolls on the +1 column.

If the attacker has the Edge ► ability and the defender does not, the attacker rolls on the +0 column rather than the -1 column.

If both sides have the Edge ► ability, neither side gets a benefit from it.



Air Combat Example. A Bf 109G-6 squadron dives to attack an B-24H squadron. The Bf 109s choose to make a hit-and-run attack, therefore using the combat speed values.

The altitude is 14, so the bomber's speed rating is 4, reduced to 3 because it is carrying a bomb load. The Bf 109's speed rating is 6, increased to 7 by the Dive marker. The differential is +4 for the attacker and -4 for the defender.

No modifiers apply to the attacker's Air Combat Table dice roll, while the bombers get +1 from their defence rating. (It would have been +3 had the Bf 109s chosen a turning fight.)

The Bf 109 squadron rolls an 7 on the Air Combat Table, which results in 2 hits on the B-24s. The bombers roll a 9, modified to 10, resulting in 1 hit on the Bf 109s.

Defence Rating 0. Turning combats make a squadron with a 0 defence rating more potent when defending.



PHOTO: Ground crew work on a P-38's battery of machineguns and cannon. At the beginning of the war many air forces relied on machineguns of 0.3 to 0.5 calibre. However, the need to defeat well-protected bombers signalled the move to heavier weapons of 20mm to 30mm.

Multi-squadron Loss Example. A defending B-17G squadron and P-51B squadron each take a hit in a multi-squadron combat. The hit on the bomber is rolled against a 5-6 Protection rating, while the hit on the fighter is rolled against a 4 Protection rating.

Loss Example. A bomber squadron's protection rating is 4-5 h. If a hit is scored against it, a modified die roll of 1 to 3 after adding firepower means no losses; a modified die roll of 4 or 5 creates a straggler; a 6 or more means a bomber is lost. If the attack is head on, the attacker increases its firepower by 1.

10.5.2 Defence Rating

A squadron with a defence rating applies it as a dice roll modifier when defending, regardless of whether or not it is the primary combatant. Attackers don't apply the defence rating modifier. If more than one squadron contributes a defence rating to a combat, apply only the highest value. Defenders in a turning fight [10.5] increase their defence rating by 2.

10.5.3 Unarmed Aircraft

A squadron that has a firepower value of 'U' is unarmed and cannot attack in air combat or contribute to the combat value in multi-squadron combats [10.2]. If defending as the primary combatant, the defender does not roll on the Air Combat Table and inflicts no hits on the opponent.

10.6 LOSSES

Each hit must be confirmed. Immediately after determining hits, roll one die for each hit, adding the primary combatant's firepower to the roll. If two firepower values are listed, separated by a slash, use the second [3.3]. Increase the squadron's firepower as follows:

- +1 The primary combatant has an Experte [5.2.1].
- +1 The primary combatant is equipped with gyro gunsights [13.5.4].
- +1 The enemy squadron's protection rating is marked with an 'h' while in a head-on combat [3.3, 10.3].
- +2 The primary combatant is equipped with gun pods [13.5.6].

Compare the modified roll with the protection rating of the enemy squadron. (In a multi-squadron combat, after hits have been distributed amongst the squadrons [10.2.2], each target squadron receiving a hit uses its own protection rating, *not* that of the primary combatant.)

If the roll is less than the enemy squadron's protection rating (or less than both ratings if two numbers are listed), no loss has occurred.

If the roll is greater than the enemy's protection rating (or greater than both ratings if two numbers are listed), a loss has occurred. Place a Loss marker on the target's Wing Display track.

If the roll equals the enemy's protection rating (or one of the ratings), place a Straggler marker on the target's Wing Display track.

An unmodified roll of 6 always results in a loss. An unmodified roll of 1 always results in no loss and no stragglers.

It is important that each hit must be rolled sequentially (i.e. do not roll to confirm the second hit until the first has been rolled and applied).

If the total losses equal or exceed the squadron's Max Losses value [5.1], remove the squadron from the map and place it with the squadron's Loss markers on the Wing Display, as these will be used to calculate victory at the end of the game [12.1].

10.6.1 Stragglers

Stragglers may be created as a result of hit confirmation [10.6]. Place Straggler markers on the Wing Display.

If a hit confirmation roll equals the enemy squadron's protection rating when that squadron possesses a Straggler marker, instead of placing another marker flip it to its Loss side instead.

10.7 COHESION CHECK

After air combat has been resolved and any hits confirmed, each unbroken attacking and defending squadron in that combat must roll a cohesion check, regardless of whether or not it took losses. If resolving flak combat, only roll cohesion if the Flak Attack Table directs it [14.2.5].

Roll two dice and modify as indicated by the Cohesion Table. Apply air combat modifiers only for checks made as a result of air combat.

For cohesion checks resulting from air combat, fighter squadrons use the Fighter column of the Cohesion Table and bomber squadrons use the Bomber column. Fighter-bombers use the column appropriate to whether they are a fighter or a bomber at that moment [3.2.1, 15.2.4]. All checks resulting from flak attacks roll on the Flak column.

A result of 1 or 2 applies that many levels of disruption to the squadron. Place a Disrupted marker on that squadron's track on the Wing Display. Disruption is cumulative with disruption levels from previous combats.

Disruptions will break a unit depending on whether it is a flight or squadron. The number of disruptions required to break a unit are:

- **Flights.** 1 or more (disruption immediately breaks a flight)
- **Squadrons.** 2 or more

If a unit is broken flip the Disrupted marker to its Broken side.

10.7.1 Broken Squadrons

A broken squadron remains broken for the rest of the game and cannot be disrupted or broken again. Players may voluntarily break their squadrons at any time during movement or after a combat.

A broken fighter squadron immediately loses any tally it has [7.2.2], leaves any dogfight [10.8.1] or Lufbery [13.4.3] it is in, exchanges its mission marker for a Return To Base marker, and must return to base [9.2.6]. A broken squadron cannot tally, react, or enter a Lufbery.

A broken bomber squadron continues moving normally. However, if it jettisons its bombs it returns to base [9.2.1.1].

A broken fighter-bomber squadron continues moving normally until it drops or jettisons its bombs, after which it behaves like a broken fighter.

10.7.2 Ammo

In air combats (NOT flak attacks) fighter squadrons use up ammo. Each participating fighter and fighter-bomber squadron is at low ammo following its first air combat. After rolling for cohesion [10.7], place a Low Ammo marker on the squadron's Wing Display track. This modifies the squadron's cohesion roll in its next (i.e., second) air combat.

After rolling for air combat a second time, the squadron's ammo is depleted. Flip the Ammo marker to its Depleted side. This modifies the squadron's cohesion roll in all subsequent air combats. The squadron remains depleted for the rest of the game.

Do not place Ammo markers on bomber squadrons. Bombers may only be marked with Ammo markers if they strafe [15.3.7], and these Ammo markers have no effect on bomber cohesion rolls.

Unarmed fighter and fighter-bomber squadrons [10.5.3] DO place Ammo markers in situations where armed fighters do.

10.7.3 Aircrew Casualties

If a squadron:

- (1) takes one or more losses in combat, AND
- (2) the cohesion roll is a natural, unmodified 2, AND
- (3) the squadron has an Experte or wing leader, THEN remove that Experte or Wing Leader marker from play.

10.8 DOGFIGHTS

If both sides have unbroken fighter squadrons remaining after cohesion is rolled, check to see if a dogfight begins. If both players agree to dogfight, a dogfight begins. If they agree not to dogfight, it does not begin.

Cohesion

Fighter squadrons break apart due to high-speed manoeuvres. A broken fighter squadron is an expanding bubble of aircraft, with fighters heading home in ones and twos due to loss of contact, damage, or a failure of nerve.

By contrast, bomber squadrons rely on disciplined maintenance of a mutually supporting formation. A broken bomber formation may have fragmented or dropped part of its bomb load prematurely, far from the actual aim point.

Put simply, a broken fighter squadron has shattered and gone home, while a broken bomber squadron has ceased to be an effective fighting formation.

Flight Cohesion. Flights can never be in the state of being disrupted; only not-broken or broken.

Broken Bombers. Broken bomber squadrons may always take the option to jettison bombs [9.2.1.1] and return to base. This may be wise if continuing onward would expose the bombers to more losses.

Ammo

The ammo rules not only represent expenditure of ammunition, but also the accelerating disintegration of squadrons in combat as pilots become separated and return to base.

Ammo Depletion. Depleted ammo does not prevent squadrons taking part in further air combats. However, it will make those squadrons break up faster.

Fighter-bombers. Since fighters carrying bombs are classed as bombers [15.2.4], they cannot enter a dogfight.

Dogfight Entry Example. A British Spitfire F Mk.IX squadron with a veteran aircrew is attacked by two German Bf 109G-6 squadrons in the same square at altitude 10. Both 'Gustavs' have Dive markers and one is green. All squadrons survive the combat unbroken.

The British player wants to force a dogfight while the German player declines. So it goes to die rolls. The German player chooses the trained squadron to roll rather than the green.

The British roll is 4, plus 6 for the squadron's basic speed and 1 for the veteran aircrew, for a total of 11.

The German roll is 4, plus 7 for the squadron's basic speed (including the Dive marker), for a total of 11. As the result is equal, a dogfight starts involving all three squadrons. Given the British roll and their advantage in aircrew, the Germans would have had to roll a 5 to avoid the dogfight.

Tallies and Dogfights. Squadrons only switch tallies if the dogfight is ongoing. If the dogfight breaks up because one side breaks and exits, the unbroken squadrons retain their tallies.

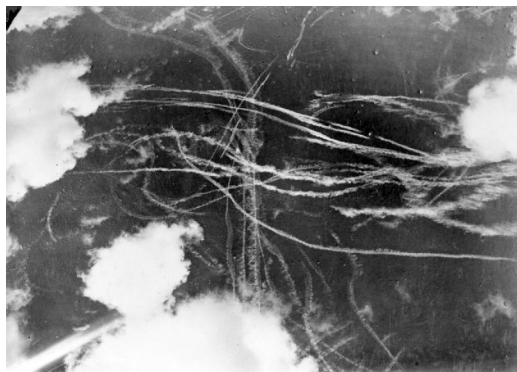


PHOTO: Contrails mark the aftermath of a dogfight over England in 1940. This shows some of the confusion of a fight and offers a clue to how easy it was for aircraft to become separated from their squadrons.

A player *must* refuse a dogfight if his side claimed defensive modifiers from evasion [13.4.2] or a Lufbery [13.4.3] in the preceding combat.

If a player refuses the dogfight but his opponent does not, each player rolls one die and adds his squadron's basic speed value [3.3.2] to his roll. Add one more if the aircrew quality is veteran and subtract one if green. Add one if that side claimed defensive evasion or Lufbery modifiers in the previous combat.

Compare the totals. If the player who wants the dogfight has a total equal to or greater than that of the player who refused, a dogfight involving both squadrons begins. Otherwise, there is no dogfight.

If a side has multiple unbroken squadrons involved, the player chooses one squadron to make the roll. A successful roll by the player who wants the dogfight means ALL squadrons are engaged in the dogfight.

If a bomber was involved in the combat, only the fighters check to enter the dogfight. The bombers are left out of any dogfight that ensues. Similarly, Me 163 flights cannot enter into a dogfight [13.8.2].

10.8.1 Dogfight Behaviour

If a dogfight begins, stack the squadrons together and place a Dogfight marker on the stack. Squadrons that enter a dogfight after a combat do not roll for air combat again until the next turn's Combat Phase.

A squadron that ends its movement in a dogfight square and has tallied a squadron in that fight immediately joins the dogfight and stacks with it.

A squadron leaves a dogfight as soon as it is broken [10.7.1]. Separate the squadron from the stack, facing in any direction. If one or both sides in a dogfight are broken or removed from play due to losses [10.6], remove the Dogfight marker; any remaining unbroken squadrons immediately turn to any desired facing.

A squadron in a dogfight cannot drop its tally [7.2.2]. Furthermore, it must maintain a tally on another squadron in that dogfight. If at any moment it does not, because its target breaks and leaves the dogfight, it must immediately choose another enemy squadron in that dogfight to tally and place its Tally marker on it; no roll is necessary [7.2.4.1].

Squadrons in a dogfight roll for air combat in the Combat Phase as normal, but must use their turn values [10.5]. The attacker is the side with the squadron that has the higher basic turn value [3.3.2]; the squadron with the lower basic turn value is the defender. If both sides have the same basic turn value, roll randomly to see which side is the attacker.

A primary combatant defending in a dogfight cannot be bounced [13.4.1]. Head-on combat [10.3] does not apply in a dogfight.

10.8.2 Dogfight Movement

Fighters in a dogfight do not move normally. Instead, when it is time to move a dogfight [6.1, 6.1.3], roll a die to see who moves the stack.

1-3 The raider player moves the stack.

4-6 The defender player moves the stack.

The winner of the roll moves the stack, but is restricted in how it can be moved to the following choices:

(1) The stack stays in the current square.

(2) The stack moves to an adjacent square at the same or lower altitude level.

Dogfights cannot be moved off the map edge. Dogfight movement does not use Movement Points, simply move the stack of counters to the destination square without changing the facing of the squadrons. If the fight loses altitude, place Dive markers on the units.

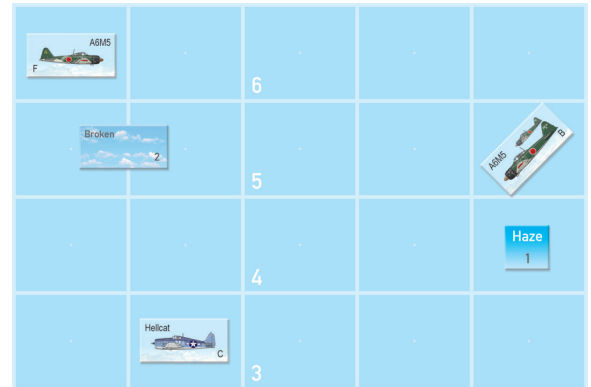
11.0 ESCAPE

Squadrons can escape by moving off the friendly map edge [5.1, 9.2.6]. Squadrons can also escape from anywhere on the map, if both players agree to let them go. This allows players to remove any squadrons from play that are no longer taking part in the battle (place them on their Wing Display track).

If the players cannot agree, the squadron does not escape. However, if the squadron is broken, it can declare an escape attempt in the Administration Phase. The raider player resolves his escapes first before the defender player resolves his. Escape is not permitted if the squadron was fired at by flak that turn.

If there are no available enemy fighter squadrons, the escape succeeds automatically. Otherwise, the opponent must nominate an available fighter squadron with a line of sight to the escapee to roll to stop the escape.

The opponent rolls one die and subtracts the largest weather modifier that applies [4.7]. If the modified roll is less than the distance from the opposing squadron to the escaping squadron, the escape is successful. If the modified roll is equal to or greater than the distance, the escape fails. Squadrons that escape are removed from the map (place them on their Wing Display track). For the purposes of victory they are assumed to have moved off the friendly map edge [12.1].



Escape Example. An F6F Hellcat flight is trying to escape from two available Zero units. The Hellcat is in haze. Zero squadron B has a line of sight uncluttered by cloud, while Zero flight F has a line of sight through broken cloud. Both Zeroes are at the same distance but the Japanese player chooses squadron B to stop the escape, as the weather modifier is smaller. The Japanese player rolls a die and subtracts 1 for the haze. As the distance from the Zero to the Hellcat is 3 squares, any modified roll of 2 or less will result in a successful escape.

12.0 ENDING THE GAME

The game ends when the players mutually agree to stop play or when all squadrons have done one of the following: exited the map, escaped, or are broken. Some scenarios may outline alternative triggers for the end of the game in the scenario victory conditions [5.1].

When the game ends, the players determine the winner.

12.1 VICTORY CONDITIONS

After the game ends, check the victory conditions for the scenario. If they instruct the players to count up Victory Points (VPs), use the following tariff. Each side acquires VPs for achieving the following:

- 1 VP Each enemy balloon counter eliminated [14.3]
- ? VPs Each enemy aircraft loss inflicted (for each loss, use the VP value shown at the top of that aircraft's ADC)
- ? VPs Victory Points scored for successful bombing attacks on surface units [14.1.1]

If the scenario does not involve bombing [15.0], apply the following:

- 6 VPs Each friendly unbroken bomber or transport squadron that exited the enemy map edge with its bomb load or cargo. Halve to 3 VPs if the squadron was disrupted or is a flight. Score 1 VP if the squadron or flight was broken. Bomber squadrons without a bomb load score no VPs for exiting.

The scenario will specify how the VPs are used to determine victory.

STOP! You have read enough of the rules to understand the basic play of the game. Now play the first three scenarios.

Sections 13.0, 14.0, and 15.0 are advanced rules that add detail. Players should use these after they have played the first three scenarios or if the scenario specifies they must use them.

Half VPs. Twin-engined fighters are worth 1.5 VPs. Note that half VPs for aircraft losses are never rounded unless the victory conditions apply a divisor, in which case rule 1.2 applies.

Where VPs are halved because of division, such as damage to surface targets [14.1.1], the fractions are rounded as normal.

Height Errors

Radars had problems determining target height, especially in the early war. As a result inaccurate information about enemy altitude was sometimes issued by GCI controllers.

Bounce

A bounce is a surprise attack that takes advantage of a squadron's inattention or its focus on pursuing another enemy. An attacker can also use the cover of the Sun to jump an enemy without warning.

Evasion and Dogfights. The rule assumes that a squadron declaring evasion is also trying to avoid being sucked into a dogfight. However, once in a dogfight, there is nothing to prevent a squadron from declaring evasion.

13.0 ADVANCED WING LEADER

These advanced rules add more detail and are required for playing many of the later scenarios.

13.1 HEIGHT ERRORS

After a player places a Vector marker on the map during set-up or successfully places a Vector marker in the Administration Phase [9.2.4], the opposing player may immediately choose to roll a die. If the roll is 6, there is an error, otherwise there is no effect. If there is an error, the opponent can move the Vector marker up to two squares in any direction.

13.2 DROP TANKS

If a scenario indicates that squadrons are carrying drop tanks, mark units that have the Drop Tanks ability [3.3] with Drop Tanks markers on the Wing Display when setting up [5.2]. Drop tanks reduce a squadron's basic speed and turn values by 1 [3.3.2].

A squadron can jettison drop tanks either during movement (including a reaction move), provided the squadron is alerted, or after an air combat is resolved. Remove the Drop Tanks marker from the Wing Display.

13.3 FUEL LIMITS

If a scenario states that fighter squadrons are operating at their fuel limits, those squadrons begin the scenario marked with Low Ammo markers on the Wing Display [10.7.2].

13.4 SPECIAL TACTICS

The following are advanced combat options and do not require a scenario special rule to be used.

13.4.1 Bounce

A bounce is a surprise attack on a single defending squadron. If there are multiple defenders, no bounce can take place. A bounce applies modifiers to that combat and prevents evasion [13.4.2].

An attack is a bounce if either of the following conditions apply:

- (1) The defender is a fighter or bomber squadron and the attacking primary combatant is attacking 'out of the Sun' [4.6.2].
- (2) The defender is a fighter squadron which is either unalerted OR has a tally on a squadron outside its current square.

If the defender is a fighter squadron, a bounce does not occur if:

- (a) It had a tally on any of its attackers immediately before the combat commenced.
- (b) It is in a dogfight [10.8.1].
- (c) It is in a Lufbery [13.4.3].

13.4.2 Evasion

If every defender has a basic speed value [3.3.2] equal to or greater than that of the attacking primary combatant, before combat is rolled the defender can declare evasion, even in a turning fight. If the defender evades, a combat roll modifier is applied to both attacker and defender. Only bombers and alerted fighters can declare evasion. To evade they must not be bounced [13.4.1], in a Lufbery [13.4.3], or flying a bombing profile [15.3]. Defenders that evade must refuse to dogfight [10.8].

13.4.3 Lufberys

An alerted, unbroken fighter squadron can enter or exit a Lufbery when it moves at a cost of 2 MPs [8.3]. Place the squadron in level flight and mark it with a Lufbery marker; remove the marker when it exits. While

marked with a Lufbery marker a squadron circles [8.3.1]. It does not have an ahead or behind aspect while in a Lufbery [8.1.2].

A squadron cannot enter a Lufbery if it occupies the same square as an enemy squadron at the start of movement or any point during movement. A squadron cannot enter a Lufbery if returning to base [9.2.6]. An escort that enters a Lufbery changes its mission to sweep [9.2.2.2] and cannot switch back to escort while in a Lufbery.

A squadron immediately exits a Lufbery at no MP cost if:

- (1) It is on the attacking side in an air combat [10.1]. Exit before rolling the combat.
- (2) It is broken [10.7.1].
- (3) It enters a dogfight [10.8].

On exiting a Lufbery face the squadron left or right at no MP cost.

A defender in a Lufbery cannot be bounced [13.4.1] and applies a defender combat roll modifier. It must also refuse to dogfight [10.8].

13.5 SPECIAL WEAPONS

The following rules add special weapons and equipment for air combat.

13.5.1 Load Restrictions

Drop tanks [13.2], AARs [13.5.3], gun/AT pods [13.5.6], and bomb loads (including all weapon loads [15.1]) are incompatible with each other. A squadron equipped with one load cannot carry another.

13.5.2 Heavy Guns

In air combat, primary combatants with the Heavy Gun ability [3.3] use the Heavy Gun value as their firepower, but only when confirming hits against bombers. Use their normal firepower against fighters.

13.5.2.1 Standoff Attacks

When attacking bombers in air combat, primary combatants with the Heavy Gun ability [3.3], or firing AARs [13.5.3], can perform standoff attacks. Standoff attacks are only made if all attackers have a Heavy Gun ability/are firing AARs. There must be no enemy fighter squadrons in the combat.

In a standoff attack the defender does not roll in the combat, so the attacker takes no losses. Both sides roll for cohesion normally after combat. The primary combatant uses its Heavy Gun value as its firepower (or 5 for AARs).

13.5.3 Air-to-air Rockets (AARs)

Squadrons with the AAR ability [3.3] can carry air-to-air rockets if the player chooses. Place a Rockets marker on its front side on the Wing Display. A squadron marked with a Rockets marker has its basic speed and turn values reduced [3.3.2]. (EXCEPTION: Me 262s ignore the speed and turn penalties for carrying rockets.) A Rockets marker may not be jettisoned.

In air combat, a primary combatant with AARs may declare it is firing them; its firepower is 5 when confirming hits against a bomber squadron, but uses its normal firepower against fighters. Flip the Rockets marker over to its Depleted side after the attack; that squadron can no longer fire AARs, but its speed and turn values remain reduced.

Attacks with AARs can be made as standoff attacks [13.5.2.1].

13.5.4 Gyro Gunsights

Aircraft with the Gyro ability [3.3] have gyro gunsights, but only where scenario special rules specify it. Squadrons with gyro gunsights receive a favourable modifier in combat AND add 1 to their firepower.

Lufberys

Defensive circles, named Lufberys after Raoul Lufbery, the French-American Great War ace, were a means for inferior aircraft to nullify the speed advantage of enemies. The squadron would fly in a circle so that each aircraft covered the tail of the 'plane in front. Any enemy attacking the circle would find itself sandwiched and in danger.

Load Restrictions Example. A Bf 109G-6 squadron is equipped with AARs. This prevents it from carrying gun pods or bombs.

Heavy Guns

One solution to American heavy bomber raids was to equip Me 410 bomber destroyers with a 50mm tank cannon. It proved effective against unescorted B-17s, permitting the interceptors to shoot from beyond defensive gun range. Other aircraft such as the Ki-45 also adopted large-calibre weapons as an anti-bomber measure.

Air-to-air Rockets

The primary rocket modelled here is the German WGr 21, derived from an army rocket mortar. Fighters launched the rocket from a large tube bolted to the wings, which is why they still suffer a performance reduction after launching.

The R4M rocket carried by the Me 262 was a smaller weapon with less effect on the jet's performance.

Gyro Gunsights

The Ferranti Mk.IID gyro sight doubled the accuracy of British fighter pilots. After debuting in RAF service in the spring of 1944, the Americans adopted the sight for the Army Air Forces in the autumn of 1944, as the K-14. The Navy did not install it, as the Mk23, until 1945.

The German EZ42 *Adler* gyro sight was tested in 1945 but never reached service.

Heavy Bomber Groups Example. Two unbroken B-17G squadrons are in formation in a square. One squadron is attacked. Its defence rating is increased from 1 to 2, even though the other squadron is not defending in the combat. If both squadrons were attacked in separate air combats, both would have their defence ratings increased to 2.

Gun Pods and AT Pods

Some aircraft could be equipped with extra guns bolted to the wings. However, these heavy weapons came with a performance penalty.

Gun pods contained 20mm or 30mm cannon, firing high-explosive shells for bomber-killing and strafing.

Anti-tank pods fired armour-piercing shells for use against tanks, submarines, and ships.

Single-aircraft Units

Single-aircraft units often represent reconnaissance flights. Such units, lacking mutual support from other aircraft, are very vulnerable.

Aircraft Carriers

The defence modifier of ships represents evasive manoeuvres during combat. When launching aircraft, an aircraft carrier must steam steadily into the wind and cannot evade.

13.5.5 USAAF Heavy Bomber Groups

American heavy bomber groups comprise two heavy bomber squadrons stacked in formation in the same square. These squadrons assist each other; if both are unbroken, increase the defence rating of each by 1.

This rule does not turn an attack on one bomber squadron into a multi-squadron combat involving both. Bombers receive this modifier even though the assisting bomber squadron is not defending in the combat.

13.5.6 Gun Pods and Anti-tank Pods

A squadron with the Gun Pod or AT Pod ability [3.3] can carry a pod if the player chooses. Place a Gun Pod or AT Pod marker on its Wing Display. A squadron marked with either kind of Pod marker has its basic speed and turn values reduced [3.3.2]. A Pod marker may not be jet-tisoned.

A squadron with a Gun Pod marker increases its firepower by 2 for air combat and strafing.

A squadron with an AT Pod marker gains the AT Gun 5 ability [15.3.7.1].

13.6 SINGLE-AIRCRAFT UNITS

If a flight is a single aircraft, it has a Max Losses value of 1 and reduces its combat speed and turn values by 1. This rule also applies to squadrons and flights that have taken losses such that they are just one away from reaching their Max Losses value [5.1].

Single-aircraft units cannot enter a Lufbery [13.4.3].

13.7 TAKING OFF

A scenario may specify that a squadron enters play by taking off from an airfield or aircraft carrier (CV, CVL, or CVE) surface unit.

No more than one squadron or flight may take off each turn from each surface unit. Take-offs are not allowed if the surface unit is heavily damaged or worse [14.1.1] or is dead in the water [14.1.3].

Place the squadron on the map in the Set-up Phase in the same square as the surface unit, in level flight facing right or left. Place a Slow marker [3.3.2] on the squadron. In the Movement Phase the squadron spends all its MPs taking off and so does not move from its set-up square.

Remove the Slow marker at the beginning of the Movement Phase of the game turn after the squadron enters play. It can now move normally.

Me 163 flights follow a different procedure for taking off [13.8.2.1].

13.7.1 Aircraft Carriers

The defence modifier [14.0] of a CV, CVL, or CVE surface unit is treated as 0 for the turn in which a squadron takes off from that unit.

13.7.2 Flak During Take-off

In the Movement Phase it enters play by taking off, a squadron cannot be attacked by small arms flak [14.2].

13.8 JETS AND ROCKET PLANES

These rules govern aircraft marked with the Jet or Rocket abilities [3.3] on their ADCs. Jet squadrons use jet MP allowances [8.2].

13.8.1 High Speeds

Jets and rocket aircraft can fly at high speeds. Rules 13.8.2 and 13.8.3 indicate when the high speed rules apply. High speeds can affect reaction dice rolls [10.4] and may affect squadrons flying a dive-bombing profile [15.3.2].

In any air combat in which high speeds affect one or both primary combatants, *both* sides halve the number of hits rolled in that combat.

13.8.2 Me 163 Rocket Planes

Me 163 flights move according to their throttle setting. Each flight starts with 3 points of fuel, which are consumed each turn that it selects full throttle. Track fuel use with a piece of scrap paper and a pencil.

The Me 163 ADC has no altitude bands. Instead, the speed, turn, and climb ratings apply at all altitudes and are listed according to throttle setting. An Me 163 flight *must* select a throttle setting each turn:

Full throttle. Consumes 1 point of fuel.

No throttle. Consumes no fuel.

If a flight has no fuel remaining, it must choose the 'no throttle' setting.

Full throttle. At full throttle, the flight moves 4 MPs (plus the bonus MP for diving, if applicable). High speed effects apply [13.8.1]. The '1 / 0.5' climb value on the ADC indicates that when the flight climbs at full throttle, it spends only 1 MP for every altitude level climbed (instead of 1 MP for the first level and 2 MPs thereafter). This cost is reduced to 0.5 MP for each altitude level if the movement is directly upwards and not diagonal. This means Me 163 flights may climb up to eight altitude levels each Movement Phase.

No throttle. At no throttle the flight moves 2 MPs (plus the bonus MP for diving). High speed effects do not apply. The flight cannot climb. It must dive at least one altitude level during movement.

Me 163 flights with no fuel and no tally must return to base [9.2.6].

Me 163 flights cannot enter dogfights [10.8].

An Me 163 flight that begins the Movement Phase at altitude 0 and is forced to dive because it has no throttle is considered to have landed and is removed from play as if it had escaped [11.0].

13.8.2.1 Me 163 Take-offs

When an Me 163 flight takes off, place it on the map in the Set-up Phase as normal [13.7]. However, do *not* mark it with a Slow marker. In the Movement Phase the flight must select full throttle, at which point it can spend MPs normally and move out of its set-up square.

13.8.3 Me 262 Jet Aircraft

High speed effects [13.8.1] apply to an Me 262 squadron at all times, except when it is marked with a Climb marker.

14.0 SURFACE UNITS

Surface units are military targets on the ground or vessels at sea. Surface units do not move. The scenario specifies the set-up locations of any surface units. They belong to the defending side unless otherwise noted.

Counters for surface units are placed on the map at altitude 0 [4.1, 5.3]. Any number of surface units can set up in the same square.

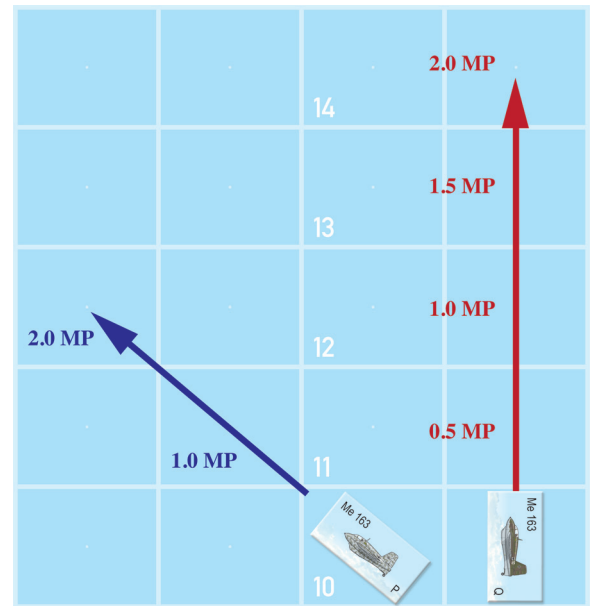
Surface units have the following characteristics:

Type. This identifies what the unit represents.

Units marked SS, DD, CL, CA, CV, CVL, CVE, BC, BB, Aux, or PG are ships. Numbers affixed to these designations are variants of the ship type.

Defence Modifier (crosshair symbol). This is a die roll modifier applied to any attack on that unit, reflecting the difficulty of hitting that target [15.4]. If this value is underlined it means the unit receives the armoured ship modifier when being attacked.

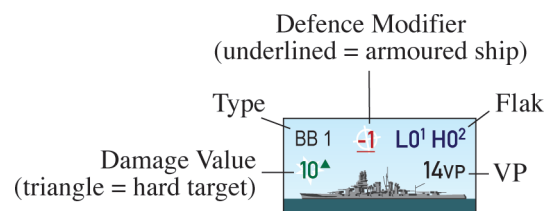
If the defence modifier changes due to damage [14.1.3] or a special rule, indicate the new modifier with a Defence Modifier marker.



Full Throttle Me 163 Climb. Flight P moves 2 MPs diagonally, at 1 MP per altitude level, while flight Q moves two MPs directly upwards at 0.5 MP per altitude level.

Me 262 and Me 163

The high speed effects applied to the Me 262 and Me 163 reflect the problems these early jets and rocket aircraft experienced with jockeying their throttles, resulting in them entering combat with unmanageable closure rates.



Surface Unit Key. The ratings for a battleship unit.

Ships. The classification of ships is as follows:

DD	Destroyer	BC	Battlecruiser
CL	Light Cruiser	BB	Battleship
CA	Heavy Cruiser	Aux	Auxiliary
CV	Aircraft Carrier	PG	Patrol Gunboat
CVL	Light Aircraft Carrier	SS	Submarine
CVE	Escort Carrier		

Patrol Gunboats represent a variety of small escort craft.

Bombing Results

Given that the bombing system covers many different types of targets, players need to interpret the results and make up their own stories.

A target that takes fatal damage is demolished or sinking, while a crippled target no longer functions but may be salvageable.

A heavily-damaged ship might live or die, depending on its damage control parties. A heavily damaged tank unit may be temporarily out of action because the crews have bailed from their vehicles. A heavily damaged airfield needs craters filled before it can recover aircraft.

Minor damage means the target is still functioning. The tank unit fights on. A bridge still has a lane open. The airfield can launch aircraft.

Feel free to create your own narratives as you play.

Damage Value (explosion symbol). This is the number of bombing hits required to cause heavy damage to that unit [14.1.1]. A triangle next to the damage value indicates the unit is a hard target and that rocket, strafing, and parafrag attacks have their bomb value halved against it [15.3.6, 15.3.7, 15.5.2].

Flak. If the unit has flak capability, its type, strength, and fire channels are indicated [14.2].

VP. The VP value for heavily damaging that unit [12.1, 14.1.1].

14.1 SURFACE UNITS IN COMBAT

Surface units take part in combat by being the targets of bombing [15.0] or by firing flak at squadrons [14.2].

14.1.1 Damage to Surface Units

Bombing attacks [15.0] can damage surface units. The amount of damage depends on the number of bombing hits inflicted [15.4]. Hits are cumulative, so hits from multiple attacks are added together. Hits markers keep track of cumulative hits on a target.

Compare the cumulative bombing hits to the target's damage value to determine the damage level and see how many VPs are scored [12.1]. Damage levels may have other damage effects [14.1.2, 14.1.3]. Apply the highest damage level achieved. Do not remove the surface unit from the map, even if the damage is fatal.

<i>Number of Bombing Hits</i>	<i>Damage Level</i>	<i>Effects</i>	<i>VPs Scored</i>
Hits equal to or exceeding triple the damage value	Fatal Damage	Flak suppressed No taking off Ship dead in the water	Triple the unit's VP value
Hits equal to or exceeding double the damage value	Crippling Damage	Flak suppressed No taking off Ship dead in the water	Double the unit's VP value
Hits equal to or exceeding the damage value	Heavy Damage	Flak suppressed No taking off	Unit's VP value
Hits equal to or exceeding half the damage value	Minor Damage	None	Half the unit's VP value
Hits greater than zero	Slight Damage	None	1 VP
Recce mission completion [15.2.1.2]	None	None	Unit's VP value

Ship Defence

The defence modifiers for ships assume they are making way in open water and able to evade bombing attacks. Surprise attacks 'out of the Sun' make evasion harder.

Ship Defence Example. A DD with a -2 defence modifier is dive-bombed from 'out of the Sun'. The modifier is reduced to -1.

14.1.2 Flak Suppression

If the total bombing hits inflicted on a surface unit equal or exceed its damage value, that target is suppressed. Suppressed targets cannot make flak attacks for the rest of the game [14.2.1].

14.1.3 Ship Defence

If a squadron makes a dive- [15.3.2] or steep-angle [15.3.3] bombing attack on a ship from 'out of the Sun', reduce the defence modifier by 1 (toward 0). The attack is 'out of the Sun' if the squadron is in the Sun arc at the moment it drops its bombs and the line of sight from the target through the bomber to the map edge is unblocked, or the attack is made in the target's square and the attacker's move qualifies per rule 4.6.2.

A ship with crippling or fatal damage is considered dead in the water. It has a defence modifier of +0 instead of the printed value. Mark it with a Defence Modifier marker. Scenario special rules might state that a ship begins a scenario dead in the water (i.e. not moving), even though no damage has been inflicted. In such instances flak suppression effects do not apply until a damage level of heavy or worse has been inflicted.

14.2 FLAK UNITS

Some surface units can fire flak at squadrons. These are termed flak units.

Units are marked with three characters, such as H1², which stand for the flak type, flak strength, and fire channels.

The first character is the type of flak the unit can fire:

- S = Small arms (barrage fire only)
- L = Light flak (barrage or direct fire)
- H = Heavy flak (barrage or direct fire)

The second character is the flak strength of the unit, with values from 0 to 2.

The third, superscripted, character is the number of fire channels. This is the number of targets the unit can shoot at with direct fire during the turn. Small arms units do not have a fire channels value since they cannot use direct fire. Fire channels have no effect on barrage fire.

Ships may be marked with two types of flak. In this case treat them as two separate flak units for the purposes of flak combat.

Barrage balloon effects are also resolved as flak attacks [14.3].

14.2.1 Flak Modes

There are two modes of operation for flak: direct fire and barrage fire.

Direct Fire. Heavy and light flak units can make direct fire attacks. During the Combat Phase they can attack a number of squadrons up to their fire channels value.

Barrage Fire. All flak units can perform barrage fire. Flak units using barrage fire cannot make direct fire attacks in the same turn.

Ship units with two types of flak (such as light and heavy) may use different modes for each flak type.

14.2.2 Flak Zones

Flak zones are created by barrage fire.

Small Arms. Units with small arms automatically create a flak zone in the square they occupy.

Barrage Balloons. Balloon counters create a flak zone in their square and in all squares directly below, down to the ground [14.3].

In any Administration Phase, heavy and light flak units can place or remove a Barrage marker from the map, or move it from one location to another. Markers can be placed even if the flak unit made direct fire attacks earlier that turn. Place the marker at the junction of four squares.

Heavy Flak. Heavy flak units place Barrage markers at the junction of any squares in the same or adjacent columns to the flak unit.

Light Flak. Light flak units place Barrage markers at one of the junctions of the unit's own square.

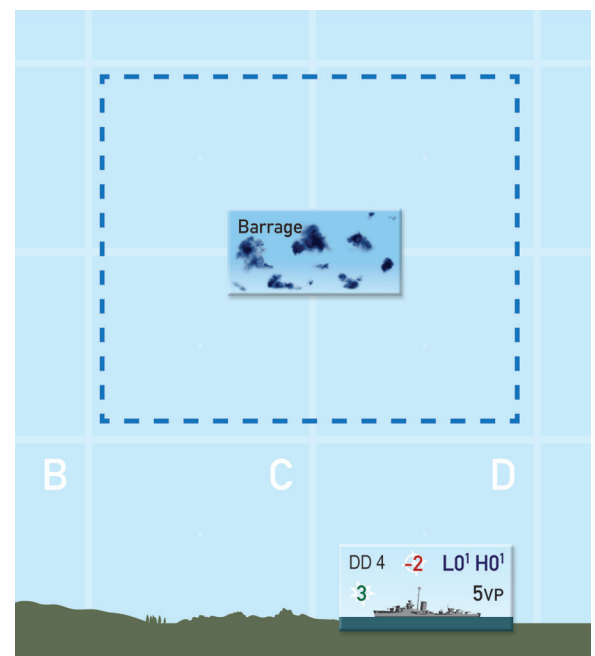
The flak zone extends into all four squares that touch the junction point. A barrage can be placed even if the flak unit does not have a line of sight [4.6] to any of the squares forming the junction. Do not place a Barrage marker in such a way that would cause its flak zone to overlap the flak zone of a Balloon counter [14.3].

A flak unit with a Barrage marker on the map cannot use direct fire.

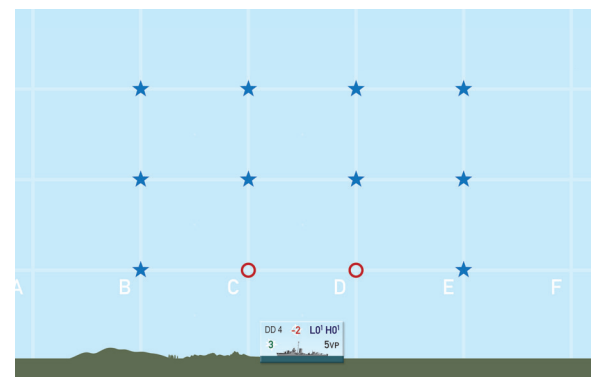
14.2.3 Barrage Fire Attacks

As soon as a squadron finishes movement, check to see if it entered, or spent MPs turning or circling in, one or more squares in a flak zone (leaving a flak zone square does not trigger an attack). If it did any of

Direct Fire Channels. A H0² flak unit has two fire channels, so it can make direct fire attacks on up to two units in the Combat Phase.



Barrage Example. The dashed line marks the flak zone emanating from the Barrage marker.



Flak Barrage Placement. The stars and circles indicate legal junctions for placing heavy flak Barrage markers. (The stars continue up to altitude 19.) The circles indicate legal junctions for placing light flak Barrage markers.

Who Rolls? Barrage fire attacks friend and foe indiscriminately. So although the flak belongs to one side, the non-moving player is always responsible for making the attack roll.

Multiple Flak Zones Example. A squadron flies through two flak zones—one belonging to heavy flak and one to small arms. It does not matter how many MPs were spent in each zone, the opposing player can choose either flak unit to make the attack. He reckons the heavy flak has the best chance of inflicting losses, so selects that unit to roll, but will add +1 to the dice roll for the supporting fire of the small arms zone.

Supporting Fire. Because a squadron can only be attacked by direct fire once each Combat Phase, if you want to use multiple flak units against it, you must use supporting fire.

Supporting Fire Example. Two H1² flak units attack a squadron. One flak unit rolls the attack and the other contributes a +1 supporting fire modifier. Each unit has used one of its two fire channels to make the attack.

Friendly Fire Example. An H1² flak unit attacks a bomber squadron that is also being attacked by a friendly fighter unit in the same square. Attacks are resolved against both the bomber and the fighter that has tallied it. However, this only counts as one fire channel used.

these things, the non-moving player rolls a barrage flak attack against the moving squadron. If a dogfight moves into or stays in a flak zone, roll attacks separately against each squadron in the dogfight.

To make a flak attack the non-moving player selects a single flak unit in whose zone the squadron moved and rolls an attack [14.2.5]; if it flew through the flak zones of multiple flak units, only one attack roll is made using the selected flak unit. However, each additional flak unit is considered to contribute supporting fire that adds +1 to the dice roll.

A flak barrage attacks every friendly and enemy squadron that moves through it. There is no limit to the number of squadrons a flak barrage can affect.

14.2.4 Direct Fire Attacks

Direct fire is resolved in the Combat Phase, before bombing or air combats are resolved. Flak units that placed a Barrage marker cannot make direct fire attacks [14.2.1]. Direct fire attacks target individual squadrons on the map.

Heavy flak can fire at any squadron in the same column or up to two columns away, regardless of altitude. Light flak can fire at squadrons in the same or adjacent columns at altitudes 0 to 4.

Flak units cannot use direct fire against squadrons to which they have no line of sight [4.6].

A direct firing flak unit can attack a number of squadrons up to its fire channels value. It cannot attack the same squadron more than once.

A squadron can only be attacked by direct fire once in each Combat Phase.

To make a direct fire attack the player controlling the flak selects a single flak unit to roll the attack. Multiple flak units can be assigned to attack the same squadron with direct fire, but only the chosen flak unit rolls the attack. Each additional flak unit is considered to contribute supporting fire that adds +1 to the dice roll. Lending supporting fire modifiers to a roll is treated as an attack for the purpose of counting fire channels used.

Roll an attack against the target squadron [14.2.5]. If other squadrons in the same square are connected to that target by a tally or chain of tallies, roll a separate attack against each one. These additional attacks do NOT count towards the use of fire channels. It is possible that different dice modifiers may apply to different squadrons.

14.2.5 Resolving Flak Attacks

To resolve flak attacks the player rolls two dice, modifies the roll as indicated and checks the result on the Flak Attack Table using the Barrage or Direct fire column, as appropriate. Some listed modifiers apply to both barrage and direct fire; others apply to direct fire only. Direct fire modifiers for altitude are based on the target squadron's altitude. Results are as follows:

- No hits are scored and no cohesion check is made.
- C Roll a cohesion check [10.7].
- # The value listed is the number of hits scored. After confirming hits [10.6], roll a cohesion check [10.7].
- 1d6 Roll one die. The result is the number of hits scored. After confirming hits [10.6], roll a cohesion check [10.7].

Roll to confirm any hits using a firepower value of 0 if a barrage fire attack or 1 if a direct fire attack [10.6].

In addition, apply the result listed in the Bomb column if the target dropped bombs during movement. This column indicates the modifier

applied on the Bombing Table to that squadron's bombing attack that turn. Add a Bombing -1 or -2 modifier marker to the Bomb Load marker as a reminder. If a Bombing Modifier marker is placed during movement by barrage fire and another placed in the Combat Phase by direct fire, they are *not* cumulative; only the larger penalty applies.

14.2.6 Flak, Bombing, and Air Combat

Since flak attacks are resolved before bombing, squadrons that are eliminated by flak do not resolve bombing attacks [15.4].

Since flak attacks are resolved before air combats, a fighter squadron that is broken by flak loses its tally [7.2.2] and therefore cannot attack in air combat in the Combat Phase (though it can defend) [10.1].

14.2.7 Advanced Flak

Scenario special rules may list that heavy flak benefits from one or more advanced flak capabilities. If a capability is listed in the special rules, apply it to all heavy flak attacks in the scenario.

The advanced flak capabilities are:

Improved Fire Direction. Heavy flak attacks apply the improved fire direction modifier to all direct fire attacks.

Proximity Fuse. Heavy flak attacks apply the proximity fuse modifier to all direct fire attacks.

Dual-fuse Ammo. Increase the firepower of heavy flak attacks (barrage or direct fire) by 1 when rolling to confirm hits [10.6].

14.2.8 Low-angle Naval Guns

An underlined heavy flak rating on a ship indicates low-angle guns.

Low-angle guns can only use direct fire at targets that are at altitude 0 or 1 but are not in the square directly above the ship. They can only place Barrage markers at the junction of squares at altitude 0. Any flak zone generated does not extend into the square directly above the ship.

14.3 BARRAGE BALLOONS

The scenario will specify the set-up locations of barrage balloons. Balloon counters are placed on the map during set-up at an altitude from 0 up to 2. Once placed they cannot move.

Barrage balloons create a flak zone [14.2.2] with a strength of 0 in the balloon square and in all squares below, down to the ground. They function like flak barrage, affect all squadrons that move in the flak zone, and can supply supporting fire to other flak unit barrage attacks [14.2.3].

Balloons can be attacked in air combat by squadrons on sweep missions. Squadrons do not roll to tally balloons. Instead, if a squadron is within four columns of a balloon and chooses to tally it, the tally is automatic. The tally is lost if the squadron moves more than four columns away.

A squadron with a tally on a balloon is not subject to its flak zone if it moves into the balloon's square. A squadron can attack a balloon in the Combat Phase provided it has a tally on the balloon, occupies the same square, and is not in an air combat with any other squadron.

Balloons have a speed and turn rating of 0 and a protection rating of 0. In air combat with balloons, only the attacker rolls. Do not make a defender roll. However, the attacker rolls cohesion [10.7] and uses up ammo [10.7.2] as normal.

Track balloon losses with Loss markers, placing them on the balloon counters. The Max Losses value for balloon units is 2. If this number of losses is inflicted, eliminate the balloon and remove the counter from play. Its flak zone disappears.

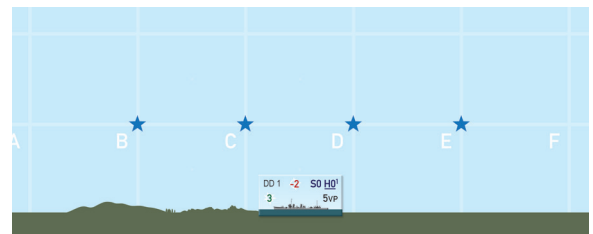
Advanced Flak

As the war progressed there were many advances in flak that enhanced its effectiveness.

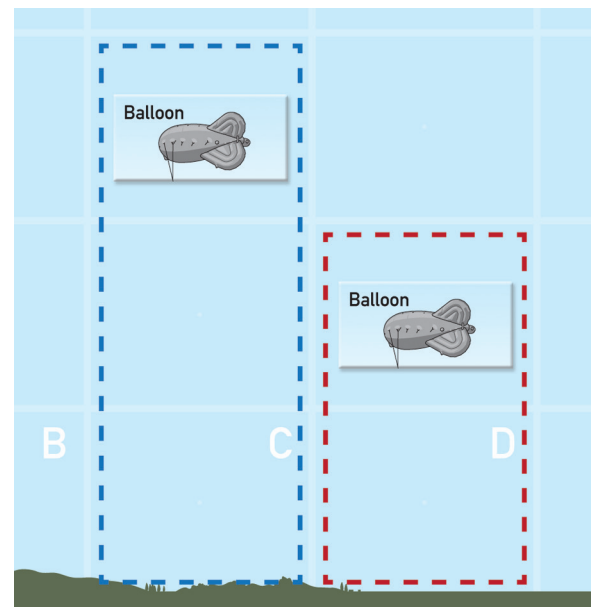
Fire directors—both optical and radar—were one major area of improvement, providing better prediction of the target's movement.

On the Allied side, proximity fuses for heavy flak, an offshoot of radar technology, were a major advance that radically reduced the number of rounds needed to damage or destroy an aircraft.

For the Germans, late-war experiments with dual-fused ammo, detonating on timing or impact, proved a multiplier to the effectiveness of heavy flak.



Low-angle Naval Guns. The stars indicate legal junctions to place Barrage markers.

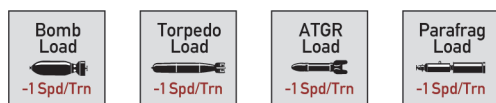


Barrage Balloons. The dashed lines indicate the flak zone of each balloon. Note that a squadron flying through both balloons' flak zones would be subject to the supporting fire modifier from one of the zones.

Bombing Attack Rules. Adding these bombing rules changes the way bomber, escort, and sweep squadrons behave. Please pay close attention to the differences.

Exception rules for strafing and fighter-bombers have been printed on the page opposite. These have been added to the sidebars as there is no space to fit them in the main rules text, but they should be treated as rules.

Weapon Loads. Remember that rule 13.5.1 says only *one* weapon load can be carried. For bombers this will be a bomb load [9.2.1] or one of the special weapon loads listed at the right. Some scenarios might assign AT pods [13.5.6] to bombers with strafing missions [15.2.1.1], in place of the normal bomb load.



Weapon Load Markers. Torpedo, ATGR, and Parafrag Load markers are variants of Bomb Load markers. If there are not enough markers of a particular type, use other markers as a substitute. For example, Drop Tanks markers can substitute if there are not enough Parafrag Load markers.

Mission Summaries. These rules change the nature of some of the missions. As with the original mission rules, we ask players to abide by the spirit of the rule, as found in the summary.

Bombing Mission Summary. Bomber squadrons fly directly to their target, changing height where necessary to set up a bombing attack. They bomb their targets and then head home.

Bombing Mission Altitude Changes. We permit bomber squadrons a limited ability to climb or dive so they can find the right altitude before starting their bombing profile.

These limits are relaxed when flying a bombing profile. However, a squadron that starts its bombing profile only to abort it later for the sole purpose of being freed from movement restrictions would be considered to be acting against the spirit of the rules.

Strafing. Strafing missions are commonly assigned to fighter-bombers and those light or medium bombers that can perform strafing attacks against suitable targets.

15.0 BOMBING

If a scenario instructs players to use the bombing attack rules, squadrons with bombing missions will attempt to attack enemy surface unit targets. They score VPs for inflicting hits on those targets [14.1.1]. They do *not* earn VPs for exiting the map carrying their bomb load [12.1].

There are three stages to a bombing attack.

- (1) The bomber flies toward the target [15.2.1].
- (2) On approaching the target it flies a bombing profile [15.3].
- (3) After completing the profile the attack is resolved [15.4].

15.1 WEAPON LOADS

Bombing attacks require the correct weapon load. For most types of attack this is bombs, but some attacks require special loads.

Torpedo attacks require torpedo loads. Squadrons carrying torpedo loads must make torpedo attacks [15.3.5]. Mark these loads with Torpedo Load markers instead of Bomb Load markers.

Rocket attacks require air-to-ground rocket (ATGR) loads. Squadrons carrying ATGR must make rocket attacks [15.3.6]. Mark these loads with ATGR Load markers instead of Bomb Load markers.

Parafrag attacks require parafrag loads. Squadrons carrying parafrag loads must make parafrag attacks [15.5.2]. Mark these loads with Parafrag Load markers instead of Bomb Load markers.

Strafing attacks require that a squadron meets prerequisites [15.3.7]. However, gun pod and AT pod loads may be carried [13.5.6].

All rules that apply to bomb loads also apply to special weapon loads. Torpedo, ATGR, and Parafrag Load markers are used in place of Bomb Load markers as a reminder of the weapon load carried.

Unless scenario special rules say otherwise, the player can choose what weapon load a squadron carries.

15.2 BOMBING MISSIONS

If a scenario instructs players to use the bombing attack rules, modify bombing, escort, and sweep missions as follows.

15.2.1 Bombing Missions

Bombers can attack any surface target. Instead of flying to the far map edge, they fly toward the column occupied by a target, then fly a bombing profile [15.3] to conduct a bombing attack [15.4]. After attacking, they return to base, the bombers exiting from *either* map edge [9.2.6].

On their way to the target, bombers spend 2 MPs each turn to move two squares (though climbing may reduce the squares moved). Jet bombers spend 3 MPs to move three squares. The following restrictions apply:

- (a) They climb or dive no more than one altitude level each turn.
- (b) Bombers in formation must all change altitude in the same phase.
- (c) Bombers do not receive the +1 MP diving bonus [8.2].

Ignore restrictions (a) to (c) while flying a bombing profile [15.3]

Players may not stack more than two friendly bomber units (squadrons or flights) in the same square at the end of movement. They must avoid any movement that can cause such stacking.

15.2.1.1 Strafing

A strafing mission is a variant of the bombing mission that permits a squadron to strafe as well as bomb. The squadron must be assigned a weapon load [15.1]. The squadron may conduct, in any order, one bomb-

ing attack and up to two strafing attacks [15.3.7]. It may attack the same or different target until its ammo is depleted by strafing and its weapon load expended or jettisoned, or it wants to stop attacking, at which point it returns to base.

15.2.1.2 *Recce*

A recce (reconnaissance) mission is a variant of the bombing mission. A squadron on a recce mission does not carry a bomb load.

To complete a reconnaissance, fly a level-bombing profile against the target [15.3.1]. The squadron must maintain line of sight to the target throughout the profile. If the squadron is unbroken at the moment it is above the target, the reconnaissance succeeds. Resolve any barrage flak attacks [14.2.3] before determining success.

After a successful reconnaissance the squadron returns to base [9.2.6]. If it safely escapes or exits the map, even if broken, score VPs equal to the VP value printed on the target counter.

15.2.1.3 *Bomber Circling*

Once per scenario, prior to commencing its bombing profile, a bomber squadron may begin to circle [8.3.1]. Circling is entirely optional. Escorts for bombers may circle when the bombers start to circle. In a formation some bombers and their escorts may circle while others continue moving, which may break up the formation. Bombers and their escorts can exit the circle in any subsequent Movement Phase. Once a bomber squadron exits the circle it cannot circle again in that game.

15.2.2 *Escort Missions*

All normal escort behaviours apply [9.2.2]. However, if the escorted bombers return to base [9.2.6], change altitude [15.2.1], or fly their bombing profile [15.3], the escorts climb or dive to match any anticipated altitude change (see sidebar).

Each bomber formation may have all its escorts switch to a sweep mission once per scenario, in the Administration Phase. They switch at the same time and may form back up on the bombers as escorts in some later game turn [9.2.2.2]. Escorts that switch to sweep can circle [15.2.3].

15.2.3 *Sweep Missions*

All normal sweep behaviours apply [9.2.3]. However, sweeps have the option of circling [8.3.1]. A squadron that starts circling continues to circle until it commences Pursuit, Support, Continue, Return to Base, or Form Up behaviour [9.2.3]. If the sweep is part of a wing, all squadrons in the wing circle together.

A sweep squadron can strafe surface units [15.3.7]. It does not return to base after attacking but can continue strafing until it tallies or continues its sweep. After commencing a strafing attack, a sweep squadron can move 3 MPs, until it continues its sweep.

15.2.4 *Fighter-bombers*

Fighter-class units carrying weapon loads are called 'fighter-bombers' and behave as bombers up to the moment they jettison or drop their bombs, after which they revert to being fighters [3.2.1].

Unlike bombers, fighter-bombers are permitted to roll tally attempts [7.2], but until they return to being fighters they do not have an alert state [7.1]. They can become alerted when they become fighters.

Fighter-bombers must jettison their bombs immediately the moment they tally an enemy squadron, either in the Tally Phase or following an air combat [9.2.1.1]; they also cease any bombing profile they are flying [15.3]. A fighter-bomber that no longer has bombs becomes a fighter, changes its mission to sweep [15.2.3], and may strafe [15.3.7].

Strafing Mission Exceptions. Squadrons carrying gun pods or AT pods cannot bomb, and can only make strafing attacks.

Fighter-class squadrons with a Strafing mission that are assigned gun pods change their mission at set-up to Sweep. See the fighter-bomber exceptions, below.

Circling. Circling is a useful tool that allows some bombers to delay their attacks so as to coordinate a simultaneous strike on a target by multiple squadrons and saturate the defences.

Commencing Circling. Bomber squadrons can commence circling at any point during movement.

Escort Mission Summary. Escorts fly with or near the bombers, moving at the same rate. Near the target the escorts will break off and circle while the bombers make their bombing attack. After the attack the escorts form back up on the bombers.

Anticipating Bomber Moves. Escorts move before bombers, so should climb or dive to anticipate bomber altitude changes. Escorts should try to maintain the same relative position to the bombers and not freely reposition themselves.

Sweep Mission Summary. Sweep squadrons usually fly above or ahead of the main body of a bomber force. Their job is to clear a path for the bombers or cover against high interceptors. Near the target they will circle away from flak before heading home.

Escorts to Sweep. Escorts that switch to sweep [15.2.2] can perform sweep behaviours [9.2.3] and strafe [15.3.7].

Fighter-bombers as Bombers. Aside from the exceptions of being able to tally and having to place Ammo markers in air combat [10.7.2], fighter-bombers are bombers in all respects while carrying bombs, including the column of the Cohesion Table they roll on [10.7].

Fighter-bomber Exceptions. These are exceptions to the rules on fighter-class units carrying gun pods and AT pods instead of bombs:

Gun Pods. A squadron with a strafing mission assigned a Gun Pod marker changes its mission at set-up to Sweep.

AT Pods. A squadron with a strafing mission assigned an AT Pod marker cannot tally and remains a bomber at all times.

Fighter-bomber Movement. Fighter-bombers get to increase their MP allowance near the target. Note that escorts do not get this benefit. It is recommended that escorts for fighter-bombers circle near the target [15.2.2] while their charges zoom about.



PHOTO: A bomb-armed Typhoon beating up shipping. Unlike the dive bomber, which would bomb and dash for home, fighter-bombers could wade in at low altitude and mix it with bomb or ATGR attacks and cannon strafes.

No Aim Penalty Example. A squadron flies a dive-bombing profile. It starts at altitude 2 and dives to altitude 0. This does not meet the minimum aim requirement of diving four levels, so the dive-bombing attack goes ahead, receiving the +3 modifier for dive bombing and also the -1 'no aim' penalty.

Multiple Profiles. A squadron cannot fly two profiles at the same time, but could complete one profile by attacking and then commence a second in the same turn. For example, a squadron could make a level-bombing attack and, on its completion, commence a strafing profile against another target.

At the end of an air combat, defending fighter-bombers can refuse to tally an enemy per 7.2.4.1 so as to retain their bomb load and continue their bombing mission. Only fighter-bombers may refuse to tally.

Fighter-bomber squadrons with tactical flexibility [9.3.2] can split when the squadron tallies in the Tally Phase, with one flight jettisoning bombs and becoming a fighter while the other continues as a bomber.

When starting movement within four columns of an enemy surface unit, fighter-bombers can move 3 MPs instead of the normal 2 MPs for bombers (and may add 1 MP for diving if flying a bombing profile).

Fighters with recce missions [15.2.1.2] carry no bombs. Treat them as bombers throughout the scenario. Like bombers they may never tally.

15.2.5 Attack Positioning

All the behaviours in the preceding sections assume that bomber squadrons fly directly toward the target's column then commence their attack as they approach. Alternatively, bomber squadrons (and their escorts) are allowed to fly into and past the target's column, then turn to face the opposite direction, fly back, and conduct the bombing.

Bombers do not all have to attack from the same direction. Some bombers can attack from the left and others from the right in the same scenario.

15.3 BOMBING PROFILES

A squadron can make one attack against one surface target each turn. At any point during movement a squadron can designate its target and the bombing profile it is flying. (Declare this to your opponent.) It then commences flying that profile. The bombing profiles listed in the following sections describe when targets can be designated and how a squadron must move until it drops bombs on the target. Any profile can be flown, provided the squadron meets the listed prerequisites.

The aiming instructions indicate the movement that must be completed, while flying a profile, in order to aim. Aiming is optional, but failure to complete aiming means the attack takes place with the 'no aim' penalty.

A squadron can only fly one profile at a time, but can cease a profile at any point so as to designate a new target or commence a different profile.

While flying a bombing profile, bombers cannot circle. On turns that they commence or fly a profile, bombers cannot evade [13.4.2], but they can claim the 1-MP bonus for diving [8.2] if the profile permits them to change height. Where the profile refers to being 'over' or 'above' the target, this means the bomber occupies a square in the same map column as the target.

On completing the profile, the squadron drops its bombs. Take the Bomb Load marker from the squadron's Wing Display track and place it on the target; it no longer modifies the squadron's basic speed or turn values. If bombs are dropped mid-move, complete any remaining movement. Resolve the attack in the Combat Phase after direct fire flak attacks but before air combats take place. A squadron is not required to complete a profile, but it can only drop bombs if it has completed one.

15.3.1 Level-bombing Attack

Prerequisites. None. All aircraft can perform level-bombing attacks.

Aiming. To aim, the squadron must fly for two squares without changing height or facing.

Profile. Designate the target when the squadron is within two or fewer columns of it. The squadron must fly over the target at any altitude without changing height or facing. Once above the target, the squadron drops its bombs.

15.3.2 Dive-bombing Attack

Prerequisites. The squadron must have the Dive Brakes ability [3.3] and a line of sight [4.6] to the target at the moment the profile commences.

Aiming. To aim, the squadron must dive at least four squares.

Profile. Designate the target when the squadron is either in or adjacent to its column at any altitude from 2 to 10. Spending as many MPs as possible, dive directly down to altitude 1 or 0. If starting from an adjacent column, the squadron must move directly above the target. On reaching the desired altitude above the target, the squadron drops its bombs.

If a squadron completes movement facing vertically down, treat any air combat it is involved in during that turn as being at high speeds [13.8.1].

15.3.3 Steep-angle Bombing Attack

Prerequisites. The squadron must be a fighter-bomber or have the Dive Brakes or Speed Brakes ability [3.3]. It must have a line of sight [4.6] to the target at the moment the profile commences.

Aiming. To aim, the squadron must dive at least three squares.

Profile. Designate the target when the squadron is either in or adjacent to the target's column at any altitude from 2 to 10. Dive directly down to the attack altitude, which must be 1 or higher. If starting from an adjacent column, the squadron must move directly above the target.

On reaching the attack altitude above the target, the squadron drops its bombs. Aircraft with S bombsights have an improved attack modifier.

15.3.4 Glide-bombing Attack

Prerequisites. All aircraft may make glide-bombing attacks. However, medium and heavy bombers [3.2] may only make glide-bombing attacks where they are either flights or specifically permitted by scenario special rule. The squadron must have a line of sight [4.6] to the target at the moment the profile commences.

Aiming. To aim, the squadron must dive exactly two squares.

Profile. Designate the target when the squadron is two columns from it, at altitude 2 or higher. The squadron flies in a diagonal dive toward the target, diving one altitude level for each column it moves closer. This means that if the squadron starts at altitude 4 it must enter the target's column at altitude 2.

Once above the target, the squadron drops its bombs. Aircraft with S bombsights have an improved attack modifier.

15.3.5 Torpedo Attack

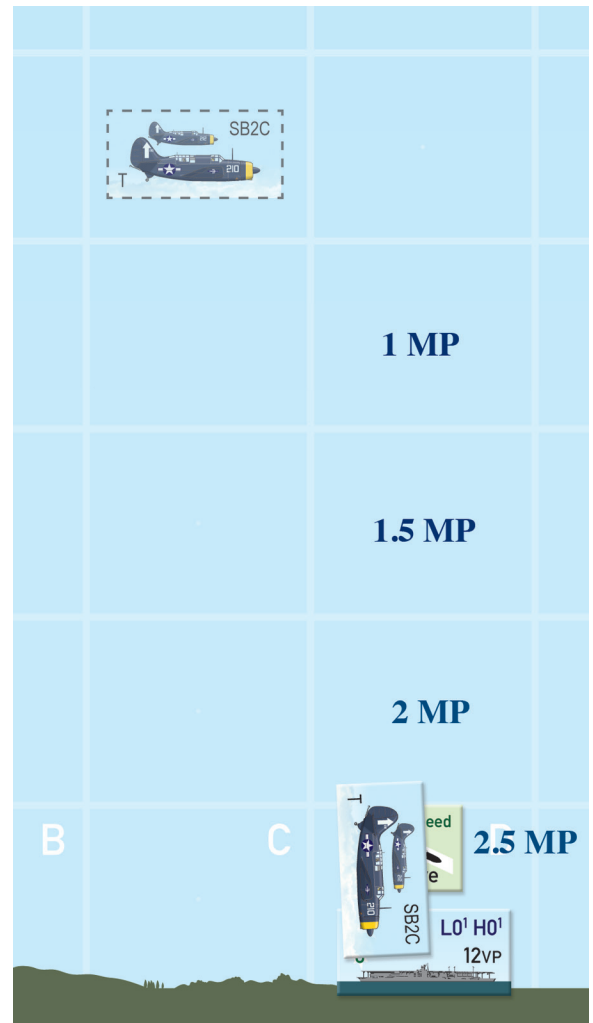
Prerequisites. The squadron must have the Torpedo ability [3.3] and be carrying a torpedo weapon load [15.1] at altitude 0. The target must be a ship [14.0].

Aiming. To aim, the squadron must fly two squares at altitude 0 without turning.

Profile. Designate the target when the squadron is within two or fewer columns of it. The squadron flies toward the target at altitude 0 without turning. A squadron may not split while flying the torpedo attack profile [9.3].

Once adjacent to or in the same square as the target (player's choice), the squadron drops its torpedoes. Place the Torpedo Load marker on the target after dropping. A torpedo attack from the adjacent square applies the long-range penalty to the bombing attack roll.

The bomb value used for torpedo attacks is always 20 (ignore the aircraft's listed bomb value). Apply the torpedo attack modifier listed on the ADC [3.3] to the attack.



Dive-bombing Example. A SB2C Helldiver squadron flies a dive-bombing profile. Claiming the +1 MP dive bonus, it dives to altitude 0, paying only 0.5 MP for each square while diving vertically in the target column. It cannot spend the final half MP, but that is okay.

As it has flown a dive-bombing profile and ended its move facing down, any air combat the Helldiver squadron is involved in is treated as high speeds.

Dive Bombers and Combat

Once committed to a dive, fighters without dive brakes could not attack dive bombers without overshooting. In the game we represent this by applying a 'high speeds' effect to combat.

Torpedo Attack Modifier

The torpedo attack modifier reflects the reliability and effectiveness of the torpedoes. American torpedoes were notoriously unreliable in the early stages of the war.

Slow Torpedoes

Slow torpedoes lacked 'air tails' that permitted high speed drops, so the bombers had to fly especially slow.

Air-to-Ground Rockets (ATGR)

ATGR were highly accurate weapons, but their explosive payload was small, making them less effective against well-protected targets or infrastructure.



PHOTO: An SBD dive bomber prepares to attack Wake Island in 1943. The dive bomber permitted precision attacks while limiting exposure to low-altitude flak.

Strafing Firepower Examples. If the strafing squadron's firepower is 0, the strafing bomb value is 1 [15.3.7].

If the firepower is 2, the strafing bomb value is 2. A Gun Pod marker would increase the value to 4 [13.5.6]. If attacking a hard target such as a Bunker, halve the total to 2 [14.0].

If the strafing squadron has a firepower of 2, and an AT Gun value of 4, and the target is a tank unit, the strafing bomb value is 4 [15.3.7.1] (the value of the AT Gun supercedes the squadron's normal firepower).

Interpreting Bombing Results

The bombing system covers so many possible outcomes that players must interpret what happened.

A 100% result means that a critical part of the target is hit: a magazine on a ship, for example, or an airfield ops room.

A 50% result represents a good concentration of bombs. Maybe some vitals were hit, but not catastrophically.

Lesser results represent glancing blows, or minor attrition.

15.3.5.1 Slow Torpedo Attack

If the Torpedo is listed as Slow on the ADC, mark the squadron with a Slow marker [3.3.2] when it commences its profile. Remove the Slow marker at the start of the Movement Phase after the attack is rolled.

15.3.6 Air-to-Ground Rocket (ATGR) Attack

Prerequisites. The squadron must have the ATGR ability [3.3] and be carrying an ATGR weapon load [15.1].

Aiming. To aim, the squadron must fly into the target's square OR into an adjacent square while facing the target's square.

Profile. Designate the target when the squadron is within four or fewer columns of it. The squadron flies the shortest route to that target's square [9.2.5]. It cannot dive more than one altitude level on the turn it attacks.

Attack when either in or adjacent to the target's square at altitude 0. Place the ATGR Load marker on the target. An ATGR attack from an adjacent square applies the long-range penalty to the bombing attack roll.

Instead of the aircraft's bomb value, use the value printed next to the ATGR ability. Halve this against hard targets [14.0].

15.3.7 Strafing Attack

Prerequisites. All aircraft with a firepower value can strafe. Squadrons must have a strafing or sweep mission. No bomb load is required; however, if the aircraft's ammo is depleted, it cannot strafe. Squadrons with a tally cannot strafe.

Aiming. To aim, the squadron must fly into the target's square.

Profile. Designate the target when the squadron is within four or fewer columns of it. The squadron flies the shortest route to that target's square [9.2.5]. It cannot dive more than one altitude level on the turn it attacks.

The squadron attacks when it enters the target's square. Unlike normal bombing attacks, no bomb load is expended (though see 15.5.5).

The bomb value for the attack is equal to the squadron's firepower value (add 2 for gun pods [13.5.6]). Halve this against hard targets [14.0].

Treat squadrons with a firepower of 0 as having a bomb value of 1.

If there are two firepower values listed separated by a slash, use the first value for strafing [3.3].

After the strafing attack, mark the squadron with a Low Ammo marker; if its ammo is already low, mark the squadron as ammo depleted. Bomber squadrons do not normally mark ammo, but are so marked after strafing, though Ammo markers have no effect on bomber cohesion rolls [10.7.2].

Unlike other bombing attacks, after strafing the squadron can strafe again, provided its ammo is not depleted. Until it attacks again the squadron can move freely provided it stays within 4 columns of any enemy surface unit. If it cannot strafe again it must continue its mission behaviour [15.2.1.1, 15.2.3].

15.3.7.1 Strafing Abilities

A squadron with a Heavy Gun or AT Gun ability uses its ability value instead of its firepower as the strafing bomb value. Heavy Gun abilities can be used against all targets; AT Gun abilities are used only against tank, truck, train, or ship units. AT pods [13.5.6] grant an AT Gun 5 ability.

15.4 RESOLVING BOMBING ATTACKS

To resolve a bombing attack, the bombing player must:

- (1) Roll on the Bombing Table to see what percentage of bombs hit.
- (2) Calculate how many bombing hits are scored based on the rolled percentage of the bomb load.

Roll two dice and modify as indicated by the Bombing Table. Refer to the Altitude Modifier Table to get the modifiers for the bombsight, based on the altitude from which the attack is made. Modifiers for disrupted or broken state use the *current* state of the bomber squadron (i.e. after direct fire flak attacks in that Combat Phase). If the squadron was eliminated by losses to flak, remove the Bomb Load marker. No attack takes place.

Total dice modifiers cannot exceed +6 or -6. Check the final modified roll against the Bombing Table to find the percentage of hits.

Multiply the squadron's bomb value by the percentage rolled and round to the nearest whole number [1.2]. (It is possible to round down to zero.) This is the number of bombing hits inflicted [14.1.1].

15.5 SPECIAL BOMBING ATTACKS

15.5.1 Anvil Attack

An anvil attack is a torpedo attack [15.3.5] launched by two or more squadrons in the same game turn against the same ship. The anvil attack modifier applies to all torpedo attacks against that ship that turn.

15.5.2 Parafrag Attack

Squadrons carrying a Parafrag Load marker [15.1] make parafrag attacks. Parafrag attacks must be resolved as level-bombing attacks at altitude 0 or 1. Apply the parafrag modifier on the Bombing Table. Halve the bomb value of parafrags if used against hard targets or ships [14.0].

15.5.3 Kamikaze Attack

Prerequisites. Squadrons that are designated as kamikaze units by the scenario can only make kamikaze attacks. Fighter-class units that are kamikazes are treated as bombers, not fighter-bombers, so they cannot jettison bombs or become sweep squadrons. (Treat kamikaze units as bombers for all purposes, including movement and ammo.)

Aiming. To aim, the bomber must fly into the target's square.

Profile. Designate the target when the squadron is within four or fewer columns of it. The squadron flies the shortest route [9.2.5] to that target's square, then stops movement and drops bombs on entering the square.

When resolving bombing, apply the kamikaze modifier to the attack. Increase the printed bomb value by 2 for *each aircraft* remaining in the squadron. The number of remaining aircraft is equal to the squadron's Max Losses value less any losses on the squadron's Wing Display track (stragglers are NOT losses). After bombing is resolved the squadron has crashed and is removed from play (place it on its Wing Display track).

15.5.4 Skip-Bombing Attack

Squadrons can use skip-bombing if the scenario special rules state they are trained for it. Skip-bombing attacks are only made against ships, use a normal bomb load, and are resolved as level-bombing attacks at altitude 0. Apply the skip-bombing modifier on the Bombing Table.

15.5.5 Combining Strafing With Other Attacks

It is possible to combine, in a single attack, strafing [15.3.7] with ATGR [15.3.6], parafrag [15.5.2], or skip-bombing [15.5.4] attacks if the squadron meets the prerequisites for both types of attack.

Make an attack in the same square as the target (ATGR attacks may not combine if attacking from an adjacent square). Use the skip-bombing, parafrag, or ATGR attack profile, applying that profile's attack modifier, *not* the strafing modifier. Add the strafing bomb value to that of the ATGR or bombs. Mark the squadron with a Low Ammo marker [10.7.2] per the normal strafing rules.

Optional Bombing Rule. If both players agree before play, use this rule, which reduces the randomness of bombing. When resolving bombing the bombing player can choose to either roll on the Bombing Table *or* treat the attack as if a dice result of 7 was rolled. (Modify this 'roll' of 7 as normal.)

Calculating Hits Examples. If the bomb value is 13, a percentage of 50% results in 6.5, rounded to 7 hits; 25% results in 3.25, rounded to 3 hits; 10% results in 1.3, rounded to 1 hit.

Anvil Attacks

Anvil attacks required groups of bombers to attack at 90 degrees from each other so that wherever the ship steered, it would receive a broadside from one of the groups.

Parafrags

Parafrags, an early form of cluster bomb, were parachute-retarded fragmentation bombs used by the USAAF in the southwest Pacific, particularly against airfields.

Kamikaze

Tokkō units, or 'special attack units', became known as *kamikaze* by the Americans for their massed suicide attacks on ships.

Kamikaze Attack Example. An A6M5 Zero flight makes a kamikaze attack on an American CV. The squadron's bomb value is 7. At the moment it attacks the flight's Max Losses value is 3 and the flight has taken 1 loss from fighters and flak but is undisturbed. Rolling on the Bombing Table, it achieves 25% hits on the attack.

The bomb value is increased by 4 to 11 by the number of remaining aircraft (i.e. 2) in the flight. Multiplying 11 by 25% (and rounding) means that 3 bombing hits are scored on the CV. Now that bombing is resolved the Zero flight is eliminated and removed from play.

16.0 INDEX

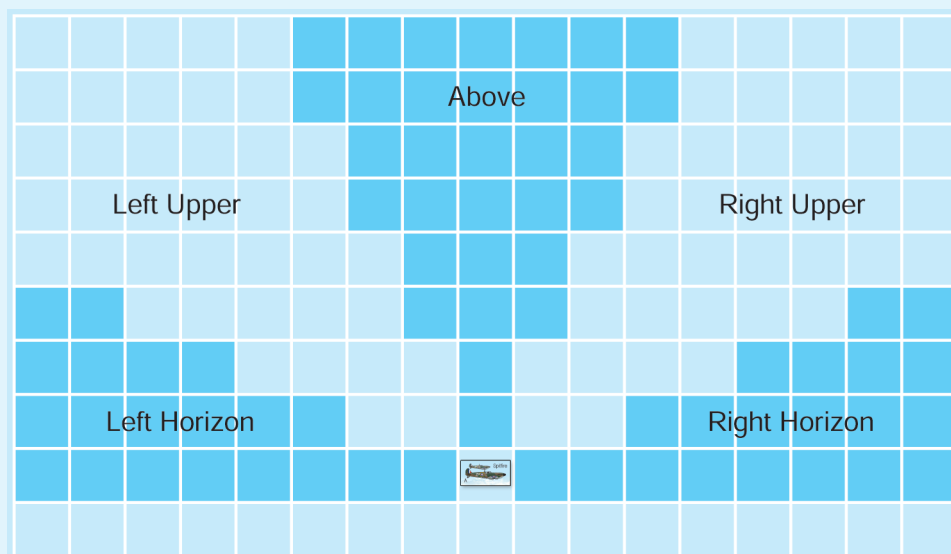
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- Sweep (mission) - 2.1, 3.2.1, 6.0, 7.1, 7.2.2, 9.2, 9.2.1.1, 9.2.2.2, **9.2.3**, 9.3.1, 9.5.4, 10.4.2, 13.4.3, 14.3, 15.2, 15.2.2, **15.2.3**, 15.2.4, 15.3.7, 15.5.3
- Tactical Flexibility - 9.3, **9.3.2**, 9.5.5, 10.4.2, 15.2.4
- Taking Off - 2.1, 5.3.1, 6.0, **13.7**, 13.7.1, 13.7.2, 13.8.2.1, 14.1.1
- Tallied/Tally - 1.1, 2.1, 3.3, 4.6.2, 4.7-4.7.1, 5.2, 6.0, 6.1, 6.1.2, **7.0-7.2.4.1**, 8.4, 9.2.1.1, 9.2.2.2, 9.2.3-9.2.4.1, 9.2.6-9.2.7, 9.3-9.3.2, 9.4, 9.4.2, 9.5.2-9.5.5.1, 10.0-10.1, 10.1.2-10.1.3, 10.2-10.2.1, 10.3, 10.4, 10.4.2-10.4.4, 10.7.1, 10.8.1, 13.4.1, 13.8.2, 14.2.4, 14.3, 15.2.3-15.2.4, 15.3.7
- Torpedo - 2.1, 3.3, 3.3.2, 5.2, 9.3, 15.1, **15.3.5-15.3.5.1**, 15.5.1
- Turn (rating) - see Basic Turn
- Turn Marker - 2.1, 5.3, **6.0**
- Turning (movement) - see Facing/Turning (movement)
- Turning Fight - 3.3, **10.5**, 10.5.2, 13.4.2
- Unalerted - see Alerted
- Unarmed - 3.3, 10.2, **10.5.3**, 10.7.2
- Unavailable - see Available
- Unbroken - see Broken
- Veteran (squadron) - see Green (squadron)
- Victory - 5.1 10.6, 11.0, **12.0-12.1**
- Victory Points (VPs) - **3.3**, 12.1, 14.0, 14.1.1, 15.0, 15.2.1.2
- Wing (formation) - see Wing Leader
- Wing Display - 2.1, 5.1, **5.2-5.2.1**, 7.1, 9.2, 9.3, 9.5, 9.5.1, 10.6, 10.7, 10.7.2, 13.2, 13.3, 13.5.3, 13.5.6, 15.3, 15.5.3
- Wing Leader - 2.1, 5.2.1, 5.3, 6.0, 7.2.4, 9.2.4, 9.3-9.3.1, 9.4, **9.5.1-9.5.2**, **9.5.5-9.5.5.1**, 10.7.3

SUN ARCS



ASPECT

