CHAPTER 10

AIR OPERATIONS

This chapter addresses the two operations we have yet to discuss: *Airstrike* and *Ready*. Collectively, they are called "air operations."

Basic Concept

Every plane starts the game on a platform, and **ready**. A platform may never have more planes than its capacity (the large yellow number) permits.

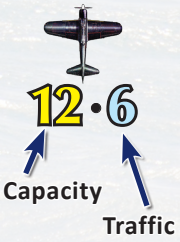
During the operations phase ready planes may be **launched**. Planes are launched for one of two reasons:

- The active side can use them in an airstrike.
- The passive side can **scramble** them as interceptors when defending against an airstrike.

After planes take part in an airstrike, they return to their platform and are **unready**. Before they can be launched again, you will have to ready them.

Traffic

A platform's traffic value is the maximum number of planes it may operate in a single operation. For example, if its traffic value is six, it may launch an airstrike of up to six planes. Or it may ready up to six unready planes.



Scrambling interceptors is also limited by your platform's traffic value, although that does not happen during one of your operations, rather during one of your opponent's.

Crippled Platform

If a platform takes sufficient structure damage to become crippled, **or** if buoyancy damage has reduced its speed to its red (lowest) value, it may not conduct air operations at all: neither launching/scrambling nor readying.

Air Combat Over Midway by John Hamilton, 1975.
Used with permission of the Naval History and Heritage Command.

THE READY OP

Planes on platforms are always either ready or unready. The DC of every platform is divided into two **panels**. A plane must be ready before it can be launched.

All planes start the game ready, i.e. on the *Ready* panel of the DC.

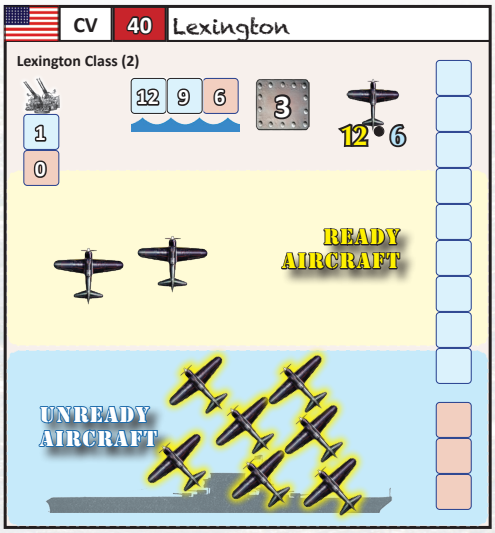
When planes land, they are placed on the *Unready Aircraft* panel of the DC.

The Ready Op

The *Ready* Op permits you to ready planes at **all** of your platforms, anywhere on the table.

In each case, you may ready a number of unready planes, up to the platform's traffic value.

Platforms that are crippled by damage may not perform air operations, and thus may not ready planes.



Readying

Lexington has two ready planes and seven unready ones. With a *Ready* Op, *Lexington* can ready six of those seven (the limit because of her traffic value of "6.")

The brutal death of USS *Lexington* in the Coral Sea, May 1942.

Chapter Ten

AIRSTRIKES: BASIC CONCEPTS

What is an Airstrike?

An *Airstrike* Op is an attempt to attack an enemy TF or base. The enemy may respond to your airstrike, scrambling fighters to oppose you.

An airstrike is launched from **one** active base or TF, against an enemy target: either an enemy TF or an enemy base. The player who controls the target is the **defender**. The player launching the airstrike is the **attacker**.

Each airstrike follows a series of steps, as shown at right.

The Sequence of an Airstrike:

1. Attacker launches planes and rolls to spot a defending TF.
2. Defender scrambles their interceptors.
3. Dogfights are resolved.
4. Roll for flak.
5. Allocate planes to attack runs.
6. Attacking planes roll to hit.
7. Resolve damage from each hit.
8. Surviving planes land at their platforms.

Who May Fly an Airstrike?

At least half of the planes in an airstrike must be strike planes. You may also include fighters as **escorts** for the strike planes.

The maximum number of planes in the airstrike is the launching platform's traffic value. Place the planes you will use for the airstrike on the game board.

Traffic Value

The maximum number of planes this platform may launch in an airstrike.

If you have more than one carrier in a TF, you may launch an airstrike by combining planes from multiple carriers in that TF. You may never combine carrier-launched planes with planes launched from a base, in the same airstrike.

Planes in an airstrike must have the range to reach the sea zone in which their intended target is located.

Limits on Airstrikes

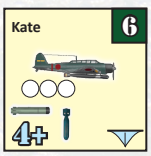
An anchored TF may not launch an airstrike.

No airstrikes may be launched in the night period.

An airstrike may not launch from a zone with storms. It may not attack a target in a zone with storms. However, the planes may "fly through" a zone with storms, en route to their target in a different zone.

Strike Planes

In order to attack an enemy ship or base, a plane must have an **attack value** against a ship or a base, respectively. If it has a blue numerical value in its lower-left corner, it may attack ships. If it has one or more bomb symbols, it may attack bases.



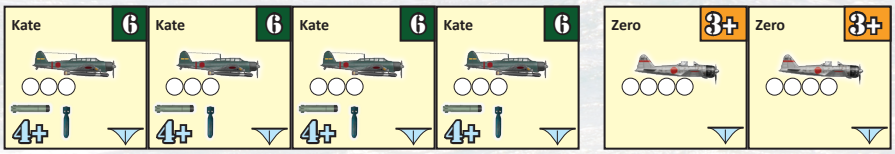
A plane that is launched in order to use its attack value against a target is called a **strike plane**.

AIRSTRIKES: BASIC CONCEPTS

Fighter-Bombers

Fighter-Bombers (like the Skua at right) can function *either* as fighters or strike planes. In such cases, you must declare upon launching how the plane is being used, so that it is clear to your opponent whether it is acting during this *Airstrike* Op as a fighter or a strike plane.

If you launch a fighter-bomber as a strike plane, its dogfight value is reduced to "6."



A Typical Airstrike

The Japanese carrier *Shokaku* has a traffic value of "6." It may launch up to six planes at a time. This airstrike comprises four strike planes (Kate torpedo bombers) and two escorting Zero fighters.

Spotting the Target

If the target is an enemy TF, then your airstrike must spot it, in order to execute the strike. After launching your planes, make the spotting attempt, as per chapter nine. If the enemy TF was concealed, a successful spotting roll reveals it.

If you fail to spot, your planes return to land at their platform and the round is over.

You do not have to roll to spot an enemy base. You always spot it.

Carriers Reveal Themselves by Launching

If you launch an airstrike *from* a concealed TF, your TF is revealed. Its ships are placed on the board *before* its planes proceed with their airstrike and their own attempt to spot the enemy.

Abort the Mission?

You may abort an airstrike immediately after your spotting roll, if you do not want to attack. Your planes return and land; the enemy doesn't scramble interceptors, there is no dogfighting, etc.

This is sometimes a useful tactic if you're using a single strike plane as a scout, "attacking" an enemy TF just to spot and reveal it, while conserving most of your planes for the main strike once the enemy is located.

SCRAMBLING INTERCEPTORS

The Defender Scrambles their Interceptors

Bases and TFs with carriers will attempt to scramble (launch) fighters to intercept attacking planes. The defender knows that an airstrike is inbound and knows how many planes it comprises. They do not yet know the exact composition of the airstrike, i.e. what sort of planes.

The defending player rolls one die:

- On a roll of "6" the defenders have been **surprised**. No interceptors have scrambled: the combat air patrol (CAP) was caught napping.
- On any other roll, the defenders may scramble up to that many interceptors. (For example, on a roll of "3" they may scramble up to three interceptors.)

The defender is never required to scramble that number, nor any interceptors at all.

The Limits of Scrambling Interceptors

You may scramble only fighters that are ready.

Regardless of the die roll, the number of interceptors you scramble from a platform may not exceed that platform's traffic value.

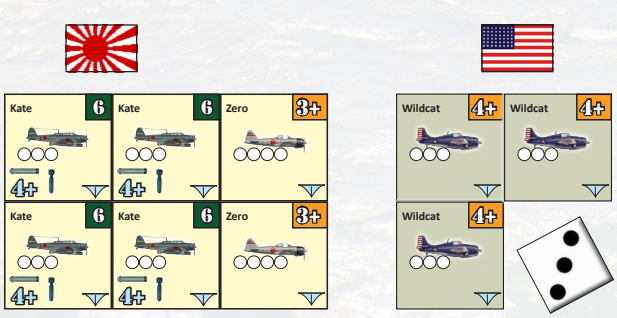
Multiple Carriers

If you have more than one carrier in a TF, you may roll one die for each of them, and scramble up to that number of fighters from each. For example, if you have two carriers, you would roll two dice. If one of them was a "5" and the other was a "2", you could scramble up to five fighters from the first and up to two from the second.

Anchored

A carrier that is anchored may not scramble interceptors.

If your TF is anchored at a friendly base that has fighters, *those* fighters (at the base) can scramble in defense of any/all TFs anchored there.



Scrambling Interceptors

A Japanese airstrike is inbound against the American carrier *Wasp*. The Americans roll a "3" and may thus scramble up to three ready fighters. *Wasp* scrambles three Wildcats.

DOGFIGHTS

Opposing planes don't fight each other individually. There is a single "dogfight," resolved in one step.

All escorts and all interceptors are involved in the dogfight. It is possible that some strike planes may also be involved:

- **If the number of escorts is equal to, or greater than,** the number of interceptors, the dogfight is resolved between them. No strike planes are involved.
- **If there are more interceptors** than escorts, then the defender adds strike planes (of the defender's choice), until the two sides have an equal number of planes in the dogfight, if possible.

Resolving Dogfights

Each plane in the dogfight rolls one die, hoping to score equal to or greater than its dogfight value. If it does, it scores a "success." Count the total number of successes on each side.

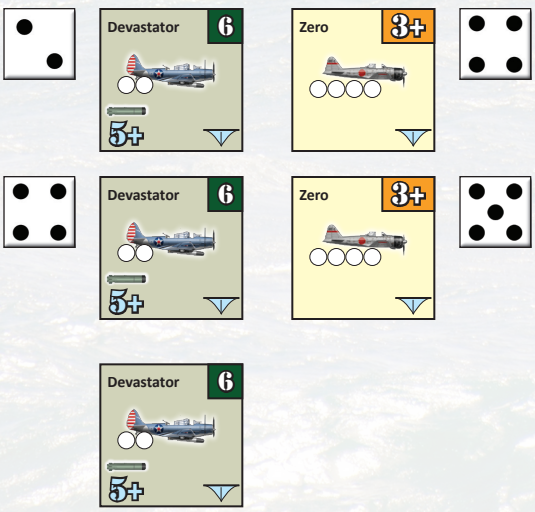
If the number of successes is tied, each side loses one plane. Your opponent chooses which of your planes they have shot down.

Otherwise, the higher-scoring side shoots down a number of enemy planes (of their choice) equal to the difference by which they won.

Planes to be shot down are always chosen by the opponent. Any plane that was involved in the dogfight may be chosen, no matter what it rolled. Planes that weren't in the dogfight may not be chosen.

Fighters Aren't Strike Planes

Once dogfights are over, fighters play no more role in the airstrike. Fighters on both sides have nothing more to do, but do not land yet. They are not subject to flak, they don't make attack runs; they are "done" and waiting for the attack to be completed.

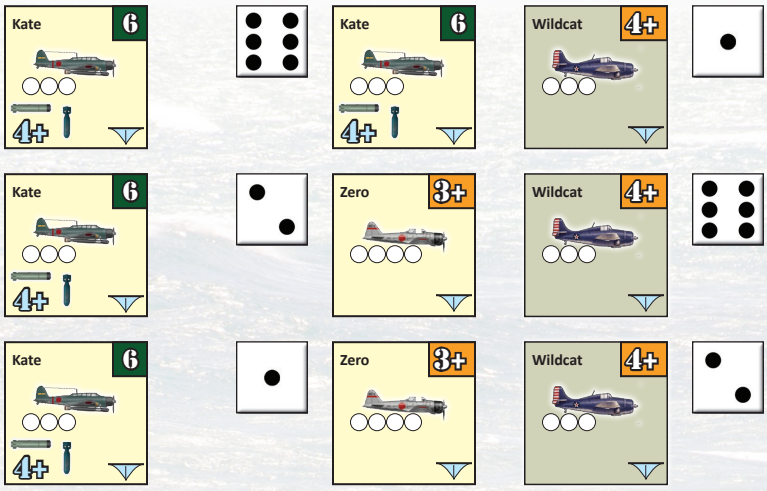


Dogfight Example 1:

Three Devastators with no fighter escort are intercepted by two Zero fighters.

All interceptors take part in the dogfight. There are no escorts, so the defender adds strike planes to the dogfight until the two sides are equal in number. Thus: two Zeroes versus two Devastators.

The Devastators, needing to roll sixes, both fail. The Zeroes, needing 3+, both succeed. A 2-0 victory for the Japanese, thus: two Devastators are shot down.



Dogfight Example 2:

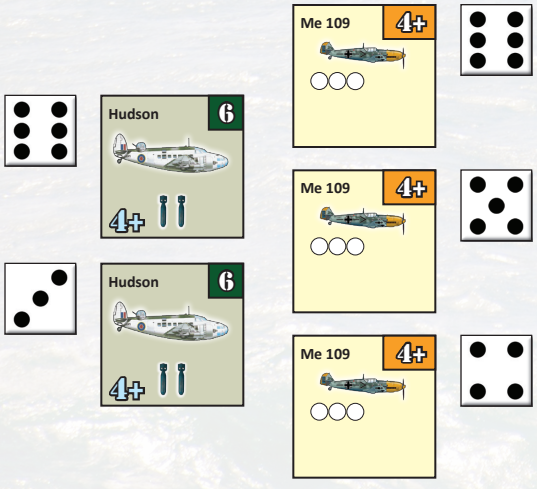
Four Kates, escorted by two Zeroes, are intercepted by three Wildcats. All three interceptors and both escorts take part in the dogfight.

Because there's one more interceptor than escort, the defender may include one of the strike planes. Thus: 3-vs-3.

Terrible dice rolling on both sides. One Wildcat succeeds, both Zeroes fail. Only the humble tailgunner in the Kate manages a success on the Japanese side.

A 1-1 tie. Each side loses one plane. Your enemy chooses which plane you lose, so the Americans choose the poor Kate, even though it was the only successful Japanese plane.

If the Americans had been more successful, they could not have chosen any more Kates, because only one was in the dogfight.



Dogfight Example 3:

Two Hudsons, with no escort, are intercepted by three Me109s.

All interceptors take part in the dogfight. With no escorts, the defender (the Germans) may include an equal number of enemy strike planes in the dogfight, but there are only two, so: all five planes are in this dogfight.

The British score one success; the Germans score three. With a 3-1 advantage, the Germans shoot down two (i.e. both) Hudsons. No German planes are lost.

FLAK

Basic Concept

Strike planes which survived dogfighting now must face the defenders' flak. Each ship has a flak value, as shown at right. This is usually a 2, 1, or zero. The defender adds the flak values of all their ships for a total flak value of the TF.

The defending player rolls a number of dice equal to the total number of strike planes and consults the Flak Table.

The Flak Table

Use the row of the table corresponding to the defender's total flak value. For example, if the task force has a total of 8 flak, use the "8-11" row. If the target is an airstrip, use the "4-7" row; if an airfield, use the "8-11" row.

Note how many 5s and 6s are rolled. Each roll of 6 is a DA result, no matter the flak value. Rolls of 5 have various effects, as described below. Remember that "the defender" is the player shooting the flak.

0-3	DA	No Effect
4-7 or Airstrip	DA	Distract
8-11 or Airfield	DA	Abort
12+	DA	Kill

Kill

Each "kill" result means that one strike plane of the defender's choice is destroyed.

Abort

Each "abort" result means that the defender chooses one strike plane and removes it from the attack. Place it to the side, where any escorting fighters might be waiting. It will return with its comrades and land on its platform, but it will not make an attack.

Distract

Each "distract" result means that the defender chooses one strike plane to "Tip" as a reminder that its attack value in its upcoming attack will be impaired.

Defender Allocates (DA)

The DA result permits the defender to allocate one strike plane of their choice to a target ship of their choice. This happens even if the TF is anchored. (It was not uncommon for pilots to make mistakes and bomb the wrong targets, even in as well-rehearsed an attack as Pearl Harbor.)

The DA result is ignored when attacking a base.

No Effect

Flak rolls of 1-4 mean that flak had no effect.

A roll of "5" when the total flak value is three or less, also means: no effect.

Chapter Ten

ALLOCATING PLANES TO TARGETS

Basic Concept

Strike planes that survived dogfighting are allocated to their attack runs. If the target is an enemy base, then all attack runs are against the same target: the base.

If the target is the enemy TF, then attacking planes must be **allocated** to specific ship targets. There is a process for this that represents the difficulty of coordinating planes against shooting, evading ships.

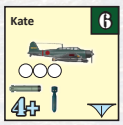
Allocation of Attacking Planes Against the Enemy's Ships

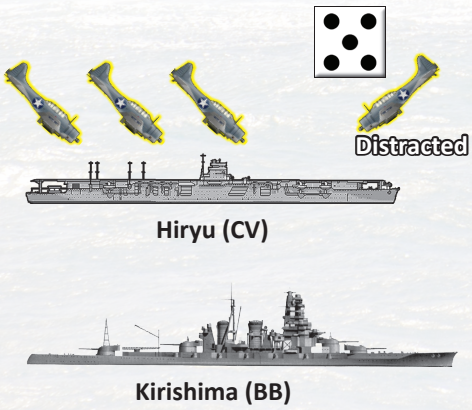
Each roll of "6" for flak permits the defender to allocate an attacking plane to a ship of their choice. Otherwise, strike planes that survive flak are allocated by the attacker.

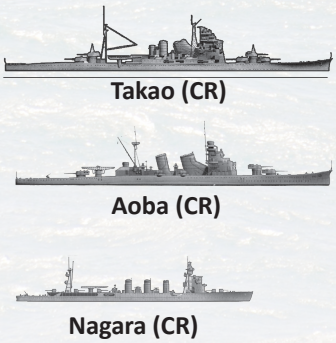
Once allocated, planes can't be reallocated to different targets in the middle of the air-strike. Thus it's possible that a target will be sunk before all the attacking planes get a chance to make their attack runs against it. Those planes, now without targets, do not make an attack. (But they can share in the celebration when they return to base.)

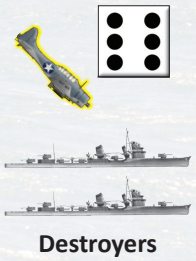
Distracted

"Tip" those planes that are distracted, to remind you of who is distracted and who isn't. Being distracted means that a plane's attack value in its upcoming attack is impaired. A distracted plane always hits only on a roll of 6.









Allocating the Attacking Planes

Five American Dauntless dive bombers are making attack runs against a Japanese task force comprising the carrier *Hiryu*, the battleship *Kirishima*, three cruisers, and two destroyers. The TF has a total flak value of "4."

The Japanese roll five dice, one of which scores a "6." The Japanese player allocates a Dauntless against the unhappy destroyer *Kagero*. The Americans allocate the remaining four planes against *Hiryu*, their main target. The Japanese had also rolled a "5", meaning that one plane is distracted.

All strike planes have been allocated. It is time to resolve their attack runs.

RESOLVING ATTACK RUNS

Resolving Attack Runs

After all flak results have been applied and all strike planes allocated, the attacker, in any order they choose, picks an attacking plane, determines whether it hits, and if so, determines the damage inflicted by that hit. They then choose another plane and repeat this procedure until all attack runs are completed.

Hitting a Base

A strike plane attacking a base rolls a number of dice equal to its number of bomb symbols. A plane with multiple bomb symbols might score more than one bomb hit.

All planes have the same success score against a base. Each roll of **four or higher** scores a bomb hit against the base.

Hitting a Ship

A strike plane attacking a ship must roll equal to, or higher than, its attack value.

If the target TF is anchored, then all its ships are hit on rolls of **3+**, regardless of the planes' attack values.

Distracted

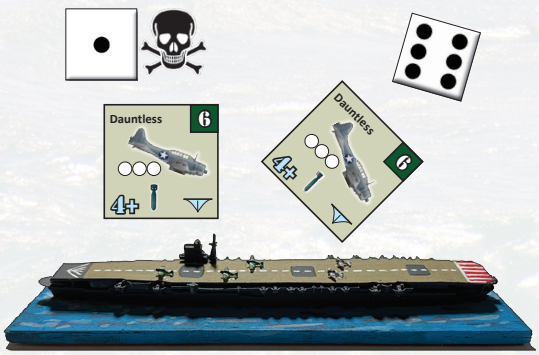
Whether attacking a base or a ship, anchored or at sea, a distracted plane's attack value is always a "6."

Defending AA

A plane that **rolls a one** when attacking a ship or base has been shot down by the machine guns of the defenders and is destroyed.

Heavy Bombers are Immune to Defending AA

A plane with multiple bomb symbols is considered a heavy bomber. Bombing from high altitude, they are immune to machine gun fire. They can't be shot down during the attack, but may still be affected by flak.



Example of an Attack Run

Two Dauntless dive bombers are attacking *Zuikaku*.

The first Dauntless rolls a "1" and is shot down by a lucky sailor with a machine gun.

The second Dauntless normally hits on a 4+ but is distracted and thus will hit only on a 6. The Americans get lucky and score a bomb hit.

The players determine the damage from the bomb before resolving any more attack runs.

Chapter Ten

DAMAGE FROM ATTACK RUNS

Each time a bomb or torpedo hits a ship, the attacking player rolls to resolve it. Chapter four discusses how to resolve torpedo hits. Bomb damage is calculated differently.

GP or AP

Your Navy List shows at least two bomb values. General Purpose (GP) bombs are the value used when you are attacking a base.

Armor Piercing (AP) is the value you should use when attacking a ship.

Bomb Damage to Bases

Each time a bomb hits a base, apply the structure damage, and then one plane at that base, chosen by the active side, is destroyed.

When the last structure box of a base is marked, the base is destroyed, along with all planes still based there.

Bomb Damage to Ships

When a bomb hits a ship, compare its value to the ship's armor. If the bomb value is greater, the target suffers a number of structure damage equal to the difference. *(For example, a bomb with a value of 6 hits a ship with an armor of 2; the ship sustains four structure damage.)*

Even if the armor is equal to, or greater than the bomb value, a bomb always inflicts a **minimum of one** structure damage.

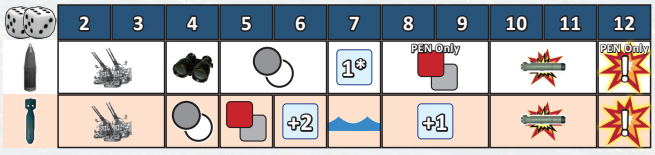
You must next roll for critical damage.

Critical Damage

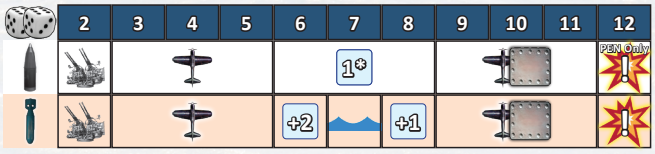
Use the lower ("bomb") row of the table when resolving bomb hits. All critical damage symbols are described in chapter four. Carriers use a different critical damage table than battleships, cruisers, and destroyers do.

Merchant ships and bases do not roll for critical damage.

(Battleships, Cruisers, and Destroyers)



(Aircraft Carriers)



Flying Boats

There is no critical damage that eliminates flying boats. As long as a base can operate airplanes at all, it may still operate its flying boats. A crippled base may not operate them, but they are not destroyed until the base is destroyed.

Once plotted, flying boats remain at sea until the status phase, even if their base is crippled or destroyed. They may not be plotted in the *next* period, however unless their base is operational at that time.

ARMORED FLIGHT DECKS

Plane Destroyed

A critical damage result showing a plane symbol means that one plane was destroyed at that platform. The attacker may choose one plane to destroy. It may be of any type, ready or unready.

There are two plane symbols, one of which shows the plane partially concealed beneath armor. That is called the **protected plane** result.

Normal Flight Deck

Most carriers have a normal armor symbol on their DC: a single armor plate with a white number.

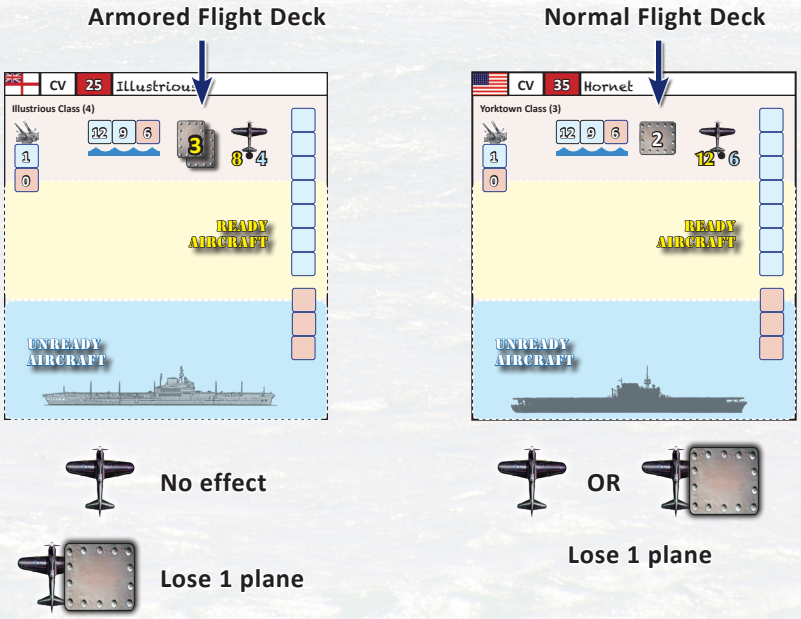
On such a ship, either the plane or the protected plane critical damage results in one plane being destroyed, as above.

Armored Flight Deck

Some carriers have a special armor symbol: two plates, with a yellow number. This indicates an armored flight deck.

On such a ship, the normal plane symbol result is treated as "no effect."

A ship with an armored flight deck loses a plane *only* on the protected plane result.



Chapter Ten

CONCLUDING ATTACK RUNS

All Surviving Planes Land

After completing an airstrike, all the attacking planes and all the defender's interceptors must land at their platform and are unready.

Interceptors that can't land because the airstrike just crippled or sank their platform, may make an **emergency landing** at any friendly platform in that same sea zone.

No plane may land on a carrier unless it has the *Carrier Plane* trait. Remember also that no platform may land planes if it already has a number of planes equal to its capacity.

A platform's traffic value is the limit on the number of planes that may land at that platform during an operation.

Planes that are not able to land are destroyed. This is called **ditching**. They count as eliminated by the enemy, for purposes of victory points. You may voluntarily ditch any of your airborne planes, rather than have them make emergency landings.

Airstrikes and Air Defense

Just as it does with artillery and torpedoes, the game "bathtubs" airstrikes. A single "plane" in the game represents 4-6 historical aircraft, and a "hit" might represent more than one actual hit.

What are the "correct" odds for a plane (or a counter representing six planes) to hit a ship? Despite an abundance of data, there is no way to answer that question. Variables from crew quality to atmospheric conditions and every possible mechanical consideration mean that no two attacks are alike. Our goal is to make attacking "worth it," because a substantial chance of success exists, and usually a bomb or torpedo hit leads to a meaningful result.

Warships mounted a variety of anti-aircraft weapons. The close defense of a ship typically relied upon machine guns, manned by whatever crewmen were available in that moment. Given its short range and limited arc of fire, a machine gun defended the ship from an attacker coming more or less toward that machine gun. In other words, from the perspective of the pilot's survival, the close defense of most ships was effectively similar.

By contrast, ships differed considerably in quantity and quality with regard to heavy AA, or what the game calls "flak." These weapons had sufficient range to defend the entire task force (if doctrine permitted). It was rare for flak to kill an attacker. More likely, it confused or rattled them, perhaps inflicting some minor damage, but overall made it harder for the attackers to hit their targets. The defender picks the affected planes because the flak would have been concentrated in defense of the task force's most important ships.