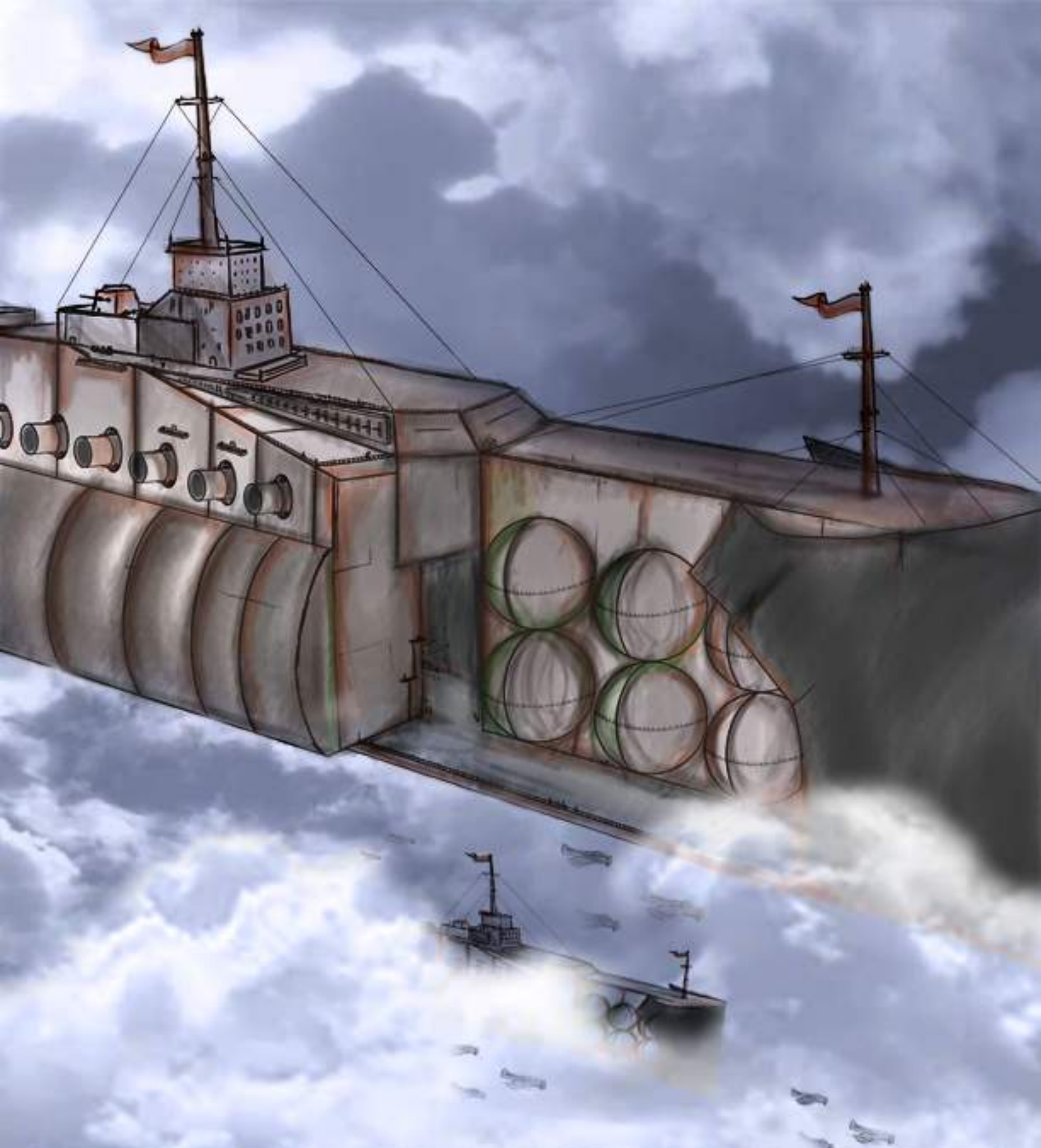




THE DOGFIGHTER'S HANDBOOK

Rules for airship combat, construction and personalization across the skies
of the world's greatest roleplaying game.

Created
by Vall Syrene



TABLE OF CONTENTS

**CHAPTER ONE: INTRODUCTION &
COMBAT - PG.2**

**CHAPTER TWO: TRAVEL SPEEDS &
AIRCRAFT - PG. 4**

**CHAPTER THREE: ENGINE DAMAGE &
CRITICAL ROLLS - PG. 5**

**CHAPTER FOUR: SKYTROL FUEL &
REPAIRING AIRCRAFT - PG. 6**

**CHAPTER FIVE: RECRUITING A CREW -
PG. 7**

**CHAPTER SIX: BUILDING &
DESIGNING AIRCRAFT - PG. 8**

**CHAPTER SEVEN: AIRCRAFT SPECIAL
RULES - PG. 15**

**CHAPTER EIGHT: EARNING GOLD
FROM PIRATE BOUNTIES - PG.17**

**CHAPTER NINE: AIRCRAFT BATTLES &
XP - PG. 18**

INTRODUCTION & COMBAT

A NOTE FROM THE AUTHOR:

This ruleset has been designed with steampunk, magitech and dieselpunk themes in mind. It still retains the traditional fantasy feel, and is not intended for fully fledged modern day campaigns.

Air combat can be a large and important part of the world of D&D. Pirates, traders, military powers and fantastical creatures all often have some element of flying combat, with many memorable battles of a campaign taking place in the air. This ruleset aims to bring those combats to new adventuring parties, so they may shape their own stories and share them with the world.

In this handbook you will find rules for turn based combat, travelling great distances using flight speeds, as well as the rules for crashing aircraft, ramming great sky fortresses out of the air, repairing and outfitting your ships and even hunting down pirate bounties for gold or glory. These rules are intended for an almost completely different playstyle to that of regular Dungeons and Dragons campaigns - with each aircraft being a dangerous foe in its own right. At the end of this handbook you will find tables for both Dungeon Masters and Players to create and outfit their very own ships. Be warned, however, that to take on even a simple aircraft from the ground without a ship of your own is an almost suicidal task for early level adventurers.

COMBAT

THE TURN

Turns and rounds in combat function very similar to those in the Player's Handbook, however rounds are assumed to last around 12 seconds, instead of the 6 seconds normally assigned to 5th edition combat. This is to represent aircraft combat being wild and furious, but taking place much further apart than ordinary tavern brawls, with aircraft and creatures having to bank to turn, lining up strafing runs against each other before savagely opening fire.

INITIATIVE

When rolling initiative, creatures and crew always use their aircraft or creature mount's Dexterity modifier in place of their own. It doesn't matter how quick skilled or efficient the pilot, crew or rider is if their aircraft or creature is slow and cumbersome!

ABILITY CHECKS

When making ability checks and saving throws in combat, adventurers piloting use the Strength, Dexterity and Constitution scores of their aircraft or mount. When making checks or saving throws using Intelligence, Wisdom or Charisma, pilots use their own scores instead.

MOVEMENT

Moving an aircraft is a difficult process, which takes much talent and quick thinking. Aircraft must always move their full movement value every turn. Aircraft can make two 45 degree turns during their movement and must spend at least 25 feet of movement in between both turns, meaning they cannot turn to face someone in their rear with standard movement. They can, however, ascend or descend up to half their movement value without turning. Each chassis has a specific turn speed, shown on the chart later in this handbook. If an aircraft is forced to end its turn in an occupied space, it treats the movement as a Ramming attack, listed below.

If an adventurer wishes to turn to 'face' their dogfighting opponent or perform a more creative method of evasion, they can do so by making a 'Maneuver'. A pilot can perform a Maneuver by spending their action to make up to four additional 45 degree turns, giving them a total turn degree of 270 degrees instead of the standard 90 each round. Each aircraft has a Turn Speed, **shown on the Aircraft Chassis table under Building and Designing Aircraft**, later in the handbook.

It is advised that when fighting on a grid using Dogfighting rules, each square be equal to 25 feet instead of the regular 5ft, and to track flight height alongside each miniature to avoid confusion when targeting enemies that may be above or below you. This is due to flying creatures and aircraft having such large movement distances, and will help to keep the game from getting too large or complex on a map.

Note: If using this system, C grade aircraft take up a 25ftx25ft square, B grades a 75ftx75ft, and A grades anything from 100ftx100ft and bigger.

A NOTE ON FLYING CREATURES.

If an adventurer is in air combat on the back of a flying mount (such as a dragon or pegasus), then either creature can be targeted by spells, abilities and attacks. If an attack would target both creatures and force a saving throw to avoid damage, (such as a fireball) both the adventurer and mount must individually make the saving throw.

Adventurers that use flying mounts are much more at risk of damage than those using aircraft. However, to balance this, both the mount and adventurer can attack separately during their turn, and the adventurer is always assumed to be in three - quarters cover for the purposes of being attacked or taking saving throws.

A rider cannot be dismounted from their mount during dogfights unless their saddle is destroyed, as it is worn as an additional suit of armour. If, however, a mount dies or falls unconscious in a dogfight, the rider may elect to detach themselves from their riding seat in order to escape potential certain death. Doffing a Dogfighting saddle takes 1 minute.

COMBAT CONT.

ATTACKING WITH AIRCRAFT

A creature piloting an aircraft must spend their action to operate the guns or equipment. When firing a weapon that requires an attack roll, the piloting creature adds their proficiency modifier to the to hit modifier of the weapon, and to its damage rolls listed in the **Weapons** table. For example, if a 5th level character fires a Light Autocannon, that has a base to hit modifier of +4, the weapon would have a total to hit modifier of +7 and a damage modifier of +3. If a weapon requires a save DC, the DC is equal to 12 plus the Pilot's proficiency modifier.

CLOSED AND OPEN TOPPED AIRCRAFT

Some aircraft have closed cockpits, while other, more simplistic designs have open cockpits which, while less protected, also allow adventurers more freedom of actions while piloting. Creatures inside a cockpit (open or closed) are considered to be in total cover from all attacks and cannot be directly picked out as a target, but any attack that targets or requires a saving throw from the aircraft's Intelligence, Wisdom or Charisma targets the piloting creature instead, regardless of whether or not they can be seen.

A creature piloting a closed cockpit aircraft cannot use any ability or spell from within the cockpit that targets anything outside of it.

Creatures in an open cockpit are still considered to be in total cover from all attacks, but can be targeted by melee attacks whilst Dogfighting if in range. These creatures can also fight back in melee, use their own weapons instead of the aircraft's and cast spells or use abilities that has a target outside of the cockpit.

For example, a creature in a closed cockpit would have nothing to fear from a dragon landing on its aircraft wing, but could only attempt to shake it off, and couldn't try hitting it with a melee weapon. A creature in an open cockpit, however, has much more to fear from a dragon, as it is quite capable of landing on the aircraft's wing and striking the piloting creature directly in melee, though it can defend itself with melee weapons or spells if it so chooses!

CLASS AND RACIAL ABILITIES

Adventurers can use any racial or class abilities as normal while piloting, and still retain their proficiencies when making skill checks pertaining to the aircraft. These abilities, however, can never apply to the aircraft directly, only indirectly.

For example, if a Barbarian is piloting an aircraft that is subject to a Dexterity saving throw, the barbarian's danger sense would apply, indirectly granting the aircraft advantage on the effect if the barbarian can see it, as he/she is piloting. However, if the barbarian goes into a rage, the resistance bonuses granted by the ability will not extend to the aircraft, as it would have to affect the aircraft directly, and cannot logically affect it indirectly.

A Fighter, for example, can also use his/her Action Surge ability in order to fire an equipped aircraft weapon twice as it indirectly affects the aircraft. However, a Fighter cannot use his/her Second Wind ability to allow the aircraft to regain hit points, as it would affect it directly instead.

RAMMING AIRCRAFT

Any aircraft can choose to ram another aircraft or creature while Dogfighting. The attacking aircraft must declare when it is ramming, and spend its action to move in a straight line until it collides with the target aircraft or creature. That aircraft or creature must then succeed on a DC 20 Dexterity saving throw.

If the target succeeds, then the attacking aircraft continues moving up to its full speed past the target, or moves an additional 50 feet if it has no more movement left.

If the target fails its saving throw, the attacking aircraft successfully rams it. Make a melee weapon attack against the target using the aircraft's strength modifier plus the pilot's proficiency. The attacking aircraft and the target each take nonmagical bludgeoning damage equal to $XD6$, where X equals the attacking aircraft's Strength score. If the attack misses, this damage is reduced by half.

If the ramming aircraft is Grade E or D, it then has its speed reduced to 0 until the start of its next turn.

If the ramming aircraft is Grade C or above, it can then attempt to initiate a Boarding Assault, as described below.

BOARDING ENEMY AIRCRAFT

If a Grade C aircraft or above is equipped with Harpoon weaponry and successfully rams an enemy aircraft, in addition to dealing the damage above, the ramming aircraft can choose to try and board the enemy aircraft to capture it. Make an attack roll with each equipped harpoon.

On a successful hit, that harpoon cable latches into the rammed enemy ship. Both ships must then remain within 25ft of each other for the duration of the assault, moving at slower speeds if they have to in order to remain together.

A ship can attempt a boarding assault for a number of rounds equal to the amount of successful hits, after which point each harpoon cable snaps and the aircraft are separated, each allowing to move freely on their following turns as normal.

FLYING CREATURES AND MOVEMENT

Flying Creatures, whilst more mobile than aircraft at dodging are, in their natural state, a lot slower at overall flight. Gargantuan and larger flying creatures in a Dogfight have a flight speed of 250ft. Flying creatures smaller than this have a flight speed of 350ft.

A flying creature can perform a maneuver as a bonus action and do not have a minimum move in between turning, meaning they can turn on the spot in midair. Flying creatures also do not need to use all their movement during a dogfight. This allows flying creatures to effectively counter and out-maneuver much more cumbersome aircraft constructs with little difficulty.

FLYING CREATURES AND RAMMING

A flying creature can perform a Dogfighting grapple on an enemy aircraft or creature by ramming them using the rules above. If the initial ram is successful, instead of making a melee weapon attack and dealing damage, the target becomes grappled by the flying creature.

GRAPPLING AIRCRAFT IN DOGFIGHTS

If a flying creature successfully grapples an aircraft when Dogfighting as described above, a number of features happen:

- The Aircraft's speed is not reduced, but it cannot perform Maneuvers.
- The flying creature's speed becomes 0. For as long as the grapple persists, the flying creature instead remains latched onto the grappled aircraft as the aircraft moves.
- Ranged attacks against an enemy involved in the grapple are at disadvantage due to the close proximity of an ally.
- Melee weapon attacks by the flying creature against the aircraft have advantage. This does not include the rider.
- If grappling a Grade C or higher aircraft, it is additionally treated as a Boarding Assault, and follows all the rules for **Crew and Boarding Assaults** found later in this handbook.

The grappled aircraft can spend its action on subsequent turns to break the grapple with a successful Dexterity (Acrobatics) check, contested by the grappling creature's Strength (Athletics) check.

If the aircraft is currently boarded by the creature and wins a boarding assault at the end of the round, it can immediately attempt to break this grapple again, with the creature making its Strength (Athletics) check with disadvantage.

If the Aircraft is successful, it frees itself and can immediately move up to 50 feet forwards to disengage. This then ends its turn. If the grapple is broken, the flying creature is thrown off the aircraft, and its speed becomes 0 until the start of its next turn.

GRAPPLING OTHER FLYING CREATURES IN DOGFIGHTS.

If a flying creature successfully grapples an enemy creature when Dogfighting as described above, a number of features happen:

- The target flying creature's speed is reduced to 0.
- The grappling flying creature counts as carrying the target for the duration of the grapple. If it cannot carry it due to weight or any other intervening factor, its speed is also reduced to 0.
- Ranged attacks against an enemy involved in the grapple are at disadvantage due to the close proximity of an ally.
- The grappling creature can move its full movement if capable of carrying the grappled target.

The grappled flying creature can spend its action on subsequent turns to break the grapple with a successful Dexterity (Acrobatics) or Strength (Athletics) check, contested by the grappling creature's Strength (Athletics) check.

If the grappled creature is successful, it frees itself and can immediately move up to half its movement to disengage from the attacking creature. This then ends its turn. If the grapple is broken, the attacking flying creature is thrown off and its speed becomes 0 until the start of its next turn.

TRAVEL SPEEDS & AIRCRAFT.

Outside of combat, an aircraft or creature is capable of moving at much greater speeds at the sacrifice of maneuverability. To work out an aircraft or creature's Cruising Speed, simply divide its flight speed by **2.94**, rounding up to the nearest whole number. This is its Cruising Speed in MPH.

For example, a Thunderbird '65 has a flight speed of 350ft. We divide this by 2.94, giving us a Cruising Speed of 119.047. Rounding up, this gives the Thunderbird '65 a Cruising Speed of 120MPH.

Note: *This is a simplified version of a much more complex and accurate formulae which will work for any flight speed. It is also not an accurate representation of true real world flight speeds, but works well with the mechanics of 5th edition.*

While moving at Cruising Speed, an aircraft or creature cannot perform maneuvers and cannot attack. A creature or aircraft returns to its ordinary flight speed as soon as combat begins.

AIRCRAFT FALLING SPEEDS AND FALL DAMAGE.

Aircraft and flying creatures engaging in Dogfights fall at a rate of 100 feet per round if they ever end their turn with 0 movement speed, falling 50 feet at the end of their current turn, and an additional 50 feet at the start of their next turn, before any other rules or features activate.

When Aircraft and Flying Creatures fall, they can choose to glide to attempt to stay in control. For every 50 feet down they fall, they can glide 25ft in a direction of their choice (but not up).

BAILING OUT OF A FALLING AIRCRAFT.

A pilot can, at any time, choose to bail out of their aircraft by spending their reaction to eject themselves in a suitable fashion. The Aircraft's speed immediately becomes 0 and is considered unusable until it stops moving (most often than not, by crashing into the ground).

CRASHING AN AIRCRAFT OR FLYING CREATURE.

If an Aircraft or Flying Creature hits a solid object from falling, they suffer fall damage. When a falling aircraft hits the ground, it suffers 5d12 bludgeoning damage for every 100ft it fell.

If this damage would reduce an aircraft to 0 hit points and lands on solid ground, it explodes, dealing 16d6 fire damage to any creature within a 25 feet radius, or half as much on a successful DC 22 Dexterity saving throw. Any creature inside the cockpit at the time of impact takes an additional 10d10 bludgeoning damage as they are crushed by the debris.

ENGINE DAMAGE & CRITICAL ROLLS

An aircraft's engine is a fickle and vulnerable thing, prone to overheating in the middle of a stressful battle or bleeding fuel profusely if its Skytrol tank is hit.

Often in Dogfights, guns can jam, barrels can run hot and engines can overheat. To represent the unreliable mechanical systems and constant stress engines are put under, aircraft have an independent 'botch' table they must roll on whenever rolling a natural 1 or suffering a critical hit when Dogfighting.

AIRCRAFT BOTCH TABLE

Roll Result (d6)	Type	Description
1	Engine Damage	A random Engine suffers 1d6 force damage.
2	Engine Overheat	A random Engine suffers 1d4 fire damage and shuts off until the start of your next turn.
3	Weapon Jam	The firing weapon jams. You or a crew member can spend an action to unjam it before it can be fired again. If no weapon was fired when rolling on this table, roll again.
4	Trigger Stuck	The firing weapon's trigger sticks, firing continuously. This weapon will continue to fire without expending an action until the trigger is unstuck. At the start of your subsequent turns, roll again on this table. You can spend an action to unstick the trigger.
5	Billowing Smoke	The Aircraft begins billowing smoke. For 1d3 rounds, all ranged attacks against the aircraft have advantage, and all melee attacks have disadvantage.
6	Rudder Locked	The Aircraft's rudder becomes jammed. It cannot perform Maneuvers for 1d3 rounds. You or another crew member can attempt to fix this by spending an action at the start of your subsequent turns to unlock the rudder.

ENGINE TYPES

There are 5 different grades of Engines used in this book. Each one grants different advantages and disadvantages, which are listed below. Engines have a number of hit points listed on their profile, which can only be affected by the Aircraft Botch Table. Once an engine has lost all its hit points, it breaks.

An aircraft with a broken engine loses all bonuses granted from that engine until it is repaired. If an Aircraft doesn't have a functioning engine, it's speed becomes 0 and it becomes inert and unresponsive.

ENGINE TYPES

Engine Type	Description	Features	Hit Points
Grade 4	Common Workhorse Engine	+50ft flight speed	10
Grade 3	Light Scout Engine	+100ft flight speed	8
Grade 2	Combat Engine	+50ft flight speed	15
Grade 1	Heavy Combat Engine	+25ft Flight Speed	25
Lodestone	Magitech Powered Engine	+150ft Flight Speed, Does not require Fuel	6

LODESTONE ENGINES

Lodestone engines are magical engines that do not require fuel. Unlike Skytrol Engines, however, if a Lodestone Engine is reduced to 0 hit points, it does not break. Instead it shatters into dust, and cannot be repaired. A Lodestone Engine heals itself over time when the aircraft is not in the air, regaining all hit points lost after a long rest.

DM's NOTE ON LODESTONES

Lodestones are rare and hard to manufacture.

This often means that aircraft powered by these engines are expensive and highly sought after by pirates. Lodestones are game changing for a lot of Skytrol based travel management, and as such should be available for purchase in only a few locations around the world, or given out as quest rewards.

SKYTROL FUEL & REPAIRING AIRCRAFT

Skytrol is the fuel that all Skytrol standard engines run on. It is a naturally occurring gas that is very flammable, but easily gathered from the atmosphere. This makes it an almost limitless, albeit dangerous, fuel source for the many warships and aircraft around the world. Skytrol is measured in canisters, or tanks. Most aircraft use a single 500 gallon tank, which normally gives a decent amount of time for sustained long distance travel.

Engines are often not the most efficient of design, with crews often opting instead for more fuel tanks if they wish to travel for longer periods of time than better engines. All engines are considered to output 8MPG, (Miles per Gallon).

If a fuel line or tank is removed prematurely or pierced, the excess fuel leaks out and cannot be stoppered due to it's gaseous nature. Often this means a punctured tank or unsecured fuel line will quickly leak Skytrol, emptying a full tank in a matter of minutes.

To combat this problem, most aircraft carry additional hand supply canisters or house additional tanks. Any aircraft can carry additional canisters. To attach a hand canister to the engine fuel lines, a pilot or crew member must spend an action to connect up the line properly. To attach a new tank or refuel, special equipment is often needed that requires the aircraft to land on an airstrip or docking bay.

The base cost of refueling is 7 Silver Per Gallon, however this can fluctuate dependant on location and Dm's Discretion. Each chassis is capable of storing a number of additional tanks or canisters. More information on this can be found in *Chapter Six: Building and Designing Aircraft*.

REPAIRING AIRCRAFT

Aircraft cannot regenerate hit points. Instead, they are repaired during periods outside of combat, though it can take some time, and during the time they are being repaired, they cannot be in use.

Adventurers wishing to repair their aircraft must look at both the Aircraft Hull and Engine Repair tables to figure out how long it will take to make their aircraft completely functional again.

For example, if an adventurer decided to spend 5 hours repairing his/her aircraft, in that time, they could repair up to 200 Hit Points of damage, and repair 1d12 Engine Hit Points. However, if the Adventurer only had time enough for 4 hours of work, then they would instead be able to repair up to 100 hit points of damage, and repair 1d4 + 1d8 engine hit points.

Aircraft can, providing they have engine and general hit points left, be taken back into combat, but any damages they have sustained, such as hit point damage and broken engines that have not been resolved, will stay until they spend the allocated time to repair them.

ASSISTING WITH REPAIRS

Creatures may assist others with repairs. If they do so, for every hour they choose to spend assisting repairs, the total amount of repair time reduces by 2 hours, to a minimum of 1 hour of repair time. **Repairs totalling more than 50% of the Hull damage of the aircraft cannot be repaired in the field.** Instead, an adventurer must land in a town to aquire materials.

HIRING REPAIR SERVICES AND MATERIAL COSTS

When in most towns and cities, adventurers can pay for repair services from the local crews stationed there. Repair Crew costs can be found on the Repair Crew table. Material costs are assumed to cover all expenses required to repair an aircraft to the level the adventurer wishes it to be at. Material costs vary from town to town, but in most places, the average cost of materials for repairing and aircraft is **50gp per 100 hit points repaired, or 5 silver per hit point.**

Repair crews are not inclusive of material costs.

AIRCRAFT REPAIR TABLE

Level of Damage	Hours to Repair
0 - 100 Hit Points	3 Hours
101 - 200 Hit Points	5 Hours
201 - 300 Hit Points	8 Hours
301 - 400 Hit Points	11 Hours
401 - 500 Hit Points	14 Hours
501 - 600 Hit Points	17 Hours
700 + Hit Points	1 Day + 3 Hours per 100 additional hit points

ENGINE REPAIR TABLE

Level of Damage	Hours to Repair
1d4 Hit Points	1 Hour
1d8 Hit Points	3 Hours
1d12 Hit Points	5 Hours
2d10 Hit Points	8 Hours

ENGINE REPAIR TABLE

Crew Skill	Repair State	Hours to Repair	Cost
Top Tier	Full Repair	4 Hours	1000gp
Mid Tier	Full Repair	8 Hours	750gp
Low Tier	Full Repair	12 Hours	500gp

RECRUITING A CREW



ften aircraft can be so large and well equipped that it takes entire crews to run them - even moreso than the adventuring crew currently on board. When this happens, sometimes adventurers need to hire a crew to fill the gaps, making sure every pintle mount is armed, and that they have a general boarding party to help fend off attackers while the party takes the fight to the enemy.

Note: When aboard a Grade C ship or higher, adventurers all count towards the Crew Size, and can take part in a Boarding Assault in place of an ordinary crew member if they choose to do so.

TYPES OF CREWS

There are a vast array of different NPCs that can make up a crew, but they all fall under one of four categories;

Poorly Skilled

A Poorly Skilled crew is cheap and can operate guns relatively well, but don't expect them to be majorly useful in the long run.

Well Trained

A Well Trained crew is a standard crew, costing an average wage but doing an average job for it. Often they are still new recruits, but with training under their belt to help with most situations.

Experienced

An Experienced crew is often made up of rugged veterans, talented buccaneers or skilled marksmen. They demand a much larger wage, but do a far better job at it than most.

Military Grade

These crews can be made up of young prodigies, old veterans or anywhere in between, but what makes them shine is their skill at operating and maintaining the aircraft on which they serve. They are fearsome warriors and fear very little in return, though they are very expensive to hire, and very difficult to find serving in mercenary roles.

HIRING A CREW

Crews can be drafted and hired from most villages, towns and cities, though due to the sporadic nature of warfare, trade and travel, not every location will be as popular as others. For example, a busy trading village might have more well trained people spare than a peaceful village, due to the rarity in which some find themselves in those areas looking for work. Consult the **Crew Availability** table to see the average availability of drafting a crew in various areas, and the general cost per day of having **each member** on board.

CREW AVAILABILITY

Crew Skill	Villages	Towns	Cities	Military Ports	Cost Per Day
Poorly Skilled	2d4	3d6	3d8	2d10	1sp
Well Trained	1d4 -2	2d4	2d6	4d6	5sp
Experienced	1d4 -3	1d8 -1	3d4	3d8	1gp
Military Grade	None	None	1d6 -2	3d6	5gp

CREW ABILITIES

Having a crew can prove to be a useful investment for a number of reasons. Firstly, having a crew fill out the rest of a ship means more pintle mounted weapons firing and better boarding defences. Secondly, it is a great opportunity for the Dungeon Master to flesh out the world with additional helpful NPCs.

REPAIRING DAMAGE & SPEEDING UP AIRCRAFT ALTERATIONS

When repairing damages, crew members can assist to speed up time, just like adventures can, but sometimes not as well. The table below gives a breakdown of how many other crew members are required to offer the same level of help as a fully fledged adventurer in terms of repairing and altering aircraft:

CREW SKILL WORTH

Crew Skill	Number Required
Poorly Skilled	5
Well Trained	3
Experienced	2
Military Grade	1

For example, in terms of repair assistance, 5 poorly skilled crewmen are equivalent to 1 Player Character Adventurer, while 1 Military Grade crewmen is assumed to be their equal.

Crew and Boarding Assaults

Sometimes, flying creatures or other aircraft crews can end up boarding aircraft for close quarter fighting. In this case, the crews involved will do whatever they can to repel the enemy by any means available. To represent this, at the end of the round, the attacking creature can take an attack action that automatically hits, with the attacking crew using half their total crew number, rounded down and rolling damage dice pooled from the Boarding Assault Table below instead. The defending crew and the pilot then roll their damage in return, with the defending crew also using the dice pooled from the Boarding Assault Table.

For every 15 points of damage the attacker wins by, the defenders lose 1 crew, beginning with Poorly Skilled first and Military Grade last. For every 10 hit points of damage the defenders win by, the attacker loses 1 crew or suffers the excess damage as piercing damage if the attacker is a singular creature or mount. If there are multiple types of each in the Boarding Assault, the damage and/or crew loss is halved between them.

The Boarding Assault ends when the defending crew repel the attackers or are killed, leaving the pilot to be captured alongside the aircraft or left to fall to earth, unconscious.

BOARDING ASSAULT TABLE

Crew Skill	Damage die per member
Poorly Skilled	1d4
Well Trained	1d6
Experienced	1d8
Military Grade	1d10

BUILDING AND DESIGNING AIRCRAFT

This ruleset has been designed to allow each adventurer to design their own aircraft from a set of base chassis and weapons, that can then be modified over time. An adventurer looking to create their own aircraft should consult the charts below. An aircraft can aesthetically look, feel and handle however the adventurer likes, however each aircraft will begin their life as one of the Five Chassis listed on the **Chassis** table.

CONSTRUCTING THE AIRCRAFT

All chassis have a base speed that the chassis itself is capable of reaching, an Armour class, average hit points, ability scores and crew size.

When creating a Chassis for the first time, an adventurer can either use the average hitpoints, or roll the listed dice. These hitpoints do not change again unless the Aircraft's Constitution increases. Once a chassis has been chosen, an engine must be purchased. Each chassis as standard comes with a **single Grade 4 Workhorse Engine and single Fuel Tank**, which can be upgraded at the base cost shown plus the upgrade cost on the **Engine Upgrades** table.

HOOKING UP THE FUEL TANKS

Fuel tanks come in two sizes; either 250 gallon, or 500 gallon. The number of fuel tank slots a chassis has will be listed on its table. Each tank when purchased new is assumed to also be full with Skytrol.

ARMING YOUR AIRCRAFT

Once you've chosen a Chassis and hooked up the engine and fuel tank, it's time to choose weapon systems. Chassis will have listed on their profile a number of **Weapon Hardpoints**. These show the maximum number of weapons a chassis can house at once.

A list of weapons and their statistics can be found on the **Weapons table**.

WEAPONS AND AMMUNITION

Unlike conventional firearms and bows, you are always assumed to have enough ammunition on board to fight with, as trying to track rounds from a fully automatic high calibre autocannon might be a little too much to keep track of.

However, this doesn't mean that eventually you won't run out. Each weapon comes with its own magazine box. When a weapon is used during a combat, it uses up a portion of its box. After 3 separate combats, the magazine of that weapon is considered to have run dry. The pilot or a crew member can spend their action to reload the weapon with a new box on their turn if one is available.

All airstrips house basic ammunition for most weaponry. Some more exotic ammunition types will vary in cost and amount depending on location. Each aircraft chassis can hold a number of additional magazine boxes equal to **half their Weapon Hardpoint Value, rounded down, to a minimum of 1**. Ammo costs are listed next to their corresponding weapon profiles on the **Weapons Table**. If **No Box** is listed, check the **Aircraft Special Rules** for more information.

UPGRADES AND MODIFICATIONS

Now the aircraft has been built, armed, fueled and established, it's time to start work on upgrading the aircraft to make it unique. Each chassis has a number of upgrade points that can be used to apply new features and stat increases to the aircraft. These upgrades can be found in the **Upgrades and Modifications** table.

An Upgrade or Modification can only be selected once. You can never have multiple instances of the same upgrade or modification equipped at the same time.

For example, you couldn't have two **Engine Reinforcement MKI**'s on the same Chassis, but you could have an **Engine Reinforcement MK I** and an **Engine Reinforcement MK II** equipped at the same time.

UPGRADES, ALTERATIONS AND TIME MANAGEMENT

Naturally, when upgrading or modifying your aircraft, it often takes a long time to make sure everything is in working order. To represent this, an adventurer wishing to make any alterations to their aircraft (including engines, upgrades, Skytrol tank and weapon replacements/additions etc), they must always land at an airfield with parts available for purchase before starting work on them.

Alone, an adventurer can make **1 change per day**. For each adventurer willing to assist with changing parts, **the number of changes that can be made per day is increased by 1**. The amount of time it takes for an alteration varies depending on the type. Consult the **Aircraft Alteration Table** below to work out how long each change will take you.

AIRCRAFT ALTERATION TABLE

Type of Alteration	Hours to Complete
Skytrol Tank replacement	1 - 2 Hours
Modifications	6 Hours
Upgrades	8 Hours
Weapon Replacement	12 Hours

HIRING HELP

Often, an adventurer may want to work on other things whilst they pay a crew of engineers to make the necessary adjustments to their aircraft. Consult the **Engineer Hire Table** below to work out which crew would work best for you.

Note: Durations only take into account working hours. Most crews work 8 hour days.

ENGINEER HIRE TABLE

Crew Skill	Alterations Per Day	Duration	Cost
Top Tier	7	8 Hours	1,500gp
Mid Tier	6	12 Hours	1,000gp
Low Tier	5	16 Hours	500gp

AIRCRAFT CONSTRUCTION TABLES

AIRCRAFT CHASSIS

Chassis Grade	Size Class	Base Speed	Armour Class	Hit Points	Fuel Tank Slots	Engine Slots	Crew Size	Weapon Hardpoints	Upgrade Points	Turn Speed	Cockpit Type	Base Cost
E	Large	400ft	20	150	1x 250 Gallon	1	1	1	2	25ft	Open	5,000gp
D1	Huge	300ft	18	378	2x 250 Gallon	2	1	1	3	25ft	Open	10,000gp
D2	Huge	300ft	18	378	1x 500 Gallon	1	1	2	2	25ft	Open	10,000gp
C1	Gargantuan	200ft	16	528	3x 250 Gallon	2	15	3	4	50ft	Closed	25,000gp
C2	Gargantuan	200ft	16	528	2x 500 Gallon	3	10	5	3	50ft	Closed	25,000gp
B1	Colossal	100ft	14	741	2x 500 Gallon	4	25	6	5	75ft	Closed	80,000gp
B2	Colossal	100ft	14	741	3x 500 Gallon	5	20	10	4	75ft	Closed	80,000gp
A1	Titan	0ft	12	984	4x 500 Gallon	6	50	14	7	100ft	Closed	400,000gp
A2	Titan	0ft	12	984	6x 500 Gallon	8	40	20	5	100ft	Closed	400,000gp

E GRADE

Value	Ability Score	Average Hit Point Mod
14 (+2)	Strength	
20 (+5)	Dexterity	
14 (+2)	Constitution	150 (20d10 + 40)
0 (-5)	Intelligence	
0 (-5)	Wisdom	
0 (-5)	Charisma	

B GRADE

Value	Ability Score	Average Hit Point Mod
26 (+8)	Strength	
12 (+1)	Dexterity	
28 (+9)	Constitution	741 (38d20 + 342)
0 (-5)	Intelligence	
0 (-5)	Wisdom	
0 (-5)	Charisma	

D GRADE

Value	Ability Score	Average Hit Point Mod
16 (+3)	Strength	
18 (+4)	Dexterity	
18 (+4)	Constitution	378 (36d12 + 144)
0 (-5)	Intelligence	
0 (-5)	Wisdom	
0 (-5)	Charisma	

A GRADE

Value	Ability Score	Average Hit Point Mod
30 (+10)	Strength	
6 (-3)	Dexterity	
30 (+10)	Constitution	984 (48d20 + 480)
0 (-5)	Intelligence	
0 (-5)	Wisdom	
0 (-5)	Charisma	

C GRADE

Value	Ability Score	Average Hit Point Mod
22 (+6)	Strength	
16 (+3)	Dexterity	
22 (+6)	Constitution	528 (32d20 + 192)
0 (-5)	Intelligence	
0 (-5)	Wisdom	
0 (-5)	Charisma	

CHASSIS SPECIAL RULES

All Aircraft are classed as **Constructs** with the following Damage and Condition Immunities. These immunities do not apply to the pilots or any crew on-board, only for the Aircraft itself:

Necrotic, Poison, Psychic, Charmed, Exhaustion, Frightened, Poisoned, Prone, Stunned.

ENGINE UPGRADE TABLE

Engine Type	Description	Features	Hit Points	Base Cost	Upgrade Cost
Grade 4	Common Workhorse Engine	+50ft flight speed	10	75gp	Free
Grade 3	Light Scout Engine	+100ft flight speed	8	150gp	100gp
Grade 2	Combat Engine	+50ft flight speed	15	150gp	100gp
Grade 1	Heavy Combat Engine	+25ft Flight Speed	25	200gp	100gp
Lodestone	Magitech Powered Engine	+150ft Flight Speed, Does not require Fuel	6	1250gp	750gp

SKYTROL GENERATOR

Skytrol Tank Size	Base Cost	Full Refill Cost	Base Price per Gallon
250 Gallon	200gp	175gp	7 Silver
500 Gallon	375gp	350gp	7 Silver

WEAPONS TABLE

Weapon Name	Range	Number of Shots	Damage	Fire Arc	To Hit Modifier	Notes	Hardpoint Cost	Base Cost	Magazine Cost Per Box
Light Autocannon	250ft/300ft	4	1d10 Piercing	Front Facing	+4		1	250gp	50gp
Medium Autocannon	150ft/200ft	3	3d8 Piercing	Front Facing	+4		1	350gp	50gp
Heavy Autocannon	150ft/250ft	2	5d10 Piercing	Front Facing	+4		2	450gp	50gp
Light Quad Flak Cannons	75ft Cone	1	2d12 Slashing	Front Facing	Dex. Save/Half		1	250gp	50gp
Heavy Quad Flak Cannons	75ft Cone	1	3d12 Slashing	Front Facing	Dex. Save/Half		1	450gp	100gp
Light Drillstorm Torpedo	100ft	1, One Use	2d6 Piercing	Front, Port or Starboard	Dex. Save	Requires arming as a bonus action before firing. If the Drillstorm Torpedo hits a target, it burrows 5ft inside it. Then, roll a d6. On a 2+ the target takes an additional 8d6 fire damage.	0.5	400gp	No Box
Heavy Drillstorm Torpedo	50ft	1, One Use	2d6 Piercing	Front, Port or Starboard	Dex. Save	Requires arming as a bonus action before firing. If the Drillstorm Torpedo hits a target, it burrows 5ft inside it. Then roll a d6. On a 2+ the target takes an additional 8d8 fire damage.	0.5	750gp	No Box
Cannon	200ft/300ft	1	7d10 Bludgeoning	Front Facing	+4		1	500gp	50gp
Echo Cannon	75ft	1	7d12 Force	Front Facing	+4	On a successful hit, after taking damage, target must roll on the Aircraft Botch Table. Requires Lodestone Engine to equip.	2	1,500gp	No Box
Fairy Fire Launcher	150ft/250ft	2	2d10 Force	Front Facing	+4	Target must succeed on a Wisdom saving throw or be blinded until the end of their next turn. Requires Lodestone Engine to equip.	1	1,000gp	No Box

WEAPONS TABLE II

Weapon Name	Range	Number of Shots	Damage	Fire Arc	To Hit Modifier	Notes	Hardpoint Cost	Base Cost	Magazine Box Cost
Dragonfire Cannon	150ft	3	6d6 Fire	FrontFacing	+4		3	1,200gp	150gp
Chain Lightning Launcher	100ft	1	4d6 Lightning	Front Facing	+4	On a hit, target must succeed on a Constitution saving throw or roll on the Aircraft Botch Table, then roll a d6. On a 5-6 the lightning arcs to another target within 200ft. Make another attack with this weapon against that target and resolve it's effects. After, roll another d6. Continue in this manner until there are no other new aircraft for the lightning to jump to, or a 1-4 is rolled on its d6. The weapon then stops firing for the turn. Requires a Lodestone Engine to equip.	1	1,600gp	No Box
Archfire Rocket Battery	200ft/300ft	8	1d10 Fire	Front Facing	+4	You can spend a bonus action to lock on to up to 4 separate targets in your arc, and divide your shots up amongst them.	2	1,000gp	350gp
Sleet Storm Rocket Battery	200ft/300ft	8	1d10 Cold	Front Facing	+4	You can spend a bonus action to lock on to up to 4 separate targets in your arc, and divide your shots up amongst them.	2	1,000gp	350gp
Lightning Strike Rocket Battery	200ft/300ft	8	1d10 Lightning	Front Facing	+4	You can spend a bonus action to lock on to up to 4 separate targets in your arc, and divide your shots up amongst them.	2	1,000gp	350gp
Thunderfire Cannon	500ft/750ft	1	10d12 Bludgeoning	Front Facing	+7	A target hit by this weapon must immediately roll on the Aircraft Botch Table. Grade C+	5	3,000gp	500gp
Twin Barrelled Nightstorm Cannon	600ft/900ft	2	10d10 Piercing	Front Facing	+8	On a hit, the target is enveloped in a darkened shroud that lasts until the start of its next turn. This has the same effect as a 3rd level <i>Darkness</i> spell, but focused on the target only. 2 Lodestone Engines required to equip Grade B+	10	3,500gp	500gp
Light Anti Aircraft Battery	175ft	1	2d8 Piercing	Turret	Dex Save	This weapon is unmanned. Once per round it will automatically fire at an enemy target that enters its range as an attack of opportunity, without expending a reaction to do so. Grade C+	1	350gp	50gp

WEAPONS TABLE III

Weapon Name	Range	Number of Shots	Damage	Fire Arc	To Hit Modifier	Notes	Hardpoint	Cost	Base Magazine Cost	Box Cost
Heavy Anti Aircraft Battery	150ft	1	3d10 Piercing	Turret	Dex Save	This weapon is unmanned. Once per round it will automatically fire at an enemy target that enters its range as an attack of opportunity, without expending a reaction to do so. Grade C+	2	550gp	75gp	
Light Flak Battery	50ft Cube, centred on one target up to 75ft away	1	2d12 Slashing	Turret	Dex Save/Half	This weapon is unmanned. Once per round it will automatically fire at an enemy target that enters its range as an attack of opportunity, without expending a reaction to do so. Grade C+	1	450gp	50gp	
Heavy Flak Battery	75ft Cube, centred on one target up to 100ft away	1	3d12 Slashing	Turret	Dex Save/Half	This weapon is unmanned. Once per round it will automatically fire at an enemy target that enters its range as an attack of opportunity, without expending a reaction to do so. Grade C+	2	550gp	100gp	
Light Broadside	300ft long, 50ft wide line	1	10d10 Bludgeoning	Port or Starboard	Dex Save	Grade C+	3	1,000gp	350gp	
Heavy Broadside	200ft long, 75ft wide line	1	14d10 Bludgeoning	Port or Starboard	Dex Save	Grade B+	5	1,250gp	500gp	
Heavy Harpoon Cannon	25ft	1	2d6 Piercing	Front, Port or Starboard	Special	This weapon is for Boarding Assaults, and cannot be fired normally. See Boarding Enemy Aircraft and Special Rules for more info. Grade B+	2	500gp	50gp	
Light Stubber	125ft	1	3d4 Piercing	Pintle Mount	+3	Grade C+	0	75gp	25gp	
Heavy Stubber	75ft	1	5d4 Piercing	Pintle Mount	+3	Grade C+	0	100gp	25gp	
Firelauncher	50ft	1	4d4 Fire	Pintle Mount	Dex Save	Grade C+	0	350gp	100gp	
Harpoon Cannon	25ft	1	2d6 Piercing	Pintle Mount	Special	This weapon is for Boarding Assaults, and cannot be fired normally. See Boarding Enemy Aircraft and Special Rules for more info.	0	250gp	50gp	
Force Stubber	100ft	1	3d4 Force	Pintle Mount	+3	Grade C+. Requires 1 Lodestone Engine to equip.	0	175gp	No Box	
Lightning Stubber	75ft	1	4d4 Lightning	Pintle Mount	+3	Grade C+. Requires 1 Lodestone Engine to equip.	0	150gp	No Box	

EXPERIMENTAL WEAPONS TABLE

Weapon Name	Range	Number of Shots	Damage	Fire Arc	To Hit Modifier	Notes	Hardpoint Cost	Base Cost	Magazine Box Cost
Tesla Storm Generator	100ft Radius Sphere from edges of selected chassis	1	3d6 Lightning	All Arcs	Con save	Experimental Weapon. Limited to 1 per chassis. Requires an Action to activate, and it remains on and firing until the craft is destroyed or it is turned off in the cockpit. Weapon automatically inflicts damage as soon as any creature or aircraft enters it's radius. Targets in the radius must then succeed on a Con saving throw or roll on the aircraft botch table. If it is a flying creature, it instead takes 2d6 additional lightning damage and is paralyzed until the start of its next turn. Grade B+	5	5,000gp	3,500gp
Runestone Cannon (Antimagic Shells)	200ft	1	3d6 Force	Front Facing	+7	Experimental Weapon. Limited to 1 per Chassis. If this weapon hits a target, in addition to taking damage, that target loses all magical features it has until the start of its next turn, at which point they return as if nothing had happened. If cast on an aircraft with a lodestone engine, that engine will shut down until the start of the pilot's next turn. If a spellcaster is on board an aircraft when it is hit, they lose all spellcasting features until the start of their following turn.	2	5,000gp	1,500gp
Wave Strike Cannon	300ft Cone	1	5d10 Thunder	All Arcs/Specify equip location	Con save	Experimental Weapon. Limited to 1 per chassis. On a failed save, in addition to the damage dealt, the target's speed is reduced to 0 until the start of their next turn and they are pushed 100ft away from the direction of the weapon. Requires 4 Lodestone Engines to equip. Grade A	8	5,000gp	No Box
Earthshaker Torpedo	500ft	1, Single Use	4d6 Piercing 14d6 Thunder	Front, Port, Starboard	Dex Save	Experimental Weapon. On a failed save the target must make a Constitution saving throw, with the DC equal to half the damage dealt by the Torpedo, rounded up. On a success, nothing happens. On a failed save, the Torpedo's debris punches multiple holes through the target, dealing an additional 10d6 piercing damage. If targeting the ground, it instead causes effects similar to that of the <i>Earthquake</i> spell. Grade B+	5	10,000gp	No Box
Wraithbore Cannon	1000ft	1	3d100 Force	Front Facing	+8	Experimental Weapon. Limited to 1 per Chassis. When this weapon hits a target it emits a gigantic pulse of white light. All creatures in a 150ft radius from the target must succeed on a Dexterity saving throw or be blinded until the start of their next turn. Requires 4 Lodestone Engines to equip, Grade A Only.	15	10,000gp	No Box

UPGRADES AND MODIFICATIONS TABLE

Upgrade Name	Upgrade Type	Prerequisites	Upgrade Point	Notes	Upgrade or Modification
Engine Reinforcement MK I	Modification	Grade 4 Engine or Higher	1	When rolling on the Aircraft Botch Table, you can add +1 to the result.	250gp
Engine Reinforcement MK II	Modification	Grade 4 Engine or Higher	2	When rolling on the Aircraft Botch Table, you can add +1 or -1 to the result. Does not work with Lodestone Engines.	750gp
Armour Reinforcement	Upgrade	D Grade Chassis and Above	2	You add +1 to your Armour Class, but lose 50ft of movement speed.	250gp
Armour Reinforcement MK II	Upgrade	D Grade Chassis and Above	2	You add +2 to your Armour Class but lose 100ft of movement speed.	500gp
Armour Reinforcement MK III	Upgrade	C Grade Chassis and Above	3	You add +3 to your Armour Class, but lose 100ft of movement speed and 3 Weapon Hardpoints.	1,000gp
Ablative Plating MK I	Modification	None	1	You gain an Armour Threshold rating of (10). See Special Rules.	250gp
Ablative Plating MK II	Modification	D Grade Chassis and Above	2	You gain an Armour Threshold rating of (20). See Special Rules.	750gp
Ablative Plating MK III	Modification	B Grade Chassis or Above	3	You gain an Armour Threshold of (30). See Special Rules.	1,500gp
Combat Reinforcement MK I	Modification	D Grade Chassis or Above	1	You gain resistance to nonmagical Bludgeoning damage.	500gp
Combat Reinforcement MK II	Modification	D Grade Chassis or Above	1	You gain resistance to nonmagical Slashing damage	500gp
Streamlined Design MK I	Upgrade	None	1	You gain an additional 25 feet of movement speed, and remove 1 from your Strength and Constitution ability scores, to a minimum of 0.	250gp
Streamlined Design Mk II	Upgrade	None	2	You gain an additional 50ft of movement speed, and remove 2 from your Strength and Constitution ability scores, to a minimum of 0.	500gp
Streamlined Design Mk III	Upgrade	None	2	You remove 3 from your Strength and Constitution ability scores, to a minimum of 0, and can perform maneuvers as a bonus action on your turn.	1,000gp
Resilient Design MK I	Upgrade	None	1	You reduce your Dexterity score by 2, and increase your Constitution score by 2.	350gp
Resilient Design MK II	Upgrade	None	3	You reduce your Dexterity Score by 4, and increase your Constitution score by 4.	1000gp
Speed Tweaks MK I	Upgrade	None	1	You reduce your Constitution score by 2, and increase your Dexterity score by 2.	350gp
Speed Tweaks MK II	Upgrade	None	3	You reduce your Constitution score by 4, and increase your Dexterity score by 4.	1000gp
Weapon Adapters	Upgrade	None	2	You increase your available Weapon Hardpoints by 1.	1250gp
Co Pilot Seat	Upgrade	E or D Grade Chassis	1	You lose 2 Armour Class, but can have an additional seated creature occupy this aircraft as a crew member.	500gp
Pintle Mount	Modification	E or D Grade Chassis	1	You can equip a single Pintle Mount of Grade C+ requirement to the rear of the Chassis.	250gp
Close Cockpit	Upgrade	E or D Grade Chassis	1	Your aircraft no longer counts as being Open Topped.	250gp
Torpedo Battery	Upgrade	None	2	You can arm and fire up to all equipped Torpedos facing the same Fire Arc on the same turn as a single action and bonus action.	1000gp

AIRCRAFT SPECIAL RULES



ere you can find a list of all the additional rules shown in the Aircraft Design Tables. Most are self explanatory, however there are a few specific new rules added that require a more in depth explanation.

ARMOUR THRESHOLD

If the aircraft suffers damage from an attack that totals the value listed in the (X) or less, it can choose to ignore it and take no damage from the attack. You cannot equip more than one Modification with this rule at the same time.

For example, if you had an armour threshold of (10), and an attack hit you for 10 damage or less, you can simply ignore the damage. If the attack deals damage of 11 or higher, however, the attack would prove too powerful, and the aircraft would take the full 11 damage.

NUMBER OF SHOTS (AIRCRAFT WEAPONS TABLE)

If a weapon has more than one shot, you would fire each shot as a separate attack roll against the same target, applying damage modifiers separately each time.

For example, the Light Autocannon has 4 shots. So you would make 4 separate attack rolls, with each of them roll 1d8 + the piloting creature's proficiency modifier in damage rolls.

FIRE ARCS

Certain weapons will have Fire Arcs listed on their profiles. This is to represent which way the weapons can be mounted on Aircraft, and subsequently, which directions they are able to fire when mounted as such.

For example, the Light Autocannon can only be Front Facing, meaning the aircraft will have to face it's target to fire at it with that weapon. However, a Light Broadside can be equipped either to face the Port (left) side of an Aircraft or the Starboard (right) side, and as such can fire either left or right, depending on how it's equipped.

TURRETS

Turrets are a special kind of weapon that are not fired by the pilot or by a crew member on board. Instead, they are designed with a simplistic construct intelligence to fire at nearby enemy targets automatically. These weapons are always considered to be equipped on the deck of a larger ship, and have a domed firing arc, meaning they can fire forwards, left, right, above, backwards and anywhere else while remaining in the dome, but cannot fire down.

PINTLE MOUNTED WEAPONS

Often equipped on trade ships due to their cost effective nature and utility, these weapons are designed as small defensive guns to deter would be attackers, such as flying creatures, or tailing enemy aircraft. A weapon with this rule **must have a free crew or party member available to fire it** and can only be fired if there they are within 5ft of it. It requires the creature to spend it's action to fire it, and does not get affected by the Aircraft Botch Table.

A Chassis can have a number of pintle mounts equipped equal to **half its crew number, rounded up, to a maximum of 10**. These weapons do not take up weapon hardpoints, can be fixed to face either the Fore, Port, Starboard or Rear in any combination, and any number can be moved to another facing on a short rest with help from the crew.

If crew are lost during Boarding Assaults which would bring the maximum number of allowed pintle mounts down, it is assumed that the excess were destroyed during the combat. If crew are removed by other means (such as the adventurer letting them go or being unable to pay their wage) and this brings the maximum number of allowed pintle mounts down, then it is assumed they are sold for scrap (for 25gp per mount), as there aren't enough free crew members able to fire them.

EXPERIMENTAL WEAPONS

Experimental weapons are very powerful, very dangerous developments that can often only be mounted on larger Grade aircraft. These weapons are so powerful that they can only be obtained through either special quests (speak with you DM), or purchased for the base price (or often higher) from a specific NPC. These weapons consume so much power that there can only ever be a single Experimental Weapon on an aircraft at any given time. It is very likely that unless you're involved with a very generous DM, or in a very high level campaign, these weapons won't see much use.

TORPEDOES

Torpedoes are powerful, one use items that can be hooked to the underside of aircraft for a quick arm and fire. Torpedoes, being under-mounted weapons, do not require additional ammo feeds or as much space as a dedicated weapon system. Therefore, a single Aircraft weapon mount can house 2 Torpedoes. A Torpedo can only be fired if the aircraft has not performed a maneuver in their previous turn. Once a torpedo is fired it is gone, and a new one must be purchased from weapon suppliers at resupply airstrips, if they have them in stock.

UPGRADES AND MODIFICATIONS: THE DIFFERENCE

Modifications are faster 'tweaks' to existing

Aircraft parts, and as such don't require as much time to complete. Upgrades almost always require removing elements of the aircraft in order to replace, or 'upgrade' existing parts, and thus take much longer to complete.

LODESTONE REQUIRED WEAPONS

Certain weapons require a Lodestone to be equipped before the can be taken. This is because instead of using standard ammunition, they draw power directly from the magical Lodestone energies. This means that for as long as the Lodestone Engine is intact, the weapon can fire without running out of ammunition.

HARPOON CANNONS

Harpoon Cannons are short range cannons that fire heavy ballista style projectiles, designed to penetrate and capture enemy aircraft. When fired, the steel cables lock in place, ensuring a solid, if temporary, opportunity for boarding.

After a short time, however, these cables become weak, and often snap, leaving the attacking crew to retreat or be left to the mercy of the now free moving defending aircraft. Often, wily commanders and crews will have additional magazines at the ready to reload the cannons for another try.

An aircraft equipped with these weapons cannot fire them in the conventional manner, instead using the **Boarding Enemy Aircraft** rules found earlier in this book. A harpoon that successfully hits an enemy aircraft deals the piercing damage noted in it's entry.

During Boarding assaults, each successful hit from a harpoon adds an additional round to the duration of the boarding assault before the cables snap and the defending aircraft manages to repel the attacker.

If a Heavy Harpoon cannon is fired, however, each hit from one of these weapons grants an additional 3 rounds, instead of the usual 1 for a pintle mounted harpoon cannon.

EARNING GOLD FROM BOUNTIES



ften, adventurers will find themselves low on gold. While some quests will function well under these circumstances, pilots have aircraft to run, and keeping them in top shape requires a steady supply of income. This is where bounties come in. Bounties are quests given out by individuals, organizations or

governments that often require a particular goal to be reached. Most of the time, these involve capturing or killing pirates, and destroying dangerous aircraft.

The rules written out here are a simple guide to setting up bounties, and how to ensure a decent gold reward for keeping those Steampunk engines running smoothly.

GROUND BASED BOUNTIES

Ground based bounties are bounties that rely on the adventurers setting out of foot, most likely after heading to an area via their aircraft. Adventurers must always be wary of traps and ambushes set up by their potential bounty, and sometimes it's rather obvious knowing someone is after you when they have aircraft in tow!

These bounties follow the same Challenge Rating rules as set out in the Dungeon Master's Guide, and should have a bounty that is at least a medium challenge for the group. The Bounty is always worth 50% of its XP rating.

For example, a Challenge Rating 10 bounty, worth 5,900XP, would earn the group 2,950gp. Some bounties will offer additional rewards if certain conditions are met, such as bringing back items, or in the case of certain monsters, potentially bringing back particular parts of it, such as the heart of a wendigo, or the claws of a bear. These additional rewards often grant an additional 10% of the bounty's XP in bonus gold, though your DM can decide if other items or a bigger reward is needed.

AIR BASED BOUNTIES

Aircraft based bounties are designed around dogfights and air combat. Some missions may be to attack, board and capture an enemy pirate captain, while others could be to destroy a certain aircraft that was threatening trade ships. Whatever the mission, each one will have a set bounty based on its challenge rating.

An easy challenge should grant the party 10% of their level XP in gold. A medium challenge should grant them 30%, and a Hard or Deadly challenge should reward them with around 50%.

For example, a party of 4 9th-level characters have a level XP of 48,000 each. So a bounty array for a group of adventurers at that level would look something like this:

- Easy: 4,800gp
- Medium: 14,400gp
- Hard/Deadly: 24,000gp

MULTIPLE BOUNTIES

Often, bounty boards may have multiple bounties on offer at once. Some bounties will be smaller than others, but will be around the same region, or even in the same area as a larger, more dangerous bounty. Collecting a few bounties at a time can quickly result in a good balance of encounters, adventures and a tidy profit at the end of it all.

Be careful not to take too many though! Some bounties may overlap others, or have time limits on them that ambitious adventurers might overstretch themselves with; wasting more days repairing and refueling than the timeframe would allow. Speak with your party and decide as a group what style of bounty hunting best suits you, then go out and get hunting!

AIRCRAFT BATTLES & XP

This chapter is designed for Dungeon Masters, to help them better calculate XP based combats using the new aircraft constructed within this book. Naturally, with such construction available to adventurers, it's important that a Dungeon Master have some control over the combat challenges, and understand the levels of difficulty the campaign can expect when adding aircraft.

This is no means required to use these rules, as a Dungeon Master can simply award milestone levels or work out balance in other manners, but for those wanting a more accurate method, it is listed below.

CHALLENGE RATINGS

To do this, the Dungeon Master must first calculate the general Challenge Rating of the aircraft constructed. Page 274 of the *The Dungeon Master's Guide* has a table for calculating Quick Monster Stats, and helps outline the general Challenge Rating of a created creature.

To use this with the *Dogfighter's Handbook*, simply take the Aircraft's finalised Armour Class, Hit Points, Highest Attack modifier and save DC (including the proficiency of the piloting creature), and the total average damage of every weapon that can be fired in a single round.

Then compare these stats to the table in the *Dungeon Master's Guide*, beginning with hit points to find a starting Challenge Rating. Using the guide in the *Dungeon Master's Guide*, work out an average Challenge Rating, adding an additional level for every 2 upgrades or modifications an aircraft has.

This will produce a general Challenge Rating you can use to work out encounters where there is only one aircraft involved, such as a group of adventurers fighting atop a mountainside against a circling B Grade warship.

BALANCING ENCOUNTERS WITH MULTIPLE AIRCRAFT

If you have an aircraft with a Challenge Rating, and you've found it's far too powerful for a collection of adventurers to fight without aircraft or ridden mounts of their own, then you will need to work out how best to balance an encounter with multiple vessels involved.

To do this, take the total XP value of every ship the adventurers will be using in the encounter. Let's say there are 4 ships, and each one is a Challenge Rating 10 aircraft worth 23,600 XP (5,900 XP each).

Then you work out the *Encounter Multiplier* from the *Dungeon Master's Guide*, based on how many aircraft are being used (in this case, 4), and multiply the total XP by that.

This forms the **Experience Base** for the Encounter.

Now look at all the Challenge Ratings of enemy aircraft or ridden monsters in the combat, and their total XP, after using the *Encounter Multiplier* table from the *Dungeon Master's Guide*. Compare this XP to the **Experience Base** of your party.

- If it is 50% less than the Experience Base, it is an **Easy Encounter**.
- If it is equal, then the encounter can be classed as a **Medium Encounter**.
- If it is between 50% higher than the Experience Base, it is a **Hard Encounter**.
- If it is around 100% or 150% above the Experience Base, it is a **Deadly Encounter**.
- If it is more than 200% higher than the Experience base, it is a **Double Deadly Encounter**.

AWARDING XP

Now you have worked out the encounters level for the party, look at page 82 of the *Dungeon Master's Guide*.

Here there is a list of Adventurer XP thresholds. Using this table, you can work out how much base XP to award each adventurer that took part in the combat.

For example, if you have worked out a Hard encounter using aircraft piloted by 10th level characters, you would, in the *Dungeon Master's Guide*, look for what the XP Threshold was for a Hard encounter for a 10th level character and award the XP listed there for each adventurer in the combat.

If you have adventurers of various levels, use the average level of the party as a whole.

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