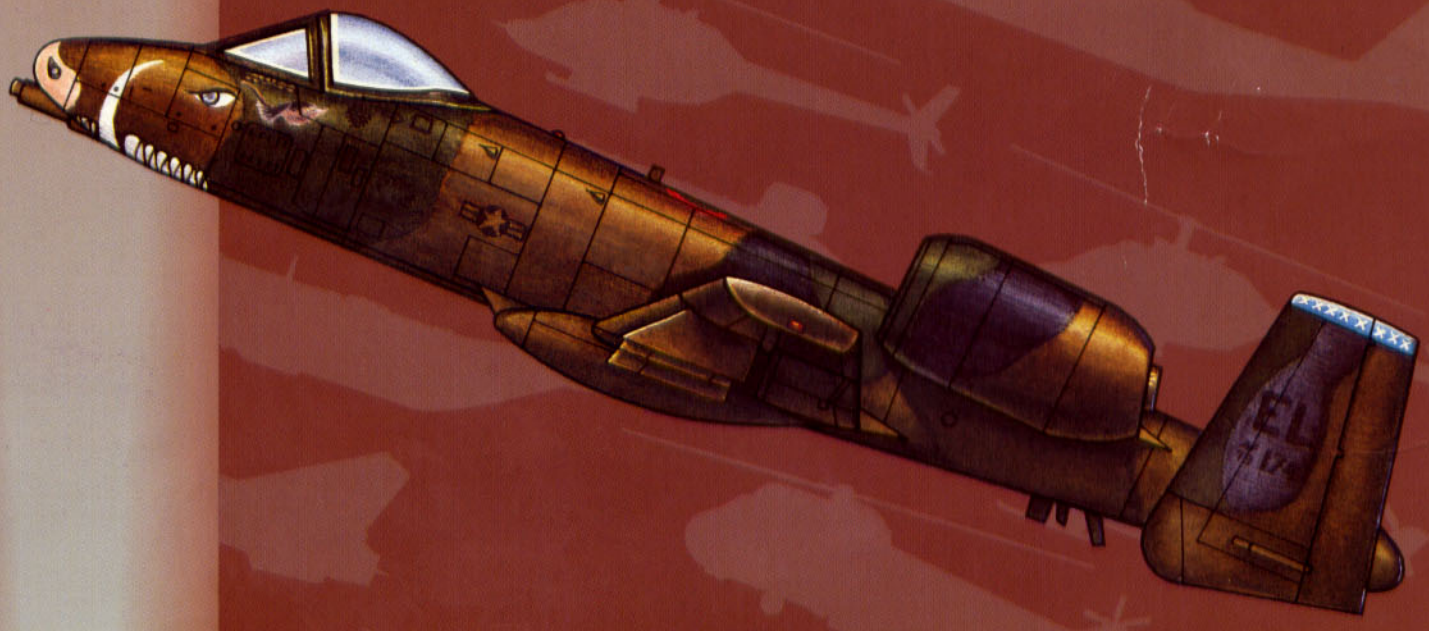
TWILIGHT: 2000™ 2nd Edition TM2009

NAUTICAL/AVIATION™ Handbook

Loren K. Wiseman



GDW

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Dark Conspiracy is GDW's trademark for its roleplaying game of unearthly horror in a modern world.

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INTRODUCTION

The **Nautical/Aviation Handbook** has been written primarily for use with **Merc: 2000** campaigns, although it can also be used with **Twilight: 2000** and other games using adaptations of the **Twilight: 2000** system (**Cadillacs and Dinosaurs** and **Dark Conspiracy**). The world situation in **Twilight** will make fuel, spare parts, and ammunition for aircraft quite rare, but individual referees may find it useful to introduce a single aircraft as a part of a special campaign scenario, or in one of the rare sections of the **Twilight: 2000** world where oil can still be had.

The water rules are contained in the basic game (which is essential to both **Twilight** and **Merc** games), and are not repeated or significantly altered in this book.

SELECTION CRITERIA

The basic philosophy in assembling the particular air and water craft was to concentrate on those vehicles which would be of greatest interest to mercenary operations. The selection of water craft in the basic **Twilight** rules was fairly comprehensive, and did not need repeating in this book. This book contains no destroyers, no frigates, and no strategic bombers, because these are all beyond the scope of the game. The characters will never own an *Aegis*-class cruiser or a B-52. They will never have need of a C-5A. But they will certainly need Pumas and Gazelles, and they might conceivably be attacked by A-10s or Su-25s.

A few transports were included since it is possible for them to show up as patron-supplied transport or spoils of war. Sadly, it was not possible to include all nationalities or all variations of some popular aircraft. The plethora of aircraft armament and electronics had to be grossly simplified. Those wanting a more rigorous simulation of air-to-air and air-to-ground combat should consult the **Harpoon** or **Air Superiority** series games (both by GDW).

Astute readers will note that while combat statistics are included for various air defense systems, we have not included the details of their launchers, or illustrations of them. Some of these are covered in the various vehicle guides already and others will be covered in the upcoming heavy weapons guide. They were excluded for reasons of space: We felt it more important to include aircraft than antiaircraft weapons.

RATING CRITERIA

The system used to rate aircraft for this book may prove of interest to people wishing to work up ratings for models not included.

Weight: This is the normal takeoff weight at sea level. What this is exactly depends on a number of variables for different aircraft, and we have taken the value given by the reference works and ignored the variables. This results in some slight inaccuracies, but the gains that this makes in simplicity and playability are well worth it.

Load: Load is average combat load carried on hardpoints for fixed-wing aircraft. For helicopters it is interior load and/or slung load, or load carried on hardpoints, as stated (sometimes slung load is stated separate from interior load, sometimes not).

Travel Move: This is the aircraft's cruising speed in kilometers per hour multiplied by 4. This gives the number of kilometers the aircraft can travel in a four-hour travel movement phase.

Combat Move: This is the aircraft's maximum speed or "never exceed" speed in kilometers per hour divided by 10, for reasons too complex to explain. This results in the number of eight-meter squares moved in a combat phase, in sync with the basic game combat movement system.

Stall Speed: This is the reference work stall speed divided by five, again for reasons too complex to explain. Not all aircraft have a stall speed, which is the minimum speed that aircraft can travel and still remain airborne.

Runway Lengths: The minimum takeoff and landing distances are rounded off to the nearest eight meters.

Helicopter Landing Zone: This is three times the maximum length of the helicopter with rotors turning, rounded off to the nearest eight meters. All helicopters are capable of landing on primitive runways or no runways at all.

Other important factors, such as the crew size and type, passenger capacity, number of hardpoints, armored cockpits, flare dispensers, and so on must be determined by a careful examination of the source material for the aircraft under consideration. Occasional judgment calls are necessary. Paratroop capacity is (arbitrarily) set at 80% of normal passenger capacity, reflecting that paratroopers carry much more equipment with them than normal passengers, even soldiers in full kit.

ORGANIZATIONS

The organizations given in the book are limited in their scope to the primary nations exporting equipment, training, and doctrine to the Third World. With a little research, referees can determine which nation "taught" the army or air force that opposes the characters. These organizations and tactical discussions can then provide a framework for the referee to put together the opposition.

DESIGNER'S NOTES

The design of the air rules is based on those derived for **Dark Conspiracy**, but they have been a little more fleshed-out. More detailed takeoff and landing rules were devised, in keeping with the requirements of the **Merc: 2000** mythos where an adventure can often end up with the bad guys chasing the good guys down the runway, firing all the way. Crash-landings, ditching, and bail-outs were added, and more detail was added to the damage system.

We had to walk a fine line between playability and perceived realism in the design of these rules, and I believe that players and referee of **Twilight: 2000** and **Merc: 2000** will be very satisfied with the results.

AIRCRAFT

This section delineates the basic rules for incorporating aircraft into **Merc: 2000** and **Twilight: 2000**.

VEHICLE MOVEMENT

Incorporating aircraft into the combat sequence involves adding a few adaptations to the basic combat rules. Most of these adaptations involve vehicle movement.

Units of Measure: Movement rates for aircraft are given in eight-meter increments moved per combat phase. When using a two-meter grid, multiply this number by 4; when using individual meter measurement, multiply it by 8.

Fire From Moving Aircraft: Characters may not conduct aimed fire from a moving aircraft. They may fire quick shots or bursts at one stage greater difficulty than normal. Pilots fire quick shots as if at two stages of difficulty greater than normal. A hovering helicopter is not a moving aircraft.

This rule does not apply to pilots or crew of aircraft firing weapons mounted on the aircraft (such as door guns). It does apply to crew and passengers firing nonmounted weapons (such as rifles or pistols).

Target Movement: If the target is moving four or more grid squares per action phase, any attempt to hit it is conducted as if at one range band greater than normal. For normal fire, this merely means one stage more difficult than normal, but for autofire, it means that the number of dice rolled per burst is reduced.

"Pilot" Action: When aircraft are involved in combat, Pilot is considered an action added to the list of normal actions. Pilot includes the operation of all types of aircraft. In some cases, performing this action will require a skill check. In others, the action is considered to be automatically successful. For instance, a character who was using the Pilot action to fly a helicopter through a train tunnel might have to make a Difficult: Pilot check, while another character who was flying a transport aircraft in a straight line at high altitude would be required to make no check at all. Flying at Very Low altitude requires an Easy: Pilot check each turn.

A few other actions can be combined with the Pilot action. Talking and piloting can be done together freely. The Ready/Change Equipment, Reload, and Fire actions can each be done while piloting, but any necessary piloting checks are at one level more difficult (sometimes requiring a check that might not otherwise be required).

In those cases where an aircraft carries a separate gunner or weapons operator, that character may undertake a Fire action independently of any actions taken by the pilot. The relevant skill for the weapon being fired is used (Small Arms or Heavy Weapons).

Aircraft Movement and Driver Initiative: Flying an aircraft is a special case of the repetitive action option. That is, aircraft move every phase, regardless of the initiative rating of their pilots. This movement is considered to be simultaneous, although for simplicity's sake the referee will most likely choose to have characters move their vehicles each phase in reverse initiative order.

At the beginning of each 30-second combat turn, each player of a piloting character tells the referee the basic direction and speed of the aircraft. This can include such things as going in a straight line, following a road or canyon (if possible), flying toward a landmark, flying to a particular position and landing, following a leading aircraft, or any similarly simple plan. The aircraft then follows the stated course through all phases prior to the pilot's initiative level. Fixed-wing aircraft and autogyros must travel in reasonably straight lines on the playing surface (the referee determines what is reasonable for an individual aircraft). Helicopters traveling at less than half their safe speed may travel any course desired by the pilot (again, within the referee's judgment).

Once a character's initiative level comes up in the combat turn, however, that character can divert freely from the stated plan, choosing a new action each phase, if desired.

In addition, the pilot of an aircraft with fixed forward-firing guns may fire them at any target in his path when his initiative level comes up. He could not fire while conducting non-initiative repetitive "drive" actions, though.

Fast Flying and Mishaps: An aircraft may travel faster than the listed safe speed at the risk of a mishap. The safe speed for aircraft is their listed combat movement. They may always travel at twice this speed if travelling in a straight line at Medium or higher altitude. They must roll for a mishap only if attempting a high speed maneuver or flying at high speed at Low altitude.

Aircraft mishaps mean the craft goes out of control and begins rushing toward the ground (losing altitude at one band per turn). Once per phase, the pilot can make an Average check versus the appropriate Pilot skill to regain control. Success means that control is regained. Based upon the speed of the craft and its altitude at the time control was lost, the referee will determine how many phases can elapse before the craft runs out of airspace. If the pilot has not regained control by this time, the craft crashes, with damage being determined by the referee's judgment.

If the mishap was the result of a catastrophic failure, attempts to regain control are at Difficult level, rather than Average.

Stall Speed: Some aircraft have a stall speed listed in parentheses after combat movement. This is the minimum speed that aircraft may travel and remain airborne. Helicopters and aircraft capable of VSTOL flight have no stall speed, and may fly at zero speed (hover), if desired.

Takeoffs and Landings: Taking off and landing are Easy: Pilot skill tasks under normal conditions. These may be made more difficult by inclement weather, poor runway surface, etc. A failed takeoff or landing roll means that the pilot has either pulled up from landing or ground-looped at the end of the runway and aborted the maneuver for the moment. A catastrophic failure means the aircraft has crashed and is destroyed. The extent by which the task was failed should indicate the seriousness of injuries, if any, sustained by pilot and crew.

Some aircraft are equipped for landings on water: These are noted on the specific aircraft data card. Only such aircraft may normally land on water. All other things being equal, a water landing is no different than a conventional landing for a properly equipped aircraft. All other water landings are considered ditching.

All aircraft have a runway requirement based on their landing type. These types are:

VTOL (Vertical Takeoff and Landing): These aircraft can land on and take off from any reasonably flat piece of ground. All heli-

copters are VTOL. The minimum clear area required is noted on each individual aircraft data card.

STOVL (Short Takeoff, Vertical Landing) These aircraft can land on any reasonably flat piece of ground, but require a short runway or ski-jump style ramp to take off. Harriers are examples of STOVL aircraft. The minimum clear area required is noted on each individual aircraft data card.

VSTOL (Very Short Takeoff and Landing): These aircraft require only very short runways. Ultralights and many light aircraft are examples of VSTOL aircraft. The minimum clear area required is noted on each individual aircraft data card.

Primitive: These aircraft may take off and land from any reasonably flat, clear surface of the required length. Length of runway required varies from aircraft to aircraft, and is also noted on the specific data chart. Aircraft capable of using primitive runways may also operate from hardened runways.

Hardened: These aircraft require very long hardened runways to take off and land. Length of runway required varies from aircraft to aircraft and is also noted on the specific data card. Aircraft requiring hardened runways may not take off from primitive runways, and are considered to be ditching when they land on one.

Altitude: Aircraft may be at one of five altitude bands: Very Low, Low, Medium, High, and Very High. Altitude is relative to the ground surface, not barometric altitude. Aircraft that have just taken off are automatically at Very Low altitude. It requires one turn to go from Very Low to Low altitude (and vice versa), and requires two turns (one minute) to change to other altitude bands.

Effects Of Altitude: Aircraft flying at Very Low altitude are in danger of colliding with ground obstructions. Avoiding collisions at Very Low or Low altitude when travelling at the safe speed or less is Easy: Pilot. Flying at night with FLIR or IR glasses or flying at greater than the safe speed increases this by one level of difficulty. Flying at night without FLIR or IR glasses increases this by two levels of difficulty. No other altitudes have this effect.

Ditching: Ditching is when the pilot, for various reasons, attempts to land on an unsuitable surface. Ditching is an Average: Pilot task. Any damage to the aircraft or ditching at night raises the difficulty level by one each. A successful ditching means the aircraft, passengers and cargo are intact. The extent by which the task was failed should indicate the seriousness of injuries, if any, sustained by pilot and crew.

Ditching in water means that the aircraft will sink in 2D6 five-second phases unless the aircraft is equipped for water landings (as noted on its data card). Each character must make a Difficult: Agility roll to escape the aircraft before it sinks (and must then swim, board a boat, or drown, obviously).

FIRING AT AIRCRAFT

Aircraft may be fired at by ground weapons or other aircraft.

Ground Weapons: The only ground weapons which may fire at aircraft are automatic weapons (defined as those weapons with a numerical ROF rather than a letter rating such as SA, etc.) and surface-to-air missiles.

Automatic weapons do so using the normal rules to hit, but at one greater level of difficulty. All automatic small arms weapons cause minor damage. All larger caliber automatic weapon cause major damage.

Radar-directed guns (those guns listed as having TA radar in the various vehicle guides) fire at aircraft at their normal difficulty level, not one difficulty level greater.

Each firing automatic weapon can only achieve one hit per combat phase, regardless of the actual number of hit rolls successfully made.

Antiaircraft missiles are fired using the Heavy Weapons skill. The accuracy of the missile indicates the difficulty level of the task. A successful task roll indicates that the target aircraft suffers minor damage; an outstanding success roll indicates major damage.

Air-to-Air Combat: Aircraft may also be fired at by other aircraft using either automatic weapons or antiaircraft missiles. All firing rules are the same, with the following additions:

All hostile aircraft engaged in combat are either advantaged or disadvantaged with respect to each other. The advantaged aircraft is the aircraft with the higher total of speed points plus Pilot skill plus maneuver points.

Speed points are equal to the current combat speed of the aircraft divided by 10, rounding fractions down. For example, an aircraft with a printed speed of 40 being flown at twice its safe speed (80) has eight speed points.

Pilot skill is the actual skill level of the pilot.

Maneuver points are gained by attempting difficult maneuvers. An Average skill roll maneuver gains 1 point, and Difficult gains 2. Outstanding success doubles the number of points gained. All helicopters and VSTOL aircraft always receive double points, and receive triple points for outstanding success.

If the advantaged aircraft's total of speed+skill+maneuver exceeds the disadvantaged aircraft's total by 50% or more, the advantaged plane may break off contact and successfully escape. Otherwise, it must stay and fight.

If a fight (exchange of fire) ensues, the advantaged aircraft picks the range of the combat, provided it is within range of at least one of its own weapons. If the advantaged aircraft has no weapons, it must be within range of at least one of the disadvantaged aircraft's weapons.

Fixed weapons (machineguns and cannon fixed to fire forward) and antiaircraft missiles may only be fired at hostile aircraft if the firing aircraft is advantaged with respect to the target. Aircraft with radar gun sights fire at their normal difficulty level instead of one difficulty level greater.

Flexible-mount weapons (such as gun turrets or door-mounted machineguns) may fire at enemy aircraft whether advantaged or disadvantaged with respect to them. If disadvantaged, however, the fire is conducted at one difficulty level greater.

Defensive Countermeasures: Some aircraft carry defensive countermeasures, including flares to confuse heat-seeking missiles and chaff or jammers to confuse enemy radar. Aircraft with flares or IR suppression are fired at by missiles at one difficulty level greater. Aircraft with chaff or radar jammers negate the beneficial effect of radar-directed guns. Command-guided missiles are confused by radar jammers, but not flares or chaff.

AIRCRAFT DAMAGE

Like human targets, aircraft in **Twilight: 2000** have various hit locations. When a hit is scored on an aircraft, damage is determined by a series of steps. First, the level of damage (minor or major) is determined by the size of the gun firing or the degree of success of the missile attack roll. Second, a roll is made for hit location on the Vehicle Hit Location table on page 7. Third, a roll is made on the appropriate damage severity table, and the resulting damage is applied.

HIT LOCATIONS

When a hit is scored on an aircraft, a 1D6

roll must be made to determine where it impacted. One point is added to the die roll if the shot was made against the aircraft's side. The final result is then compared to the table below, to determine exact hit location. Those locations are explained as follows:

Fuselage: This reflects a hit upon the main body of the vehicle—an aircraft's fuselage.

Wing/Rotor: In the case of rotary-wing craft, this indicates a hit upon the rotor. On all other aircraft, it is a hit upon one wing .

DAMAGE RESOLUTION

When firing at aircraft, all automatic small arms weapons cause minor damage when they hit, while all larger caliber automatic weapons cause major damage. When firing missiles, a successful task roll indicates that the target aircraft suffers minor damage, while an outstanding success roll indicates major damage.

VEHICLE HIT LOCATIONS
Aerospace

*Die Roll**	*Result*
1	Wing/rotor
2	Wing/rotor
3	Wing/rotor
4	Fuselage
5	Fuselage
6	Fuselage
7	Fuselage

*+1 to die roll for side shots.

AEROSPACE CRAFT DAMAGE

Fuselage Minor

Die	*Result*
1	1 crewmember
2	Controls
3	Controls
4	2 passengers*
5	Radio
6	Major fuselage

Wing/Rotor Minor

Die	*Result*
1	No effect
2	No effect
3	Controls
4	Controls
5	Controls
6	Major wing

Fuselage Major

Die	*Result*
1	Engine
2	Engine
3	Instruments
4	Instruments
5	Weapon/ammo
6	Minor wing/rotor

Wing/Rotor Major

Die	*Result*
1	Controls
2	Fuel
3	Fuel
4	Fuel
5	Fuel
6	Fireball

*2 passengers becomes a 1 crewmember hit if this is not a passenger-carrying vehicle. If it is a passenger-carrying vehicle but no passengers are present, the hit has no effect. Cargo destroyed may be substituted for this result at the referee's discretion.

DAMAGE IMPLEMENTATION

Locate the damage table corresponding to the target vehicle's configuration. Find the correct section (minor or major damage, fuselage or wing/rotor damage) and roll 1D6 once for each required damage result. The following results are possible:

1 Crewmember: Which crewmember is hit is determined randomly. The crewmember suffers 1D6 hits, each of which does 1D6 damage. Determine hit location separately for each hit.

If the target is an aircraft with an armored cockpit and the hit was inflicted by a ground-based weapon (either gun or missile), ignore the hit.

2 Passengers: Two passengers are selected at random and are hit exactly as noted above. If this is not a passenger-carrying vehicle, then this is treated as a "1 Crewmember" hit. If this is a passenger-carrying vehicle but none are present, this becomes a "No Effect."

If the hit is converted to a "1 Crewmember" hit result, the target is an aircraft with an armored cockpit, and the hit was inflicted by a ground-based weapon (either gun or missile), ignore the hit.

Radio: The vehicle's radio is destroyed.

Weapons/Ammo: The vehicle's main weapon (or main weapon still functional) is damaged and can no longer fire. On a 1D10 roll of 10, any explosive ordnance carried is hit and the plane explodes.

Engine: The engine (or engines) is hit and damaged enough to render the aircraft incapable of sustaining altitude. The aircraft will immediately begin to descend at a rate of one band per minute. Helicopters autogyro directly down, while fixed-wing aircraft glide. Landing safely is a Difficult skill roll, with failure damaging the craft beyond repair and a catastrophic failure indicating a crash.

Fuel: The fuel tank of the aircraft has been hit. Roll 1D6×10 to determine the percentage of fuel capacity lost.

No Effect: The round passes through the aircraft's wing with no serious effect.

Controls: The control surfaces and/or connections are damaged, making the craft more difficult to control. All Pilot skill checks become one level more difficult.

Instruments: The craft's instrument panel is damaged and its instruments begin to fail (altimeter, wind speed indicator, fuel indicator, compass, and the like). The pilot must make an Average task roll to avoid a mishap at the start of each subsequent combat turn. Additional damage results to the instruments raise these additional difficulty levels.

Fireball: The craft explodes in flame, destroying everyone and everything inside. Characters must make a Difficult: Agility roll in order to escape the aircraft (including characters in ejection seats, since the damage is sudden and unexpected). Failure means they escape with 1D6 of burn injuries (distributed randomly among the character's body locations). Catastrophic failure means they are killed. If a character escapes and has a parachute, the character may then make a normal parachute descent (unless injuries render the character unconscious). Characters escaping without parachutes are killed.

Note: Some rolled results convert the damage into a different type. For example, if a minor fuselage hit is achieved against an aircraft, but a 6 is rolled on the damage table, the hit is converted into a major fuselage hit. In this case roll again on the Fuselage Major subtable of the Aerospace Craft Damage Table. If a 6 is rolled on this table, the damage is converted to a minor wing/rotor hit. If a 6 is then rolled on that table, it is converted to a major wing/rotor hit. There is no possibility of any alteration to a major wing/rotor hit.

GROUND ATTACK

Aircraft may attack ground targets with guns, missiles, rockets, bombs, and cluster bombs.

Guns and Rockets: Attacks on ground targets using guns and rockets are conducted using the normal rules for direct fire, as described in the basic rules. All attacks by aircraft moving at a speed of four or more grid squares per action phase are resolved at one difficulty level higher.

Missiles: Missiles are usually fired from helicopters and are usually fired at tanks. The normal missile fire rules are used. The helicopter may not move while the missile is in flight, as the gunner needs to continue to pilot the missile to its target.

Laser-guided missiles, such as Hellfire, re-

quire only that a laser designator be focused on the target. The missile homes on the reflected laser light, and will hit the target if the designator is trained upon it long enough. This designator may be in another aircraft than the firing aircraft, or may be used by a ground unit. If a character other than the pilot is aiming the laser designator, the aircraft containing the designator may move without affecting accuracy; otherwise, the designating aircraft must remain stationary. As with the normal missile rules, whoever is aiming the designator must continue to do so throughout the flight of the missile.

Bombs: When an aircraft drops one or more bombs, the pilot makes a roll against his Pilot skill to hit the target. He makes a separate roll for each bomb dropped. The task is Average if the aircraft is diving toward the target, Difficult if flying at Very Low or Low altitude, and may not be attempted at High and Very High.

An outstanding success means that the bomb has fallen exactly on the target and achieves a direct contact hit. A standard success means that the bomb has missed the target but deviates only 1D10×5 meters. A failure means that the bomb missed and deviates 1D10×10 meters. A catastrophic failure means that the bomb missed and deviates 1D10×20 meters.

Bombs attack as conventional HE rounds.

Laser-guided bombs (LGBs) have fins to change course, but no propulsion to change speed. LGBs require a laser designator like a laser-guided missile (otherwise they are the same as ordinary bombs). Hitting with a laser-guided bomb becomes one level easier.

Cluster Bombs: When an aircraft drops a cluster bomb unit (CBU), the pilot makes a task roll against his Pilot skill to hit the target, the same as with a conventional bomb. Cluster bombs attack as ICM rounds instead of conventional HE rounds. (See the ICM rules on page 201 of the basic rules, and the Cluster Bombs Chart on page 15.)

COLLISION DAMAGE

It is entirely possible for vehicles to collide with one another in combat or with ground obstructions when at Very Low altitude. The following rules apply in those situations.

Damage done depends upon the size of the vehicle/obstruction and the net speed. Net speed depends upon the relative direction and speed of the two colliding vehicles. Vehicles headed in opposite directions add their speeds together. Those travelling in the same direction subtract the slower's speed from the faster's. All others use the speed of the faster for determining collision damage (obstructions have a speed of zero, obviously).

Obstructions are of two sizes: small and large. Small obstructions are such things as high tension lines, telephone poles, sheds and small houses, and trees, and have a de facto tonnage of 2D6÷2 (telephone lines and the like do not weigh this much but damage an aircraft severely regardless). Large obstructions are things like large buildings, cliffs, rock outcroppings and the like. Large obstructions have a de facto tonnage of 1D6×10 tons (or larger, at the referee's option).

For aircraft, collision damage value equals tonnage times net speed, divided by 10 (rounded off to the nearest whole number). This is the number of times the vehicle is "hit" during the collision. A random roll is made to determine wing/rotor or fuselage as hit location. Collisions with smaller vehicles or obstructions do minor damage; collisions with larger or equal-sized vehicles or obstructions do major damage.

Example: An AH-64 helicopter flying at its safe speed (36) loses control due to combat damage and collides with an OH-58 travelling at its safe speed (22) in the same direction. The net speed is 14 (36–22=14). The AH-64 weighs eight tons, and thus inflicts 11 "hits" on the OH-58 (14×8=112, 112÷10=11.2, rounded to 11). The OH-58 weighs 1.5 tons, and thus inflicts two "hits" to the AH-64 14×1.5 =21). The hits on the OH-58 are major hits, since the AH-64 is larger, and those on the AH-64 are minor, since the OH-58 is smaller.

Loss of Control: After all damage effects are calculated, pilots of aircraft involved in collisions must immediately make a Difficult test of the appropriate Pilot skill in order to remain in control of their aircraft. Failure means the aircraft goes out of control. Aerospace crafts plummet toward the ground at one range band per turn. It is a Difficult test versus the appropriate vehicle skill to regain control, which can be made once per phase in which the pilot is normally allowed an action.

A catastrophic failure at the original test means the vehicle is damaged so severely that control cannot be regained.

BAILING OUT

There are times when characters will wish to leave an aircraft. Characters sitting in ejection seats need only take one five-second action to fire the seat and blow themselves clear of the aircraft (even if done on the ground this will propel the character high enough for the parachute to open). Characters not in ejection seats must make an Average roll versus Agility to bail out. Success means the character bails out in 1D6+2 phases. Failure means the character bails out in 2D6+2 phases. Catastrophic failure means the character spends one turn attempting to bail out and fails to do so (although the character may try again if time permits).

Characters who have successfully bailed out make a normal parachute drop as described below. Characters who have successfully bailed out without a parachute are dead unless the referee decides otherwise (in which case the referee decides what injuries the character receives upon impact).

PARACHUTE DROPS

Parachute-equipped characters may jump from any helicopter or any fixed wing aircraft (in this case not requiring a task roll since they are prepared for it). Parachute-equipped vehicles or cargo can be dropped from any helicopter or from any fixed-wing aircraft with a rear ramp. This may not be done at Low or Very Low altitude, since the parachutes will not have time to open properly.

Characters my leave through any door or ramp or may eject from a cockpit in a fixed-wing aircraft. Cargo can be pushed out a door if small enough (referee's call) otherwise, it must go out a ramp. Vehicles must be pushed out a ramp or dropped from a sling (if the aircraft is capable of carrying a slung load).

Deviation: Parachute landings can deviate, especially with supply drops. To simulate this deviation on the tactical grid, use the following rules:

Each player nominates a landing square for his character. The referee chooses for NPCs and for inanimate objects such as vehicles and supply crates. Then roll for scatter using the scatter diagram on page 252 of the **Twilight: 2000** 2nd edition rules (except that a result of a 7 is long instead of short). Long is the wind direction at the time of the drop, as determined by the referee. Distance is determined by rolling a die (1D6÷2 for

steerable parachutes, 1D6 for normal parachutes, and 1D10 for inanimate objects) and subtracting the characters' Parachute skill (but never reduce the number below 1). The result is the number of two-meter squares the actual landing square deviates from the nominated landing square.

For example, a character with a normal parachute and Parachute skill of 3 nominates a square. The character rolls 1D6, getting a result of 5, and thus deviates 5–3=2 squares in the direction of the prevailing wind. Mishaps are determined based on the terrain the character (or object) actually lands in, not the nominated square.

Mishaps: Mishaps on landings do not occur in clear terrain squares. Characters who land in a square containing anything else must roll to avoid a mishap. Avoiding a mishap is an Average: Parachute task. Failure means the character receives 1D6 wounds; catastrophic failure means 2D6 wounds (location up to the referee).

Alternatively, the referee may wish to implement a mishap more suited to the terrain. If, for example, the character comes down in trees, the character could be entangled in the branches several meters off the ground. A character coming down in water could be weighed down by the parachute and have to cut himself loose or drown (roll Average: Agility to get loose, swimming is as noted in the basic rules). Other mishaps will surely occur to creative referees.

For the purposes of avoiding mishaps, consider inanimate objects which are being dropped to have Parachute: 1.

VERY LOW-ALTITUDE EXTRACTION

Vehicles and cargo may be dropped at less than the minimum parachute altitude by means of a system called Very Low-altitude extraction. A Very Low-altitude extraction package is required (see page 10) and the aircraft must have a rear ramp. The aircraft flies at extremely low altitude (three to five meters) at minimum speed and deploys the drogue chute out the back. The drogue chute opens, the vehicle is yanked out of the aircraft, and the pallet absorbs most of the shock of landing. Vehicles larger than 25 tons cannot be dropped in this fashion.

Crewmembers may not ride in the vehicle while this goes on. It requires 10 minutes to make a vehicle operational after landing.

SLUNG LOADS

Aircraft capable of carrying slung loads may discharge them without landing if desired. The aircraft must hover over the area where the load is to be landed for 30 seconds, at the end of which time the cargo is on the ground and disconnected from the aircraft. Picking up cargo with a sling requires the aircraft to hover for two full minutes during which time a character on the ground must hook up the sling.

GROUND REFUELING AND REARMING

For simplicity's sake, all aircraft require 20 minutes to refuel per 5000 kilograms of fuel or fraction thereof, assuming the aircraft is either on an air base or carrier, or one or more fuel trucks (and their integral pumps) are present. Two ground crew are needed for this process (or it takes twice as long).

Rearming requires 15 minutes per hardpoint or fixed gun ammunition container, and also requires two ground crew.

AIR-TO-AIR REFUELING

Most tankers are important only from a logistical standpoint. For this reason, we present only the relevant data concerning tankers, and provide no illustrations or combat data, since they are unarmed and presumably won't get shot at unless someone blunders very badly. Tankers only operate from secure airfields (that is, one controlled by the owner of the tanker).

Not many countries need air-to-air refueling capability, and not many maintain fleets of tankers. Merc groups must rent tankers from one of the national governments that have them, or from the three or four private companies worldwide that provide such service to merc groups (it is not economical to maintain a large tanker, and is effectively beyond the reach of the characters). The total fee equals $1500 per 1000 kilometers travelled (from a secure base), plus the cost of the fuel consumed during the flight by the tanker.

A mishap during refueling that damages the tanker will result in the renting group being fined 10 times the total fee for that mission. National governments may provide refueling free of charge for important missions, but these are rare. Fuel consumption is in kilograms per kilometer flown, instead of in the standard notation.

Mission Planning Considerations: The sum of the fuel required to get the tanker from the secure base to the refueling point, fuel used up by the tanker lingering at the refueling point, fuel given to other aircraft during refueling, and fuel required to get from the refueling point to the secure base must be less than the fuel capacity of the tanker.

For example, to refuel three A-10s in flight from a KC-135 takes 14,550 liters (4850×3=14,550). This leaves 77,660 liters remaining in the tanker (92,000–14,550=77,450), so the tanker can fly no more than 15,490 kilometers (77,450÷5=15,490) to get to and from the refueling point. This means the refueling point can be no farther than 7745 kilometers from the takeoff/landing point of the tanker—preferably less to allow a safety margin.

Tasks: Refueling from a tanker under normal circumstances is Average: Pilot (Fixed Wing or Rotary Wing), where the particular aircraft are properly equipped. Air-to-air refueling cannot be done in aircraft not designed or equipped for it. Drop tanks may not be refueled in flight.

Failure in the refueling task roll indicates that the aircraft takes on only 1D6×10% of the plane's fuel capacity, and may not retry for 10 30-second turns (five minutes). Catastrophic failure indicates that the plane or the tanker has been damaged (roll 1D6; 1-4: character's plane damaged; 5-6: tanker damaged) and that aircraft's refueling equipment is rendered inoperable. Tanker pilots are assumed to make no mistakes.

Buddy Refueling: Aircraft in the data pages noted as having buddy refueling capability can refuel other aircraft equipped for air-to-air refueling. Such aircraft can be operated by the characters or NPC organizations of the referee's invention, unlike those mentioned below.

TANKERS

Aircraft	*Fuel Cap (kg)*	*Fuel Cons (kg/km)*
KC-130H Hercules	40,000	4
KC-135	92,000	5
KC-10 Extender	158,000	10
Il-78 Midas	65,000	5
Victor K.2	55,866	10
Tristar k.1	136,080	10

EQUIPMENT

Some of this equipment is repeated from other sources, simply to have it all in one convenient location.

HALO Rig: HALO stands for *high-altitude, low-opening*, and refers to a particular style of parachute drop. The parachutist leaves the plane at a great height (usually over 25,000 feet high—enough to require oxygen gear) and free-falls to a level below radar and visual observation height before opening. The HALO rig consists of a standard parachute, an oxygen tank, face mask, an insulated overgarment (it gets cold up that high) and an altimeter.

Wt: 14 kg; *Merc Price:* $3500; *Twilight Price:* $4500 (R/—)

Skyhook (Ground Unit): A specialized ground/air pickup rig for extraction by aircraft when ground conditions do not permit a landing, originally designed for military and civilian air/sea rescue units. The ground unit consists of a personnel harness (very similar to a parachute harness), a coil of cable, and an inflatable helium balloon large enough to carry the cable several hundred feet into the air. The unit can be used for both personnel or cargo. Skyhook requires a specially modified multi-engine aircraft, usually provided by the patron (few merc groups can afford to maintain them).

Using Skyhook: The passenger dons the harness, inflates the balloon (upon arrival of the pickup aircraft), and prepares himself for the shock of pickup. A specially modified multi-engine cargo aircraft snares the balloon/cable with a specially fitted "V"-shaped "blimp-catcher" on its nose, and reels in the passenger until the passenger is close enough to a specially installed cargo door on the bottom of the aircraft. The aircrew snares the passenger/cargo, hauls him/her/it aboard the plane, and prepares for another pickup if necessary. The shock involved is no more severe than an opening parachute, provided the pickup aircraft does not fly too fast. The process is dangerous, but no more so than a parachute jump, if done properly.

The pickup plane must fly straight and level a few hundred feet off the ground. The whole operation needs suitable terrain (no nearby obstructions) and reasonable privacy. The blimp can be equipped with IR/white light strobes (activated at the last moment) for a night pickup. The weather must be reasonably clear, with no excessive wind conditions. Skyhook can also be used at sea. A skyhook ground unit may not be reused. The ground unit is available in **Twilight: 2000** only by special decision of the referee.

Wt: 18 kg; *Merc Price:* $800 (—/R); *Twilight Price:* $— (—/—)

Skyhook (Aircraft Unit): This package must be fitted to an aircraft in order to recover people or things using the skyhook ground unit mentioned above. It consists of a "V"-shaped yoke fastened to the nose of the aircraft, in addition to other equipment elsewhere on the plane. It can only be installed on an aircraft with a clear nose (no engine or other obstructions), and with a rear cargo ramp. The aircraft must be flying at its stall speed when the pickup is made. Making a successful pickup using a skyhook rig is Average: Pilot, with failure indicating that the pilot misses the balloon and must circle around and try again. Catastrophic failure indicates that the process went awry at a more critical phase, possibly during the attempt by the aircraft crew to snag the package and reel it in. Referees may devise their own details.

After making a pickup, the aircraft must clear its yoke (a process requiring two 30-second turns) before it can make another pickup attempt. The price is for the unit and installation charges; the aircraft is not included. The kit is available in **Twilight: 2000** only by special decision of the referee.

Wt: 900 kg; *Merc Price:* $120,000 (—/—); *Twilight Price:* $— (—/—)

Parachute: A device which allows a character to leap from a perfectly good aircraft and probably reach the ground intact. Includes main canopy, reserve canopy, and all necessary harnesses. If recovered, the parachute can be repacked and reused. A character may carry up to four times normal load during a parachute drop (note, however, that he may not be able to carry it far on the ground).

Wt: 15 kg; *Merc Price:* $450 (C/C); *Twilight Price:* $1200 (C/C)

Paraglider (Steerable Parachute): A special form of parachute permitting the passenger to direct his descent more than is possible with a normal parachute. If recovered, it can be repacked and reused.

Wt: 16 kg; *Merc Price:* $650 (C/C); *Twilight Price:* $1800 (R/R)

Vehicle Parachute Kit: This consists of several parachutes (depending on the weight of the vehicle to be dropped), a retrorocket assembly, and a shock-absorbing pallet strapped to the bottom of the vehicle. After the vehicle is dropped from the aircraft and the chute deployed, a contact sensor on a cord drops three meters below the vehicle, and the retrorocket package deploys above the vehicle. When the sensor touches the ground, the retrorocket package fires and slows the vehicle's descent even more. Vehicles heavier than 15 tons cannot be dropped in this fashion.

Crew may not ride in the vehicle while this goes on. It requires 10 minutes to make a vehicle operational after landing, including disconnecting the chute and the pallet, freeing everything that had to be tied down for air transport, screwing down everything that was jarred loose during the landing, and—last but not least—a quick inspection, which is not something to have to do in a hot LZ.

Wt: 1 ton; *Merc Price:* $12,000 (—/R); *Twilight Price:* $15,000 (R/—)

Vehicle Very Low-Altitude Extraction Kit: This consists of a drogue parachute and a shock-absorbing pallet strapped to the bottom of the vehicle. The aircraft must have a rear cargo ramp to utilize this kit.

Wt: 1.5 tons; *Merc Price:* $8000 (—/R); *Twilight Price:* $10,000 (S/R)

Snorkel Gear: A mask, snorkel, and swim fins, permitting a character to swim underwater for periods of up to 30 seconds, with a minimum of surface interaction. The character need only gently break the surface and can then breathe normally without making great amounts of noise or surface ripples. Spotting is done normally for characters on the surface, but characters swimming underwater cannot be spotted.

Wt: 2 kg; *Merc Price:* $120 (V/V); *Twilight Price:* $250 (C/C)

WEAPONS

Unlike ground vehicles, aircraft carry an assortment of weapons and equipment depending upon the specific requirements of the current mission. Many aircraft are not equipped with integral armament, using an assortment of weapons and equipment attached to one or more "hardpoints," specially reinforced places on the wings or fuselage with lugs for attachment of pods, bombs, or drop tanks. For simplicity's sake, we consider that a pod is a pod and a hardpoint is a hardpoint, and any pod can be attached to any hardpoint, regardless of the nationality of both. Where a weapon is restricted to a certain aircraft, or a class of aircraft, that fact is noted in the descriptions below.

Weight, price, and availability information are not given for most missiles and other munitions covered in the basic game price list.

WEAPONS

A pod is a complete system, intended to be installed on a hardpoint. The guns listed below are usually installed as fixed weapons or flexible-mount weapons (sometimes either one).

Guns

Gun pods can contain one or more guns and linked or continuous feed ammunition for them.

Door Gun: A door gun is normally fitted to a pintle-type mount inside one door of an aircraft (usually a helicopter), and is intended for low-level strafing of landing zones and for defense of the aircraft when it is on the ground. Door guns have fixed cones of fire and are restricted to only one side of the aircraft at a time (although several door guns can often be fitted—normally as many as there are doors).

Remote Guns: Many weapons are mounted so they can be fired remotely, sometimes linked electronically to a "look-of-death" helmet on the pilot and/or weapons officer, sometimes to other controls.

Fixed Guns: Fixed guns are mounted on fixed mounts, and cannot change their angle of fire relative to the aircraft. The pilot aims the weapons by pointing the aircraft itself.

M214 Door Gun: This is a 5.56mmN minigun mounted on a pintle as a door gun, usually on helicopters.

Wt: 12.3 kg; *Twilight Price:* $10,000 (R/R); *Merc Price:* $7500 (—/R)

M134/GAU-2B: This is a 7.62mmN, six-barreled, electrically driven minigun, called M134 by the US Army and GAU-2B by the USAF/USMC. The weapon can be fitted as a fixed weapon, mounted on a pintle as a door gun or used in a gun pod (in which case it is called the M18E1 minigun pod).

Wt: 24 kg; *Twilight Price:* $2400 (S/—); *Merc Price:* $8500 (—/R)

12.7mm MG: This Soviet machinegun is normally mounted as a door gun or as a fixed weapon in helicopters.

Wt: 46.7 kg; *Twilight Price:* $2000 (C/V); *Merc Price:* $4200 (—/V)

12.7mm MG 4-bbl: This is a Soviet helicopter armament, used in the chin turret of the earlier Mi-24 Hind variants, and capable of firing up to 45° on either side of the centerline of the aircraft.

Wt: 140 kg; *Twilight Price:* $7500 (—/R); *Merc Price:* $12,600 (—/R)

Autocannons

Weight and price are given for purposes of purchasing replacements for battle damaged parts.

20mm Vulcan Autocannon: This is an electrically driven, six-barreled autocannon, mounted as a fixed gun or in a weapon pod. The number of rounds carried varies with the aircraft and the mounting system—this is noted in each particular aircraft's data card.

Wt: 116 kg; *Twilight Price:* $66,000 (C/R); *Merc Price:* $96,000 (—/C)

20mm 2-bbl Autocannon: Navy and USMC.

Wt: 85 kg; *Twilight Price:* $250,000 (S/—); *Merc Price:* $125,000 (—/—)

M197 20mm or 30mm 3-bbl Autocannon: The M197 is an American helicopter armament system, mounted as a chin turret in the AH-1 series of helicopters.

Wt: 470 kg; *Twilight Price:* $450,000 (S/R); *Merc Price:* $250,000 (—/S)

23mm Autocannon: This Soviet autocannon is normally mounted as a fixed weapon.

Wt: 32 kg; *Twilight Price:* $45,000 (R/C); *Merc Price:* $35,000 (—/S)

23mm 2-bbl Autocannon: This Soviet twin-barreled autocannon is normally mounted as a fixed weapon or a chin turret on helicopters.

Wt: 48 kg; *Twilight Price:* $400,000 (R/S); *Merc Price:* $200,000 (—/S)

23mm 6-bbl Autocannon: This Soviet six-barreled autocannon is normally mounted as a fixed weapon.

Wt: 95 kg; *Twilight Price:* $750,000 (R/S); *Merc Price:* $450,000 (—/S)

25mm Autocannon: An autocannon ised in the British version of the Harrier.

Wt: 60 kg; *Twilight Price*: $750,000 (S/R); *Merc Price*: $450,000 (—/R)

GAU-12 25mm Gatling Autocannon: A six-barreled Gatling-type autocannon used on the American version of the Harrier.

Wt: 410 kg; *Twilight Price*: $750,000 (R/R); *Merc Price*: $420,000 (—/S)

27mm Autocannon: A fixed mount autocannon used to arm the Panavia Tornado Gr.1

Wt: 65 kg; *Twilight Price:* $700,000 (R/S); *Merc Price:* $400,000 (—/S)

30mm Autocannon: This autocannon is normally mounted as a fixed weapon.

Wt: 65 kg; *Twilight Price:* $700,000 (R/S); *Merc Price:* $400,000 (—/S)

30mm-3bbl Autocannon: This three-barreled autocannon is normally mounted as a chin turret on helicopters.

Wt: 49 kg; *Twilight Price:* $850,000 (—/R); *Merc Price:* $500,000 (—/R)

GAU-8 30mm Autocannon (30mmG): The GAU-8 is a seven-barreled Gatling gun used only on the A-10 Warthog ground attack aircraft. Burst of 135 rounds. 1174-round drum.

Wt: 1827 kg (with ammo); *Twilight Price:* $650,000 (R/—); *Merc Price:* $375,000 (—/R)

30mm Chain Gun Autocannon: This is a chain-driven, 30mm autocannon, manufactured by Hughes for use in the AH-64 Apache gunship as part of a chin-turret mount capable of firing up to 45° on either side of the centerline of the aircraft. It has an internal ammunition capacity of 1200 rounds.

Wt: 56 kg; *Twilight Price:* $120,000 (S/R); *Merc Price:* $85,000 (—/S)

Rockets

Rockets are unguided reaction-pro-

pelled weapons. Their greatest advantage is that they are inexpensive. Weight and price shown below are for the pod and for a single rocket.

S-55/8, S-55/16, S-55/19, S-55/32: This is a pod containing 8, 16, 19, or 32 unguided 55mm rockets, which may be fired singly or in salvoes.

Wt: 144 kg (8), 288 kg (16), 342 kg (19), 576 kg (32), 15 kg (55mm rocket); *Twilight Price:* $1100 (—/S) (8), $2200 (—/S) (16), $2600 (—/S) (19), $4400 (—/S) (32), $400 (R/C) (55mm rocket); *Merc Price:* $660 (—/S) (8), $1320 (—/S) (16), $1560 (—/S) (19), $2650 (32), $480 (—/C) (55mm rocket)

FFAR/7 and FFAR/19: This is a pod containing seven or 19 2.75" FFAR (folding fin aerial rockets), which may be fired singly or in salvoes (as selected by the pilot or weapons officer).

Wt: 135 kg (FFAR/7 pod), 350 kg (FFAR/19 pod), 15.5 kg (2.75" rocket); *Twilight Price:* $1250 (C/R) (FFAR/7 pod), $2000 (S/R) (FFAR/19 pod), $450 (S/R) (2.75" rocket); *Merc Price:* $750 (—/S) (FFAR/7 pod), $1500 (—/R) (FFAR/19 pod), $600 (—/C) (2.75" rocket)

Matra-155 Pod: This is a pod containing 18 68mm Matra rockets.

Wt: 328 kg (pod), 15.5 kg (68mm rocket); *Twilight Price:* $1800 (R/—) (pod), $420 (S/R) (68mm rocket); *Merc Price:* $1250 (S/R) (pod), $560 (—/C) (68mm rocket)

Zuni 5" Rocket: This is a 127mm unguided rocket, mounted one per hardpoint.

Wt: 12 kg; *Twilight Price:* $1250 (R/—); *Merc Price:* $850 (—/R)

M-100: This is a 137mm unguided rocket, mounted one per hardpoint.

Wt: 16 kg; *Twilight Price:* $1100 (—/S); *Merc Price:* $775 (—/R)

TRS-190: This is a 190mm unguided rocket, mounted one per hardpoint.

Wt: 46 kg; *Twilight Price:* $1350 (—/R); *Merc Price:* $950 (—/R)

ARS-212: This is a 212mm unguided rocket, mounted one per hardpoint.

Wt: 116 kg; *Twilight Price:* $1600 (—/R); *Merc Price:* $1120 (—/R)

Guided Missiles

These are reaction-propelled weapons with some form of guidance, and are usually fired singly, unlike rockets.

TOW and TOW II: The TOW series of missiles is widely used in the US Army, forming the main ATGM of the AH-1 Cobra. The missile is wire guided and the gunner must continue to aim at the target for the entire flight of the missile. This launcher accepts the TOW II-C missile as well. Its pod carries four missiles, but the missiles can also be wired three to a hardpoint. The weight and price statistics are for the quad launcher without missiles.

Wt: 126 kg; *Twilight Price:* $10,000 (S/R); *Merc Price:* $2200 (—/C)

Hellfire: This missile is the main ATGM of the AH-64 Apache and RAH-66 Comanche attack helicopters. It is laser guided, and someone with a designator must aim at the target for the entire flight of the missile (although this need not be someone in the firing aircraft). Its pod carries four missiles per hardpoint or the missiles may be wired individually to a hardpoint. The weight and price statistics are for the quad launcher without missiles.

Wt: 176 kg; *Twilight: 2000 Price:* $7500 (R/—); *Merc Price:* $3500 (—/S)

MILAN II: This missile launcher fires the MILAN II and MILAN II-T antitank missiles. The MILAN II-T is an overhead attack weapon like Tank Breaker. It is wire guided, like the TOW series, and subject to the same restrictions. Its pod carries four missiles, but the missiles can also be wired three to a hardpoint. The weight and price statistics are for the quad launcher without missiles.

Wt: 77 kg; *Twilight Price:* $6000 (R/S); *Merc Price:* $1800 (—/V)

HOT: A multinational antitank missile produced by a Franco-German consortium (Euromissile). It is wire guided, like the TOW series, and subject to the same restrictions. Its pod carries four missiles, but the missiles can also be wired two to a hardpoint. The weight and price statistics are for the quad launcher without missiles.

Wt: 130 kg; *Twilight Price:* $4500 (S/R); *Merc Price:* $2000 (—/C)

Bombs

In their simplest form, bombs are simply containers of explosive fitted with impact fuses. Bombs are more often carried by fixed-wing aircraft, although some Soviet helicopters regularly carry bombs, and almost any helicopter can do so for a special purpose. (FAE bombs are often carried by helicopters to clear landing zones, for example.)

Bombs larger than 200 kilograms must be fitted one per hardpoint. Smaller bombs can be mounted in multiples, but all bombs on a given hardpoint must be dropped at once.

GP Bombs: General-purpose bombs are the simplest form of bomb. In most cases, they consist of a case filled with explosives (usually finned and streamlined), with an impact fuse. Some GP bombs have proximity fuses set to detonate at a predetermined height, but these do not affect the end result in game terms.

Bombs that have been fitted with laser guidance units have fins for course alteration during the otherwise ballistic fall of the bomb. The bomb will home on a target in the same way as a laser-guided missile will do, but the bomb has no motor and cannot change its velocity, only its course.

250-lb GP: *Wt:* 115 kg; *Twilight Price:* $1800 (C/C); *Merc Price:* $900 (—/V)

500-lb GP: A laser guidance unit may be fitted to this bomb at twice the standard price. *Wt:* 230 kg; *Twilight Price:* $2000 (C/C); *Merc Price:* $1000 (—/V)

750-lb GP: A laser guidance unit may be fitted to this bomb at twice the standard price. *Wt:* 340 kg; *Twilight Price:* $2400 (S/S); *Merc Price:* $1200 (—/V)

1000-lb GP: *Wt:* 455 kg; *Twilight Price:* $2800 (S/S); *Merc Price:* $1400 (—/C)

2000-lb GP: A laser guidance unit may be fitted to this bomb at twice the standard price. *Wt:* 910 kg; *Twilight Price:* $4000 (R/R); *Merc Price:* $2000 (—/C)

3000-lb GP: A laser guidance unit may be fitted to this bomb at twice the standard price. *Wt:* 1370 kg; *Twilight Price:* $7000 (R/R); *Merc Price:* $3500 (—/S)

Napalm/Incendiary Bombs: Napalm bombs are packages of jellied gasoline designed to break open during descent and scatter their contents over a specified area, setting it ablaze. Incendiary bombs scatter hundreds of high temperature fragments (thermite, magnesium, or other substances) over the burst radius. Damage done is as follows: Incendiary=2D6/second, napalm=1D6/second.

4-lb Incendiary: *Wt:* 2 kg; *Twilight Price:*

$225 (C/C); *Merc Price:* $110 (—/C)

40-lb Incendiary: *Wt:* 18 kg; *Twilight Price:* $500 (C/C); *Merc Price:* $250 (—/C)

250-lb Napalm: *Wt:* 115 kg; *Twilight Price:* $3360 (R/R); *Merc Price:* $1200 (—/S)

500-lb Incendiary: *Wt:* 230 kg; *Twilight Price:* $3300 (S/S); *Merc Price:* $1500 (—/S)

500-lb Napalm: *Wt:* 230 kg; *Twilight Price:* $3850 (R/R); *Merc Price:* $1750 (—/R)

750-lb Incendiary: *Wt:* 340 kg; *Twilight Price:* $4000 (S/S); *Merc Price:* $1800 (—/R)

750-lb Napalm: *Wt:* 340 kg; *Twilight Price:* $4850 (R/R); *Merc Price:* $2200 (—/R)

800-lb Incendiary: *Wt:* 365 kg; *Twilight Price:* $6200 (R/R); *Merc Price:* $2800 (—/R)

1000-lb Napalm: Available in **Twilight: 2000** at the referee's discretion. *Wt:* 455 kg; *Twilight Price:* $8000 (—/—); *Merc Price:* $3600 (—/R)

Fragmentation Bombs: Fragmentation bombs are designed especially to provide large numbers of fragments in addition to concussive force. "Beehive" is a special type of fragmentation bomb consisting of an explosive core surrounded by thousands of nail-sized flechettes.

1-lb Fragmentation: *Wt:* 0.6 kg; *Twilight Price:* $190 (C/S); *Merc Price:* $95 (—/C)

2-lb Fragmentation/Dual Purpose: A dual purpose fragmentation antitank bomb. *Wt:* 0.9 kg; *Twilight Price:* $340 (C/S); *Merc Price:* $170 (—/C)

4-lb Fragmentation: *Wt:* 1.8 kg; *Twilight Price:* $350 (C/S); *Merc Price:* $175 (—/C)

20-lb Fragmentation: *Wt:* 9 kg; *Twilight Price:* $440 (C/S); *Merc Price:* $220 (—/S)

90-lb Fragmentation: *Wt:* 40 kg; *Twilight Price:* $1300 (S/R); *Merc Price:* $650 (—/S)

260-lb Fragmentation: *Wt:* 120 kg; *Twilight Price:* $1700 (S/R); *Merc Price:* $850 (—/R)

500-lb Fragmentation: *Wt:* 265 kg; *Twilight Price:* $2900 (R/—); *Merc Price:* $1450 (—/R)

550-lb "Beehive": *Wt:* 255 kg; *Twilight Price:* $3000 (R/—); *Merc Price:* $1500 (—/R)

CBU: Cluster bomb units (CBUs) are the aerial equivalent of ICM—a number of smaller bomblets packaged in a container for easier delivery. Some CBUs contain a proportion of bomblets with time fuses, set to go off minutes, hours, or days after the bomb is dropped. Other bombs may have fuses set to go off when the bomblets are moved (naturally, these are not activated until several minutes after the bomb is dropped). CBUs consisting entirely of delay bomblets are often called *area denial munitions* because they prevent the enemy from making full use of a given area in complete safety. Treat such areas as having been hit by a FASCAM minefield at the RAAM density for the appropriate burst radius of CBU.

100-lb CBU: *Wt:* 46 kg; *Twilight Price:* $3360 (R/R); *Merc Price:* $1200 (—/C)

500-lb AT CBU: A laser guidance unit may be fitted to this bomb at twice the standard price. *Wt:* 215 kg; *Twilight Price:* $4000 (S/S); *Merc Price:* $1800 (—/C)

750-lb CBU: *Wt:* 340 kg; *Twilight Price:* $4850 (R/R); *Merc Price:* $2200 (—/S)

2000-lb CBU: *Wt:* 908 kg; *Twilight Price:* $8000 (R/—); *Merc Price:* $3600 (—/S)

AIR-TO-SURFACE MISSILES (ASMS)

AT-3 "Sagger": *Wt:* 11 kg; *Twilight Price:* $1200 (R/S); *Merc Price:* $4500 (—/C)

TOW II: *Wt:* 25 kg; *Twilight Price:* $1500 (S/R); *Merc Price:* $7500 (—/C)

TOW II-C: *Wt:* 31 kg; *Twilight Price:* $2100 (R/—); *Merc Price:* $6500 (—/S)

Hellfire: *Wt:* 44 kg; *Twilight Price:* $3500 (R/—); *Merc Price:* $7500 (—/S)

MILAN II: *Wt:* 7 kg; *Twilight Price:* $3000 (C/S); *Merc Price:* $8000 (—/C)

MILAN II-T: *Wt:* 8 kg; *Twilight Price:* $4500 (C/S); *Merc Price:* $9000 (—/S)

HOT: *Wt:* 20 kg; *Twilight Price:* $5500 (S/R); *Merc Price:* $5500 (—/C)

AIR-TO-AIR MISSILES (AAMS)

AA-2 Atoll: *Wt:* 72 kg; *Twilight Price:* $600 (R/C); *Merc Price:* $200 (—/C)

AA-6 Acrid: *Wt:* 750 kg; *Twilight Price:* $1650 (R/S); *Merc Price:* $550 (—/R)

AIM-7 Sparrow: *Wt:* 205 kg; *Twilight Price:* $1500 (S/R); *Merc Price:* $500 (—/C)

AIM-9L Sidewinder: *Wt:* 85 kg; *Twilight Price:* $750 (C/R); *Merc Price:* $250 (—/C)

Grail: A Soviet air-to-air missile also fired from a shoulder launcher, normally fitted to Hind helicopters. *Wt:* 45 kg; *Twilight Price:* $750 (R/C); *Merc Price:* $250 (—/C)

Mistral: A French air-to-air missile also fired from a shoulder launcher. *Wt:* 20 kg; *Twilight Price:* $800 (S/R); *Merc Price:* $275 (—/C)

DROP TANKS

Most aircraft have the capability to carry additional fuel in disposable containers called drop tanks. These are attached to hardpoints as if they were ordnance, and can be detached when empty. Drop tanks cannot be refueled in the air. Drop tanks weigh their equivalent fuel weight. For **Merc: 2000** and **Dark Conspiracy**, drop tanks cost $2 per kilogram of fuel capacity; thus, a 300-kilogram drop tank weighs 300 kilograms and costs $600 (300×2=600). Drop tanks are (S/C) in these games. For **Twilight: 2000**, they cost $10 per kilogram of fuel capacity, and are (R/R).

SPECIALTY PODS

Several nations have specialized aircraft pods, designed to fit standard bomb lugs and imparting special capabilities to the aircraft they are mounted on. We have chosen to represent these pods by generics rather than listing dozens of pod types and the specific aircraft to which they can be applied.

FLIR Pod: This pod contains a FLIR (forward-looking infrared) unit, which permits an aircraft to attack targets at night. In **Twilight: 2000**, available at referee's discretion.

Wt: 150 kg; *Twilight Price:* $60,000 (—/—); *Merc Price:* $30,000 (—/S)

Flare Pod: This pod enables an aircraft to dispense flares to confuse and distract IR-seeking missiles.

Wt: 240 kg; *Twilight Price:* $4800 (S/S); *Merc Price:* $1800 (—/C)

Chaff Pod: This pod enables an aircraft to dispense chaff (clouds of shredded metallic mylar film) to confuse and distract radar-guided missiles.

Wt: 240 kg; *Twilight Price:* $5000 (S/S); *Merc Price:* $2000 (—/C)

Radar Jammer Pod: This pod broadcasts misleading radar pulses designed to confuse radar-guided guns. In **Twilight: 2000**, available at referee's discretion.

Wt: 200 kg; *Twilight Price:* $52,000 (—/—); *Merc Price:* $24000 (—/S)

Laser Designator Pod: This pod enables an aircraft to "paint" targets for weapon systems requiring laser guidance such as laser-guided bombs or the Hellfire ATGM. In **Twilight: 2000**, available at referee's discretion.

Wt: 180 kg; *Twilight Price:* $55,000 (—/—); *Merc Price:* $25,000 (—/C)

WEAPON CHARTS

SURFACE-TO-AIR MISSILES (SAMS)

Missile	Rng	Guidance	Accuracy Level
ADATS	6 km	IR	Average
Blowpipe	3.5 km	CMD	Difficult
Chapparal (Sidewinder)	8 km	IR	Average
Croatale	10 km	Radar	Average
FIM-43 Redeye	5 km	IR	Difficult
FIM-92A Stinger	6 km	IR	Average
FIM-99 Scorpion	7 km	Radar/IR	Easy
IHawk	50 km	Radar	Average
Javelin	4 km	Radar	Average
MBB-7 *Venusfliegenfalle*	7 km	Radar/IR	Easy
Patriot	60 km	Radar	Easy
Rapier	7 km	CMD	Average
Roland II	8 km	Radar/IR	Average
SA-4 Ganef	70 km	CMD	Difficult
SA-6 Gainful	60 km	IR	Difficult
SA-7	3.6 km	IR	Difficult
SA-8 Gecko	12 km	CMD	Average
SA-9 Gaskin	5 km	CMD	Average
SA-14	8 km	IR	Average
SA-27 Grappler	6 km	Radar/IR	Easy

AIR-TO-AIR MISSILES (AAMS)

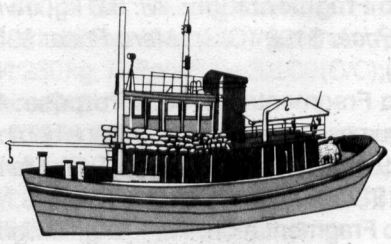
Missile	Rng	Guidance	Accuracy Level
AA-2 Atoll	6 km	IR	Difficult
AA-6 Acrid	20 km	Radar/IR	Difficult
AIM-7 Sparrow	45 km	Radar	Average
AIM-9L Sidewinder	18 km	Radar	Average
AIM-54 Phoenix	160 km	Radar/IR	Easy
Grail	6 km	IR	Difficult
Mistral	5 km	IR	Average

AIR-TO-SURFACE MISSILES (ASMS)

Missile	Rng	Damage	Pen
AT-3	3000	C:6, B:4	75C
TOW II	3500	C:12, B:12	160C
TOW II-C	3500	C:12, B:12	160C
Hellfire	4500	C:12, B:12	160C
MILAN II	2000	C:12, B:12	145C
MILAN II-T	2000	C:12, B:12	145C
HOT	4000	C:12, B:12	155C

ROCKETS

Weapon	ROF	Mag	Rng	Ammo	Damage	Pen
55mm rocket	16	8/16/19/32	400	HE	C:8, B:28	–4C
68mm rocket	12	18	425	HE	C:8, B:28	–4C
				WP	C:2, B:20	Nil
				APERS	C:8, B:36	–2C
2.75" FFAR	12	7/19	425	HE	C:8, B:28	–4C
				WP	C:2, B:20	Nil
				APERS	C:8, B:36	–2C
5" Zuni	1	1	425	HE	C:12, B:20	0C
137mm rocket	1	1	425	HE	C:14, B:22	0C
190mm rocket	1	1	475	HE	C:16, B:24	1C
212mm rocket	1	1	500	HE	C:18, B:28	3C



FRAGMENTATION BOMBS

Type	DPs	Damage	Pen
1-lb fragmentation	1	C:3, B:12	Nil
2-lb fragmentation/dual-purose	1	C:3, B:4	12C
4-lb fragmentation	2	C:5, B16	Nil
20-lb fragmentation	5	C:8, B:16	Nil
90-lb fragmentation	112	C:38, B:20	Nil
260-lb fragmentation	64	C:28, B:24	Nil
500-lb fragmentation	—	B:64	—
550-lb "Beehive"	40	C:22, B:24	—

CONVENTIONAL BOMBS

Type	DPs	Concussion	Burst	Pen
250-lb GP	264	58	16	Nil
500-lb GP	522	80	48	Nil
750-lb GP	1092	117	64	Nil
1000-lb GP	1200	122	72	Nil
2000-lb GP	4400	235	96	Nil
3000-lb GP	5400	260	104	Nil

CLUSTER BOMBS

Round	Close	Adjacent	Concussion	Burst	Pen	Wt
100-lb CBU	1–3	2	3	12	Nil	46 kg
500-lb AT CBU	1-5	3	3	16	12C	215 kg
750-lb CBU	1-6	4	4	18	Nil	340 kg
2000-lb CBU	1-6	4	6	22	Nil	908 kg

CBU Direct Hit Chance: Personnel, 1; Vehicle, 1–5

NAPALM/INCENDIARY BOMBS

Type	Burst	Wt
4-lb incendiary	8	2 kg
40-lb incendiary	12	18 kg
250-lb napalm	24	115 kg
500-lb incendiary	36	230 kg
500-lb napalm	36	230 kg
750-lb incendiary	52	340 kg
750-lb napalm	52	340 kg
800-lb incendiary	96	365 kg
1000-lb napalm	72	455 kg

AUTOCANNONS

Weapon	ROF	Mag	Rng	Ammo	Damage	Pen
20mm	10	*	250	API	10	3/–2/–5
			250	HE	C:1, B:2	–8C
20mm-2	20	*	250	API	10	3/–2/–5
			250	HE	C:1, B:2	–8C
M197 20mm	30	*	250	API	10	3/–2/–5
			250	HE	C:1, B:2	–8C
20mm Vulcan	60	*	250	API	10	3/–2/–5
			250	HE	C:1, B:2	–8C
23mm	10	*	250	API	10	–2/–4/–6
			250	HE	C:1, B:2	–8C
23mm-2	20	*	250	API	10	–2/–4/–6
			250	HE	C:1, B:2	–8C
23mm-6	50	*	250	API	10	–2/–4/–6
			250	HE	C:1, B:2	–8C
25mm	5	*	250	APFSDSDU	14	13/9/3
			250	API	14	4/0/–2
			250	HE	C:1, B:2	–8C
GAU-12 25mm	30	*	250	APFSDSDU	14	13/9/3
			250	API	14	4/0/–2
			250	HE	C:1, B:2	–8C
27mm	10	*	300	API	16	5/1/-2
			300	HE	C:1, B:2	–6C
M197 30mm	30	*	250	API	16	5/1/-2
			250	HE	C:1, B:2	–6C
30mm	10	*	250	API	16	5/1/-2
			250	HE	C:1, B:2	–6C
30mm-3	30	*	250	API	16	5/1/-2
			250	HE	C:1, B:2	–6C
30mmG	135	*	450	API(DU)	14	18/12/5
			450	HEI	C:2, B:3	–2C

*Varies with individual installations.

MACHINEGUNS

Weapon	ROF	Dam	Pen	Blk	Mag	—Recoil— SS	Brst	Rng
M214 door gun	50	3	1-Nil	4	1000C	1	5	90
M134/GAU-2B	100	4	2-3-Nil	4	1500C	*	*	90
M18E1 minigun pod	100	4	2-3-Nil	4	1500C	*	*	90
MAG door gun	10	4	2-3-Nil	6	1000B	1	2	125
M60 MG door gun	5	4	2-3-Nil	6	1000B	1	1	125
M2HB MG door gun	5	8	2-2-3‡	8	1050B	2	7	150
12.7mm MG	5	9	2-2-3	8	1000B	3	8	150
12.7mm-4 MG	50	9	2-2-3	8	†	*	*	150

*Weapon has negligible recoil when used this way.
†Varies with installation.
‡.50-caliber SLAP ammunition has a penetration of 1-1-2.

EXPLANATION OF TERMS

A few of the terms used in this book are not intuitively obvious. Here are a some elaborations.

Armament: Armament represents the aircraft's normal internal armament (if any). It does not count rockets, bombs, or missiles attached to external hardpoints. Some aircraft have no standard internal weaponry, and do all their work with attached ordnance pods.

Load: Load is divided into two types: internal and external. Internal load is normally taken up with cargo or passengers (although in some rare cases it may include fuel or weapons carried inside the aircraft, such as door guns or internal fuel bladders). External load includes various pods (weapon, fuel, and other types), missiles, bombs, or cargo carried in a sling (called *slung load*). Sometimes the limiting factor is the number of hardpoints an aircraft has, sometimes it is the weight that can be carried.

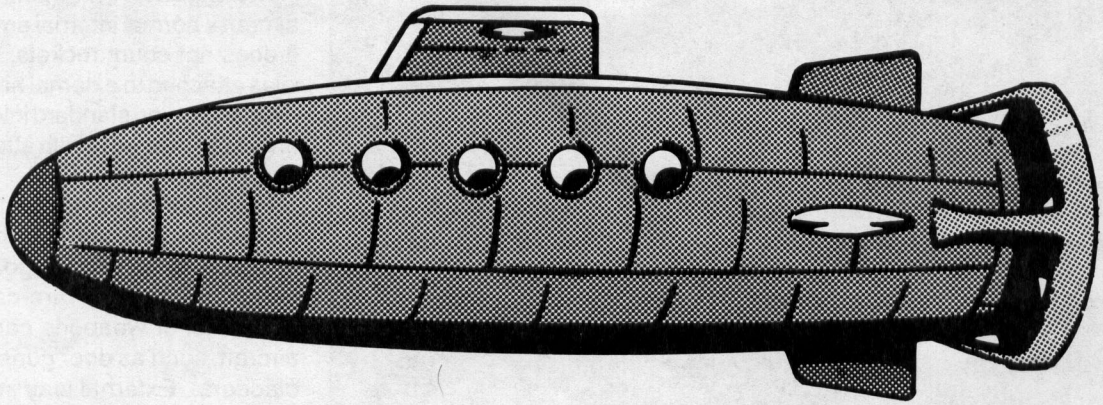
Referees must carefully study the individual aircraft cards to determine what can be loaded where on that particular aircraft. It is possible for some aircraft to have pods on hardpoints, carry internal cargo, and also carry a slung load all at the same time. For simplicity, it is assumed that any pod, bomb, or weapon can be attached to any hardpoint of any aircraft, in whatever combination is desired within the individual aircraft's limitations.

Tr (Travel) Move: This is the number of kilometers travelled in four hours at the aircraft's average cruising speed. It is given as a single number because there is no difference in an aircraft's road and cross-country movement.

Com (Combat) Move: This is the number of eight-meter squares moved in a combat phase, in sync with the basic game combat movement system. This number is the aircraft's "safe" speed. Aircraft can fly at up to twice this speed at certain risks explained in "Aircraft" (page 5). It is given as a single number because there is no difference in an aircraft's road and cross-country movement.

Stall Speed: This is the minimum speed that a fixed-wing aircraft can travel and still remain airborne. It is listed in parentheses after the combat move. Where no stall speed is listed, the aircraft can travel at as low a speed as desired (including zero).

Hayes Narwhal



Merc: 2000 Price: $145000 (—/R)
Twilight: 2000 Price: $362,500 (—/—)
Armament: None
Length: 7
Draft: 0.5 m
Speed: 3 (surface)/1 (submerged)
Turn: 2
Acceleration: 1
Pumps: None
Night Vision: White light spotlight
Load: 600 kg
Minimum/Optimum Crew: 1/1 (+5 passengers)
Mnt: 3

Damage Record
Crewmembers: Pilot ☐
Passengers: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐
Engine: ☐
Battery: Damaged ☐ Destroyed ☐

Full Speed ☐
Dead in Water ☐
Sunk ☐

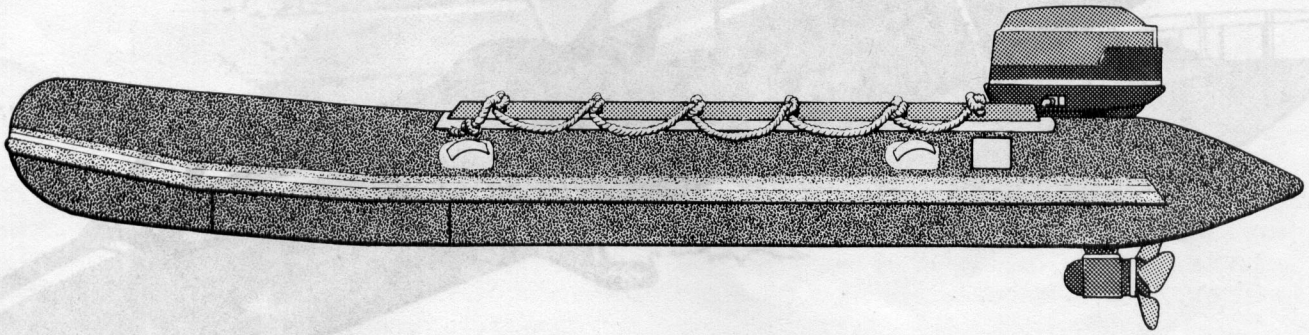
Hayes Narwhal (Flush Deck): The Hayes Narwhal is an electric-powered, six-passenger minisub. Designed as a private venture by the Hayes Marine Corporation of Tampa, Florida, the Narwhal consists of a fiberglass central hull containing heavy-duty rechargable batteries, several compressed air tanks, and a sealed cargo compartment capable of carrying up to 600 kilograms of equipment in dry condition. This sealed compartment is leakproof down to 10 meters (which is the Narwhal's operational floor). The Narwhal has no periscope and no on-board air supply (passengers must bring their own aqualungs or rebreathers). The hull serves as a streamlining measure only, and is not airtight or pressure resistant. A special underwater compass and other navigation instruments permit dead reckoning courses to within 1D6 meters per 200 meters traveled. The batteries retain sufficient power for four hours operating time between recharging. The Narwhal needs at least 12 hours on a 500-kilowatt generator to recharge.

The Narwhal can be "parked" underwater if desired (the vessel's tool kit comes with a number of small plastic marker floats designed to resemble typical seaside flotsam), for the crew to return to after the mission has been accomplished.

Tr Move: 8/8

Fuel Type: Battery
Config: Flush deck
Tonnage: 1
Hull Armor: 0
Waterline Armor: 0
Superstructure Armor: 0
Propulsion: Electric motor
Size: 1

Assault Boat (Inflatable)



Merc: 2000 Price: $1000 (V/V)
Twilight: 2000 Price: $200 (C/C)
Armament: None
Length: 1
Draft: 0.5 m
Speed: 3
Turn: 2
Acceleration: 1
Pumps: None
Night Vision: None
Load: 1000
Minimum/Optimum Crew: 1/1 (+9 passengers)
Mnt: 3

Damage Record
Crewmembers: Operator ☐
Passengers: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

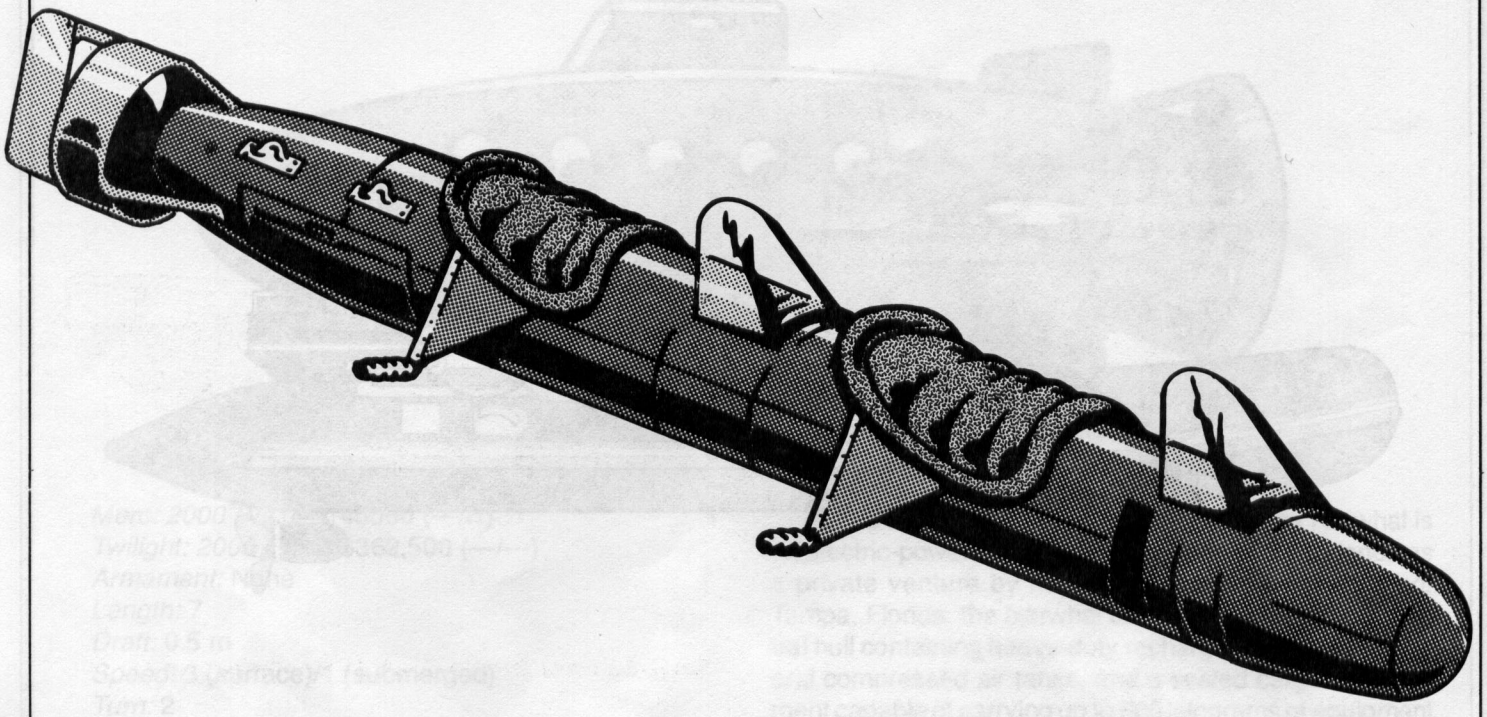
Full Speed ☐
Dead in Water ☐
Sunk ☐

Assault Boat (Inflatable) (Flush Deck): This boat is typical of a number of small inflatable assault boats intended for river crossings, small-scale amphibious landings, and similar operations. Stats are given for a model fitted with a small outboard motor. If the boat is propelled by oars, use speed, turn, and acceleration ratings from the Very Small Open Boat given in the basic game on page 89. Each passenger reduces the load capacity by 100 kilograms.

***Tr Move:* 4/4**
***Fuel Cap:* 20**
***Fuel Cons:* 5**

Fuel Type: G, A
Config: Flush deck
Tonnage: 1
Hull Armor: 0
Waterline Armor: 0
Superstructure Armor: 0
Propulsion: Motor
Size: 1

Hayes Barracuda



Merc: 2000 Price: $112,000 (R/S)
Twilight: 2000 Price: $750,000 (R/—)
Armament: None
Length: 2.8
Draft: 0.5 m
Speed: 1
Turn: 4
Acceleration: 1
Pumps: None
Night Vision: None
Load: 50 kg
Minimum/Optimum Crew: 1/1 (+1 passenger)
Mnt: 8

Damage Record
Crewmembers: Operator ☐
Passengers: 1 ☐
Engine: ☐
Battery: Damaged ☐ Destroyed ☐

Full Speed	☐
Dead in Water	☐
Sunk	☐

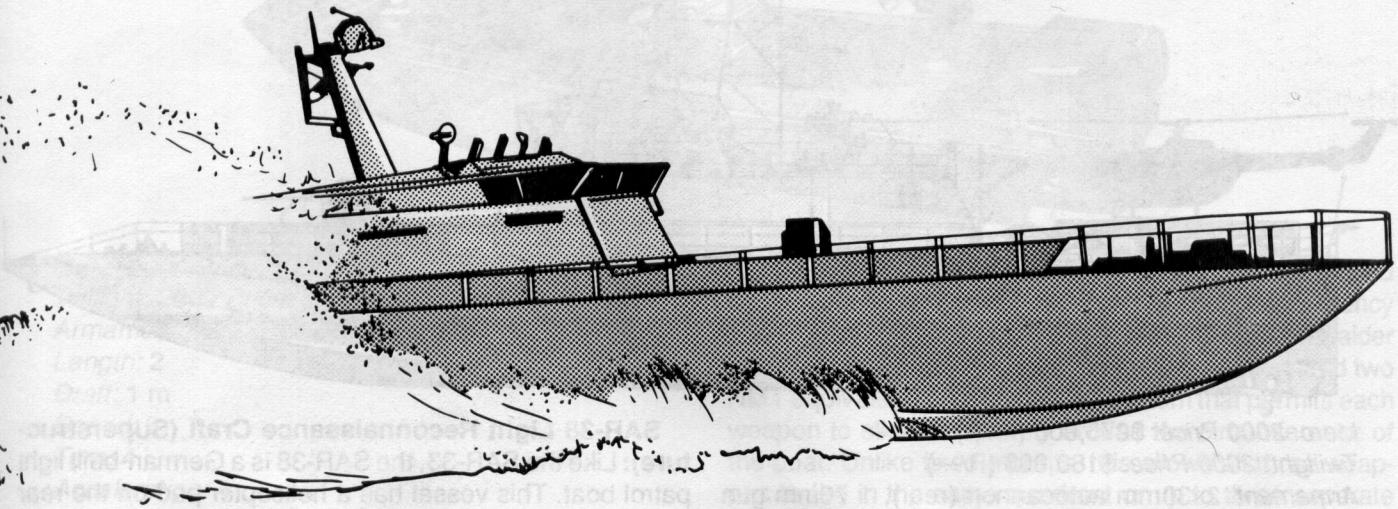
Hayes Barracuda (Flush Deck): The Hayes Barracuda minisub has been described as "little more than a torpedo with seats," and in some ways, that is a very apt description. The Barracuda consists of a 2.8-meter cylinder fitted with an electric motor, storage batteries, and a steering system. Two seats and a number of D-rings form the rest of the craft. Any cargo has to be tied in place, and the riders must provide their own air tanks.

Trim is adjusted for neutral buoyancy to match the load carried, and depth is adjusted by filling or emptying flotation chambers. The motor and battery compartments are watertight down to 10 meters depth. The batteries contain sufficient power for up to 12 hours of normal cruising.

Tr Move: 2/2

Fuel Type: Battery
Config: Flush deck
Tonnage: 1
Hull Armor: 0
Waterline Armor: 0
Superstructure Armor: 0
Propulsion: Electric motor
Size: 1

SAR-33 Fast Strike Craft



Merc: 2000 Price: $250,000 (—/S)
Twilight: 2000 Price: $100,000 (R/—)
Armament: Two 30mm autocannons (250 rounds each)
Length: 3
Draft: 1.5 m
Speed: 3
Turn: 3
Acceleration: 1
Pumps: 3
Night Vision: White light searchlight
Load: 5 tons
Minimum/Optimum Crew: 4/7
Mnt: 12

Damage Record
Crewmembers: Commander ☐ Navigator ☐ Helmsman ☐ Gunner 1 ☐ Gunner 2 ☐ Engineer 1 ☐ Engineer 2 ☐
Sight/Vision: Night vision equipment ☐
Radio: ☐
30mm AC 1: ☐
30mm AC 1 Traverse: ☐
30mm AC 2: ☐
30mm AC 2 Traverse: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

Full Speed ☐☐☐☐☐ ☐☐☐☐☐ ☐
Dead in Water ☐☐☐☐☐ ☐☐☐☐☐ ☐
Sunk ☐☐☐☐☐ ☐☐☐☐☐ ☐
(Each box equals 5 flotation hits)

SAR-33 Fast Strike Craft (Superstructure): The SAR-33 is a German-built light patrol boat designed for patrols, waterborne raids, and counterinsurgency (COIN) operations in coastal or river areas.

***Tr Move:* 16/16**
***Fuel Cap:* 1600**
***Fuel Cons:* 100**

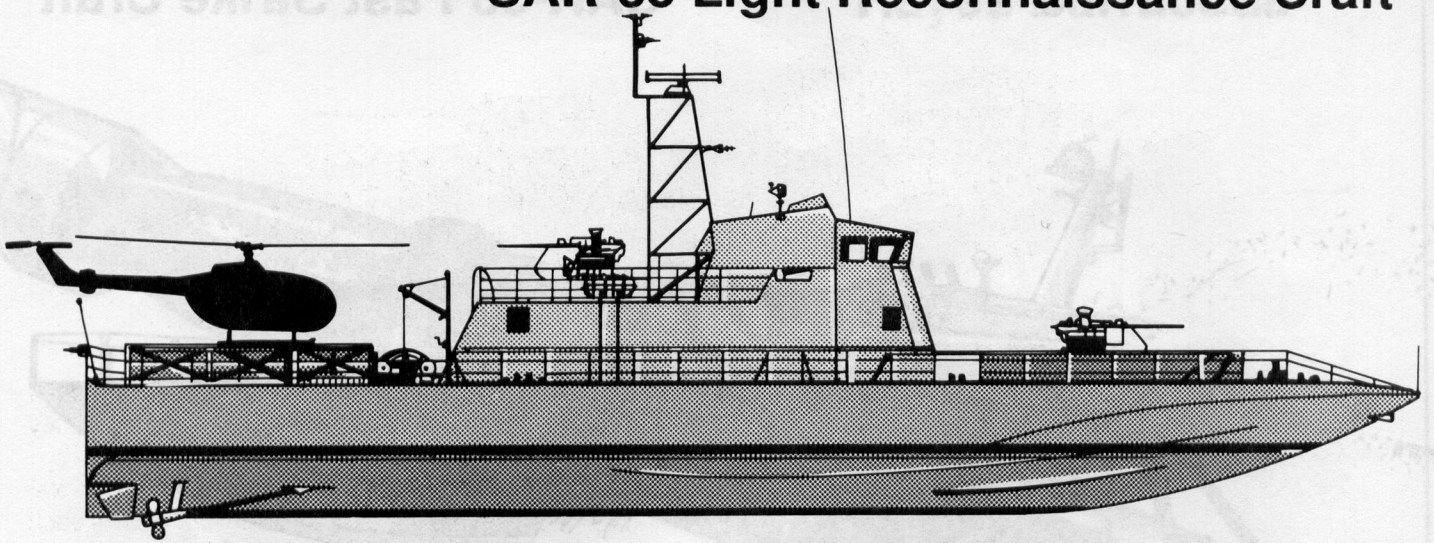
Fuel Type: D, G, A
Config: Superstructure
Tonnage: 50
Hull Armor: 2
Waterline Armor: 2
Superstructure Armor: 2
Propulsion: Motor
Size: 3

AMMUNITION
Use 30mm ammo records from page 99.

WEAPON DATA

Weapon	*ROF*	*Mag*	*Rng*	*Ammo*	*Damage*	*Pen*
30mm	50	500C	250	API	16	5/1/–2
			250	HE	C:1, Brst:2	–6C

SAR-38 Light Reconnaissance Craft



Merc: 2000 Price: $275,000 (—/R)
Twilight: 2000 Price: $180,000 (R/—)
Armament: 2×30mm autocannon (rear), 1 76mm gun (bow)
Length: 38
Draft: 3.2 m
Speed: 3
Turn: 3
Acceleration: 1
Pumps: 3
Night Vision: White light spotlight
Load: 5 tons
Minimum/Optimum Crew: 6/12
Mnt: 10

Damage Record
Crewmembers: Commander ☐ Navigator ☐ Helmsman ☐ Gunner 1 ☐ Gunner 2 ☐
Loader 1 ☐ Loader 2 ☐ Chief engineer ☐ Engineer 1 ☐ Engineer 2 ☐ Engineer 3 ☐
Sight/Vision: Night vision equipment ☐
Radio: ☐
30mm AC 1: ☐
30mm AC 1 Traverse: ☐
30mm AC 2: ☐
30mm AC 2 Traverse: ☐
76mm Gun (Bow): ☐
76mm Traverse (Bow): ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

Full Speed	☐☐☐☐☐ ☐☐☐☐☐ ☐☐☐☐☐
Dead in Water	☐☐☐☐☐ ☐☐☐☐☐ ☐☐☐☐☐
Sunk	☐☐☐☐☐ ☐☐☐☐☐ ☐☐☐☐☐

(Each box equals 5 flotation hits)

SAR-38 Light Reconnaissance Craft (Superstructure): Like the SAR-33, the SAR-38 is a German-built light patrol boat. This vessel has a helicopter pad on the rear deck capable of accepting helicopters with a minimum landing radius of 24 meters or less.The boat can carry up to 20 passengers for a short time (no provision is made for sleeping or feeding them, for example), which means less than 24 hours.

***Tr Move:* 12/12**
***Fuel Cap:* 1800**
***Fuel Cons:* 110**

Fuel Type: D, A
Config: Superstructure
Tonnage: 75
Hull Armor: 2
Waterline Armor: 3
Superstructure Armor: 2
Propulsion: Motor
Size: 5

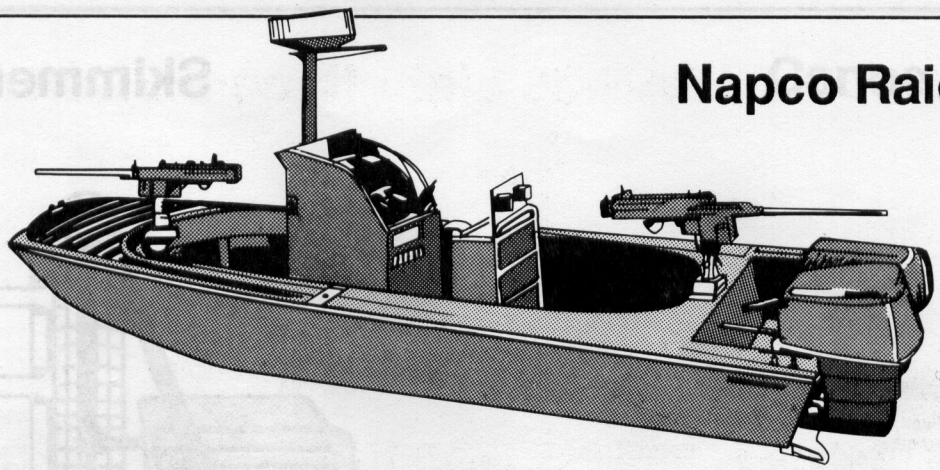
AMMUNITION
Use 30mm ammo records from page 99.

WEAPON DATA

Weapon	*ROF*	*Mag*	*Rng*	*Ammo*	*Damage*	*Pen*
30mm	50	500C	250	API	16	5/1/–2
			250	HE	C:1, Brst:2	–6C

Type	*Round*	*Rng*	*Damage*	*Pen*
76mm	AP	300	16	8/4/2
	HVAP	300	16	12/6/3
	HE	300	C:6, B:12	–3C

Napco Raider



Merc: 2000 Price: $750,000 (—/S)
Twilight: 2000 Price: $1,200,000 (—/—)
Armament: 1×M2HB MG, 2×M60 MG
Length: 2
Draft: 1 m
Speed: 8
Turn: 4
Acceleration: 4
Pumps: 1
Night Vision: White light spotlight
Load: 1 ton
*Minimum/Optimum Crew:*1/4
Mnt: 6

Damage Record

*Crewmembers:*Commander/"Driver"☐ Gunner 1 ☐ Gunner 2 ☐ Gunner 3 ☐
Sight/Vision: Night vision equipment ☐
Radio:☐
M2HB MG:☐
M60 MG 1:☐
M60 MG 2:☐
Engine:☐
Fuel (% Consumed or Destroyed):☐☐☐☐☐ ☐☐☐☐☐

Full Speed ☐☐☐☐☐ ☐☐☐☐☐
☐☐☐☐☐ ☐☐☐☐☐
Dead in Water ☐☐☐☐☐ ☐☐☐☐☐
☐☐☐☐☐ ☐☐☐☐☐
Sunk ☐☐☐☐☐ ☐☐☐☐☐
☐☐☐☐☐ ☐☐☐☐☐

Napco Raider (Flush Deck): A small, fiberglass-hulled boat designed for coastal/river patrols, counterinsurgency (COIN) operations, and police/customs duties. The Raider has three weapons mounts (one NHT equivalent and two NMT equivalent) on a unique rail system that permits each weapon to slide completely around the circumference of the boat. Unlike fixed mounts, this allows all three weapons to fire in the same quadrant or up to three separate ones as necessary. The Raider is normally armed with an M2HB MG and two M60 MGs, but any weapon which uses a tripod can be fitted (size allowing). Use the tripod firing values for pintle-mounted weapons (other values are given for completeness' sake).

***Tr Move:* 24/24**
***Fuel Cap:* 500**
***Fuel Cons:* 50**

Fuel Type: D, A
Config: Flush deck
Tonnage: 20
Hull Armor: 0
Waterline Armor: 0
Superstructure Armor: 0
Propulsion: Motor
Size: 2

AMMUNITION

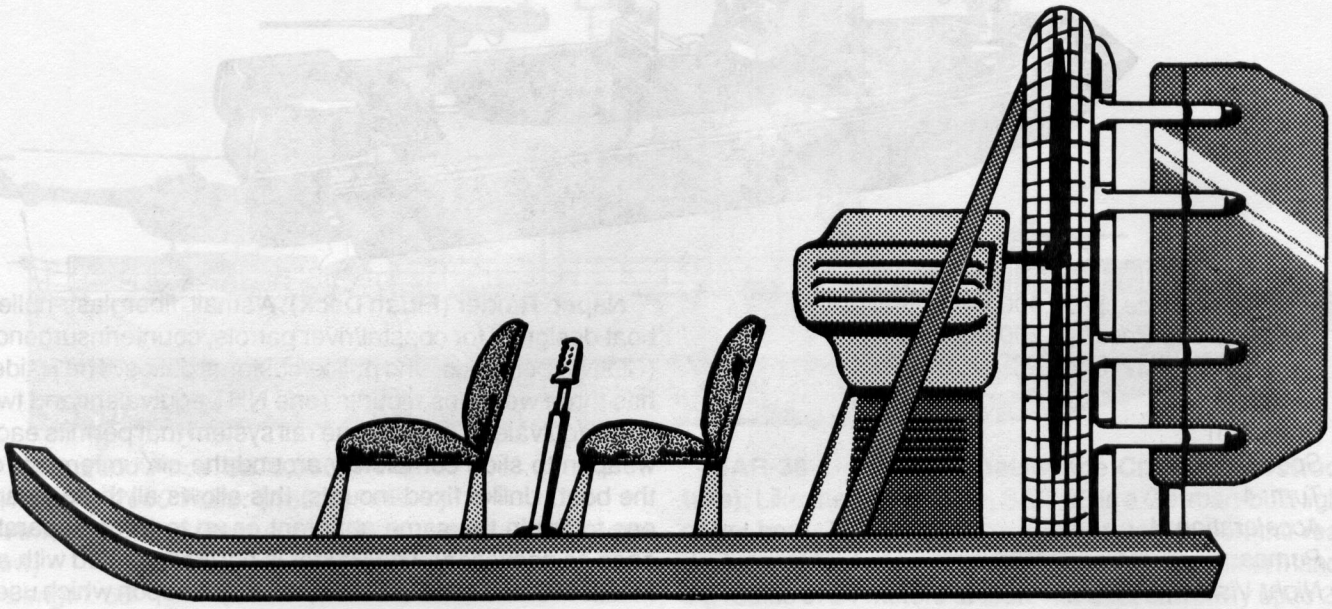
Use MG ammo records from page 99.

WEAPON DATA

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
M2HB	5	8	2-2-3*	8	105B	3	14	65
tripod	5	8	2-2-3*	8	105B	2	7	150
M60	5	4	2-3-Nil	6	100B	1	4	65
bipod	5	4	2-3-Nil	6	100B	1	2	90
tripod	5	4	2-3-Nil	6	100B	1	1	125

*.50 SLAP ammunition has a penetration value of 1-1-2.

Skimmer



Merc: 2000 Price: $1500 (S/S)
Twilight: 2000 Price: $3500 (R/—)
Armament: None
Length: 3
Draft: 0.2 m
Speed: 8
Turn: 4
Acceleration: 4
Pumps: None
Night Vision: White light spotlight
Load: 200 kg
Minimum/Optimum Crew: 1/1 (+1 passenger)
Mnt: 6

Damage Record
Crewmembers: Driver ☐
Passengers: 1 ☐
Sight/Vision: Night vision equipment ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

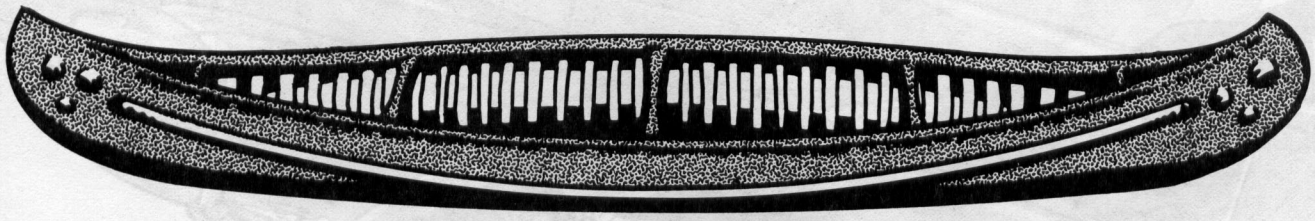
Full Speed ☐
Dead in Water ☐
Sunk ☐

Skimmer (Flush Deck): Also known as marsh boats and grass boats (because they can sail on the dew on a field of grass, it is rumored), these are very shallow draft boats intended for use in marshes and swamps as well as well as on open water. Their main problem is that they tend to swamp easily in rough water due to their low freeboard, and they cannot carry large loads. They are primarily used by trappers, fishers, hunters and park rangers in swampy areas, and they have become increasingly popular in certain countries for counterinsurgency patrols. A weapon can be fitted (NMT equivelant), but the boat is too fragile for anything heavier.

***Tr Move:* 24/24**
***Fuel Cap:* 50**
***Fuel Cons:* 5**

Fuel Type: G, A
Config: Flush deck
Tonnage: 1
Hull Armor: 0
Waterline Armor: 0
Superstructure Armor: 0
Propulsion: Motor
Size: 1

Canoe



Merc: 2000 Price: $750 (V/V)
Twilight: 2000 Price: $950 (C/C)
Length: 3
Draft: 0.3 m
Speed: 1
Turn: 4
Acceleration: 1
Pumps: None
Night Vision: None
Load: 400 kg
Minimum/Optimum Crew: 1/2 (+2 passengers)
Mnt: 3

Damage Record
Crewmembers: Bow paddler ☐ Stern paddler ☐
Passengers: 1 ☐ 2 ☐

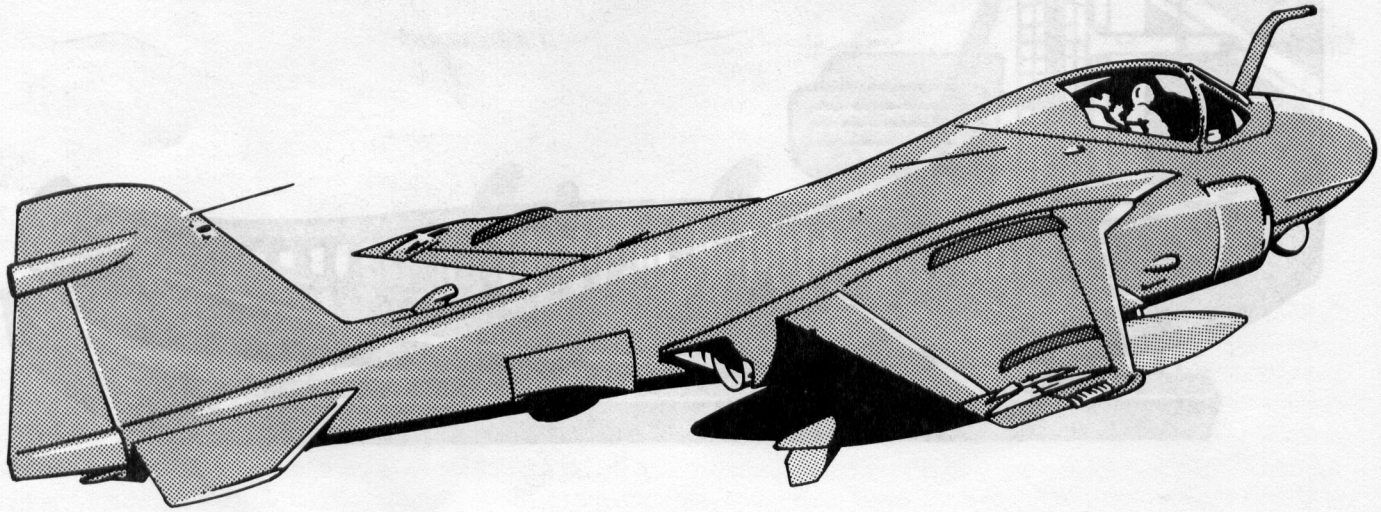
Full Speed ☐
Dead in Water ☐
Sunk ☐

Canoe (Flush Deck): Formerly made by certain tribes of Amerindians from birch bark, the canoe is a simple and classic design for a small boat and is still popular with sportsmen and certain irregular militia forces today. Small motors can be fitted, but paddles are the traditional (and quieter) means of propulsion. Canoes are not normally armed.

Tr Move: 4/4

Config: Flush deck
Tonnage: 1
Hull Armor: 1
Waterline Armor: 1
Superstructure Armor: 0
Propulsion: Paddles
Size: 1

A-6E Intruder



Merc: 2000 Price: $30,000,000 (—/S), KA-6D $32, 000,000 (—/R)
Twilight: 2000 Price: $60,000,000 (—/—), KA-6D $64,000,000 (—/—)
Armament: No fixed armament
Fuel Type: AvG
Load: Up to 8000 kg on 5 hardpoints (external only)
Veh Wt: 27.5 tons
Crew: 2
Mnt: 10
Runway Type: Hardened
Min. Runway, Takeoff/Land: 1400/784 m

Damage Record
Crewmembers: Pilot ☐ Weapons officer ☐
Instruments: ☐
Controls: ☐
Radio: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

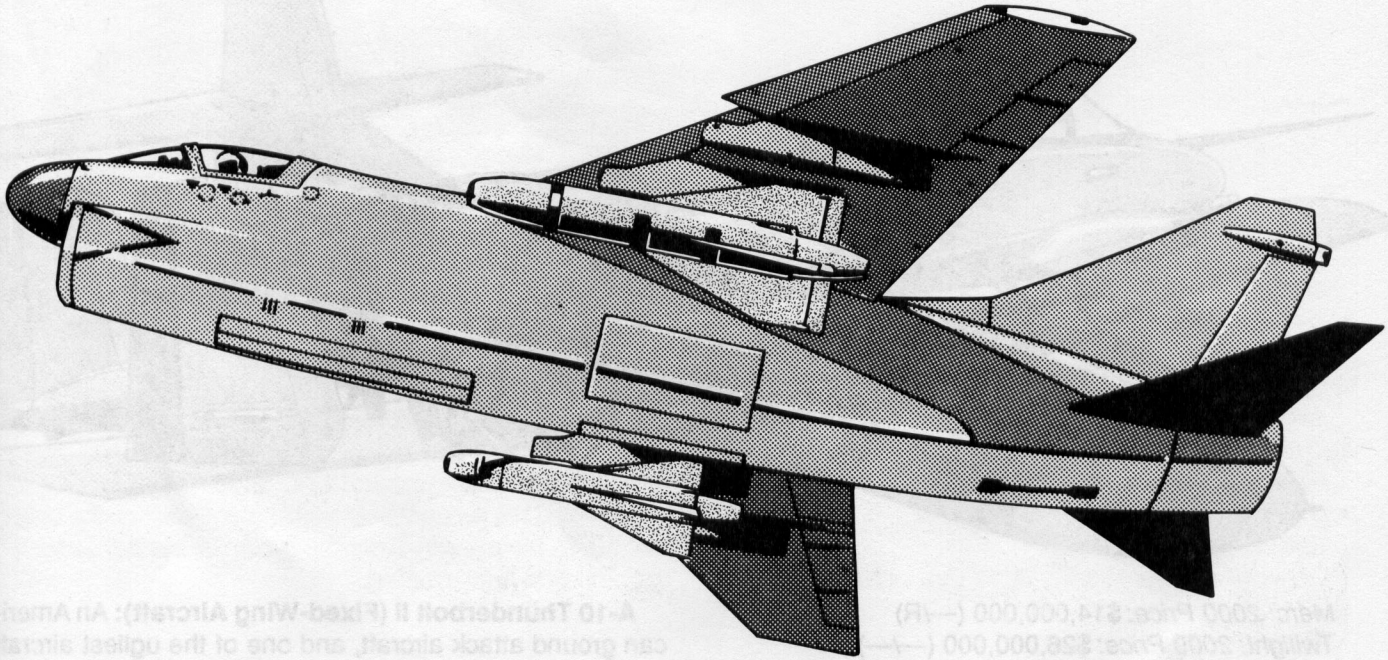
A-6E Intruder (Fixed-Wing Aircraft): The Intruder is an older US Navy ground attack aircraft. The Intruder can carry additional fuel externally (900-kilogram drop tanks are available) and is capable of in-flight refueling through a nose probe. Both crewmembers have ejection seats.

A tanker version also exists (called the KA-6D) which can carry 9500 liters of fuel (at the expense of its bomb load and some internal electronics) and is capable of buddy refueling.

***Tr Move:* 1640**
***Com Move:* 41 (23)**
***Fuel Cap:* 7300**
***Fuel Cons:* 7300**

COMBAT EQUIPMENT
FLIR, laser designator and radar gun sight (flares, chaff, or radar jammers if relevant pod carried).

A-7E Corsair II



Merc: 2000 Price: $26,000,000 (—/S)
Twilight: 2000 Price: $52,000,000 (R/—)
Armament: One fixed 20mm Vulcan AC
Ammo: 1032×20mm
Fuel Type: AvG
Load: Up to 6800 kg in 6 hardpoints (external only)
Veh Wt: 19 tons
Crew: 1
Mnt: 12
Runway Type: Hardened
Min. Runway, Takeoff/Land: 1200/800 m

Damage Record
Crewmembers: Pilot ☐
Radio: ☐
Instruments: ☐
Controls: ☐
20mm Vulcan AC: ☐
Ammo: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

WEAPON DATA

Weapon	*ROF*	*Mag*	*Rng*	*Ammo*	*Damage*	*Pen*
20mm	60	1032C	450	API	10	3/–2/–5
			450	HE	C:1, Brst:2	–8C

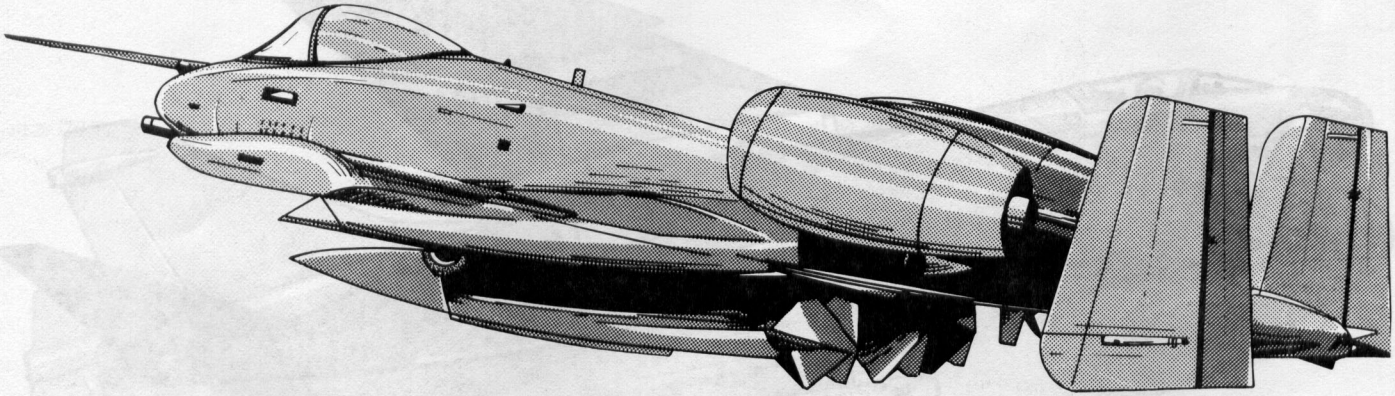
A-7E Corsair II (Fixed-Wing Aircraft): The Corsair II is a newer ground attack aircraft used by both the US Navy and USAF (in limited numbers). The Corsair II can carry additional fuel externally (900- and 750-kilogram drop tanks are available) and is capable of in-flight refueling through a nose probe (but not buddy refueling). Pilot has ejection seat.

***Tr Move:* 3600**
***Com Move:* 90 (20)**
***Fuel Cap:* 4555**
***Fuel Cons:* 4555**

COMBAT EQUIPMENT
Armored cockpit, radar jammers, integral chaff and flare dispensers.

AMMUNITION
Use 20mm autocannon records on page 99.

A-10 Thunderbolt II



Merc: 2000 Price: $14,000,000 (—/R)
Twilight: 2000 Price: $26,000,000 (—/—)
Armament: One fixed GAU-8 30mmG Gatling autocannon (internal)
Ammo: 1174×30mmG
Fuel Type: AvG
Load: Up to 6500 kg on 11 hardpoints (external only)
Veh Wt: 14.8 tons
Crew: 1
Mnt: 14
Runway Type: Primitive
Min. Runway, Takeoff/Land: 440/400 m

Damage Record
Crewmembers: Pilot ☐
Radio: ☐
Instruments: ☐
Controls: ☐
GAU-8 30mm AC: ☐
Ammo: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

WEAPON DATA

Weapon	*ROF*	*Mag*	*Rng*	*Ammo*	*Damage*	*Pen*
30mmG	135	1174C	450	API(DU)	14	18/12/5
			450	HEI	C:2, Brst:3	–2C

Missile	*Rng*	*Guidance*	*Accuracy Level*
AIM-9L Sidewinder	18 km	Radar	Average

A-10 Thunderbolt II (Fixed-Wing Aircraft): An American ground attack aircraft, and one of the ugliest aircraft ever to fly, the A-10 was nicknamed the *Warthog* shortly after it entered service. It acquired a great reputation as a tank-buster and general ground attack platform during the Second Persian Gulf War of 1991, and was the subject of a short custody battle between the US Army and the US Air Force (the latter finally emerging with control). The A-10 is capable of in-flight refueling, but not buddy refueling. It can carry extra fuel in external drop tanks at the expense of some of its bomb load (one or more 1800-kilogram drop tanks are available). In addition to the normal array of pods and bombs, the A-10 can also carry one or two AIM-9L Sidewinder AAMs. Pilot has ejection seat.

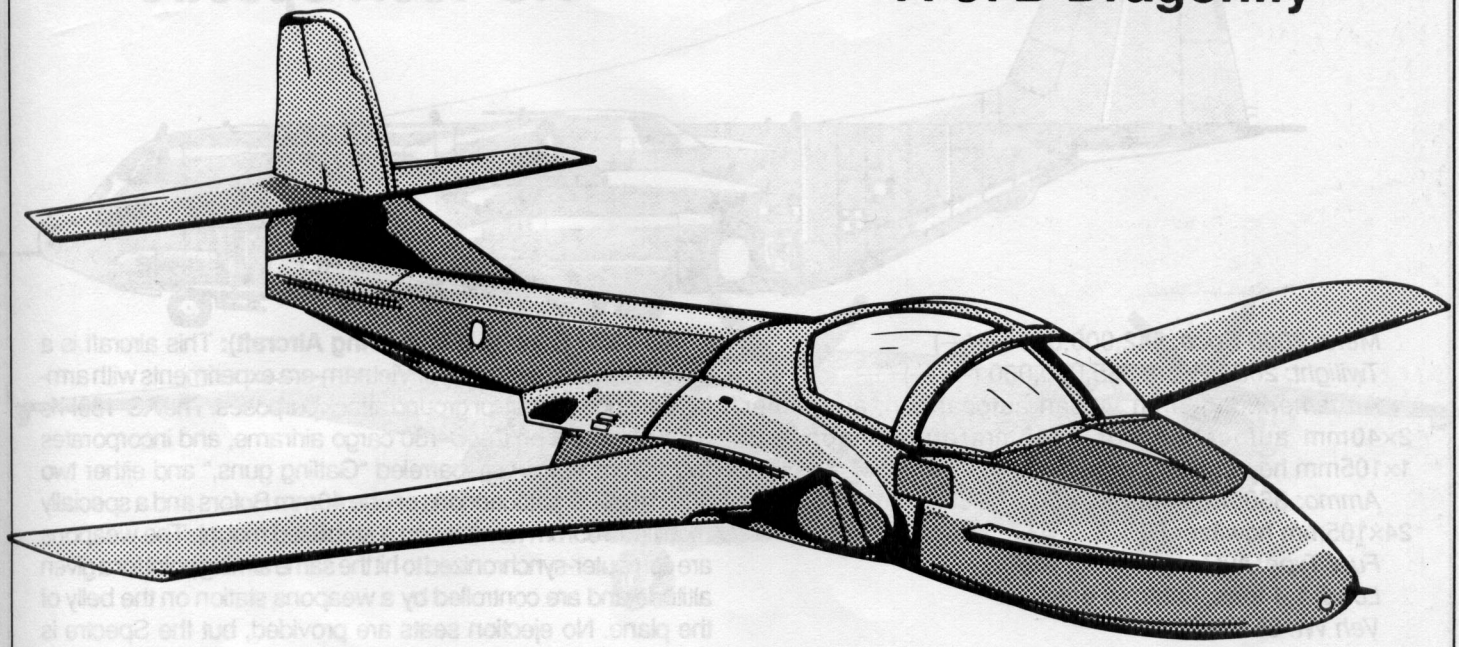
***Tr Move:* 2220**
***Com Move:* 82 (15)**
***Fuel Cap:* 4850**
***Fuel Cons:* 4850**

COMBAT EQUIPMENT
Armored cockpit, radar gun sight, integral flare and chaff dispensers.

AMMUNITION
Use 30mm autocannon records provided on page 99.

AIM-9L Sidewinder (1 or 2 missiles)
☐☐

A-37B Dragonfly



Merc: 2000 Price: $1,600,000 (—/S)
Twilight: 2000 Price: $3,200,000 (R/—)
Armament: One fixed GAU-2B MG
Ammo: 1500×7.62mmN
Fuel Type: AvG
Load: Up to 5400 kg on 8 hardpoints
Veh Wt: 6.3 tons
Crew: 2
Mnt: 12
Runway: Primitive
Min. Runway, Takeoff/Land: 552/496 m

Damage Record
Crewmembers: Pilot ☐ Weapons officer ☐
Radio: ☐
Instruments: ☐
Controls: ☐
GAU-2B MG (Internal): ☐
Ammo: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

WEAPON DATA

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
GAU-2B pod	100	4	2-3-Nil	4	1500B	*	*	90

* Weapon is fired in burst only, and has negligible recoil when in the pod.

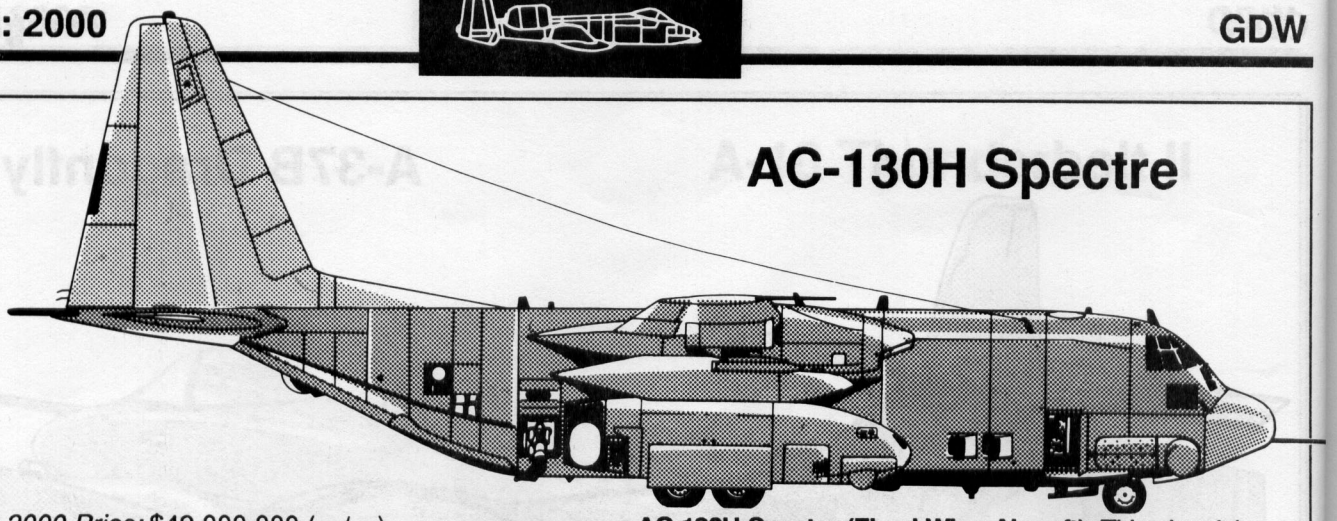
A-37B Dragonfly (Fixed-Wing Aircraft): Developed in the late 1960s from a two-seat jet trainer (the Cessna T-37), the A-37B Dragonfly has proved very popular as a COIN (counterinsurgency) and light ground attack aircraft with the US and many other air forces. The Dragonfly is capable of in-flight refueling by means of a nose probe, but it has no buddy refueling capability. The A-37B is normally armed with a combination of 250-pound and/or 500-pound bombs, one or more GAU-2B MG pods, and one or more FFAR-7 rocket pods. From one to three 300-kilogram drop tanks can also be fitted externally, but at a cost of bomb load. Both crewmembers have ejection seats.

***Tr Move:* 3148**
***Com Move:* 82 (36)**
***Fuel Cap:* 2000**
***Fuel Cons:* 2500**

COMBAT EQUIPMENT
None normally fitted.

AMMUNITION
Use 7.62mmN ammo records on page 99.

AC-130H Spectre



Merc: 2000 Price: $42,000,000 (—/—)
Twilight: 2000 Price: $85,000,000 (—/—)
Armament: 2×20mm Vulcan autocannon, and either 2×40mm autocannon or 1×40mm autocannon and 1×105mm howitzer
Ammo: 3600×20mm AC, 480 or 960×40mm AC, 0 or 24×105mm howitzer HE
Fuel Type: AvG
Load: 1.4 tons, (internal only)
Veh Wt: 65 tons
Crew: 14 (105mm version); 13 (twin 40mm version)
Mnt: 14
Runway: Primitive
Min. Runway, Takeoff/Land: 1104/800 m

Damage Record

Crewmembers: Pilot ☐ Copilot ☐ Navigator ☐ Flight engineer ☐ Fire director ☐ Gunner 1 (20mm) ☐ Loader 1 (20mm) ☐ Gunner 2 (20mm) ☐ Loader 2 (20mm) ☐ Gunner 3 (40mm) ☐ Loader 3 (40mm) ☐ Gunner 4 (40/105mm) ☐ Loader 5 (40/105mm) ☐ Loader 6 (105mm) ☐
Radio: ☐
Instruments: ☐
Controls: ☐
20mm Vulcan AC 1: ☐
20mm Vulcan AC 2: ☐
40mm Bofors AC 1: ☐
40mm Bofors AC 2 or 105mm How: ☐
Ammo: ☐
Engine ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

AC-130H Spectre (Fixed-Wing Aircraft): This aircraft is a development of a number of Vietnam-era experiments with arming transport aircraft for ground attack purposes. The AC-130H is a development on the C-130 cargo airframe, and incorporates two 20mm Vulcan six-barreled "Gatling guns," and either two 40mm Bofors autocannons or one 40mm Bofors and a specially modified 105mm howitzer on a stabilized mount. The weapons are computer-synchronized to hit the same aiming point for a given altitude and are controlled by a weapons station on the belly of the plane. No ejection seats are provided, but the Spectre is capable of in-flight refueling.

***Tr Move:* 2080**
***Com Move:* 52 (18)**
***Fuel Cap:* 24,000**
***Fuel Cons:* 24,000**

COMBAT EQUIPMENT

FLIR, laser designator, radar jammers, radar gun sight, integral flare and chaff dispensers, IR suppression.

AMMUNITION

Use 20mm AC and 40mm AC ammo records on page 99.

105mm Howitzer (24 rounds)
☐☐☐☐☐ ☐☐☐☐☐
☐☐☐☐☐ ☐☐☐☐☐
☐☐☐☐

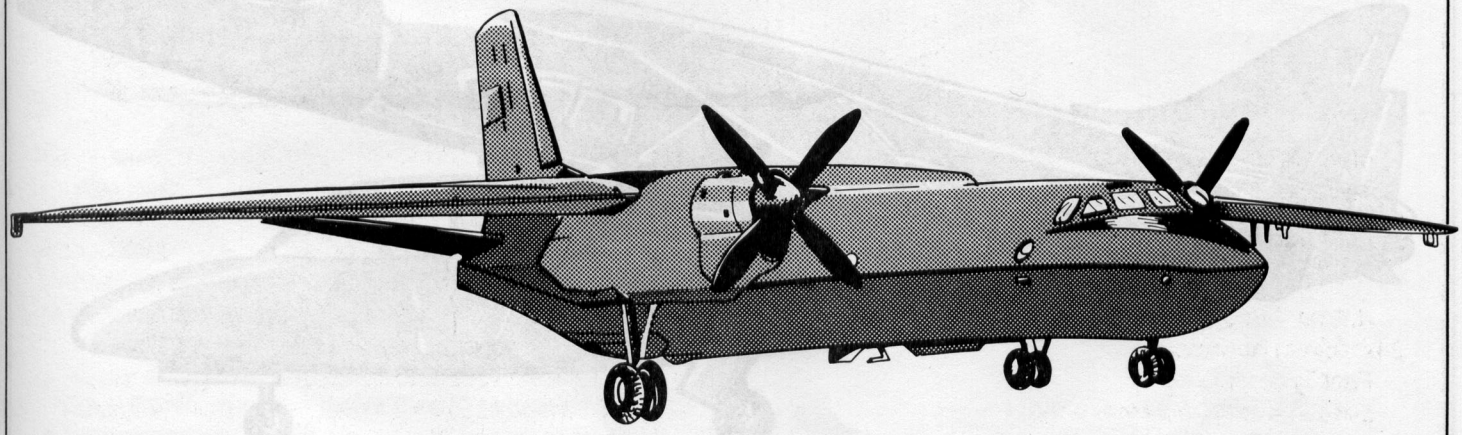
WEAPON DATA

Weapon	*ROF*	*Mag*	*Rng*	*Ammo*	*Dam*	*Pen*
20mm	60	1800C	450	API	10	3/–2/–5
			450	HE	C:1, Brst:2	–8C

Weapon	*ROF*	*Mag*	*Rng*	*Ammo*	*Dam*	*Pen*
40mm Bof	5	480D	200	API	14	4/2/0/–2

Type	*Round*	*Rng*	*Dam*	*Pen*
105mm How	HE	300	C:6, B:8	4C
Ifr: 17km				
Rld: 1				

An-26 Curl



Merc: 2000 Price: $38,000,000 (—/—)
Twilight: 2000 Price: $76,000,000 (—/—)
Fuel Type: AvG
Load: 5 tons (internal only)
Veh Wt: 24 tons
Crew: 4+40
Mnt: 10
Runway: Primitive
Min. Runway, Takeoff/Land: 1240/1740 m

Damage Record

Crewmembers: Pilot ☐ Copilot ☐ Radio operator ☐ Flight engineer ☐

Passengers: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 ☐ 14 ☐ 15 ☐ 16 ☐ 17 ☐ 18 ☐ 19 ☐ 20 ☐ 21 ☐ 22 ☐ 23 ☐ 24 ☐ 25 ☐ 26 ☐ 27 ☐ 28 ☐ 29 ☐ 30 ☐ 31 ☐ 32 ☐ 33 ☐ 34 ☐ 35 ☐ 36 ☐ 37 ☐ 38 ☐ 39 ☐ 40 ☐

Paratroopers: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 ☐ 14 ☐ 15 ☐ 16 ☐ 17 ☐ 18 ☐ 19 ☐ 20 ☐ 21 ☐ 22 ☐ 23 ☐ 24 ☐ 25 ☐ 26 ☐

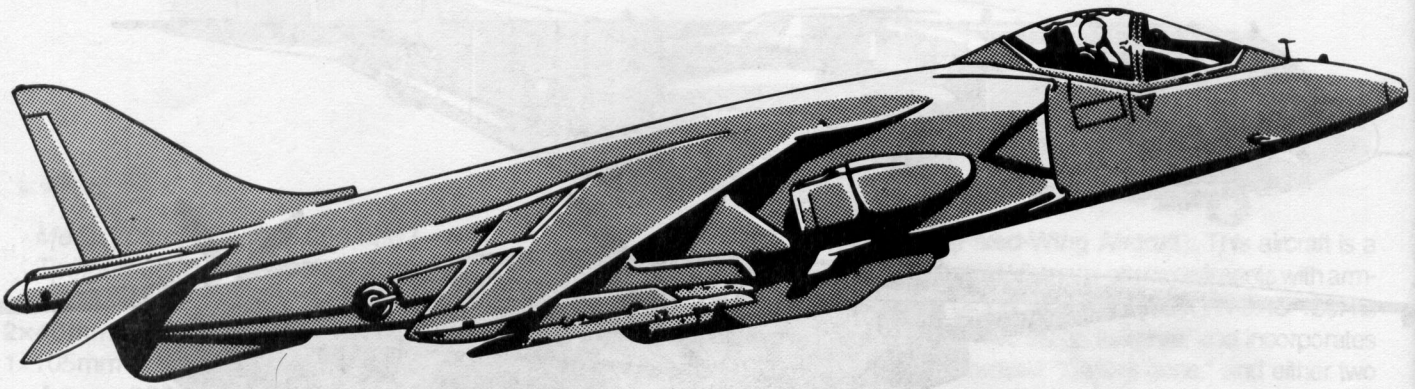
Radio: ☐
Instruments: ☐
Controls: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

An-26 Curl (Fixed-Wing Aircraft): A Soviet-built cargo plane, which is now very popular in the Third World, and a source of much-needed income for the USSR. The Curl has a rear ramp and paratroop departure doors. No ejection seats are provided, but the Curl is capable of in-flight refueling.

***Tr Move:* 1760**
***Com Move:* 44 (18)**
***Fuel Cap:* 5500**
***Fuel Cons:* 7900**

COMBAT EQUIPMENT
None normally fitted.

AV-8B Harrier II



Merc: 2000 Price: $21,000,000 (—/S)
Twilight: 2000 Price: $42,000,000 (R/—)
Armament: Two fixed 25mm AC (GR.7) or one fixed GAU-12 25mm Gatling AC (AV-8B)
Ammo: 200×25mm AC (GR.7), 300×25mm AC (AV-8B)
Fuel Type: AvG
Load: 4000 kg on 5 (AV-8B) or 7 (GR.7) hardpoints (2400 kg in VSTOL flight)
Veh Wt: 12.4 tons
Crew: 1
Mnt: 12
Runway: Primitive
Min. Runway, Takeoff/Land: 448/16 m (STOVL); 448/504m conventional

Damage Record
Crewmembers: Pilot ☐
Radio: ☐
Instruments: ☐
Controls: ☐
25mm AC 1 (GR.7): ☐
25mm AC 2 (GR.7): ☐
GAU-12 25mm AC (AV-8B): ☐
Ammo: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

AV-8B Harrier II (Fixed-Wing Aircraft): AV-8B is the American designation for the USMC version of the British-designed GR.7 Harrier II STOVL (Short Takeoff/Vertical Landing) aircraft. The AV-8B is capable of a bewildering variety of helicopter-like maneuvers, including the ability to hover and fly backwards. Up to four 1200-kilogram drop tanks may be mounted at once. The AV-8B can only fly VSTOL mode with 2400-kilogram or less of cargo or equivalent fuel reduction. The pilot has an ejection seat, and the Harrier is capable of in-flight refueling

***Tr Move:* 3408**
***Com Move:* 106**
***Fuel Cap:* 4200**
***Fuel Cons:* 6400**

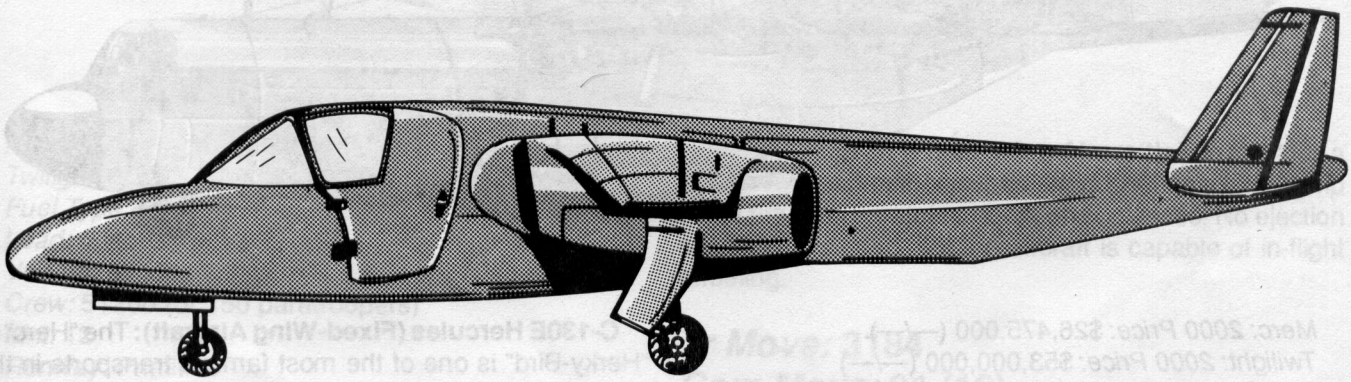
COMBAT EQUIPMENT
FLIR and integral chaff and flare dispensers.

AMMUNITION
Use 25mm autocannon records on page 99.

WEAPON DATA

Weapon	*ROF*	*Mag*	*Rng*	*Ammo*	*Damage*	*Pen*
25mm	5	200B	250	APFSDSDU	14	13/9/3
			250	API	14	4/0/–2
			250	HE	C:1, Brst:2	–8C
GAU-12 25mm	30	300B	250	APFSDSDU	14	13/9/3
			250	API	14	4/0/–2
			250	HE	C:1, Brst:2	–8C

Daimyo *Mitsubachi*



Merc: 2000 Price: $8,500,000 (C/C)
Twilight: 2000 Price: $17,000,000 (R/R)
Fuel Type: AvG
Load: 400 kg (internal), plus up to 600 kg (external) in 2 hardpoints
Veh Wt: 9 tons
Crew: 2+4
Mnt: 10
Runway: Hardened
Min. Runway, Takeoff/Land: 464/528 m

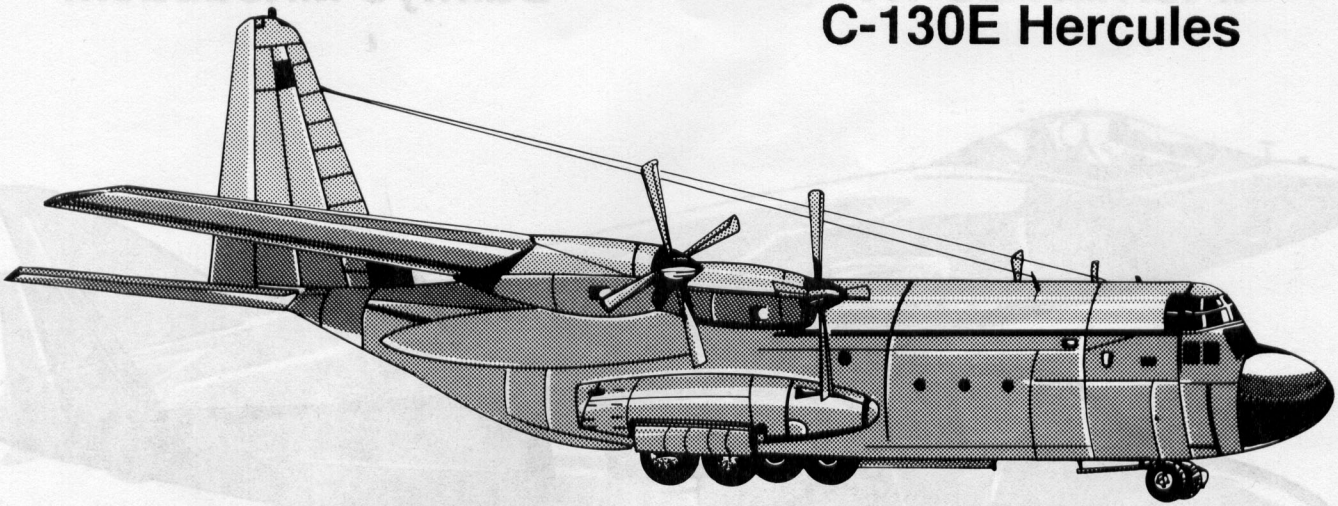
Damage Record
Crewmembers: Pilot ☐ Copilot ☐
Passengers: 1 ☐ 2 ☐ 3 ☐ 4 ☐
Radio: ☐
Instruments: ☐
Controls: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

Daimyo *Mitsubachi* (Fixed-Wing Aircraft): The Japanese-built *Mitsubachi* (bee) is a small, civilian, fixed-wing aircraft of the so-called "business jet" variety. It is similar to many others manufactured by several firms worldwide. The jet is not armed, but has two drop tank hardpoints (normally fitted with two 300-kilogram drop tanks) which can be (and often are) fitted with weapons. No ejection seats are provided, and the *Mitsubachi* is not capable of in-flight refueling (like most civilian aircraft).

***Tr Move:* 1760**
***Com Move:* 44 (12)**
***Fuel Cap:* 1150**
***Fuel Cons:* 1150**

COMBAT EQUIPMENT
None.

C-130E Hercules



Merc: 2000 Price: $26,475,000 (—/—)
Twilight: 2000 Price: $53,000,000 (—/—)
Fuel Type: AvG
Load: 19 tons
Veh Wt: 70 tons
Crew: 4+92 (or 64 paratroopers)
Mnt: 10
Runway: Primitive
Min. Runway, Takeoff/Land: 1104/800 m

Damage Record

Crewmembers: Pilot ☐ Copilot ☐ Navigator ☐ Systems manager ☐

Passengers: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 ☐ 14 ☐ 15 ☐ 16 ☐ 17 ☐ 18 ☐ 19 ☐ 20 ☐ 21 ☐ 22 ☐ 23 ☐ 24 ☐ 25 ☐ 26 ☐ 27 ☐ 28 ☐ 29 ☐ 30 ☐ 31 ☐ 32 ☐ 33 ☐ 34 ☐ 35 ☐ 36 ☐ 37 ☐ 38 ☐ 39 ☐ 40 ☐ 41 ☐ 42 ☐ 43 ☐ 44 ☐ 45 ☐ 46 ☐ 47 ☐ 48 ☐ 49 ☐ 50 ☐ 51 ☐ 52 ☐ 53 ☐ 54 ☐ 55 ☐ 56 ☐ 57 ☐ 58 ☐ 59 ☐ 60 ☐ 61 ☐ 62 ☐ 63 ☐ 64 ☐ 65 ☐ 66 ☐ 67 ☐ 68 ☐ 69 ☐ 70 ☐ 71 ☐ 72 ☐ 73 ☐ 74 ☐ 75 ☐ 76 ☐ 77 ☐ 78 ☐ 79 ☐ 80 ☐ 81 ☐ 82 ☐ 83 ☐ 84 ☐ 85 ☐ 86 ☐ 87 ☐ 88 ☐ 89 ☐ 90 ☐ 91 ☐ 92 ☐

Paratroopers: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 ☐ 14 ☐ 15 ☐ 16 ☐ 17 ☐ 18 ☐ 19 ☐ 20 ☐ 21 ☐ 22 ☐ 23 ☐ 24 ☐ 25 ☐ 26 ☐ 27 ☐ 28 ☐ 29 ☐ 30 ☐ 31 ☐ 32 ☐ 33 ☐ 34 ☐ 35 ☐ 36 ☐ 37 ☐ 38 ☐ 39 ☐ 40 ☐ 41 ☐ 42 ☐ 43 ☐ 44 ☐ 45 ☐ 46 ☐ 47 ☐ 48 ☐ 49 ☐ 50 ☐ 51 ☐ 52 ☐ 53 ☐ 54 ☐ 55 ☐ 56 ☐ 57 ☐ 58 ☐ 59 ☐ 60 ☐ 61 ☐ 62 ☐ 63 ☐ 64 ☐

Radio: ☐
Instruments: ☐
Controls: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

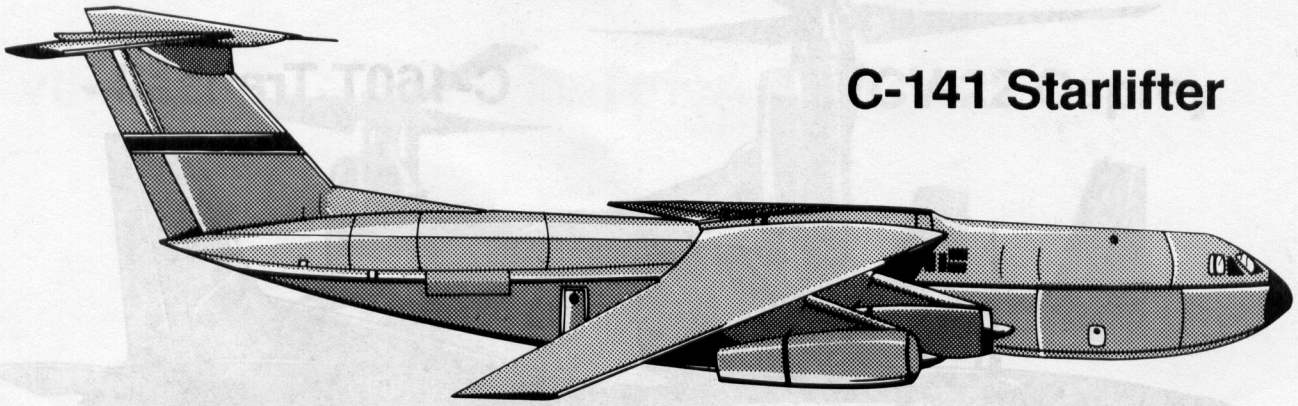
C-130E Hercules (Fixed-Wing Aircraft): The "Herc" or "Herky-Bird" is one of the most famous transports in the world, having seen service with the US armed forces since the 1960s. It has a large ramp in the rear and paratroop doors on both sides. No ejection seats are provided, but the "Herk" is capable of in-flight refueling.

***Tr Move:* 2080**
***Com Move:* 52 (18)**
***Fuel Cap:* 24,000**
***Fuel Cons:* 24,000**

COMBAT EQUIPMENT

Integral flare and chaff dispensers.

Variants on the basic C-130 airframe include gunship, electronic warfare aircraft, tanker, airborne command post and bombardment aircraft. This last comes about because the C-130 is one of the few aircraft large enough to carry the six-ton BLU-82 "Daisy-Cutter" FAE (fuel-air explosive) bomb.



C-141 Starlifter

Merc: 2000 Price: $26,000,000 (—/—)
Twilight: 2000 Price: $53,000,000 (—/—)
Fuel Type: AvG
Load: 40 tons
Veh Wt: 68 tons
Crew: 5+200 (or 150 paratroopers)
Mnt: 12
Runway: Primitive
Min. Runway, Takeoff/Land: 1768/1128 m

Damage Record

Crewmembers: Pilot ☐ Copilot ☐ Flight engineer ☐ Navigator ☐ Loadmaster ☐

Passengers: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 ☐ 14 ☐ 15 ☐ 16 ☐ 17 ☐ 18 ☐ 19 ☐ 20 ☐ 21 ☐ 22 ☐ 23 ☐ 24 ☐ 25 ☐ 26 ☐ 27 ☐ 28 ☐ 29 ☐ 30 ☐ 31 ☐ 32 ☐ 33 ☐ 34 ☐ 35 ☐ 36 ☐ 37 ☐ 38 ☐ 39 ☐ 40 ☐ 41 ☐ 42 ☐ 43 ☐ 44 ☐ 45 ☐ 46 ☐ 47 ☐ 48 ☐ 49 ☐ 50 ☐ 51 ☐ 52 ☐ 53 ☐ 54 ☐ 55 ☐ 56 ☐ 57 ☐ 58 ☐ 59 ☐ 60 ☐ 61 ☐ 62 ☐ 63 ☐ 64 ☐ 65 ☐ 66 ☐ 67 ☐ 68 ☐ 69 ☐ 70 ☐ 71 ☐ 72 ☐ 73 ☐ 74 ☐ 75 ☐ 76 ☐ 77 ☐ 78 ☐ 79 ☐ 80 ☐ 81 ☐ 82 ☐ 83 ☐ 84 ☐ 85 ☐ 86 ☐ 87 ☐ 88 ☐ 89 ☐ 90 ☐ 91 ☐ 92 ☐ 93 ☐ 94 ☐ 95 ☐ 96 ☐ 97 ☐ 98 ☐ 99 ☐100 ☐ 101 ☐ 102 ☐ 103 ☐ 104 ☐ 105 ☐ 106 ☐ 107 ☐ 108 ☐ 109 ☐ 110 ☐ 111 ☐ 112 ☐ 113 ☐ 114 ☐ 115 ☐ 116 ☐ 117 ☐ 118 ☐ 119 ☐ 120 ☐ 121 ☐ 122 ☐ 123 ☐ 124 ☐ 125 ☐ 126 ☐ 127 ☐ 128 ☐ 129 ☐ 130 ☐ 131 ☐ 132 ☐ 133 ☐ 134 ☐ 135 ☐ 136 ☐ 137 ☐ 138 ☐ 139 ☐ 140 ☐ 141 ☐ 142 ☐ 143 ☐ 144 ☐ 145 ☐ 146 ☐ 147 ☐ 148 ☐ 149 ☐ 150 ☐ 151 ☐ 152 ☐ 153 ☐ 154 ☐ 155 ☐ 156 ☐ 157 ☐ 158 ☐ 159 ☐ 160 ☐ 161 ☐ 162 ☐ 163 ☐ 164 ☐ 165 ☐ 166 ☐ 167 ☐ 168 ☐ 169 ☐ 170 ☐ 171 ☐ 172 ☐ 173 ☐ 174 ☐ 175 ☐ 176 ☐ 177 ☐ 178 ☐ 179 ☐ 180 ☐ 181 ☐ 182 ☐ 183 ☐ 184 ☐ 185 ☐ 186 ☐ 187 ☐ 188 ☐ 189 ☐ 190 ☐ 191 ☐ 192 ☐ 193 ☐ 194 ☐ 195 ☐ 196 ☐ 197 ☐ 198 ☐ 199 ☐ 200 ☐

Radio: ☐
Instruments: ☐
Controls: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐☐☐☐☐☐

C-141 Starlifter (Fixed-Wing Aircraft): The C-141 is a large, American-built transport aircraft. It has a large ramp in the rear and paratroop doors on both sides. No ejection seats are provided, but the aircraft is capable of in-flight refueling.

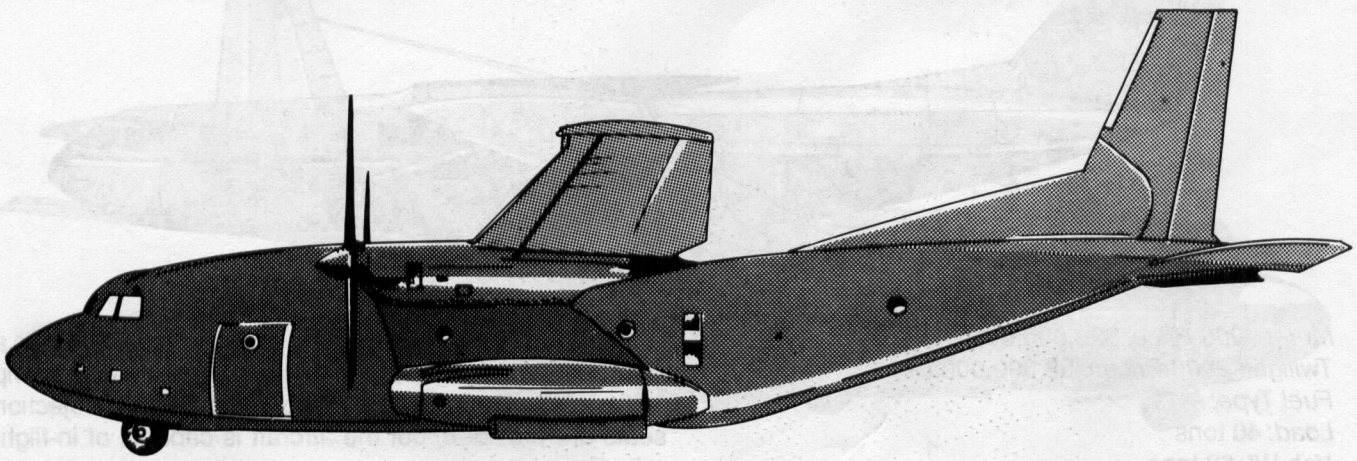
***Tr Move:* 3184**
***Com Move:* 91 (18)**
***Fuel Cap:* 24,000**
***Fuel Cons:* 24,000**

COMBAT EQUIPMENT

Integral flare and chaff dispensers.

Paratroopers: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 ☐ 14 ☐ 15 ☐ 16 ☐ 17 ☐ 18 ☐ 19 ☐ 20 ☐ 21 ☐ 22 ☐ 23 ☐ 24 ☐ 25 ☐ 26 ☐ 27 ☐ 28 ☐ 29 ☐ 30 ☐ 31 ☐ 32 ☐ 33 ☐ 34 ☐ 35 ☐ 36 ☐ 37 ☐ 38 ☐ 39 ☐ 40 ☐ 41 ☐ 42 ☐ 43 ☐ 44 ☐ 45 ☐ 46 ☐ 47 ☐ 48 ☐ 49 ☐ 50 ☐ 51 ☐ 52 ☐ 53 ☐ 54 ☐ 55 ☐ 56 ☐ 57 ☐ 58 ☐ 59 ☐ 60 ☐ 61 ☐ 62 ☐ 63 ☐ 64 ☐ 65 ☐ 66 ☐ 67 ☐ 68 ☐ 69 ☐ 70 ☐ 71 ☐ 72 ☐ 73 ☐ 74 ☐ 75 ☐ 76 ☐ 77 ☐ 78 ☐ 79 ☐ 80 ☐ 81 ☐ 82 ☐ 83 ☐ 84 ☐ 85 ☐ 86 ☐ 87 ☐ 88 ☐ 89 ☐ 90 ☐ 91 ☐ 92 ☐ 93 ☐ 94 ☐ 95 ☐ 96 ☐ 97 ☐ 98 ☐ 99 ☐100 ☐ 101 ☐ 102 ☐ 103 ☐ 104 ☐ 105 ☐ 106 ☐ 107 ☐ 108 ☐ 109 ☐ 110 ☐ 111 ☐ 112 ☐ 113 ☐ 114 ☐ 115 ☐ 116 ☐ 117 ☐ 118 ☐ 119 ☐ 120 ☐ 121 ☐ 122 ☐ 123 ☐ 124 ☐ 125 ☐ 126 ☐ 127 ☐ 128 ☐ 129 ☐ 130 ☐ 131 ☐ 132 ☐ 133 ☐ 134 ☐ 135 ☐ 136 ☐ 137 ☐ 138 ☐ 139 ☐ 140 ☐ 141 ☐ 142 ☐ 143 ☐ 144 ☐ 145 ☐ 146 ☐ 147 ☐ 148 ☐ 149 ☐ 150 ☐

C-160T Transall



Merc: 2000 Price: $2,800,000 (R/S)
Twilight: 2000 Price: $3,750,000 (R/R)
Fuel Type: AvG
Load: 16 tons (internal only)
Veh Wt: 47 tons
Crew: 3+93 (or 64 paratroopers)
Mnt: 14
Night Vision: None
Runway: Primitive
Min. Runway, Takeoff/Land: 715/990 m

Damage Record

Crewmembers: Pilot ☐ Copilot ☐ Flight engineer ☐
Passengers: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 ☐ 14 ☐ 15 ☐ 16 ☐ 17 ☐ 18 ☐ 19 ☐ 20 ☐ 21 ☐ 22 ☐ 23 ☐ 24 ☐ 25 ☐ 26 ☐ 27 ☐ 28 ☐ 29 ☐ 30 ☐ 31 ☐ 32 ☐ 33 ☐ 34 ☐ 35 ☐ 36 ☐ 37 ☐ 38 ☐ 39 ☐ 40 ☐ 41 ☐ 42 ☐ 43 ☐ 44 ☐ 45 ☐ 46 ☐ 47 ☐ 48 ☐ 49 ☐ 50 ☐ 51 ☐ 52 ☐ 53 ☐ 54 ☐ 55 ☐ 56 ☐ 57 ☐ 58 ☐ 59 ☐ 60 ☐ 61 ☐ 62 ☐ 63 ☐ 64 ☐ 65 ☐ 66 ☐ 67 ☐ 68 ☐ 69 ☐ 70 ☐ 71 ☐ 72 ☐ 73 ☐ 74 ☐ 75 ☐ 76 ☐ 77 ☐ 78 ☐ 79 ☐ 80 ☐ 81 ☐ 82 ☐ 83 ☐ 84 ☐ 85 ☐ 86 ☐ 87 ☐ 88 ☐ 89 ☐ 90 ☐ 91 ☐ 92 ☐ 93 ☐
Paratroopers: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 ☐ 14 ☐ 15 ☐ 16 ☐ 17 ☐ 18 ☐ 19 ☐ 20 ☐ 21 ☐ 22 ☐ 23 ☐ 24 ☐ 25 ☐ 26 ☐ 27 ☐ 28 ☐ 29 ☐ 30 ☐ 31 ☐ 32 ☐ 33 ☐ 34 ☐ 35 ☐ 36 ☐ 37 ☐ 38 ☐ 39 ☐ 40 ☐ 41 ☐ 42 ☐ 43 ☐ 44 ☐ 45 ☐ 46 ☐ 47 ☐ 48 ☐ 49 ☐ 50 ☐ 51 ☐ 52 ☐ 53 ☐ 54 ☐ 55 ☐ 56 ☐ 57 ☐ 58 ☐ 59 ☐ 60 ☐ 61 ☐ 62 ☐ 63 ☐ 64 ☐
Radio: ☐
Instruments: ☐
Controls: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

C-160T Transall (Fixed-Wing Aircraft): The Transall is a French-built, medium-sized transport aircraft, exported in large numbers. The Transall has port and starboard paratroop doors and a rear loading ramp. A flexible fuel bladder capable of carrying an additional 9000 kilograms can be installed at the expense of internal cargo. The Transall has no hardpoints, and no ejection seats are provided. The Transall is capable of in-flight refueling.

***Tr Move:* 2000**
***Com Move:* 59 (35)**
***Fuel Cap:* 19,000**
***Fuel Cons:* 19,000**

COMBAT EQUIPMENT
None.

Many air buffs feel that the C-160 Transall lacks the cargo capacity to be an effective transport aircraft for a first-line airmobile force.

CV-22 Osprey

Merc: 2000 Price: $750,000 (R/C)
Twilight: 2000 Price: $2,000,000 (R/—)
Armament: 4×AIM-9, 30mm 3-barreled autocannon (special operations version)
Ammo: 500×30mm autocannon (special ops version)
Fuel Type: AvG
Load: 9 tons (internal, with up to 4.5 tons slung at expense of internal load)
Veh Wt: 24 tons
Crew: 2+24 (or 16 paratroopers) (special ops); 3+24 (troop transport/rescue versions)
Mnt: 12
Runway: Primitive
Min. Runway, Takeoff/Land: 16/16 m VSTOL (550/600 m in conventional mode)

Damage Record

Crewmembers: Pilot ☐ Copilot ☐ (Crew chief ☐, troop transport version)
Passengers: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 ☐ 14 ☐ 15 ☐ 16 ☐ 17 ☐ 18 ☐ 19 ☐ 20 ☐ 21 ☐ 22 ☐ 23 ☐ 24 ☐
Paratroopers: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 ☐ 14 ☐ 15 ☐ 16 ☐
Radio: ☐
Instruments: ☐
Controls: ☐
30mm 3-bbl Gatling AC: ☐
Ammo: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

WEAPON DATA

Weapon	*ROF*	*Mag*	*Rng*	*Ammo*	*Damage*	*Pen*
30mm-3	50	500C	250	API	16	5/1/-2
			250	HE	C:1, Brst:2	–6C

Missile	*Rng*	*Guidance*	*Accuracy Level*
AIM-9L Sidewinder	18 km	Radar	Average

CV-22 Osprey (Fixed-Wing Aircraft): The CV-22 is an American-built, tilt-rotor, VSTOL aircraft, which was adopted as an assault helicopter substitute by the USMC in the early 1990s and put to use by the US Air Force and Coast Guard as an air-sea rescue craft. Capable of takeoff in either VTO mode (only two-thirds cargo capacity can be carried VTO), the Osprey can later flip its wings down and fly like a conventional fixed-wing craft. No ejection seats are provided. In-flight refueling is possible through a nose probe. Rescue models have a hoist over the forward cabin door (250-kilogram capacity) for lifting people aboard and into the cabin.

The Osprey has a forward cabin door suitable for paratroopers, a rear cargo ramp, and provisions for a cargo hook for slung loads. The Osprey can carry a slung load (up to 4.5 tons) at half its safe speed in VTO mode but not in regular flight mode. A flexible fuel bladder capable of carrying up to 8000 kilograms of additional fuel can be installed at the expense of cargo. The troop carrier variant is unarmed, but the special operations version has a three-barrel 30mm Gatling autocannon, and 4 AIM-9L Sidewinders.

***Tr Move:* 2020**
***Com Move:* 50**
***Fuel Cap:* 6215**
***Fuel Cons:* 2050**

COMBAT EQUIPMENT

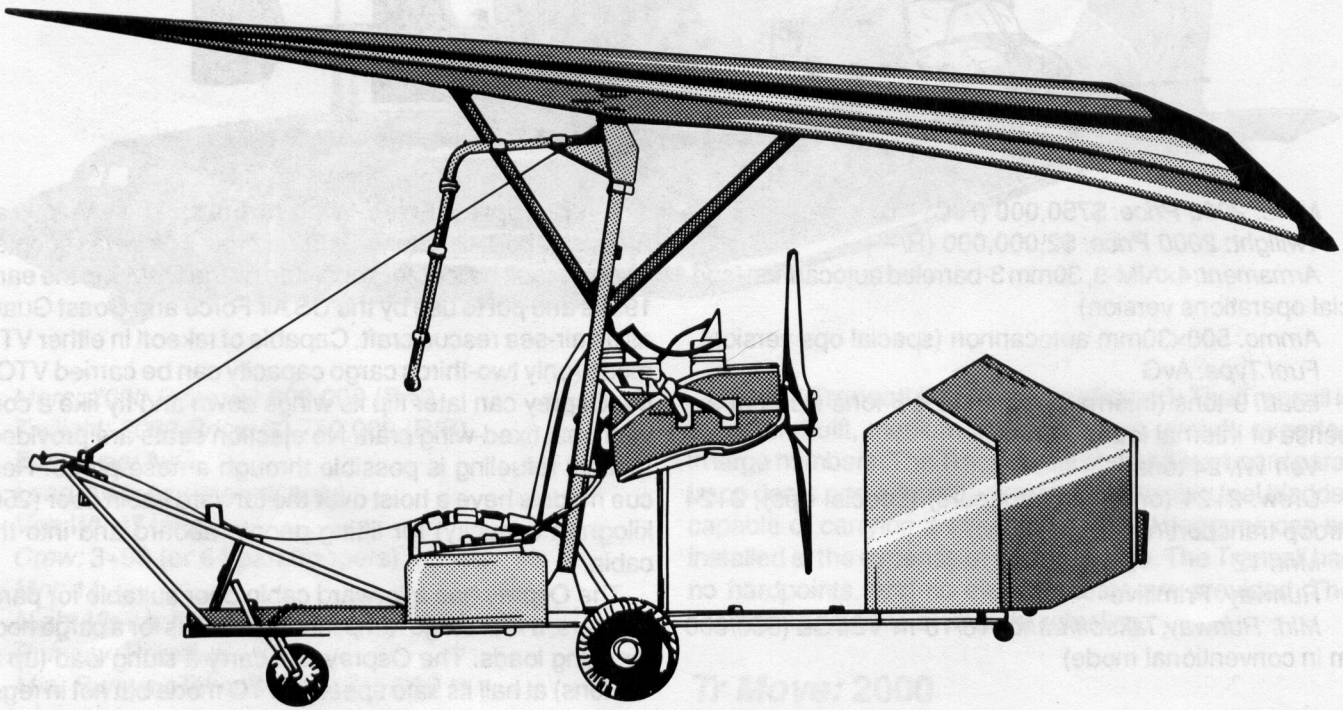
IR suppression, integral chaff and flare dispensers. Special operations version has FLIR in addition.

AMMUNITION

Use 30mm autocannon records from page 99.

AIM-9L Sidewinder (4 missiles)
☐☐☐☐

DF-1 AeroTechnologies Dragonfly



Merc: 2000 Price: $2400 (C/C)
Twilight: 2000 Price: $5000 (R/—)
Fuel Type: AvG, G
Load: 200 kg (including pilot and fuel)
Veh Wt: 48 kg
Crew: 1
Mnt: 8
Night Vision: None
Runway: Primitive
Min. Runway, Takeoff/Land: 176/56 m

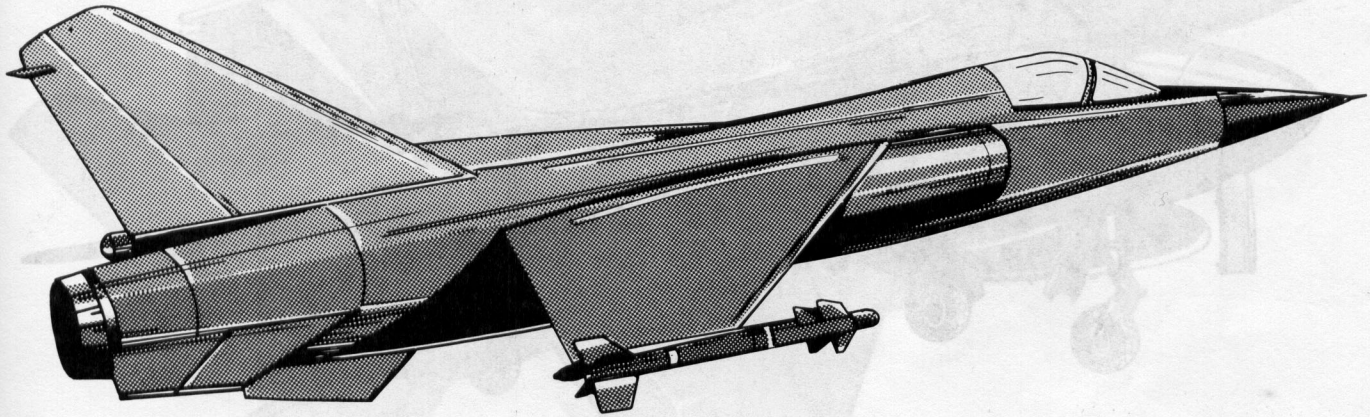
Damage Record
Crewmembers: Pilot ☐
Controls: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

DF-1 AeroTechnologies Dragonfly (Fixed-Wing Aircraft): Manufactured by the Canadian firm of AeroTechnologies, the DF-1 Dragonfly is a man-portable (in the sense that one average person can lift it), one-passenger ultralight designed to collapse and fit into a fiberglass carrying case. No ejection seats are provided, and the Dragonfly is incapable of in-flight refueling. It has no hardpoints and no suitable attachment points for a weapon. Originally designed as a sport aircraft, the Dragonfly can be air-dropped, and is quite popular with covert mission teams as a means of transport.

***Tr Move:* 200**
***Com Move:* 12 (8)**
***Fuel Cap:* 24**
***Fuel Cons:* 6**

COMBAT EQUIPMENT
None.

F.1 Mirage



Merc: 2000 Price: $36,000,000 (—/R)
Twilight: 2000 Price: $72,000,000 (R/—)
Armament: Two fixed 30mm autocannons
Ammo: 270×30mm
Fuel Type: AvG
Load: Up to 4000 kg in 5 hardpoints
Veh Wt: 16.2 tons
Crew: 1
Mnt: 12
Runway: Hardened
Min. Runway, Takeoff/Land: 608/640 m

Damage Record
Crewmembers: Pilot ☐
Radio: ☐
Instruments: ☐
Controls: ☐
30mm AC 1: ☐
30mm AC 2: ☐
Ammo: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

WEAPON DATA

Weapon	*ROF*	*Mag*	*Rng*	*Ammo*	*Damage*	*Pen*
30mm	5	135C	250	API	16	5/1/–2
			250	HE	C:1, Brst:2	–6C

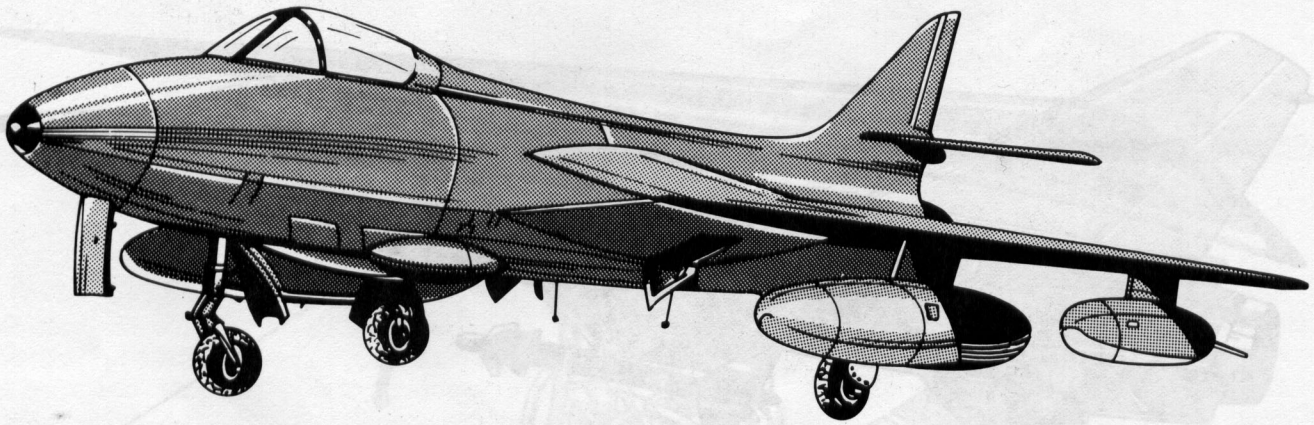
F.1 Mirage (Fixed-Wing Aircraft): Manufactured by the French firm of Dassault, the F.1 Mirage first flew in the mid-1960s, and has been a staple of many nations' ground attack air units since then. The F.1 Mirage is a single-seat, fixed-wing, all-weather fighter-bomber. It is equipped with an ejection seat and an in-flight refueling probe.

***Tr Move:* 4736**
***Com Move:* 148 (30)**
***Fuel Cap:* 4300**
***Fuel Cons:* 5600**

Combat Equipment: FLIR, radar gun sight, integral flare and chaff dispensers.

AMMUNITION
Use 30mm autocannon ammo records from page 99.

F-6



Merc: 2000 Price: $550,000 (—/S)
Twilight: 2000 Price: $1,200,000 (—/R)
Armament: Three fixed 30mm autocannons
Ammo: 185×30mm
Fuel Type: AvG
Load: 2000 kg on 4 hardpoints
Veh Wt: 14.5 tons
Crew: 1
Mnt: 10
Runway: Primitive
Min. Runway, Takeoff/Land: 760/496 m

Damage Record
Crewmembers: Pilot ☐
Radio: ☐
Instruments: ☐
Controls: ☐
30mm AC 1: ☐
30mm AC 2: ☐
30mm AC 3: ☐
Ammo: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

WEAPON DATA

Weapon	*ROF*	*Mag*	*Rng*	*Ammo*	*Damage*	*Pen*
30mm	5	135C	250	API	16	5/1/–2
			250	HE	C:1, Brst:2	–6C

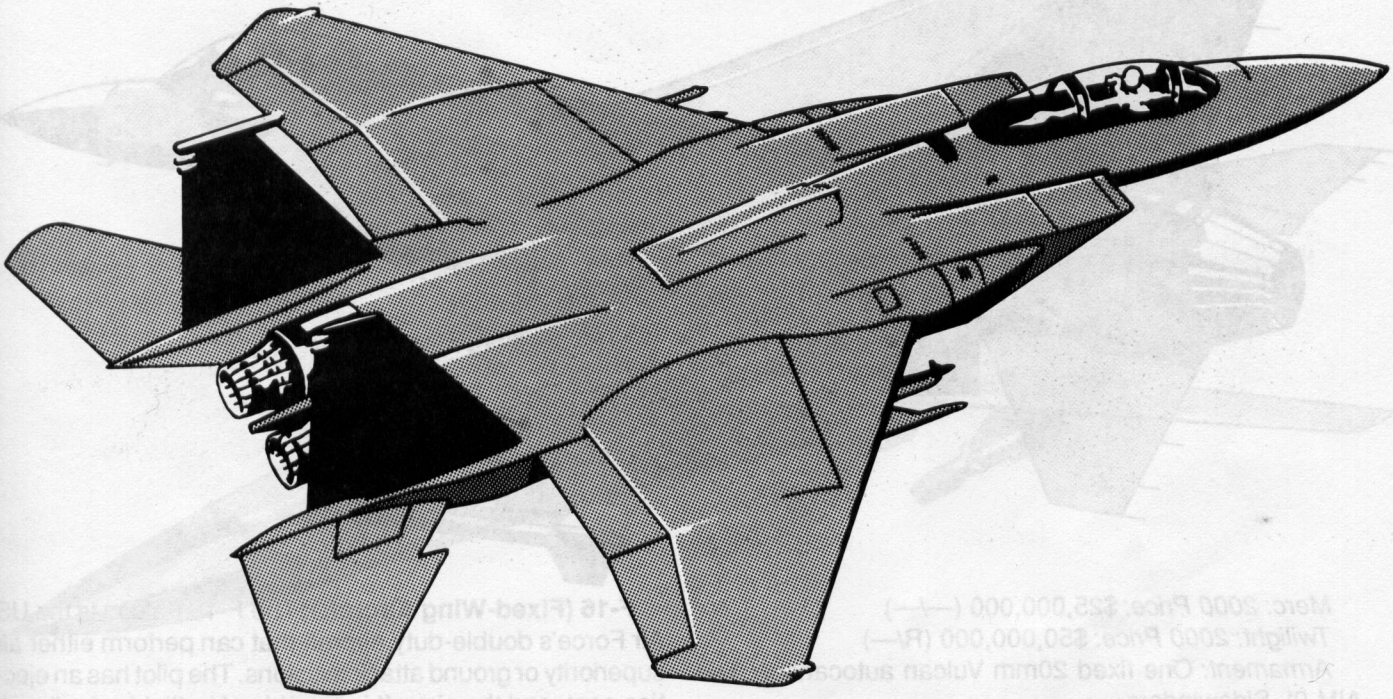
F-6 (Fixed-Wing Aircraft): The F-6 is a Chinese-produced copy of the Soviet MiG-19, sold to numerous Third World nations as a less expensive alternative to NATO ground attack aircraft. The pilot has an ejection seat, and the plane is not capable of in-flight refueling.

***Tr Move:* 2052**
***Com Move:* 55 (11)**
***Fuel Cap:* 1700**
***Fuel Cons:* 1700**

COMBAT EQUIPMENT
Integral flare and chaff dispensers

AMMUNITION
Use 30mm autocannon ammo records from page 99.

F-15E Strike Eagle



Merc: 2000 Price: $36,000,000 (—/—)
Twilight: 2000 Price: $72,000,000 (R/—)
Armament: One fixed 20mm Vulcan autocannon
Ammo: 950×20mm
Fuel Type: AvG
Load: 10,000 kg in 9 hardpoints
Veh Wt: 20.2 tons
Crew: 2
Mnt: 12
Runway: Hardened
Min. Runway, Takeoff/Land: 280/1056 m

Damage Record
Crewmembers: Pilot ☐ Weapons officer ☐
Radio: ☐
Instruments: ☐
Controls: ☐
20mm Vulcan AC: ☐
Ammo: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

WEAPON DATA

Weapon	*ROF*	*Mag*	*Rng*	*Ammo*	*Damage*	*Pen*
20mm Vulcan	60	950C	250	API	10	3/–2/–5
			250	HE	C:1, Brst:2	–8C

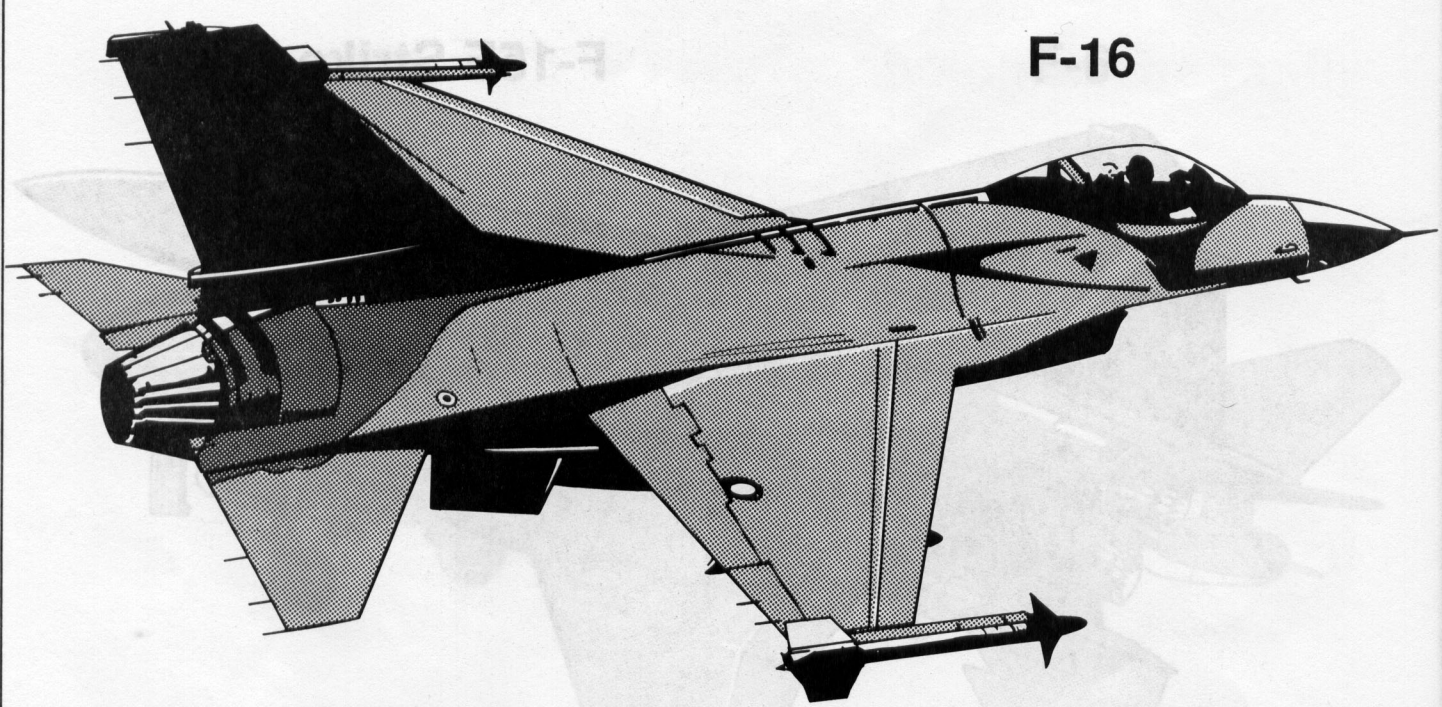
F-15E Strike Eagle (Fixed-Wing Aircraft): The Strike Eagle is a heavily reworked ground attack version of the F-15 fighter, but retains most of its capability as an air-to-air fighter. The F-15E can have up to three 2400-kilogram external drop tanks (at the expense of external load). Both crewmembers have ejection seats, and the aircraft is capable of in-flight refueling.

***Tr Move:* 3920**
***Com Move:* 148 (46)**
***Fuel Cap:* 13,328**
***Fuel Cons:* 10,100**

COMBAT EQUIPMENT
FLIR, radar gun sight, integral flare and chaff dispensers.

AMMUNITION
Use 20mm autocannon records provided on page 99.

F-16



Merc: 2000 Price: $25,000,000 (—/—)
Twilight: 2000 Price: $50,000,000 (R/—)
Armament: One fixed 20mm Vulcan autocannon, two AIM-9L Sidewinders
Ammo: 500×20mm
Fuel Type: AvG
Load: 6895 kg in 7 hardpoints
Veh Wt: 23.8 tons
Crew: 1
Mnt: 12
Runway: Hardened
Min. Runway, Takeoff/Land: 800/528 m

Damage Record
Crewmembers: Pilot ☐
Radio: ☐
Instruments: ☐
Controls: ☐
20mm Vulcan AC: ☐
Ammo: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

WEAPON DATA

Weapon	*ROF*	*Mag*	*Rng*	*Ammo*	*Damage*	*Pen*
20mm Vulcan	60	500C	250	API	10	3/–2/–5
		250	HE	C:1, Brst:2		–8C

Missile	*Rng*	*Guidance*	*Accuracy Level*
AIM-9L Sidewinder	18 km	Radar	Average

F-16 (Fixed-Wing Aircraft): The F-16 Falcon is the US Air Force's double-duty aircraft that can perform either air superiority or ground attack missions. The pilot has an ejection seat, and the aircraft is capable of in-flight refueling. It may also carry up to three 900-kilogram drop tanks at the expense of bomb load.

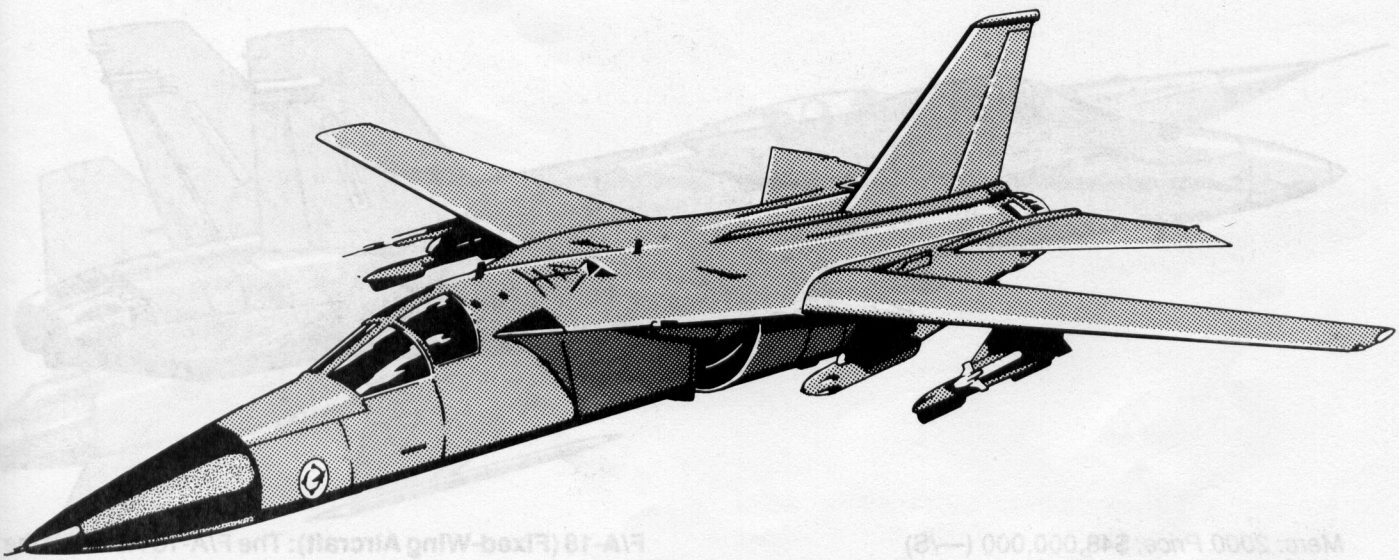
***Tr Move:* 7200**
***Com Move:* 225 (68)**
***Fuel Cap:* 3162**
***Fuel Cons:* 3200**

COMBAT EQUIPMENT
FLIR, radar gun sight, integral flare and chaff dispensers.

AMMUNITION
Use 20mm autocannon records provided on page 99.

AIM-9L Sidewinder (2 missiles)
☐☐

F-111 Aardvark



Merc: 2000 Price: $67,000,000 (—/R)
Twilight: 2000 Price: $133,000,000 (—/—)
Armament: One fixed 20mm Vulcan autocannon
Ammo: 2084×20mm rounds
Fuel Type: AvG
Load: 8000 kg in 4 hardpoints
Veh Wt: 36 tons
Crew: 2
Mnt: 14
Min. Runway, Takeoff/Land: 1400/1104 m

Damage Record
Crewmembers: Pilot ☐ Weapons officer ☐
Instruments: ☐
Controls: ☐
20mm Vulcan AC: ☐
Ammo: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

WEAPON DATA

Weapon	*ROF*	*Mag*	*Rng*	*Ammo*	*Damage*	*Pen*
20mm Vulcan	60	2084C	250	API	10	3/–2/–5
			250	HE	C:1, Brst:2	–8C

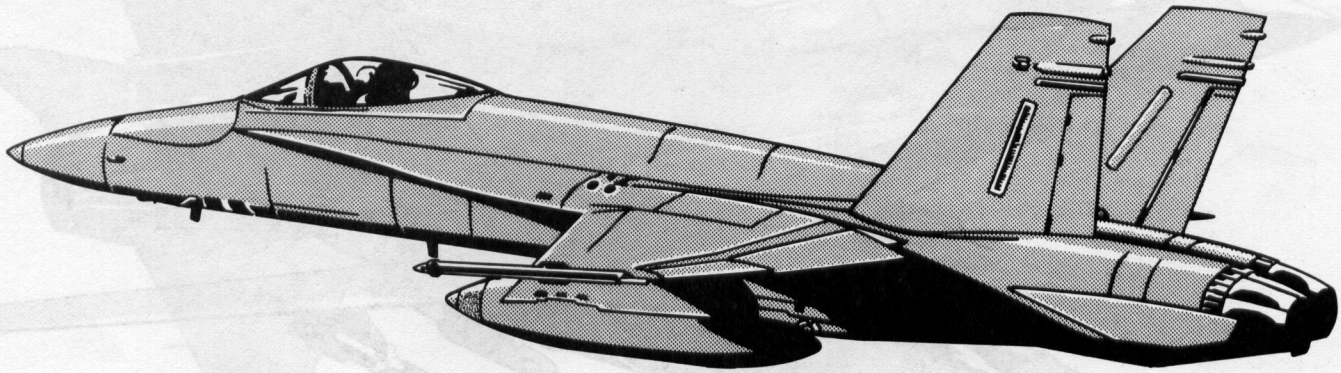
F-111 Aardvark (Fixed-Wing Aircraft): The F-111 is an American, variable-wing geometry (swing-wing), medium bomber which is serving with the US Air Force. Both crewmembers have ejection seats, and the aircraft is capable of in-flight refueling. One 1800-kilogram drop tank may be fitted at the expense of bomb load.

***Tr Move:* 2008**
***Com Move:* 78 (26)**
***Fuel Cap:* 15,000**
***Fuel Cons:* 15,000**

Combat Equipment: FLIR, laser designator, radar gun sight, integral flare and chaff dispensers.

AMMUNITION
Use 20mm autocannon records provided on page 99.

F/A-18



Merc: 2000 Price: $48,000,000 (—/S)
Twilight: 2000 Price: $96,000,000 (S/—)
Armament: One fixed 20mm Vulcan autocannon, two AIM-9L Sidewinders
Ammo: 500×20mm
Fuel Type: AvG
Load: 7710 kg in 5 hardpoints
Veh Wt: 36 tons
Crew: 1
Mnt: 12
Runway: Hardened
Min. Runway, Takeoff/Land: 616/744 m

Damage Record
Crewmembers: Pilot ☐
Radio: ☐
Instruments: ☐
Controls: ☐
20mm Vulcan AC: ☐
Ammo: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

WEAPON DATA

Weapon	*ROF*	*Mag*	*Rng*	*Ammo*	*Damage*	*Pen*
20mm Vulcan	60	500C	250	API	10	3/–2/–5
			250	HE	C:1, Brst:2	–8C

Missile	*Rng*	*Guidance*	*Accuracy Level*
AIM-9L Sidewinder	18 km	Radar	Average

F/A-18 (Fixed-Wing Aircraft): The F/A-18 Hornet is the US Navy's dual-purpose fighter-bomber. The pilot has an ejection seat, and the aircraft is capable of in-flight refueling. Up to three 1000-kilogram drop tanks can be fitted at the expense of bomb load.

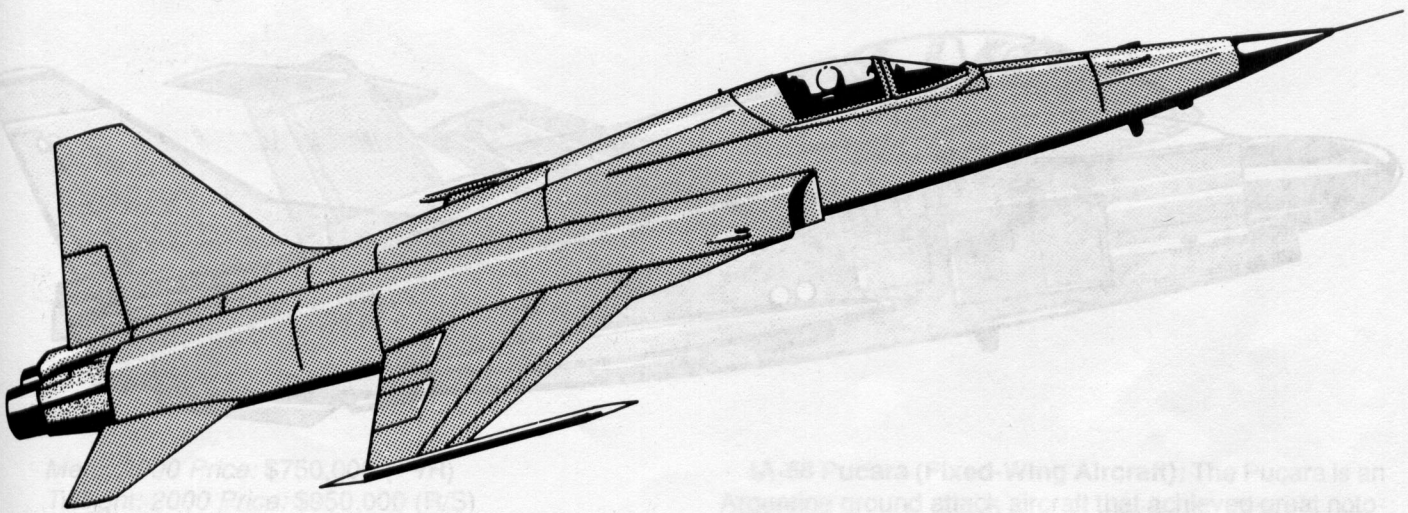
***Tr Move:* 2880**
***Com Move:* 49 (25)**
***Fuel Cap:* 4900**
***Fuel Cons:* 4900**

COMBAT EQUIPMENT
FLIR, radar gun sight, integral chaff and flare dispensers and radar jammer.

AMMUNITION
Use 20mm autocannon records provided on page 99.

AIM-9L Sidewinder (2 missiles)
☐☐

F-5E Tiger II



Merc: 2000 Price: $2,400,000 (—/S)
Twilight: 2000 Price: $4,800,000 (R/—)
Armament: Two fixed 20mm autocannons
Ammo: 500×20mm
Fuel Type: AvG
Load: 2400 kg on 5 hardpoints,
Veh Wt: 9.4 tons
Crew: 1
Mnt: 12
Runway: Hardened
Min. Runway, Takeoff/Land: 616/744 m

Damage Record
Crewmembers: Pilot ☐
Radio: ☐
Instruments: ☐
Controls: ☐
20mm AC 1: ☐
20mm AC 2: ☐
Ammo: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

WEAPON DATA

Weapon	*ROF*	*Mag*	*Rng*	*Ammo*	*Damage*	*Pen*
20mm AC	10	500C	250	API	10	3/–2/–5
			250	HE	C:1, Brst:2	–8C

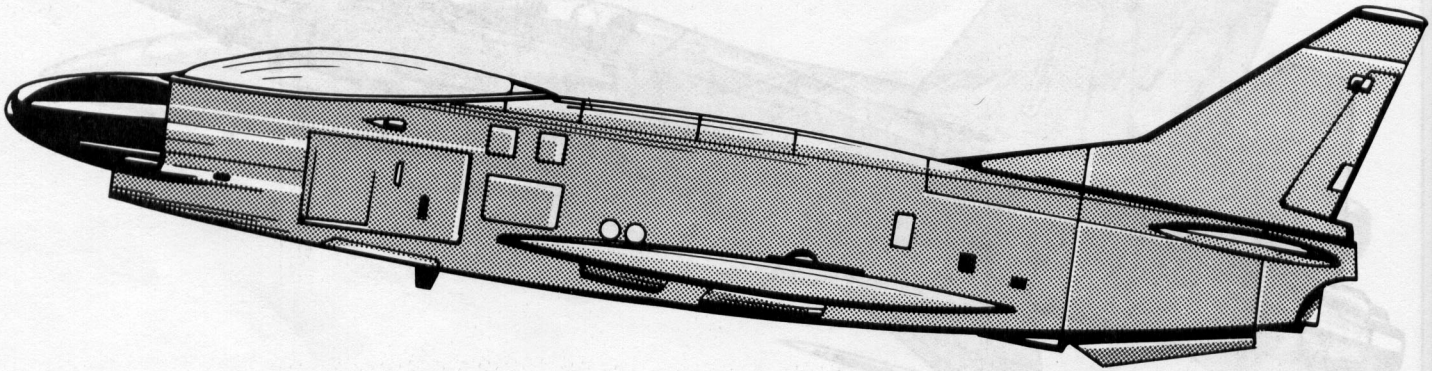
F-5E Tiger II (Fixed-Wing Aircraft): A light American-built fighter intended primarily for the export market. The pilot has an ejection seat, and the aircraft is not capable of in-flight refueling. A 1000-kilogram drop tank can be fitted at the expense of bomb load.

***Tr Move:* 4204**
***Com Move:* 132 (40)**
***Fuel Cap:* 4900**
***Fuel Cons:* 4900**

COMBAT EQUIPMENT
Integral chaff and flare dispensers, radar gun sight, IR suppression.

AMMUNITION
Use 20mm autocannon records provided on page 99.

G.91



Merc: 2000 Price: $600,000 (R/S)
Twilight: 2000 Price: $950,000 (S/R)
Armament: Two fixed 30mm autocannons
Ammo: 300×30mm
Fuel Type: AvG
Load: 1800 kg in 4 hardpoints
Veh Wt: 8.7 tons
Crew: 1
Mnt: 12
Runway: Hardened
Min. Runway, Takeoff/Land: 616/744 m

Damage Record
Crewmembers: Pilot ☐
Radio: ☐
Instruments: ☐
Controls: ☐
30mm AC 1: ☐
30mm AC 2: ☐
Ammo: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

WEAPON DATA

Weapon	*ROF*	*Mag*	*Rng*	*Ammo*	*Damage*	*Pen*
30mm	10	150	250	API	16	5/1/–2
			250	HE	C:1, Brst:2	–6C

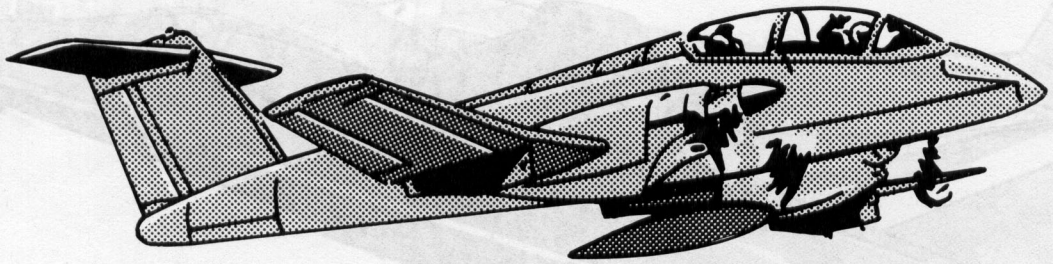
G.91 (Fixed-Wing Aircraft): The Fiat G.91 is a single engined recon and ground attack aircraft produced in Italy and used by a number of countries. The pilot has an ejection seat, and the aircraft is not capable of in-flight refueling.

***Tr Move:* 1608**
***Com Move:* 48 (14)**
***Fuel Cap:* 1500**
***Fuel Cons:* 1500**

COMBAT EQUIPMENT
None.

AMMUNITION
Use 30mm autocannon records provided on page 99.

IA-58 Pucara



Merc: 2000 Price: $750,000 (—/R)
Twilight: 2000 Price: $950,000 (R/S)
Armament: Two fixed 20mm autocannon, four M2HB MGs
Ammo: 300×20mm and 1050×.50 BMG
Fuel Type: AvG
Load: 1620 kg in 3 hardpoints.
Veh Wt: 14.9 tons
Crew: 1
Mnt: 12
Runway: Hardened
Min. Runway, Takeoff/Land: 616/744 m

Damage Record
Crewmembers: Pilot ☐
Radio: ☐
Instruments: ☐
Controls: ☐
20mm AC 1: ☐
20mm AC 1: ☐
M2HB MG 1: ☐
M2HB MG 2: ☐
M2HB MG 3: ☐
M2HB MG 4: ☐
Ammo: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

WEAPON DATA

Weapon	*ROF*	*Mag*	*Rng*	*Ammo*	*Damage*	*Pen*
20mm AC	10	500C	250	API	10	3/–2/–5
			250	HE	C:1, Brst:2	–8C

IA-58 Pucara (Fixed-Wing Aircraft): The Pucara is an Argentine ground attack aircraft that achieved great notoriety during the Falklands War. The pilot has an ejection seat, and the aircraft is not capable of in-flight refueling. One 300-kilogram drop tank may be fitted at the expense of bomb load.

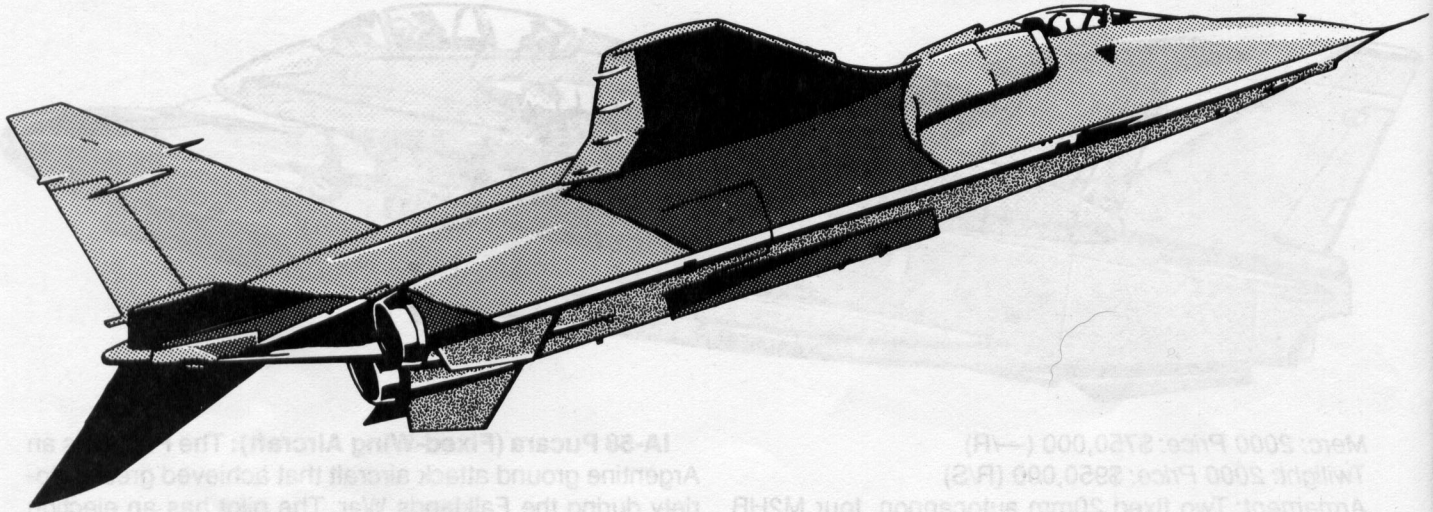
***Tr Move:* 1704**
***Com Move:* 53 (15)**
***Fuel Cap:* 1020**
***Fuel Cons:* 1000**

COMBAT EQUIPMENT
None.

AMMUNITION
Use 20mm autocannon and .50 BMG ammunition records provided on page 99.

During the Falklands War, Pucara pilots were described by their British opponents as being "great stick and rudder guys," meaning that the Argentines would press home attacks in the face of sometimes withering antiaircraft fire.

Jaguar



Merc: 2000 Price: $2,400,000 (—/S)
Twilight: 2000 Price: $4,800,000 (R/—)
Armament: Two fixed 30mm autocannon
Ammo: 300×30mm
Fuel Type: AvG
Load: 4700 kg in 3 hardpoints
Veh Wt: 11 tons
Crew: 1
Mnt: 12
Runway: Hardened
Min. Runway, Takeoff/Land: 1250/785 m

Damage Record
Crewmembers: Pilot ☐
Radio: ☐
Instruments: ☐
Controls: ☐
30mm AC 1: ☐
30mm AC 2: ☐
Ammo: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

WEAPON DATA

Weapon	*ROF*	*Mag*	*Rng*	*Ammo*	*Damage*	*Pen*
30mm	10	150	250	API	16	5/1/–2
			250	HE	C:1, Brst:2	–6C

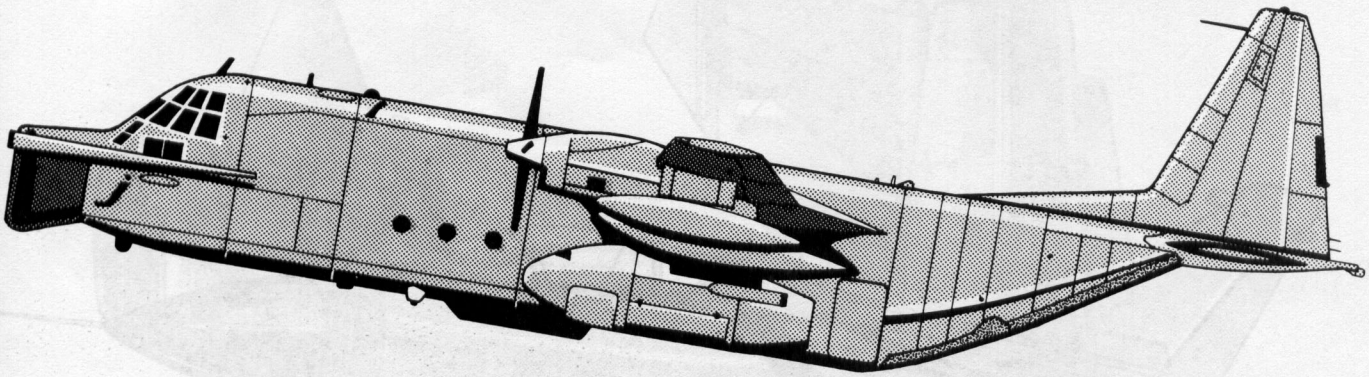
Jaguar (Fixed-Wing Aircraft): The Sepecat Jaguar is a Franco-British design for a ground attack aircraft sold heavily in the international market. The pilot has an ejection seat, and the aircraft is capable of in-flight refueling. Up to three 1200-kilogram drop tanks may be fitted at the expense of bomb load.

Tr Move: 4320
***Com Move:* 135 (35)**
***Fuel Cap:* 4200**
***Fuel Cons:* 4200**

COMBAT EQUIPMENT
Integral flare and chaff dispensers.

AMMUNITION
Use 30mm autocannon records provided on page 99.

MC-130H Combat Talon



Merc: 2000 Price: $55,000,000 (—/—)
Twilight: 2000 Price: $111,000,000 (—/—)
Fuel Type: AvG
Load: 1000 kg (internal only)
Veh Wt: 65 tons
Crew: 9+92 (or 64 paratroopers)
Mnt: 16
Runway: Primitive
Min. Runway, Takeoff/Land: 1104/800 m

Damage Record

Crewmembers: Pilot ☐ Copilot ☐ Navigator ☐ Flight engineer ☐

Crew chief ☐ Cargo handler 1 ☐ Cargo handler 2 ☐ Electronics specialist 1 ☐ Electronics specialist 2 ☐

Passengers: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 ☐ 14 ☐ 15 ☐ 16 ☐ 17 ☐ 18 ☐ 19 ☐ 20 ☐ 21 ☐ 22 ☐ 23 ☐ 24 ☐ 25 ☐ 26 ☐ 27 ☐ 28 ☐ 29 ☐ 30 ☐ 31 ☐ 32 ☐ 33 ☐ 34 ☐ 35 ☐ 36 ☐ 37 ☐ 38 ☐ 39 ☐ 40 ☐ 41 ☐ 42 ☐ 43 ☐ 44 ☐ 45 ☐ 46 ☐ 47 ☐ 48 ☐ 49 ☐ 50 ☐ 51 ☐ 52 ☐ 53 ☐ 54 ☐ 55 ☐ 56 ☐ 57 ☐ 58 ☐ 59 ☐ 60 ☐ 61 ☐ 62 ☐ 63 ☐ 64 ☐ 65 ☐ 66 ☐ 67 ☐ 68 ☐ 69 ☐ 70 ☐ 71 ☐ 72 ☐ 73 ☐ 74 ☐ 75 ☐ 76 ☐ 77 ☐ 78 ☐ 79 ☐ 80 ☐ 81 ☐ 82 ☐ 83 ☐ 84 ☐ 85 ☐ 86 ☐ 87 ☐ 88 ☐ 89 ☐ 90 ☐ 91 ☐ 92 ☐

Paratroopers: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 ☐ 14 ☐ 15 ☐ 16 ☐ 17 ☐ 18 ☐ 19 ☐ 20 ☐ 21 ☐ 22 ☐ 23 ☐ 24 ☐ 25 ☐ 26 ☐ 27 ☐ 28 ☐ 29 ☐ 30 ☐ 31 ☐ 32 ☐ 33 ☐ 34 ☐ 35 ☐ 36 ☐ 37 ☐ 38 ☐ 39 ☐ 40 ☐ 41 ☐ 42 ☐ 43 ☐ 44 ☐ 45 ☐ 46 ☐ 47 ☐ 48 ☐ 49 ☐ 50 ☐ 51 ☐ 52 ☐ 53 ☐ 54 ☐ 55 ☐ 56 ☐ 57 ☐ 58 ☐ 59 ☐ 60 ☐ 61 ☐ 62 ☐ 63 ☐ 64 ☐

Radio: ☐
Instruments: ☐
Controls: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

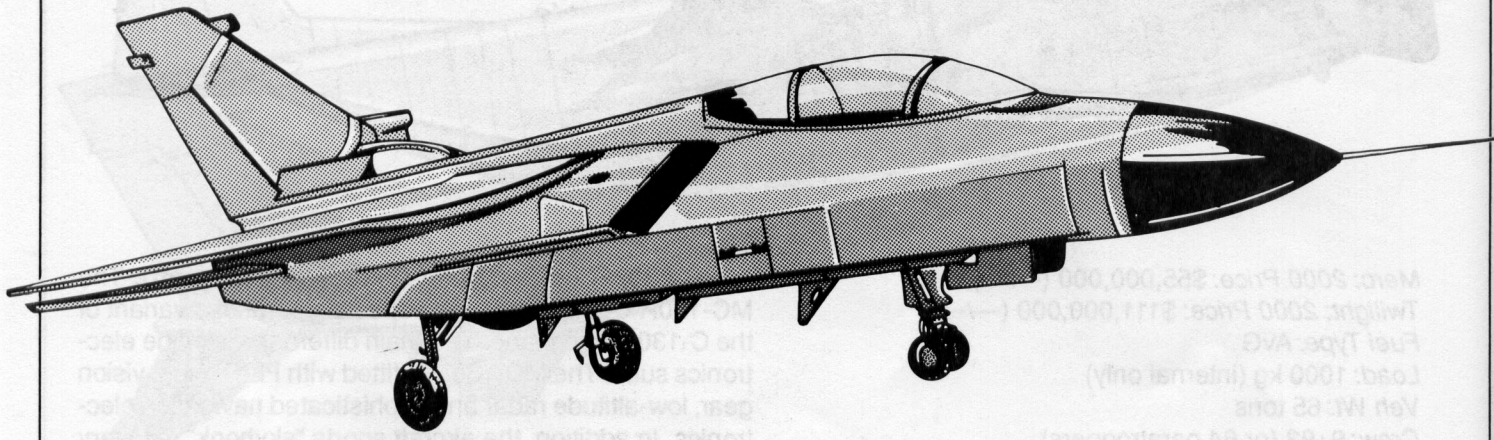
MC-130H Combat Talon (Fixed-Wing Aircraft): The MC-130H Combat Talon is a special operations variant of the C-130 cargo plane. The main difference is in the electronics suite: The MC-130H is fitted with FLIR, night vision gear, low-altitude radar and sophisticated navigation electronics. In addition, the aircraft sports "skyhook" recovery gear in the nose for recovery of ground personnel or cargo. No ejection seats are provided, but the aircraft is capable of in-flight refueling and buddy refueling.

***Tr Move:* 2080**
***Com Move:* 52 (18)**
***Fuel Cap:* 24,000**
***Fuel Cons:* 24,000**

COMBAT EQUIPMENT

FLIR, radar jammers and integral flare and chaff dispensers.

Panavia Tornado GR.1



Merc: 2000 Price: $2,400,000 (—/C)
Twilight: 2000 Price: $4,800,000 (S/—)
Armament: One fixed 27mm autocannon
Ammo: 400×27mm
Fuel Type: AvG
Load: 9000 kg in 6 hardpoints
Veh Wt: 20 tons
Crew: 2
Mnt: 12
Runway: Hardened
Min. Runway, Takeoff/Land: 760/496 m

Damage Record
Crewmembers: Pilot ☐ Copilot ☐
Radio: ☐
Instruments: ☐
Controls: ☐
27mm AC 1: ☐
27mm AC 2: ☐
Ammo: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

WEAPON DATA

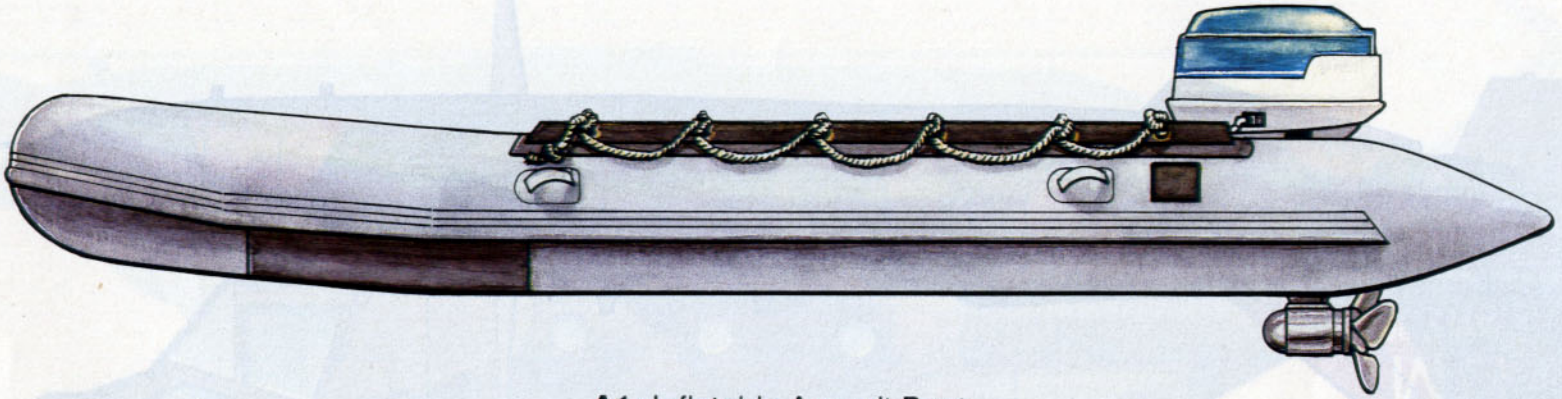
Weapon	*ROF*	*Mag*	*Rng*	*Ammo*	*Damage*	*Pen*
27mm	10	400	300	API	16	5/1/–2
			300	HE	C:1, Brst:2	–6C

Panavia Tornado GR.1 (Fixed-Wing Aircraft): The Panavia Tornado GR.1 was a joint venture of the UK, France, and Germany, and is in service with these and other countries. The pilot has an ejection seat, and the aircraft is capable of internal refueling. Up to two 1200-kilogram drop tank can be fitted at the expense of bomb load.

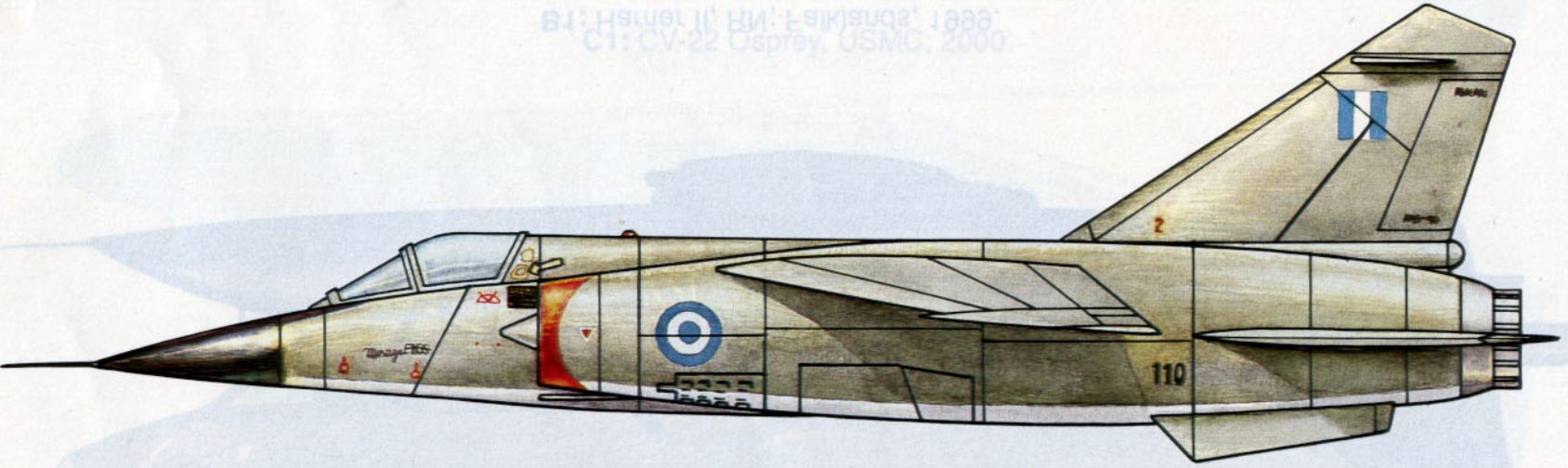
***Tr Move:* 6800**
***Com Move:* 213 (64)**
***Fuel Cap:* 8000**
***Fuel Cons:* 8000**

COMBAT EQUIPMENT
FLIR, radar gun sight and integral flare and chaff dispensers.

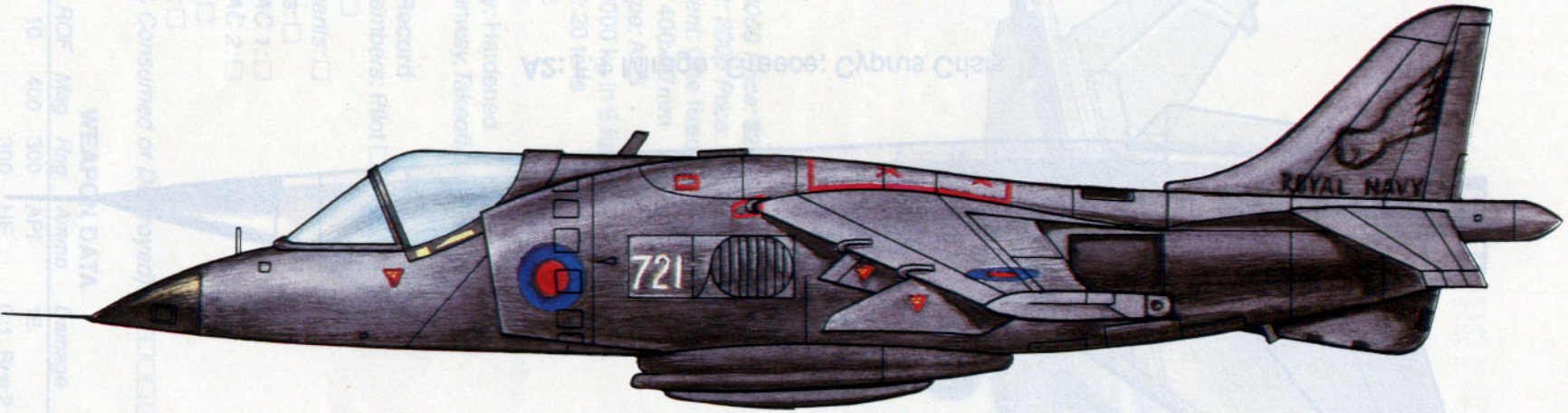
AMMUNITION
Use 27mm autocannon records provided on page 99.



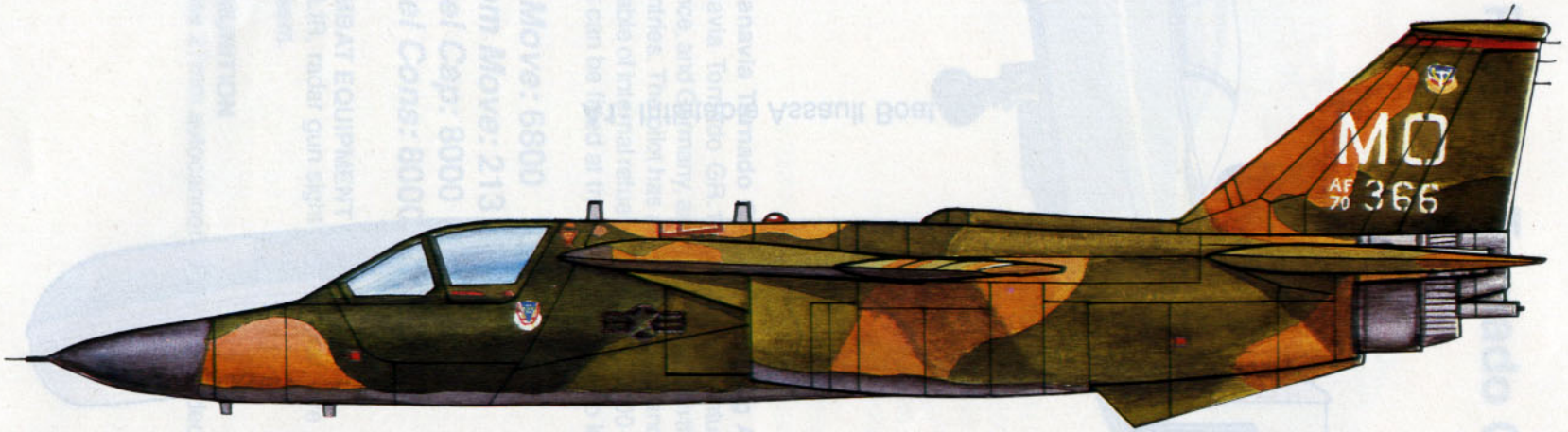
A1: Inflatable Assault Boat.



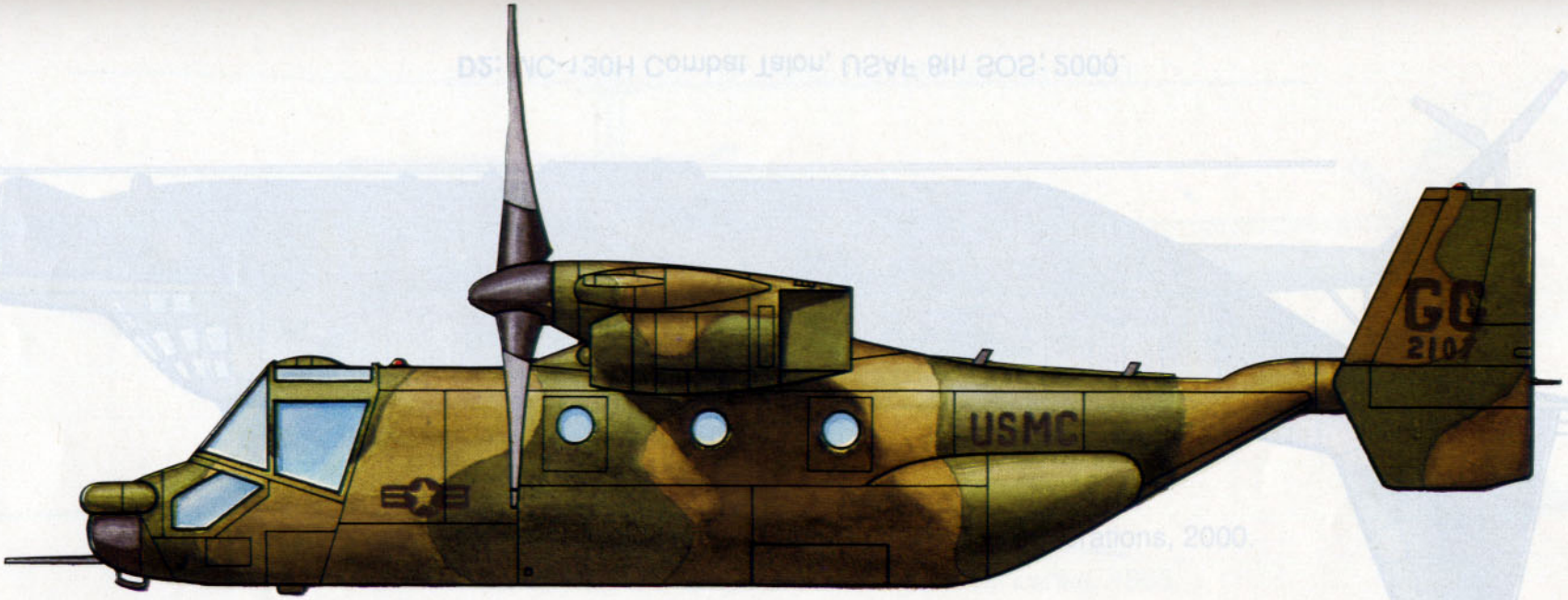
A2: F.1 Mirage. Greece; Cyprus Crisis.



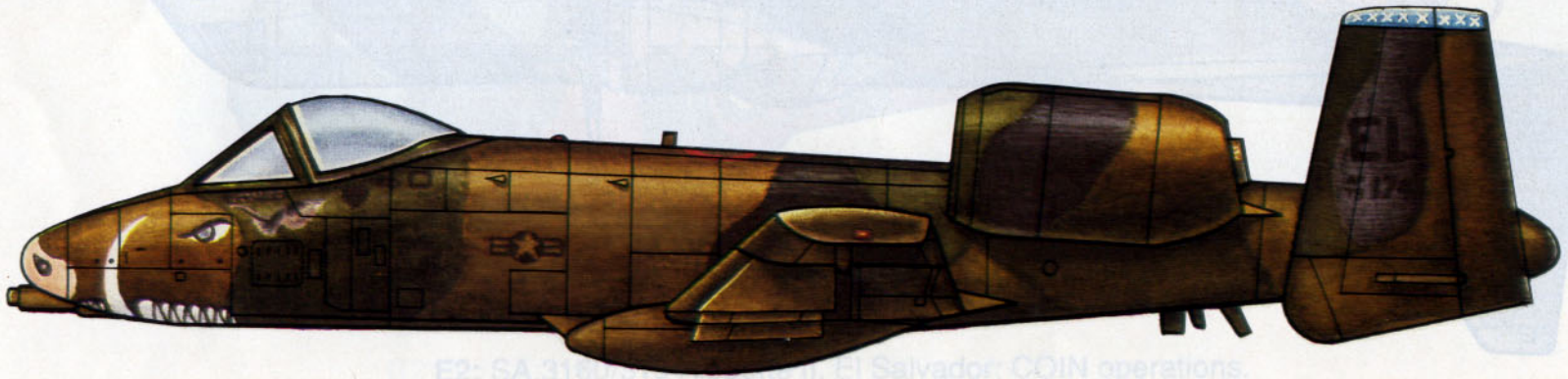
B1: Harrier II, RN; Falklands, 1999.



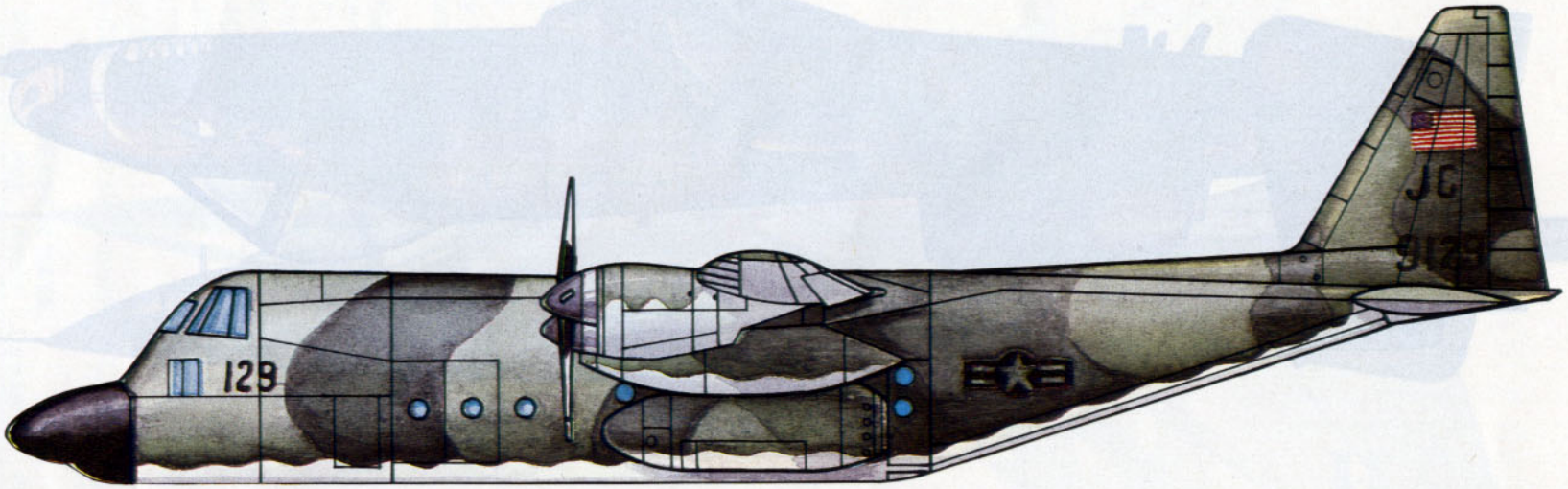
B2: F-111 Aardvark, USAF, 366th Tactical Fighter Wing; 1998.



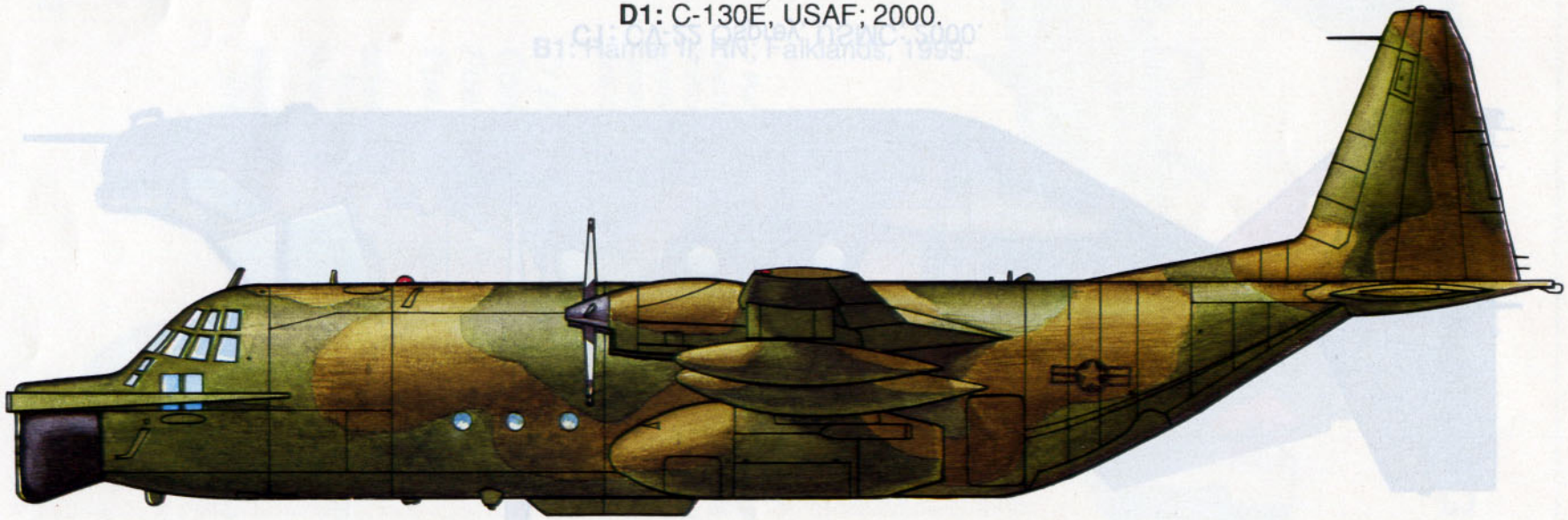
C1: CV-22 Osprey, USMC; 2000.



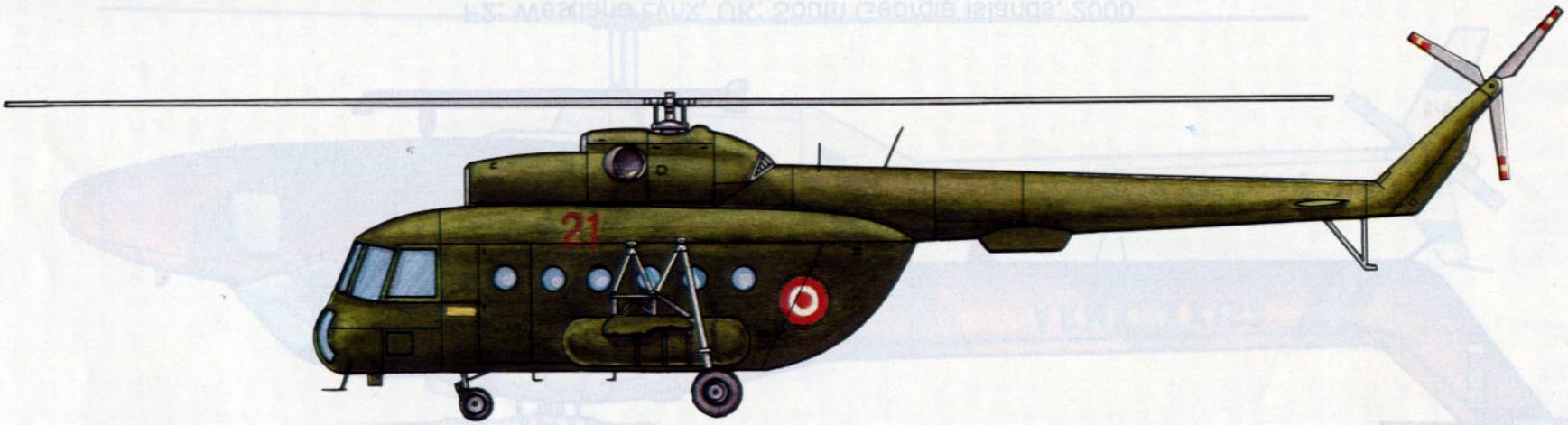
C2: A-10 Thunderbolt II, USAF, 23rd Tactical Fighter Wing; 1997.



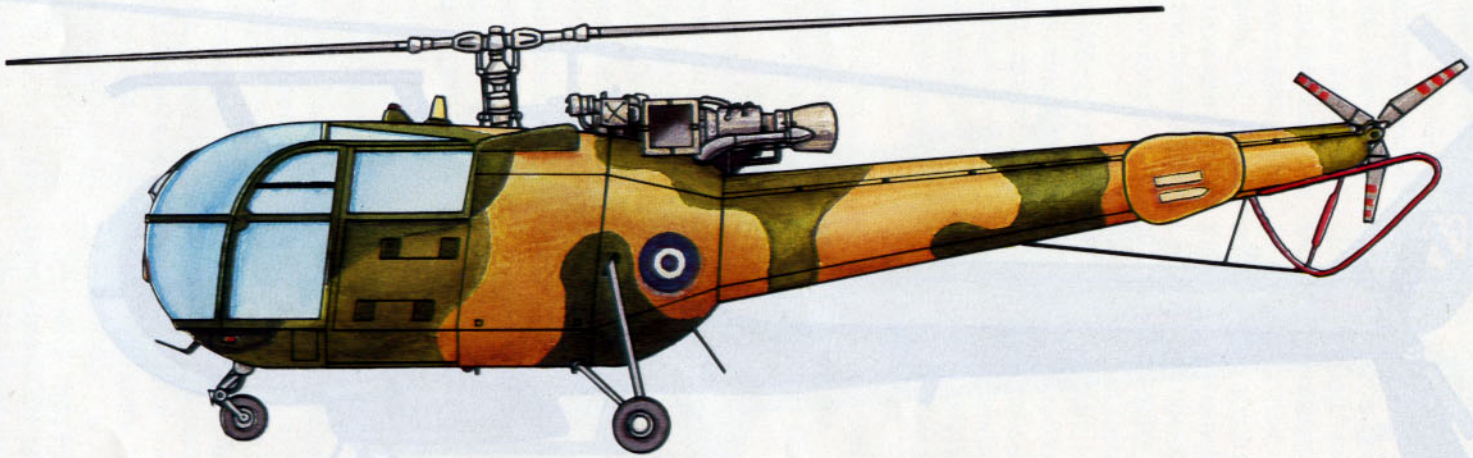
D1: C-130E, USAF; 2000.



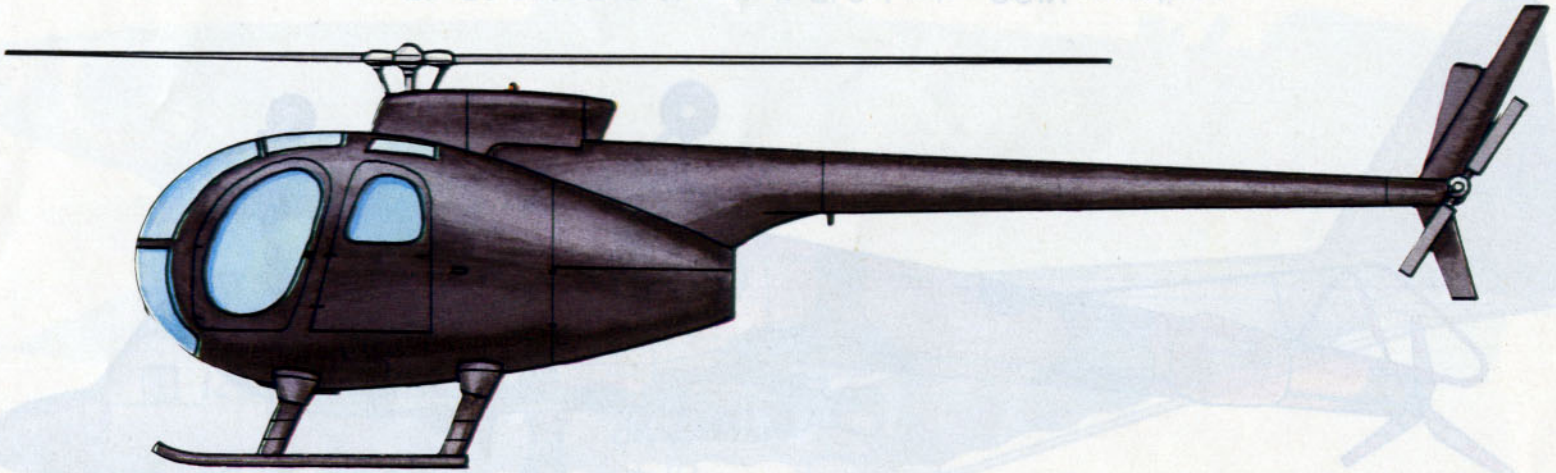
D2: MC-130H Combat Talon, USAF 8th SOS; 2000.



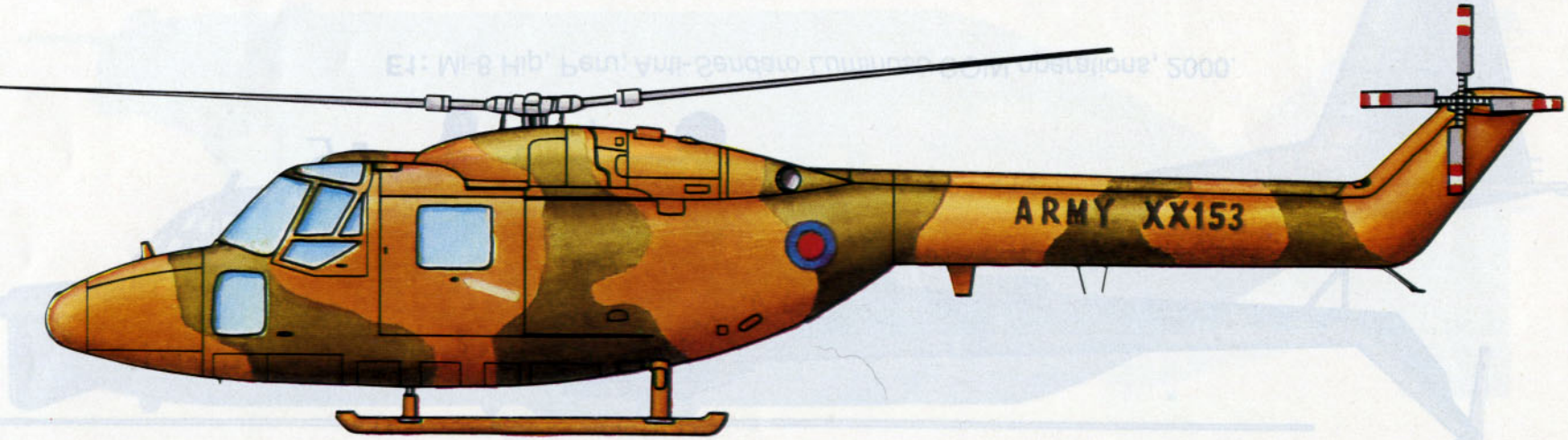
E1: Mi-8 Hip, Peru; Anti-*Sendaro Luminoso* COIN operations, 2000.



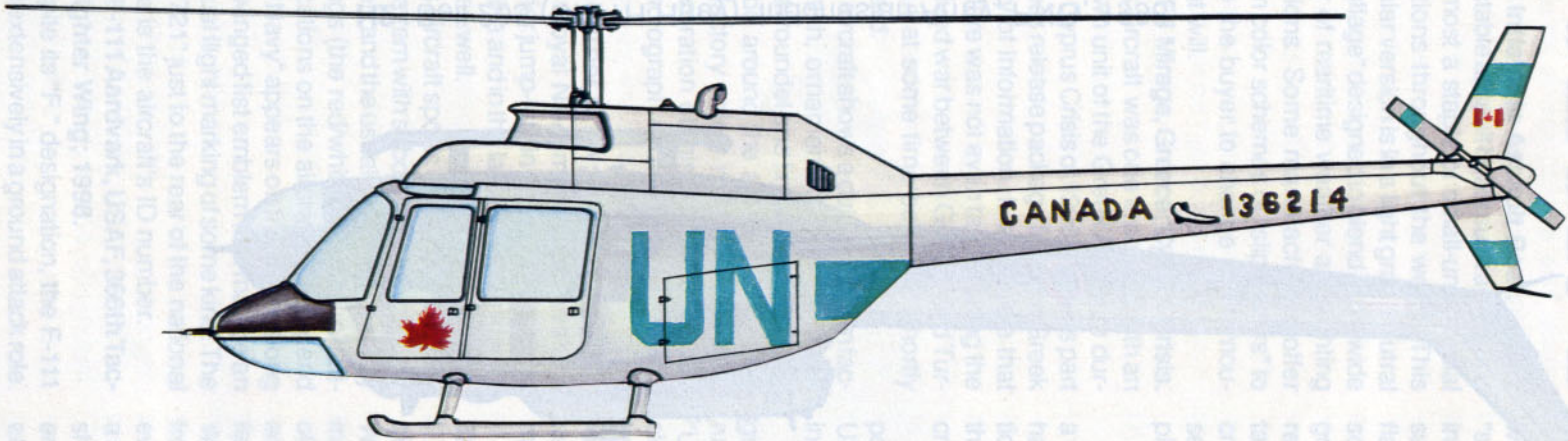
E2: SA.3160/319 *Alouette* II, El Salvador; COIN operations.



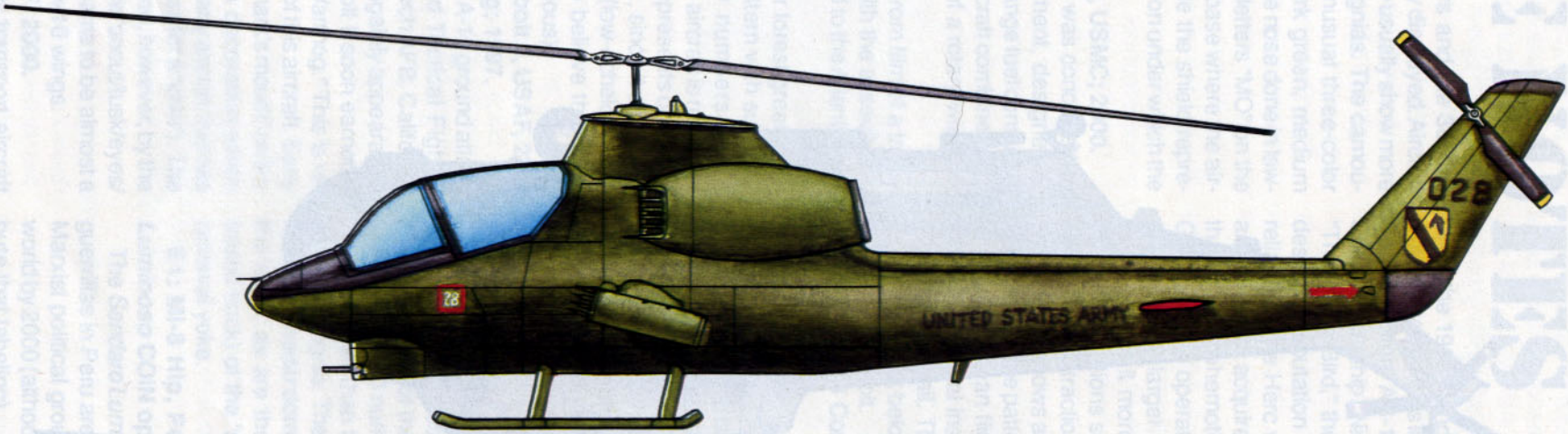
F1: AH-6 Defender, US Army TF-160; 1998.



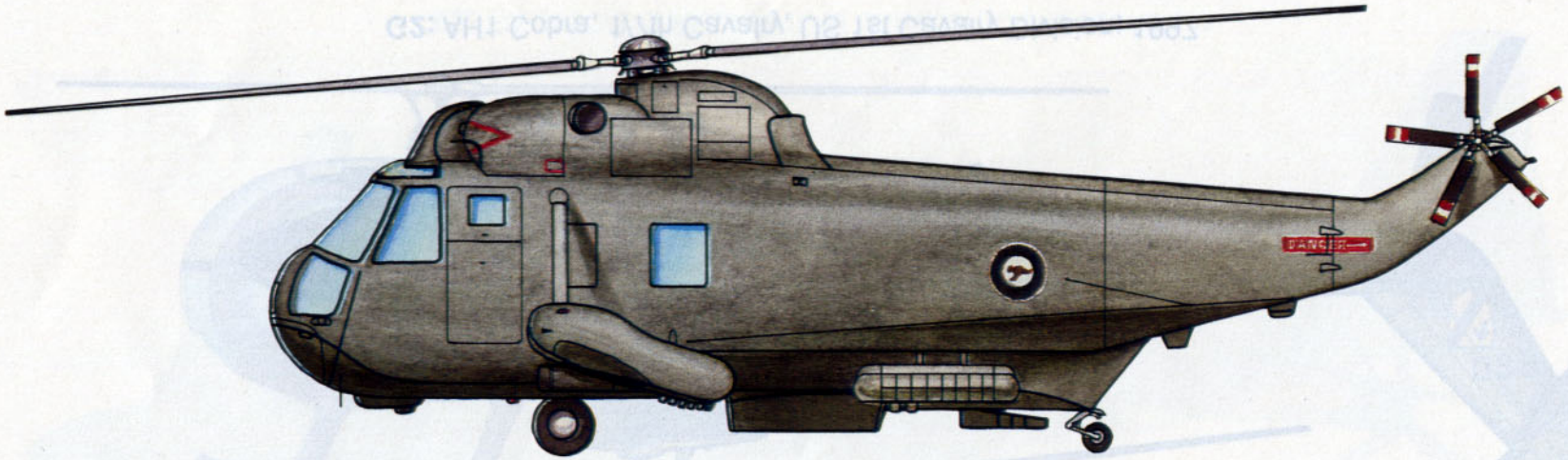
F2: Westland Lynx, UK; South Georgia Islands, 2000.



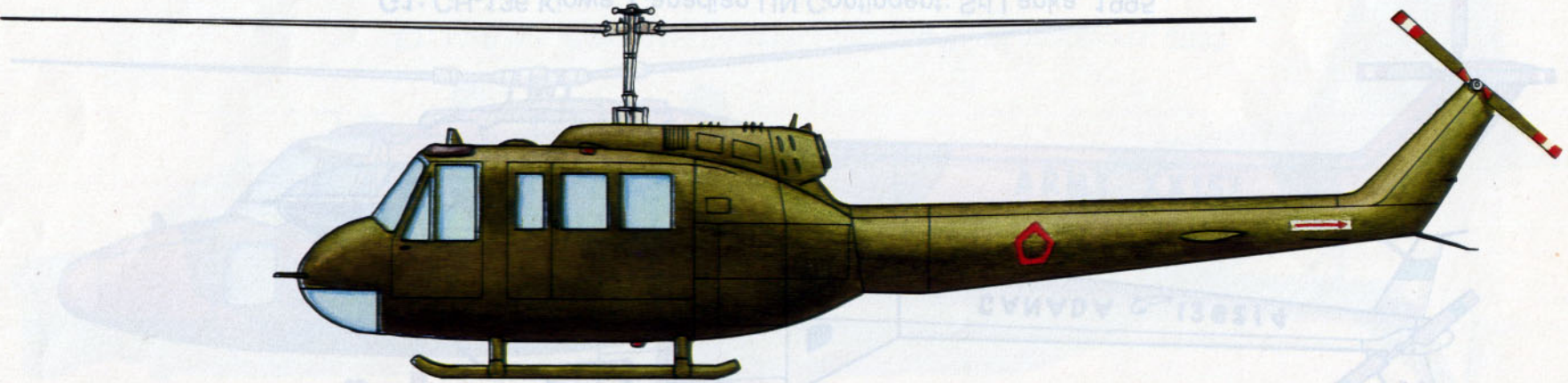
G1: CH-136 Kiowa, Canadian UN Contingent; Sri Lanka, 1995.



G2: AH1 Cobra, 1/7th Cavalry, US 1st Cavalry Division; 1997.



H1: Mk 50 Sea King, Australian Navy; Indonesia, 2000.



H2: Bell 205 (UH-1H Huey), Indonesian Army; PNG, 1998.

COLOR PLATE NOTES

A1: Inflatable Assault Boat.

Inflatable assault boats such as this one are almost a staple of small-unit special operations throughout the world. This particular version is in a light gray "neutral camouflage" designed to blend into a wide variety of maritime weather and lighting conditions. Some manufacturers offer custom color schemes or "slip-covers" to enable the buyer to change the camouflage at will.

A2: F.1 Mirage, Greece; Cyprus Crisis.

This aircraft was one in service with an unknown unit of the Greek Air Force during the Cyprus Crisis of 1996, and was part of a press release package from the Greek Ministry of Information. It is possible that the picture was not even taken during the short-lived war between Greece and Turkey, but at some time before or shortly afterward.

The aircraft shows a dull, aluminum factory finish, ornamented with the Greek national roundel and fin flash. A red warning band around the air intakes and the usual factory safety markings complete the decoration of this particular aircraft. The photograph shows no squadron insignia.

B1: Harrier II, RN; Falklands, 1999.

The Royal Navy made extensive use of Harrier jump-jets in the 1980s' war with Argentina and in the late 1990s' Falklands Crisis as well.

This aircraft sports a dark gray camouflage pattern with subdued British national roundels and the usual warning and safety markings (the red/white triangles at various locations on the aircraft). The legend "Royal Navy" appears on the tail fin, along with a winged fist emblem that may be an individual flight marking of some kind. The white "721" just to the rear of the national insignia is the aircraft's ID number.

B2: F-111 Aardvark, USAF, 366th Tactical Fighter Wing; 1998.

Despite its "F " designation, the F-111 is used extensively in a ground attack role. This particular aircraft belongs to the 366th Tactical Fighter Wing and is stationed in Idaho, meaning that it can sport colorful red-white-and-blue national insignias, white unit ID numbers and the 366th's "shield" can be proudly displayed. Aircraft in combat-ready mode usually show more subdued national insignias. The camouflage pattern is an unusual three-color scheme, showing dark green, medium green, and tan, with the nose done in low-reflectivity black. The letters "MO" on the tail fin indicate the air base where the aircraft is stationed, while the shield represents the higher echelon under which the plane serves.

C1: CV-22 Osprey, USMC; 2000.

The VSTOL CV-22 was conceived as a helicopter replacement, designed to have the better long-range fuel consumption of a fixed-wing aircraft combined with the landing flexibility of a rotary-wing aircraft.

This plate is taken from film of a transport aircraft serving with the assault ship USS *Tarawa*, attached to the Atlantic fleet in 2000.

It shows a two-color forest green/olive green camouflage pattern with subdued national insignia ID numbers and a "USMC" marking. The aircraft is relatively clean, and probably represents one fresh from an on-board refit, since it shows no factory warning labels (low-echelon maintenance crew tend to believe that such markings are superfluous).

C2: A-10 Thunderbolt II, USAF, 23rd Tactical Fighter Wing; 1997.

This plate shows an A-10 ground attack aircraft from the 23rd Tactical Fighter Wing, stationed at March AFB, California in May of 2000. The ungainly appearance of the A-10 Thunderbolt II soon earned it another nickname: "Warthog." This is reflected in the nose art of this aircraft. Early Warthogs sported a "shark's mouth" on the front of the aircraft (a decoration which eventually appears on any aircraft that has a structure that can pass for a "chin"). The shark was soon replaced, however, by the eminently more suitable "snout/tusk/eyes/ears" insignia, which came to be almost a requirement in most A-10 wings.

D1: C-130E, USAF; 2000.

The C-130 Hercules transport aircraft has served with the air forces of the world since the 1960s, and forms the basis for a number of variants including the MC-130 Combat Talon, AC-130 tanker, and the Spectre gunship. Nicknamed "Herc" or "The Herky-Bird," the C-130 has a well-deserved reputation for ruggedness and reliability. The Herc was less expensive and therefore acquired in larger numbers than flying behemoths such as the C-5 Galaxy. It can operate off more primitive airfields than larger transports, as well, which makes it more useful for combat support operations such as paratroop or low-altitude extraction drops.

This Herc shows a rare, dark gray/light gray camouflage pattern adopted for long-range over-ocean flights, along with the subdued national insignia and a US flag applied to the tail. The ID number "120" appears in black below and slightly to the rear of the cockpit.

D2: MC-130H Combat Talon, USAF 8th SOS; 2000.

The 8th Special Operations Squadron of the United States Air Force operates out of Hurlbert AFB and is the primary air transport for American special operations as well as US government-sanctioned merc operations worldwide. The squadron operates 14 Combat Talons and other special operations aircraft in conjunction with the US Army Special Forces, Delta Force, and Rangers as well as US Navy SEAL teams and other US special operations units.

As is typical of special operations forces in the latter part of the 1990s, this aircraft shows no unit ID numbers or markings of any kind other than the subdued (black) national insignia. The special low-altitude navigation radar dome is clearly visible on the nose, as are the two arms (shown folded back) of the "skyhook" ground/air retrieval yoke.

E1: Mi-8 Hip, Peru; anti-*Sendaro Luminoso* COIN operations, 2000.

The *Sendaro Luminoso* (Shining Path) guerrillas in Peru are one of the few truly Marxist political groups remaining in the world by 2000 (although some purists dispute that labeling).

Most of Peru's helicopter fleet was ob-

tained from the Soviet Union during the Cold War, and a market in spare parts and replacements still exists. This particular Hip was filmed after returning from an airmobile counterinsurgency operation in northern Peru. It appears in its original factory paint scheme of Russian green, to which has been added only an ID number and a Peruvian national roundel. This machine was evidently used as a troop transport, since no external weapons pods are visible in the original newsreel footage.

E2: SA.3160/319 *Alouette* III, El Salvador; COIN operations.

Helicopters are ideally suited to counterinsurgency operations due to their speed and their ability to land almost anywhere. This particular aircraft is one used in support of counterinsurgency raids by the Salvadoran National Guard's elite *COPARA* rapid reaction antiterrorist company, in conjunction with AH-6 helicopters and A-37 ground attack aircraft.

This particular aircraft shows a dry summer camouflage pattern, consisting of olive with a tan overspray, with two warning bands in white on the tail fin and the Salvadoran national roundel on the hull.

F1: AH-6 Defender, US Army TF-160; 1998.

The US Army's Task Force 160 (also known as the 160th Aviation Battalion) was formed after the 1980 Iran hostage rescue attempt, as part of a "Never Again" policy by each of the armed forces involved in that abortive mission. Helicopters and personnel from TF-160 took part in Urgent Fury, the Second Persian Gulf War, and are rumored to have played a part in several other less publicized operations. As is typical of such organizations, the personnel are not prone to seek publicity.

This AH-6 is typical of late-1990s special operations aircraft in that it shows no unit insignia, tail markings or national markings. On particularly sensitive missions, the aircrew are not allowed to carry anything that might link the operation to the United States government.

F2: Westland Lynx, UK; South Georgia Islands, 2000.

This Lynx is one of three assigned to the British Army garrison of the South Georgia Islands and is used both for patrol and liaison purposes. Ordinarily the maritime variant of the Lynx would have been used, but shortages forced the British to make use of standard Lynxes in some less important spots. These aircraft normally carry no external weaponry and have been equipped with internal flexible fuel bladders for extended-range operations.

The aircraft has not been stationed to the islands long, as it still sports the olive/tan dry summer camouflage pattern instead of a more suitable color scheme. The only other markings are the ID numbers in black and the subdued British national roundel.

G1: CH-136 Kiowa, Canadian UN Contingent; Sri Lanka, 1995.

As part of the last major military intervention of the United Nations peacekeeping forces, Canada sent a small expeditionary force to Sri Lanka in 1995. This CH-136 (the Canadian designation of the Bell Model 206 Jetranger, known in US service as the OH-58 Kiowa) is part of the Canadian Forces Liaison Section directly attached to UN Headquarters—Colombo, where it performed VIP transport duties. The white-and-blue color scheme of the UN peacekeeping forces was applied in a depot (as testified by the sharp lines of the letters and blue stripe). The red maple leaf on the pilot's door seems to have been applied later, by hand. The serial number, the low-reflectivity panel in front of the cockpit, and the word *Canada* on the tail boom were done in flat black, presumably in a depot.

G2: AH-1 Cobra, 1/7th Cavalry, US 1st Cavalry Division; 1997.

The attack helicopters of the 1st Cavalry Division (an armored division despite its name) are among the last front-line AH-1s in US Army service. The AH-1 was due to be phased out in favor of the AH-64 and RAH-66 helicopters, but budget constraints forced the retention of a certain number of the aging aircraft (the AH-1 first saw service in Vietnam and is still in use 30 years later).

This helicopter is from the 1/7th Cavalry Regiment (known as "Custer's Own" because of a former commander), one of two divisional attack helicopter squadrons. Normally armed with TOW ATGMs, this particular AH-1 seems to have been fitted with 2.75" FFAR pods, reflecting the increasing employment of attack helicopters in counterinsurgency rather than antitank roles. The aircraft sports an unusual monocolor forest-green paint scheme, with a black low-reflectivity panel in front of the cockpit. The number "28" in the red box below the cockpit and the "028" on the anti-torque rotor housing reflect the aircraft's company number. The yellow shield with the black diagonal and horse head is the distinctive heraldic representation of the 1st Cavalry Division. The aircraft shows no national insignia, but does carry "United States Army" on the tail boom along with the usual warning and safety notices.

H1: Mk 50 Sea King, Australian Navy; Indonesia, 2000.

This Mk 50 Sea King helicopter is part of an Australian naval detachment based at Pattimura Airfield on the island of Ambon in the Indonesian archipelago. The photograph from which this plate was taken shows an aircraft undergoing maintenance, with a repair truck and "lift" blocking the view of the middle fuselage and any distinctive marking which might have been there (probably the aircraft's serial number, and perhaps something concerning its vessel of origin).

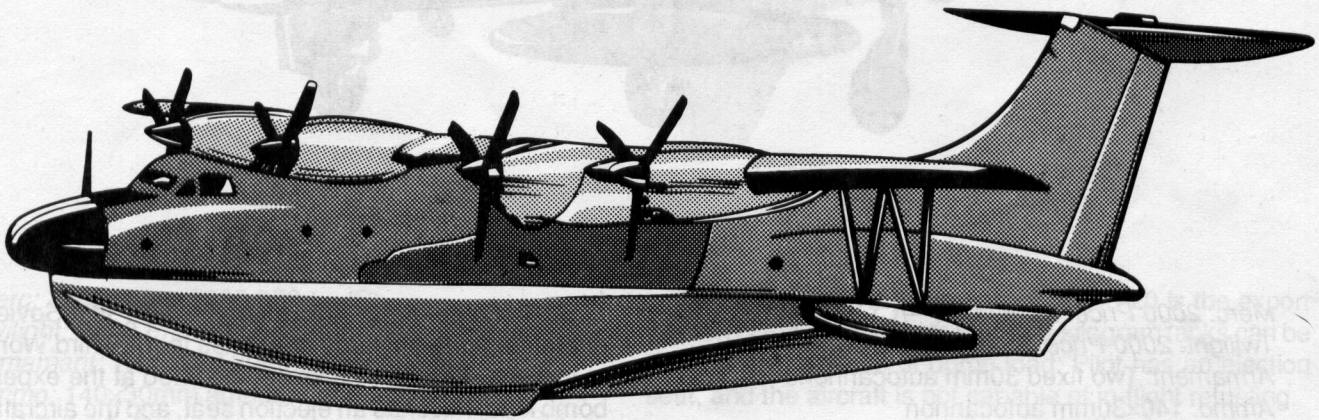
The overall gray maritime camouflage pattern of this aircraft is broken only by the Australian national roundel with its distinctive red kangaroo faded by the equatorial sun to a dull brown (red being particularly prone to destruction by sunlight, although it usually bleaches to a pinkish color rather than turning brown).

H2: Bell 205 (UH-1H Huey), Indonesian Army; PNG, 1998.

The nature of the war in Papua New Guinea in 1998-1999 led to extensive use of helicopters in airmobile operations.

This utility transport was captured in January 1999 by a force of Australian SAS accompanied by an Australian Army photographic unit, who filmed the raid for posterity. It shows a UH-1 helicopter of the Indonesian Army in the monocolor olive drab factory paint job, including a warning notice on the tail boom. Evidently the only local change made to the aircraft was the addition of the Indonesian national insignia, the hollow red pentagram on the tail boom.

PS-1 Cargo Floatplane



Merc: 2000 Price: $950,000 (S/S)
Twilight: 2000 Price: $950 (R/R)
Fuel Type: AvG
Load: 4 tons (internal only)
Veh Wt: 20 tons
Crew: 2+8
Mnt: 10
Min. Runway,Takeoff/Land: 990/550 m

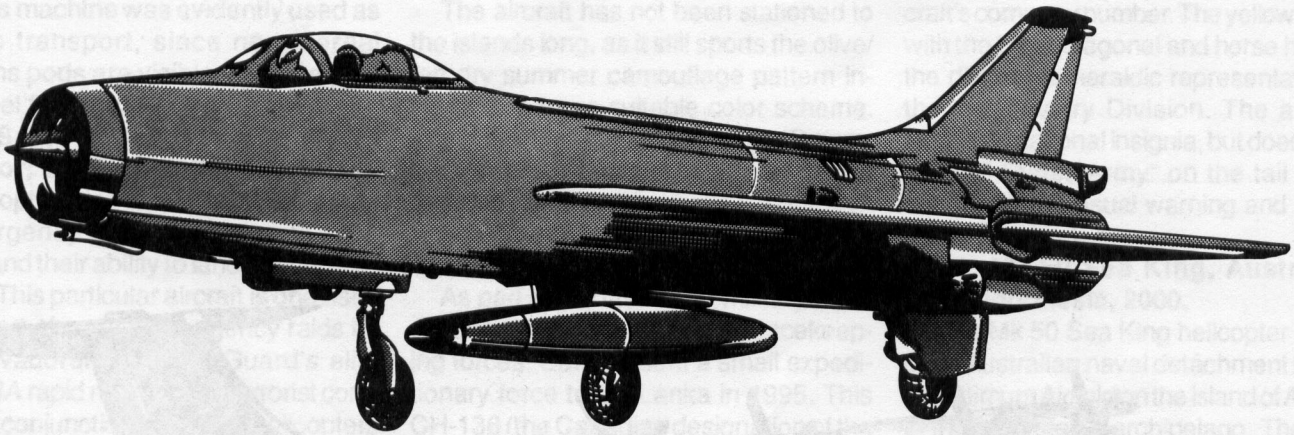
Damage Record
Crewmembers: Pilot ☐ Copilot ☐
Passengers: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐
Radio: ☐
Instruments: ☐
Controls: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

PS-1 Cargo Floatplane (Fixed-Wing Aircraft): Many thought that the helicopter would spell the end of the civilian cargo floatplane; this was not true. The PS-1 has one cabin door on each side and a cargo door in the rear. No ejection seats are provided, and the aircraft is not capable of in-flight refueling, but it can make amphibious landings.

***Tr Move:* 1148**
***Com Move:* 37 (12)**
***Fuel Cap:* 4650**
***Fuel Cons:* 4500**

COMBAT EQUIPMENT
None.

Su-7



Merc: 2000 Price: $975,000 (—/C)
Twilight: 2000 Price: $1,800,000 (R/C)
Armament: Two fixed 30mm autocannons
Ammo: 140×30mm autocannon
Fuel Type: AvG
Load: 3175 kg on 9 hardpoints
Veh Wt: 19.5 tons
Crew: 1
Mnt: 10
Runway: Hardened
Min. Runway,Takeoff/Land: 904/952 m

Damage Record
Crewmembers: Pilot ☐
Radio: ☐
Instruments: ☐
Controls: ☐
30mm AC 1: ☐
30mm AC 2: ☐
Ammo: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

WEAPON DATA

Weapon	*ROF*	*Mag*	*Rng*	*Ammo*	*Damage*	*Pen*
30mm	10	140	250	API	16	5/1/–2
			250	HE	C:1, Brst:2	–6C

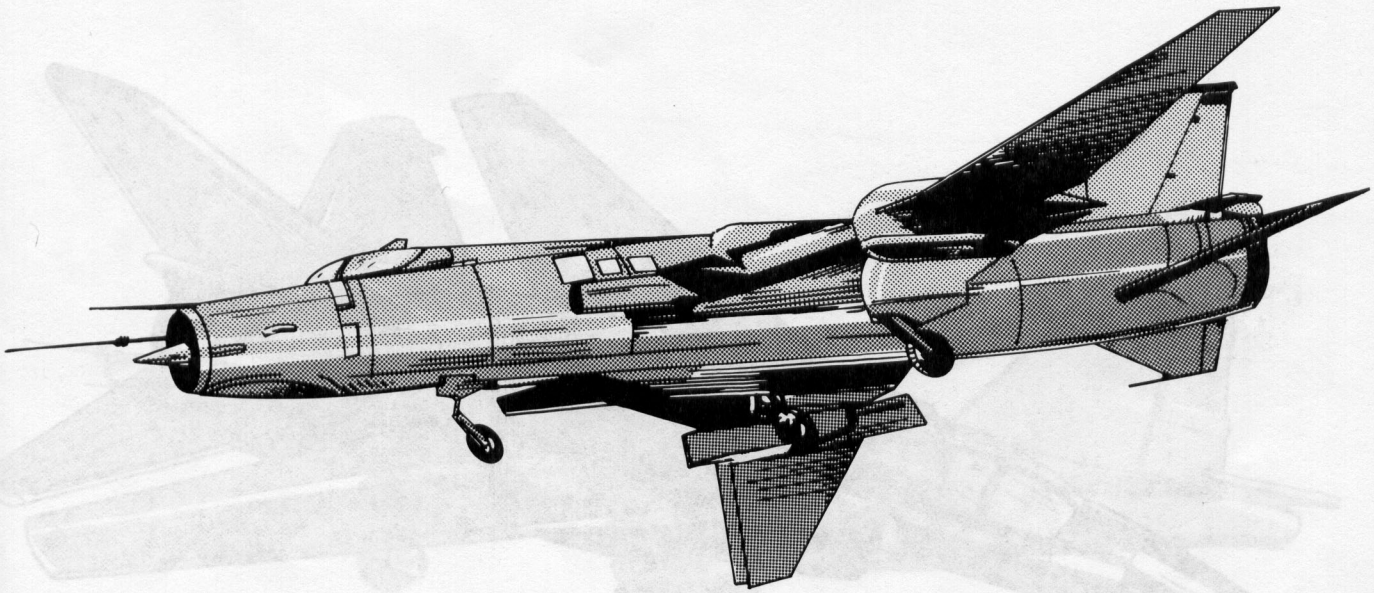
Su-7 (Fixed-Wing Aircraft): The Su-7 is a Soviet-built aircraft exported in large quantities to the Third World. Up to four 800-kilogram tanks can be fitted at the expense of bomb load. Pilot has an ejection seat, and the aircraft is not capable of in-flight refueling.

***Tr Move:* 4480**
***Com Move:* 140 (28)**
***Fuel Cap:* 4550**
***Fuel Cons:* 6000**

COMBAT EQUIPMENT
Integral flare and chaff dispensers.

AMMUNITION
Use 30mm autocannon records provided on page 99.

Su-20



Merc: 2000 Price: $990,000 (—/C)
Twilight: 2000 Price: $1,950,000 (R/C)
Armament: Two fixed 30mm autocannons
Ammo: 140×30mm autocannon
Fuel Type: AvG
Load: 3200 kg on 9 hardpoints
Veh Wt: 19.5 tons
Crew: 1
Mnt: 10
Runway: Hardened
Min. Runway, Takeoff/Land: 904/952 m

Damage Record
Crewmembers: Pilot ☐
Radio: ☐
Instruments: ☐
Controls: ☐
30mm AC 1: ☐
30mm AC 2: ☐
Ammo: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

WEAPON DATA

Weapon	*ROF*	*Mag*	*Rng*	*Ammo*	*Damage*	*Pen*
30mm	10	140	250	API	16	5/1/–2
			250	HE	C:1, Brst:2	–6C

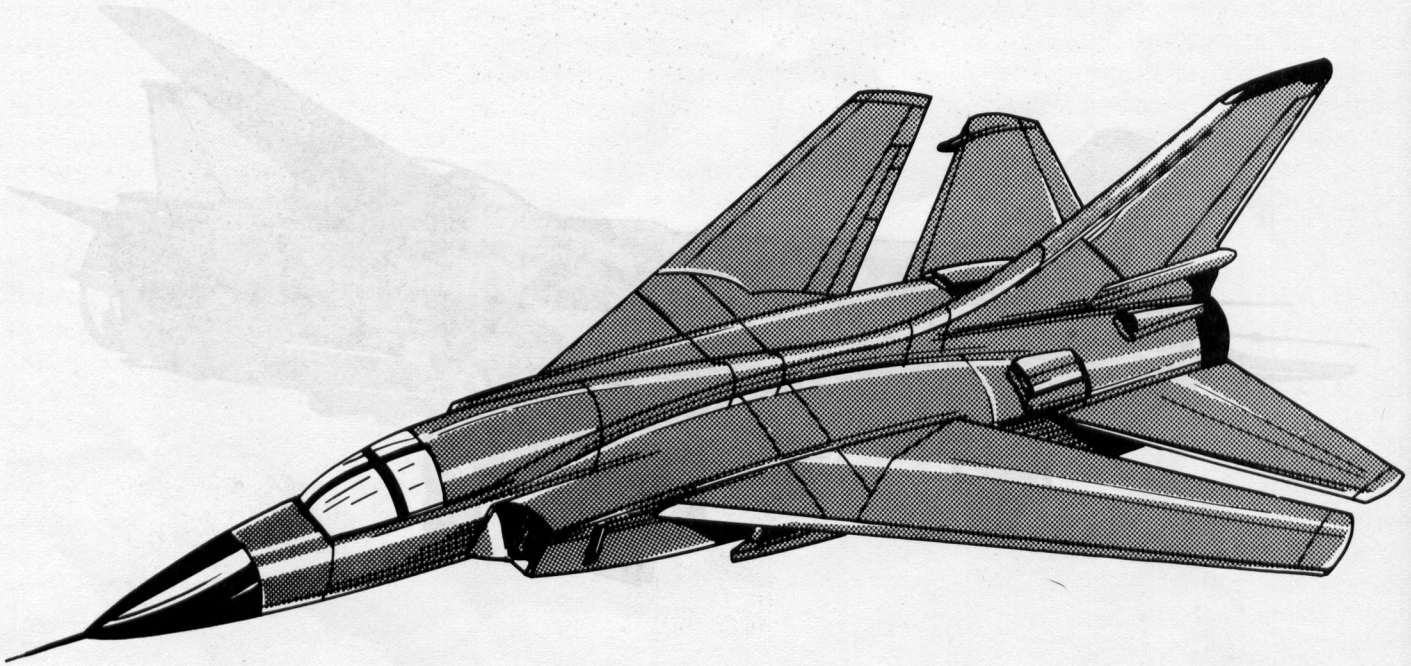
Su-20 (Fixed-Wing Aircraft): The Su-20 is the export version of the Su-17. Up to four 800-kilogram tanks can be fitted at the expense of bomb load. Pilot has an ejection seat, and the aircraft is not capable of in-flight refueling.

***Tr Move:* 4480**
***Com Move:* 140 (28)**
***Fuel Cap:* 4600**
***Fuel Cons:* 5600**

COMBAT EQUIPMENT
Integral flare and chaff dispensers.

AMMUNITION
Use 30mm autocannon records provided on page 99.

Su-24 Fencer



Merc: 2000 Price: $1,850,000 (—/S)
Twilight: 2000 Price: $2,100,000 (—/R)
Armament: One fixed 30mm autocannon
Ammo: 140×30mm AC
Fuel Type: AvG
Load: 8000 kg in 8 hardpoints
Veh Wt: 36 tons
Crew: 2
Mnt: 10
Runway: Hardened
Min. Runway, Takeoff/Land: 1304/944 m

Damage Record

Crewmembers: Pilot ☐ Weapons officer ☐
Radio: ☐
Instruments: ☐
Controls: ☐
30mm AC: ☐
Ammo: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

WEAPON DATA

Weapon	*ROF*	*Mag*	*Rng*	*Ammo*	*Damage*	*Pen*
30mm	10	140	250	API	16	5/1/–2
			250	HE	C:1, Brst:2	–6C

Su-24 Fencer (Fixed-Wing Aircraft): The Su-24 Fencer is a Soviet-built, variable geometry (swing-wing) aircraft. Both crewmembers have an ejection seat.

***Tr Move:* 4480**
***Com Move:* 140 (28)**
***Fuel Cap:* 4550**
***Fuel Cons:* 6000**

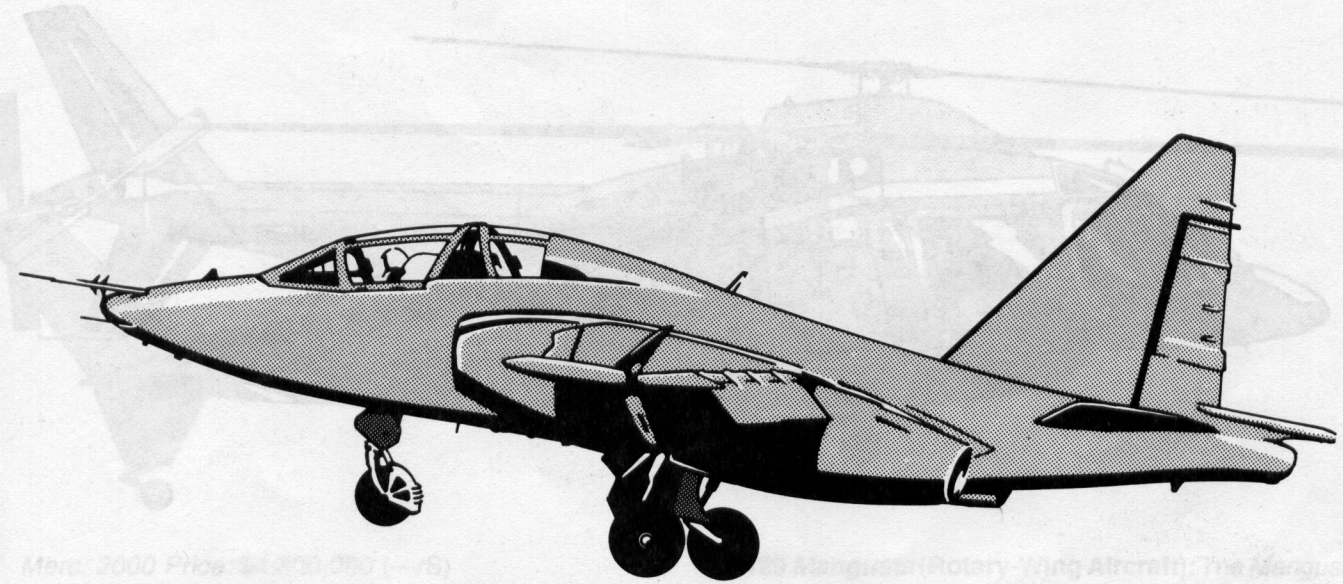
COMBAT EQUIPMENT

Integral flare and chaff dispensers.

AMMUNITION

Use 30mm autocannon records provided on page 99.

Su-25 Frogfoot



Merc: 2000 Price: $1,750,000 (—/R)
Twilight: 2000 Price: $2,750,000 (—/R)
Armament: One fixed 30mm-3 AC
Ammo: 250×30mm
Fuel Type: AvG
Load: 9700 kg on 8 hardpoints
Veh Wt: 16 tons
Crew: 1
Mnt: 10
Runway: Primitive
Min. Runway, Takeoff/Land: 1200/600 m

Damage Record
Crewmembers: Pilot ☐
Radio: ☐
Instruments: ☐
Controls: ☐
30mm-3 AC: ☐
Ammo: ☐
Engine 1: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

Su-25 Frogfoot (Fixed-Wing Aircraft): The Su-25 is a purpose-built ground attack aircraft built (some feel) in imitation of the American A-10 "Warthog."

***Tr Move:* 2800**
***Com Move:* 98 (20)**
***Fuel Cap:* 4550**
***Fuel Cons:* 6000**

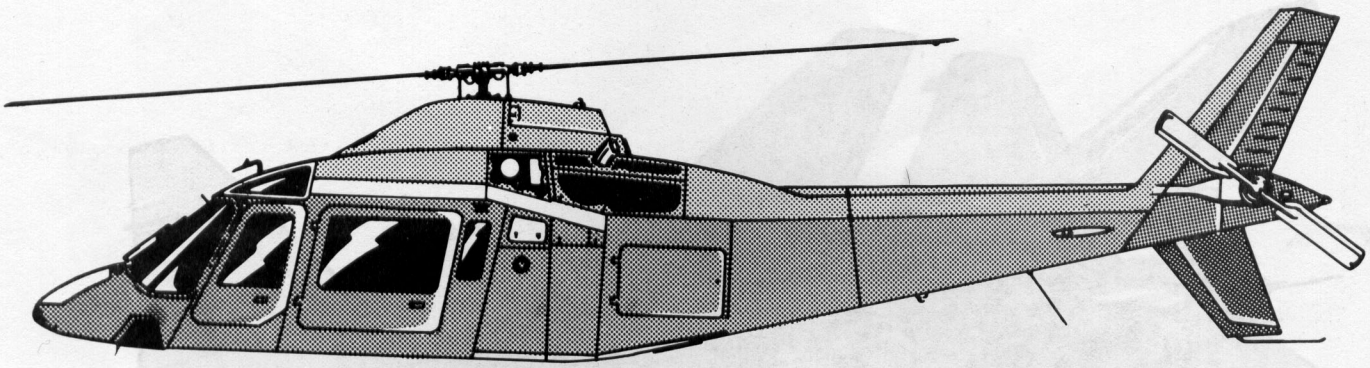
COMBAT EQUIPMENT
Armored cockpit, radar gun sight, integral chaff and flare dispensers.

AMMUNITION
Use 30mm autocannon records provided on page 99.

WEAPON DATA

Weapon	*ROF*	*Mag*	*Rng*	*Ammo*	*Damage*	*Pen*
30mm-3	30	250	250	API	16	5/1/–2
			250	HE	C:1, Brst:2	–6C

A109A *Hirundo*



Merc: 2000 Price: $110,000 (C/C)
Twilight: 2000 Price: $250,000 (S/R)
Armament: Various door gun configurations
Ammo: Various, depending upon armament
Fuel Type: AvG
Load: Up to 1000 kg in 2 hardpoints or as internal cargo
Veh Wt: 2.6 tons
Crew: 2+6 (civil & police), 2+2 (scout), 2 (attack)
Mnt: 12
Minimum Landing/Takeoff Zone: 24 m

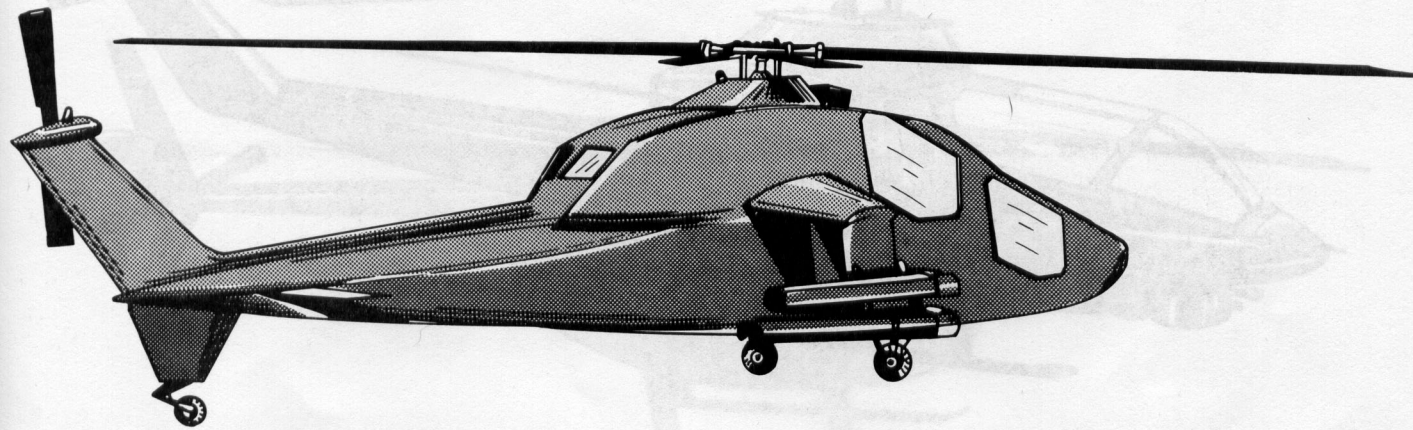
Damage Record
Crewmembers (Attack): Pilot ☐ Weapons officer ☐
Crewmembers (Police): Pilot ☐ Observer ☐
Crewmembers (Civil): Pilot ☐ Copilot ☐
Crewmembers (Scout): Pilot ☐ Weapons officer ☐ Door gunner 1 ☐ Door gunner 2 ☐
Passengers (Civil & Police): 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐
Radio: ☐
Instruments: ☐
Controls: ☐
Weapon (If Present): ☐
Ammo: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

A109A *Hirundo* (Rotary-Wing Aircraft): The *Hirundo* (swallow) is an Italian helicopter available in military, civil and police versions. No ejection seats are provided, and the aircraft is not capable of in-flight refueling.

***Tr Move:* 416**
***Com Move:* 32**
***Fuel Cap:* 700**
***Fuel Cons:* 700**

COMBAT EQUIPMENT
None.

A129 *Mangusta*



Merc: 2000 Price: $4,800,000 (—/S)
Twilight: 2000 Price: $9,600,000 (S/R)
Armament: 8 TOW II, or 8 Hellfire, or 2-4 FFAR/7 or FFAR/19 2.75" rocket pods
Fuel Type: AvG
Load: 1200 kg in 4 hardpoints
Veh Wt: 3.7 tons
Crew: 2
Mnt: 12
Minimum Landing/Takeoff Zone: 32 m

Damage Record
Crewmembers: Pilot ☐ Copilot/Gunner ☐
Radio: ☐
Instruments: ☐
Controls: ☐
Weapon (If Present): ☐
Traverse: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

WEAPON DATA

Missile	*Rng*	*Dam*	*Pen*
TOW II	3500	C:6, B:4	160C
Hellfire	4500	C:12, B:12	160C

Weapon	*ROF*	*Mag*	*Rng*	*Ammo*	*Damage*	*Pen*
2.75" FFAR	12	7/19	425	HE	C:8, B:28	–4C
				WP	C:2, B:20	
				APERS	C:8, B:20	

A129 *Mangusta* (Rotary-Wing Aircraft): The *Mangusta* (mongoose) is an Italian attack helicopter used by the Italian military and widely exported. No ejection seats are provided, and the aircraft is not capable of in-flight refueling.

***Tr Move:* 416**
***Com Move:* 32**
***Fuel Cap:* 700**
***Fuel Cons:* 700**

COMBAT EQUIPMENT
Armored cockpit, radar gun sight, integral flare and chaff dispensers.

AMMUNITION
TOW II (8 missiles)
☐☐☐☐☐ ☐☐☐
Hellfire (8 missiles)
☐☐☐☐☐ ☐☐☐
FFAR/7 2.75"
☐☐☐☐☐ ☐☐☐☐☐
☐☐☐☐☐ ☐☐☐☐☐
☐☐☐☐☐ ☐☐☐☐☐
☐☐☐☐☐ ☐☐☐☐☐
FFAR/19 2.75"
☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
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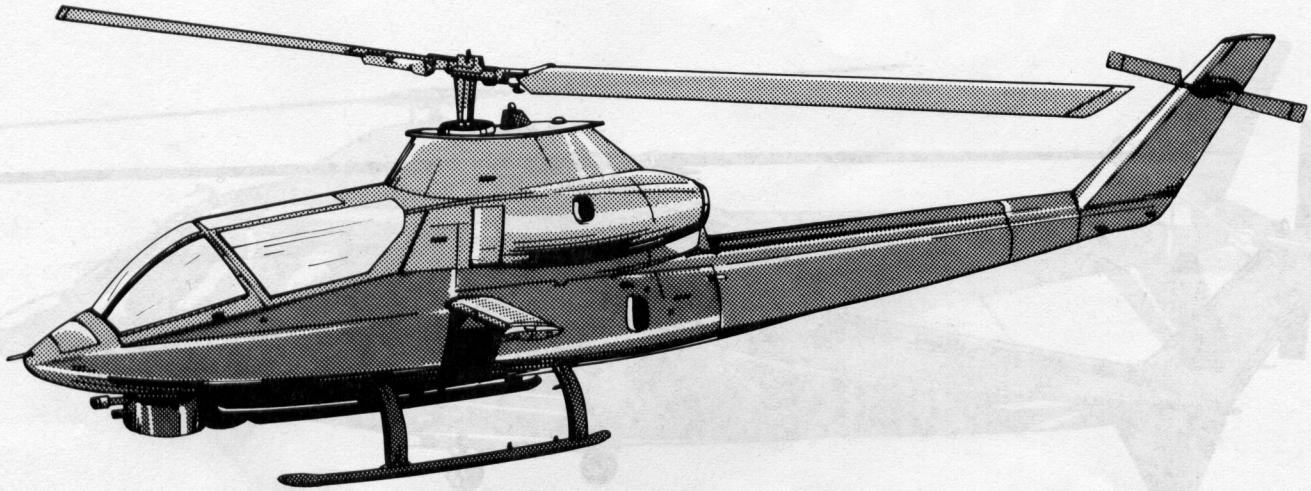
AH-1 "Cobra"



Merc: 2000 Price: $4,800,000 (—/R)
Twilight: 2000 Price: $9,600,000 (R/—)
Armament: M197 20mm or 30mm chin turret
Ammo: Various, depending on armament
Fuel Type: AvG
Load: Eight TOW missiles or four 2.75" rocket pods, or four TOW and two pods
Veh Wt: 9.5 tons
Crew: 2
Mnt: 12
Minimum Landing/Takeoff Zone: 40 m

Damage Record
Crewmembers: Pilot ☐ Weapons officer ☐
Radio: ☐
Instruments: ☐
Controls: ☐
M197 Turret: ☐
Ammo: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

WEAPON DATA

Weapon	*ROF*	*Mag*	*Rng*	*Ammo*	*Dam*	*Pen*
M197 20mm	30	1200	250	API	10	3/–2/–5
			250	HE	C:1, B:2	–8C
M197 30mm	30	1100	250	API	16	5/1/–2
			250	HE	C:1, B:2	–6C

AH-1 "Cobra" (Rotary-Wing Aircraft): The AH-1 series of attack helicopters was made famous during Vietnam, and are still in service with many nations, including the US Army and Marines. No ejection seats are provided, and the aircraft is not capable of in-flight refueling.

***Tr Move:* 726**
***Com Move:* 23**
***Fuel Cap:* 290**
***Fuel Cons:* 390**

COMBAT EQUIPMENT
Armored cockpit, integral flare and chaff dispensers.

AMMUNITION
Use 20mm or 30mm ammo record forms supplied on page 99.

AH-6 Defender/OH-6 Cayuse

Merc: 2000 Price: $1,350,000 (—/C) (military); $950,000 (C/C) (civilian)
Twilight: 2000 Price: $2,700,000 (S/R) (military); $1,900,000 (C/R) (civilian)
Armament: AH-6: ATGM pods, OH-6: MG pods
Ammo: Various, depending upon armament
Fuel Type: AvG
Load: 1000 kg in 2 hardpoints
Veh Wt: 1.6 tons
Crew: 1+3 (Model 500), 2 (OH-6, AH-6)
Mnt: 12
Minimum Landing/Takeoff Zone: 24 m

Damage Record
Crewmembers (OH-6): Pilot ☐ Observer ☐
Crewmembers (AH-6): Pilot ☐ Weapons officer ☐
Crewmembers Model 500): Pilot ☐
Passengers (Model 500): 1 ☐ 2 ☐ 3 ☐
Radio: ☐
Instruments: ☐
Controls: ☐
Weapon (If Present): ☐
Ammo (If Present): ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

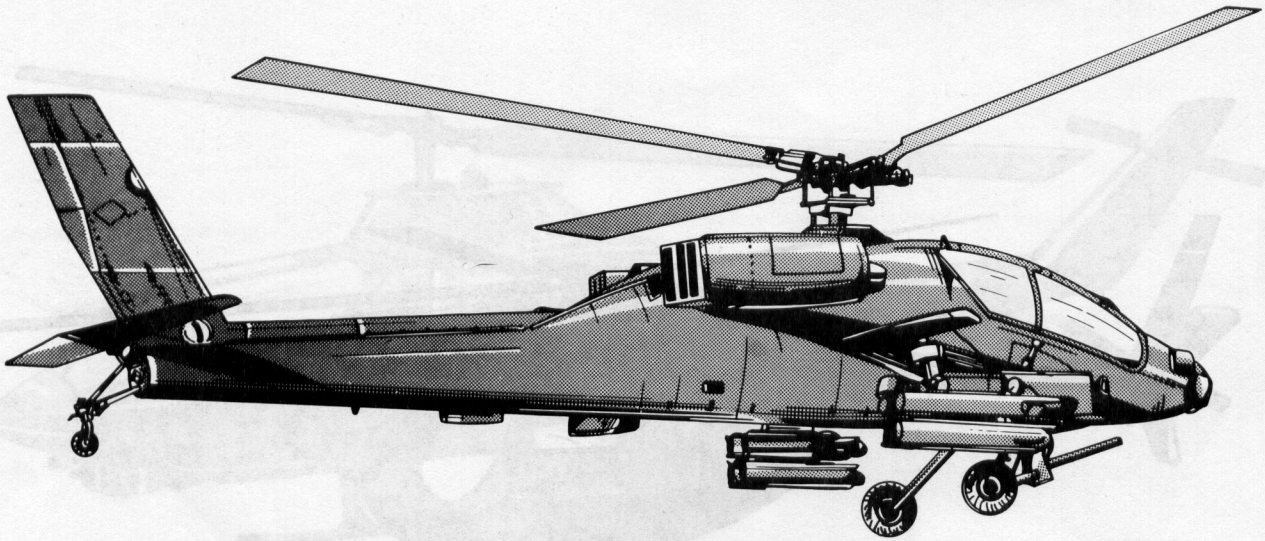
AH-6 Defender/OH-6 Cayuse (Rotary-Wing Aircraft): The civilian Hughes Model 500 series helicopter was the US Army's observation helicopter (where it was called the OH-6) until it was replaced by the OH-58. Many armies still use improved versions of it, including the US Army's special operations TF-160 (where it is called the MH-6). Armed versions are called AH-6 in the US Army, when they are used. Police versions often mount a white light searchlight for night work. The OH-6 and AH-6 can be fitted with a laser designator. An optional 80-liter internal fuel tank can be fitted at the expense of passengers and standard on military models. No ejection seats are provided, and the aircraft is not capable of in-flight refueling.

***Tr Move:* 1032**
***Com Move:* 28**
***Fuel Cap:* 240**
***Fuel Cons:* 320**

COMBAT EQUIPMENT
Integral flare and chaff dispensers on all military models.

AMMUNITION
Use MG ammunition records provided on page 99.

AH-64 Apache



Merc: 2000 Price: $12,600,000 (—/S)
Twilight: 2000 Price: $25,000,000 (S/—)
Armament: One triple-barreled 30mm-3 autocannon in remote forward mount
Ammo: 1200×30mm autocannon
Fuel Type: AvG
Load: See description
Veh Wt: 8 tons
Crew: 2
Mnt: 14
Night Vision: Thermal imaging, image intensifier
Minimum Landing/Takeoff Zone: 48 m

Damage Record
Crewmembers: Pilot ☐ Weapons officer ☐
Radio: ☐
Instruments: ☐
Controls: ☐
30mm-3: ☐
Ammo: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

WEAPON DATA

Weapon	*ROF*	*Mag*	*Rng*	*Ammo*	*Damage*	*Pen*
30mm-3	30	1200C	250	API	16	5/1/–2
			250	HE	C:1, Brst:2	–6C

Weapon	*ROF*	*Mag*	*Rng*	*Ammo*	*Damage*	*Pen*
FFAR-7	12	7/19	425	HE	C:8, B:28	–4C
				WP	C:2, B:20	Nil
				APERS	C:8, B:36	–2C

AH-64 Apache (Rotary-Wing Aircraft): The AH-64 Apache was the US Army's supreme attack helicopter, and will not be completely replaced by the RAH-66, since the latter is built for more specialized missions. The helicopter can be armed with up to 16 Hellfire ATGMs (four per hardpoint) or FFAR pods (one pod per hardpoint, FFAR-7 or FFAR-19). Some models can mount up to two Sidewinders (don't count against hardpoints). No ejection seats are provided, and the aircraft is not capable of in-flight refueling.

***Tr Move:* 1172**
***Com Move:* 36**
***Fuel Cap:* 1420**
***Fuel Cons:* 1420**

COMBAT EQUIPMENT
Armored cockpit, FLIR, integral flare and chaff dispensers, IR suppression, laser designator.

AMMUNITION
Use 30mm autocannon records on page 99.

AS.331 Super Puma

Merc: 2000 Price: $ 2,200,000 (S/S)
Twilight: 2000 Price: $ 4,000,000 (S/R)
Armament: Two MAG MG door guns (optional)
Ammo: 1000×7.62mmN
Fuel Type: AvG
Load: 8600 kg internal (including up to 4500 kg slung), 2 hardpoints
Veh Wt: 9.6 tons
Crew: 2+21; 3+14 (if paratroopers carried)
Mnt: 12
Minimum Landing/Takeoff Zone: 48 m

Damage Record

Crewmembers: Pilot ☐ Copilot ☐ Crew chief/Jumpmaster (if paratroopers carried) ☐
Passengers: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 ☐ 14 ☐ 15 ☐ 16 ☐ 17 ☐ 18 ☐ 19 ☐ 20 ☐ 21 ☐
Paratroopers: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 ☐ 14 ☐
Radio: ☐
Instruments: ☐
Controls: ☐
MAG Door Gun 1: ☐
MAG Door Gun 2: ☐
Ammo: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

WEAPON DATA

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
MAG door gun	10	4	2-3-Nil	6	100B	1	2	125

AS.331 Super Puma (Rotary-Wing Aircraft): The Super Puma is an improved version of the Puma. Too many versions exist to describe in detail. A 1000-kilogram auxiliary tank can be fitted to the cabin at the expense of passengers, plus fuel up to two 325-kilogram external tanks (at the expense of external load). No ejection seats are provided, and the aircraft is not capable of in-flight refueling. An armed transport version is described below.

***Tr Move:* 1104**
***Com Move:* 28**
***Fuel Cap:* 1500**
***Fuel Cons:* 1750**

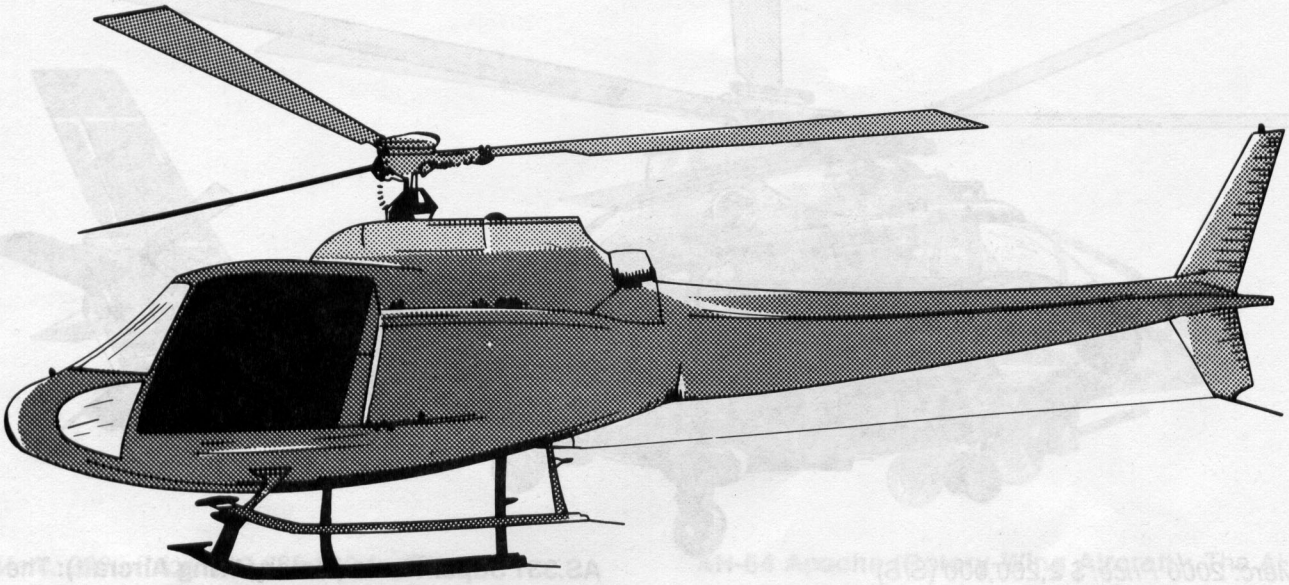
COMBAT EQUIPMENT

None fitted to civilian models. Military models sometimes have IR suppression and integral chaff and flare launchers.

AMMUNITION

Use 7.62mmN ammo records provided on page 99.

AS.350 *Ecureuil*



Merc: 2000 Price: $2,200,000 (S/S)
Twilight: 2000 Price: $4,000,000 (S/R)
Fuel Type: AvG
Load: 1000 kg internal (or up to 750 kg slung), 2 hard-points in military version
Veh Wt: 2.1 tons
Crew: 1+4
Mnt: 12
Minimum Landing/Takeoff Zone: 40 m

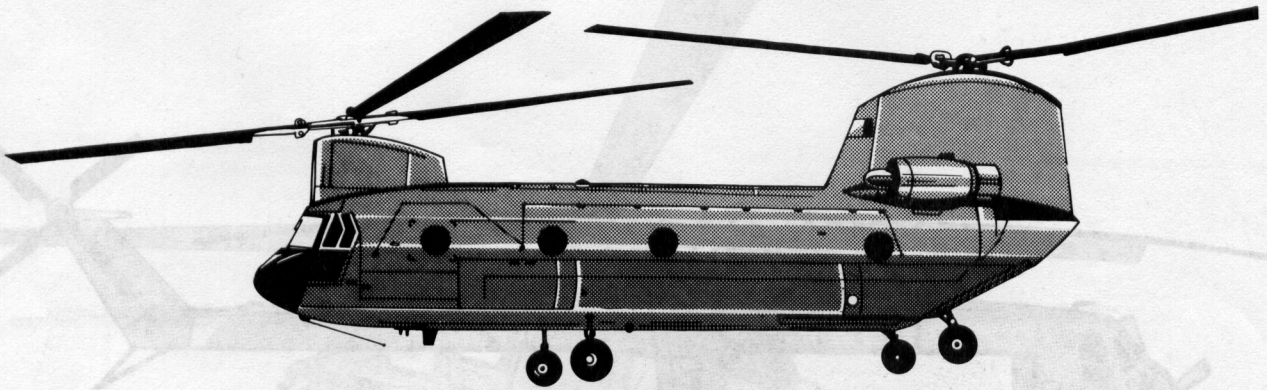
Damage Record
Crewmembers: Pilot ☐
Passengers: 1 ☐ 2 ☐ 3 ☐ 4 ☐
Radio: ☐
Instruments: ☐
Controls: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

AS.350 *Ecureuil* (Rotary-Wing Aircraft): The French AS.350 *Ecureuil* (squirrel) I & II (called Astar in America) are not normally armed. The *Ecureuil* may carry a slung load at the expense of internal cargo capacity. No ejection seats are provided, and the aircraft is not capable of in-flight refueling.

***Tr Move:* 500**
***Com Move:* 27**
***Fuel Cap:* 530**
***Fuel Cons:* 690**

COMBAT EQUIPMENT
None.

CH-47 Chinook



Merc: 2000 CH-47 Price: $16,000,000 (S/C), *MH-47E Price:* $24,000,000 (—/R)

Twilight: 2000 CH-47 Price: $32,000,000 (R/—), *MH-47E Price:* $48,000,000 (—/—)

Armament (MH-47E): 2×M2HB MG (P/S), M60 MG (rear)

Ammo (MH-47E): 1100×.50 BMG, 2000×7.62mmN

Fuel Type: AvG

Load: 11 tons (no more than 7 internal)

Veh Wt: 20 tons

Crew: 3+55 (33 if paratroopers) (CH-47), 5+55 (33 if paratroopers) (MH-47E)

Mnt: 12

Minimum Landing/Takeoff Zone: 80 m

Damage Record

Crewmembers (CH-47): Pilot ☐ Copilot ☐ Crew chief/Jumpmaster ☐

Crewmembers (MH-47E): Pilot ☐ Copilot ☐ Gunner 1 ☐ Gunner 2 ☐ Crew chief/Gunner 3 ☐

Passengers: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 ☐ 14 ☐ 15 ☐ 16 ☐ 17 ☐ 18 ☐ 19 ☐ 20 ☐ 21 ☐ 22 ☐ 23 ☐ 24 ☐ 25 ☐ 26 ☐ 27 ☐ 28 ☐ 29 ☐ 30 ☐ 31 ☐ 32 ☐ 33 ☐ 34 ☐ 35 ☐ 36 ☐ 37 ☐ 38 ☐ 39 ☐ 40 ☐ 41 ☐ 42 ☐ 43 ☐ 44 ☐ 45 ☐ 46 ☐ 47 ☐ 48 ☐ 49 ☐ 50 ☐ 51 ☐ 52 ☐ 53 ☐ 54 ☐ 55 ☐

Paratroopers: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 ☐ 14 ☐ 15 ☐ 16 ☐ 17 ☐ 18 ☐ 19 ☐ 20 ☐ 21 ☐ 22 ☐ 23 ☐ 24 ☐ 25 ☐ 26 ☐ 27 ☐ 28 ☐ 29 ☐ 30 ☐ 31 ☐ 32 ☐ 33 ☐

Radio: ☐

Instruments: ☐

Controls: ☐

M2HB MG (P): ☐

M2HB MG (S): ☐

M60 MG: ☐

Ammo: ☐

Engine: ☐

Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

CH-47 Chinook (Rotary-Wing Aircraft): The CH-47 Chinook is the US armed forces standard medium-lift helicopter and is also found in service with many other nations in both military and civilian versions. There are two doors to the cabin (P/S) and a rear cargo ramp. The helicopter is capable of water landings without special flotation equipment and has an integral hydraulic rescue winch and cargo hooks for slung loads. An extended-range version of the CH-47 is available (at 20% additional cost).

MH-47E is the designation of the US Army special operations version, with one .50 MG per side (two total) and an M60 door gun at the rear ramp, expanded fuel tanks, special navigation and night vision radar, FLIR, provision for ATA refueling, and buddy system refueling. No ejection seats are provided.

***Tr Move:* 986**
***Com Move:* 30**
***Fuel Cap:* 3900 (*Extended Range:* 7830)**
***Fuel Cons:* 1600**

COMBAT EQUIPMENT

None normally fitted (CH-47). MH-47E has FLIR, integral flare and chaff dispensers.

AMMUNITION

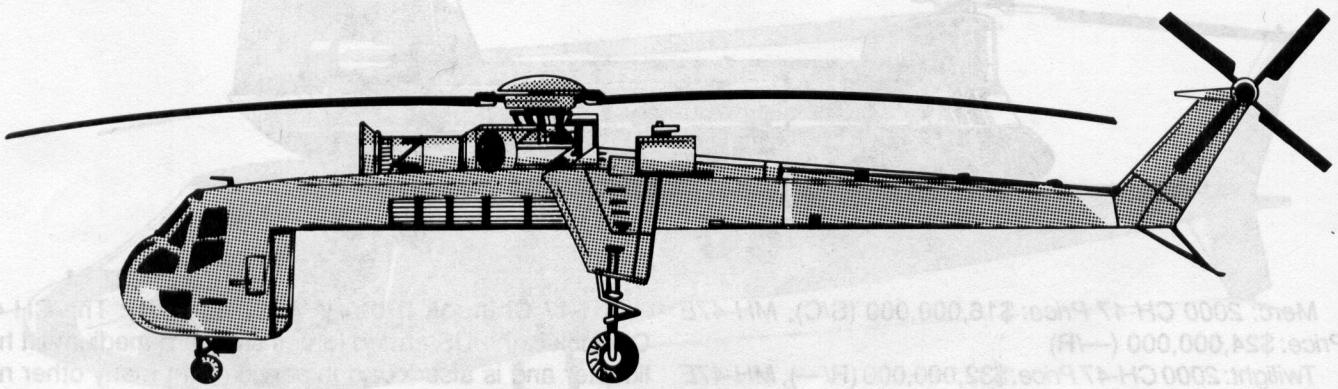
Use .50 BMG and 7.62mmN ammo records provided on page 99.

WEAPON DATA

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
M2HB door gun	5	8	2-2-3‡	8	105B	2	7	150
M60 door gun	5	4	2-3-Nil	6	100B	1	1	125

‡ .50-caliber SLAP ammunition has a penetration of 1-1-2

CH-54 Tarhe "Skycrane"



Merc: 2000 Price: $4,200,000 (—/R) (pods are $20,000 (—/R))
Twilight: 2000 Price: $8,400,000 (R/—) (pods are $50,000 (—/R))
Fuel Type: AvG
Load: 18 tons (no internal)
Veh Wt: 22 tons
Crew: 3
Mnt: 14
Minimum Landing/Takeoff Zone: 80 m

Damage Record
Crewmembers: Pilot ☐ Copilot ☐ Loadmaster ☐
Radio: ☐
Instruments: ☐
Controls: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

CH-54 Tarhe "Skycrane" (Rotary-Wing Aircraft): The CH-54 is the largest load-lifter in the US inventory. The helicopter is unique in that it has only a cabin, and all of its cargo capacity is either a giant cargo pod fastened between the wheel pylons or a slung load. No ejection seats are provided, and the aircraft is not capable of in-flight refueling.

Pods: A passenger pod capable of carrying 44 passengers and a cargo pod capable of carrying 12 tons of cargo are available. Each pod has two doors forward (P/S) and a rear ramp.

***Tr Move:* 540**
***Com Move:* 16**
***Fuel Cap:* 3600**
***Fuel Cons:* 2600**

COMBAT EQUIPMENT
None.

H-2 Seasprite

Merc: 2000 Price: $112,000 (R/R)
Twilight: 2000 Price: $250,000 (S/—)
Armament: M60 MG door gun
Ammo: 500×7.62mmN
Fuel Type: AvG
Load: 1800 kg slung load
Veh Wt: 6 tons
Crew: 2+4; 3+3 (if armed)
Mnt: 12
Minimum Landing/Takeoff Zone: 40 m

Damage Record
Crewmembers: Pilot ☐ Copilot ☐ Gunner (if armed) ☐
Passengers: 1 ☐ 2 ☐ 3 ☐ 4 ☐
Passengers (If Armed): 1 ☐ 2 ☐ 3 ☐
Radio: ☐
Instruments: ☐
Controls: ☐
M60 MG (If Present): ☐
Ammo: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

WEAPON DATA

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
M60 door gun	5	4	2-3-Nil	6	100B	1	1	125

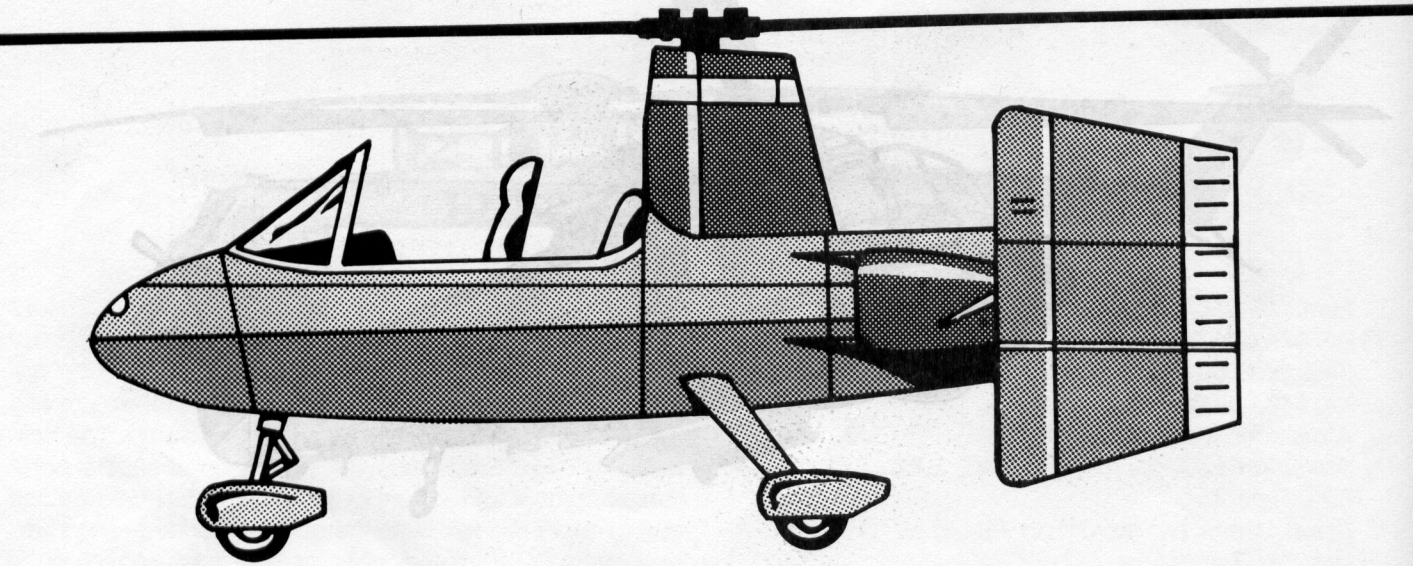
H-2 Seasprite (Rotary-Wing Aircraft): The H-2 is a naval helicopter used for liaison duties ashore, along with ASW and other duties. Ratings for a ship-to-shore utility configuration are given below. The Seasprite is not usually armed for such duties, but an M60 door gun could be fitted (operated by a gunner carried at the expense of one of the passengers). No ejection seats are provided, and the aircraft is not capable of in-flight refueling.

***Tr Move:* 964**
***Com Move:* 26**
***Fuel Cap:* 1800**
***Fuel Cons:* 1500**

COMBAT EQUIPMENT
None.

AMMUNITION
Use 7.62mmN ammo records provided on page 99.

K&K F-2 *Fliedermaus*



Merc: 2000 Price: $1400 (R/S)
Twilight: 2000 Price: $3000 (R/—)
Fuel Type: AvG
Load: 100 kg
Veh Wt: 250 kg
Crew: 1+1
Mnt: 10
Min. Runway, Takeoff/Land: 120/176 m

Damage Record
Crewmembers: Pilot ☐
Passengers: 1 ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

K&K F-2 *Fliedermaus* (Rotary-Wing Aircraft): The German firm of Kunstler und Königlich, GmbH specializes in small civilian aircraft, but they do manufacture a few items of interest to mercs. The *Fliedermaus* (bat) is a two-passenger collapsible autogyro constructed of advanced materials for the lowest possible weight. The F-2 is unarmed, unarmored, its range is short, and its cargo capacity is small, but it can sometimes mean the difference between escape and capture in tense situations. The F-2 dismantles to fit into a fiberglass capsule three meters long by half a meter in diameter (which forms the fuselage when fully assembled, and was designed to withstand the rigors of a parachute drop). The F-2 comes with all tools needed to assemble it and can be unpacked and made flyable in one hour by two people (or one person in two hours). No ejection seats are provided, and the aircraft is not capable of in-flight refueling.

***Tr Move:* 400**
***Com Move:* 11 (7)**
***Fuel Cap:* 20**
***Fuel Cons:* 20**

COMBAT EQUIPMENT
None.

MBB Bo-105/PAH-1

Merc: 2000 Price: $1,750,000 (S/S)
Twilight: 2000 Price: $3,500,000 (S/R)
Armament: Civilian versions unarmed, six TOW II-C or four HOT (PAH-1 attack version)
Fuel Type: AvG
Load: 1 ton
Veh Wt: 2.5 tons
Crew: 2+4
Mnt: 12
Minimum Landing/Takeoff Zone: 38 m

Damage Record
Crewmembers: Pilot ☐ Copilot ☐
Passengers: 1 ☐ 2 ☐ 3 ☐ 4 ☐
Radio: ☐
Instruments: ☐
Controls: ☐
Weapon (If Present): ☐
Ammo (If Present): ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

WEAPON DATA

Missile	*Rng*	*Damage*	*Pen*
TOW II-C	3500	C:12, B:12	160C
HOT	4000	C:12, B:12	155C

MBB Bo-105 (Rotary-Wing Aircraft): The MBB Bo-105 is the standard recon and liaison helicopter in the German military (where it is known as the PAH-1) and is widely sold for similar purposes worldwide. No ejection seats are provided, and the helicopter is not capable of in-flight refueling. When armed, the PAH-1 is usually fitted with an MG door gun of some kind or ATGMs (up to six TOW or four HOT).

***Tr Move:* 928**
***Com Move:* 27**
***Fuel Cap:* 776**
***Fuel Cons:* 776**

COMBAT EQUIPMENT
None fitted to civilian models. Military versions have IR suppression and integral flare and chaff dispensers.

AMMUNITION
TOW II-C (6 missiles)
☐☐☐☐☐ ☐☐
HOT (4 missiles)
☐☐☐☐

MBB/Kawasaki BK-117

Merc: 2000 Price: $2,000,000 (S/S)
Twilight: 2000 Price: $4,000,000 (S/R)
Armament: Civilian version unarmed
Ammo: Various, depending on armament
Fuel Type: AvG
Load: 3200 kg (internal and external), military version has 2 hardpoints
Veh Wt: 3.2 tons
Crew: 1+7
Mnt: 10
Minimum Landing/Takeoff Zone: 40 m

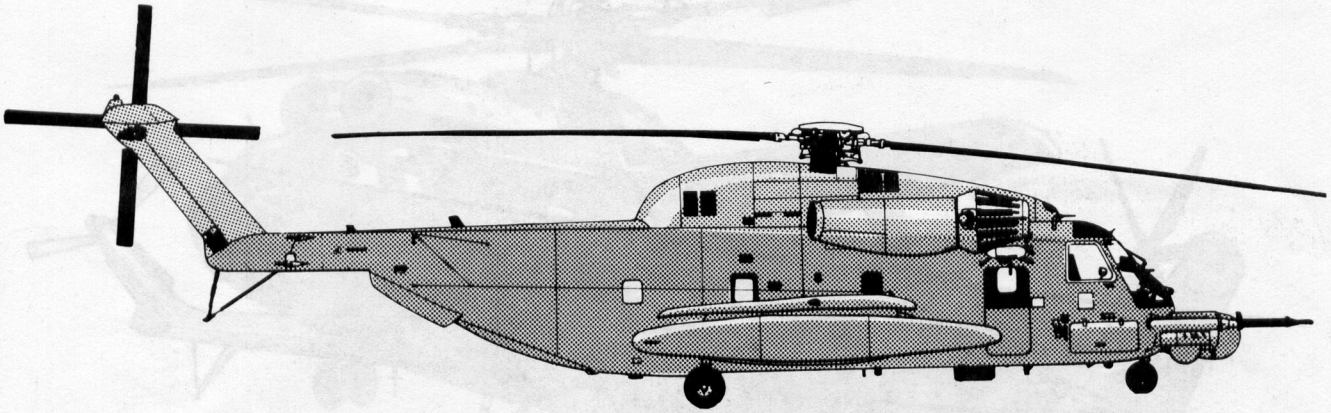
Damage Record
Crewmembers: Pilot ☐
Passengers: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐
Radio: ☐
Instruments: ☐
Controls: ☐
Weapon (If Present): ☐
Ammo (If Present): ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

MBB/Kawasaki BK-117 (Rotary-Wing Aircraft): The BK-117 is the result of a joint venture between the German firm of MBB and the Japanese firm of Kawasaki. No ejection seats are provided, and the helicopter is not capable of in-flight refueling. Both civilian and military versions exist, at approximately the same price (the cost of classier appointments cancels out the cost of armaments in most cases).

***Tr Move:* 1000**
***Com Move:* 28**
***Fuel Cap:* 708**
***Fuel Cons:* 920**

Combat Equipment
None fitted to civilian models. Military versions have IR suppression and integral flare and chaff dispensers.

MH-53H Pave Low II, MH-53J Pave Low III



Merc: 2000 Price: $2,000,000 (—/R)
Twilight: 2000 Price: $4,000,000 (—/—)
Armament: M60 MG door gun
Ammo: 1000×7.62mmN
Fuel Type: AvG
Load: 5000 kg (internal), up to 9 tons slung at expense of internal load
Veh Wt: 19.5 tons
Crew: 3+50
Mnt: 12
Minimum Landing/Takeoff Zone: 40 m

Damage Record

Crewmembers: Pilot ☐ Copilot ☐ Crew chief ☐
Paratroopers: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 ☐ 14 ☐ 15 ☐ 16 ☐ 17 ☐ 18 ☐ 19 ☐ 20 ☐ 21 ☐ 22 ☐ 23 ☐ 24 ☐ 25 ☐ 26 ☐ 27 ☐ 28 ☐ 29 ☐ 30 ☐ 31 ☐ 32 ☐ 33 ☐ 34 ☐ 35 ☐ 36 ☐ 37 ☐ 38 ☐ 39 ☐ 40 ☐ 41 ☐ 42 ☐ 43 ☐ 44 ☐ 45 ☐ 46 ☐ 47 ☐ 48 ☐ 49 ☐ 50 ☐
Radio: ☐
Instruments: ☐
Controls: ☐
M60 MG Door Gun: ☐
Ammo: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

MH-53H Pave Low II, MH-53J Pave Low III (Rotary-Wing Aircraft): These two helicopters are special operations versions of the H-53 Sea Stallion helicopter. No ejection seats are provided, but both models are capable of in-flight refueling and buddy refueling. These are available in **Twilight: 2000** by referee's discretion. Both types are capable of amphibious landings.

***Tr Move:* 1112**
***Com Move:* 32**
***Fuel Cap:* 5400**
***Fuel Cons:* 5400**

COMBAT EQUIPMENT

FLIR, IR suppression, integral chaff and flare dispensers.

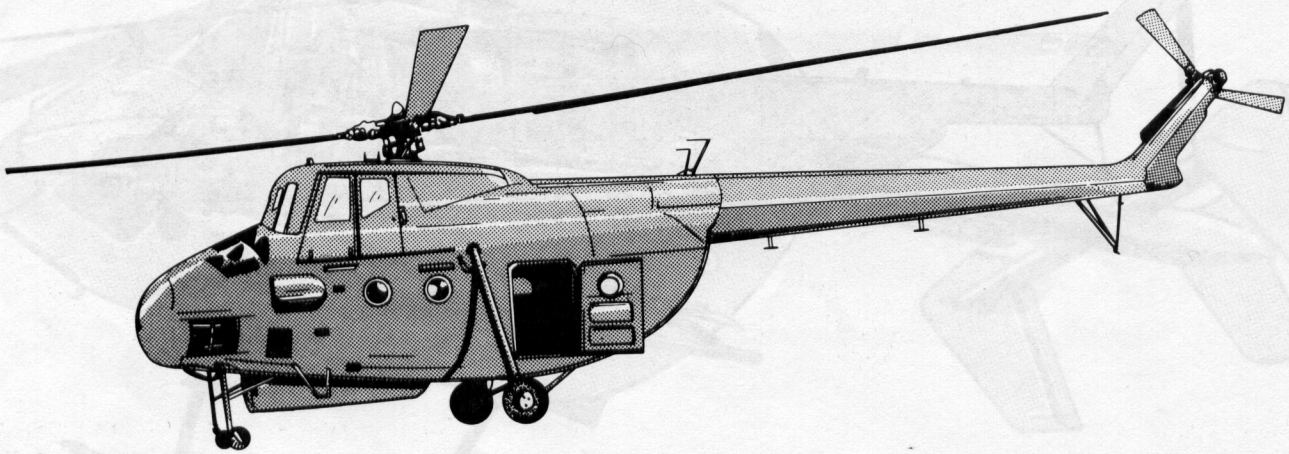
AMMUNITION

Use 7.62mmN ammo records provided on page 99.

WEAPON DATA

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
M60 door gun	5	4	2-3-Nil	6	100B	1	1	125

Mi-4 Hound



Merc: 2000 Price: $75,000 (S/S)
Twilight: 2000 Price: $100,000 (R/C)
Fuel Type: AvG
Load: 2 tons
Veh Wt: 4.5 tons
Crew: 1+8
Mnt: 10
Minimum Landing/Takeoff Zone: 24 m

Damage Record
Crewmembers: Pilot ☐
Passengers: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐
Radio: ☐
Instruments: ☐
Controls: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

Mi-4 Hound (Rotary-Wing Aircraft): Code-named *Hound* by NATO, this Soviet helicopter is aging by current standards, and is found in service only with Third World nations. No ejection seats are provided, and the helicopter is not capable of in-flight refueling.

***Tr Move:* 640**
***Com Move:* 18**
***Fuel Cap:* 800**
***Fuel Cons:* 800**

COMBAT EQUIPMENT
None.

Mi-6 Hook

Merc: 2000 Price: $175,000 (S/S)
Twilight: 2000 Price: $300,000 (R/C)
Armament: Various
Fuel Type: AvG
Load: 12 tons (internal), 8 tons slung at expense of internal capacity
Veh Wt: 40.5 tons
Crew: 5+90
Mnt: 10
Minimum Landing/Takeoff Zone: 32 m

Damage Record

Crewmembers: Pilot ☐ Copilot ☐ Navigator ☐ Flight engineer ☐ Radio operator ☐

Passengers: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 ☐ 14 ☐ 15 ☐ 16 ☐ 17 ☐ 18 ☐ 19 ☐ 20 ☐ 21 ☐ 22 ☐ 23 ☐ 24 ☐ 25 ☐ 26 ☐ 27 ☐ 28 ☐ 29 ☐ 30 ☐ 31 ☐ 32 ☐ 33 ☐ 34 ☐ 35 ☐ 36 ☐ 37 ☐ 38 ☐ 39 ☐ 40 ☐ 41 ☐ 42 ☐ 43 ☐ 44 ☐ 45 ☐ 46 ☐ 47 ☐ 48 ☐ 49 ☐ 50 ☐ 51 ☐ 52 ☐ 53 ☐ 54 ☐ 55 ☐ 56 ☐ 57 ☐ 58 ☐ 59 ☐ 60 ☐ 61 ☐ 62 ☐ 63 ☐ 64 ☐ 65 ☐ 66 ☐ 67 ☐ 68 ☐ 69 ☐ 70 ☐ 71 ☐ 72 ☐ 73 ☐ 74 ☐ 75 ☐ 76 ☐ 77 ☐ 78 ☐ 79 ☐ 80 ☐ 81 ☐ 82 ☐ 83 ☐ 84 ☐ 85 ☐ 86 ☐ 87 ☐ 88 ☐ 89 ☐ 90 ☐

Radio: ☐
Instruments: ☐
Controls: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

Mi-6 Hook (Rotary-Wing Aircraft): Code-named *Hook* by NATO, this Soviet helicopter is another export model growing rapidly more obsolescent as time passes. The Soviets and what used to be called the Warsaw Pact nations no longer use this helicopter, except for civilian purposes. Military versions in Third World hands have a number of various armaments. The cabin has two doors (P/S) and rear clamshell doors for cargo. Additional fuel tanks of 3500-kilogram capacity can be fitted at the expense of some cargo. No ejection seats are provided, and the helicopter is not capable of in-flight refueling.

***Tr Move:* 1000**
***Com Move:* 30**
***Fuel Cap:* 3500**
***Fuel Cons:* 3500**

COMBAT EQUIPMENT

None.

Mi-8 Hip

Merc: 2000 Price: $180,000 (C/C)
Twilight: 2000 Price: $300,000 (R/V)
Fuel Type: AvG
Load: 4000 kg (internal), 3000 kg (slung) (civilian) or on 4 hardpoints (military)
Veh Wt: 11 tons
Crew: 3+28
Mnt: 12
Minimum Landing/Takeoff Zone: 40 m

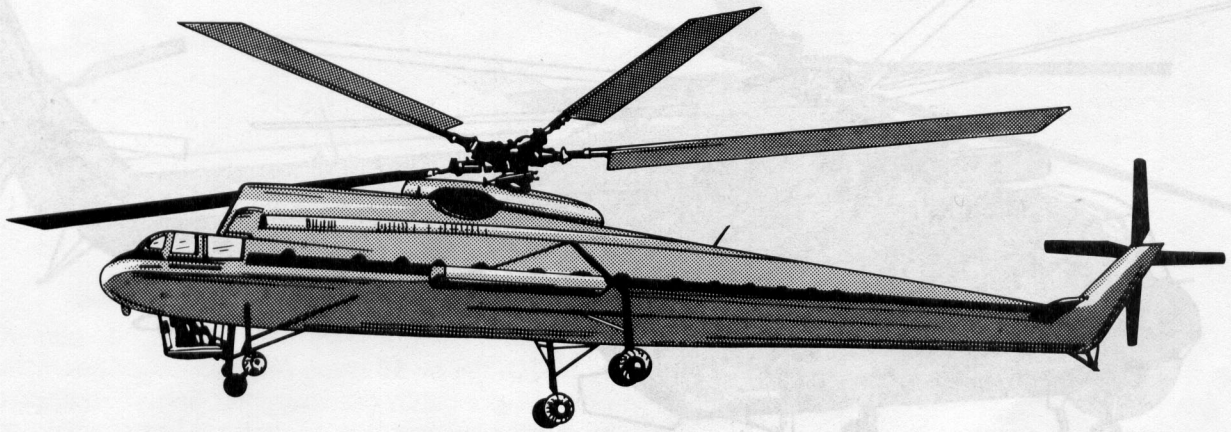
Damage Record
Crewmembers: Pilot ☐ Copilot ☐ Flight engineer ☐
Passengers: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 ☐ 14 ☐ 15 ☐ 16 ☐ 17 ☐ 18 ☐ 19 ☐ 20 ☐ 21 ☐ 22 ☐ 23 ☐ 24 ☐ 25 ☐ 26 ☐ 27 ☐ 28 ☐
Radio: ☐
Instruments: ☐
Controls: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

Mi-8 Hip (Rotary-Wing Aircraft): Code-named *Hip* by NATO, this Soviet-designed helicopter is now restricted almost solely to unarmed cargo duties in what used to be called the Warsaw Pact countries, or civilian jobs throughout the world. No ejection seats are provided, and the helicopter is not capable of in-flight refueling. The Mi-17 is the export version.

***Tr Move:* 720**
***Com Move:* 23**
***Fuel Cap:* 1870**
***Fuel Cons:* 1870**

Combat Equipment
None.

Mi-10 Harke



Merc: 2000 Price: $750,000 (S/S)
Twilight: 2000 Price: $1,000,000 (—/R)
Fuel Type: AvG
Load: 16 tons (maximum of 12 tons slung, 8 tons internal)
Veh Wt: 38 tons
Crew: 2+28
Mnt: 12
Minimum Landing/Takeoff Zone: 80 m

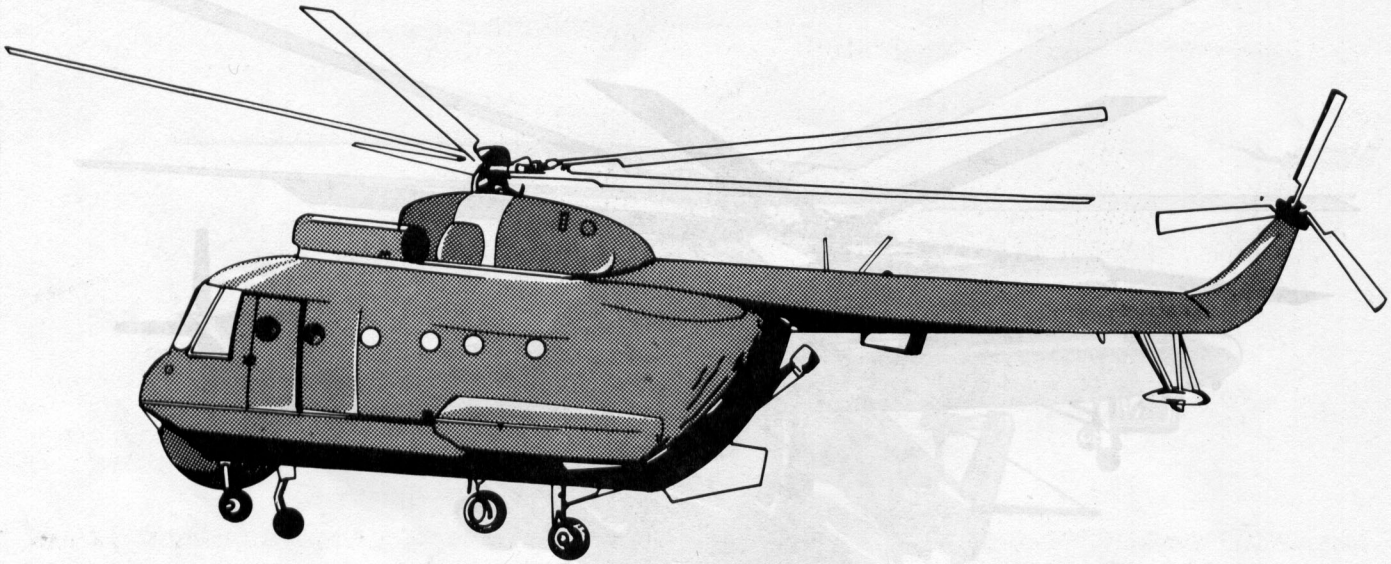
Damage Record
Crewmembers: Pilot ☐ Copilot ☐
Passengers: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 ☐ 14 ☐ 15 ☐ 16 ☐ 17 ☐ 18 ☐ 19 ☐ 20 ☐ 21 ☐ 22 ☐ 23 ☐ 24 ☐ 25 ☐ 26 ☐ 27 ☐ 28 ☐
Radio: ☐
Instruments: ☐
Controls: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

Mi-10 Harke (Rotary-Wing Aircraft): Code-named *Harke* by NATO, this Soviet-built helicopter is a development on the Mi-6 and is used for heavy-lift duties in both military and civilian capacities in the nations of the former Warsaw Pact. No ejection seats are provided, and the helicopter is not capable of in-flight refueling. The helicopter is normally used for cargo rather than passenger service, although a small number of seats are provided.

***Tr Move:* 436**
***Com Move:* 14**
***Fuel Cap:* 9000**
***Fuel Cons:* 9000**

COMBAT EQUIPMENT
None.

Mi-14 Haze



Merc: 2000 Price: $190,000 (S/S)
Twilight: 2000 Price: $320,000 (—/S)
Fuel Type: AvG
Load: 4000 kg (internal), 3000 kg (slung)
Veh Wt: 14 tons
Crew: 3+28
Mnt: 12
Minimum Landing/Takeoff Zone: 40 m

Damage Record

Crewmembers: Pilot ☐ Copilot ☐ Flight engineer ☐
Passengers: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 ☐ 14 ☐ 15 ☐ 16 ☐ 17 ☐ 18 ☐ 19 ☐ 20 ☐ 21 ☐ 22 ☐ 23 ☐ 24 ☐ 25 ☐ 26 ☐ 27 ☐ 28 ☐
Radio: ☐
Instruments: ☐
Controls: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

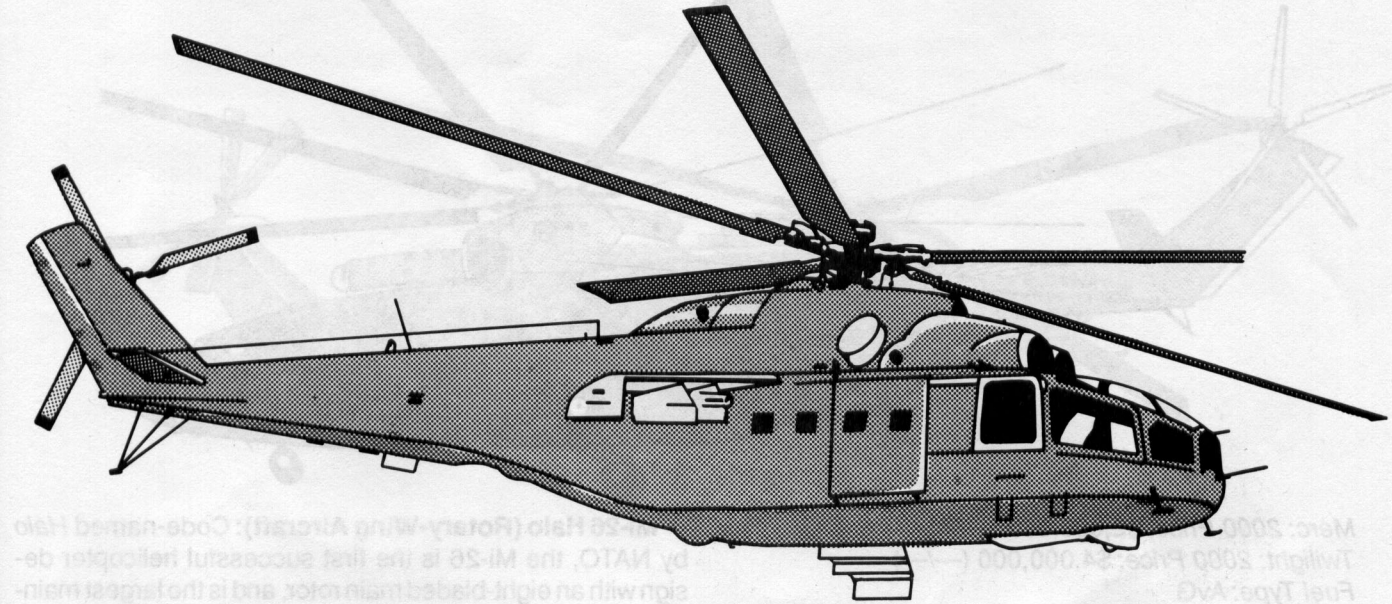
Mi-14 Haze (Rotary-Wing Aircraft): Code-named *Haze* by NATO, this is a Soviet shore-based amphibious helicopter (capable of water landings without additional floatation devices). The helicopter has two sliding doors into the cabin (P/S) and a rescue hoist with a 500-kilogram capacity. No ejection seats are provided, and the helicopter is not capable of in-flight refueling.

***Tr Move:* 720**
***Com Move:* 23**
***Fuel Cap:* 1870**
***Fuel Cons:* 1870**

COMBAT EQUIPMENT

None.

Mi-24 Hind



Merc: 2000 Price: $950,000 (—/C)
Twilight: 2000 Price: $1,200,000 (—/C)
Armament: 12.7mm MG in nose mount, up to 1500 kg of ordnance on wing racks
Ammo: 500×12.7mmB
Fuel Type: AvG
Load: 1 ton (internal) or 1500 kg on 6 hardpoints
Veh Wt: 12 tons
Crew: 3+8
Mnt: 10
Minimum Landing/Takeoff Zone: 40 m

Damage Record
Crewmembers: Pilot ☐ Weapons operator ☐ Ground engineer ☐
Passengers: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐
Radio: ☐
Instruments: ☐
Controls: ☐
12.7mm Gun: ☐
Ammo: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

Mi-24 Hind (Rotary-Wing Aircraft): The Mi-24 was code-named *Hind* by NATO, and was the main Soviet attack helicopter from its introduction in 1975 until it was superseded by the Havoc in the 1980s. The Hind is probably the most combat-experienced helicopter gunship in the world, having seen extensive action in Afghanistan, Iran/Iraq, and in Soviet Central Asia. The Hind can carry up to four 500-liter drop tanks to extend its action radius, at the expense of ordnance. Up to 12 ATGMs plus two AAMs or bombs (not exceeding 1500 kilograms) can be fitted as external load. No ejection seats are provided, and the aircraft is incapable of in-flight refueling. A 1500-kilogram, flexible fuel tank or passengers can be carried at the expense of internal load.

***Tr Move:* 1180**
***Com Move:* 32**
***Fuel Cap:* 1500**
***Fuel Cons:* 1500**

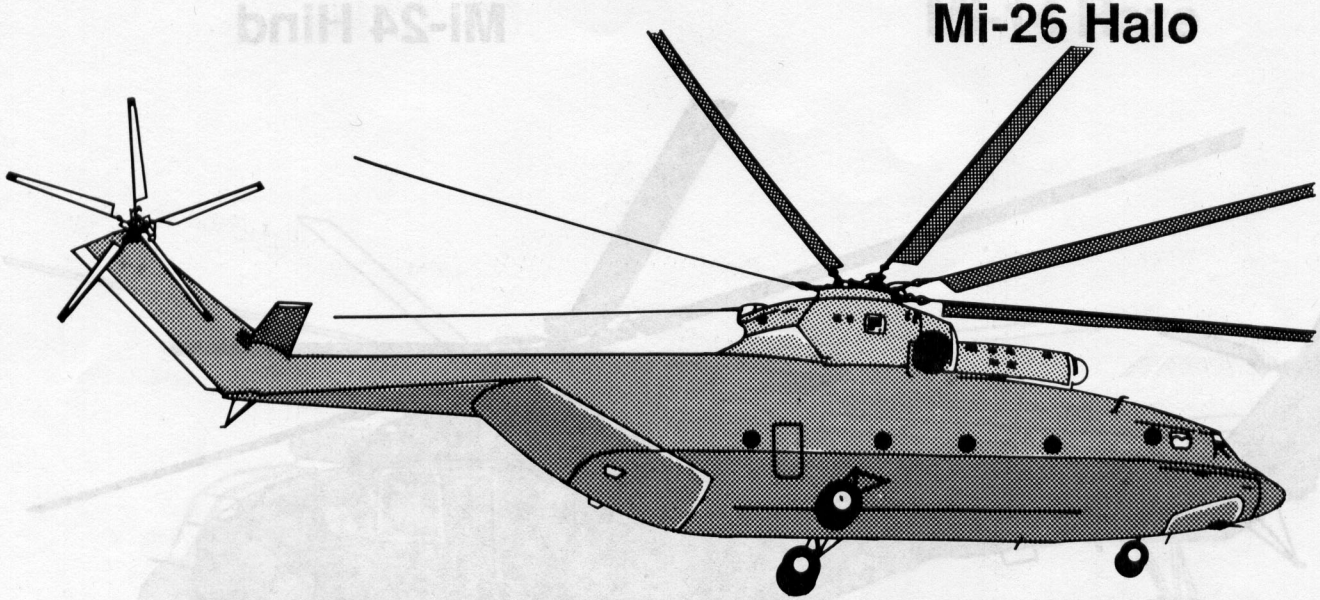
Combat Equipment: IR suppression, integral flare and chaff dispensers.

WEAPON DATA

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
12.7mm MG	5	9	2-2-3	8	1000B	3	8	150

AMMUNITION
Use 12.7mm MG records provided on page 99.

Mi-26 Halo



Merc: 2000 Price: $2,000,000 (—/R)
Twilight: 2000 Price: $4,000,000 (—/—)
Fuel Type: AvG
Load: 20 tons (slung or internal)
Veh Wt: 49.5 tons
Crew: 5+85 (or 68 paratroopers)
Mnt: 12
Minimum Landing/Takeoff Zone: 80 m

Damage Record

Crewmembers: Pilot ☐ Copilot ☐ Navigator ☐ Flight engineer ☐ Loadmaster ☐

Passengers: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10
☐ 11 ☐ 12 ☐ 13 ☐ 14 ☐ 15 ☐ 16 ☐ 17 ☐ 18 ☐ 19 ☐ 20
☐ 21 ☐ 22 ☐ 23 ☐ 24 ☐ 25 ☐ 26 ☐ 27 ☐ 28 ☐ 29 ☐ 30
☐ 31 ☐ 32 ☐ 33 ☐ 34 ☐ 35 ☐ 36 ☐ 37 ☐ 38 ☐ 39 ☐ 40
☐ 41 ☐ 42 ☐ 43 ☐ 44 ☐ 45 ☐ 46 ☐ 47 ☐ 48 ☐ 49 ☐ 50
☐ 51 ☐ 52 ☐ 53 ☐ 54 ☐ 55 ☐ 56 ☐ 57 ☐ 58 ☐ 59 ☐ 60
☐ 61 ☐ 62 ☐ 63 ☐ 64 ☐ 65 ☐ 66 ☐ 67 ☐ 68 ☐ 69 ☐ 70
☐ 71 ☐ 72 ☐ 73 ☐ 74 ☐ 75 ☐ 76 ☐ 77 ☐ 78 ☐ 79 ☐ 80
☐ 81 ☐ 82 ☐ 83 ☐ 84 ☐ 85 ☐

Paratroopers: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10
☐ 11 ☐ 12 ☐ 13 ☐ 14 ☐ 15 ☐ 16 ☐ 17 ☐ 18 ☐ 19 ☐ 20
☐ 21 ☐ 22 ☐ 23 ☐ 24 ☐ 25 ☐ 26 ☐ 27 ☐ 28 ☐ 29 ☐ 30
☐ 31 ☐ 32 ☐ 33 ☐ 34 ☐ 35 ☐ 36 ☐ 37 ☐ 38 ☐ 39 ☐ 40
☐ 41 ☐ 42 ☐ 43 ☐ 44 ☐ 45 ☐ 46 ☐ 47 ☐ 48 ☐ 49 ☐ 50
☐ 51 ☐ 52 ☐ 53 ☐ 54 ☐ 55 ☐ 56 ☐ 57 ☐ 58 ☐ 59 ☐ 60
☐ 61 ☐ 62 ☐ 63 ☐ 64 ☐ 65 ☐ 66 ☐ 67 ☐ 68 ☐

Radio: ☐
Instruments: ☐
Controls: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

Mi-26 Halo (Rotary-Wing Aircraft): Code-named *Halo* by NATO, the Mi-26 is the first successful helicopter design with an eight-bladed main rotor, and is the largest main-production helicopter in the world. It has a cargo bay and payload capacity similar to the C-130 Hercules cargo plane. The Halo has two passenger doors on the port side, one starboard, and a cargo ramp located in the rear. The Mi-26 Halo is not normally armed. No ejection seats are provided, and the helicopter is not capable of in-flight refueling. This helicopter is available in **Twilight: 2000** at the discretion of the referee.

***Tr Move:* 1020**
***Com Move:* 30**
***Fuel Cap:* 12,000**
***Fuel Cons:* 18,000**

COMBAT EQUIPMENT
None.

Mi-28 Havoc

Merc: 2000 Price: $2,000,000 (—/R)
Twilight: 2000 Price: $4,000,000 (—/—)
Armament: Triple-barreled 30mm autocannon
Ammo: 300×30mm-3 autocannon
Fuel Type: AvG
Load: Typically either 16 AT-6 ATGMs or 8 rocket pods
Veh Wt: 11.4 tons
Crew: 2
Mnt: 10
Minimum Landing/Takeoff Zone: 40 m

Damage Record
Crewmembers: Pilot ☐ Weapons officer ☐
Radio: ☐
Instruments: ☐
Controls: ☐
30mm AC: ☐
Ammo: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

WEAPON DATA

Weapon	ROF	Mag	Rng	Ammo	Damage	Pen
30mm-3	30	300C	250	API	16	5/1/–2
			250	HE	C:1, Brst:2	–6C

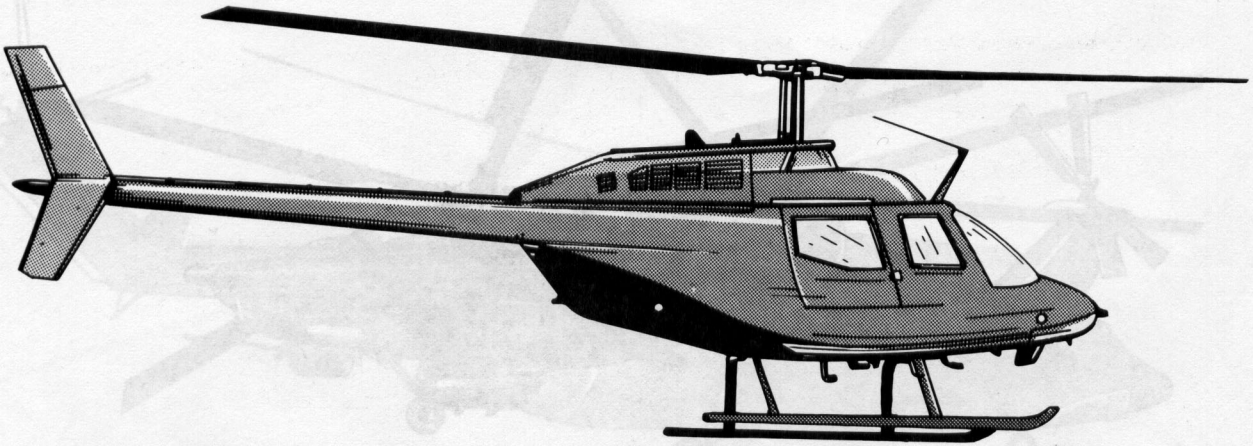
Mi-28 Havoc (Rotary-Wing Aircraft): Code-named *Havoc* by the West, the Mi-28 Havoc is a Soviet-made, twin-engine attack helicopter developed in the early 1980s. The Havoc has no provision for air-to-air refueling, but can mount extra drop tanks as part of its wing load. The Havoc is equipped with FLIR, and a laser range finder/designator in the nose. No ejection seats are provided.

***Tr Move:* 1184**
***Com Move:* 37**
***Fuel Cap:* 1900**
***Fuel Cons:* 3800**

COMBAT EQUIPMENT
FLIR, laser designator, integral flare and chaff dispensers.

AMMUNITION
Use 30mm autocannon records provided on page 99.

OH-58C Kiowa



Merc: 2000 Price: $700,000 (C/C)
Twilight: 2000 Price: $1,400,000 (S/—)
Armament: 2×GAU-2B pods are optional (OH-58); none (Model 206)
Ammo: 3000×7.62mmN
Fuel Type: AvG
Load: 500 kg (OH-58 has 1 hardpoint)
Veh Wt: 1.5 tons
Crew: 2 (OH-58); 2+4 (Model 206)
Mnt: 12
Minimum Landing/Takeoff Zone: 24 m

Damage Record

Crewmembers (OH-58): Pilot ☐ Observer ☐
Crewmembers (Model 206): Pilot ☐ Copilot ☐
Passengers (Model 206): 1 ☐ 2 ☐ 3 ☐ 4 ☐
Radio: ☐
Instruments: ☐
Controls: ☐
GAU-2B Pod (OH-58): ☐
Ammo (OH-58): ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

WEAPON DATA

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
GAU-2B pod	100	4	2-3-Nil	4	1500C	*	*	90

* Weapon has negligible recoil when used this way

OH-58C Kiowa (Rotary-Wing Aircraft): The military version of the Bell Model 206 JetRanger, used in civilian service for police and general transport purposes. Stats are given for both OH-58 and Model 206 where they differ. The OH-58 has laser designator which extends on a mast above the rotor for hull-down observation and designation of targets. Model 206L-3 LongRanger III has an extended fuselage to add three more passengers, and incorporates a 416-kilogram fuel tank. Model 206 is illustrated. Police versions of the Model 206 often mount a white light searchlight for night work. No ejection seats are provided. Military and civilian models are priced the same. The LongRanger is 1.3 times normal cost (and one level more scarce). When armed, the OH-58 is most commonly fitted with the GAU-2B pod.

***Tr Move:* 752**
***Com Move:* 22**
***Fuel Cap:* 276 (Model 206), 399 (OH-58)**
***Fuel Cons:* 315**

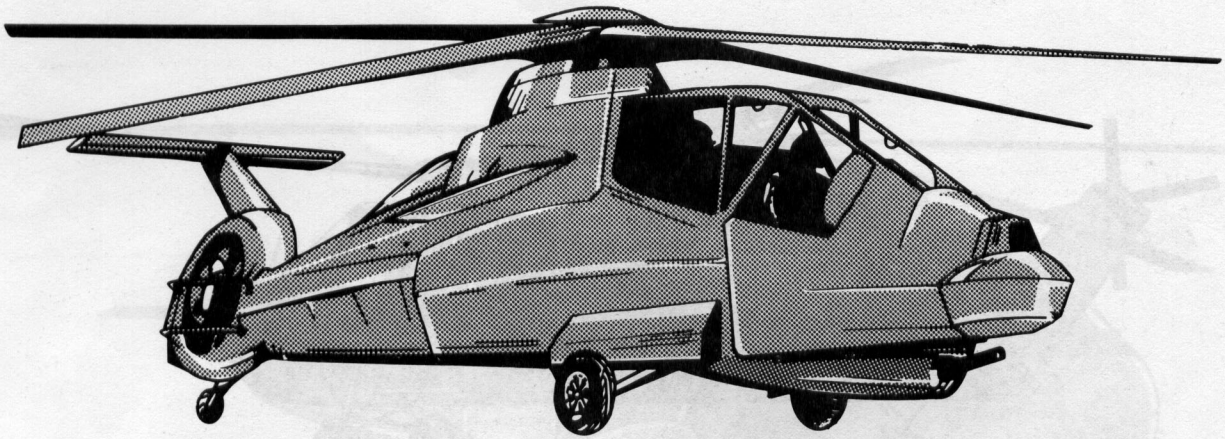
COMBAT EQUIPMENT

None normally fitted to Model 206. OH-58 has laser designator, integral flare and chaff dispensers.

AMMUNITION

Use 7.62mmN ammo record forms provided on page 99.

RAH-66 Comanche



Merc: 2000 Price: $3,000,000 (—/R)
Twilight: 2000 Price: $5,000,000 (—/R)
Armament: One 20mm Gatling autocannon (chin turret)
Armament (Recon/Attack): 6 hardpoints (retractable)/14 hardpoints (external)
Ammo: 500×20mm autocannon
Fuel Type: AvG
Load: 1400 kg (recon mode); 3000 kg (attack mode)
Veh Wt: 4.5 tons
Crew: 2
Mnt: 14
Minimum Landing/Takeoff Zone: 40 m

Damage Record
Crewmembers: Pilot ☐ Weapons officer ☐
Radio: ☐
Instruments: ☐
Controls: ☐
20mm Gatling AC: ☐
Ammo: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

WEAPON DATA

Weapon	*ROF*	*Mag*	*Rng*	*Ammo*	*Damage*	*Pen*
20mm	60	1032C	450	API	10	3/–2/–5
			450	HE	C:1, Brst:2	–8C

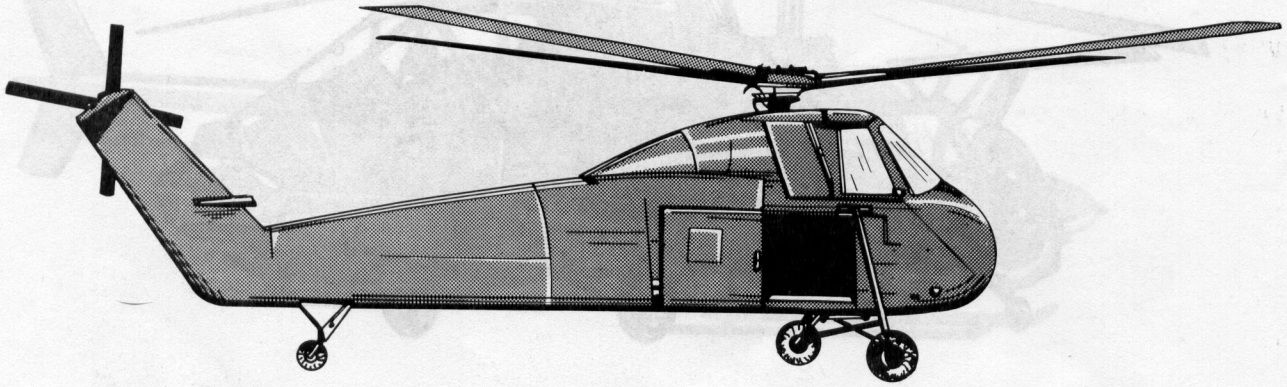
RAH-66 Comanche (Rotary-Wing Aircraft): Winner of the US Army's light helicopter program, the RAH (Recon/Attack Helicopter) was not designed to replace the AH-64, but to supplement it on deep penetration and attack missions. The landing gear and weapon racks retract into the hull for stealth flights, but weapon capacity can be expanded by add-on weapon racks. The RAH-66 had its first flight in 1994, and entered US service in 1997; it was heavily promoted in overseas sales to US allies. No ejection seats are provided, and the helicopter is not capable of in-flight refueling, although external fuel pods can be fitted at the expense of external load.

***Tr Move:* 945**
***Com Move:* 32**
***Fuel Cap:* 1020**
***Fuel Cons:* 1600**

COMBAT EQUIPMENT
FLIR, armored cockpit, radar jammers, IR suppression, integral flare and chaff dispensers, radar gun sight.

AMMUNITION
Use the 20mm autocannon ammo records provided on page 99.

S-58/H-34 Choctaw



Merc: 2000 Price: $170,000 (C/C)
Twilight: 2000 Price: $280,000 (V/R)
Fuel Type: AvG
Load: 4000 kg (internal); 7000 kg (slung)
Veh Wt: 14 tons
Crew: 3+8
Mnt: 12
Minimum Landing/Takeoff Zone: 40 m

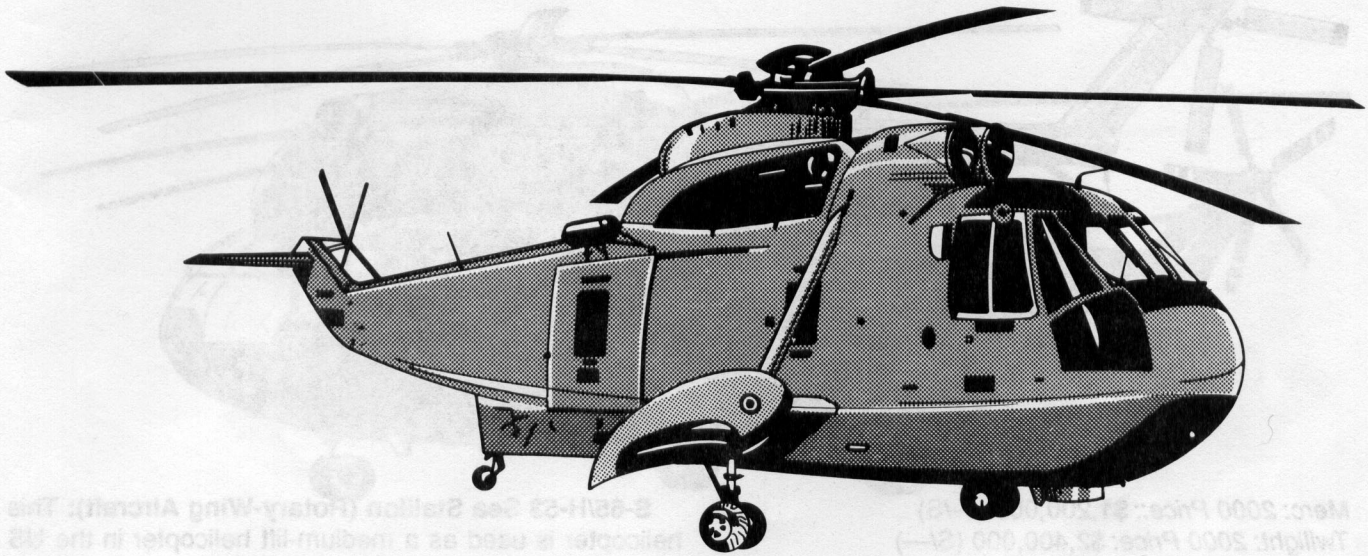
Damage Record
Crewmembers: Pilot ☐ Copilot ☐ Flight engineer ☐
Passengers: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8
Radio: ☐
Instruments: ☐
Controls: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

S-58/H-34 Choctaw (Rotary-Wing Aircraft): An obsolete American helicopter, now mainly found in civilian service and with Third World armed forces in transport duties. No ejection seats are provided. Internal cargo is carried at the expense of some slung capacity.

***Tr Move:* 772**
***Com Move:* 23**
***Fuel Cap:* 1800**
***Fuel Cons:* 1800**

COMBAT EQUIPMENT
None.

S-61/H-3 Sea King



Merc: 2000 Price: $5,200,000 (S/C)
Twilight: 2000 Price: $10,400,000 (S/—)
Fuel Type: AvG
Load: 4000 kg (internal); 7000 kg (slung)
Veh Wt: 10 tons
Crew: 3+8
Mnt: 12
Minimum Landing/Takeoff Zone: 40 m

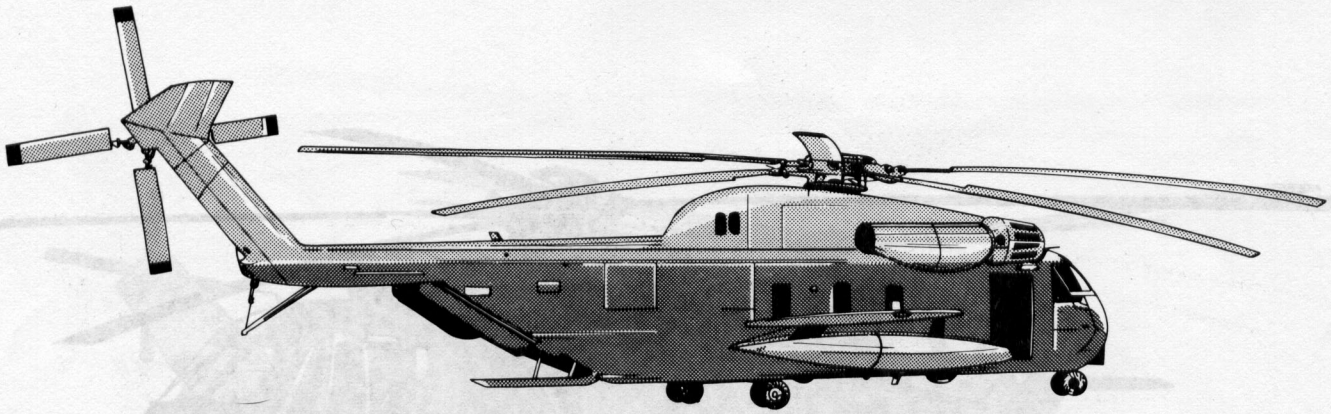
Damage Record
Crewmembers: Pilot ☐ Copilot ☐ Crew chief
Passengers: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐
Radio: ☐
Instruments: ☐
Controls: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

S-61/H-3 Sea King (Rotary-Wing Aircraft): This is an American naval helicopter used primarily for transport and liaison duties, and seldom armed. A door gun could be fitted, if necessary, and fired by a gunner carried at the expense of one passenger. No ejection seats are provided, and the helicopter is not capable of in-flight refueling. The Sea King is capable of amphibious landings.

***Tr Move:* 855**
***Com Move:* 26**
***Fuel Cap:* 1200**
***Fuel Cons:* 1200**

COMBAT EQUIPMENT
None.

S-65/H-53 Sea Stallion



Merc: 2000 Price:: $1,200,000 (—/S)
Twilight: 2000 Price: $2,400,000 (S/—)
Armament: M60 door gun
Ammo: 1000×7.62mmN
Fuel Type: AvG
Load: 5000 kg (internal), up to 9 tons slung at expense of internal load
Veh Wt: 19.5 tons
Crew: 3+50
Mnt: 12
Minimum Landing/Takeoff Zone: 40 m

Damage Record

Crewmembers: Pilot ☐ Copilot ☐ Crew chief ☐
Passengers: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 ☐ 14 ☐ 15 ☐ 16 ☐ 17 ☐ 18 ☐ 19 ☐ 20 ☐ 21 ☐ 22 ☐ 23 ☐ 24 ☐ 25 ☐ 26 ☐ 27 ☐ 28 ☐ 29 ☐ 30 ☐ 31 ☐ 32 ☐ 33 ☐ 34 ☐ 35 ☐ 36 ☐ 37 ☐ 38 ☐ 39 ☐ 40 ☐ 41 ☐ 42 ☐ 43 ☐ 44 ☐ 45 ☐ 46 ☐ 47 ☐ 48 ☐ 49 ☐ 50 ☐
Radio: ☐
Instruments: ☐
Controls: ☐
M60 MG Door Gun: ☐
Ammo: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

WEAPON DATA

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
M60 door gun	5	4	2-3-Nil	6	100B	1	1	125

S-65/H-53 Sea Stallion (Rotary-Wing Aircraft): This helicopter is used as a medium-lift helicopter in the US Marines and with other armed forces worldwide. In US Navy use it is called the RH-53, and two special operations versions are also available (see MH-53H and MH-53J). No ejection seats are provided. The helicopter is capable of in-flight refueling, but not buddy refueling. The Sea Stallion is capable of amphibious landings.

***Tr Move:* 1112**
***Com Move:* 32**
***Fuel Cap:* 5400**
***Fuel Cons:* 5400**

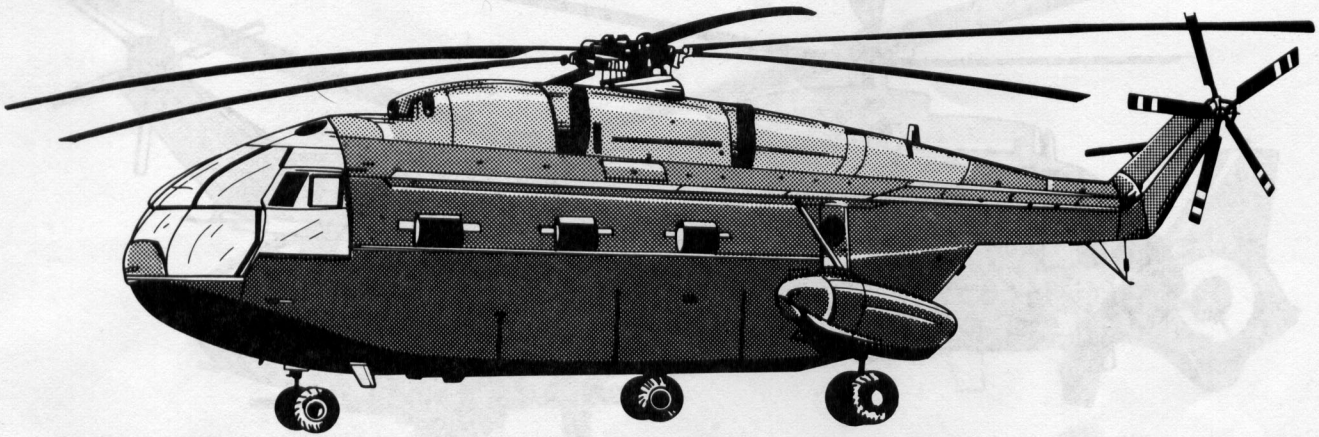
COMBAT EQUIPMENT

Integral chaff and flare dispensers.

AMMUNITION

Use 7.62mmN ammo records provided on page 99.

SA.321 Super Frelon



Merc: 2000 Price: $250,000 (—/S)
Twilight: 2000 Price: $350,000 (R/—)
Fuel Type: AvG
Load: 14 tons (8 tons slung load at expense of internal capacity)
Veh Wt: 29 tons
Crew: 2+28
Mnt: 12
Minimum Landing/Takeoff Zone: 56 m

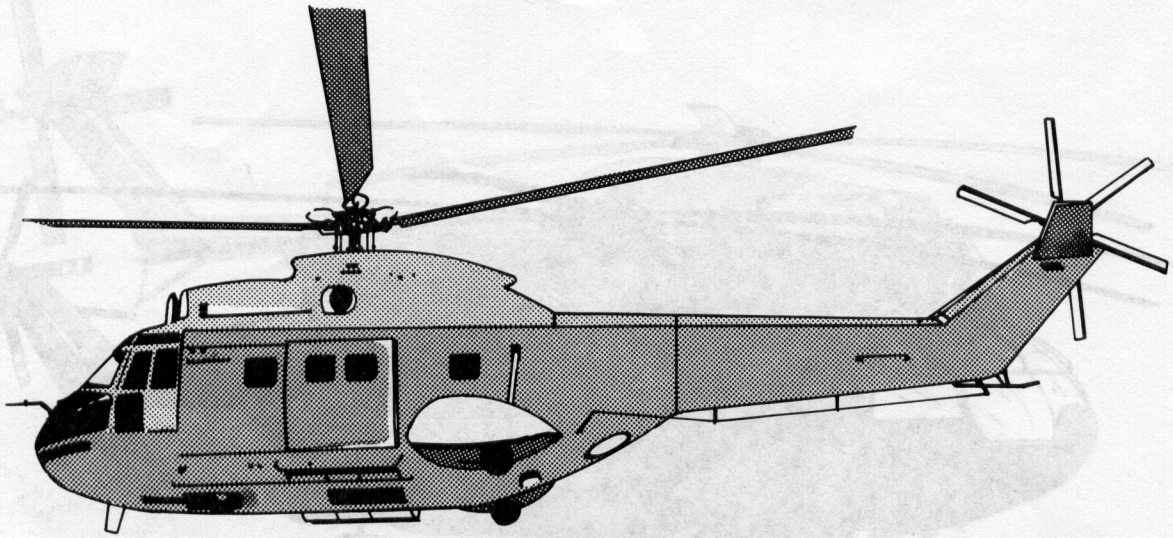
Damage Record
Crewmembers: Pilot ☐ Copilot ☐
Passengers: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12 ☐ 13 ☐ 14 ☐ 15 ☐ 16 ☐ 17 ☐ 18 ☐ 19 ☐ 20 ☐ 21 ☐ 22 ☐ 23 ☐ 24 ☐ 25 ☐ 26 ☐ 27 ☐ 28 ☐
Radio: ☐
Instruments: ☐
Controls: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

SA.321 Super Frelon (Rotary-Wing Aircraft): The Super Frelon is the largest French helicopter made and is fully amphibious. Super Frelons are primarily naval helicopters, and most of their armament packages are not relevant to the game. No ejection seats are provided, and the helicopter is incapable of in-flight refueling.

***Tr Move:* 880**
***Com Move:* 28**
***Fuel Cap:* 1500**
***Fuel Cons:* 1500**

COMBAT EQUIPMENT
None.

SA.330 Puma



Merc: 2000 Price: $120,000 (S/S)
Twilight: 2000 Price: $300,000 (S/R)
Armament: No fixed armament
Ammo: Various, depending on armament
Fuel Type: AvG
Load: 1200 kg in 2 hardpoints
Veh Wt: 7 tons
Crew: 2+12
Mnt: 12
Minimum Landing/Takeoff Zone: 48 m

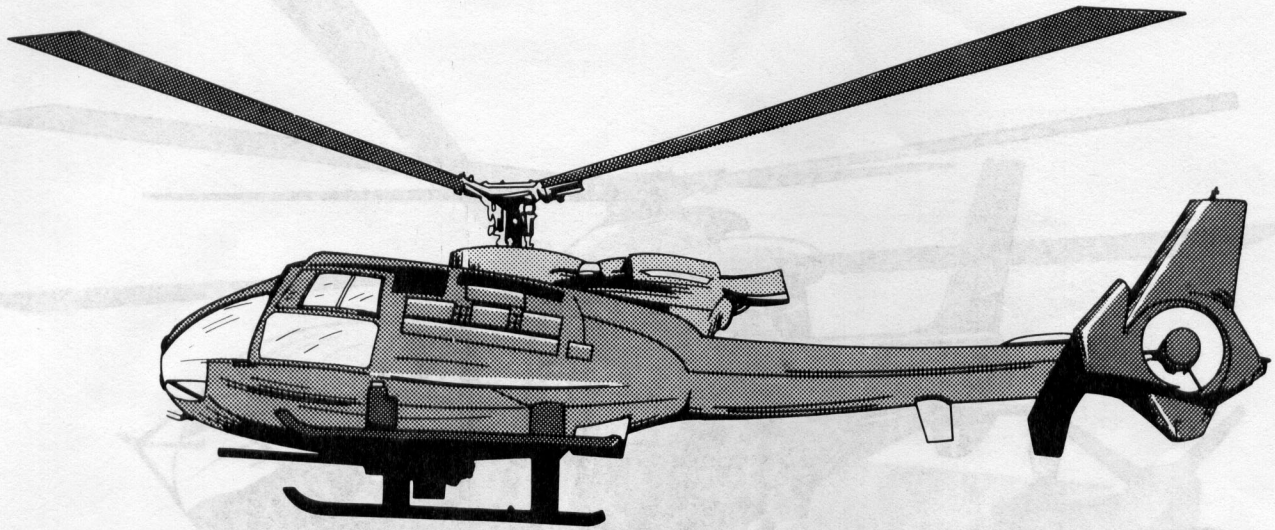
Damage Record
Crewmembers: Pilot ☐ Copilot ☐
Passengers: 1☐ 2☐ 3☐ 4☐ 5☐ 6☐ 7☐ 8☐ 9☐ 10☐ 11☐ 12☐
Radio: ☐
Instruments: ☐
Controls: ☐
Weapon (If Present): ☐
Ammo (If Present): ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

SA.330 Puma (Rotary-Wing Aircraft): The French Puma is another aging workhorse, but one that is found all over the world. It can be armed with a variety of gun, missile or rocket pods, or with flexible door gun mounts if needed. No ejection seats are provided, and the helicopter is incapable of in-flight refueling.

***Tr Move:* 822**
***Com Move:* 25**
***Fuel Cap:* 800**
***Fuel Cons:* 800**

COMBAT EQUIPMENT
None.

SA.341 Gazelle



Merc: 2000 Price: $300,000 (S/S)
Twilight: 2000 Price: $750,000 (R/R)
Armament: 20mm autocannon in flexible mount
Ammo: 500×20mm
Fuel Type: AvG
Load: 1000 kg in 2 hardpoints or 700 kg slung (500 kg internal load at expense of slung load)
Veh Wt: 1.9 tons
Crew: 1+3
Mnt: 12
Minimum Landing/Takeoff Zone: 36 m

Damage Record
Crewmembers: Pilot ☐
Passengers: 1 ☐ 2 ☐ 3 ☐
Radio: ☐
Instruments: ☐
Controls: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

WEAPON DATA

Weapon	*ROF*	*Mag*	*Rng*	*Ammo*	*Damage*	*Pen*
20mm	10	500C	250	API	10	3/–2/–5
			250	HE	C:1, Brst:2	–8C

SA.341 Gazelle (Rotary-Wing Aircraft): The Gazelle is an obsolescent French workhorse that is gradually being replaced by more modern craft. The main armed version in French service is a gunship, and this is the version for which statistics are presented below. Civilian versions have no armament and carry no combat equipment. A 200-kilogram ferry tank can be carried in the cabin at the expense of passengers. No ejection seats are provided, and the helicopter is incapable of in-flight refueling.

***Tr Move:* 1056**
***Com Move:* 31**
***Fuel Cap:* 445**
***Fuel Cons:* 580**

COMBAT EQUIPMENT
Integral flare and chaff dispensers.

AMMUNITION
Use 20mm autocannon records provided on page 99.

SA.360/SA.365 *Dauphin*

Merc: 2000 Price: $200,000 (S/S)
Twilight: 2000 Price: $300,000 (S/—)
Fuel Type: AvG
Load: 2300 kg (internal) +1000 kg (slung) or on 2 hardpoints
Veh Wt: 4 tons
Crew: 2+8
Mnt: 12
Minimum Landing/Takeoff Zone: 40 m

Damage Record
Crewmembers: Pilot ☐ Copilot ☐
Passengers: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐
Radio: ☐
Instruments: ☐
Controls: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

SA.360/SA.365 *Dauphin* (Rotary-Wing Aircraft): A French helicopter in both civil and military use. Civil versions are unarmed and have no combat equipment. No ejection seats are provided, and the helicopter is incapable of in-flight refueling. Armed versions are usually equipped with MG or rocket pods, or ATGM launchers.

***Tr Move:* 1036**
***Com Move:* 31**
***Fuel Cap:* 450**
***Fuel Cons:* 475**

COMBAT EQUIPMENT
None normally fitted.

SA.3160/SA.319 *Alouette* III

Merc: 2000 Price: $125,000 (C/C)
Twilight: 2000 Price: $250,000 (S/R)
Fuel Type: AvG
Load: 1000 kg in 2 hardpoints (external); 2330 (internal)
Veh Wt: 5 tons
Crew: 2+4
Mnt: 12
Minimum Landing/Takeoff Zone: 32 m

Damage Record
Crewmembers: Pilot ☐ Copilot ☐
Passengers: 1 ☐ 2 ☐ 3 ☐ 4 ☐
Radio: ☐
Instruments: ☐
Controls: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

SA.3160/SA.319 *Alouette* III (Rotary-Wing Aircraft): The *Alouette* (skylark) is an older French helicopter now being phased out of French service, but still exported in large quantities. No ejection seats are provided, and the helicopter is incapable of in-flight refueling.

***Tr Move:* 672**
***Com Move:* 21**
***Fuel Cap:* 800**
***Fuel Cons:* 800**

COMBAT EQUIPMENT
None.

UH-1 Iroquois "Huey"

Merc: 2000 Price: $2,250,000 (S/S)
Twilight: 2000 Price: $4,500,000 (S/R)
Armament: Two M60 door guns (P/S)
Ammo: 1000×7.62mmN
Fuel Type: AvG
Load: 1000 kg in 2 hardpoints, or 2000 kg internal slung load at expense of internal capacity
Veh Wt: 5.8 tons
Crew: 4+6
Mnt: 12
Minimum Landing/Takeoff Zone: 40 m

Damage Record

Crewmembers: Pilot ☐ Copilot ☐ Door gunner 1 ☐ Door gunner 2 ☐
Passengers: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐
Radio: ☐
Instruments: ☐
Controls: ☐
M60 Door Gun 1: ☐
M60 Door Gun 2: ☐
Ammo: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

WEAPON DATA

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
M60 door gun	5	4	2-3-Nil	6	100B	1	1	125

UH-1 Iroquois "Huey" (Rotary-Wing Aircraft): The UH-1 "Huey" (also called a "slick") is one of the most famous American military helicopters. Dozens of variants exist, including gunship, troop carrier, casualty evacuation and liaison types. Statistics below are for the Vietnam-era troop carrier. No ejection seats are provided, and the helicopter is incapable of in-flight refueling.

***Tr Move:* 800**
***Com Move:* 20**
***Fuel Cap:* 650**
***Fuel Cons:* 650**

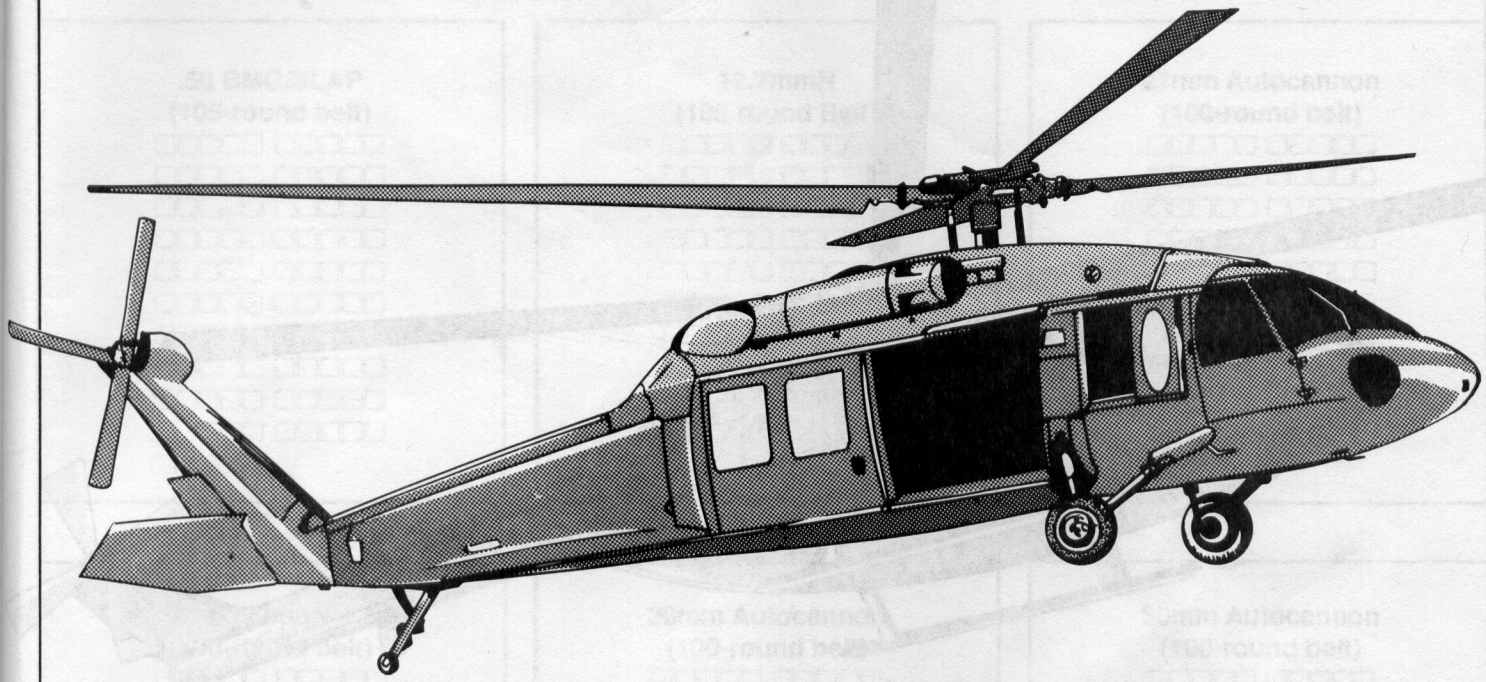
COMBAT EQUIPMENT

None.

AMMUNITION

Use 7.62mmN ammo records provided on page 99.

UH-60 Blackhawk



Merc: 2000 Price: $11,250,000 (R/C)
Twilight: 2000 Price: $22,500,000 (S/R)
Armament: Two M60 door guns (P/S)
Ammo: 1000×7.62mmN
Fuel Type: AvG
Load: 1100 kg (internal); 3600 kg slung load at expense of internal capacity
Veh Wt: 22 tons
Crew: 3+11
Mnt: 12
Minimum Landing/Takeoff Zone: 48 m

Damage Record

Crewmembers: Pilot ☐ Copilot ☐ Crew chief ☐
Passengers: 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐
Radio: ☐
Instruments: ☐
Controls: ☐
M60 Door Gun 1: ☐
M60 Door Gun 2: ☐
Ammo: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

WEAPON DATA

						—Recoil—		
Weapon	*ROF*	*Dam*	*Pen*	*Blk*	*Mag*	*SS*	*Brst*	*Rng*
M60 door gun	5	4	2-3-Nil	6	100B	1	1	125

UH-60 Blackhawk (Rotary-Wing Aircraft): The Blackhawk is the current US Army transport and utility helicopter. Statistics for the troop transport version are given, although several variants exist. No ejection seats are provided, and the helicopter is capable of in-flight refueling via a nose probe.

***Tr Move:* 1076**
***Com Move:* 29**
***Fuel Cap:* 3500**
***Fuel Cons:* 3500**

COMBAT EQUIPMENT

Integral chaff and flare dispensers, IR suppression.

AMMUNITION

Use 7.62mmN ammo records provided on page 99.

Westland Lynx

Merc: 2000 Price: $1,250,000 (—/C)
Twilight: 2000 Price: $2,750,000 (R/—)
Armament: No fixed armament
Ammo: Various, depending on armament
Fuel Type: AvG
Load: 1000 kg (internal), or 1300 kg slung or on 4 hardpoints
Veh Wt: 10 tons
Crew: 2+4 (3 if paratroopers)
Mnt: 12
Minimum Landing/Takeoff Zone: 30 m

Damage Record
Crewmembers: Pilot ☐ Copilot ☐
Passengers: 1 ☐ 2 ☐ 3 ☐ 4 ☐
Paratroopers: 1 ☐ 2 ☐ 3 ☐
Sight/Vision: Gun sight ☐ Range finder ☐ Night vision equipment ☐
Radio: ☐
Instruments: ☐
Controls: ☐
Weapon (If Present): ☐
Ammo (If Present): ☐
Traverse: ☐
Engine: ☐
Fuel (% Consumed or Destroyed): ☐☐☐☐☐ ☐☐☐☐☐

Westland Lynx (Rotary-Wing Aircraft): The British-built Lynx has recently been upgraded (the Lynx-3), and it is still in service with the British Army and other armies worldwide. No ejection seats are provided, and the helicopter is incapable of in-flight refueling.

***Tr Move:* 1060**
***Com Move:* 26**
***Fuel Cap:* 1200**
***Fuel Cons:* 1200**

COMBAT EQUIPMENT
Integral flare and chaff dispensers.

Helicopters such as the Lynx have proven very valuable in remote stations such as the South Georgia Islands. The civilian version of the Lynx has also gained quite a reputation for reliability—an important consideration when operating in remote regions.

AMMUNITION RECORD FORMS

Some ammo types are present in too large a quantity to be readily recorded in the space available on the vehicle sheets. Make as many copies of these forms as you need (clipping and pasting them as required) to assemble an ammunition record for each vehicle. Each box represents a single round of ammunition unless otherwise noted.

.50 BMG/SLAP
(105-round belt)

12.7mmN
(105 round Belt)

27mm Autocannon
(100-round belt)

5.56mmN
(100-round belt)

20mm Autocannon
(100-round belt)

30mm Autocannon
(100-round belt)

7.62mmN
(100-round belt)

25mm Autocannon
(100-round belt)

40mm Autocannon
(100-round belt)

E. STUNTON

ORGANIZATIONS

The administrative organizations of various nations' air assets are not of tremendous importance to players and referees of either **Twilight: 2000** or **Merc: 2000**, except in an intellectual sense. We have given only a few brief notes on these organizations, with the aim of helping the referee figure out what will turn up on the battlefield (either to help or hinder the characters).

United States

US ARMY

After the Second World War, when the United States Army Air Force split off from the US Army to become a separate branch of service (the US Air Force), the two branches split up their aviation assets between them. The Army was allowed to fly helicopters and small, fixed-wing aircraft (suitable for liaison and forward observer duties). The Air Force got everything else. The Army was not allowed to have large transport aircraft (for its paratroopers) or ground attack aircraft under its direct control—such things were the province of the newly created Air Force.

Perhaps because of this, the United States Army pushed for development of armed helicopters, and makes greater use of helicopters than most of the armies of the world. Helicopters are an integral part of the organization at the division level and below. One division of the American Army, the 101st Air Assault, is trained and equipped for heliborne operations. In the US Army, observation helicopters perform reconnaissance, forward observer, liaison, and light transport duties. Utility and cargo helicopters not only carry troops and equipment during airmobile operations, but often serve as the only logistical supply link between rapidly moving advance units and their rear echelons. Utility helicopters are also assigned to medical units for casualty evacuation duties. Attack helicopter teams roam deep within the enemy rear, disrupting communications and destroying troop concentrations.

Aviation assets of the US Army tend to operate in teams of two to four helicopters, the normal team consisting of two attack helicopters (typically AH-64s) operating with one or two observation helicopters (typically OH-58s). The observers locate the enemy and guide the attack helicopters to them.

Special Forces TF-160

12 AH-6 "Defenders"
5 MH-6 Cayuses
2 OH-6 Cayuses
16 MH-47E Chinooks
30 UH-60 Blackhawks

Notes: Due to the specialized nature of this unit, the organization of subunits varies with each individual mission assignment.

Air Cavalry Combat Brigade

Headquarters:
2 UH-60 Blackhawks
1 Air Cavalry Squadron:
Headquarters:
4 UH-60 Blackhawks
2 Air Cavalry Troops:
6 OH-58 Kiowas
4 AH-64 Apaches
1 Attack Helicopter Battalion:
Headquarters:
3 UH-60 Blackhawks
3 Attack Helicopter Companies, each with:
7 RAH-66 Comanches or AH-64 Apaches
4 OH-58 Kiowas
2 Transport Helicopter Companies, each with:
15 UH-60 Blackhawks

Notes: One per light infantry division.

Attack Helicopter Battalion

Headquarters:
3 UH-60 Blackhawks
3 Attack Helicopter Companies, each with:
7 RAH-66 Comanches or AH-64 Apaches
4 OH-58 Kiowas

Notes: One or two with each armored or mechanized infantry division.

Transport Helicopter Battalion

Headquarters:
2 UH-60 Blackhawks
3 Transport Helicopter Companies, each with:
15 UH-60 Blackhawks

Notes: Attached as needed, two with the 101st Division (Air Assault).

Medium Transport Helicopter Battalion

Headquarters:
2 UH-60 Blackhawks
3 Medium Transport Helicopter Companies, each with:
16 CH-47 Chinooks

Notes: Attached as needed, one with the 101st Division (Air Assault).

Air Cavalry Squadron

Headquarters:
4 UH-60 Blackhawks
2 Attack Helicopter Troops:
4 OH-58 Kiowas
7 RAH-66 Comanches or AH-64 Apaches
3 Scout Helicopter Troops:
6 OH-58 Kiowas
4 AH-64s

Notes: One per airborne or airmobile division or armored cavalry regiment (ACR).

Air Cavalry Troop

6 OH-58s
4 RAH-66 Comanches or AH-64 Apaches

Notes: Two per armored or mechanized divisional cavalry squadron.

US AIR FORCE

USAF air assets are ground-based and are organized in squadrons as the basic unit. The number of aircraft in a squadron varies according to the type of aircraft and the location of the unit, but 18-24 is common. A group consists of two (occasionally only one) squadrons with associated ground support personnel and equipment. A wing is slightly larger, and contains four (occasionally three) squadrons with associated ground support personnel and equipment.

The USAF operates several special operations units equipped with MC-130H Combat Talons, MH-54H Pave Low II, MH-53J Pave Low III, and other specialized aircraft. These aircraft are often used to deliver and support special operations forces from all arms (Army Special Forces and Navy SEALs as well as United States Air Force S&R, and others).

For a ground attack mission, the number and type of aircraft attacking a specific target will vary. An average of from two to six aircraft (flying in pairs) will hit a given target most of the time. Ground attack aircraft (such as the A-10 "Warthog") sometimes patrol a given section of the front, looking for ground targets to attack.

US NAVY

Aviation assets of the US Navy are primarily assigned to ships; fixed-wing aircraft operate from carriers, while helicopters operate from carriers or other vessels. Each fleet aircraft carrier carries about 74 fixed-wing aircraft, of which 34 are ground attack oriented (24 F/A-18 and 10 A-6E). Special amphibious assault ships are designed to carry a landing force of US Marines plus transport helicopters (normally CH-47 or CH-53) and attack aircraft (sea versions of the AH-1 and AH-64, or AV-8B Harriers). Other ships can carry one or more helicopters for various duties (ASW patrols, mine-sweeping, observation, liaison, etc.), most of which are not relevant to the game.

The number and type of aircraft attacking a specific target will vary. An average of from two to six aircraft (flying in pairs) will hit a given target most of the time.

France

FRENCH ARMY

French helicopters take an American-style, mixed team-oriented approach, with two attack helicopters (SA.341 Gazelles or SA.3160/319 *Alouette* IIIs) accompanied by one or two light scout helicopters. French Army helicopters are part of the *Aviation Légère de L'Armée de Terre* (ALAT, or Army Light Aviation) forces. French helicopter units are formally attached at the corps level (except for the three *Régiment d'Hélicoptères de Combat* (combat helicopter regiment) with airmobile divisions), but are often temporarily deployed to lower echelons for individual missions (such as lifting an infantry battalion in an airmobile assault).

Under French doctrine, the corps *Groupe Hélicoptères Légeres* (Light He-

licopter Group) provides scouting for the attack helicopter teams (antitank guided missile-equipped Gazelles or *Alouette* IIIs accompanied by autocannon-armed Gazelle gunships).

***Régiment d'Hélicoptères de Combat* (Combat Helicopter Regiment)**

HQ Flight:
2 SA.330 Pumas
1 Support & Protection Squadron:
10 SA.341 Gazelles with 20mm autocannons
3 Antitank Squadrons:
10 SA.341 Gazelles with antitank guided missiles or SA.3160/319 *Alouette* IIIs with ATGMs
2 Tactical Transport Squadrons:
10 SA.330 Pumas

Notes: Three per airmobile division, one per corps.

***Groupe Hélicoptères Légeres* (Light Helicopter Group)**

30 SA.330 Pumas and/or SA.3160/319 *Alouette* IIIs

Notes: One per corps, for scout, liaison and casualty evacuation duties.

FRENCH AIR FORCE

The *Armée de l'Aire* is organized into wings and squadrons similar in size and makeup to those of other nations, and equally irrelevant to the game. The French Air Force also maintains about 40 medium and 90 light transport helicopters in groups of 10-20 aircraft.

FRENCH NAVY

French naval air assets make use of carriers and land basing. French carriers of the *DeGaulle* class carry 35-40 fixed-wing and rotary-wing aircraft.

Germany

GERMAN ARMY

German attack helicopter tactics differ radically from the rest of NATO: German attack helicopters operate in flights of seven helicopters, with each helicopter locating and attacking its own targets. German fixed-wing aircraft operate in pairs. Recon helicopters are attached to the headquarters of the corps-level Aviation Command, which consists of an antitank helicopter regiment, one light and one medium aviation transport regiment. The Germans hope to make up for the lack of scouting with an intimate knowledge of the local terrain acquired by intensive training flights. Note that a German helicopter regiment actually has only one battalion of helicopters.

Germany has no naval aviation assets of interest to players of the game.

Light Flight Battalion

Headquarters:
2 Light Transport Companies:
16 UH-1s

Notes: One per light aviation transport regiment.

Medium Flight Battalion

Headquarters:
2 Light Transport Companies:
12 CH-53s

Notes: One per medium aviation transport regiment.

Antitank Flight Battalion

Headquarters:
4 Bo-105s (Scout and Liaison)
2 Antitank Squadrons:

28 Bo-105s with ATGMs or Bo-117s with ATGMs

Notes: One per corps antitank helicopter regiment.

GERMAN AIR FORCE

The *Luftwaffe* is organized in squadrons of approximately 30 aircraft which, like most nations, operate in pairs.

United Kingdom

BRITISH ARMY

British Army aviation assets are part of the Army Air Corps. Attack helicopters are attached at division level, and operate in close cooperation with ground forces. Recon helicopters also perform artillery spotting and liaison duties. Transport is usually left to the appropriate helicopter squadrons of the Royal Air Force, although the Army Air Corps can carry troops or supplies if needed.

Divisional Aviation Troop
6 Lynx AHs
6 Gazelle OHs

Divisional Aviation Squadron
Headquarters:
3 Aviation Troops:
6 Lynx AHs
6 Gazelle OHs

ROYAL AIR FORCE

The Royal Air Force is organized in squadrons consisting of a variable number of aircraft depending upon the type of squadron and its location. Jaguar squadrons have between 13-18 planes, Harrier squadrons between 18-24, and transport aircraft tend toward 9-10 planes per squadron. British aircraft follow NATO doctrine and operate in pairs. The British-designed Harrier aircraft is able to operate very close to the front lines, and rapid response to air support requests is strongly emphasized during training.

Medium-Lift Helicopter Squadron
14-20 Pumas

Heavy-Lift Helicopter Squadron
9-10 CH-47s

ROYAL NAVY

British naval aviation has concentrated on antisubmarine warfare for several years, but the Harriers operated by the Royal Navy are capable of ground attack missions if necessary. The largest British carriers carry 21 fixed-wing and rotary-wing aircraft, and many smaller vessels (cruisers, etc.) carry one or more helicopters for various duties irrelevant to the game.

Union of Soviet Sovereign Republics

SOVIET ARMY

Soviet Army aviation assets, like those of many other armies, consist mostly of helicopters, fixed-wing liaison aircraft, and fixed-wing transport aircraft.

Helicopter Squadron
12 Mi-8s
4 Mi-6s

Notes: One per combined arms army.

Transport Helicopter Regiment
2 Heavy-Lift Squadrons:
12 Mi-6s or Mi-26s
2 Medium-Lift Squadrons:
12 Mi-8s or Mi-17s

Notes: One per tank army.

Attack Helicopter Regiment
2 Hind Squadrons:
15 Hinds
1 Hip Squadron:
15 Mi-8 Hips

Notes: One per tank army.

SOVIET AIR FORCE

For many decades after the Second World War, the Soviets did not have a formal fixed-wing ground attack aircraft. Their tactical planners believed that no aircraft could survive in their forward air defense zone (not even their own), and that artillery could provide ample support for main force attacks. Army helicopters such as the Hind and Hip were more than adequate for less intensive conflicts or for special operations such as airmobile operations. With this idea uppermost, the Soviets formed their tactical air force on the notion of long-range operations almost completely.

The Second Persian Gulf War amply demonstrated that the Soviet postwar air doctrine was bankrupt, however. The Iraqi air defense forces used Soviet equipment and doctrine, and Coalition aircraft flew through the Iraqi air defense zones with impunity, destroying Iraqi aircraft and Iraqi air defense installations with very few Coalition casualties. The Soviets studied the war, and concluded that while they might have caused more casualties in the attacking aircraft, the overall result—loss of air supremacy—would have been the same with their forces on the receiving end.

As part of the complete restructuring of Soviet air doctrine, Soviet air tacticians began to experiment with various aircraft and weapon combinations for direct air support of front-line troops, finally settling on a virtual duplicate of the American model using the Su-25 Frogfoot ground attack aircraft (which bears a slight resemblance to the A-10 "Warthog").

It turned out, however, that in the late 1990s, Soviet experiences in Afghanistan were to prove more valuable to them than American experiences in the Persian Gulf.

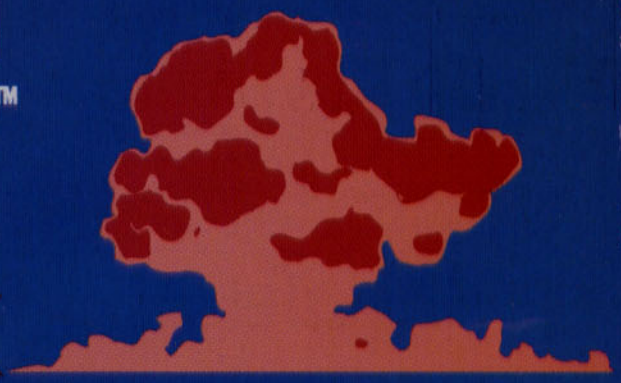
SOVIET NAVY

Soviet naval aviation is concentrated mainly in smaller helicopter carriers such as the *Minsk*-class, but the Soviets have produced one larger carrier, the *Brezhnev* (which was to be called the *Riga* before the civil strife in the Baltic republics made that name unsuitable for a Soviet ship).

Other Nations

Most smaller countries use a variation of US, Soviet, British, or French aircraft organizations and tactics. Few nations make as extensive a use of attack helicopters as these nations, instead tending to use helicopters for liaison, logistical, casualty evacuation, and special ops duties. Most armies maintain a few heliborne troops for civil affairs duties, if for nothing else.

NAUTICAL/AVIATION™ Handbook



The **Nautical/Aviation Handbook** is intended to supplement and extend the basic vehicle listing provided with the 2nd edition **Twilight: 2000** rules, and to provide an extension to the rules for aircraft.

The **Nautical/Aviation Handbook** includes eight new water craft, ranging from the Hayes Barracuda (a two-man minisub) to the SAR-38 (a 12-man light reconnaissance patrol boat). In addition to rules for aircraft, the **Nautical/Aviation Handbook** contains statistics and game ratings for 29 fixed wing and 35 rotary wing aircraft, including the A-10 Thunderbolt II, AC-130H Spectre, AV-8B Harrier II, CV-22 Osprey, F.1 Mirage, F-15E Strike Eagle, F-5E Tiger II, MC-130H Combat Talon, Panavia Tornado, Su-25 Frogfoot, A129 Mangusta, AH-64 Apache, AS.350 Ecureuil, MBB/Kawasaki BK-117, Mi-28 Havoc, RAH-66 Comanche, SA.341 Gazelle, and UH-60 Blackhawk.

The aircraft rules included with the **Nautical/Aviation Handbook** are fully compatible with **Twilight: 2000** and all GDW roleplaying games that use the **Twilight: 2000** system (**Dark Conspiracy**, **Merc: 2000**, and **Cadillacs and Dinosaurs**). Rules are included for air-to-air, air-to-ground, and ground-to-air combat, in-flight refueling, ditching, crash-landing, and parachute drops (both personnel and equipment).

To top it off, the vehicle guide includes eight pages of color plates showing representative vehicles in their field color schemes. Players and referees of **Twilight: 2000** and **Merc: 2000** as well as aviation enthusiasts in general will find the **Nautical/Aviation Handbook** a welcome addition to their game library.

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