

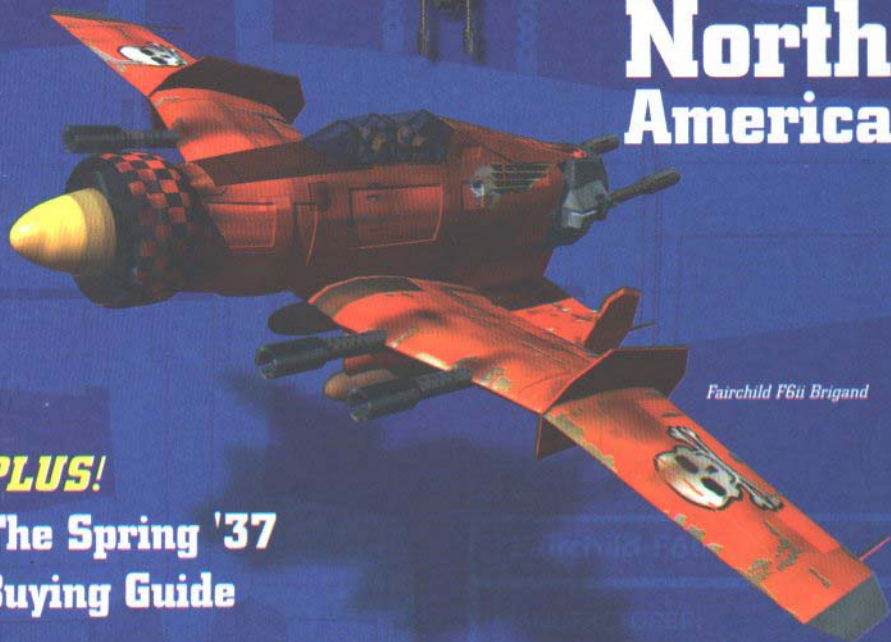
AIR ACTION^{Weekly}

SPRING 1937 - SPECIAL EDITION

ES, DC, PG, 45c / HW, TX, DX 30c / ISA 55c / CAN 75c



AAW Reviews the
Aircraft of
North
America



Fairchild F6U Brigand

PLUS!

The Spring '37
Buying Guide



MISS FORTUNE



FIRST AID
UNDER PA

LETTER FROM THE EDITOR 5**AIRCRAFT OF NORTH AMERICA**

Whittly & Douglas M210 Raven	7
Curtiss-Wright J2 Fury	11
McDonnell S2B Kestrel	15
Bell Valiant MkII	19
Curtiss-Wright P2 Warhawk	23
Grumman E-1C Avenger	27
Hughes-Lockheed Firebrand	31
Hughes Aviation Bloodhawk	35
Marquette PR-1 Defender	39
Fairchild F6II Brigand	43
Hughes P21-J MkIII Devastator	47
Sanderson FB14 "Vampire"	51
William and Colt Peacemaker 370	55
Ravenscroft Coyote	59

AIRCRAFT CONSTRUCTION

SYSTEM	63
Constructing Aircraft	63
Choose Aircraft Type	63
Choose Base Target Number and Class	63
Choose Maximum Speed	64
Choose Maximum G Rating	65
Choose Maximum Acceleration	65
Apply Maximum Deceleration	66
Choose and Allocate Armor	66
Choose Weapons	66
Determine Cargo Area	66
Fill Out Record Sheet	67

CLASSIFIED

ADVERTISEMENTS	69
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A special thanks to J.M. Albertson for moving us from Europe to America and to Mitch Gitelman and Heinz Schuller for being there at the painful beginning.

On a personal note, I would like to thank all of the people who have worked at nights and on weekends to bring this common dream to life. A game may seem to be a small thing to be called a common dream, but it has indeed been a dream to work with such a talented group from around the world on a universe that has become an extension of all us. Thank you for what has been and I hope will continue to be a very rewarding experience.

Jordan Weisman

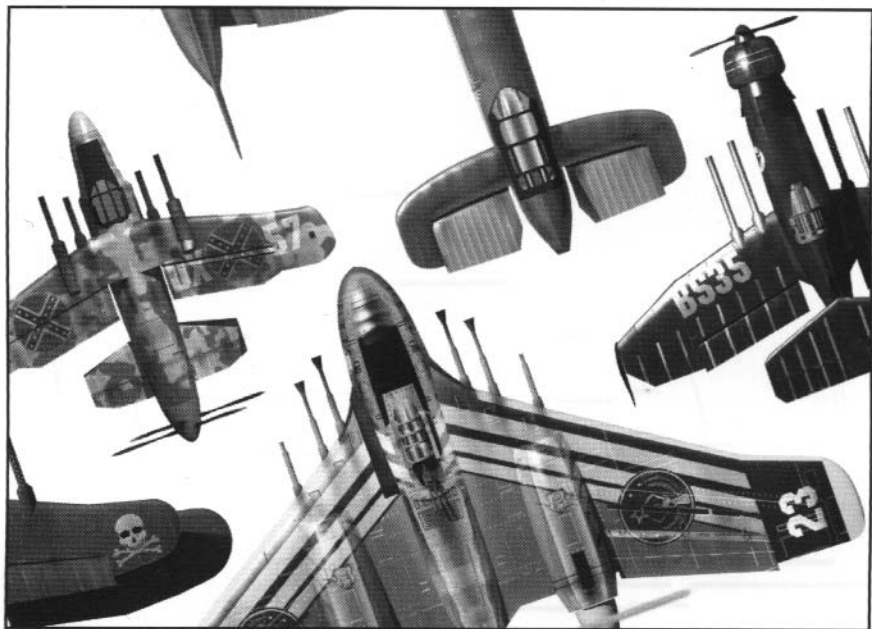
P.S. To all the wives, husbands, children, and significant others, (in my case Dawne, Zach, Nate, and Lucas) - thanks for not clipping our wings and letting us fly.

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AIR ACTION WEEKLY'S 1937 AIRCRAFT REVIEW



Since the inception of *Air Action Weekly*, the annual review of North American aircraft has been one of this magazine's major features. Our technical staff spent the past twelve months researching aircraft manufacturing, air combat actions and other aviation-related news; the following descriptions are the fruits of that research, based on careful weighing of a wide range of information.

Traditionally, the annual review focuses on a dozen aircraft—not necessarily the best or the newest designs, nor limited to American manufacturers, but instead those deemed to have had the greatest impact on the North American nations. These aircraft may belong to individuals, or have seen service in militias, pirate bands or national air forces.

Selecting a mere twelve aircraft from the more than one hundred designs and variants in service across the shattered American landscape is always a difficult task. This year, the introduc-

tion of several new models has made the choice that much harder, even when limiting the eligible designs to fighters and fighter-bombers. As a result, *Air Action Weekly* has expanded the number of aircraft reviewed to fourteen. This change allows us to cover a broader sweep of designs, from the ultra-sophisticated craft of Hollywood and the Dixie Confederacy to the aging vehicles in service with pirate groups.

Each design description contains background information on the design's creation, history and specifications, as well as manufacturers and famous pilots and planes associated with it. Though *Air Action Weekly* has made every effort to ensure the veracity of the facts presented, the management does not vouch for the accuracy of the information and accepts no liability for any injury or death resulting from misuse.

—John Graham, Technical Editor

THE
LIFE
OF
THE
NATION
Weekly



Whittly & Douglas M210 Raven

The years following the collapse of the United States saw a dramatic rise in the design and construction of military aircraft for use by government agencies, air militias and private citizens. Many of the new American nations lacked native industries, while ties to hostile new neighbors hamstrung others. The Industrial States of America soon dominated manufacturing, earning a reputation for quality mass production, though without the design flair of Hollywood and the Empire State (aviation heartland of the old America).

Whittly & Douglas was among the companies that took up the challenge, though a series of financial problems led it to be less than discriminating with regard to its customers. Consequently, Whittly & Douglas designs today are more likely to be seen in a pirate fleet than in the hands of their intended buyers, the ISA air militias.

DESIGN HISTORY

Intended for easy field maintenance, the M210 Raven is a highly customized aircraft; few

are configured in exactly the same way. A multi-role fighter and fighter-bomber, the Raven's shape and use of a pusher-prop give it agility rarely matched in its weight class and role. However, the design is also relatively underpowered, rarely exceeding 250 mph. Some modified Ravens use a supercharger with a nitro-boost system, though the nose on these planes has a tendency to rise and buck when the craft hits higher than normal speeds.

Unusually for a fighter-bomber, the M210 Raven is a single-seat design. Some groups that use it, most notably the private air militia known as the Detroit Crusaders, have added a seat for a weapons operator in the rear of the plane's spacious cockpit. Being seated so close to the engine, however, makes communication with pilots extremely difficult.

Three sets of wing-mounted guns are the aircraft's principal armaments, providing firepower that can rapidly shred opposing vehicles. The largest are the 50-caliber Sperry-Browning "Hurricane" cannons, one mounted in the

inboard weapon bay on each wing. The other two pairs are 40-caliber "Gatekeeper" machine guns, two per wing in the outboard mountings. The ammunition feed mechanism's poor design, however, requires all the guns to use the same ammunition type. Wing pylons allow the Raven to carry rockets, aerial torpedoes or bombs. Despite limited cockpit visibility, the craft has earned a reputation for precision delivery of its payload; pilots learn to use the Raven's distinctive nose to aim.

Though surpassed in many respects by several more modern designs, this aircraft's ease of maintenance, adaptability and sheer numbers (with more than 750 remaining in service) will keep the Raven a common sight in the skies over the disunited states of America.

MANUFACTURER

Founded in 1920, the Douglas Aircraft Company was heavily involved in the development of civil aviation. It opened aircraft plants across North America throughout the twenties, until the Crash of '29 shattered the company and drove CEO Donald Douglas to the brink of bankruptcy. Faced with rising debts, Douglas had little choice but to enter into partnership with Chicago financier Albert Whittly, whose business acumen and hard-nosed policies had saved his own Racine Bank. The partnership prompted the relocation of the company headquarters to Chicago, but Whittly & Douglas remained low on operating capital despite the financier's involvement.

The collapse of the USA in 1930 deepened the company's financial crisis, as the sudden halt

of inter-state trade crippled company operations. Salvation came in the unlikely person of Hollywood entrepreneur Howard Hughes, who had formed his own aircraft company just before the Crash. Hughes offered to purchase the Douglas plant at Clover Field in Santa Monica, and the capital from this transaction allowed Douglas to claw its way out of the Great Depression. The first new aircraft produced by the company since the Crash—the civilian DC-2 Iroquois—entered service in 1931, followed in 1933 by

Whittly & Douglas' first military plane, the M210 Raven fighter-bomber. A dedicated fighter, the F370 Vulture, entered service in 1935.

Whittly-Douglas currently operates three plants: one in Chicago, Illinois (ISA), one in Oklahoma City and one in Tulsa, Oklahoma (Republic of Texas).

**"So it's not
cutting-edge
—it works,
and that's
good enough
for me."**

**—The Black Swan,
1937**

ROLE AND DEPLOYMENT

Though intended as a ground attack craft, the M210 Raven has carved out a niche as an anti-aircraft gunship. The Raven's mix of agility and firepower make it ideal for this task, allowing for selective targeting of engine pods or weapons, or wholesale destruction of gas cells. However, this same mix of capabilities has proven the bane of many Raven pilots. The lack of effective opposition to the Raven's heavy guns in its early years made many flyers overconfident, prompting them to dogfight with enemy escort aircraft. Though the Raven's agility still gives it something of an edge in these engagements, its poor acceleration and deceleration, combined with a low maximum speed com-

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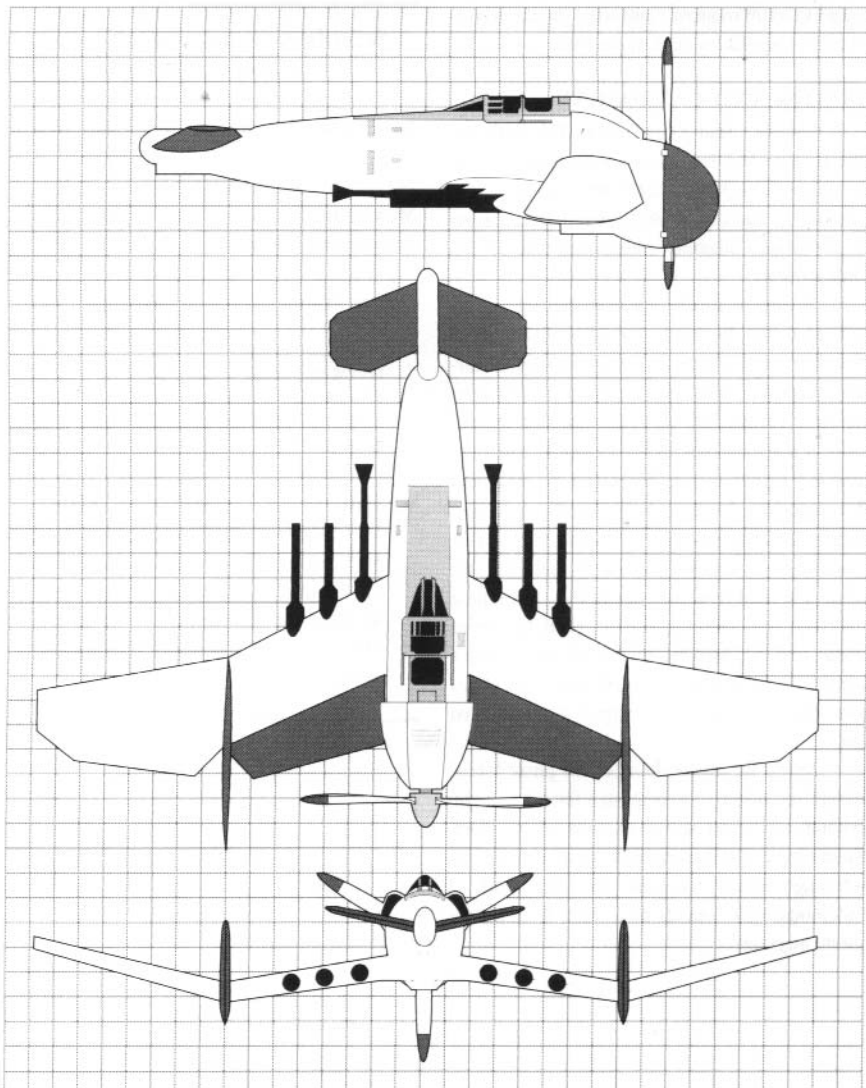
Black Swan



ISA



Texas



Whittly & Douglas M210 Raven

Class:
Heavy Fighter (pusher)

MANUFACTURER:
Whittly & Douglas, Chicago, USA

ENGINE:
Pratt & Whitney Hornet Series II (1,261 hp)

WING SPAN: 33 ft., 11 in. **LENGTH:** 25 ft., 5 in. **HEIGHT:** 12 ft., 2 in.
(excluding prop)

Loaded Weight:
10,750 lbs

Service Ceiling:
21,000 ft.

Range:
400 miles

Max. Speed:
250 mph

Max Accel:
32.8 feet/second

Max Decel:
65.6 feet/second

WEAPONS:

(2) Sperry-Browning "Hurricane" 50-caliber cannons, (4) Sperry-Browning "Gatekeeper" 40-caliber machine guns

pared to more modern craft, leave the Raven vulnerable when facing such opponents.

PILOTS AND CAMPAIGNS

Edward "Mad Eddie" Sears flies with the Black Swan and has earned a reputation as an innovative, if reckless, pilot. Sears is credited with "inventing" the use of bombs against aerial targets in the group's infamous engagement with the ISS *Indomitable*.

Moving to attack what they thought was an ISA cargo ship, the pirates were horrified to learn that their prey was actually a disguised combat airship, complete with several squadrons of escort fighters. Thrown on the defensive, the pirates faced a potential rout. In an attempt to avoid the airship's fighter escort, Sears and his wingman flew along the larger vessel's length—an action similar to flying low over a ground target. This gave Sears an idea for evening up the battle. He made a second pass over the airship, this time a thousand feet above it, and dropped his entire bomb payload. Striking slightly off the airship's centerline, the attack punctured several starboard gas cells, which gave the zeppelin a pronounced list.

Seeing the airship founder, the pirate forces rallied and managed to beat back the ISA fighters. Without the fighter screen to ward off the Black Swan's band, the *Indomitable* was easy prey. Its wreckage, which lies some 50 miles south of Columbus, Ohio, stands as a mute testament to pirate ingenuity.

Whittly & Douglas M210 Raven Game Statistics

Base Target Number 4 7,000 lbs.

Maximum Speed: 3 1,680 lbs.

Maximum Gs: 3 2,100 lbs.

Acceleration Rate: 1 560 lbs.

Armor Points 280 840 lbs.

Nose 50

Port Wing Leading 50

Port Wing Trailing 40

Starboard Wing Leading 50

Starboard Wing Trailing 40

Tail 50

Weapon	Arc	Mass
50 Caliber	Forward	400 lbs.
50 Caliber	Forward	400 lbs.
40 Caliber	Forward	250 lbs.
40 Caliber	Forward	250 lbs.
40 Caliber	Forward	250 lbs.
40 Caliber	Forward	250 lbs.



Curtiss-Wright J2 Fury

In 1903, the Wright brothers entered the history books by making the first powered flight at Kittyhawk, North Carolina. The company they founded has steadily grown, going from strength to strength despite mergers, buyouts and litigation. The J2 Fury fighter, so ably used by the Black Swan's forces, is the latest in a line of aircraft directly descended from the original Wright Flyer.

Developed to meet the demand for increased air power in the newly fractured America, the abilities of the Fury make it a much sought-after plane. Curtiss-Wright's unique position as a multinational company has made its planes, especially the Fury, a common sight in the North American skies.

DESIGN HISTORY

Eschewing the fashionable pusher-prop in favor of a traditional engine and propeller assembly, the Fury incorporates a number of tried and tested systems that make it a solidly reliable aircraft. Powered by a 14-cylinder Wright R-1800-C engine, the Fury can reach almost 250 mph in

level flight and still remain maneuverable thanks to its wing-and-tail assembly. This capability comes with a trade-off; the craft is nose-heavy, with a tendency to stall at speeds usually considered safe. An attempt by Curtiss-Wright to rectify this problem with canard wings adversely affected maneuverability and was therefore abandoned.

A massive 70-caliber Goliath cannon is located on the plane's centerline, mounted on a pylon long enough to place its barrel outside the propeller disc. Though the gun can deliver devastating firepower, it is also prone to jam, which often forces the pilot to rely on the Fury's four wing-mounted 40-caliber cannons. These guns can fire at longer ranges than their larger relative, but lack the Goliath's stopping power. When combined with rockets, however, whose massive warheads can easily rip through armor and vital systems, the smaller-caliber guns can do considerable damage. Dum-dum and magnesium rounds are particularly effective at exploiting rocket-made armor breaches, and are widely regarded as a standard feature of the Fury.

The location of the cockpit at the base of the plane's T-shaped tail has earned the Fury a reputation as a difficult aircraft from which to bail. A traditional side-leap maneuver would cause the pilot to collide (fatally) with the tail assembly. Instead, bailing Fury pilots must hang from the cockpit and aim for the narrow gap between tail and wing—a tough proposition in the heat of combat. The side-ways-hinged canopy, which restricts entry and egress to the left side of the aircraft, only adds to the problem.

MANUFACTURER

Founded in Dayton, Ohio, the Wright Company spent its early years fighting patent infringement cases, and despite gaining sizable sums from royalties, soon found itself outclassed by its competitors. The company struggled until 1915, three years after Wilbur Wright's death, when Orville Wright sold it to a New York finance company and created the Curtiss-Wright Corporation. The company swiftly became one of the most diverse in North America, expanding to include plants in upstate New York; Columbus, Ohio; St. Louis, Missouri; and Louisville, Kentucky.

The Crash and the subsequent dissolution of the United States threatened Curtiss-Wright's survival, but the company soon bounced back with the release of the J1 Ascender in 1931. The J2 Fury quickly followed in 1932, the P2 Warhawk and the J3 Eagle in 1934. A new model, the J4 Crusader, is currently undergoing trials at Buffalo and is expected to enter service in 1938.

Curtiss-Wright's multinational holdings pose a particular problem, with research and manufacturing sites spread across the Empire State, the

ISA, Dixie and Appalachia. The mutually antagonistic relationships between these countries have prompted Curtiss-Wright to develop inventive shipping and management policies, and the company is legally headquartered in neutral Columbia. CEO Glenn Wagner has won concessions from the governments in whose territory his plants lie to allow free passage of Curtiss-Wright goods in exchange for favorable purchase deals. Ironically,

the Fury has become a mainstay of pirate bands like the Black Swan's and others, and is frequently used to attack Curtiss-Wright airships.

**"A sleek and
deadly beast,
just like the
Black Swan."**

—Jonathan "Ghengis"
Kahn, 1937

ROLE AND DEPLOYMENT

Until recently a mainstay of the ISA, the Fury is being withdrawn from front-line service and replaced by the GM Tempest. Dixie and Empire State use has likewise fallen off in the past year as more

advanced aircraft come into service, resulting in a burgeoning market in second-hand Furies. Most go to private individuals or small militia units, from which many have fallen into the hands of pirate bands.

The craft serves best as an interceptor, using its mix of speed and agility along with raw firepower to harass enemy aircraft. The Fury also works well as an anti-zeppelin platform; its centerline Goliath cannon allows for precision strikes against engine pods or gun turrets. Some groups also use the Fury in a ground-support role, attacking buildings and ground units. However, the need to dive at the target to bring the cannons to bear exposes the plane to withering return fire, and tends to result in excessive losses.

— In the Service of —



Black Swan



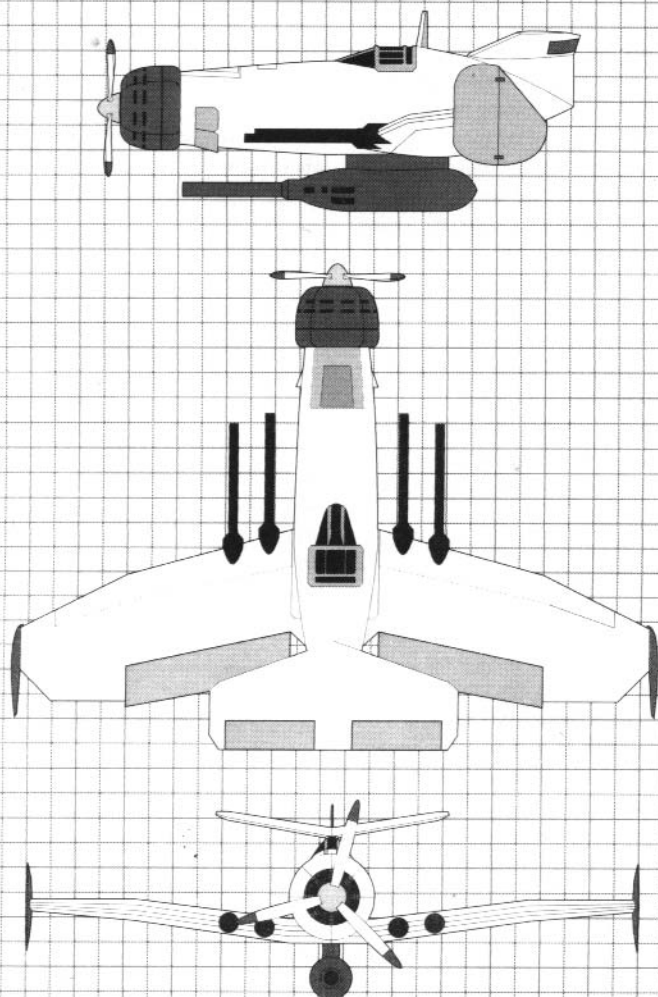
ISA



Empire State



Dixie



Curtiss-Wright J2 Fury

Class:
Fighter (Tractor)

MANUFACTURER:
Curtiss-Wright Aviation, Cleveland, Ohio, USA

ENGINE:
14-cylinder Wright r-1800-C (856 hp)

WING SPAN: 28 ft., 4 in. **LENGTH:** 21 ft., 3 in. **HEIGHT:** 14 ft., 9 in.
(excluding prop)

Loaded Weight:
7,000 lbs

Service Ceiling:
18,000 ft.

Range:
400 miles

Max. Speed:
250 mph

Max Accel:
65.6 feet/second

Max Decel:
65.6 feet/second

WEAPONS:

(2) Bruin Armaments 30-caliber machine guns, (2) Bruin Armaments 40-caliber machine guns, (1) Bruin Armaments "Goliath" 70-caliber cannon

PILOTS AND CAMPAIGNS

Blonde and petite, pilot Judith "Valkyrie" DuChamp is the physical opposite of her boss, the Black Swan. Like the Swan, however, she has carved out her own niche in the male-dominated world of American air aces, earning the respect of her colleagues and the fear of her enemies. Raised in Colorado, Du Champ was the daughter an aircraft engineer who worked for the pirate captain Red Sky. Judith grew up longing to become a pilot; she got her chance in 1932, with the arrival of a new recruit to Red Sky's band.

Already an accomplished aviator, Judith was allowed to serve as her father's assistant on a raid into Arixo. The pirate band attempted to hijack a passenger zeppelin, but soon found themselves competing for the prize with another pirate band, the Sun Children. Red Sky's airship came under attack, and a direct hit to its crew quarters badly injured several pilots.

Seeing her opportunity, DuChamp took off in the Fury that belonged to Roman "Caesar" Spencer. Almost immediately, she encountered the newest Red Sky pilot beset by three Sun Children aircraft. She moved to assist, using sonic rockets as a distraction and giving the friendly time to evade. The hunted then became the hunters, as the rescued Red Sky pilot shot down two pursuers. Judith downed the third, earning the new recruit's respect and gratitude.

That recruit was the Black Swan. When the Swan left Red Sky's group, Judith went along as her wingman, and now serves as a squadron commander with the Black Swan gang. Her father, "Pop" DuChamp, is the chief mechanic on the gang's airship, the *Huntress*.

Curtiss-Wright J2 Fury Game Statistics

Base Target Number	7	4,000 lbs.
Maximum Speed:	3	600 lbs.
Maximum Gs:	3	840 lbs.
Acceleration Rate:	2	240 lbs.
Armor Points	220	660 lbs.
Nose	40	
Port Wing Leading	40	
Port Wing Trailing	30	
Starboard Wing Leading	40	
Starboard Wing Trailing	30	
Tail	40	
Weapon	Arc	Mass
30 Caliber	Forward	150 lbs.
30 Caliber	Forward	150 lbs.
40 Caliber	Forward	250 lbs.
40 Caliber	Forward	250 lbs.
70 Caliber	Forward	850 lbs.



McDonnell S2B Kestrel

The states of the old American South—now known as Dixie—have long distrusted the North and the union. The Civil War, which arose out of the region's failed bid for independence in the 1860s, was fought for numerous reasons, and few of the issues were resolved after the war. It therefore came as little surprise when the Southern states followed Texas in seceding from the USA..

Early clashes with French Louisiana and the region that would become the Empire State demonstrated the need for strong air power, which the rise in piracy served to underline. The newly independent Confederacy had its fair share of suitable manufacturers, but the Northern states had a technological advantage that Dixie struggled to match. Help soon materialized from the British Empire, which gave Dixie access to European-built aircraft as well as advanced design and manufacturing processes. Working in partnership with the British, the Confederation has closed the technology gap and even overtaken the ISA and the

Empire State in many areas. McDonnell's Kestrel is a prime example of this Dixie-British partnership.

DESIGN HISTORY

The Kestrel uses a unique dual hull that allows for enhanced stability in level flight. The design got off to a bad start when the prototype's nose gear collapsed after the craft's second flight, but that design flaw has been rectified in production. Equipped with two Rolls-Royce Merlin II engines, each with 1,180 horsepower, the Kestrel is a fast aircraft that can carry a substantial load of bombs and rockets. However, the hard-to-handle airframe design gives the craft poor turning and climbing rates.

Despite its handling problems, in the right hands the Kestrel's centerline-mounted gun pod can prove devastating. Its seven weapons—two 30-caliber machine guns, two 40-caliber machine guns and three 60-caliber cannons—are primarily intended to engage slow-moving targets and are

of limited use against agile fighters. Most Kestrel pilots use the gun cluster to attack unarmored ground and air targets. When combined with the bombs and rockets mounted on the eight wing pylons, these armaments make the Kestrel a deadly, if ungainly, aircraft.

The Kestrel has earned a reputation for endurance, capable of flights of up to 600 miles without needing drop tanks. Of the hundred Kestrels so far built, thirty have been sold to European nations and ferried across the Atlantic via Greenland and Iceland. Of these, ten belong to private individuals and have seen action in the Spanish Civil War.

MANUFACTURER

Incorporated in 1933, McDonnell began life as a component manufacturer for Curtiss-Wright. In 1934, it entered a "strategic partnership" with the British Hawker Company. The first fruit of this alliance, the Kestrel, was built in St. Louis, Missouri, and entered service in 1936. McDonnell opened a second plant in Memphis, Tennessee in 1937, exploiting Appalachia's lower wage base.

McDonnell is currently embroiled in a series of bitter legal battles with the ISA's General Motors company. GM claims that McDonnell violated numerous patents and stole key design elements when they employed ex-General Motors designer, John-Paul Astin. Fortunately for McDonnell, GM has fallen afoul of the Confederacy's byzantine legal system, which protects Dixie companies

against outside threats. Escalating costs may yet force GM to abandon the suit.

ROLE AND DEPLOYMENT

The Kestrel's heavy payload makes it ideal for anti-zeppelin attack missions, but its limited maneuverability makes it a poor candidate for anti-fighter operations. Most Kestrels serve in state or private militias, where they are used to suppress pirate bases or other ground targets. The craft's excellent range makes it ideal for deep strikes. However, few modern fighters have the range to escort the Kestrel all the way to its target; consequently, the plane is often restricted to lightly defended objectives.

The principal Kestrel formation involves six aircraft, broken into three two-plane elements, each of which is assigned its own objectives to attack with guns, rockets or bombs. Bomb attacks are made by diving at the target,

then releasing the bomb load and pulling up. A few supremely skilled pilots use a technique called "lobbing," climbing toward the target and releasing the bombs so that they fall in the target's vicinity. Though less accurate than the traditional method, the extended range of such attacks allows qualified pilots to minimize return fire.

PILOTS AND CAMPAIGNS

Fighter-bombers, including the Kestrel, make up more than three-quarters of the Well's Sharks militia of Pensacola. The militia works

**"When they said
Through adversity
to the stars,
I don't think
this is what they
had in mind ..."**

**—James "Smiley" Gleeson,
pilot with the Winged Gator
Gang, Florida**

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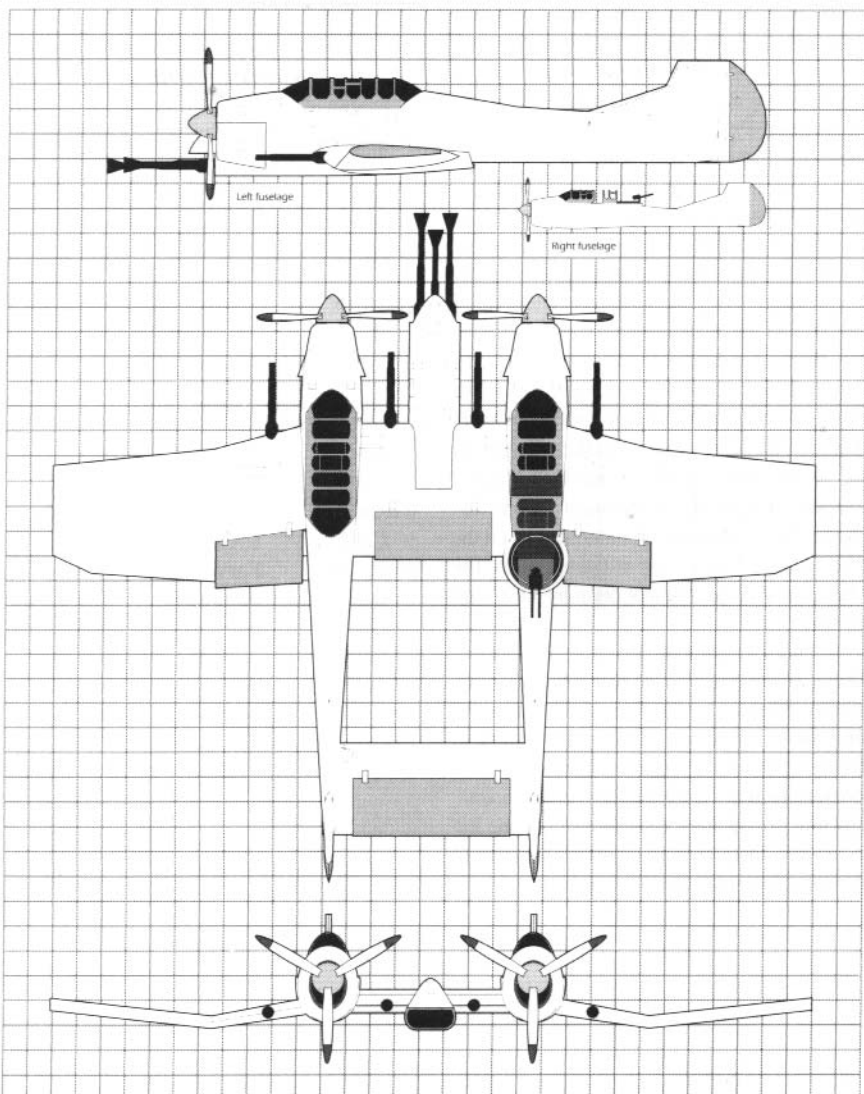
Dixie



Great Britain



Canada



McDonnell S2b Kestrel

Class:
Heavy Fighter (Tractor)

MANUFACTURER:
McDonnell Aircraft Corporation,
St. Louis, Missouri, Dixie

ENGINE:
(2) Rolls Royce Merlin IIs (1,180 hp each)

WING SPAN: 39 ft., 7 in. **LENGTH:** 34 ft., 10 in. **HEIGHT:** 13 ft., 8 in.
(excluding prop)

Loaded Weight: 12,000 lbs	Service Ceiling: 25,000 ft	Range: 600 miles
Max. Speed: 250 mph	Max Accel: 98.4 feet/second	Max Decel: 65.6 feet/second

WEAPONS:
(2) Sperry-Browning "Zephyr" 30-caliber machine guns, (2) Sperry-Browning "Gatekeeper" 40-caliber machine guns,
(3) McDonnell "Bullfrog" 60-caliber cannons

closely with the Florida Coast Guard, providing devastating firepower against hostile naval targets. The unit's most recent engagement occurred in March of 1937 against an unidentified surface vessel harassing Dixie, French Louisiana and British shipping in the Dixie Gulf. When this mysterious light cruiser fired on and sank a Coast Guard vessel, Well's Sharks went into action.

Led by Captain Jackson Wells, the militia searched for the rogue ship and eventually sighted it 200 miles south of Mobile. A squadron of Kestrels flew out to engage the vessel, targeting its gun turrets and bridge to allow a Coast Guard team to board. The first attack runs, by Captain Wells, inflicted minimal damage; luckily, the rogue ship's anti-air defenses were equally ineffectual. As the second wave moved to attack, the raider deployed a quartet of Chance-Vought Skewer seaplanes. Two of these aircraft never made it off the water, gunned down as they moved to launch. The other pair were quickly shot down by the Kestrel squadron.

A third assault wave, led by Martin "Spider" Adams, concentrated on the rear gunnery turrets. Initially delighted to see his payload shatter the large turret, Adams quickly found joy turning to dismay as the strike triggered a back-blast that tore into the ship's magazine. The resulting explosion tore the unknown raider in two, sinking her in minutes. There were no survivors; the origin of the marauding vessel remains unknown.

McDonnell S2B Kestrel Game Statistics

Base Target Number	3	8,000 lbs.
Maximum Speed:	3	2,160 lbs.
Maximum Gs:	2	1,600 lbs.
Acceleration Rate:	3	880 lbs.
Armor Points	250	750 lbs.
Nose	50	
Port Wing Leading	40	
Port Wing Trailing	40	
Starboard Wing Leading	40	
Starboard Wing Trailing	40	
Tail	40	

Weapon	Arc	Mass
30 Caliber	Forward	150 lbs.
30 Caliber	Forward	150 lbs.
40 Caliber	Forward	250 lbs.
40 Caliber	Forward	250 lbs.
60 Caliber	Forward	600 lbs.
60 Caliber	Forward	600 lbs.
60 Caliber	Forward	600 lbs.



Bell Valiant MkII

Nowhere was the introduction of advanced British technology more keenly felt than in the creation of light, agile fighter craft. A number of Dixie companies benefited from contacts with their Old World cousins, among them Bell Aircraft Corporation. Alliances with Rolls-Royce and more recently the Canadian Car and Foundry Company (C.C.F.) have allowed Bell to gain a decisive advantage over its competitors—one that Bell's contacts in the ISA appear set to maintain.

DESIGN HISTORY

First built in Marietta, Georgia, the Valiant entered service in 1934. Small and agile, it was an ideal dogfighter, capable of out-turning almost every opposing craft. Until recently only the People's Collective Defender and General Motors' Tempest matched the Valiant's performance.

Initially equipped with a Pratt and Whitney P7 750 horsepower engine, the Mark I version of the aircraft lacked the acceleration and top speeds of many contemporary planes. The inclusion of a Rolls-Royce Morgana engine solved that problem,

increasing the horsepower to 910 and the top speed to more than 300 mph. The Mark II Valiant quickly became this plane's standard configuration, as the Mark Is were upgraded with the new engine.

To gain its speed and maneuverability, the Valiant sacrifices payload and is armed only with six light machine guns. The added damage potential of magnesium rounds makes them a favorite among Valiant pilots; rockets are likewise considered an essential part of the weapon loadout.

The combination of a cruciform tail and a pusher-prop limits the Valiant's ability to use runways. Unlike most craft, which come in for landings at near-stall velocity in a nose-high attitude (usually between 30 and 45 degrees) to bleed off speed, the Valiant can only land at a nose altitude of 10 degrees without risking damage. This means that the airplane must approach the runway at a shallow angle, which in turn means higher landing speeds and the need for a longer runway. Some pilots can land on standard-length runways, approaching in a traditional nose-high attitude

and dropping the nose at the last minute to a "safe" angle. However, the split-second timing and spatial awareness needed to perform this maneuver generally means that only the best or most desperate pilots use it. This flaw does not affect carrier operations, where a retractable "skyhook" allows the Valiant to be dropped from an airship and recovered in a similar manner.

The Valiant's cockpit is spacious for the plane's overall size. A few variant Valiants have appeared in the past six months that add room for a second crew member—not a human co-pilot, but a dog intended to provide warning of beeper-seeker ultrasonic guided missiles. The high-pitched noise of the missile's "tag" is beyond the range of human hearing, but clearly audible to dogs; suitably trained animals can provide sufficient warning to throw off inbound missiles.

Ironically, Bell's partner, Rolls-Royce, threatens the Valiant's continued existence. Rolls-Royce's new Phantasm design, though heavier, operates in similar roles. Both are high-speed, agile craft intended for interception and dogfighting. However, the weapons and armor of the newer Phantasm give it a decisive edge that outweighs its increased cost. With rich individuals dominating the Valiant market, the price gap is unlikely to harm the Phantasm's sales.

MANUFACTURER

After being let go by Consolidated Aircraft in the wake of the Crash, Lawrence Bell founded Bell

Aircraft Corporation in 1931. Originally located in the Empire State, Bell relocated its headquarters to Marietta, Georgia, following the death of Lawrence Bell and nineteen workers in a terrorist attack on the Buffalo factory in early 1933. New CEO Bradley Carmichael has never accepted the official Empire State report, that blamed a Unionist

terror group, and instead believes that business rivals—most likely Grumman or Curtiss-Wright—set out to destroy Bell Corporation. No evidence exists to support this theory, but that has not prevented Carmichael from declaring a moratorium on sales to the Empire State.

In 1934, Bell entered a partnership with the Rolls-Royce Company. The use of Rolls-Royce's advanced engines made possible a whole new generation of air-

craft. In October of 1936, Bell entered a similar partnership with Montreal-based C.C.E.; the two companies' first joint venture was the construction of a new plant in Burlington, Vermont, in the Maritime Provinces. This plant has so far only carried out assembly work, but is expected to begin full-scale manufacturing by the autumn of 1938. Shortly after forming the second partnership, Bell began retro-engineering a captured Hughes Aviation Bloodhawk, leading to a complex legal action in which Bell remains enmeshed. These legal troubles prompted Bell to make contacts with the General Motors/Messerschmitt partnership in the ISA; Bell is still exploring the possibilities.

**"It may be small
and lightly armed,
but don't bet
against this agile
little blighter."**

*—Pilot officer Michael Kirk-
Rawlins, RAF liaison to the
Dixie Confederacy*

— In the Service of —



Dixie



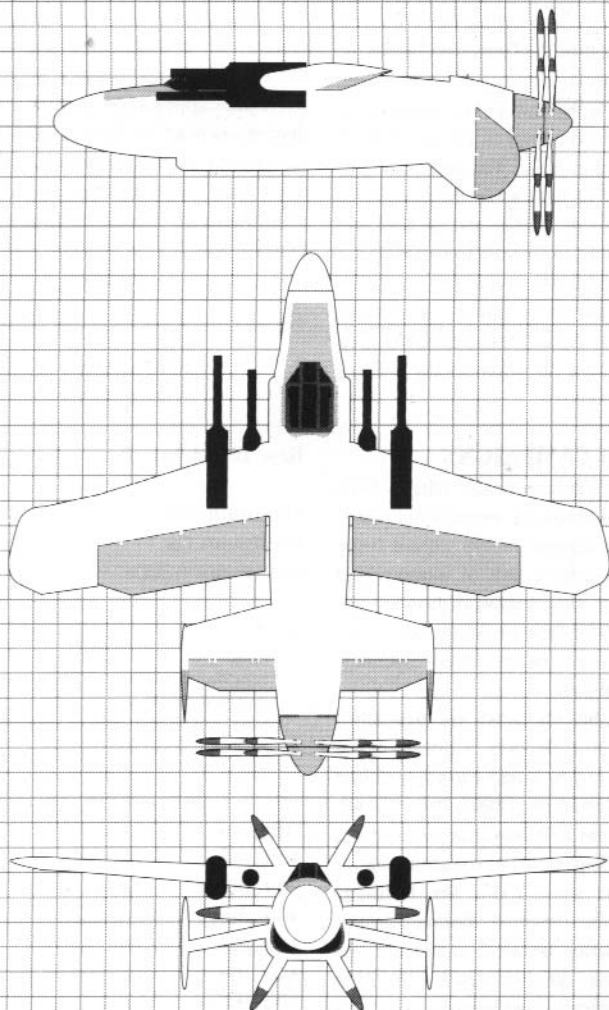
Texas



Utah



Arixxo



Bell Valiant Mark II

Class:
Fighter (Pusher)

MANUFACTURER:

Bell Aircraft Corporation, Marietta, Georgia

ENGINE:

Rolls Royce Morgana (910 hp)

WING SPAN:

24 ft., 3 in.

LENGTH:

23 ft., 7 in.

HEIGHT:

15 ft., 1 in.

Loaded Weight:

3,000 lbs

Service Ceiling:

17,500 ft.

Range:

350 miles

Max. Speed:

300 mph

Max Accel:

65.6 feet/second

Max Decel:

65.6 feet/second

WEAPONS:

(6) Springfield Mark IV 30-caliber machine guns

ROLE AND DEPLOYMENT

Almost three hundred of the inexpensive but effective Valiants have been built at Bell's Marietta facility. Most remain in the Dixie Confederacy, in service with state and private militias, as well as in the possession of individuals and corporations. A handful have also been seen in the Republic of Texas, in Utah and in Arixo. With the opening of Bell's new factory in Burlington, the number of Valiants in service with Quebec and the Maritime Provinces is expected to increase dramatically.

The main restriction on the craft's use is its long runway requirement and an operational range of only 350 miles. These limitations keep most Valiants serving as point-defense fighters rather than interceptors.

PILOTS AND CAMPAIGNS

Most Dixie air militias include Valiants, but it takes a good pilot to use the aircraft's full potential in speed and maneuverability without being held back by its relative lack of weapons and armor. Most often, close teamwork between aircraft compensates for these weaknesses, with anywhere from two to a dozen aircraft operating toward a common goal.

These pack-hunting tactics are exemplified by the Alabama Mud Hoppers, a private militia based in Mobile. Led by British expatriate Robert Wooten-Taylor (known as "English Bob," though not to his face), this little band has prosecuted a feud with the Chapeau d'Or squadron out of French Louisiana since 1935. The Louisiana squadron flies the imported Morane-Saulnier MS382 fighter, which is better armed but less maneuverable than the Bell design. The Mud Hoppers rely on surprise and numbers to pick off MS382s, often attacking a lone pair with six Valiants. The Louisiana pilots decry this tactic as

unfair and cowardly, and frequently stage counter-raids on the Dixie force's airfield.

This private war has escalated in recent months with the involvement of a squadron from the French Foreign Legion's Dervish unit. The Dervishes' appearance in turn prompted the deployment of an elite Dixie squadron, the Second Alabama Air Guard. These two units have encountered each other, but have not yet exchanged shots. Residents of both Atlanta and Baton Rouge, however, fear that this situation may escalate.

Bell Valiant MkII Game Statistics

Base Target Number 8 3,000 lbs.

Maximum Speed: 4 720 lbs.

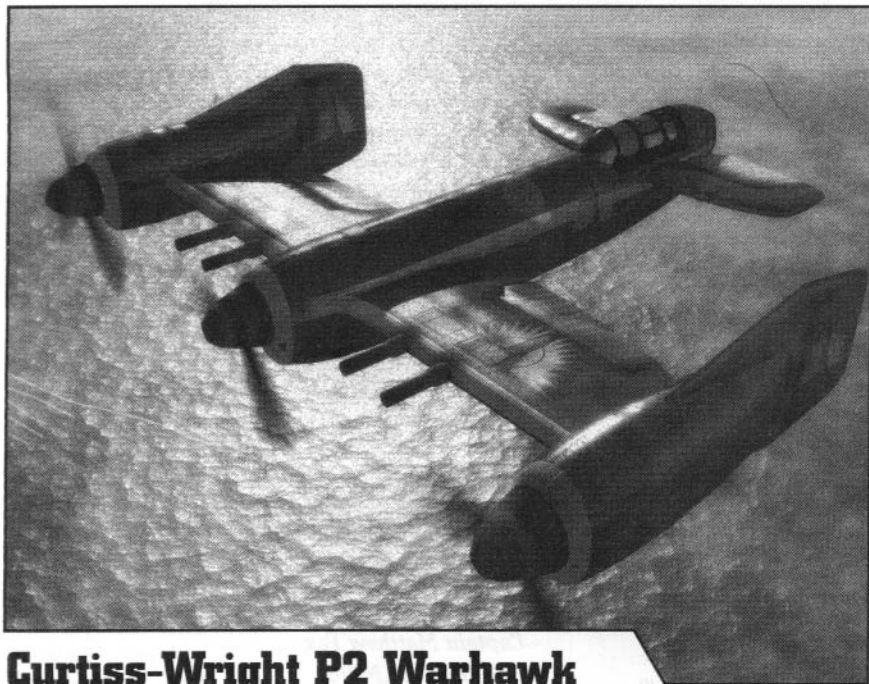
Maximum Gs: 4 840 lbs.

Acceleration Rate: 2 150 lbs.

Armor Points 130 390 lbs.

Nose	30
Port Wing Leading	20
Port Wing Trailing	20
Starboard Wing Leading	20
Starboard Wing Trailing	20
Tail	20

Weapon	Arc	Mass
30 Caliber	Forward	150 lbs.
30 Caliber	Forward	150 lbs.
30 Caliber	Forward	150 lbs.
30 Caliber	Forward	150 lbs.
30 Caliber	Forward	150 lbs.
30 Caliber	Forward	150 lbs.



Curtiss-Wright P2 Warhawk

Once the financial heart of the United States, the Empire State struggled to survive the collapse of America, as it lacked many of the industries and resources necessary to prosper. Almost immediately engaged in low-level hostilities with the Industrial States of America, the Empire State was hard-pressed to defend the resources it had, particularly the mineral-rich land of Pennsylvania. Fortunately, the Empire State could call on several experienced aircraft and airship manufacturers within its borders, all of whom rose to the challenge of defending their new nation. Within weeks, they were operating at full capacity to meet the demands of state and private militias. At the forefront was Curtiss-Wright, whose first Empire State-produced craft was the P2 Warhawk.

DESIGN HISTORY

Built at Curtiss-Wright's Buffalo plant, the Warhawk entered service in 1932. Intended as a light bomber, it was designed with an emphasis on payload and endurance rather than speed and agility. This bias is clear from the plane's wing and

engine configuration; it carries three Wright R-1350 radial engines, one in the fuselage and one at each wingtip, each capable of delivering 736 horsepower. This arrangement results in sluggish handling, with the wingtip engine pods serving as counterweights that hold the craft level. In an attempt to alleviate this problem, Curtiss-Wright replaced the traditional tail assembly with wingtip rudders. The fix met with limited success, however, giving the Warhawk a tendency to sideslip when turning.

Many pilots complain that the Warhawk is nose-heavy and does not perform well in the event of an engine failure. On paper, the Warhawk can fly with only two engines; in practice, however, the loss of a wingtip engine causes major handling problems and generally prompts the crew to bail out.

This design is also notable for its unusual landing gear: three retractable wheels, one per engine, and a small fixed wheel at the aircraft's tail. This arrangement leads to a noticeable bump when the aircraft hits the runway, and the steep



angle at which the aircraft is inclined makes taxiing difficult. With ground steering controlled by a combination of the tail wheel, wingtip rudders and differential throttling,* many Warhawk pilots choose to be towed to their shelters or stands. Similarly, the Warhawk's large wingspan means that pilots must take particular care when launching or being recovered from an airship carrier, though the craft's low stall speed allows for easy link-ups with the recovery apparatus.

For all its handling problems, the Warhawk can carry an impressive weapons load. The wing-mounted cannons are of varying caliber, giving the craft a versatile balance of range and firepower. Poor maneuverability often limits the usefulness of these weapons, however. Many Warhawks serve as gunships, using a mix of cannons, rockets and bombs to attack relatively static targets like airships, heavy bombers and ground facilities.

MANUFACTURER

The Warhawk is a product of Curtiss-Wright's Empire State arm, and the majority of the five hundred built to date came out of the Buffalo factory. The remainder were built at the Louisville plant in Appalachia, which was constructed to take advantage of that country's lower wages. Curtiss-Wright uses Appalachia's semi-neutral status to facilitate sales to third parties and avoid the Empire State's restrictions on trade with hostile powers. However, the market for the Warhawk has

steadily declined as more modern craft enter service, and reports from the Buffalo plant suggest that production of the plane may soon be suspended in favor of an as-yet unannounced design. Warhawk manufacturing at the Louisville plant looks set to continue, probably with a view to sales in less discerning and more price-conscious nations such as Utah, Colorado and Arixo.

ROLE AND DEPLOYMENT

**"I used to think
this was the
goofiest plane
in service. Then I
saw what it did
to my airfield."**

*—Captain Matthew Fox,
2nd Ohio Air Militia*

Though considered somewhat dated, the Warhawk excels at long-distance precision strikes. Able to cruise at high altitude, the craft can fly up to 750 miles on its internal fuel tanks, further if some of its payload is sacrificed for drop tanks. Equipped with such tanks, Warhawks have made non-stop flights from the Buffalo factory to Seattle and

Portland in Pacifica.

The aircraft's large wing area and multiple engines allow it to operate at high altitudes, allegedly up to 37,000 feet. This allows the Warhawk to engage high-flying strategic bombers above the service ceiling of regular interceptors; when combined with the aircraft's exceptional range, this high-flying capability makes the Warhawk an excellent bomber escort.

PILOTS AND CAMPAIGNS

Though the Broadway Bombers are the most famous Empire State unit, they are not alone in

In the Service of



Empire



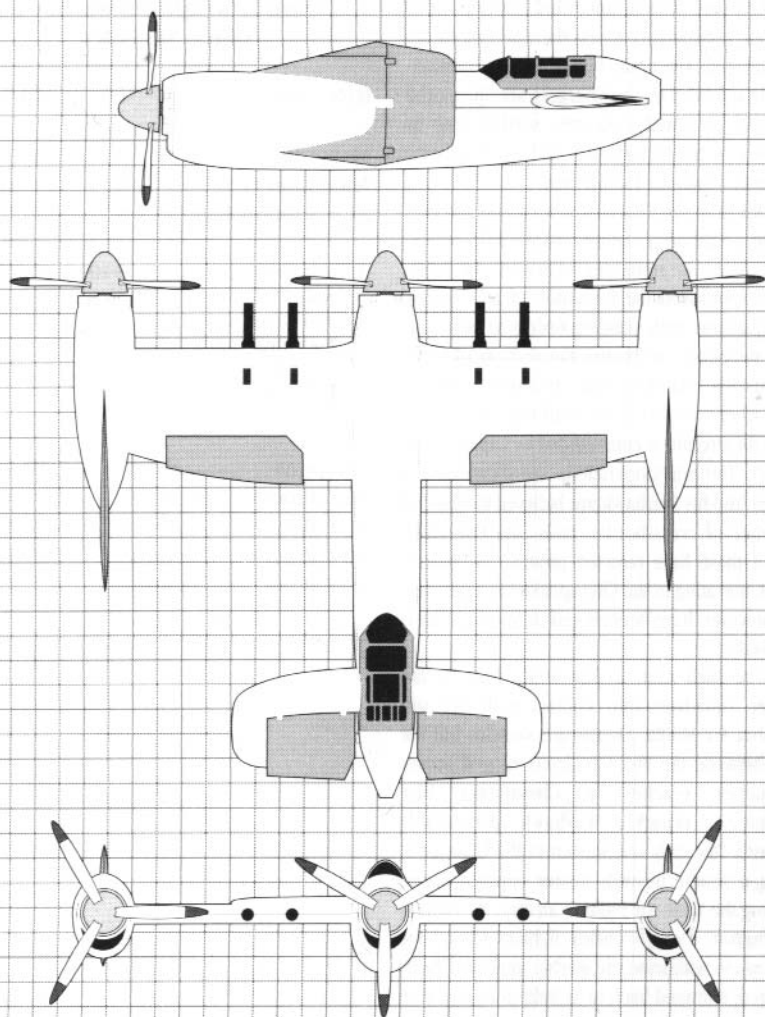
Arixo



Colorado



Utah



Curtis-Wright P2 Warhawk

Class:
Heavy Fighter (Tractor)
MANUFACTURER:

Curtis-Wright, Buffalo, New York, Empire State

ENGINE:

(3) Wright R-1350s (736 hp each)

WING SPAN:

39 ft., 7 in.

LENGTH:

9 ft., 6 in.

HEIGHT:

27 ft., 2 in.

Loaded Weight:

13,250 lbs

Service Ceiling:

37,000 ft.

Range:

750 miles

Max. Speed:

200 mph

Max Accel:

32.8 feet/second

Max Decel:

65.6 feet/second

WEAPONS:

(4) Sperry-Browning "Crusader" 60-caliber cannons

their efforts to defend their new nation. The New Jersey Chargers, though somewhat less glamorous than their companions across the Hudson, are no less dedicated. The brainchild of Newark industrialist Edward Newton, the Chargers are sponsored by several industrial concerns, serving both as defenders of the factory sites and as escorts for shipments within the Empire State.

Officially, the Chargers never cross the border into neighboring nations; unofficially, however, the story is somewhat different. In 1936, Newton sponsored the formation of an "aggressor" squadron, with standing orders to take "any action necessary" to ensure the security of allied interests—a mandate that included offensive action where needed. This small unit, numbering only eight aircraft, is commanded by Captain Ryan Gardner. The unit's operations are secretive, but Gardner and his Warhawk are believed to have led a number of cross-border raids into Columbia. Most of these have targeted pirates, particularly groups operating in the Chesapeake Bay area; several, however, have been aimed at Newton's business rivals.

One such raid, in late 1936, brought the Charger squadron into contact with the 9th Columbia Air Militia. Details are sketchy, but the battle between the two squadrons ranged across the upper reaches of Chesapeake Bay. Eyewitnesses report a Warhawk, presumably Gardner's (the only one known in the Chargers), cutting a swathe through lighter opposition and engaging the Ninth Air Militia's airship, the *George Washington*. Though enemy fighters forced the Warhawk to withdraw, the airship appeared badly damaged; it limped back to its Baltimore yard with two destroyed engine pods and several punctured gas cells.

Curtiss-Wright P2 Warhawk Game Statistics

Base Target Number	2	9,000 lbs.
Maximum Speed:	2	1,440 lbs.
Maximum Gs:	3	3,240 lbs.
Acceleration Rate:	1	900 lbs.
Armor Points	340	1,020 lbs.
Nose	70	
Port Wing Leading	50	
Port Wing Trailing	50	
Starboard Wing Leading	50	
Starboard Wing Trailing	50	
Tail	70	
Weapons	Arc	Mass
60 Caliber	Forward	600 lbs.
60 Caliber	Forward	600 lbs.
60 Caliber	Forward	600 lbs.
60 Caliber	Forward	600 lbs.



Grumman E-1C Avenger

The Empire State has prospered in the years since the old USA's collapse, regaining its role as a major financial center and becoming a key political player among the nations of North America. Hard pressed militarily by the ISA and Dixie, as well as by Québec, the Empire State has spent considerable effort on aircraft design and manufacture. A major area for aircraft manufacturing before the U.S. breakup, the Empire State has many advantages over its neighbors and an excellent reputation for quality designs. Though some companies have relocated outside the Empire State, others have risen to take their place. Grumman, originally a design bureau, has also become a well-respected manufacturer of aircraft, with several models of the Avenger to its credit.

DESIGN HISTORY

The first Avenger to leave Grumman's Long Island works in 1932 was a far cry from the powerful aircraft favored by the aces of the Empire State. Like the modern Avenger E-1C, the original E-1 model could reach speeds up to 250 mph, powered by a pair of air-cooled, 630 horsepower

Feldman 16-valve engines. The use of twin engines, not common in an aircraft as small as the Avenger, allows for an unusual mix of speed and fuel efficiency when compared to a single large engine. This extends the craft's operational range by almost 50 percent over comparable aircraft. One drawback, however, is that the engines serve as counterweights and hinder maneuverability.

The new Avenger, the E-1C model introduced in 1936, retained the original plane's twin-engine configuration, but made sweeping changes to the aircraft's armor and armaments. Two of the original 30-caliber cannons were upgraded to 60-caliber guns, and the remaining six fire-linked to improve shot-grouping. The new design also added more wing pylons, increasing the number of hard-points for external ordnance to eight. The aircraft received a moderate armor boost to the cockpit, which greatly increased the pilot survival rate at the price of marginally more aircraft losses.

Many pilots complain that the extra weight from the modifications has adversely affected the aircraft's handling, giving it a generally sluggish response to the stick and a poorer turning circle.

This loss of performance, they claim, offsets the increased firepower of the E-1C. As one such pilot was heard to say, "What's the use of bigger guns if you can't aim them properly?" However, more accomplished pilots such as Loyle Crawford and Terrance Hobart of the Broadway Bombers seem happy with the modifications. The Avenger is a difficult aircraft to master, but a lethal tool in the hands of the right pilot.

MANUFACTURER

Born in the wake of the Crash, the Grumman Aircraft Engineering Corporation came into existence on December 6, 1929—one of the few companies to exploit America's deteriorating financial and political conditions. With the collapse of the USA and the conflict that ensued, the Grumman design bureau soon earned a reputation for producing top-notch aircraft. In those early years, the team subcontracted to other companies, designing for the Fairchild Bandit and, more controversially, the General Motors Lancer. In 1932, the company entered the manufacturing field with the E-1 Avenger. The design proved popular with the affluent citizens of the Empire State, particularly the group known as the Broadway Bombers, and the growth spurred by steady sales soon lifted

the company's shares into the Wall Street top ten.

The past few years, by contrast, have seen a steady decline in Avenger sales as more modern designs came on the market. As a stopgap measure until Grumman's new Courser design enters service (expected in 1938), the company has released the upgraded Avenger E-1C model.

**"In the Avenger,
Grumman struck a
happy medium between
a plane that
looks great and one
with the power
to back it up.
You've got to have
the heart, or you
shouldn't take
the stage."**

*—Major Loyle Crawford,
Madison Venturers Squadron,
Broadway Bombers Militia*

ROLE AND DEPLOYMENT

Despite its high price tag, the Avenger has become the signature aircraft of the Empire State. Media exposure through units like the Broadway Bombers has driven up sales among independently wealthy citizens, though less well-off individuals and many state militias prefer cheaper but less capable aircraft.

The design principally acts as a fast, hard-hitting interceptor, a task for which its combination of range and firepower is ideal. Most Avengers used in the Empire State operate in this role, though a handful serve as reconnaissance or light-strike craft. Mediocre maneuverability and armor make this aircraft a poor choice for dogfighting, and so the Avenger rarely serves as an escort.

In the Service of



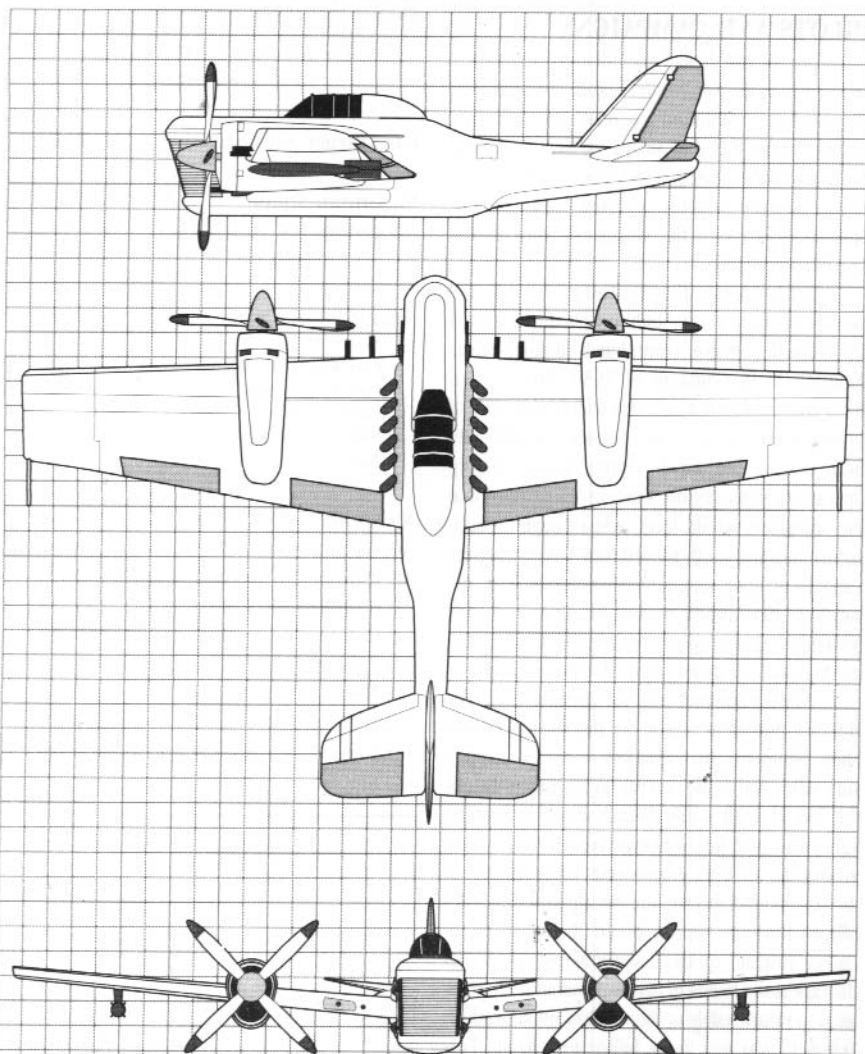
Empire



Appalachia



Pacifica



Grumman E-1C Avenger

Class:
Fighter (tractor)

MANUFACTURER:

Grumman Aircraft Engineering,
Long Island, New York, Empire State

ENGINE:

(2) Feldman-16s (630 hp each)

WING SPAN: 38 ft., 5 in. **LENGTH:** 24 ft., 10 in. **HEIGHT:** 12 ft., 8 in.

Loaded Weight:
7,000 lbs

Service Ceiling:
18,000 ft.

Range:
600 miles

Max. Speed:
250 mph

Max Accel:
32.8 feet/second

Max Decel:
65.6 feet/second

WEAPONS:

(6) Sperry-Browning "Zephyr" 30-caliber machine guns, (2) Sperry-Browning "Crusader" 60-caliber cannons

PILOTS AND CAMPAIGNS

One of two Broadway Bombers squadrons supported by the Rockefeller family, the Gramercy Hussars have established a reputation for efficiency and daring. Based in Albany, upstate New York, the squadron's principal task is to secure the air routes between Syracuse and New York City. The Hussars also patrol the smugglers' runs in the Catskill Mountains.

Led by Captain Theresa Wells-Vanderbilt, the squadron came to the public's attention after it intercepted a major contraband shipment near Kingston in late autumn of 1936. Rumors had been circulating for weeks that a large shipment of booze from Québec was headed through the Adirondacks, but winter storms limited airship operations in the region. Vanderbilt suspected that the smugglers would loop west through Ontario before heading south toward New York, using the Catskills as concealment and protection from the weather. Her hunch proved accurate; in early November, Hussar scouts reported an unidentified airship working its way through the mountains.

Newly equipped with the Avenger E-1C, the Hussars moved to attack. As the airship passed Slide Mountain, the squadron emerged from a side valley and made several raking passes before the bandit craft could launch its own fighters. Vanderbilt and her wingman made several runs against the airship's engine pods while the rest of the squadron distracted the airship's escorts. Pilot officer Royman Harris forced the crew of an enemy Brigand to eject, but suffered significant damage at the hands of twin Bell Valiants. He managed to return safely to base; fellow pilot Elizabeth Schofield was less lucky, falling to a bandit Fury after downing its companion. With their airship crippled and about to be boarded, the four remaining bandit fighters fled.

**Grumman E-1C Avenger
Game Statistics**

Base Target Number	7	4,000 lbs.
Maximum Speed:	3	600 lbs.
Maximum Gs:	2	480 lbs.
Acceleration Rate:	1	200 lbs.
Armor Points	200	600 lbs.
Nose	50	
Port Wing Leading	30	
Port Wing Trailing	30	
Starboard Wing Leading	30	
Starboard Wing Trailing	30	
Tail	30	
Weapon	Arc	Mass
30 Caliber	Nose	150 lbs.
30 Caliber	Nose	150 lbs.
30 Caliber	Nose	150 lbs.
30 Caliber	Nose	150 lbs.
30 Caliber	Nose	150 lbs.
30 Caliber	Nose	150 lbs.
60 Caliber	Nose	600 lbs.
60 Caliber	Nose	600 lbs.



Hughes-Lockheed Firebrand

"Build on success" is a key principle of business and warfare. Hughes Aviation, one of North America's newest aeronautical engineering companies, has done just that, launching four successful aircraft designs since the company's founding in 1929. The latest of these, the Firebrand fighter-bomber, demonstrates Hughes' commitment to design innovation and pushing the aviation-technology envelope.

DESIGN HISTORY

In a marked deviation from conventional design philosophies, the Firebrand is a "flying wing," with a vertical aileron but no tail assembly. Instead, the aircraft maneuvers using flaps on the leading and trailing wing edges. With such a large wing area, the Firebrand can attain altitudes of up to 35,000 feet, and carries a formidable weapon payload. The trade-off for these capabilities is lesser agility, speed and acceleration.

Powered by twin Wright Tornado G500 engines and pusher propellers, the Firebrand can reach a respectable 250 mph in level flight.

Ordinarily fuel-efficient, the engines' fuel consumption increases drastically as the plane's speed does—three times the normal rate at top speed. This excessive fuel consumption is probably responsible for several officially unexplained Firebrand crashes.

The two-man tandem cockpit has excellent all-round visibility and is equipped with dual controls that allow either crew member to pilot the aircraft. This feature is particularly valuable on long flights, as it allows the pilot and copilot/bombardier to share their responsibilities. The Firebrand has an operational range of 800 miles, provided its speed does not exceed 180 mph.

As with many pusher-prop aircraft, bailing out can be a tricky proposition, as the configuration of the main fuselage and engine pods funnels escaping aviators toward the propellers. In theory, the blades should lock in a "clear" position when the engines are manually shut down; in practice, however, damage to the propellers, transmission or engine can cause this system to fail.



Nose-mounted 50- and 70-caliber Sperry-Browning cannons provide the Firebrand's main armament, backed by rockets and bombs. Armor-piercing rockets are the most common underwing payload, but many crews choose to carry non-lethal rockets on the two outermost pylons. This additional means of distracting enemy aircraft or anti-aircraft crews is invaluable to the ungainly Firebrand, considerably enhancing its chances of defeating enemy craft and escaping.

The only factory-built variant of the Firebrand replaces the lower 50-caliber cannons with photographic equipment. Operated by the co-pilot, these twin cameras can each take fifty pictures, individually or simultaneously for stereoscopic images.

MANUFACTURER

In 1924, a young Texan named Howard Hughes inherited the family business of manufacturing oil well drill bits, and with the resulting wealth set off to Hollywood to pursue his dreams. He had become a major film producer by 1928, and so turned his attention to his other passion: flying. A pilot since 1919, he founded the Hughes Aviation Company in early 1929 to further his piloting ambitions. The company developed the Hughes Lancer, a one-off aircraft with which Hughes set the world air-speed record at 352 mph—just six days before the stock market crash.

Hughes exploited others' misfortunes mercilessly in the ensuing months, acquiring resources and facilities from those badly hurt by the Crash

and the dissolution of the USA. This explosive growth showed a clear return in 1931 with the launch of the popular Devastator fighter; Hughes Aviation built on this success with the C-2 Conestoga civil transport in 1933 and the superlative Bloodhawk fighter in 1936.

The Firebrand, launched in 1937, marks a new direction for Hughes Aviation. It owes its existence to a partnership with

Lockheed, formerly among Hughes Aviation's greatest rivals. Built at Lockheed's Burbank plant but using predominantly Hughes components, the Firebrand embodies a détente between the companies after the legal wrangles of 1935-36. As well as gaining access to each other's technical resources, the strategic

alliance between Hughes and Lockheed also offers the possibility of enhanced sales, with Lockheed's heavy aircraft marketed to Hughes' predominantly fighter-orientated clientele and vice versa. Plans are already well advanced for licensed manufacture of the Firebrand and the Bloodhawk in the Republic of Texas and Great Britain, where Lockheed is already well established.

ROLE AND DEPLOYMENT

One of the newest aircraft in use, fewer than sixty Firebrands are in service. To date, all but one are in Hollywood. Almost half serve in the state militia, with the remainder split between private militias and corporations. A single Firebrand was flown to Lockheed's Fort Worth facility, where it currently serves as a demonstration craft for potential Republic of Texas buyers.

**"Buy the best?
Sure, but Hughes
won't let me."**

*—Squadron Leader
Garret Dawes,
2nd Atlanta Air Militia*



Hollywood



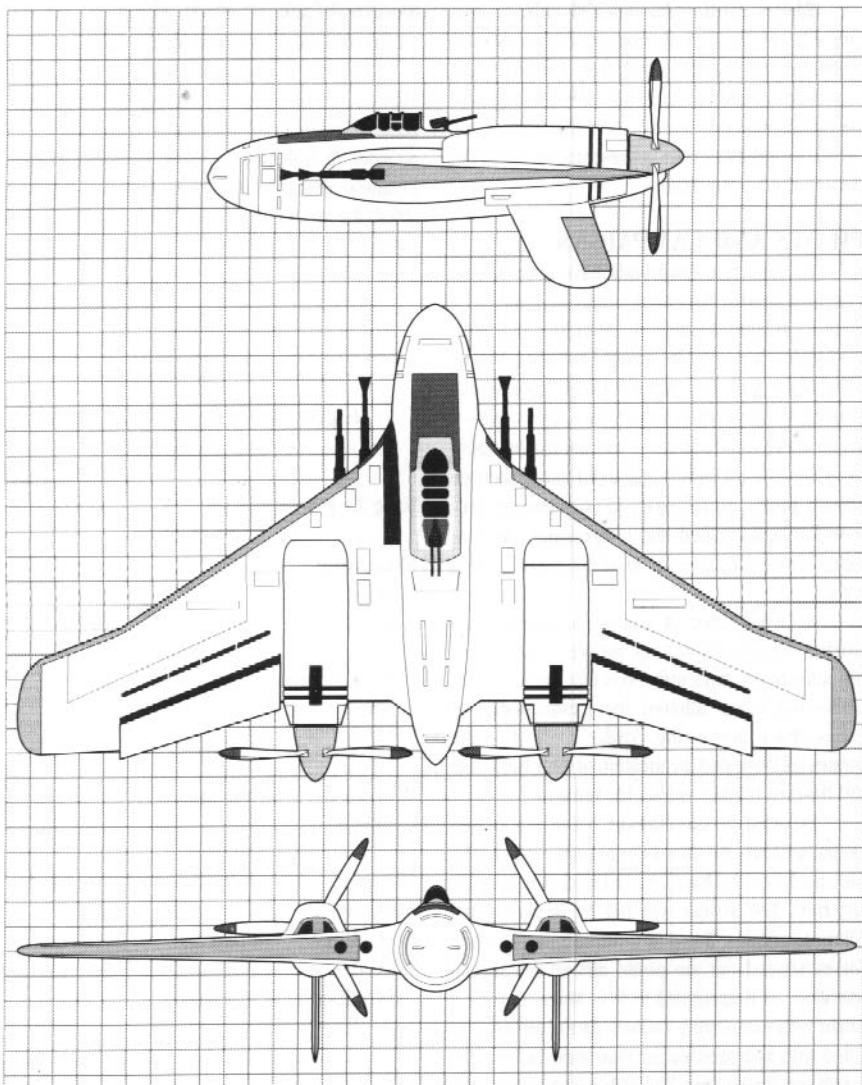
Texas



ISA



Empire State



Hughes-Lockheed Firebrand

Class:
Heavy Fighter (pusher)

MANUFACTURER:
Hughes Aviation Company,
Culver City, Hollywood

ENGINE:
(2) Allison X-900s (790 hp each)

WING SPAN: 39 ft., 7 in. **LENGTH:** 27 ft., 2 in. **HEIGHT:** 9 ft., 6 in.

Loaded Weight: 13,250 lbs	Service Ceiling: 37,000 ft.	Range: 750 miles
Max. Speed: 200 mph	Max Accel: 32.8 feet/second	Max Decel: 65.6 feet/second

WEAPONS:
(2) Barret Arms 50-caliber cannons, (2) Barret Arms 70-caliber cannons

Hughes Aviation has exerted tight control over sales of the aircraft. Attempts by Dixie-based groups or individuals to purchase the Firebrand have been rebuffed in light of legal wrangling over the Bloodhawk; by contrast, sales discussions are currently underway with representatives from the ISA and the Empire State.

PILOTS AND CAMPAIGNS

To date, few Firebrands have seen action. The most notable Firebrand engagement, in 1937, involved Hughes Aviation. In March of that year, the Mexico-based pirate group Los Lobos Negros (The Black Wolves) raided southern Hollywood, striking as far north as Los Angeles. One target—accidentally, as it happens—was the Hughes facility at Long Beach, which sustained minor damage when a pirate aircraft snagged on a barrage balloon line and crashed into a warehouse. An outraged Howard Hughes ordered the pirates “dealt with.”

A mixed force of Hollywood Knights and Hughes Air Guard drove the pirates from the city, but after negotiating with President Madison, the Hollywood forces allowed the pirate airship to escape back across the border. Only after the pirates had revealed the location of their Baja base did Howard Hughes extract his revenge.

Escorted by Bloodhawks based out of San Diego, a dozen Air Guard Firebrands made multiple attacks on the base and reduced it to a smoking ruin. The assault was led by Hughes’ chief pilot, Jonathan “Samurai” Murayama. Hughes’ forces singled out the pirate airship for special attention; as it attempted to flee, Murayama set it alight with magnesium rounds. As the airship was filled with hydrogen rather than inert helium, the result was devastating. The action cost Hughes two

Bloodhawks and a single Firebrand, the latter to mechanical failure en route back to Los Angeles.

Despite being decorated by President Madison for his actions, Murayama—a second-generation Japanese-American—found himself an outsider in Hollywood society. He and others of Japanese descent have been further ostracized since the outbreak of war between China and Japan.

Hughes-Lockheed Firebrand Game Statistics

Base Target Number	4	7,000 lbs.
Maximum Speed:	3	1,680 lbs.
Maximum Gs:	2	1,260 lbs.
Acceleration Rate:	1	560 lbs.
Armor Points	330	990 lbs.
Nose	60	
Port Wing Leading	60	
Port Wing Trailing	50	
Starboard Wing Leading	60	
Starboard Wing Trailing	50	
Tail	50	
Weapon	Arc	Mass
50 Caliber	Forward	400 lbs.
50 Caliber	Forward	400 lbs.
70 Caliber	Forward	850 lbs.
70 Caliber	Forward	850 lbs.



Hughes Aviation Bloodhawk

Built around the heart of the North American film industry, the nation of Hollywood—formerly the state of California—earned a reputation for wealth and prosperity that has been an advantage and a curse. Along with the steady influx of immigrants seeking opportunity, Hollywood also attracts the attention of less desirable elements: the pirates and privateers who regard it as rich pickings.

Fortunately, California was a major center for aircraft manufacture at the time of the U.S. breakup. This fact, combined with the wealth of many of its citizens, guaranteed the creation of a host of private militias, all seeking to protect their interests. These groups' demands prompted steady evolution in aircraft design, as much for aesthetic as for practical purposes. In Hollywood, flying "last year's" design is a clear sign of social ineptitude and relative poverty.

The Hughes Aviation Bloodhawk is the latest in a line of superlative aircraft from Hollywood's premiere aircraft manufacturer. It epitomizes style

and function, engineered as much for its deadly appearance as its equally deadly capabilities. It is also one of the most expensive aircraft ever built, but in Hollywood that's all part of the game.

DESIGN HISTORY

Though the Bloodhawk incorporates few revolutionary ideas, the design's balance of new and old concepts makes it in a superlative aircraft and one of the most sought-after designs in North America.

The plane entered service in 1936, manufactured at Hughes Aviation's Culver City plant. Powered by a fuel-injection Allison V-1690 engine that produces 1,288 horsepower, the craft also uses a pusher-prop that allows it to attain speeds of just over 300 mph in level flight, with 350 mph possible in a dive. The airframe is stressed to allow speeds in excess of 450 mph, though no currently available version of the Bloodhawk can achieve such speeds. The airframe's construction reflects forward planning by the Hughes team,

allowing them to upgrade the plane's power plant without redesigning the chassis.

The combination of a pusher-prop and the plane's rear wing design poses its own problems, however. Though extremely maneuverable at high speeds, the Bloodhawk does not perform well at low velocities and has an unusually high stall speed. Damage to the nose-mounted canard wings exacerbates this problem. These stubby wings, counterbalanced by the engine, play an integral part in keeping the aircraft aloft.

Nose-mounted cannons, two 30-caliber and two 40-caliber, serve as the Bloodhawk's primary weapons. All are manufactured by Browning and are capable of a high fire rate with little risk of jamming. The weapons' location allows for deadly accuracy, earning the Bloodhawk a reputation for lethality despite its relatively modest armament. Four double-attachment, under-wing pylons allow the aircraft to carry rockets or external fuel tanks as required, though the latter have a detrimental effect on the aircraft's handling; they are generally only used when moving aircraft from one location to another or on long-range escort missions.

MANUFACTURER

The flagship of Hughes Aviation's fighter design group, the Bloodhawk is the focus of a bitter legal dispute with Bell Aircraft Corporation. In November of 1936, Dixie's First Georgia Air Militia captured a squadron of Bloodhawks being

shipped by air to a private client in the Empire State. The majority of the captured planes entered service with the First, but at least one appears to have reached the Bell plant at Marietta, where it became the subject of extensive examinations. Hughes quickly filed suit against Bell, but the Dixie company apparently expected the case to founder in the Confederacy's legal system. They had not counted on Hughes' determination.

In March of 1937, Hughes Aviation Company acquired the Laister-Kauffman glider plant in St. Louis, which effectively granted Hughes the status of a Dixie corporation and circumvented the Confederacy's protectionist policies. With their position badly undermined and legal costs spiraling out of control, Bell prepared for the worst.

Then rescue came from an unexpected source: a partnership with Messerschmitt/General Motors. M/GM offered to bankroll Bell's defense in exchange for access to the Bloodhawk research. The case is scheduled for trial in January, 1938.

ROLE AND DEPLOYMENT

The Bloodhawk is currently a backbone design among Hollywood aviators, particularly the Hollywood Knights group. A handful are also in service with the Republic of Texas, the Empire State and Dixie. The latter are the subject of considerable acrimony between Hughes and the Confederacy that has prompted the virtual blacklisting of Dixie-based clients. The recent raid by Dixie forces on Manhattan, in which the

**"The Bloodhawk
is as much a
fashion statement
as a superlative
killing machine."**

*—Harlan Ostroff,
Hollywood Knights,
1937*



Hollywood



Empire State

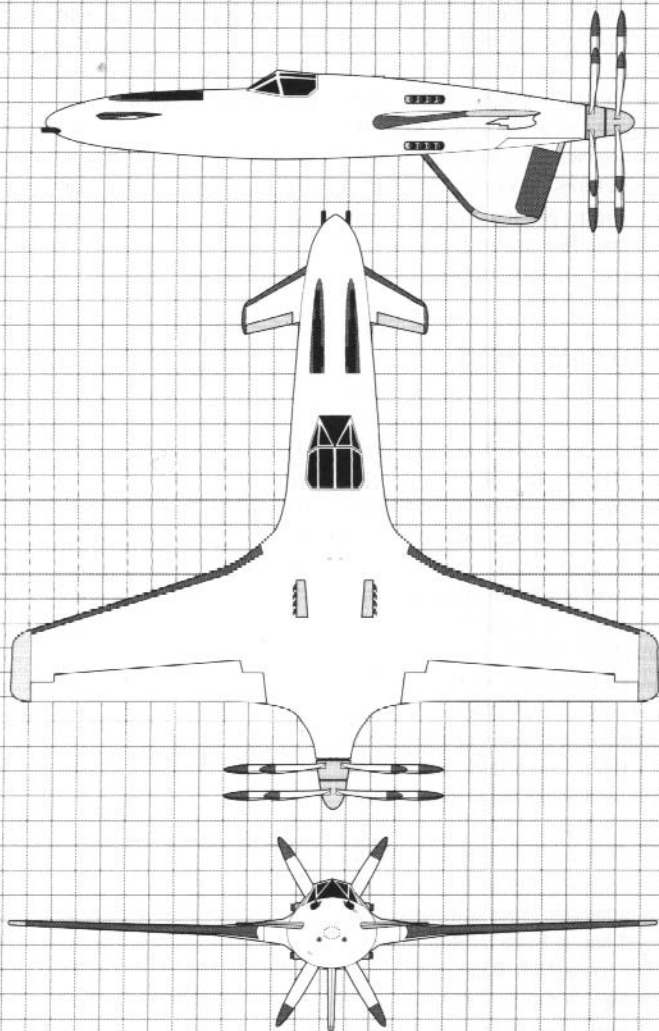


Texas



Dixie

In the Service of



Hughes Aviation Bloodhawk

Class:
Fighter (Pusher)

MANUFACTURER:
Hughes Aviation Company,
Culver City, Hollywood

ENGINE:
Allison V-1690 (1,288 hp)

WING SPAN: 29 ft., 6 in. **LENGTH:** 27 ft., 6 in. **HEIGHT:** 14 ft., 1 in.

Loaded Weight:
8,250 lbs

Service Ceiling:
22,000 ft.

Range:
400 miles

Max. Speed:
300 mph

Max Accel:
65.6 feet/second

Max Decel:
65.6 feet/second

WEAPONS:

(2) Barrett Arms "Mustang" 30-caliber machine guns, (2) Barrett Arms "Ranger" 40-caliber machine guns

Confederate pilots used several captured Bloodhawks, has further heightened tensions.

Though the Bloodhawk remains one of the best aircraft made in North America, the recent introduction of the Rolls-Royce Phantasm has spurred development of a Bloodhawk Mark II. Hughes Aviation will not settle for being second-best, and its design teams are working to increase the Bloodhawk's engine power and agility in line with the British craft. However, without access to advanced Merlin or Morgana engines, Hughes' engineers face a difficult task.

PILOTS AND CAMPAIGNS

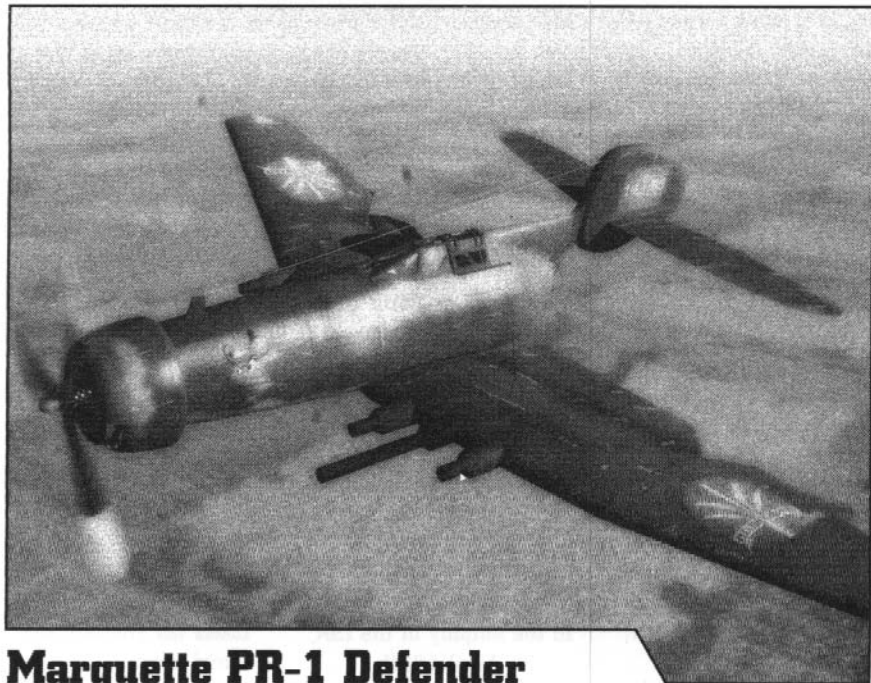
Not surprisingly, the most famous Bloodhawk pilot is Howard Robard Hughes, president of Hughes Aviation. Though not officially a member, Mr. Hughes has flown with the Hollywood Knights. The owner of numerous restaurants, hotels and casinos, Mr. Hughes is prominent in Hollywood society. Among the richest and most powerful men in the nation at a mere thirty-two years of age, he is widely regarded as one of the most eligible bachelors in Los Angeles. He is also the one-time holder of the world air speed record, and the current holder of the fastest coast-to-coast flight time (7 hours 28 minutes, set in 1935). Mr. Hughes is currently planning an attempt to set the around-the-world speed record, due to take place in June of 1938.

A fully credited ace, with seventeen aircraft and one shared zeppelin kill to his name, Mr. Hughes boasts formidable flying skills. One local reporter accused him of being a "glory hound," who deliberately ignored his flying companions and their objectives in favor of racking up an impressive kill total. Though that reporter was quickly dismissed, the accusation struck a nerve among Mr. Hughes' detractors.

Hughes Aviation Bloodhawk Game Statistics

Base Target Number	6	5,000 lbs.
Maximum Speed:	4	1,600 lbs.
Maximum Gs:	4	1,800 lbs.
Acceleration Rate:	2	350 lbs.
Armor Points	150	450 lbs.
Nose	40	
Port Wing Leading	20	
Port Wing Trailing	20	
Starboard Wing Leading	20	
Starboard Wing Trailing	20	
Tail	30	

Weapon	Arc	Mass
30 Caliber	Forward	150 lbs.
30 Caliber	Forward	150 lbs.
40 Caliber	Forward	250 lbs.
40 Caliber	Forward	250 lbs.



Marquette PR-1 Defender

When Samuel Morrow formed the communist People's Collective in 1931, he abrogated all loans and mortgages, thereby saving the farmers of the Midwest from economic ruin in the Great Depression. Knowing that the bankers of the industrial states would soon move to repossess what they regarded as stolen property, Morrow created the People's Militias, outfitting them with locally produced arms and equipment.

Though hard-pressed in the early months after the collapse of the United States, the People's Militias held their own, first against federal troops and later against raids by the nascent Industrial States of America. However, these early border clashes demonstrated one gaping hole in the militias' defense: lack of air power. The Collective had no native aircraft industries, and so its governing body instituted a crash program to remedy the problem. The PR-1 Defender is the first fruit of that effort.

DESIGN HISTORY

The lack of accomplished aviation engineers in the People's Collective hampered early design efforts, but by early 1932 the prototype Defender began test flights at the Marquette Airworks plant west of Des Moines. Massing a little under 6,000 pounds, the Defender was lighter than many of its contemporaries; its designers apparently hoped that the agility of the small airframe would offset the plane's payload disadvantage. Though sound in theory, in practice the designers' inexperience coupled with the committee's orders to meet a wide range of operational demands resulted in an aircraft whose performance is mediocre at best.

Poor airframe design and an under-powered engine limit the Defender to 250 mph in level flight, though a competent pilot (rare in the Collective) can attain 300 mph when diving. The Juarez 720-horsepower engine, based on a Mexican design from the 1920s, is too small for the airframe; efforts to make up for the power shortfall by supercharging the engine have resulted in poor fuel efficiency and a tendency for the

engine to cut out when subjected to high G-forces. Later-model Defenders, upgraded with Russian fuel systems, avoid this problem. Of the three hundred Defenders in service, however, fewer than forty include such modifications.

With regard to maneuverability, the designers exceeded expectations. Though ISA's General Motors Tempest and the Dixie-built Bell Valiant can now boast equal or better capabilities, for its time the Defender's turning ability was unmatched. A competent pilot can use the Defender's turning ability to keep the craft out of harm's way while plotting his or her own attacks. The rear-lifting canopy limits rearward visibility, however, and hinders the craft's ability to avoid tailing.

A pair of Czech-made 50-caliber cannons and a single 30-caliber machine gun form the Defender's principal armament. The designers argue that this configuration is more effective than the four 30-cal guns found on many other craft of similar size, and it is true that the guns' increased penetration has proved decisive in several engagements. In the event of a mechanical failure, the pilot must rely on rockets and other external ordnance.

MANUFACTURER

The first aircraft produced by state-owned Marquette Airworks, the Defender earned the company a reputation for light air-superiority

planes despite problems with the original model. Dixie and the ISA regularly target the Des Moines, Iowa factory complex, braving return fire from two squadrons of Defenders and Defiants as well as massed flak batteries. The Defiant is Marquette's second design, and has so far performed reasonably well.

Marquette's current project is a marked change for the company: an extended-range fighter-bomber, presumably intended to strike targets deep in the ISA. However, the decision by the People's Committee to build the Yakovlev 4 design, recently licensed from Russia, at a new plant in Rapid City has prompted outrage among the citizens. Only the threat from nearby Lakota has prevented widespread protest.

**"Designed by
committee and built
by morons—
this is what
'Made in America'
truly means."**

**—Günther Lützow,
German instructor
in the employ of the ISA,
April 1936**

ROLE AND DEPLOYMENT

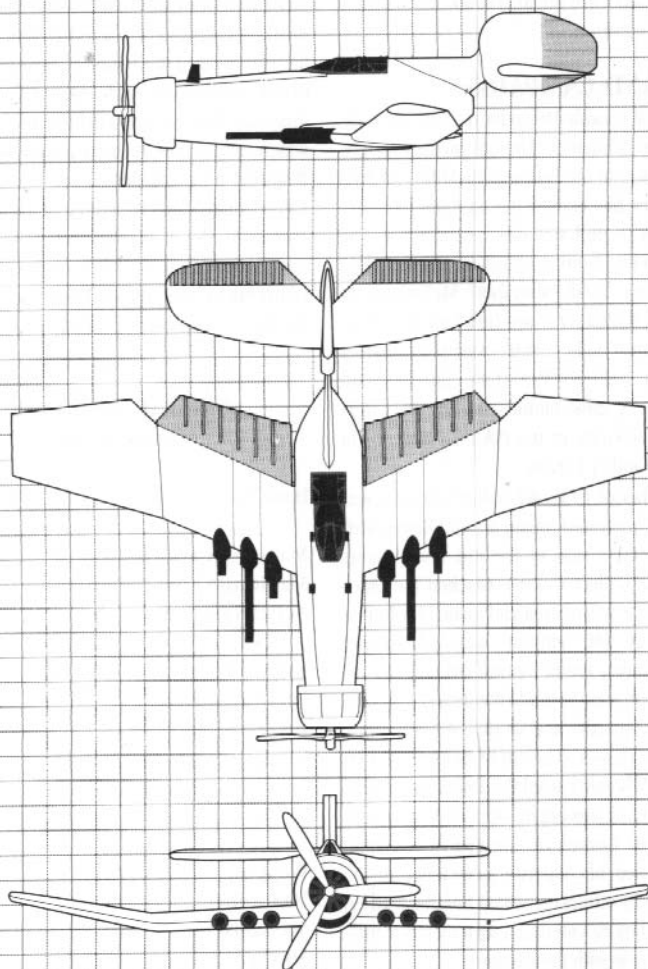
Though occasionally used for anti-airship or ground-attack missions, the Defender has failed dismally in such roles, being too light to carry an effective weapon load or to withstand return fire. The design's primary task is to engage and defeat enemy aircraft, but its short operational range restricts it to defensive operations or carrier-based deep strikes. In the latter case, the Defender generally serves as an airship escort rather than a strike aircraft.

The People's Militias deploy their Defenders in 12-plane groups, subdivided into 6-plane squadrons. Unlike most American nations, which

— In the Service of —



People's Collective



Marquette PR-1 Defender

Class:
Fighter (tractor)

MANUFACTURER:
Marquette Airworks, Des Moines, Iowa

ENGINE:
Juarez (720 hp)

WING SPAN: 26 ft., 8 in. **LENGTH:** 22 ft., 5 in. **HEIGHT:** 13 ft., 2 in.
(excluding prop)

Loaded Weight:
7,000 lbs

Service Ceiling:
18,000 ft.

Range:
400 miles

Max. Speed:
360 mph

Max Accel:
32.8 feet/second

Max Decel:
65.6 feet/second

WEAPONS:
(2) Czech 50-caliber cannons, (1) Czech 30-caliber machine gun

have adopted two-plane elements, some units in the People's Collective Air Militia use an outdated three-plane formation.

PILOTS AND CAMPAIGNS

The most notable Defender pilot is Comrade Captain Aaron Whittaker. Though nicknames are discouraged within the People's Air Militia as divisive, Whittaker has earned the moniker "Easter" for his ability to pull victories out of a hat. The nickname comes from a comment attributed to Comrade Major Todd "Slingshot" McFarlane, in reference to Whittaker's two-hundred-plus missions and thirty kills. "More surprises than a child's Easter basket," McFarlane allegedly said after Whittaker's most famous exploit: the interception and downing of the ISA's German "flight instructor," Günther Lützow.

In October of 1936, Whittaker's element was patrolling the contested region around Bettendorf, on the Collective's side of the old Iowa-Illinois border. As the Collective force reached the outer boundaries of its patrol area and turned for home, a squadron of GM Tempests attacked without warning. Whittaker found himself dueling Lützow, but was hard-pressed to evade the deadly fire from the heavier ISA aircraft and its skilled pilot.

Knowing he would be cut to ribbons in open sky, "Easter" Whittaker used the Defender's agility to hug the ground, forcing his opponent to fly with uncharacteristic caution or else risk an accident. Whittaker turned his superior knowledge of the terrain to deadly advantage, extending his lead on the ISA plane before entering a tight turn that took him nose-to-nose with the German.

Firing a flare rocket as he completed the maneuver, Whittaker closed with his temporarily distracted opponent, battering him with rocket fire that ravaged the Tempest's port wing. In a desperate attempt to evade the onslaught, Lützow threw his Tempest into a tight series of maneuvers, which only served to increase the wing damage. Realizing he could not escape Whittaker, Lützow gained altitude and bailed out of his stricken craft. Ironically, the ISA pilot was unharmed in the engagement while Whittaker broke both legs upon returning to base. His undercarriage, damaged in the duel, collapsed on landing.

Marquette PR-1 Defender Game Statistics

Base Target Number	7	4,000 lbs.
Maximum Speed:	3	600 lbs.
Maximum Gs:	4	1280 lbs.
Acceleration Rate:	1	280 lbs.
Armor Points	140	420 lbs.
Nose	30	
Port Wing Leading	20	
Port Wing Trailing	20	
Starboard Wing Leading	20	
Starboard Wing Trailing	20	
Tail	30	
Weapon	Arc	Mass
50 Caliber	Forward	400 lbs.
50 Caliber	Forward	400 lbs.
30 Caliber	Forward	150 lbs.
30 Caliber	Forward	150 lbs.
30 Caliber	Forward	150 lbs.
30 Caliber	Forward	150 lbs.



Fairchild F6II Brigand

Pirate attacks against shipping began within weeks of the USA's collapse, initially disorganized ground-based assaults and later carefully arranged strikes from carrier airships. Maintaining their aircraft's reliability and firepower soon became key concerns for the attackers, who were operating outside the law and were therefore denied access to many repair and maintenance facilities. Together with a general reluctance on the part of manufacturers to sell aircraft to less-than-reputable individuals, these requirements have helped determine the selection of aircraft used by pirate bands.

Pirate aircraft tend to come from a select few sources. Designs produced in neutral nations like Columbia, Ontario or Free Colorado are the most common, but the easy availability of these craft means that many also serve in private or state militias. The Fairchild Company of Columbia is a favored source of pirate aircraft; Columbia's much-vaunted neutrality prevents Fairchild from refusing sales, even to known pirates such as the Red Skull gang.

DESIGN HISTORY

The Brigand entered service in 1935, deployed as part of the Arlington Angels squadron in Columbia. It quickly earned a reputation as a reliable and accomplished attack aircraft, prompting widespread sales.

Powered by a single 16-cylinder Pratt & Whitney R600 engine, delivering 991 horsepower, the Brigand is fast but fuel-hungry. Much of the craft's poor fuel efficiency can be blamed on the fuel injection system, though its design does allow the craft to operate without taking into account the effect of gravity on fuel flow. The engine's large size when compared to the airframe has an additional feature—either a benefit or a flaw, depending on the circumstances and on different people's opinions. The engine's high torque acts on the fuselage, requiring the pilot to apply almost constant leftward pressure on the stick to prevent an engine-powered roll. Many pilots find this unsettling and modify the controls so that the neutral stick position holds the craft level; others exploit this feature to ease rightward turns.

The Brigand's compact shape and power grant it unusual agility for a heavy fighter. It makes an ideal anti-zeppelin platform, and many pirate groups use it to cripple their prey before boarding. However, the Brigand's poor turning circle and mediocre acceleration make it easy pickings for dedicated fighters.

Heavily armed, the craft sports two 50-caliber cannons per wing, each capable of delivering explosive, armor-piercing or incendiary shells. In addition, the co-pilot controls an electrically operated rear-facing turret that sports a pair of 30-caliber machine guns. Though the guns' accuracy is debatable, the turret serves to discourage close pursuit.

MANUFACTURER

The Fairchild Airplane Manufacturing Corporation was founded in 1925 at Hagerstown, Maryland. The company soon earned a reputation for quality civilian aircraft and grew by leaps and bounds through investments and acquisitions. In the years following the collapse of the United States, Fairchild's products became easy prey for pirates and privateers, which prompted the company to produce armed versions of its designs. The F4 Bandit fighter came off the production line in 1932, swiftly followed by the Corsair and the Brigand.

Over the past five years, the company has acquired a reputation for offering good value plus incentives for various groups to purchase its aircraft. The latter practice has made Fairchild one of the top ten companies in Columbia, though its

business rivals have decried some of its practices as unfair. A few have even charged Fairchild with deliberately fostering air piracy to ensure continued sales. While Fairchild certainly has benefitted from the increased sales brought about by the rise of air militias, company president Sherman Fairchild strenuously denies active support of any nation, faction or pirate band. He instead points to Fairchild's neutrality as the reason for its success, though some business rivals equate that neutrality with lack of morals.

**"It may be
ugly as sin,
but I'm willing to
sacrifice image for
that extra bit of
survivability."**

**—Winslow "Heartbreaker"
Davies, Red Skull Legion**

ROLE AND DEPLOYMENT

Though Fairchild's plants are all located in Columbia, the company has achieved enviable sales across North America. Built with export in mind, the Brigand serves in many North American nations. Militias in the Dixie Confederacy have been the largest buyers, closely followed by Appalachian and Empire State groups. The

only national government to have acquired the Brigand is Utah, where a single squadron serves along the Navajo border. However, the company's policy of neutrality means that many pirate bands also use the aircraft.

One popular rumor has it that former New York stockbroker Jonathan Kahn, aka "Ghengis" Kahn of the Red Skull Legion, traded his stocks in the company for a pair of Brigands. Kahn and Sherman Fairchild are certainly on good terms, and apparently knew each other before the Crash. Kahn is a regular visitor to the Hagerstown plant,

In the Service of



Red Skull Legion



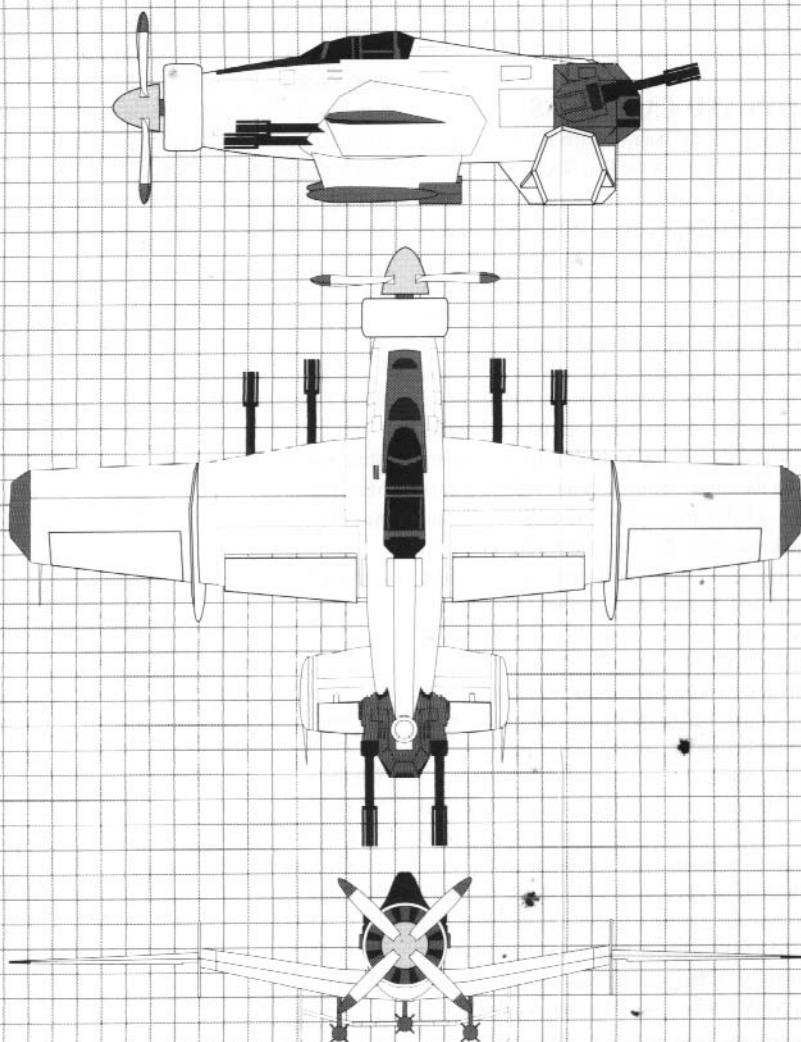
Dixie



Appalachia



Empire State



Fairchild F6II Brigand

Class:
Heavy Fighter (tractor)

MANUFACTURER:
Fairchild Aircraft Manufacturing,
Hagerstown, Maryland, Columbia

ENGINE:
Pratt & Whitney R600 (991 hp)

WING SPAN: 41 ft., 1 in. **LENGTH:** 30 ft., 9 in. **HEIGHT:** 12 ft., 11 in.

Loaded Weight: 11,250 lbs.	Service Ceiling: 18,000 ft.	Range: 350 miles.
Max. Speed: 250 mph	Max Accel: 65.6 feet/second	Max Decel: 65.6 feet/second

WEAPONS:
(2) Westmore "Dragon" 30-caliber machine guns, (4) Anderson Mk 103 50-caliber cannons

and the Red Skull Legion makes extensive use of all three Fairchild combat aircraft. Kahn pilots a modified Hughes Devastator.

PILOTS AND CAMPAIGNS

Harry "Lucky" Kenyon earned his nickname on his second flight for the Red Skull Legion, piloting a bomber-configured Brigand against a People's Collective target in 1936. With his copilot/bombardier Michael "Fritz" Schmidt, he was ordered to destroy the anti-aircraft defenses of a complex near Salina, Kansas, to allow the Red Skull's airship to approach and take on plunder.

While Skull fighters chased the defending aircraft away from the site, Kenyon and the other fighter-bombers began their runs on the installation. With flak bursting around them, the fighters dove on the target. Moments before releasing their bombs, a flak burst exploded just off Kenyon and Schmidt's wingtip. The two pilots were showered with fragments, but nonetheless released their payload and headed back toward the carrier. Before they reached it, a People's Collective Defender that had escaped the fighter sweep dove down on the bomber group. The combined fire of the eight Red Skull Brigands eventually drove it off, but not before it scored additional hits on Kenyon's plane.

Only after arriving back at the carrier did Kenyon and Schmidt recognize their amazing good fortune in surviving. The flak burst and cannon fire had come close to tearing off the Brigand's wing, but the aircraft's sturdy construction had allowed it to limp home. Even more surprising was the number of hits Kenyon had survived. He had been badly cut by glass fragments when the flak shattered the plane's canopy, then hit by metal

fragments from the cannon bursts. Despite these wounds, he had continued to fly the plane. When removing one fragment from Kenyon's chest, the ship's doctor told him that, had it hit a handspan higher or lower, it likely would have killed him. Schmidt, who had suffered minor injuries, immediately dubbed Kenyon "Lucky"—a moniker that quickly replaced his less complimentary nickname of "Newboy."

Fairchild F6II Brigand Game Statistics

Base Target Number	6	5,000 lbs.
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Max Speed:	3	900 lbs.
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Max Gs:	2	700 lbs.
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Acceleration Rate:	2	350 lbs.
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Armor Points	200	600 lbs.
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Nose	40
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Port Wing Leading	40
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Port Wing Trailing	30
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Starboard Wing Leading	40
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Starboard Wing Trailing	30
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Tail	20
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Weapon	Arc	Mass
50 Caliber	Forward	400 lbs.
50 Caliber	Forward	400 lbs.
50 Caliber	Forward	400 lbs.
50 Caliber	Forward	400 lbs.
30 Caliber	Turret	150 lbs.
30 Caliber	Turret	150 lbs.
Turret	Rear	550 lbs.



Hughes P21-J MkIII Devastator

Few aircraft have played as significant a role in the development of North American air warfare as the Hughes Devastator. Built principally as a fighter, but also including spotter and fighter-bomber variants, the Devastator is one of the oldest designs in widespread use. It has undergone several modifications to allow it to keep up with the host of newer designs; coupled with the plane's simplicity and versatility, these make it a favorite of smaller militias and pirate gangs.

DESIGN HISTORY

The first commercial design from what was then a new company, the Devastator was initially scorned for its tailless fuselage and use of a pusher-prop. Neither feature had previously appeared on aircraft, and pundits expected the design—which they termed “the product of a fevered imagination”—to prove a disaster. Surprisingly, however, the Devastator outmaneuvered and outran every design against which it was tested.

The original 12-cylinder Wright Cyclone engine, though underpowered by modern stan-

dards, gave the aircraft a top speed of 230 mph, a notable improvement over many of its contemporaries. When the design was revamped in 1934, a Tornado G450 engine with 1,468 horsepower replaced the Cyclone, increasing the plane's top speed to 270 mph.

The Devastator's factory-fitted armament consists of twin Anderson 50-caliber cannons, mounted in the nose forward of the cockpit. The second design revision, in 1935, added a United Munitions 40-caliber machine gun to the weapon load. The plane also features eight external ordnance points for rockets, bombs or external fuel tanks. The relative ease with which the craft's weapon load can be altered has prompted several custom configurations, making the Devastator one of the least predictable aircraft in today's skies.

Compared to more modern planes, the Devastator's cockpit is cramped and spartan, but many older pilots prefer this simplicity over the gadget-laden instrument panels of more contemporary craft. Many instruments now seen as essential were optional extras on the earliest

Devastators. It is not unusual to see a Devastator without an air-speed gauge or altimeter, even though these items became standard on the Mark II and Mark III versions.

When faced with modern fighters like the Bloodhawk, the GM Tempest or the Rolls-Royce Phantasm, the Devastator is clearly outclassed. However, many groups use the Devastator as a fighter-bomber, where its lack of speed is not a problem and its agility and firepower are above average. The versatile Devastator seems likely to remain in service for a number of years.

MANUFACTURER

Since first building it in 1931, Hughes Aviation has slowly scaled back manufacture of the Devastator in favor of more modern craft. The many Devastators in service have prompted the company to continue limited production of spare parts, but Hughes plans to cease this by the end of 1938. Current users of the plane will be relieved to know that Hughes recently concluded a deal with the De Bruin Company of Denver that ensures the Devastator's future. De Bruin's ties to the Boulder Pirate Haven have prompted many governments to criticize Hughes' decision, to which Hughes has responded in its traditional fashion by threatening to sue.

De Bruin, a long-time supplier of parts to Hughes, began licensed manufacture of the Devastator in February 1937, including at-order customizing of the weapon loadout and engine

specifications to meet each client's requirements. The standard Mark III design is the basic configuration, but two standard variants have appeared in recent months. The first downgrades the craft's speed in favor of armaments; the second downgrades the machine guns to twin 40-caliber Andersons in favor of greater rocket- and bomb-carrying capacity.

ROLE AND DEPLOYMENT

Most North American nations field some of the fifteen hundred existing Devastators in service. The largest number have been exported to Utah and Colorado, where the aircraft's rugged simplicity is a boon; however, these account for less than two hundred of the six hundred Devastators that remain in service. The rest are in private hands, largely a result of the thriving resale market that appeared following

the introduction of the Bloodhawk. Through such sales, many Devastators have fallen into pirate hands, where the design has proven to be a rugged workhorse. Many Colorado-based pirate bands fly the Devastator, as do groups like Jon "Ghengis" Kahn's Red Skull Legion, the Sun Children and the Communist Freedom League.

PILOTS AND CAMPAIGNS

The most famous Devastator pilot is former Manhattan stockbroker Jonathan "Ghengis" Kahn. Now head of the Red Skull Legion, Kahn can afford

**"Some planes
age gracefully
and are retired.
The Devastator
is anything but
graceful, and is
fighting retirement
tooth and nail."**

—Red Sky, Navajo Raider

In the Service of



Red Skull



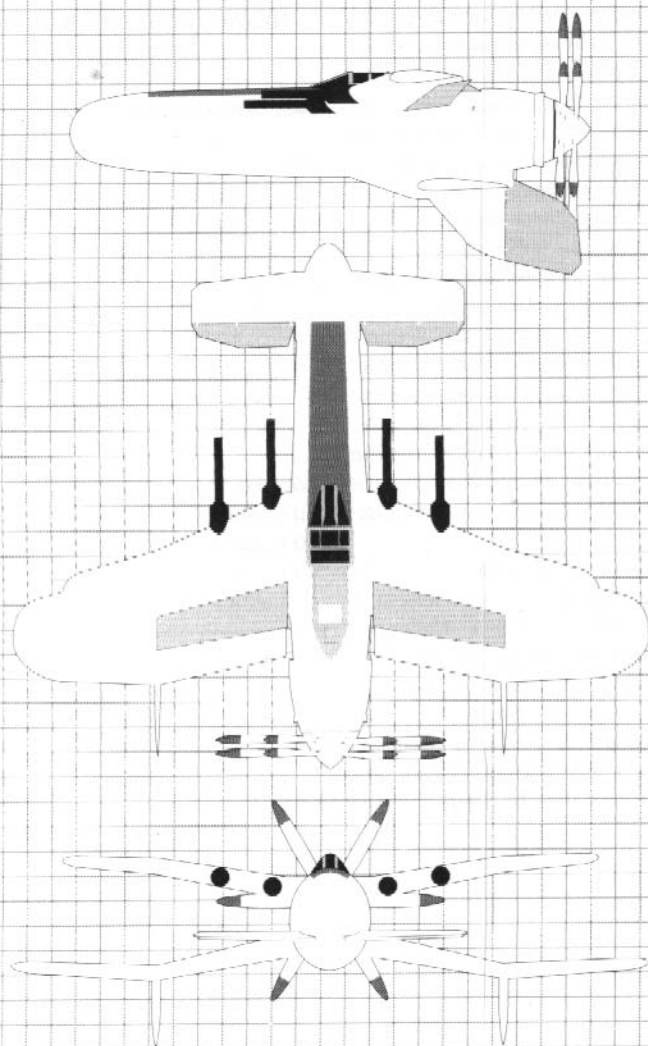
Utah



Free Colorado



King Cobras



Hughes P21-JMKIII Devastator

Class:
Fighter (pusher)

MANUFACTURER:
Hughes Aviation, / De Bruin Company,
Culver City, Hollywood Denver, Free Colorado

ENGINE:
Tornado G450 (1,468 hp)

WING SPAN: 31 ft. 11 in. **LENGTH:** 26 ft. **HEIGHT:** 16 ft. 3 in.

Loaded Weight: 9,500 lbs	Service Ceiling: 20,000 ft.	Range: 400 miles
Max. Speed: 300 mph	Max Accel: 98.4 feet/second	Max Decel: 65.6 feet/second

WEAPONS:
(4) United Munitions 40-caliber machine guns



to buy any aircraft he wants, and has bought a number of modern Fairchild aircraft for the Legion. Personally, however, he prefers to pilot the custom-variant Devastator he has used since his early days with the Purple Gang. Dubbed the "Whitney's Neglect," the aircraft is based on the Mark III Devastator chassis, but downgrades the engine to a 1,126-horsepower G320. The plane redlines at 250 mph, slower than the standard Mark III, but trades the higher speed for more payload space. Kahn used that space to upgrade his plane's weapons. In place of the standard model's four 40-caliber cannons, the "Whitney's Neglect" mounts three Sperry-Browning Crusader 60-caliber cannons, along with a slight reduction in armor to make room for the bulky guns. Though the 60s have a shorter effective range than the 50s they replaced, the added firepower is deadly against airships and other slow-moving targets.

In his custom aircraft, Kahn has earned a reputation from coast to coast as the scourge of shipping. The "Whitney's Neglect" typifies his fighting style, getting close to the target and pounding away. However, Kahn can also use subtlety and guile when it suits him. He is renowned for pushing his aircraft, convincing opponents they are facing a regular Devastator, and then shattering their illusions with the Sperry-Browning cannons.

Hughes P21-K MkIII Devastator Game Statistics

Base Target Number	5	6,000 lbs.
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Maximum Speed:	4	2,160 lbs.
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Maximum Gs:	3	1,620 lbs.
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Acceleration Rate:	3	540 lbs.
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Armor Points	220	660 lbs.
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Nose	50
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Port Wing Leading	30
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Port Wing Trailing	30
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Starboard Wing Leading	30
------------------------	----

Starboard Wing Trailing	30
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Tail	50
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Weapon	Arc	Mass
40 Caliber	Forward	250 lbs.
40 Caliber	Forward	250 lbs.
40 Caliber	Forward	250 lbs.
40 Caliber	Forward	250 lbs.



Sanderson FB14 "Vampire"

Though fighters are undoubtedly the kings of the air, their capabilities against ground targets are sorely limited. A fighter can use its cannons to strafe an unarmored target, but armor or fortifications render such attacks ineffectual. In most cases, hitting ground targets is a task for heavy fighters or even bombers, though the latter are rarely seen outside national air forces. But not all heavy fighters are alike. Some are lighter and more maneuverable, like smaller fighters, while others have more in common with heavy bombers. Intended as a light support bomber, the Sanderson FB14 "Vampire" falls solidly into the latter category, capable of delivering an impressive payload over long distances with considerable accuracy.

DESIGN HISTORY

One of the heaviest aircraft designated as a fighter, the two-seat Sanderson FB14 "Vampire" is more like a bomber than its fighter-bomber cousins. Massing almost 13,250 pounds, the FB14 is cumbersome and slow, but extremely well armed and armored.

Powered by a pair of tail-mounted Pratt and Whitney P12 engines mated to pusher props, which deliver a combined thrust of 1,590 horsepower, the FB14's maximum cruise speed is 200 mph. The two massive engines are fuel-efficient, giving the craft a 700-mile operational range. In addition, the large-bladed props combined with the aircraft's considerable wing surface give the FB14 an excellent climb rate and allow it to fly at altitudes of up to 25,000 feet. Few fighters can operate at such altitudes, which allows the FB14 to escape engagements with more agile craft and to fly long distances with minimal risk of interception. This high-altitude flight capability also makes the FB14 an ideal escort for heavy bombers and an excellent bomber-interceptor.

The plane's armaments are among the heaviest carried by any fighter. Twin Carver 40-caliber machine guns provide long-range hitting power, while shorter-range 60- and 70-caliber cannons mounted in wing pods do devastating close-in damage. Many pilots choose to augment these guns with armor-piercing and fragmentation rock-

ets or with bombs, thereby making the FB14 a truly fearsome aircraft.

As might be expected of a pirate band, the Redmann Gang often equips its FB14s with harpoon rockets that allow them to snatch cargo. They have this maneuver down to a fine art, but collecting the salvage from beneath the plane is often a tricky proposition.

The Sanderson FB14 has no official name, but is unofficially nicknamed the "Vampire." The name stems from the craft's high maintenance requirements, particularly its engines and control surfaces. The complex tail and engine assembly requires particularly careful maintenance if the FB14 is to remain airworthy. The craft consumes a disproportionate amount of time and money to remain fit to fly, though most users regard the aircraft's payload and accuracy as worth it.

MANUFACTURER

Established in 1893, the Sanderson Machine Corporation began as a tool manufacturer, and expanded into precision machining over the decades that followed. By the 1920s, the Tulsa, Oklahoma-based company's concerns ranged from oil derricks to small arms and automobile parts. In 1924, now-defunct North American Aviation contracted Sanderson to manufacture wings for its Gossamer courier aircraft, and later for the Dragonfly cargo transport.

The Crash and subsequent dissolution of the USA placed Sanderson Machine Corp. in a difficult position. North American Aviation went bankrupt,

its factories sold off to the highest bidder. Sanderson's aircraft division found itself with expertise and machinery but no work, until Matthew Sanderson, grandson of company founder Ewan Sanderson, decided it was time to cut out the middleman and produce aircraft. After poaching staff from troubled Douglas, also based in Tulsa, Sanderson set about producing its first plane: the C-10 transport, better known as the Charger.

The company followed up with its first military craft, the FB14 heavy fighter, in 1934. Though both Sanderson aircraft are infamous for frequent technical difficulties and high maintenance requirements, the company has ensured sales with a favorable pricing policy and its willingness to sell to anyone with the requisite funds. So far the Texas Rangers remain Sanderson's biggest single customer, but the company

makes the bulk of its sales to private buyers.

"Every rule has an exception that proves it. The B14 is that exception."

—Paulo Velasquez, Vampire pilot, the Redmann Gang

ROLE AND DEPLOYMENT

Though the "Vampire" was intended as a heavy fighter-bomber, two variants also exist. The first is a photo-reconnaissance plane that replaces the 40-caliber machine guns with additional fuel storage. This variant, with a range of 1,200 miles, is often used to examine sites in advance of an air or ground attack, allowing would-be attackers to adapt their battle plans to specific conditions. Several examples of this variant serve with the Texas Air Rangers along the Mexican border, providing a continually updated picture of the fron-

— In the Service of —



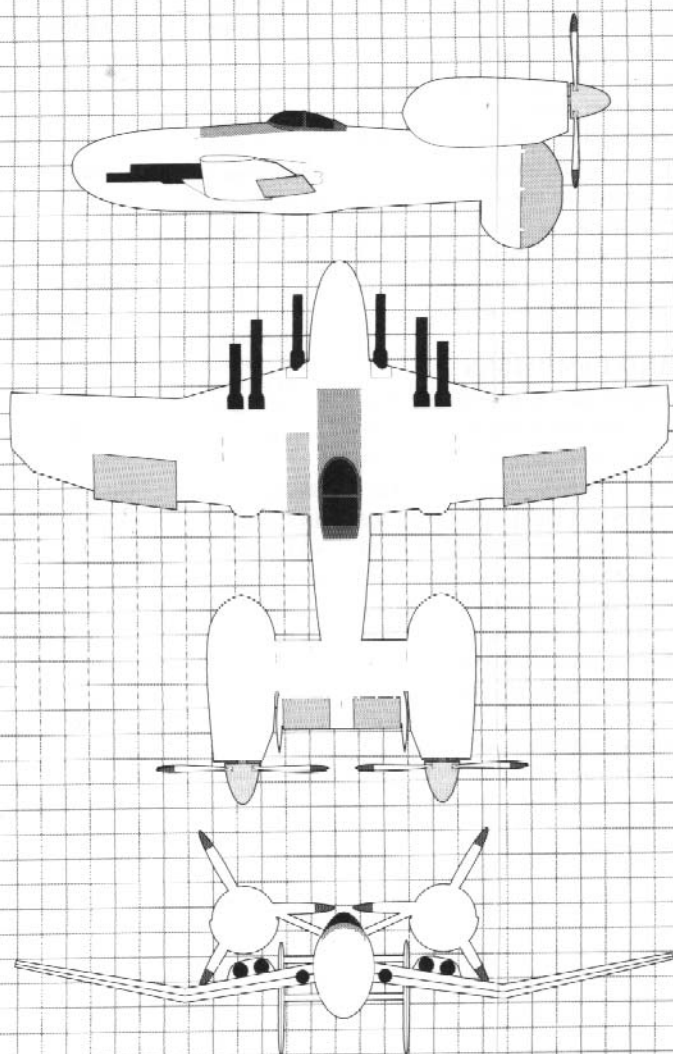
Redmann



Texas



Diamond Back Gang



Sanderson FB14 Vampire

Class:
Heavy Fighter (Pusher)

MANUFACTURER:
Sanderson Machine Corporation,
Tulsa, Oklahoma, Republic of Texas

ENGINE:
(2) Pratt & Whitney P12s (795 hp each)

WING SPAN: 27 ft., 6 in. **LENGTH:** 33 ft., 4 in. **HEIGHT:** 18 ft., 4 in.

Loaded Weight: 13,250 lbs	Service Ceiling: 25,000 ft.	Range: 700 miles
Max. Speed: 200 mph	Max Accel: 32.8 feet/second	Max Decel: 65.6 feet/second

WEAPONS:
(2) Carver Series II 40-caliber machine guns, (2) Carver Series IV 60-caliber cannons, (2) Carver Series V 70 caliber cannons

tier. Several others have been seconded to the Texan Cartographic Commission.

The second variant replaces the same two guns with a small, general-purpose cargo bay. These aircraft serve as couriers and mail carriers throughout the Republic of Texas. Texan mail routes extend as far as Albuquerque, Denver, New Orleans and Kansas City, crossing some of the most dangerous terrain in North America. The "Vampire's" range, weapon load and armor make it better suited than unarmed transport planes to delivering mail over such hostile territory.

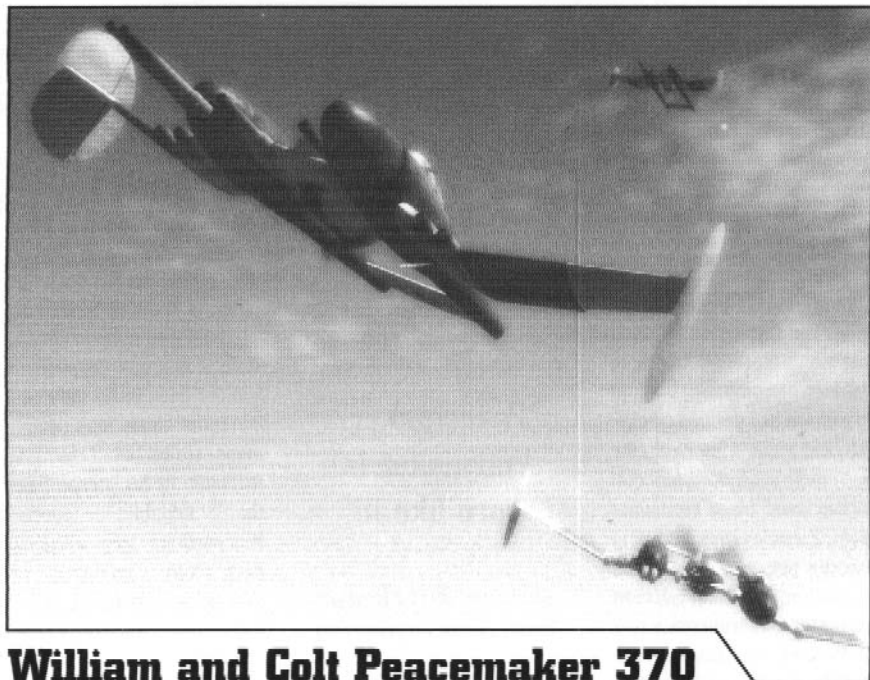
PILOTS AND CAMPAIGNS

Bill Redmann's gang in general has a reputation for cold brutality, but among the worst of the bunch are the crew of the "Vampire" known as the "Davy Crockett." Its pilot, George "Gunman" Foster, is a reckless but highly skilled pilot, and bombardier Ethan "Smokey" McCoy is known to target anything and everything in his sights. In June of 1936, the duo bombed a convent in Wichita Falls, taking out their frustration at having been turned back from an assault on a Texan cargo zeppelin. That callous act, which left seven nuns dead and twelve injured, shot Foster and McCoy high up on the Air Rangers' "Most Wanted" list, second only to Redmann himself.

Sanderson FB14 "Vampire" Game Statistics

Base Target Number	2	9,000 lbs.
Maximum Speed:	2	1,440 lbs.
Maximum Gs:	2	1,980 lbs.
Acceleration Rate:	1	900 lbs.
Armor Points	420	1,260 lbs.
Nose	80	
Port Wing Leading	70	
Port Wing Trailing	70	
Starboard Wing Leading	70	
Starboard Wing Trailing	70	
Tail	60	

Weapon	Arc	Mass
40 Caliber	Forward	250 lbs.
40 Caliber	Forward	250 lbs.
60 Caliber	Forward	600 lbs.
60 Caliber	Forward	600 lbs.
70 Caliber	Forward	850 lbs.
70 Caliber	Forward	850 lbs.



William and Colt Peacemaker 370

Within weeks of seceding from the Union, the Republic of Texas found itself at war with Mexico. A key factor in the Texans' victory was the use of superior air power to sweep the Mexican air force from the sky. With the Mexican fighters gone, Texan fighter-bombers pounded the invaders, attacking their formations and interdicting their supply lines to force their withdrawal.

Realizing that the withdrawal was likely temporary, the Texan Senate called upon the Republic's arms industries to develop newer and better weapons for use against future incursions. The government offered tax incentives to encourage such work, prompting the formation of numerous small aircraft manufacturers. Many experimented with new and innovative concepts, sometimes successfully. The William and Colt Peacemaker 370 was one such aircraft, whose sterling performance validated its unusual design.

DESIGN HISTORY

Though William and Colt's concept of a dual-hull fighter was not revolutionary, their execution

of the design was. Most such designs use two engines, one in each hull, with the cockpit located between them. The Peacemaker's engine was placed between the hulls, with the cockpit in one hull and much of the plane's weaponry in the other. Though seemingly unbalanced, this distribution of mass counteracts the torque of the massive 18-cylinder Guiberson Model 77 engine. The Model 77 uses diesel fuel rather than traditional aviation fuel, though this has proved a minor inconvenience within the Republic of Texas.

Overall, the Peacemaker's performance is unexceptional, with a top speed of 255 mph and a service altitude of 26,000 feet. The counterbalancing effect of the dual hulls gives the aircraft a relatively poor turn rate and a generally lazy response to the stick, offset by the versatility of the design and its potential payload.

The standard Peacemaker carries four fixed-forward, 60-caliber cannons, two per hull, and up to eight rockets. Some variants place the left hull cannon in a hydraulically operated turret and add a fifth gun that fires into the rear arc. This "gun-

ship" modification, with its need for additional crew positions, comes at the expense of more than half the aircraft's operational range. The Peacemaker can also serve as a light bomber, though its performance in such a role is generally inferior to a dedicated fighter-bomber's. It is unclear how much of the performance drop is due to the aircraft design and how much to pilot inexperience.

MANUFACTURER

The Crash of '29 shattered the once-prosperous North American Aviation company. Rapid expansion had drained off capital, and within a few weeks the seemingly solid company collapsed amid bitter recriminations. Factories were sold off at bargain prices, prompting the formation of small aircraft manufacturers scattered across Hollywood, the Empire State and the Republic of Texas. One site in Dallas was purchased by Dallas industrialist Bruce Williams and Benjamin Colt, descendant of Samuel Colt (of pistol fame). Both were keen amateur aviators and intended to use the plant to further their hobby. The dissolution of the United States and the Texan government's call for armaments, however, prompted the two men to design a new type of heavy fighter.

Their first effort proved unsuccessful, but they persevered, and in June of 1932 the first Peacemaker began trials. Despite a few early problems with the engine mounting, the project was judged a success and mass production began in October of the same year. A second design, the Rifleman, followed in 1936. That same year the

company acquired the former North American plant in Kansas City to produce a new line of civilian aircraft. However, strained relations with the People's Collective government have so far prevented the start of full production at the facility.

ROLE AND DEPLOYMENT

Never produced in large numbers, fewer than two hundred Peacemakers are in service. More than half of those serve in the Texas Air Rangers and the Republic of Texas Air Force, with the remainder scattered between local militias in

Texas, Arixo and Colorado. A number have found their way into pirate hands, most notably those stolen by "Marshal" Redmann in his escape from the Republic. Several Peacemakers have allegedly been seen supporting the Nationalist Kuomintang in the three-sided war in China. Assuming that rumor is true, how the aircraft got to China

remains a mystery.

Though it lacks the agility of many other fighters, the Peacemaker has proved an effective aircraft, relying on brute force rather than finesse. Its armor and firepower make it an ideal anti-zeppelin platform. The "gunship" variant is perhaps the most adept at this role, able to track and engage gun and engine pods without having to resort to hard maneuvering.

PILOTS AND CAMPAIGNS

After the Texas Air Rangers, the most famous (or infamous) Peacemaker pilot is "Marshal" Bill Redmann. A former Texas Air Ranger, Redmann proved to be a loose cannon and was court-mar-

**"Peacemaker?
Warmaker is
more like it!"**

*—Senator Rett Morgan,
Texas State Legislature*



Redmann



Texas

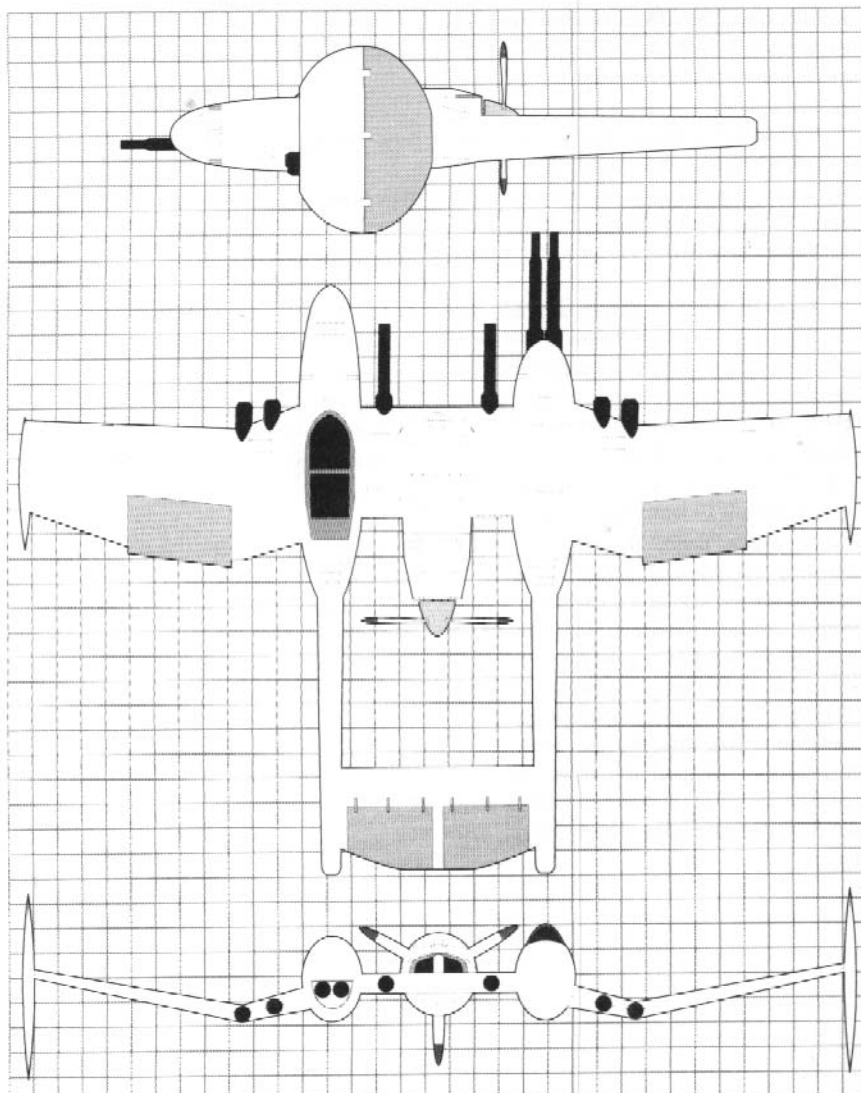


Arixo



Free Colorado

In the Service of



William and Colt Peacemaker 370

Class:
Fighter (Pusher)

MANUFACTURER:

William and Colt Aviation,
Dallas, Republic of Texas

ENGINE:

18-cylinder Guiberson Model 77 (1,126 hp)

WING SPAN: 35 ft., 5 in. **LENGTH:** 27 ft., 2 in. **HEIGHT:** 14 ft., 2 in.

Loaded Weight: 9,500 lbs	Service Ceiling: 26,000 ft.	Range: 400 miles
Max. Speed: 250 mph	Max Accel: 911.4 feet/second	Max Decel: 65.6 feet/second

WEAPONS:

(4) Colt Industries "Cheyenne" 60-caliber cannons

tialled after destroying a Dixie passenger zeppelin. After avenging himself against his former commanding officer, he fled, becoming first a mercenary, then a pirate.

Redmann's Peacemaker, his third since leaving the Rangers, is a stock model. He is said to favor a mix of magnesium and armor-piercing rounds. He also has a penchant for flak rounds, using them to herd targets into the killing zone of his guns.

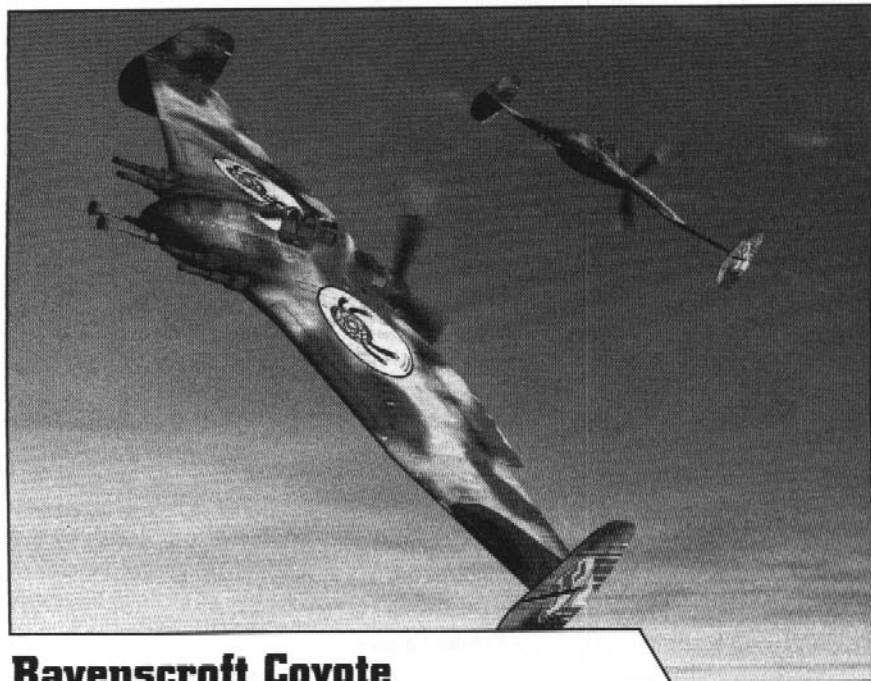
Redmann gives no quarter and asks for none, though he has been known to use other pilots' sense of honor against them. His murder of "Fireman" Kelly is among his most infamous exploits, but he has also lured Dixie and People's Collective pilots to their doom.

Early in his career, while employed in French Louisiana, he faked engine trouble to lure Dixie ace Martin "Banjo" McCauley to his death. Alternately opening and closing the throttle, Redmann made it look as if his Peacemaker was suffering engine problems. This prompted McCauley, who was known to be conscious of his "kill" total, to line up on Redmann's tail for a killing shot. Redmann then dropped air mines and gunned his engine. While McCauley was recovering from the impact of the mines, Redmann looped his aircraft to fall directly behind the Dixie pilot. McCauley did not live to learn from his mistake.

William and Colt Peacemaker 370 Game Statistics

Base Target Number	5	6,000 lbs.
Max Speed:	3	1,260 lbs.
Max Gs:	2	960 lbs.
Acceleration Rate:	3	540 lbs.
Armor Points	280	300 lbs.
Nose	50	
Port Wing Leading	50	
Port Wing Trailing	40	
Starboard Wing Leading	50	
Starboard Wing Trailing	40	
Tail	50	

Weapon	Arc	Mass
60 Caliber	Forward	600 lbs.
60 Caliber	Forward	600 lbs.
60 Caliber	Forward	600 lbs.
60 Caliber	Forward	600 lbs.



Ravenscroft Coyote

The collapse of the United States led to the resurgence of several Native American tribes. Some, like the Seminole and Miccosukee in Florida, created autonomous regions within the post-Collapse nations. Others, like the Sioux and Navajo, recreated their own nations. Though outsiders perceive both of the latter as unified, the Navajo Nation is actually a loose confederation of tribes who are often at odds with one another over issues of culture, policy or politics.

The Navajo Nation lies at the Four Corners nexus of Arizona, New Mexico, Colorado and Utah. The Navajo tribe dominates the region, but the nation includes sizable minorities of Hopi, Zuni, Ute, Apache and Pueblo Indians. Interestingly, the Apaches of the Whiteriver region have rebuffed attempts to incorporate them into the Navajo Nation; their territory remains an autonomous district of Arixo.

The relationship between the Hopi and Navajo tribes, never particularly good, has become increasingly strained in recent years. The Hopi are responsible for many of the Navajo

Nation's technological innovations that the Navajo tribe has appropriated, including the Coyote heavy fighter. Bickering over the issue has gradually escalated into clashes that threaten the stability of the region.

DESIGN HISTORY

The Coyote grew out of custom-built aircraft produced by the Hopi at Second Mesa. The prototype flew in late 1931; by mid-1932, it had come to the attention of the Navajo Council of Elders, who ordered a cadre of Wind Warriors to seize the design. Stripped and disassembled, the aircraft was quickly retro-engineered. Within six months, Ravenscroft Industries—a Navajo-owned company—had received the design schematics and begun production at its Farmington plant.

At first sight, the Coyote does not inspire confidence. Its construction looks unbalanced to the untrained eye, though in practice placing its cockpit away from the hull offers many advantages over a more traditional mono-hull design. Most importantly, the cockpit's placement counteracts

the torque of the 1,261-horsepower Cortez "Mountain Lion" engine, improving the aircraft's handling. Placing the cockpit away from the hull also allows for better visibility, particularly below the aircraft. This makes the Coyote an ideal spotter or light bomber and has earned it a place in many Navajo squadrons.

When combined with the complex system of hydraulics and cabling necessary to operate the aircraft, however, the cockpit-hull arrangement results in a generally sluggish response to the stick. Another side effect of the plane's unbalanced design is its unusual armor distribution. The armor protecting the off-center cockpit blends into the wing surface; together with the cockpit's structural bracing, this adds the equivalent of another thirty pounds of armor. Despite this, the aircraft's overall armor thickness is regarded as average for its mass.

The Coyote's most serious flaw may be its undercarriage. Several of the Ravenscroft prototypes suffered hydraulics trouble that resulted in the collapse of one or both legs during landing. Though no aircraft were lost, attempts to resolve this problem delayed the Coyote's entrance into active service by several months. The ensuing modifications were not wholly successful; the aircraft's undercarriage still has a reputation for collapsing in heavy landings.

MANUFACTURER

An Anglo-owned company until it was nationalized by the new Navajo Nation,

Farmington-based Ravenscroft Industries originally produced light machinery. As one of a handful of companies capable of the precision engineering required for aircraft manufacture, Ravenscroft was a natural choice to build the Navajo Nation's first aircraft plant. Construction of the assembly facility began in the fall of 1931, and the first aircraft rolled out in the spring of 1933.

The Ravenscroft plant is far from the usual mass-production facility. Production of the Coyote, Ravenscroft's only aircraft to date, numbers a mere twenty per year. The recent opening of a second plant in Cedar Ridge suggests that the company intends to step up its output. However, last month's raid on the new site by rogue Hopi warriors forced a delay in production, and so the first aircraft are not expected to roll off the Cedar Ridge production line until 1938.

**"The Navajo take
what they need
to survive.
The Coyote is
one such item."**

*—Soloho Salawa,
Hopi warrior*

ROLE AND DEPLOYMENT

The Coyote was designed as a multi-role craft and can

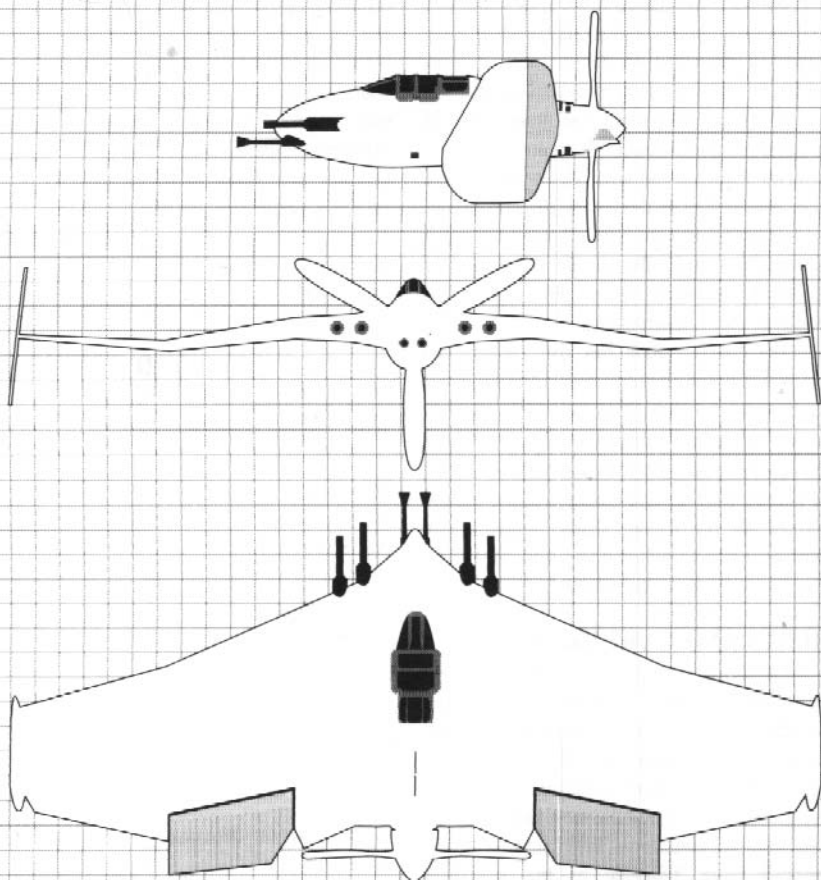
hold its own against most aircraft dedicated to single roles. In addition to acting as a spotter and bomber, the aircraft's heavy weapon payload makes it an ideal gunship. The Coyote's armaments include one pair each of Durango Arms 50- and 70-caliber cannons and a single 30-caliber machine gun. Copied from Sperry-Browning designs, these weapons are surprisingly reliable, with ammunition-feed mechanisms far superior to those of the guns on which they were based.

Despite the Coyote's relatively small numbers—less than a hundred in service—the plane

In the Service of



Navajo Nation



Ravenscroft Coyote

Class:
Heavy Fighter (Pusher)

MANUFACTURER:
Ravenscroft, Farmington, Navajo Nation

ENGINE:
Cortez "Mountain Lion" (1,261 hp)

WING SPAN: 35 ft., 6 in. **LENGTH:** 22 ft., 2 in. **HEIGHT:** 10 ft., 2 in.
(excluding prop)

Loaded Weight: 10,750 lbs	Service Ceiling: 21,000 ft.	Range: 400 miles
Max. Speed: 250 mph	Max Accel: 65.6 feet/second	Max Decel: 65.6 feet/second

WEAPONS:
(2) Durango Arms 70-caliber cannons. (4) Durango Arms 40 caliber machine guns

is a common sight in the Navajo Nation. It is rarely seen outside the nation's borders, however. Individual warriors as well as squadrons use the design, but more than one Coyote rarely appears in a single unit. Operating from airfields that are little more than clear patches of desert, most of the Navajo Nation's Coyotes fly against air forces from Free Colorado and Arixo. Coyote pilots play a major role in shutting down smuggling operations ferrying alcohol into the Navajo Nation. (Together with smallpox and influenza, the Navajo regard alcohol as the white man's curse against The People, as they call themselves.)

The Navajo Nation has civil (though not exactly warm and friendly) relations with Arixo, but its relations with Utah have their ups and downs. Utah is highly suspicious of the "heathen" Navajo, who return that sentiment in kind. During the Plateau Wars against Colorado-based pirates, however, the two nations shared limited intelligence against their common foe. Since then, relations have once again deteriorated.

PILOTS AND CAMPAIGNS

The Coyote played a major role in the 1936 Plateau Wars against Colorado based pirates, operating principally as a high-altitude spotter. Coyotes directed allied aircraft against pirate groups, while using their formidable firepower to devastating effect. One of the most famous Coyote pilots from that conflict was Rodrigo Matihab, who operated from Telluride in the San Juan Mountains. He chose to prove his skill as a warrior by fighting alone.

A militant Navajo, Matihab has painted twenty-six victory feathers on his aircraft, fourteen from the Plateau Wars, as well as eleven coup markers—all of them testifying to his courage and prowess. He made many of his kills during the Plateau Wars in swooping attacks from high astern, often against whole pirate squadrons,

using the speed and surprise from the dive to cancel out his plane's handling problems. The coup markers indicate passes through enemy formations made without any attempt to harm pirate aircraft. Such actions, though deemed foolhardy by many of the People, have nonetheless earned Matihab considerable fame. Though his kill count is lower than those of fellow warriors Soloho Salawa or Carlos Alchesay, Matihab's achievements have made him one of the most respected aviators in the Navajo Nation.

Ravenscroft Coyote Game Statistics

Base Target Number 4 7,000 lbs.

Maximum Speed: 3 1,680 lbs.

Maximum Gs: 2 1,260 lbs.

Acceleration Rate: 2 630 lbs.

Armor Points 240 720 lbs.

Nose 40

Port Wing Leading 40

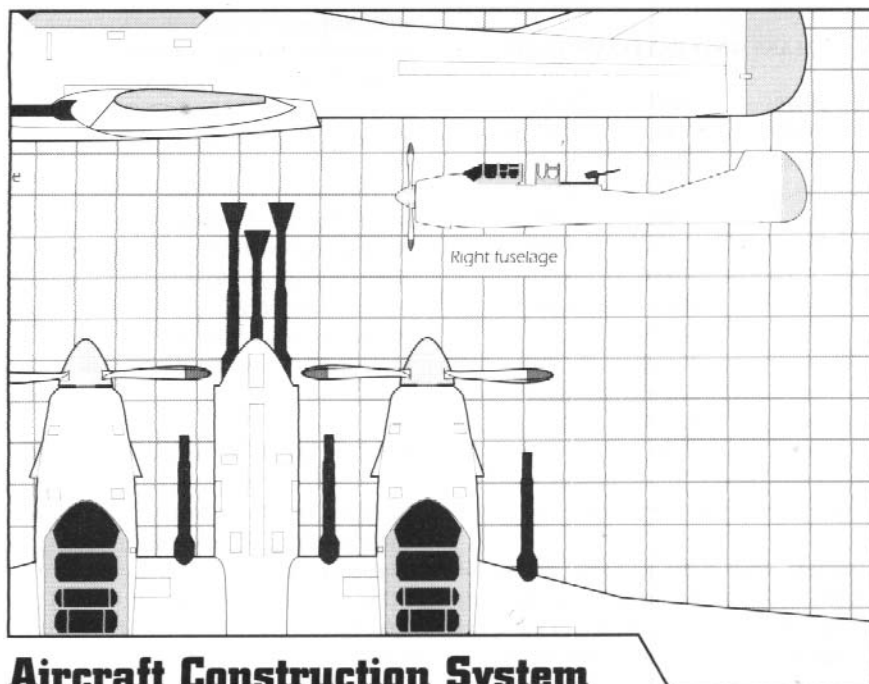
Port Wing Trailing 40

Starboard Wing Leading 40

Starboard Wing Trailing 40

Tail 40

Weapon	Arc	Mass
40 Caliber	Forward	250 lbs.
40 Caliber	Forward	250 lbs.
40 Caliber	Forward	250 lbs.
40 Caliber	Forward	250 lbs.
70 Caliber	Forward	850 lbs.
70 Caliber	Forward	850 lbs.



Aircraft Construction System

The North America of *Crimson Skies* is awash with aircraft designs, ranging from mass-produced models to home-built designs. For players who want to construct their own aircraft, the following section contains all the necessary rules and information. This section also discusses the cost of equipment, including wing-mounted ordnance such as rockets and bombs.

CONSTRUCTING AIRCRAFT

Crimson Skies uses a simple and flexible construction system that allows players to build a wide range of aircraft. This system revolves around the aircraft's base to-hit number, called the base target number, which determines an air-

craft design's available space and the mass of most components. The system includes the following ten steps.

STEP 1: CHOOSE AIRCRAFT TYPE

The aircraft of *Crimson Skies* fall into two categories: fighters and heavy fighters. Fighters are designed for dogfighting and interception, while heavy fighters serve as gunships and light bombers. Unlike fighters, heavy fighters may be equipped with a turret (Step 8, p. 66). Fighters may have a base target number between 10 and 5. Heavy fighters may have a base target number between 6 and 1.

STEP 2: CHOOSE BASE TARGET NUMBER AND CLASS

All *Crimson Skies* aircraft have a base target number between 10 and 1, a number that helps determine the craft's mass and maneuverability. A Base Target Number of 10, representing the

**AIRCRAFT BASE TARGET NUMBER
TABLE**

Aircraft Type	Base Target Numbers
Fighter	10–5
Heavy Fighter	6–1

MASS AND PAYLOAD TABLE

Base Target Number	Total Mass (lbs.)	Maximum Payload (lbs.)
10	3,250	1,000
9	4,500	2,000
8	5,750	3,000
7	7,000	4,000
6	8,250	5,000
5	9,500	6,000
4	10,750	7,000
3	12,000	8,000
2	13,250	9,000
1	14,500	10,000

smallest aircraft, is the most agile and therefore hardest to hit, but has minimal space for equipment, armor or weapons. An aircraft with a Base Target Number of 1, the largest possible, makes a much bigger target but can also carry large amounts of equipment, armor and weapons. The base target number also dictates the size of major components; see steps 3 through 5, pp. 59–61.

The total mass of all equipment and weapons included in an aircraft design may not exceed the maximum payload, which is determined by the base target number. Equipment,

armor and weapons may take up less space than the maximum payload, in which case treat any remaining payload as cargo space. The total mass and maximum payload for the various base target numbers appear in the Mass and Payload Table.

Bryn chooses to design a heavy fighter, which allows him to choose a base target number between 6 and 1. Bryn decides on a Base Target Number of 6. According to the Mass and Payload Table, Bryn's aircraft masses 8,250 pounds, of which 5,000 pounds is the maximum payload and may be used for components.

STEP 3: CHOOSE MAXIMUM SPEED

Now the player selects a maximum speed for his or her aircraft. This number determines the craft's maximum speed (without pushing the envelope) in the game. Players may choose Speed 1 (150 mph), Speed 2 (200 mph), Speed 3 (250 mph), Speed 4 (300 mph) or Speed 5 (350 mph). Fractional maximum speeds do not exist in *Crimson Skies*.

After selecting the aircraft's maximum speed, cross-reference it with the aircraft's base target number to determine the mass of the engine (in pounds, shown on the Engine Mass Table). Subtract this number from the maximum payload.

ENGINE MASS TABLE

Base Target Number	Maximum Speed				
	1	2	3	4	5
10	10	25	60	160	300
9	20	60	180	400	700
8	30	120	360	720	1,200
7	40	240	600	1,120	1,800
6	100	400	900	1,600	2,500
5	180	600	1,260	2,160	3,300
4	280	840	1,680	2,800	4,200
3	400	1,120	2,160	3,520	5,200
2	540	1,440	2,700	4,320	6,300
1	700	1,800	3,300	5,200	7,500

STRUCTURAL REINFORCEMENTS TABLE

Base Target Number	Maximum G Rating				
	1	2	3	4	5
10	20	60	120	200	300
9	60	160	300	480	700
8	120	300	540	840	1,200
7	200	480	840	1,280	1,800
6	300	700	1,200	1,800	2,500
5	420	960	1,620	2,400	3,300
4	560	1,260	2,100	3,080	4,200
3	720	1,600	2,640	3,840	5,200
2	900	1,980	3,240	4,680	6,300
1	1,100	2,400	3,900	5,600	7,500

Bryn decides he wants a fast aircraft, and considers Speed 4. However, a Speed 4 aircraft with a Base Target Number 6 would have an engine mass of 1,600 pounds, a third of the craft's available mass. Bryn chooses Speed 3, which gives the craft an engine mass of 900 lbs. Bryn has 4,100 lbs. left for other components.

STEP 4: CHOOSE MAXIMUM G RATING

Having selected maximum speed and engine mass, the player now chooses a Maximum G Rating. This rating determines the amount of stress the aircraft's wings can take without risking damage, and thereby governs its turning ability. Ratings range from 1 to 5, with Rating 1 the lowest. Fractional Maximum G Ratings do not exist in *Crimson Skies*.

After choosing the Maximum G Rating, cross-reference it with the aircraft's base target number to determine the mass (in pounds) of the necessary structural reinforcements (shown on the Structural Reinforcements Table). Subtract this number from the remaining payload.

Bryn decides he does not want a particularly agile aircraft and so chooses a Maximum G Rating of 2. Cross-referencing his plane's Base Target Number of 6 with 2 Gs, he finds that the structural reinforcements mass 700 lbs. He deducts this figure from the remaining pay-

load, leaving him with 3,400 lbs. for additional components.

STEP 5: CHOOSE MAXIMUM ACCELERATION

Next, the player determines the aircraft's maximum acceleration rating. This rating determines the aircraft's ability to increase its speed without pushing, and so limits the aircraft's maneuvering options. Rating 1 is 32.8 feet per second per second, Rating 2, 65.6 feet per second per second, and Rating 3, 98.4 feet per second per second. Fractional acceleration ratings do not exist in *Crimson Skies*.

MAXIMUM ACCELERATION TABLE

Base Target Number	1	2	3
10	10	20	45
9	20	50	105
8	120	150	180
7	200	240	280
6	300	350	400
5	420	480	540
4	560	630	700
3	720	800	880
2	900	990	1,080
1	1,100	1,200	1,300

After selecting the maximum acceleration rating, cross-reference it with the aircraft's base target number to determine the mass (in pounds) to be added to the engine (shown on the Maximum Acceleration Table, p. 65). Subtract this number from the remaining payload.

Bryn decides his aircraft should have average acceleration and chooses a Maximum Acceleration Rating of 2. That rating increases the aircraft's engine mass by 350 lbs., reducing the remaining available payload to 3,050 lbs.

STEP 6: APPLY MAXIMUM DECELERATION

All aircraft have a Maximum Deceleration Rating of 2. This rating determines the aircraft's ability to decrease its speed without pushing and so limits the aircraft's maneuvering options. Deceleration imposes no mass requirement. A Maximum Deceleration Rating 2 is equal to 65.6 feet per second per second.

STEP 7: CHOOSE AND ALLOCATE ARMOR

All aircraft mount armor to protect pilots and vital systems from enemy fire. Players may add armor to any of the six available facings—Nose, Fuselage, Port Wing Leading, Port Wing Trailing, Starboard Wing Leading, Starboard Wing Trailing and Tail Fuselage—up to the maximum limit for that location and airframe (as shown on the record sheet) at a cost of 3 pounds per armor box. Armor may only be purchased in 10-box rows (30 pounds per row). On the record sheet, all partial rows adjacent to critical components are free armor.

After determining the amount of armor, allocate it between the armor facings. Then subtract the total mass of the armor from the remaining payload.

Bryn adds 200 boxes (20 rows) of armor to his aircraft. This reduces the available payload by 600 lbs., to 2,450 lbs. He allocates the armor boxes as follows:

Nose	40
Port Wing Leading	40
Port Wing Trailing	30
Starboard Wing Leading	40
Starboard Wing Trailing	30
Tail	20

STEP 8: CHOOSE WEAPONS

Next, the player selects his aircraft's guns. Guns fall into five classes, or calibers; players may add up to eight of any combination of calibers to an aircraft, limited only by the available payload space. All guns are in a forward firing arc. Subtract the mass of these guns from the available payload.

GUN MASS TABLE

Gun Type	Mass
30-Caliber Machine Gun	150 lbs.
40-Caliber Machine Gun	250 lbs.
50-Caliber Cannon	400 lbs.
60-Caliber Cannon	600 lbs.
70-Caliber Cannon	850 lbs.

Heavy fighters may mount a forward- or rear-facing gun turret. This turret masses 400 lbs., plus half the weight of the guns it includes. Each turret may mount only two guns.

Bryn uses his remaining available payload to mount six guns: four fixed-forward 50-caliber cannons (400 lbs. each) and two 30-caliber machine guns (150 lbs. each) in a rear-facing turret. The turret masses 550 lbs. (400 lbs. plus half the mass of the 30-caliber guns, which comes to 150 lbs.) The guns take up all the remaining payload.

STEP 9: DETERMINE CARGO AREA

Any mass remaining from the construction process becomes the aircraft's cargo area. This space may range from small amounts of mass (5 to 25 pounds) unusable for any part of the design system, to cavernous cargo bays limited only by the maximum payload.

STEP 10: FILL OUT RECORD SHEET

After completing the construction process, the player fills out a record sheet with the aircraft's performance limits, armor and weapons. *Crimson Skies* includes four types of record sheets: fighters with a tractor (nose) propeller, fighters with a pusher (tail) propeller, heavy fighters with a tractor propeller, and heavy fighters with a pusher propeller. The choice of tractor or pusher prop is left to each player, but must be chosen during construction.

Players should not select ammunition for machine guns and cannons at this point. Such decisions are made at the start of each mission and may sometimes be changed between scenarios. Only one ammunition type may be allocated to each weapon; players cannot select for each shot or mix-and-match ammunition.

PAYLOADS TABLE

Payload	Hardpoints
Armor-Piercing Rocket	1
High-Explosive Rocket	1
Flak Rocket	.5
Drill Rocket	1
Flare Rocket	.5
Sonic Rocket	.5
"Beeper" Rocket	.5
"Seeker" Rocket	1
Aerial Torpedo	2
Bomb	Variable
Harpoon Rocket	.5

Each aircraft has eight hardpoints that can carry rockets and bombs. These ordnance types are also chosen at the beginning of a mission. Each rocket or bomb takes up the number of hardpoints indicated on the Payloads Table. Players may mount more than one of some types of ordnance on each hardpoint.

Bryn fills out a record sheet for his aircraft and names the plane the Cutlass. He assigns each gun to one of the eight available gun positions (in order to record hits against them). He places a 30-caliber machine gun in each of the Gun 4 and Gun 5 positions, and a 50-caliber cannon in the Gun 1, 2, 7 and 8 slots.

At the start of his first mission, he chooses the ammunition for each weapon. In the Gun 4 position (30-caliber) and the Guns 1 and 2 positions (50-caliber), he places armor-piercing (AP) rounds. In the Gun 5 position (30-caliber), he places magnesium (MG) ammunition, and in Guns 7 and 8 (50-caliber) he places dum-dum (DD) ammo. He then selects his rocket load: two armor-piercing rockets (1 hardpoint each), two fragmentation rockets (1 hardpoint each), four flare rockets (0.5 hardpoints each) and four sonic rockets (0.5 hardpoints each).

LA

Weekly

1937 Lighting, PRIME Condition

A beauty of plane, used for only two years in raids on zeppelin shipping over Ohio. Always kept in cherry condition: original engine, but lots more firepower. She now carries twin 70-cal. machine guns and sports a rack of 12 missiles. Asking \$12,800, but negotiable.

A priceless piece of art

Remember the art theft at the Empire State's Metropolitan Museum of Art? They never found the loot, but I found the plane! Small and extremely fast, she is the perfect plane for getting away, from the cops or just for the weekend. If you're interested in a STEAL, give me a call.

Due to be exhibited at the World's Fair

Top speed 295 miles per hour!!! This one-of-a-kind prototype racing plane can be in your hangar instead—for the right price! All legitimate offers considered.

"She saved my life and she'll do the same for you." Captain Lucas, Texas Air Rangers

I am parting with my beloved 1935 Grumman Avenger. This killer of a plane has served me well in combat against pirates and in the Second Battle of the Alamo against the Mexican Air Force. Asking \$7,500.00 (non-negotiable). No offers accepted from pirates or privateers.

Pilots wanted to dig gold in Alaska

Involves tight flying in dangerous canyons, most likely while under fire. Interested parties should apply in person at Petersons Aeroport. Ask for Jimmy.

We pay 3 times normal wages!

Due to regular air attacks on the oil wells of Boom Town, Alaska, we are in constant need of trained mechanics to keep the pumps running. If an occasional explosion doesn't faze you and you would enjoy all the extra money, just show up at the offices of Getty Oil, Main Street, Boom Town, Alaska.

The People of Alaska Need YOUR Help!

If you're a combat pilot, the people of the country of Alaska need your help. Alaska has become the second battleground of the Russian Revolution and we are tired of it. Good base pay, plus combat kill bonuses for any pilots who will aid us in kicking out both the White and Red Russians. Please contact John Franklin at the office of Internal Affairs, Alaskan Government. (Pilots must provide own planes.)

SACRIFICE 1934**Hughes Cross-Country Flier**

Converted for use in the Confederate Air Corps. Mounted twin 60-cals included. Rockets extra. Light on armor, but she's fast. Can arrange squadron escort

home for the right buyer. Asking \$7,950, Confederate currency.

Funeral Forces Sale!

1936 Ford "Blockade Runner" for only \$8,500. Husband used it for two years to fly 35 combat missions into the Black Hills and Montana. New engine 6 months ago. Full weapons overhaul last week. Never forced down. Pilot finally killed in hiking "accident."

Parts for sale or trade

1937 Kittyhawk. Five months old, two engagements. Run-in with the Black Swan left me with half a plane and a new appreciation for tail gunners. Take it all for \$3,500. Also, looking for piloting job far from Empire State.

PUBLIC NOTICE**OF FEDERAL AUCTION**

To be held in Annapolis, Columbia on 10/15/37.

Military surplus planes and maintenance equipment. High man-hours and sold as-is. Guns included, but no rockets or ammunition load-out. Planes may be viewed the day before auction at Wilson Fields.

**Emerald
SkyLimo
Out-of-
Business
Sale**

Selling off six GM-manufactured White Cloud deluxe sky taxis. All are in good running order and mount the legal maximum (in accordance with Empire State law) for weapons on commercial transport passenger vehicles.

**GenAir: Lake Geneva's
Annual Airshow**

Will be held August 6th through the 9th at the Greater Milwaukee Air Field. Concessions, entertainment and prize drawings. As part of the recent change of management, a special presentation of the ISA's Steel Skies militia has been arranged.

Have Tools, Will Travel

Specialty team available for airplane custom modifications. Radical structure modifications, weapon innovation, specialty ammunitions; can do! No Pirate Bands! Privateers considered on case by case basis.

Looking for hot pilots who own planes

Trans-state couriers need good pilots with stamina for small-package long-haul jobs. Security deposit required on cargo, but pays up to 3 cents per air mile plus fuel and munitions.

**Pacifica Opens
Trade with King
of Hawaii!!**

Recent expansion of Pacifica's trading with the Hawaiian Islands has resulted in new air routes being opened up by several large companies. Zeppelin crews and fighter escorts needed. Extensive background checks! Foul weather experience a must. Seattle-8521.

**Ladies,
you're in
demand with
the
Hollywood
Squires!**

The fabulous flyers in Hollywood demand the best in entertainment. If you think you've got what it takes—singer, dancer, or other talents—our scouts would like to interview you. This may be your big break!

(Not associated with the Hollywood Knights.)

Turret Gunner needed ASAP!

I got the plane and the contracts. Need someone to fly shotgun in the bubble. Appalachia, frequent runs from the Allegheny Mountains into the Industrial States of America. Flat rate or percentage.

Why sell out, when you can buy in?

The Texas Air Rangers are the best outfit in the North American Nations. We know it, and they know it. If you think you've got the stuff to join, apply now for testing. Or simply jump the border and fly to Austin. You make it, you're in.

Privately Funded Teams Mounting Search For Earhart!

G. Putnam has hired four zeppelins for an extensive search of the area in which his wife, Amelia, is believed missing. Interested pilots, contact Putnam Publishing.

Engineers, mechanics, delivery pilots, test pilots!

The ever-expanding production division of Howard Hughes Aviation is always hiring. We'll give you the chance to help design, build, or fly some of the fastest and deadliest planes currently on the market. Apply today. Recent employee difficulties have opened up three test-pilot positions. Hiring bonus! Good medical plan.

Scout the skies for us

Organization based out of Aspen, Colorado looking for good recon unit. Solo elite pilots considered, but would prefer a squadron with experience in target acquisition and tracking. Pay based on successful missions, and includes generous cut of salvage.

Will Fly For Food

Pilot with family to support seeking employment within the People's Collective. Have 1936 Lightning, fully loaded and tuned. Veteran of the 1930 "Crop Dueling" battles; have flown with the Dusters off and on since.

Wanted: Aircraft mechanic

Minimum 3 yrs exp, must like travel. Skill as gunner a plus. Apply Box 305, NY, ES.

Position Sought

Dispute with former employer has forced pilot with 5 yrs combat exp to seek new position. Flying against the Black Swan not a problem. Reply Box 1927, Atlanta, GA, DX.

Personal

To the Unionist pilot flying over Memphis—next time you will not be so lucky. I salute you for not shooting when I hit the silk.

—Colonel Andrea Hawkes, Flaming Witch Company.

Ford Skydagger for sale.

Standard configuration, w/2x.60 mgs, parachute included. She's sweet, but my wife's sweeter, and

hitting the silk is better with her. \$5,000 obo. Reply Box 823, NY, ES.

Found

Document satchel that survived a long fall—man handcuffed to it did not. Looks like blueprints, or is that a map to your secret base? Reply with code number on the docs and we'll start talking lucre. RFD 41, Tyler, Rep Texas.

Need help with Pest Control?

Empire State firm specializing in destruction of infestations, especially of flying pests. Reply c/o Nipsy Weston, Box 523, Queens, ES.

Will Pay for Information

Looking for information on the March 3rd raid of Empire State Shipping zeppelin, the ESS *Manhattan Straits*. Three missing passengers, one of them my fiancée. No questions asked! For the identity and location of the raiders, will sign over everything I own but plane and enough fuel money to get me in range. Respond in care of Air Action Weekly magazine.

Specialty ammunition guarantees your safety

Loads manufactured for planes or personal weapons. Send a dime for our catalog. Dr. Tycho's Specialty Munitions, 1345 E. Pearl St., Philadelphia, ES.

Position Sought

Navigation and logistics specialist seeks employment—boss got my wife and I got the sack. Have sample plans for prospective employers to examine. Reply Box 9932, Burlington, VT, MP.

For Sale

Hudson Kestrel, .70 nose, 2x.30 cal wings. Climbs slow, but can't beat the dive. Dad's gone so the farm is mine, but she's no duster so I have to part with her. \$2500 obo; will trade for tractor with disc-harrow and baler. Reply M. Stanley, General Delivery, Topeka, PC.

For Sale

Read about the truth behind the Unionist Militia and the League of Nations and President Harding's assassination. Learn how dark forces are manipulating YOU and what YOU can do about it. Send \$1.50 to O. Stone, Hollywood.

Career Opportunity

The Dixie Bureau of Security has positions open in a variety of departments, including Intelligence, Counter-Intelligence, Cryptography and Data Assessment. Good pay, great benefits and chance for advancement. Apply DBS, Box 1001, Atlanta, GA, DX.

Adventure

If you have courage and the will to reap the material benefits you deserve, Hell's Henchmen may be

for you. If you don't know how to fly, we can teach you. Apply in person, Boulder, CFS.

Diamondback Air Patrols

Copperhead Mining Company (CMC) out of Arizo is hiring fighter pilots for border-patrol duty out of Tucson and flying escort for CMC cargo zeppelins making runs over the Navajo Nation. Frequent rotations to Phoenix garrison for R&R guaranteed by contract.

Personal

Angel, the black wind blows at midnight. Prof. Diablo

Wanted:

My brother is missing. Last heard of in May, '36. 5'11", 175, green eyes, lt br hair, great smile. Mom is dying and wishes to see him again. If you have seen Sam Lodge,

reply Box 631, Cranston, AC. Reward offered—we don't have much, but will send what we have in exchange for verified information.

Air Action Weekly

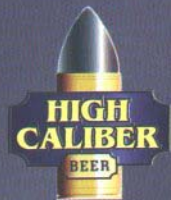
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