

BOARD OF DIRECTORS

August 2024 Issue

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President's Comments

New Pilot Pads

The larger concrete pilot pads are finally completed and now provide an elevated area to stand, large enough for an instructor and student. One of the main advantages of this that I am hearing is that it keeps feet away from fire ants. Thanks to Steve Watson for his help in coordinating this project.

Control Line Area Defined

A "runway" and pilot pad have been put in place in the slow fly area. Several members have pointed out a growing interest in control line flying and this area will accommodate this type of flying. Thanks to Steve Watson for coordinating this project.

Club Officer Update

As previously announced, the positions of President, Vice-President, and Safety Director will be open for new Officers at the November meeting when voting normally takes place. At this writing, Steve Watson has expressed interest in the President position and Devin Allen has expressed interest in serving as Vice-President and Secretary.

If you have any interest in serving in one of these positions, please let me know so that I can put that information in the newsletter in the coming months.

Safe Flying

Don Rick

Upcoming Events

TRAC - Club Meeting at Field, Saturday, August 10 at 11:00AM

TRAC - Club Meeting at Field, Saturday, September 14 at 11:00AM

TRAC - Club Meeting at Field, Saturday, October 12, at 11:00AM

TRAC - Club Meeting at Field, Saturday, November 9, at 11:00AM

TRAC - Club Meeting at Field, Saturday, December 14, at 11:00AM

TRAC MINUTES

July 13, 2024

Meeting Call to Order

Meeting called to order by Pres. Don Riek at 10:57 a.m. with 18 signed-in members present.

Motion to accept minutes of last meeting was made, seconded, and passed.

Treasury Report

Tim Haas presented a detailed treasury report and break down of expenses.

Beginning Balance \$ XXXX

Income \$ 1009.94

Expenses \$ 2080.88

Closing Balance \$ XXXX

Runway Fund \$ 370.00

Motion to accept the Treasurer's Report was made, seconded, and passed.

New Members/New Pilots

Jude Curtis

Safety block

Preflight your planes before takeoff and one thing to

always check is make sure your ailerons aren't backwards.

With us in our rain season the fire ants are popping up all over the field so make sure you watch where you steps and if you see a mound use some of the available fire ant killer available under he shelter on them

Old Business

Warbird Event still no updates from Vince Sr.
Update on club officers positions Steve Watson
has shown some interest in the president position and Devin Allen has said he would take
on the dual roles of Vice President and Secretary.

New pilot station pads and control lne pad, have you noticed them? What do you think?

New Business

- 1) Our lease with the county has been approved thru September 3, 2025
- 2) The county is still cutting all the grass at the field which is great since it doesn't cost us anything

<u>Show-and-Tell:</u> See Attached articles of Devin Allen's new Phoenix Models A6M5 Zero

Adjournment 11:12am

Phoenix Models A6M5 Zero Flown by Saburo Sakai

Power: Saito FA-72 Electric Retracts Onboard Glow Ignitor Wingspan 55" Length 47.3 "



Saburō Sakai fought in the Japanese Imperial Navy (IJN) as a member of the Tainan Kokutai (Tainan air wing) during World War II. The Tainan Kokutai was a premier fighter unit that participated in the opening actions of the Pacific war in the Philippines. Saburō Sakai was born on 25 August 1916 in Saga Prefecture, Japan. He was born into a family with an immediate affiliation to the samurai and their warrior legacies. He was the third-born of four sons (his given name literally means "third son") and had three sisters. Sakai had 28 aerial victories, including shared ones, according to official Japanese records, though he and his ghostwriter Martin Caidin claimed much higher numbers. He was the 4th highest scoring ace for the Japanese.



Mitsubishi A6M Zero



The **Mitsubishi A6M** "**Zero**" is a long-range <u>carrier-based</u> <u>fighter aircraft</u> formerly manufactured by <u>Mitsubishi Aircraft Company</u>, a part of <u>Mitsubishi Heavy Industries</u>. It was operated by the <u>Imperial Japanese Navy</u> (IJN) from 1940 to 1945. The A6M was designated as the

Mitsubishi Navy Type 0 carrier fighter[□] (零式艦上戦闘機, *rei-shiki-kanjō-sentōki*), or the Mitsubishi

A6M Rei-sen. The A6M was usually referred to by its pilots as the *Reisen* (零戦, zero fighter), "0" being the last digit of the <u>imperial year</u> 2600 (1940) when it entered service with the Imperial Navy. The official <u>Allied reporting name</u> was "**Zeke**", although the name "Zero" was used colloquially as well.

The Zero is considered to have been the most capable <u>carrier-based</u> fighter in the world when it was introduced early in <u>World War II</u>, combining excellent maneuverability and very long range.

The <u>Imperial Japanese Navy Air Service</u> also frequently used it as a land-based fighter. In early combat operations, the Zero gained a reputation as a <u>dogfighter</u>, achieving an outstanding kill ratio of 12 to 1, but by mid-1942 a combination of new tactics and the introduction of better equipment enabled <u>Allied</u> pilots to engage the Zero on generally equal terms. By 1943, the Zero was less effective against newer Allied fighters. The Zero lacked hydraulic boosting for its <u>ailerons</u> and rudder, rendering it difficult to maneuver at high speeds. Lack of <u>self-sealing fuel tanks</u> also made it more vulnerable than its contemporaries. By 1944, with Allied fighters approaching the A6M's levels of maneuverability and consistently exceeding its firepower, armor, and speed, the A6M had largely become outdated as a fighter aircraft. However, as design delays and production difficulties hampered the introduction of newer Japanese aircraft models, the Zero continued to serve in a front-line role until the end of the <u>war in the Pacific</u>. During the final phases, it was also adapted for use in <u>kamikaze</u> operations. Japan produced more Zeros than any other model of combat aircraft during the war.

The <u>Mitsubishi A5M</u> fighter was just entering service in early 1937, when the <u>Imperial Japanese Navy</u> started looking for its eventual replacement. On 5 October 1937, it issued "Planning Requirements for the Prototype 12-shi Carrier-based Fighter", sending them to <u>Nakajima</u> and Mitsubishi. Both firms started preliminary design work while awaiting more definitive requirements a few months later.

Based on the experiences of the A5M in China, the IJN sent out updated requirements in October.

m (9,800 ft) in 9.5 minutes. With <u>drop tanks</u>, the IJN wanted an endurance of two hours at normal power, or six to eight hours at economical cruising speed. Armament was to consist of two <u>20 mm cannons</u>, two 7.7 mm (.303 in) <u>machine guns</u> and two 60 kg (130 lb) <u>bombs</u>. A complete radio set was to be mounted in all aircraft, along with a <u>radio direction finder</u> for long-range navigation. The maneuverability was to be at least equal to that of the A5M, while the wingspan had to be less than 12 m (39 ft) to allow for use on aircraft carriers.

Nakajima's team considered the new requirements unachievable and pulled out of the competition in January. Mitsubishi's chief designer, <u>Jiro Horikoshi</u>, thought that the requirements could be met, but only if the aircraft were made as light as possible. Every possible weight-saving measure was incorporated into the design. Most of the aircraft was built of a new top-secret aluminium alloy developed by <u>Sumitomo Metal Industries</u> in 1936. Called "<u>extra super duralumin</u>", it was lighter, stronger and more ductile than other alloys used at the time but was prone to corrosive attack, which made it brittle. This detrimental effect was countered with a <u>zinc chromate</u> anti-corrosion coating applied after fabrication. No armour protection was provided for the pilot, engine or other critical points of the aircraft, and <u>self-sealing fuel tanks</u>, which were becoming common among other combatants, were not used. This made the Zero lighter, more maneuverable, and one of the longest ranged single-engine fighters of World War II, which made it capable of searching out an enemy hundreds of kilometres away, bringing it to battle, then returning to its base or aircraft carrier. However, that tradeoff in weight and construction also made it prone to catching fire and exploding when struck by enemy fire.

With its low-wing <u>cantilever monoplane</u> layout, retractable wide-set <u>conventional landing gear</u>, and enclosed cockpit, the Zero was one of the most modern carrier-based aircraft in the world at the time of its introduction. It had a fairly high-lift, low-speed wing with very low <u>wing loading</u>. Combined with its light weight, this resulted in a very low <u>stalling speed</u> of well below 60 kn (110 km/h; 69 mph). This was the main reason for its phenomenal maneuverability, allowing it to out-turn any Allied fighter of the time. Early models were fitted with <u>servo tabs</u> on the <u>ailerons</u> after pilots complained that control forces became too heavy at speeds above 300 kilometres per hour (190 mph). They were discontinued on later models after it was found that the lightened control forces were causing pilots to overstress the wings during vigorous maneuvers.

The Zero quickly gained a fearsome reputation. [3] Thanks to a combination of unsurpassed maneuverability—compared to contemporary Axis fighters—and excellent firepower, it easily disposed of Allied aircraft sent against it in the Pacific in 1941. [19][20] It proved a difficult opponent even for the Supermarine Spitfire. "The RAF pilots were trained in methods that were excellent against German and Italian equipment but suicide against the acrobatic Japs", as Lieutenant General Claire Lee Chennault noted. [21] Although not as fast as the British fighter, the Zero could out-turn the Spitfire with ease, sustain a climb at a very steep angle, and stay in the air for three times as long.[22] Allied pilots soon developed tactics to cope with the Zero. Because of its extreme agility, engaging a Zero in a traditional turning dogfight was likely to be fatal. [23] It was better to swoop down from above in a high-speed pass, fire a quick burst, then climb quickly back up to altitude. A short burst of fire from heavy machine guns or cannon was often enough to bring down the fragile Zero. These tactics were regularly employed by Grumman F4F Wildcat fighters during Guadalcanal defense through high-altitude ambush, which was possible with an early warning system consisting of coastwatchers and radar. [24] Such "boom-and-zoom" tactics were also successfully used in the China Burma India Theater by the "Flying Tigers" of the American Volunteer Group (AVG) against similarly maneuverable Japanese Army aircraft such as the Nakajima Ki-27 "Nate" and Nakajima Ki-43 "Oscar". AVG pilots were trained by their commander Claire Chennault to exploit the advantages of their P-40 Warhawks, which were very sturdy, heavily armed, generally faster in a dive, and level flight at low altitude, with a good rate of roll. [25]

Another important maneuver was Lieutenant Commander <u>John S. "Jimmy" Thach</u>'s "<u>Thach Weave</u>", in which two fighters would fly about 60 m (200 ft) apart. If a Zero latched onto the tail of one of the fighters, the two aircraft would turn toward each other. If the Zero followed his original target through the turn, he would come into a position to be fired on by the target's wingman. This tactic was first used to good effect during the <u>Battle of Midway</u> and later over the <u>Solomon Islands</u>.



More improvements to the club







General characteristics

Crew: 1

Length: 9.06 m (29 ft 9 in) **Wingspan:** 12 m (39 ft 4 in) **Height:** 3.05 m (10 ft 0 in)

Wing area: 22.44 m² (241.5 sq ft)

Aspect ratio: 6.4

Airfoil: root: MAC118 or NACA 2315; tip: MAC118 or NACA 3309[155]

Empty weight: 1,680 kg (3,704 lb)
Gross weight: 2,796 kg (6,164 lb)
Max takeoff weight: 2,796 kg (6,164 lb)

Fuel capacity: 518 L (137 US gal; 114 imp gal) internal + 1 × 330 L (87 US gal; 73 imp gal) drop

tank

Powerplant: 1 × Nakajima NK1C Sakae-12 14-cylinder air-cooled radial piston engine, 700 kW

(940 hp) for take-off

710 kW (950 hp) at 4,200 m (13,800 ft)

Propellers: 3-bladed Sumitomo-Hamilton constant-speed propeller

Performance

Maximum speed: 533 km/h (331 mph, 288 kn) at 4,550 m (14,930 ft)

Cruise speed: 333 km/h (207 mph, 180 kn)

Never exceed speed: 600 km/h (370 mph, 320 kn)

Range: 1,870 km (1,160 mi, 1,010 nmi) **Ferry range:** 3,102 km (1,927 mi, 1,675 nmi)

Service ceiling: 10,000 m (33,000 ft) **Rate of climb:** 15.7 m/s (3,090 ft/min)

Time to altitude: 6,000 m (20,000 ft) in 7 minutes 27 seconds

Wing loading: 107.4 kg/m² (22.0 lb/sq ft) **Power/mass:** 0.254 kW/kg (0.155 hp/lb)

Armament



Divergence of trajectories between 7.7 mm and 20 mm

ammunition

2 × 7.7 mm (0.303 in) Type 97 aircraft machine guns in the engine cowling, with 500 rounds per gun.

2 × 20 mm (0.787 in) Type 99-1 Mk.3 cannon in the wings, with 60 rounds per gun.

Bombs:

2 × 60 kg (130 lb) bombs *or*

1 × fixed 250 kg (550 lb) bomb for kamikaze attacks