



AMA Chapter #3798

Chino Valley Model Aviators

Official News



January 25, 2020

Volume 23 Issue 1

www.chinovalleymodelaviators.org

"To create an interest in, further the image of, and promote the hobby/sport of radio controlled aircraft"

Inside this issue

- ⇒ Mystery Plane 2
- ⇒ President's Message 2
- ⇒ Safety Column 3
- ⇒ Club Field Flying 4 & 5
- ⇒ Monokote Information 6
- ⇒ F-104N "Zoom" Flight 7
- ⇒ January Club Meeting 8
- ⇒ C-47T Combat Ship 9
- ⇒ Name the Plane Data 10

Aviation Thought:

I have no yesterdays; Time took them away. Tomorrow may not be, But I have today.

Support our Local Hobby Shop



Valley Hobby
Prescott Gateway Mall

Steve Zingali's All American Delta



Tanner Pacini's Twin EDF F-14 Tom Cat





Bill Gilbert: CVMA President's Message



We had a great turnout at our January Meeting-it was an important meeting to disseminate what we (your club's board) has learned about the FAA NPRM for Remote ID, and how we can respond to it. The discussions we had were fruitful for our membership to understand how important it is for all of us to get involved and comment on this NPRM. Our hobby is being greatly jeopardized by these proposed new rules. Help and be part of the solution-we need to move the needle within the FAA.

Let's stay positive and continue to enjoy our hobby. We are probably 3-1/2 to 4 years away from any RID requirements being implemented.

On the fun side, we have some great events planned for this year; E-Warbird

racing, Combat Wing pylon racing, Build-n-Fly, and lastly we are working on bringing regular Indoor Flying sessions to the membership. This may be in conjunction with the CDA club. Not only will indoor flying allow us to stay practiced during the winter, but it could be lots of fun year round. There are a lot very capable indoor aircraft available these days! And, they are very affordable and fun. Please participate, the more the merrier as they say.

Keep those new projects going, or conduct repairs and upgrades to old ones. The weather is now in that very unstable cycle- great clear days (if somewhat cold), followed by gloomy windy days and precipitation. We will soon be into the spring-time high winds.

Projects can help break that itch we all get to go out and fly. You may want to consider building a forgiving plane for

those high wind conditions that are coming up; I've found that a robust foamie works really well; it can keep you flying when you don't want to risk your nicer planes in high winds.

Keep those social connections open while we avoid the inclement weather or toil away in our shops. One of the things that makes our club special are the friendships we build up through flying together, and enjoying Tacos or Pizza afterwards. Don't

let un-flyable days lead us to neglect of those social contacts. Lunches or field trips to interesting local places can keep these friendships alive past just RC modeling.

See you at the field!

Bill

Flight Instructors

CVMA
FLIGHT SCHOOL
Volunteer Flight Instructors Needed

Needed

CVMA NEWSLETTER

AMA Chapter #3789
Published Monthly

President — *Bill Gilbert* 

Vice President — *Doug McBride* 

Treasurer — *Harold Ellis* 

Secretary — *Bob Steffensen* 

Safety Officer — *Steve Shephard* 

At Large Member — *Dan Avilla* 

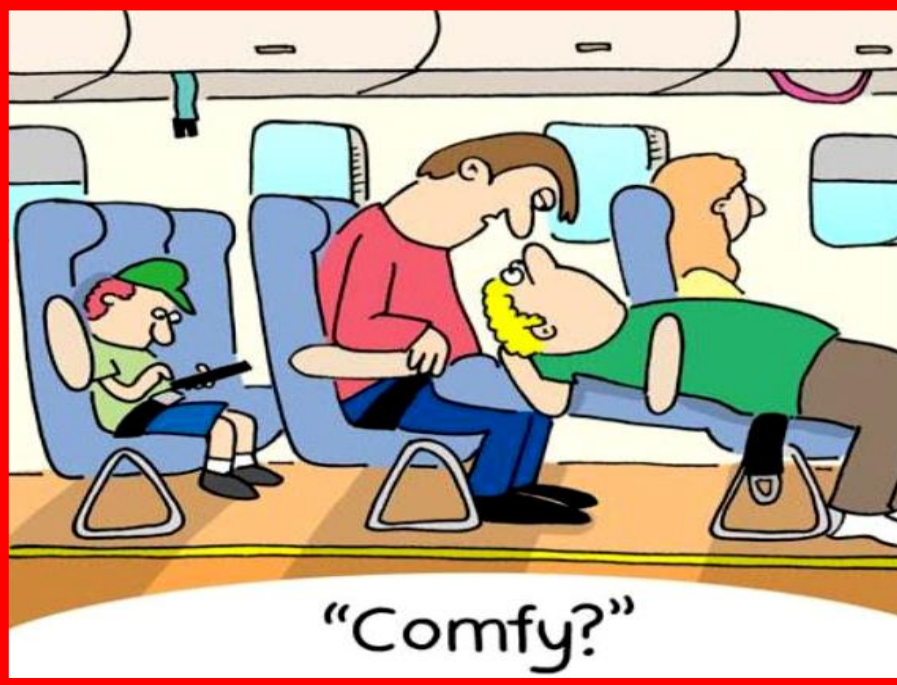
At Large member—*Dennis O'Connor* 

Newsletter Editor — *Bob Shanks* 

What Aircraft has this Cockpit?



See Page Ten

**2020 — MARK YOUR CALENDARS**

- May 9** Spring Fling, Fun Fly Swap Meet
- June 6** E-Warbird Races
- July 4** PotLuck and Fun Fly
- Aug. 8** Combat Wing Pylon Races
- Sept. 19** Annual Steve Crow Memorial Fun Fly
- Oct. 24** Annual Build & Fly Challenge
- Dec. 4** Christmas Banquet

Field Clean Up as needed before events

Club Meetings:

Third Wednesday of Each Month—7 PM
Prescott Airport Executive Building

**BORN IN A BARN?**

IF YOU ARE THE LAST ONE TO LEAVE THE FIELD:
PLEASE REMEMBER TO LOCK THE GATE.

**SAFETY: ALWAYS A CRITICAL ISSUE**

Members, we need to marshal all of our energy to contact those in power to help mediate the very restrictive FAA plans to severely regulate our freedoms we enjoy in our hobby of building flying RC airplanes.

We build and fly primarily model airplanes, not “drones”. To categorize model airplanes as “drones” is a highly uninformed approach. We build all types of model airplanes and fly only at sanctioned flying sites through the Academy of Model Aeronautics (AMA). As you know, our club is one of over 2,500 model airplane clubs in the U.S. The AMA was founded in 1936 and now has over 195,000 members enjoying model aviation.

What the FAA is considering as rules governing all UAS aircraft is a highly gross over reach and anti-business to traditional RC modeling. Many “mom

and pop” small hobby shops support our hobby around the country. By categorizing all model airplanes as “drones” and trying to regulate and only allow modelers to buy government approved aircraft that must be flown connected to the Internet is untenable and will in the long run close down the hobby of RC model aviation as we know it now.

Please write your congressional and political representatives as well as our AMA area representative Lawrence Tougas in California.

Your editor as well as our President Bill Gilbert have fired off letters to Congressman Gosar and Senator McSally. Bill also sent out a template to use in drafting your letters but make sure yours is not a direct copy of the template, use your own words and logic being highly respectful.

If you need help or assistance don't hesitate to contact your editor or Bill Gilbert.

Your editor took off one of his gliders recently and lost control of it immediately due to the tail skid fouling up in the elevator. He was able to regain control and safely land. While the model was designed to only use a skid it is imperative we all double check what we are going to fly to make sure everything is secure and all flying surfaces are functioning properly.

Most models have steerable tail wheels some do not so be aware of all the limitations of what you are flying or building and double check everything before flying even though you have flown your creation many times. Always fly safe members.



Tanner Pacini's F-14 Tom Cat

Club Members Flying Machines

WINTER HAS ARRIVED



This is Jeremy Beck's Raptor. Bill Gilbert has been assisting Jeremy in learning to fly it better, Bill is putting the Raptor through its paces on a snowy day. Jeremy, at left of Bill does a good job of flying this chopper and is slowly building up his helicopter flying confidence.



Newsletter editor *Bob Shanks* and his CL Ringmaster he converted to RC. The converted CL flies very well.

Power is from a Rimfire .15 and a 1600 Mah battery.

Rick Nichols grabbed his camera and for quick photo as Bob is rarely in the newsletter he does for the club.



Another colorful Zingali creation at right cutting through the blue.

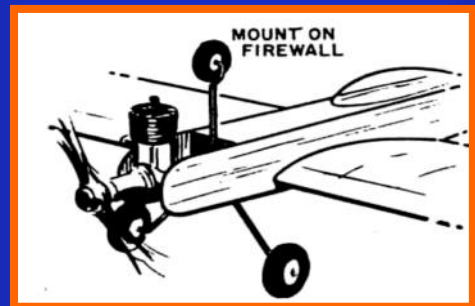


A Unique Member Project



Matt Butler's unique covering technique, actual Dove feathers. He hopes to test fly this when warmer weather arrives.

Preventing Student Engine Damage



How to prevent engine damage by students learning to fly glow or gas. Put a small wheel above the engine for sudden inverted landings!



Dennis O'Connor's DLE 20 Powered Corsair



Club Members Flying Machines



Tanner with Papa Pacini, both are expert flyers and Club members



Tanner Pacini's high speed pass with his F-14 EDF Tom Cat!

Matt Mrdeza's Arrow



Close up shot of Dennis O'Connor's DLE20 on a fly by.



Members Mike and Jean Greear live in Paulden and sent in these shots of their Ultra Stick on skis. Winter is indeed here. Jean is flying the Stick in these photos, she's a great flyer too.

New CVMA field sign at right looks good.



TWO CENTS WORTH OF SOME GOOD INFORMATION

by Randy Meathrell

Editors Note:

As many of you know, club member Randy Meathrell uncovers some good Internet information, not only for RC enthusiasts but for anyone interested in aviation and aviation related information and history in general. I received this information just before Thanksgiving as did many of you most likely but it is worth getting into the newsletter. Some handy information on covering, yes some of our members still build!!

When covering a model use trim solvent, it works great. It glues just like you have used a covering iron, of course after it dries. The Topflight homepage for the Trim solvent says after 24 hours the bond on the Monokote to Monokote is permanent. <http://www.monokote.com/acacys/topr6020.html>.

The trim solvent is excellent for use with the Smart Stripe Cutting tool, check out <http://www.monokote.com/accys/topr2420> so you don't need to use heat or over heat the Monokote that has already been applied hence the name trim solvent. It chemically melts the Monokote glue then dries without applying heat.

Randy points out that although he hasn't tried it you could in theory combine a whole wing panel of different strips of Monokote before hand on a flat surface then iron it one across ribs in one shot. You would probably need to keep the temperature down to 225 degrees Fahrenheit to keep the seam from melting loose.

When applying one piece of Monokote over another, trim solvent helps eliminate trapped air bubbles although you can also keep the air bubbles away by keeping your covering iron at 225 degrees Fahrenheit, according to the directions packed with Monokote.

There's an excellent tutor called "Trim Graphics Made Easy" at <http://www.topflite.com/reviews/trimgraphics.html>. If you want to make a very cool RCM decal out of Monokote check out the tutor at



This hapless modeler tripped and will now need to repair and recover his model.

Edwards AFB History Office Archives: The famous Dec. 10, 1963 ^{*} “Zoom Flight” Incident depicted in the Movie “The Right Stuff”

It's December 10th, 1963

Col. Chuck Yeager, Aerospace Research Pilot School Commander, wearing a full pressure suit, straps in the cockpit of an NF-104A Starfighter (#56-0762) serving as a low-cost “manned spacecraft transition trainer” for test pilots destined to fly the X-15 at Edwards Air Force Base, California, home of the Air Force’s Aerospace Research Pilot School, later renamed U.S. Air Force Test Pilot School.

The NF-104A is one of three heavily modified Starfighters that has just entered service and reach altitudes of about 125,000 feet. It features a 6,000-pound thrust rocket engine at the base of the vertical tail, nose and wingtips’ reaction control thrusters, a larger vertical tail, increased wingspan, as well as tanks to store the rocket propellants, provision for a full pressure suit, a cockpit hand controller to operate the reaction control thrusters, and modified cockpit instrumentation.

The NF-104A is used to perform “Zoom” flights: a typical flight profile sees a level acceleration to Mach 1.9 at 35,000 feet; the rocket engine ignition and on reaching Mach 2.1, a 50-70 degree climb at 3.5 g. The J79 afterburner would start to be throttled down at approximately 70,000 feet followed shortly after by manual fuel cutoff of the main jet engine itself around 85,000 feet. From that point, the pilot began a parabolic arc to the peak altitude, where he would experience zero “g” (or “weightlessness” for about one minute) and use hydrogen peroxide reaction control to handle the aircraft around the pitch, roll and yaw axis, before descending back into denser air where the main engine could be restarted using the windmill restart technique for recovery using a conventional landing. A standard mission would last about 35 minutes from taxi to touchdown.

Today, Yeager was attempting to reach an altitude record. The mission goes as planned until the rocket-propelled NF-104A reaches 101,595 feet and goes into an uncontrollable yawing and rolling motion. Yeager tries all what he can to recover the plane that is falling back towards the desert below in a flat spin at 8,500 feet, he decides to eject from the uncontrollable Starfighter.

During the separation from the ejection seat he’s struck in the face by the rocket nozzle while the combination of the red hot nozzle and oxygen in his helmet produced a flame that burned the left side of his neck and set several parachute cords on fire. Yeager will be hospitalized for two weeks, but he’s alive. The whole scene is filmed from the ground and the footage has now been released by Edwards Air Force Base History Office. It was later determined that the un-recover-able flat spin was caused by the excessive angle of attack that was not pilot input but a gyroscopic condition set up by engine rotation after shut-down for the zoom. The scene is depicted also in the book (and film of the same name) “The Right Stuff”, although most of the facts surrounding the crash have been altered somewhat. (Note, the aircraft used in the movie is an F-104G).

If interested, one can read more about Yeager’s experience, in his own words: (http://www.check-six.com/Crash_Sites/NF104-YeagerInterview.htm) In a previous article on the NF-104A subject, another flight almost ended in disaster on June 15, 1971, when Capt. Howard Thompson experienced a rocket engine explosion while trying to fire it up at 35,000 feet and Mach 1.15. Capt. Thompson was able to perform a safe landing to Edwards AFB using the normal jet engine. Few months later, in December 1971, the last NF-104A flight was performed: the program was terminated as it had been decided that the aerospace training mission would be carried out by NASA.

The first NF-104A #56-0756 is currently on display at Nevada County Air Park, Grass Valley, California wearing the markings of “56-0751. The second NF-104A #56-0760 is mounted on a pole outside the U.S. Air Force Test Pilot School at Edwards AFB.



The NF-104A



Chuck Yeager
in his “Space Suit”

* <https://theaviationist.com/2019/12/11/newly-released-video-shows-then-col-chuck-yeager-losing-control-and-crashing-an-nf-104a-at-edwards-afb-in-1963/>



JANUARY 2020 CLUB MEETING



The General Membership meeting for January 15, 2020 opened at 7pm, when President **Bill Gilbert** brought the meeting to order. We opened with Pledge of Allegiance to the flag of the Republic... for which it stands...

Club membership stands at 162. There were 57 members present including new member **Mark Harrison** and guests **David Huber** and **Fred Lesko**

Minutes of November 2019 meeting were approved unanimously with no corrections noted.

President's Agenda

A lively discussion of the NPRM for the FAA proposal for Remote ID for UAS was led by President **Bill Gilbert**. We don't know how this will end up, however, we do need to influence the proposal and make our voices heard: Make comments to the FAA; send your comments to your elected representatives; and contact other friends in other clubs.

Do they comply with current regulations to register with the FAA and label each of their aircraft as required? **(More to come on this)**

Bill Gilbert brought in a suggested warbird, a T6 Texan for club pylon racing. Other candidates were discussed and final selection was not resolved. More to follow. VP **Doug McBride** thanked everyone for the recent clean up, spreading gravel and grading access road including tractor operators **Bill Gilbert** and **Bob DeNoyelles**. The monthly Horse's Ass trophy award for the best crash went new member **Mark Harrison**.

In regard to the Horse's Ass award, this will be the last time we will be giving out that little trophy. Consensus is that we should not celebrate crashes.

Treasurer **Harold Ellis** presented Treasurer's report. The balance is \$9755.72. Report was approved unanimously. We need volunteers of bring goodies for Mar, Apr, Jul, Sep, Oct, and Nov. Let **Bob Steffensen** know if you can provide for future club meetings. The signup sheet will be again present at our February meeting.

We broke about 7:45pm for cookies provided by **Bob Steffensen** and **Harold Ellis**. Thanks

guys! We resumed the meeting at about 8:05pm.

Planes and Projects

Don Ferguson brought in a great looking FW 190; **Matt Mrdeza** brought in his M & Z designed F23 foamy; **Steve Zingali** showed his Sukhoi T50 foamy and the Blue Flow; **Jerry Calvert** has a Christen Eagle II foam bi-plane; **Larry Parker** came with a foam C160; and **Matt Butler** displayed his Flying Eagle feather duster.

Door Prize/Raffle

Charlie Gates won the door prize consisting of the proverbial bottled glue, velcro tie down straps and a flash light. **Jerry Skoczylas** won the Hobby King IONOS F3A with a 1.5m wingspan (59") in this month's raffle.

We adjourned about 8:30pm.

Respectfully,

Bob Steffensen Club Secretary



Don Ferguson's FW-190



Jerry Calvert's Christian Eagle.



Matt Butler's feathered creation.



Matt Mrdeza's Arrow.



Larry Parker's C-130 type.



Steve Zingali's Sukhoi T-50



Steve Zingali's VTO Blue Flow



Charlie Gates won the door prize.



Don Crowe was selected at our Christmas banquet as the Jay Riddle Perpetual trophy



Shel Liebach's landing gear award from Christmas banquet.



Columbian C-47T Combat Gun Ships

<https://www.dc3dakotahunter.com/blog/80-years-dc-3s-maiden-flight-colombian-c-47-combat-role/>

The Columbian AC-47 T Fantasma, a night prowler using the W II built C-47 air frame, modified with turbo engines and a couple of very lethal barrels protruding from the windows. It may not look all too impressive, but in this layout, the aircraft has pounded the FARC jungle camps by night to such extent that FARC almost disintegrated in a matter of 3 years of attacks with those “Bats out of Hell” and other specialized aircraft. The Rebel camps were hard to find in the dense jungle and mountains, until the InfraRed Camera arrived, coupled to those sideways firing guns.

These photos on this page depict unmistakably the iconic Douglas DC-3/ C-47/ Dakota, a vintage aircraft of which the last one was built in 1946, 70+ years ago. That legendary aircraft (aka The Gooney Bird) made its maiden flight on December 17th, 1935, now exactly 80 years ago. In the 10 years of its production, this DC-3 in various models would forever change the World, and the 10.600 + aircraft built in all its versions in the USA were to become the most enduring and operationally longest lasting aircraft ever constructed in the 100+ years of Aviation History.

The Douglas DC-3 entered the Hall of Fame already long before WWII, responsible in 1940 for over 70 % of all North American Passenger Air Transport. But the real “Days of Eternal Glory” came during the War that took place for the USA from December 1941 until August 1945. Its heroic role as a Utility/ Cargo/ Paratrooper/ Medevac transport in all theaters of War will never ever fade from public memory. Both at the Normandy Invasion and in the Far East, flying over the Hump, its reputation as a most reliable and versatile platform for air transport was settled forever in the War History books. After 1945, there came the Berlin Airlift (1948), the Korean Conflict (1950-53) and the Vietnam War (1964-1975). In all those conflict areas, the Skytrain/ Skytrooper/ C-47/ C-117/R4D was there for help, hauling food, fuel, beer, ammo, Jeeps, Howitzers, Generals, Soldiers, Paratroopers, the wounded and the fugitives.

After those wars, the aircraft soldiered on, both in the Military Role and with Civilian Operators. They came available from the USAAF surplus dumps by the thousands. Inevitably, over the years, we saw the aircraft disappear from the European airports. With the arrival of the big Intercontinental 4-engine Propliners in the late 1940s and the Jetliners in the late 1950s, the Dakota's role was relegated to the more remote airfields where cargo flights to primitive airstrips prevailed.

The Caribbean, Alaska, the Yukon, Northern Canada, Africa, and South America are now part of the last realm of the DC-3 where until today still some 150/200 airworthy aircraft of the type can survive. Also in a military role, there are some Air Forces that still have the C-47/DC-3, either with original radial piston engines, or modified with the more modern Turbo Prop engines. (Mostly made by Oshkosh based company Basler, their conversion named the BT-67)

What many people do not know is that there existed already in 1964 an outrageous version of the peaceful Douglas transport. It was armed with 3 side-wards firing Mini guns of the Gatling type, with 6 rotating barrels per gun. The vintage C-47 Transport came out of the blue into an Attack role and got the prefix A (Attack) as AC-47. This veteran wasp soon turned out to be a most effective deterrent in its role as a Close Air Support gunship in Vietnam. With the Viet Cong staging ambushes from paddy fields, villages and jungles, the help of the overhead flying “Ammo Hailstorm-inducing” aircraft became legendary, and soon these planes were honored with the nicknames “Puff the Magic Dragon” and “Spooky”.

At right, the Columbian AC-47 T *Fantasma*, using the very same airframe as the iconic Vietnam War Aerial Manhunters based on the C-47, these airframes have an extended fuselage.



NAME THE PLANE: RUSSIAN MIL V-12 HELICOPTER

Design studies for a giant helicopter were started at the Mil OKB in 1959, receiving official sanction in 1961 instructing Mil to develop a helicopter capable of lifting 44,000 to 55,000 lb. The directive intended the helicopter to lift major items of combat materiel as well as large inter-continental ballistic missiles (ICBM).

Design limitations forced Mil to adopt a twin rotor system but design studies of a tandem layout, similar to the Boeing CH-47 Chinook, revealed major problems. The single rotor layouts also studied proved to be non-viable, leading to the transverse layout chosen for the finished article.

The transverse rotor system of the V-12, which eliminates the need for a tail rotor, consists of two Mil Mi-6 transmission systems complete with rotors mounted at the tips of the approximately 98 ft span inverse tapered wings.

Construction of the V-12 first prototype, after exhaustive testing with test-rigs and mock-ups including a complete transmission system, began at Panki in 1965. The airframe was largely conventional, using stressed skin construction methods with high strength parts machined from solid metal blocks. The large fuselage accommodated the cabin and crew section in the extreme nose, housing a pilot, co-pilot, flight engineer, the electrical engineer was in the lower cockpit, with the navigator and radio operator in the upper cockpit.

At the aft end of the fuselage access to the cabin is gained by large clamshell doors and a drop down cargo ramp with inbuilt retractable support jacks. Doors in the fuselage also give access to the cargo hold: two on the starboard side and three on the port side. Above the rear fuselage is a very large fin and rudder, with a moderately sized tailplane with dihedral fitted with end-plate fins (not fitted for the first flight).

The fixed undercarriage consists of large paired main-wheel units on oleo-pneumatic levered shock absorbers mounted at the junction of a strut system supporting the rotor systems and wings and connected to the center fuselage by a tripod strut structure with the nose-leg attached aft of the crew section. A pair of bumper wheels are mounted at the rear of the fuselage keel and fixed support pads ensure that the cargo ramp is extended to the correct angle. Long braced struts also connected the transmission units

to the rear fuselage forward of the fin. Cargo handling is done by means of a forklift or electric hoists on traveling beams.

The power system and wings are mounted above the center fuselage with interconnecting shafts ensuring synchronization of the main rotors which overlap by about 9.8 ft. Drag and lift losses are

reduced by the inverse taper wings with minimum chord in regions of strongest down-wash. The interconnecting shafts also ensured symmetrical lift distribution in the event of an engine failure. To optimise control in roll and yaw the rotors are arranged to turn in opposite directions ensuring that the advancing blades pass over the fuselage.

Each power unit comprises two Soloviev D-25VF turbo-shaft engines mounted below the main gearboxes which each drive five-bladed 35 m (115 ft) diameter rotors and their synchronization shafts which run from wing-tip to wing-tip. Each paired engine pod has large access panels which open up for maintenance access and also form platforms for servicing crews to operate from.

Control of the V-12 presented several problems to the designers and engineers due to the sheer size as well as the rotor layout. The pilot and co-pilot sat in the lower flight deck with a wide expanse of windows to give excellent visibility. Using conventional cyclic stick, collective lever and rudder pedals the pilots input their commands in a conventional fashion. Roll control is by differential collective pitch change on the left and right rotors, ensuring that sufficient lift is generated to prevent inadvertent sink. Yaw in the hover or low air speeds is achieved by tilting the rotor discs forward and backward differentially depending on direction of yaw required. At higher air speeds differential rotor control is gradually supplanted by the large aerodynamic rudder on the fin.

Ascent and descent are controlled by the collective lever increasing or decreasing



the pitch of both rotors simultaneously. Large elevators on the tail plane help control the fuselage attitude and provide reaction to pitching moments from the wing and variation on rotor disc angle.

The control system is complex due to the sheer size of the aircraft and the need to compensate for aeroelastic deformation of the structure, as well as the very large friction loads of the control rods and levers. To keep the control forces felt by the pilots to a minimum, the control system has three distinct stages. Stage three, the high-powered rapid action control actuators at the main gearboxes operates the swashplates directly.

Construction of the first prototype was completed in 1968. A first flight on 27 June 1967 ended prematurely due to oscillations caused by control problems; one set of main wheels contacted the ground bursting a tire and bending a wheel hub. The cause of the oscillations proved to be a harmonic amplification of vibrations in the cockpit floor feeding into the control column during input into the cyclic stick.

The first prototype, made its first flight on 10 July 1968. In February 1969, the first prototype lifted a record 68,410 lb payload to 9,682 ft. On 6 August 1969, the V-12 lifted 97,455 lb to a height of 7,398 ft, also a world record.

