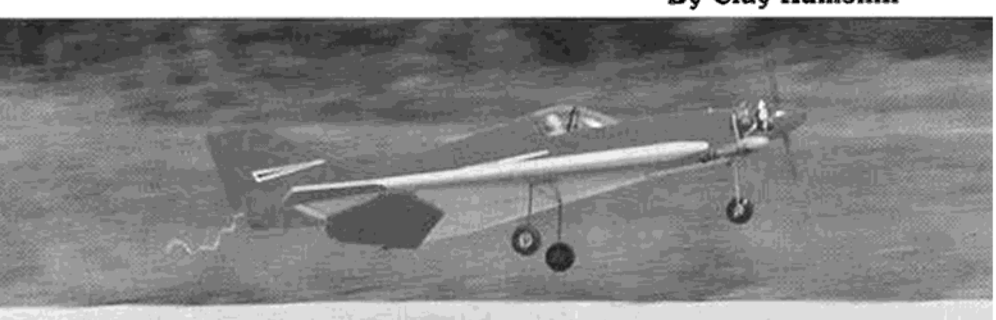
CliMax Delta

This Sport Delta is a real performer, and with a hot .40-.50 2-stroke up front, it's sure to provide plenty of excitement!

By Clay Ramskill



Have you reached the point where all the available kits seem to be about the same? Where all your planes are satisfying, but none really thrill you? Are you suffering from a lack of **contrast** in your flying stable?

CliMax could be the alternative you seek. This sleek delta never fails to attract attention; it looks different and it certainly flies differently. This is **not** an aircraft for the inexperienced flier — but if you can handle high speeds and very high roll rates, CliMax will add some spice to your flying. Learning to fly this type of airplane well, will make you a far better, more versatile pilot.

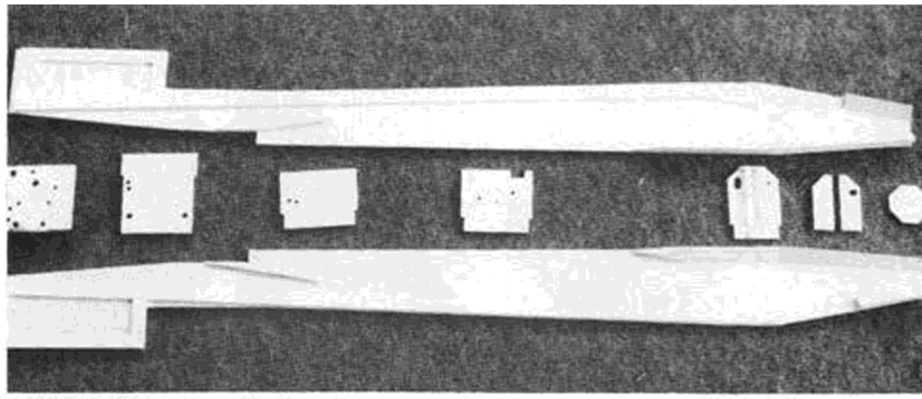
The design includes low frontal area for high speed potential, low wing loading for maneuverability and slow speed capability, a short wingspan for a high roll rate, powerful elevon control, and excellent pitch stability.

The delta wing planform is not a panacea of design that will do everything; after all, how many do you see around the local airport? But you'll likely find some at military airfields, worldwide, where their speed potential, high maneuverability, and stall characteristics make them ideal for combat purposes. And your first flying model was most likely a delta; if you folded your sheet of tablet paper correctly, it flew well.

Design Philosophy:

I prefer my designs to look like a full-size plane — in this case, a relatively small,

CLIMAX
Designed By:
Clay Ramskill
TYPE AIRCRAFT
Sport Delta
WINGSPAN
40 Inches
WING CHORD
18 Inches (Avg.)
TOTAL WING AREA
665 Sq. In.
WING LOCATION
Low Wing
AIRFOIL
Symmetrical
WING PLANFORM
Delta
LEADING EDGE SWEEP
51°
DIHEDRAL, EACH TIP
None
OVERALL FUSELAGE LENGTH
46 Inches
RADIO COMPARTMENT SIZE
(L) 18" x (W) 2½" x (H) 2½"
STABILIZER SPAN
NA
STABILIZER CHORD
NA
STABILIZER AREA
NA
STAB AIRFOIL SECTION
NA
STABILIZER LOCATION
NA
VERTICAL FIN HEIGHT
6 Inches
VERTICAL FIN WIDTH (incl. rud.)
7½ Inches (Avg.)
REC. ENGINE SIZE
.40-.45 Cu. In. 2-stroke
FUEL TANK SIZE
8-10 Ozs.
LANDING GEAR
Tricycle
REC. NO. OF CHANNELS
4
CONTROL FUNCTIONS
Elevons, rud./steering, throt.
BASIC MATERIALS USED IN CONSTRUCTION
Fuselage .... Balsa & Ply
Wing .... Balsa & Ply
Empennage .... Ealsa
Wt. Ready To Fly . 76-84 Ozs. (4¾-5¼ Lbs.)
Wing Loading .... 16.5-18.2 Oz./Sq. Ft.



Sides and formers ready for assembly.

perhaps home-built aircraft. The model must have provision for and interior volume for a pilot; about 1/6 scale for CliMax. My planes must slow down to land easily on a 200'-300' runway. They must be strong enough to last through hundreds of sport flights, and the occasional hard landing. And above all, they must perform, and perform with an inexpensive sport engine.

Power:

CliMax was designed around the Fox .40. The deluxe (ABC) version is recommended for its power, smoothness, resistance to flame-outs, plus it's **very** lightweight. But any strong, high-revving 40-45 will do, the lighter the better for balancing considerations. Above all, the engine should be reliable — CliMax glides nicely, but not very far!

Radio:

Any 4-channel radio will do, with the use of the sliding servo tray. If you have a unit that supports electronic roll and pitch mixing (delta mix), that should work, cutting the servo loads in half. **Do not** use slow servos, or you will have an airplane that is quicker than your servos. The Futaba 48 series servo has proven to be plenty fast and powerful enough.

CONSTRUCTION

General Notes:

The key to achieving light weight is to use light wood so select your balsa very carefully. The design is strong enough to tolerate this, although pithy wood should be avoided for spars and the fuselage sides.

CA glues were used exclusively except where noted.

Check your 1/2" triangle stock before going too far — if it isn't exactly 1/2", you may have to adjust the corners of the frames in the rear fuselage section. Obviously, this is best done before you cut them out! The same caution applies to 1/8" lite ply, which often shrinks to 3/32" during shipping, somehow!

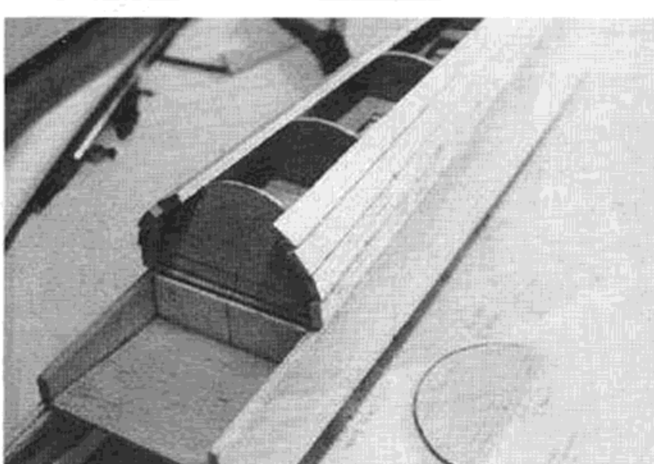
The arrangement of the rudder and nose gear steering NyRods is a bit unconventional — they are arranged this way so that as the NyRods expand and contract, both rudder and nosewheel will shift the same direction. Thus, when you trim up the rudder before flight, the nosewheel will tend to center also.

The plans are drawn for a flat battery pack; a square pack could be installed with some structural modification. Note the switch location, roughly 1/2 way between the battery and the receiver — you may want to check the length of your wiring to make sure your radio will fit.

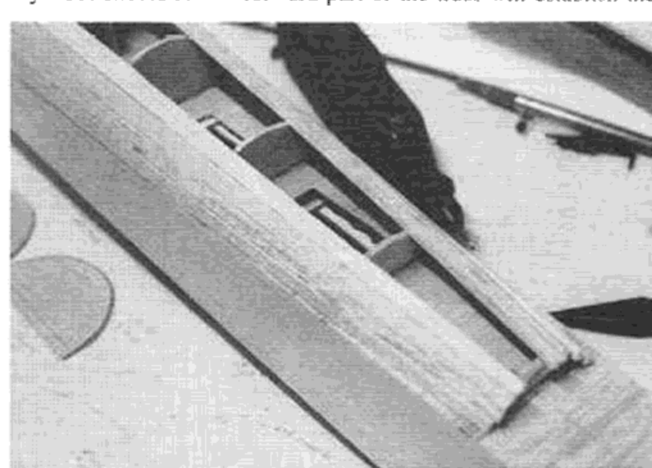
The plans allow for either an internal or external antenna, your choice.

Fuselage:

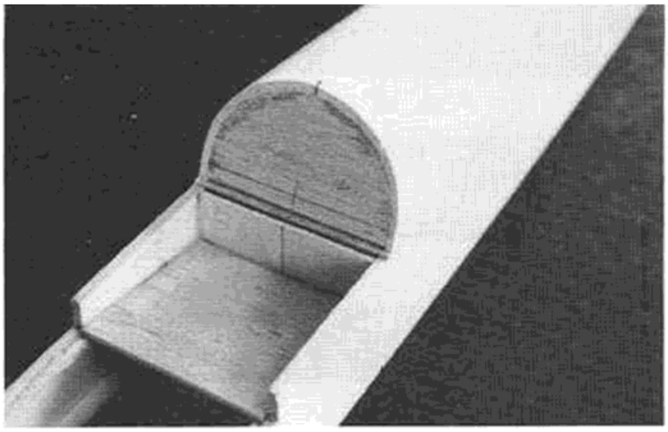
Cut out the sides from 3/16" x 4" x 36" lite balsa. Glue on extensions to the rear to complete the length required. Cut some 1/2" strips of lite ply for the doublers (inner truss), cut to fit, and glue on as indicated, as accurately as possible. Note that the forward part of the truss will establish the

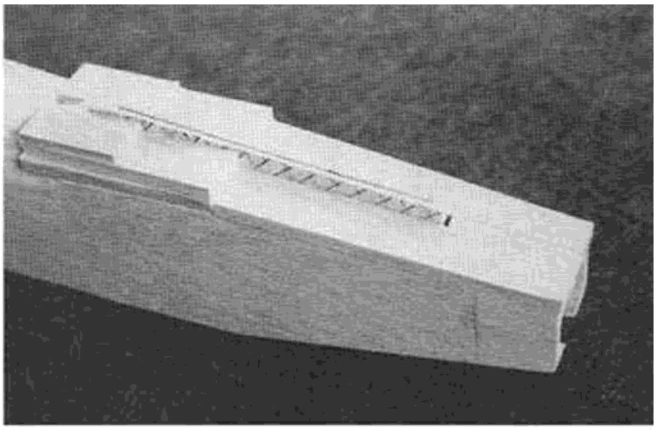


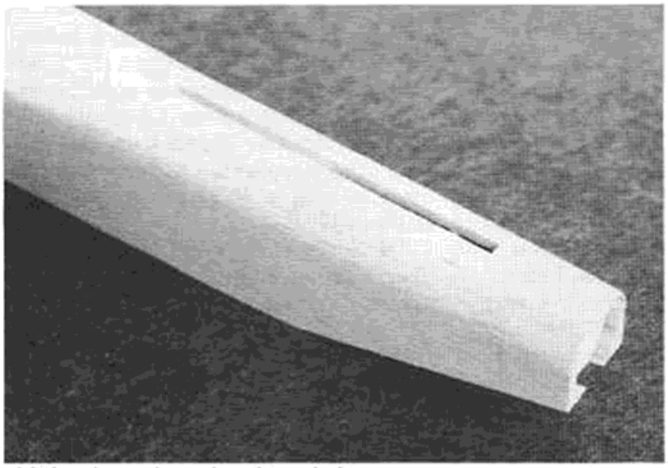
Forward turtledeck partially planked.

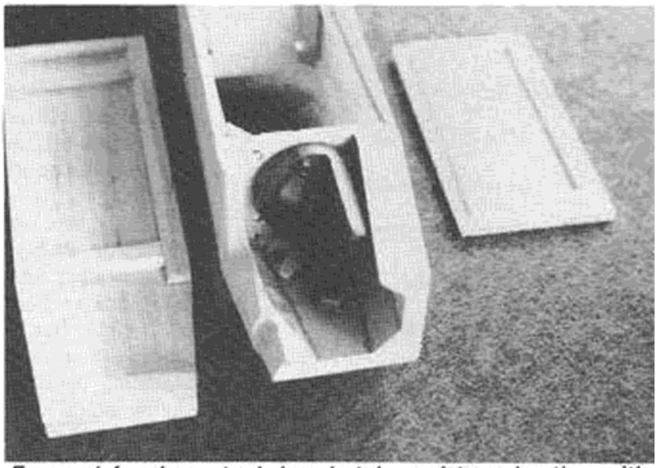


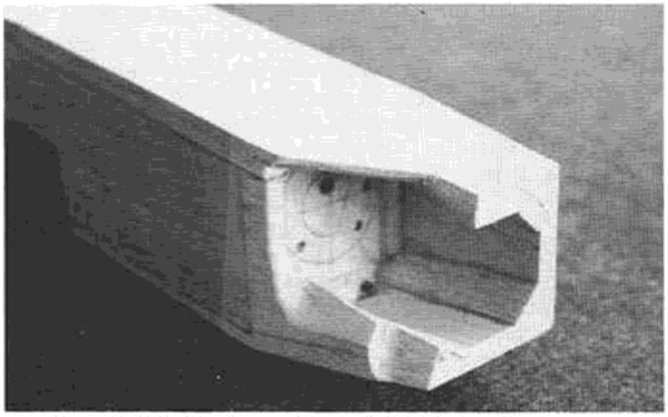
Rear turtledeck section.

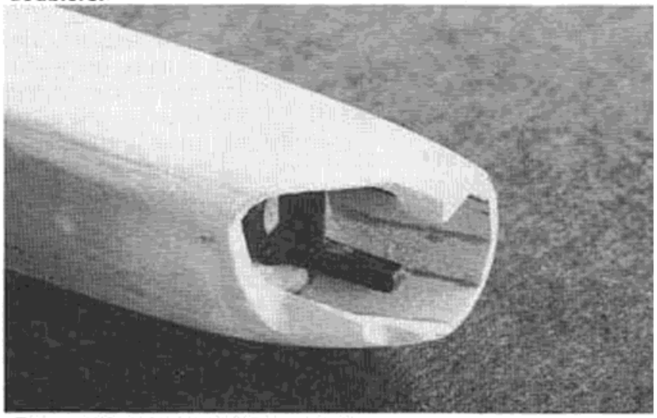

Turtledeck finished.

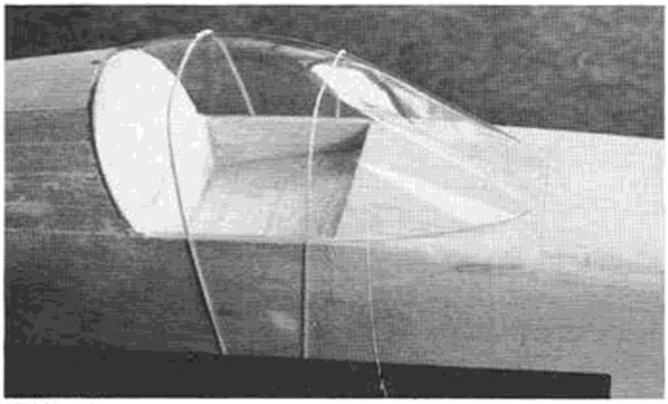

Dummy rudder and aft fuselage blocks tack glued in place.

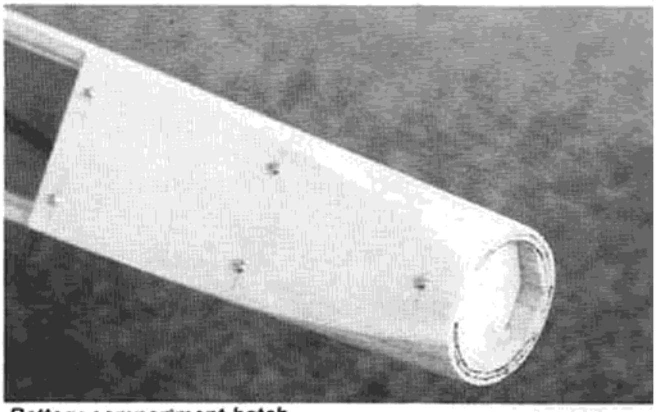

Aft fuselage shaped and sanded.

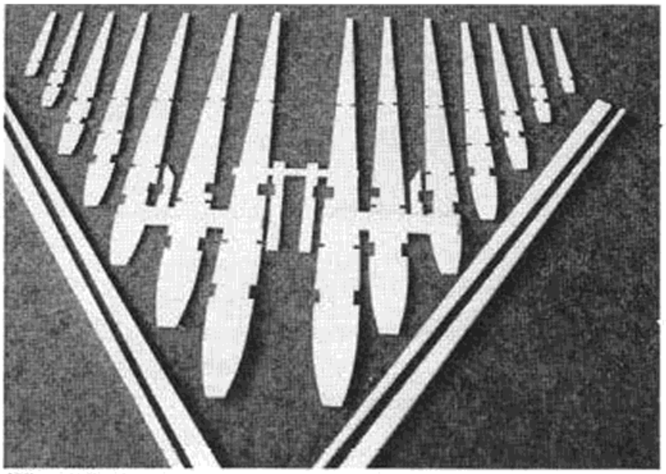

Forward fuselage, tank bay hatch, and top sheeting with doublers.


Top sheeting installed with rough cut-out for engine.

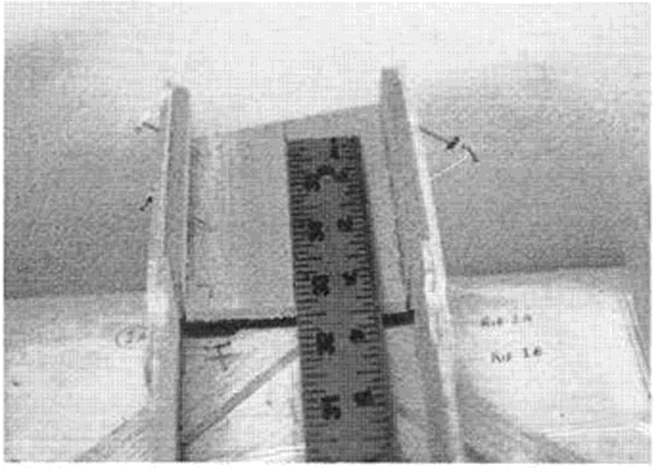

Forward fuselage, rough sanded.


Fitting the canopy.

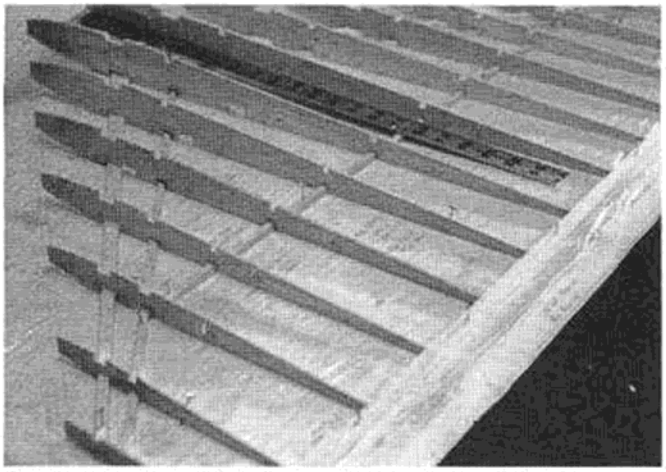

Battery compartment hatch.



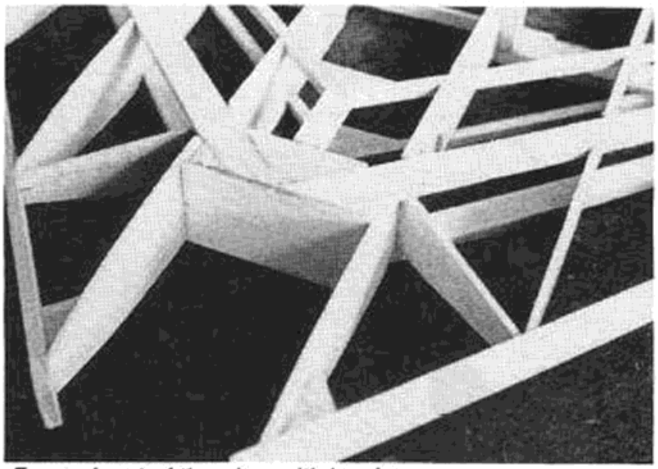
Wing "kit."



Aligning number 1 ribs, with jig inserted between ribs.



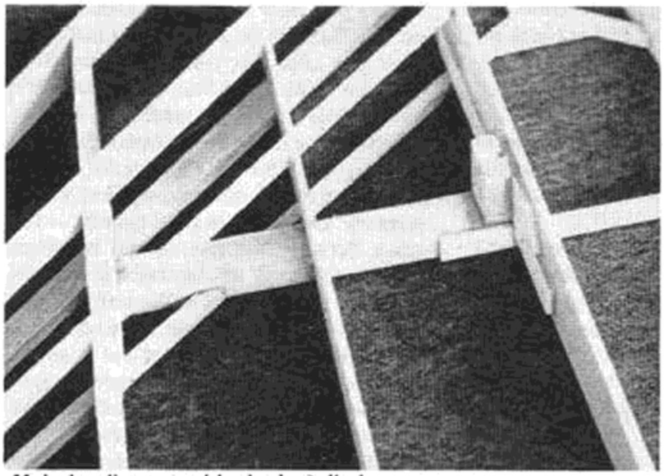
Starting the wing. Note alignment along the leading edge.



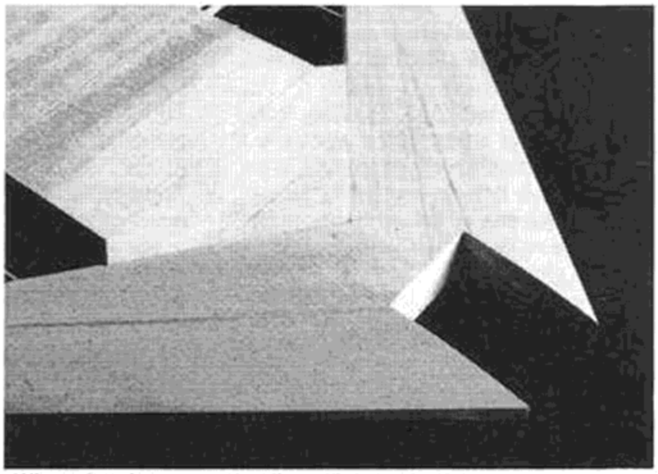
Forward part of the wing, with bracing.

squareness of the fire wall, and that the truss is located 1/16'' above the wing saddle, to allow sanding as necessary for a good wing fit. Glue on the 1/8'' x 1/4'' saddles for the cockpit floor, and the doublers just forward of them. Add the triangle stock to the rear of the sides and also, mark the bulkhead locations. Cut out the fire wall (1/4'' aircraft ply) and the bulkheads (1/8'' lite ply), add doublers, and drill for NyRods and antenna. Drill the two 1/4'' holes for the wing dowels into bulkhead B. Install blind nuts for the engine mount and the nose gear mount, ensuring that your nose gear steering arm will fit in-between. The bottom of the engine mount can be ground off a bit if necessary. With both engine and nose gear mounts tightly in place on the fire wall, drill right through the nose gear hole into the engine mount with a 5/32'' drill. Enlarge the hole in the engine mount to 11/64'' after it has been removed from the fire wall.

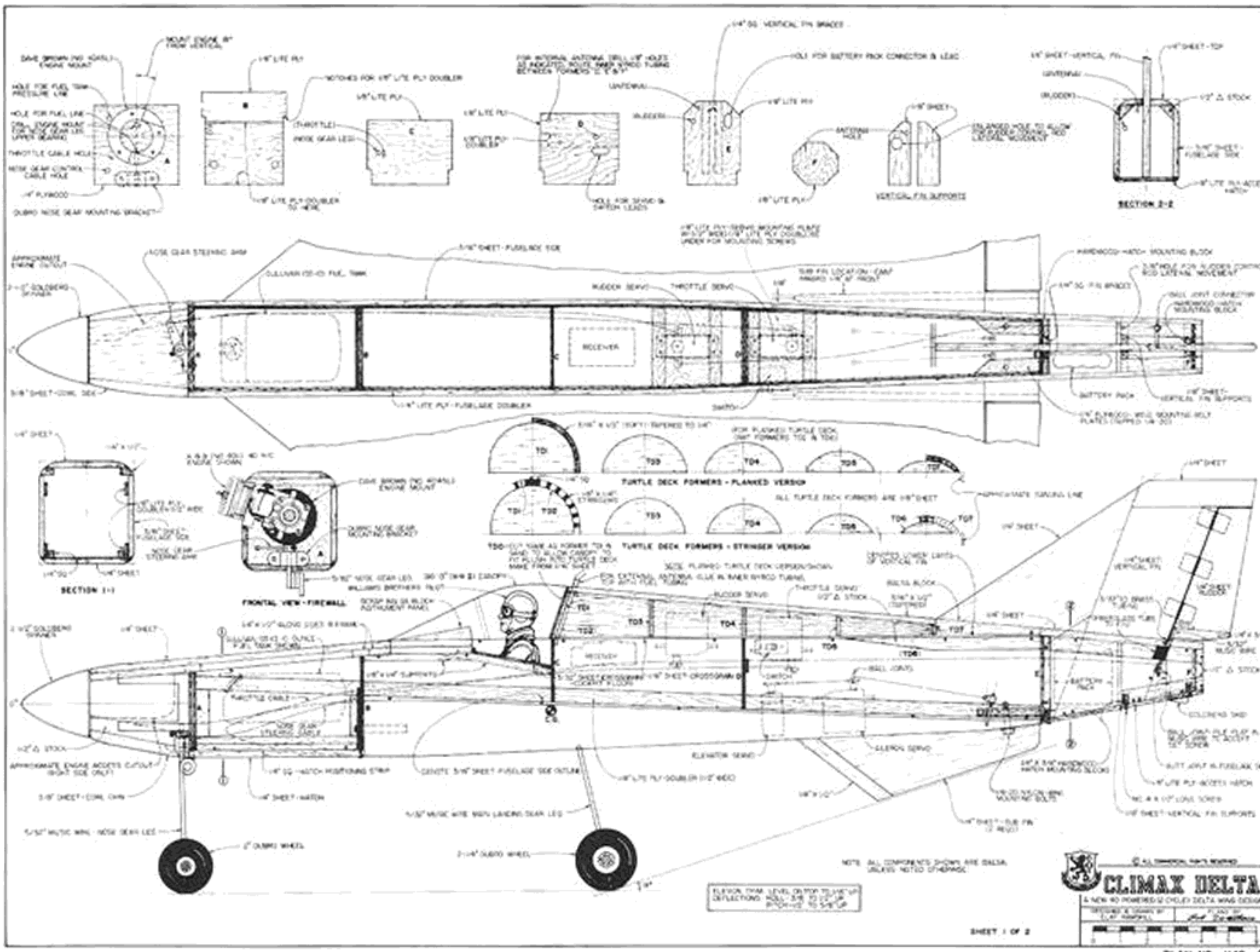
Now the fuselage can be framed up, starting from the fire wall and working aft. Ensure squareness all around as you do this. Adding in the cockpit floor and tri-stock in the fuel tank bay at this time will help to keep the assembly square. Before adding any top decking, I recommend installing the outer NyRods, throttle cable sheathing, antenna guide tubing, and lite ply servo trays. (Note: If using one of the heavier engines, the rudder and throttle servos can be placed about 1'' farther to the rear.) Install the cross-grain 1/16'' balsa along the top from the cockpit back to bulkhead E. Cut holes in the top for the servos to poke through, making sure that there is space for the servo leads to get into the fuselage



Main landing gear blocks installed.



Wing sheeting, outer leading edge yet to go.



PLAN NO. 1142

proper. Add the 1/4'' x 3/8'' hardwood cross pieces to the lower rear of the fuselage.

Cut 1/4'' sheeting roughly for the forward top decking, and for the fuel tank bay hatch. Also cut the cowl sides and bottom from 3/8'' sheet. I built up the cowl, then glued it onto the fire wall area; the bottom block will have to be relieved considerably in the area of the nose gear mount. Cut out the right side to allow engine access, and fit the engine. After adding the doublers (1/4'' x 1/2'') onto the bottom of the top sheeting, and cutting engine access, the top decks can be glued onto the top back to the cockpit.

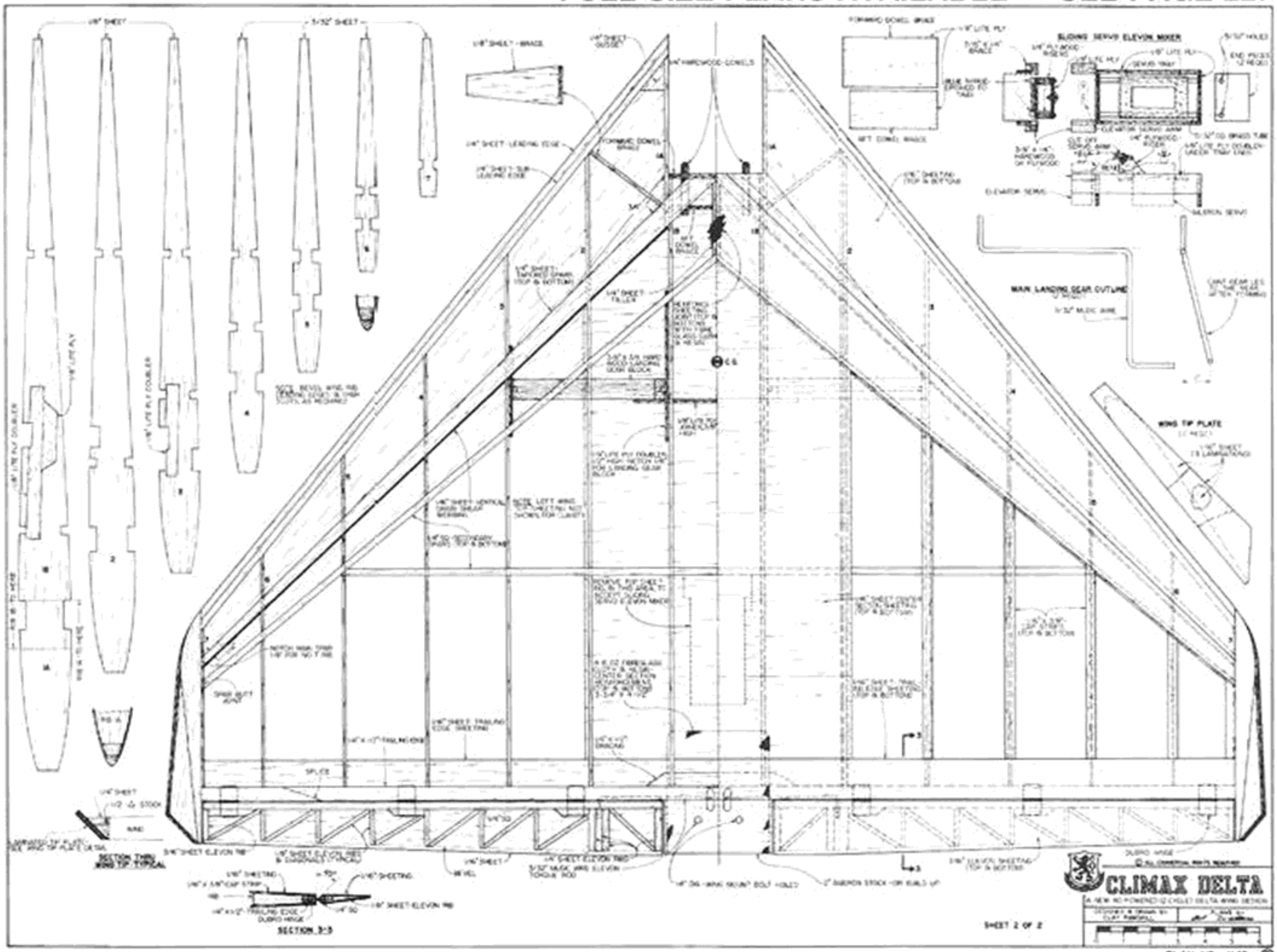
Now, for the turtledeck! Planking really isn't that big of a deal, and it gives you a light, strong, and smooth structure. Cut out the turtledeck formers and pin to the top, checking that they all line up evenly on top. Sand or move the formers slightly until they do, then glue them on. Cut 12 planks from 3/16'' soft balsa, 14½'' long, 1/4'' wide at the back, 1/2'' at the front. Start at the bottom of each side, and work your way to the top. Taper the lower edge of each plank by planing or sanding so that the plank will fit. Sand the formers flat where the plank will fit and glue on, starting at the front end (leave a bit of overhang), and twisting and gluing right on back. Work your way up from each side and you should end up with a reasonably centered gap on top. It will take some extra effort to make the ''topcap'' fit, as you probably won't have straight lines anymore. Now, sand the worst parts and fill any gaps with a light filler (Model Magic, etc.), but leave the bulk of the sanding until the rest of the top deck is complete. If you're violently against the planking method, the plans show an open structure layout, as well.

Before completing the rear top deck block structure, make a dummy rudder out of scrap 1/4'' balsa. Insert it, and check for straightness with the fuselage, both inline, and vertically. Now, while it's easy, cut or fill the rudder braces until the dummy fits properly. Then you can make up blocks to fit the rest of the top deck, around the dummy. **Tack glue** them on so they can be removed after sanding.

The whole fuselage can now be planed and rough sanded to end up with a round nose to fit the spinner. You can get the rear pretty round also. Use the plans as a guide marking where the canopy will go so that area can be left flat. Make up the fin and rudder, complete with hinges, and rudder linkage with ball coupler. The plan is to install the fin/rudder as a completed assembly, even covered if you desire. Remember that you want the rudder to have at least 45° of movement each way.

Wing:

After you've cut out all the ribs and the spars, make up the 1A and 1B ribs into a left and a right number 1 rib. Add in the lite ply doublers around the landing gear block cut-outs. Lay down some Saran Wrap over the plans, on a **flat** board, and pin down the trailing edge and the secondary spars. The wing is built in one piece and is flat all the way up to the secondary spars, but not to the main spars. Lay in the main spars, and loosely pin. Now, for the fun part — each rib will have to be fitted individually for good glue joints. As you do this, pay close attention to the front line, and ensure that the rib ends at the line where the leading edge will glue on. Note — some scrap balsa to simulate the fuselage can be put in-between the 1A ribs to ensure they will fit properly. Do not shoot for a tight fit — the space between the ribs should be about 1/32'' wider than the fuselage. If you are satisfied, glue the ribs to the trailing edge and secondary spars — but **not** to the main spar. When they're all in, cut and fit all the top spars, and add the inner leading edges after beveling the ribs. Plane and sand the leading edge and the trailing edge fair with the ribs. Add in all the corner bracing and tri-braces at this point, as well as the ply brace up front. Using a long sanding block,



PLAN NO. 1142 ②

sand the ribs a bit to even them up and to bevel them for a better gluing surface.

Now unpin and flip the wing, pinning it down securely again. Glue in the lower main spar, and cut the secondary spars for the landing gear blocks. Glue in the landing gear blocks when you're satisfied with the fit. Add on the trailing edge sheeting, and fit a 1/16" x 3" x 36" piece of balsa over the front of the wing, back to the center of the main spar. The piece you cut off should be just about right to butt-glue in the area in the center where the 3" width isn't enough. To glue this piece on, I make some marks so I know exactly where it should go on the main spar. Then I put aliphatic (like Quicksand) glue on the ribs, and slow CA on the leading edge. Line up the sheet on the spar, roll it over to the leading edge and hold until the glue sets. Then I put some more CA on the spar, and roll the sheet tightly back to the spar and press in place. Cut a piece for the area between the main and secondary spars and glue in. The center sheeting can also be put on now. Note that the center sheet should be one piece all the way through.

Unpin again and flip. Before adding any sheeting to the top, put in the webbing on the rear of the main spar. Add in fill where the hold-down bolts go, and fit in the second ply center brace, along with fill along the centerline forward as shown on the plans.

At this point you should be ready to sheet the top of the wing — as always, be sure it is pinned flat before you sheet.

Now the outer leading edge can be added, planed, and sanded to the airfoil shape. Add wingtips and the center (fixed) elevon section with the elevon hardware — note the bend in the links. Add 4-6 oz. fiberglass to this area, as well as the sheeting joints forward. Cut and glue on the capstrips, and you're pretty much done.

Elevons:

Built-up elevons are shown on the plans. Constructed upside down, they end up flat on top and have a "twist" on the bottom surface. They are very light and strong, with a high degree of resistance to twisting. The varying shape and inertia along the length of the elevons cause them to be virtually impervious to any flutter problems. Note that the elevons must be sanded to a wedge in front so that they can travel **at least** 45° each way.

Mixer:

The sliding servo mixing scheme has been in use a long time, and works very well. The unit shown on the plans is sized for S-28 type servos. If you don't have any blue NyRod sheathing, someone you know does! Just be sure that the brass tubes are perfectly parallel — drill both end pieces together, and put the tubes on something level when you glue. Don't use thin CA; it will wick out the tubes and gum up the works! And do sand the NyRods, so epoxy will stick better to them when you attach the servo tray.

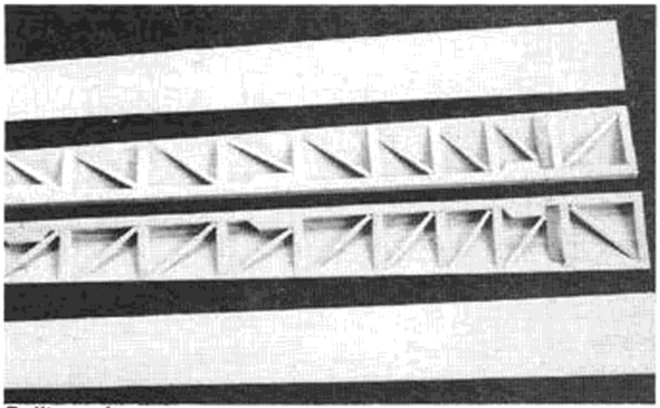
Cut the hole in the wing so that the completed mixer will fit snugly, leaving a hole for the servo wires to exit. Glue in securely, then CA some strips of light fiberglass around the edges. Check to make sure the roll servo wire has enough slack to accommodate full pitch travel without stretching or chafing.

Subfins:

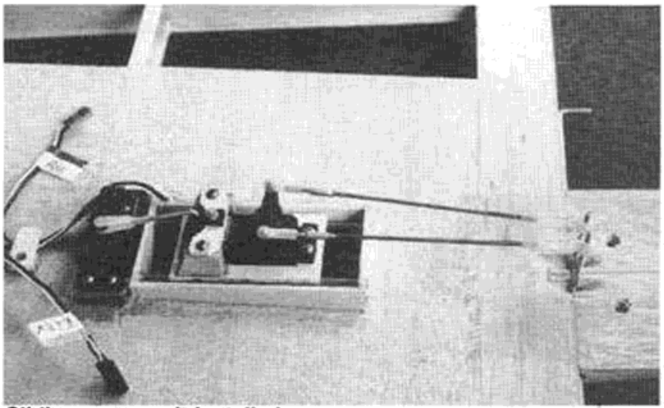
These help directional stability during hard turns and slow flight, where the top fin gets blanked out somewhat. Note the 1/8" inward cant at the front. It's easier to attach these after covering.

Assembly:

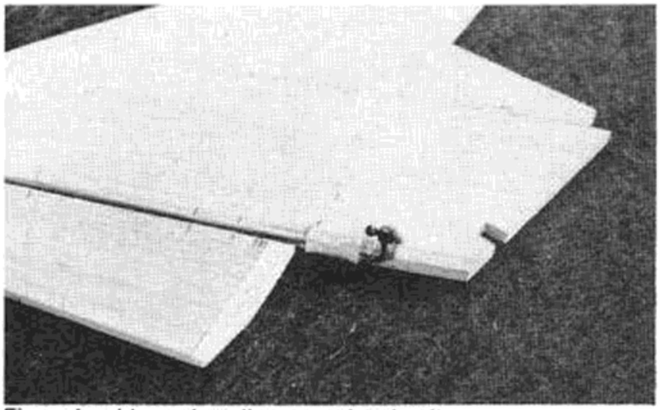
Put the wing on the fuselage and check the fit. The ply doubler in the wing saddle is 1/16" up to allow easy sanding to get a good tight fit. When you're satisfied, mark through the holes in bulkhead B, and drill into the wing for the dowels. Put in the wing hold-down blocks, and drill right through the wing into them. Tap the holes, and you're set. Cut off the aft fuselage blocks that you tack glued, and insert the fin and rudder assembly, ensuring that it is straight. Glue it all in place when you're satisfied.



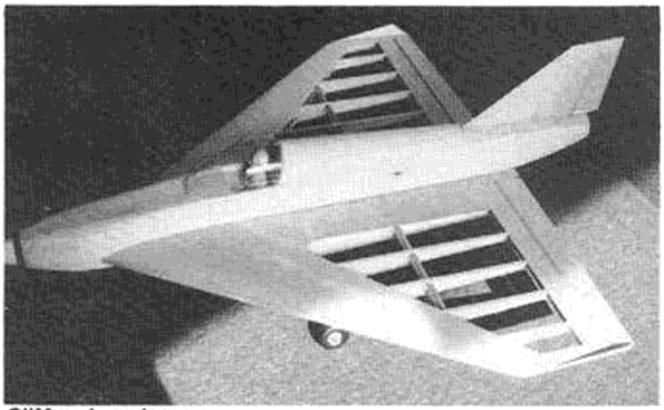
Built-up elevons.



Sliding servo unit installed.



Fin and rudder --- install as completed unit.



CliMax, bare bones.

Before stuffing your battery tightly into its box with foam, tie a string around it so that it can be removed easily. Ensure the battery plug cannot rattle around in the fuselage, and maybe get into the elevon linkage. The same for the elevator and aileron wires and plugs — if anything jams up the sliding tray, you'll have a dead delta, really quick!

The main landing gear is "set back" 1" from its mount. This gives good spring action and virtually eliminates bouncing on a hard landing. Bend the gear straight, then twist it back; this procedure puts a "set" in the wire so it will maintain its position.

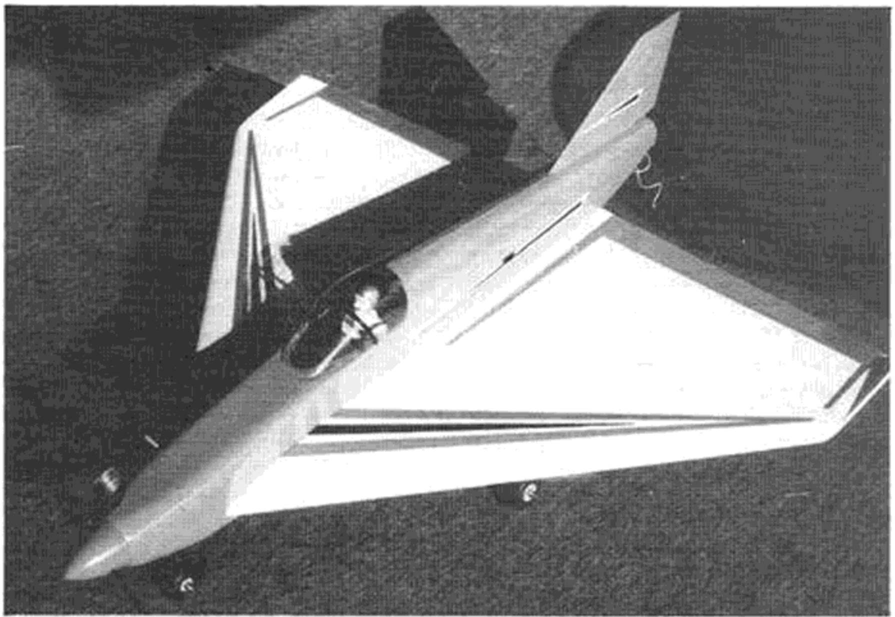
Cover your CliMax as you desire — but keep weight in consideration; the lighter the better. I highly recommend you use contrasting colors between the top and the bottom, to see where you're at while doing rolls.

Delta Wing Behavior:

The delta wing combines the characteristics of a swept wing with those of a low aspect ratio (stubby) wing. This combination gives a lot of wing area on a short span, high speed potential, and the natural triangulation in both chord and thickness leads to considerable strength for the weight and area involved.

On any wing generating lift, there will be some airflow **around** the tips, from the higher pressure on the bottom toward the low pressure on top. This lowers lift efficiency and creates vortexes, which cause considerably more drag. The shorter (lower aspect ratio) the wing, the more of the total area of the wing is affected. The sweep of the delta tends to direct airflow toward the tips anyway, pronouncing the effect, as do higher angles of attach (AOA).

A beauty of the delta planform is that this tendency for the flow to go around the tips instead of across the wing is **progressive**, as angle of attack is increased. On a "normal" wing, as angle of attack is increased to a certain point, the smooth flow over the wing becomes disrupted, resulting in a relatively sudden loss of lift (it stalls). But with the delta, the flow progressively changes (from over the wing to around the tips); it's not disrupted, but merely changes its pattern, remaining relatively smooth, and providing less efficiency and considerable drag at the higher angles of attack. Since the wing never really stalls, it can't snap or spin in the normal fashion. Delta and swept wing aircraft can sustain **flat** spins, however, depending on configuration. We're speaking here of sweep angles of 45° or more — lower sweep angles will exhibit the



Completed aircraft.

same characteristics to a lesser degree.

Another aspect of delta and swept wing behavior is the dihedral effect. Picture the result from throwing the rudder to the right; the left wing is pushed around more perpendicular to the oncoming air — there is less sweep, relatively, plus the wing becomes effectively longer. The right wing, trailing away, is relatively shorter, and exhibits more sweep. The combination results in **a lot** more lift on the left wing than the right, and the resulting roll ranges from minimal at low angles of attack to violent at high AOA. This presents a problem landing in a gusty crosswind, and is one of the reasons why such aircraft must have lots of vertical fin area and high directional stability. Because of the dihedral effect, swept wing and delta aircraft are very sensitive to rudder trim.

One last bit of swept wing and delta phenomena — the "lift shift". We've mentioned that, as angle of attack is increased, lift out toward the wingtips decreases substantially as flow there moves more toward and around the tips. So as AOA is increased, the lift generated is more toward the root (inboard) of the wing, and near the leading edge, giving us a "center of lift" which is more **forward**. And that decreases the static margin, the distance the Center of Gravity is ahead of the lift center. And **that** decreases pitch stability! So what we do is design (with a forward C.G.) for adequate pitch stability at high AOA for landing and hard maneuvers. Therefore, the plane will have an **excess** of pitch stability at low angles of attack, at higher speeds.

Like most aircraft, the delta becomes more responsive in roll at higher speeds. But it becomes **less** responsive in pitch under the same conditions, very much unlike other aircraft! The resulting discrepancy between pitch and roll response with changing speed is a hallmark of delta behavior and does take some "getting used to."

What you get with the low aspect ratio, highly swept wing planform of a delta like the CliMax, then, is a bird which can be maneuvered around at ridiculously slow speeds (with power because of the high drag), with no fear of snaps or stalls, and fairly well balanced control effectiveness. But at the high speeds the delta is capable of, you have wildly responsive roll characteristics, yet rock-stable pitch control!

Flying:

You may want to use dual rate on roll for your first flights, set at about 3/8" deflection, until you're comfortable enough to go to higher roll rates. It will take a bit of back stick to get the nose up on take-off, and you'll be flying. Remember the delta's sensitivity to the rudder — if your CliMax doesn't "feel right," rudder trim is the most likely cure. Set the pitch trim at high speed, and you're ready for some slower flying. It will take more back stick than you're used to, and the nose will certainly be at a higher attitude. And it will take a bit of power to maintain level flight. Quite a lot of power (and right rudder) is necessary when you get **really** slow.

If you're not familiar with this type of plane, CliMax may seem very uncomfortable at first — stick it out, you are in a learning process. Don't try really slow landing approaches until you have some experience with the plane. Just bring it in at the speeds you are comfortable with (the nose will be higher, though), and at about a foot off the deck, flare and chop to idle. You must learn to judge the speed of the plane by its **attitude**. Remember that nose-high attitudes also mean more drag and a higher power requirement. If you are slow and not near the runway, you will need some power. Note also, that when slow, the addition of power will require some right rudder!

Inverted flight performance is excellent, including acrobatics. But as with all tailless aircraft, considerable forward stick is required, and note that rudder requirements are reversed.

After you have passed the knee-knock phase and you're reasonably comfortable with your CliMax, there are some really neat maneuvers you can try.

(1) "Quick rolls." No problem! The problem is stopping them where you want. CliMax stops rolling instantly; unfortunately, servos don't center instantly! You can do three or four rolls in a heartbeat at high speed. If you ease off the stick a bit to slow the roll rate, then you can stop more consistently.

(2) "The snap roll." CliMax doesn't really snap, because it doesn't really stall. But if you use both rudder and "aileron," and little or no "elevator," the result **looks** like a snap, and is awfully quick at high speeds.

(3) "The slow loop." Starting with a slow, low-as-you-dare fly-by, start raising the nose and feeding in full power. Going uphill, maintain your line with rudder (right rudder, lots of it!) — as you go over the top at near zero speed, transition to forward stick as necessary, start easing off the throttle, and then bring in back stick again. CliMax will mush through the downhill turn, gaining very little speed. It's hard to do a really round loop like this, but any spectators, expecting a stall-spin-crash at any moment, will hardly notice! Reverse Cuban-eights can be done "slow style," also. You can finish these off with a CliMax "slow roll"; bring the nose up to about 30° high, and when the already slow speed drops to near zero, add power, and full aileron and rudder. CliMax will roll fairly well at near zero speed on propwash alone.

(4) "The hover." In level, slow flying, you'll find that at about 30° nose up, you run out of back stick, right rudder, or both. But if you add near full throttle and haul the nose up to 70°-80° nose high, you can control the plane. It's not stable, but controllable --- much like balancing a yardstick! It takes a **lot** of control juggling --- all four of them. In only a light breeze, CliMax will hover, stationary; this depends on your ability, power, prop, and aircraft weight, of course.

(5) "The cross-control spin." Take your CliMax up high, and start what would ordinarily be an upright spin (i.e., full back stick, full right aileron and rudder). After several turns of diving spirals, jam the stick forward, keeping in the right aileron and rudder. The plane will either just fly funny, or enter a violent spin, with an axis pretty much along one leading edge! Neutralize to recover.

(6) "The flat inverted spin." According to my logbook, I learned to do this on the 252nd flight --- and I still only get the spin in one of 5 or 6 attempts. The necessary ingredients are: zero airspeed, inverted, lots of directional rotation, and full rudder, forward stick, aileron same as rudder, and well under 1/2 throttle. I've had the best luck so far by going straight up at full throttle; as the plane slows, put in full "snap" controls (i.e., full right stick, back stick, right rudder). If the plane gyrates through inverted and zero speed at the same time, then reducing the throttle and jamming the stick forward may start the spin. Recover by neutralizing, then adding full throttle and opposite rudder. Recovery takes several turns and is straight down; have **lots** of altitude! This, folks, is a real crowd-pleaser --- and a heart-stopper for the pilot!

Note: This maneuver has a high mortality rate — I've crashed the prototype twice this way! If you run out of altitude without recovery, **leave it in the spin** — the descent rate is so slow that damage is quite minimal.

A few effects of the high drag at high

Bill of Materials

Balsa
12 — 1/16" x 3" x 36"
3 — 3/32" x 3" x 36"
2 — 1/8" x 4" x 36"
3 — 3/16" x 4" x 36"
4 — 1/4" x 3" x 36"
1 — 3/8" x 3" x 36"
1 — 1/8" x 1/4" x 36"
6 — 1/4" sq. x 36"
2 — 1/4" x 1/2" x 36"
2 — 1/2" x 36" tri-stock or triangle stock

Ply
1 — 1/8" x 4" x 36" lite ply
1 — 1/4" x 6" x 12" aircraft ply

Hardwood
1 — 1/4" x 3/8" x 36"
1 — 1/4" x 36" dowel
2 — 5/32" grooved 3/8" x 3/4" x 12" landing gear blocks

Other
1 — 5/32" x 12" O.D. brass tubing
1 — 5/32" x 36" music wire
1 — set 3/32" aileron linkage
1 — canopy (13" Sig WWII)
1 — set nose gear and mounts
1 — 2½" spinner
1 — fuel tank, 8-10 oz.
2 — 2¼" wheels
1 — 2" wheel
1 — engine mount (Dave Brown 4045L)
1 — set flat landing gear straps
Plus bolts, collars, clevises, red NyRods, hinges, ball joints, couplers, glass cloth, etc.

AOA characteristic are of note. At high speed, you can do nice big loops --- you can also yank CliMax into very tight loops and turns, but your airspeed will bleed off dramatically. You can also horse it around into very tight loops and turns at slow speeds, but lots of power is required. On landing, as you flare into higher angles of attack, your speed will drop off rapidly; you can also fly the whole approach very nose high and slow, but this will take some power.

If you have a flame-out, keep your speed up at a reasonable level until you're committed to land. CliMax glides well at medium speeds, but the high drag at higher AOA in turns or slower speeds is trouble. In this situation, with no power, the high drag takes over, causing CliMax to descend rapidly with no reserve energy left to stop the rate of descent.

I love to yank my CliMax off the ground on take-off, after just a few feet of roll, and climb at very slow speed, almost straight up. It's spectacular. But if the engine quits in that type of maneuver at a low altitude, a crash will result. Just remember that at slow speed without power, CliMax will drop like the proverbial rock!

In short, your CliMax will fly better than conventional planes in some ways, worse in others. But above all, it will definitely be different! And that's why I love deltas. □