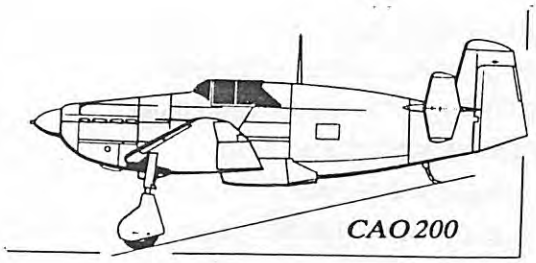
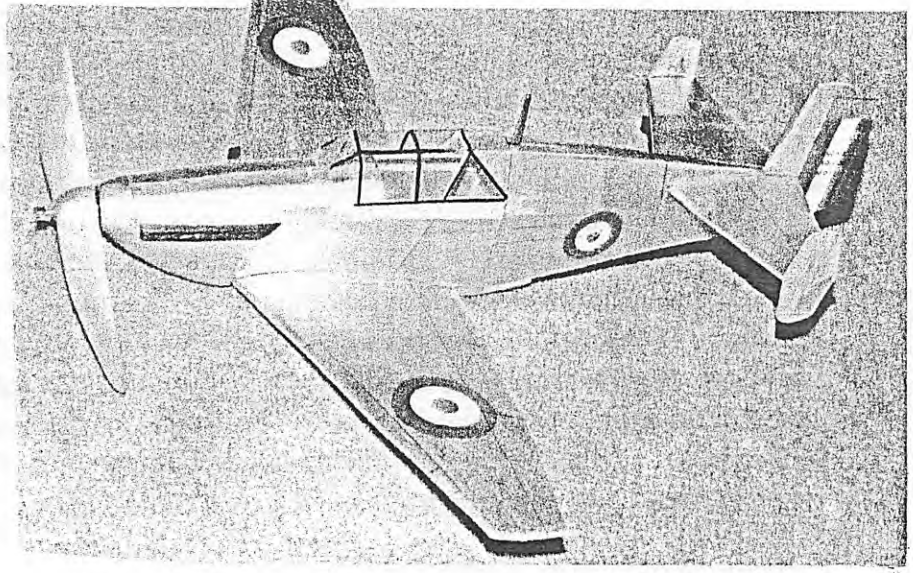
16" SNCAO 200 French Fighter by Steve Griebling

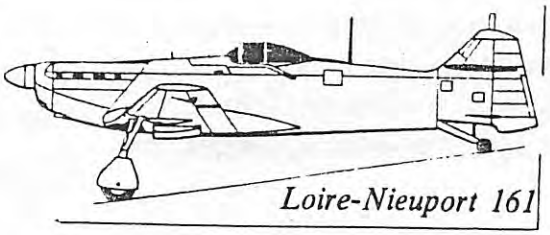
CROSSWINDS

#134

CLEVELAND FREE FLIGHT SOCIETY

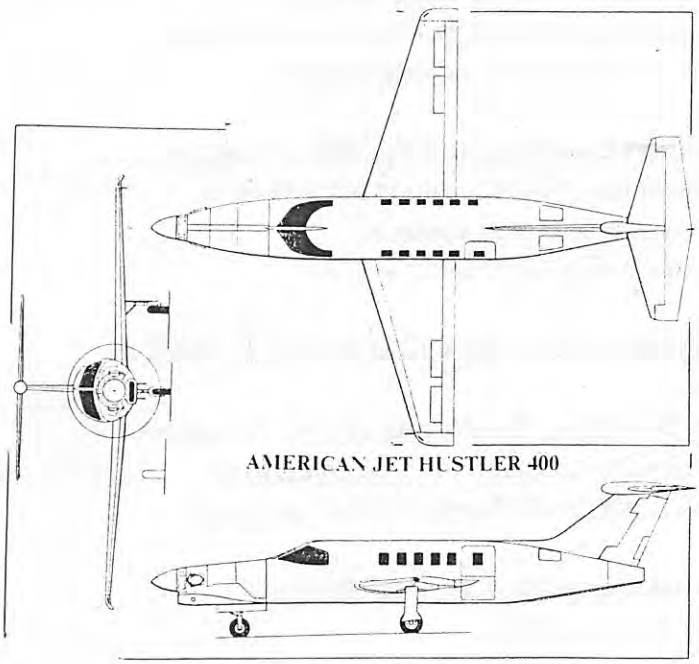


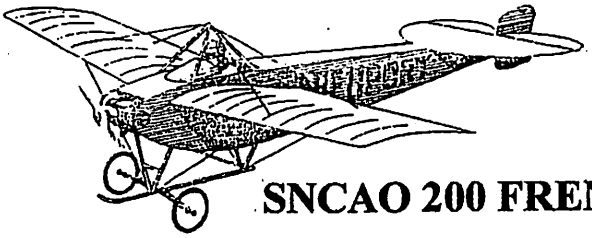


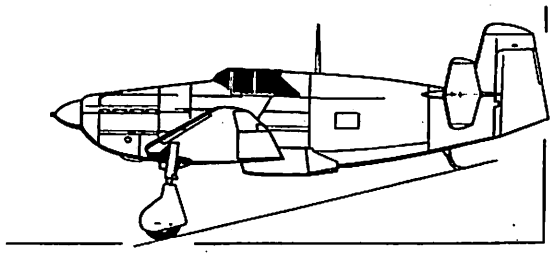


CROSSWINDS
RUSS BROWN
4909 N. SEDGEWICK
LYNDHURST, OH 44124

CLEVELAND FREE FLIGHT SOCIETY







SNCAO 200 FRENCH FIGHTER OF 1939

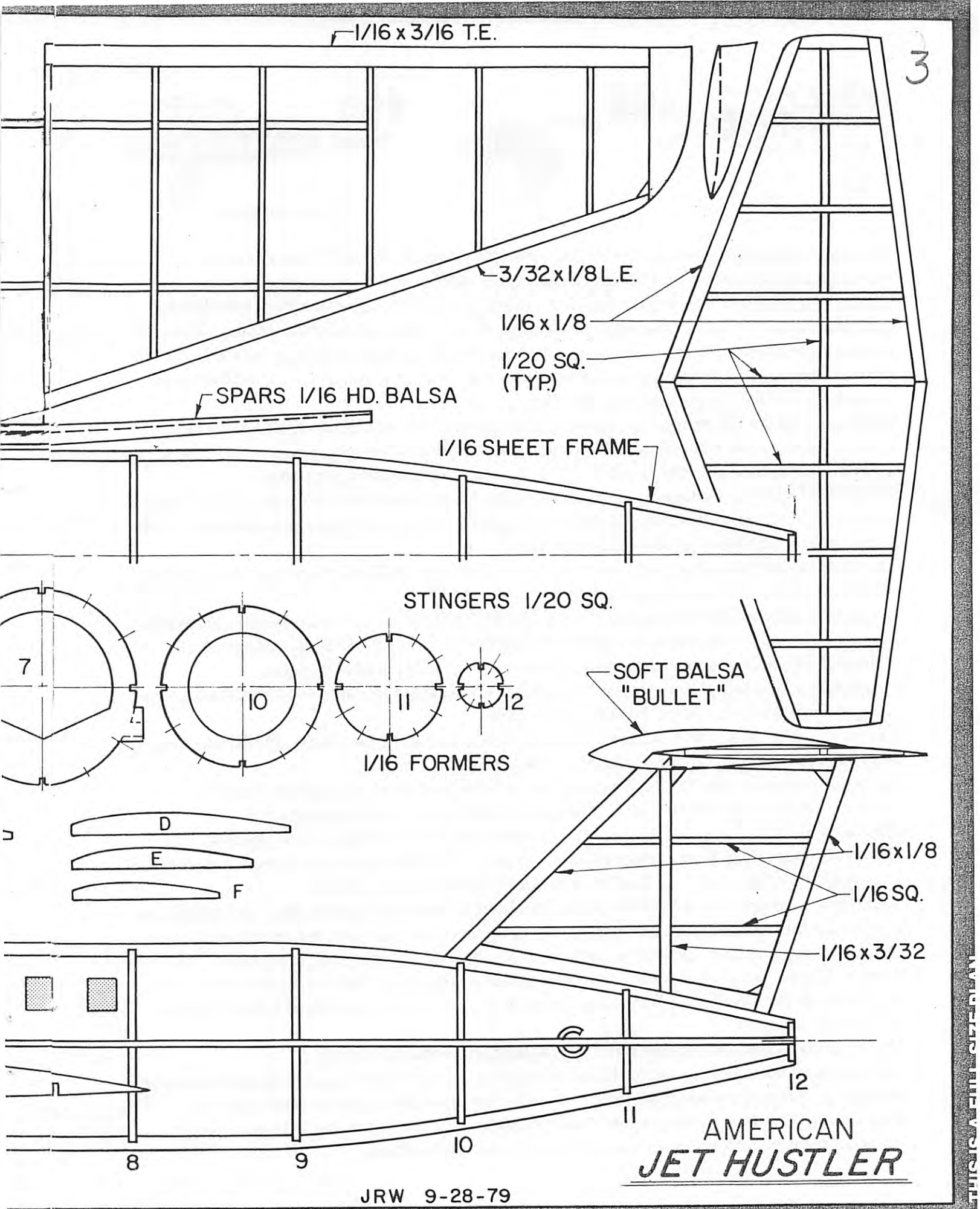
The Nieuport-Duplex company was established in 1902 by the several brothers Nieuport for the manufacture of engine components. In 1909 the company was re-named Société Général d' Aerolocomotion and marketed additional components for the aircraft industry. Their first aircraft, probably built in 1908, was destroyed in a flood, and the second, a single wing monoplane, with totally enclosed fuselage, was completed in late 1909.
Buy 1911 the company was producing components, including propellers, for the aircraft industry exclusively, and was named Nieuport et Deplante.
In 1911 Edouard Nieuport was thrown out of a plane on landing and died. The company was then taken over by Henri Deutsch de la Meurthe and re-named Société Anonyme des Établissments Nieuport. In 1912, Charles Nieuport was killed in another crash.
The chief designer for a short time was Franz Schneider who soon went to work for L.V.G in Germany where he fought with Anthony Fokker over the design of interrupter gear for fuselage mounted machine guns used in aircraft.

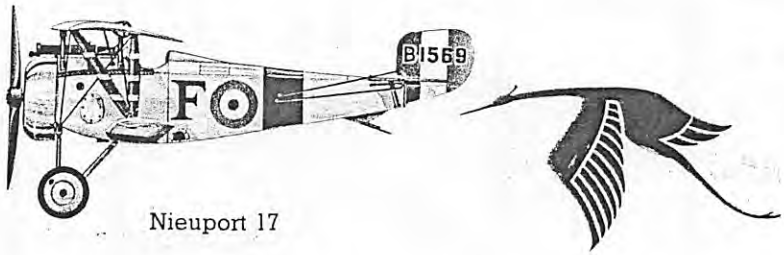
In 1914 Gustave Delage took charge of the Nieuport company and oversaw development of their aircraft through the Nieuport 27 model.

Nieuport aircraft through Ni27 were very lightly built and were rather fragile, suffering from occasional wing failures, but were preferred by Albert Ball and Charles Nungesser in combat.
Nieuports were also assigned to the first USA squadrons and were flown by Eddie Rickenbacker among others.
Nieuport 28 and 29 models had a second spar to strengthen both wings. Model 29 featured a monocoque fuselage construction and a strongly braced two bay wing design.
The Nieuport 31 was a monoplane and was the first aircraft to exceed 200 mph.

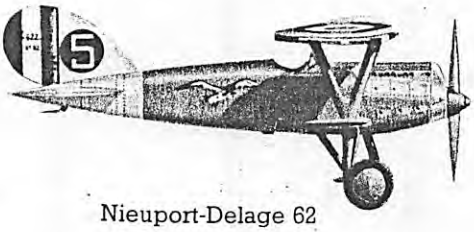
After WW I, Nieuport absorbed the Astra aerial balloon company and the Tellier seaplane company and produced a family of planes based upon the Ni-D42 layout until WW II.
The Ni-42C-1 was a single seat racer and Ni-42 C-2 was a two seat version.
The Nieuport-Delage 52 was used in Spain during its Civil War.

The French Army bought many 62 series Nieuport planes (620, 621, 622 and 629) but they became obsolete before WW II.
The Nieuport company merged with Loire in 1932, becoming the Société Anonyme Loire-Nieuport. In 1936 the company was taken over by SNCAO (Société de Constructions Aéronautiques de l'Oueste) which later became SNCASO (Sud-Ouest) in 1941 and was completely absorbed by Sud Aviation in 1957.
In 1934, under the leadership of Monsieur Pillon, work began on a tandem two seat, inverted gull wing dive bomber. The first prototype flew in 1935.


1/16 x 3/16 T.E.
3
3/32 x 1/8 L.E.
1/16 x 1/8
1/20 SQ.
(TYP.)
SPARS 1/16 HD. BALSA
1/16 SHEET FRAME
STINGERS 1/20 SQ.
7
10
11
12
1/16 FORMERS
SOFT BALSA
"BULLET"
D
E
F
1/16 x 1/8
1/16 SQ.
1/16 x 3/32
12
11
10
9
8
AMERICAN
JET HUSTLER
JRW 9-28-79



Nieuport 17



Nieuport-Delage 62

This plane, and its successor, the Ni-140 strongly resemble the Ju87 Stuka and the Germans accused Pillon and others of espionage, while they occupied France during World War II, due to this similarity. The central fin on these dive bombers was divided such that its lower half would flare out during the dive and act as a dive brake. This was not effective enough though, and it was decided to extend the landing gear in a dive to slow the plane. The landing gear did not fully retract in any case since the wheels were about half exposed in the retracted position.

There were also a number of similarities between the SNCAO 200 and the LN-140 and LN-141, notably the twin stabilizer tip rudders, the general fuselage shape and some wing layout details, although the SNCAO 200 wing had much more sweep back.

The SNCAO 200 was allegedly derived from the Ni-161 (probably more accurately named the LN-161) although the SNCAO 200 wing leading edge somewhat resembled that of the German Arado 96! (see photos and three view).

The SNCAO 200 was designed by M. Marie in 1936 as a single seat fighter and might be considered to be the last Nieuport fighter.

It was to be fitted with the Hispano Suiza 12Y-51 1,100 hp. liquid cooled engine, however the sole prototype was actually fitted with the 860 hp. HS 12Y-31. It was of all metal construction but was somewhat under powered with that particular engine.

Armament consisted of one, engine mounted 20-mm Hispano Suiza 404 cannon and two wing mounted 7.5 mm MAC 1934 machine guns.

Development of the SNCAO 200 was abandoned because the Dewoitine D.520 had already been selected for quantity production by the Armée de l'Air.

Maximum speed of the CAO 200 was 277 mph a sea level and 342 mph at 19,685 ft..

Time to 6,560 ft. was 2.45 minutes. Endurance 2.0 hours. Loaded weight 5,511 lbs.

Span was 31 ft. 2", Length, 29 ft. 2- 1/3" , Height, 11ft. 5-1/2" Wing Area 143.16 sq. ft.

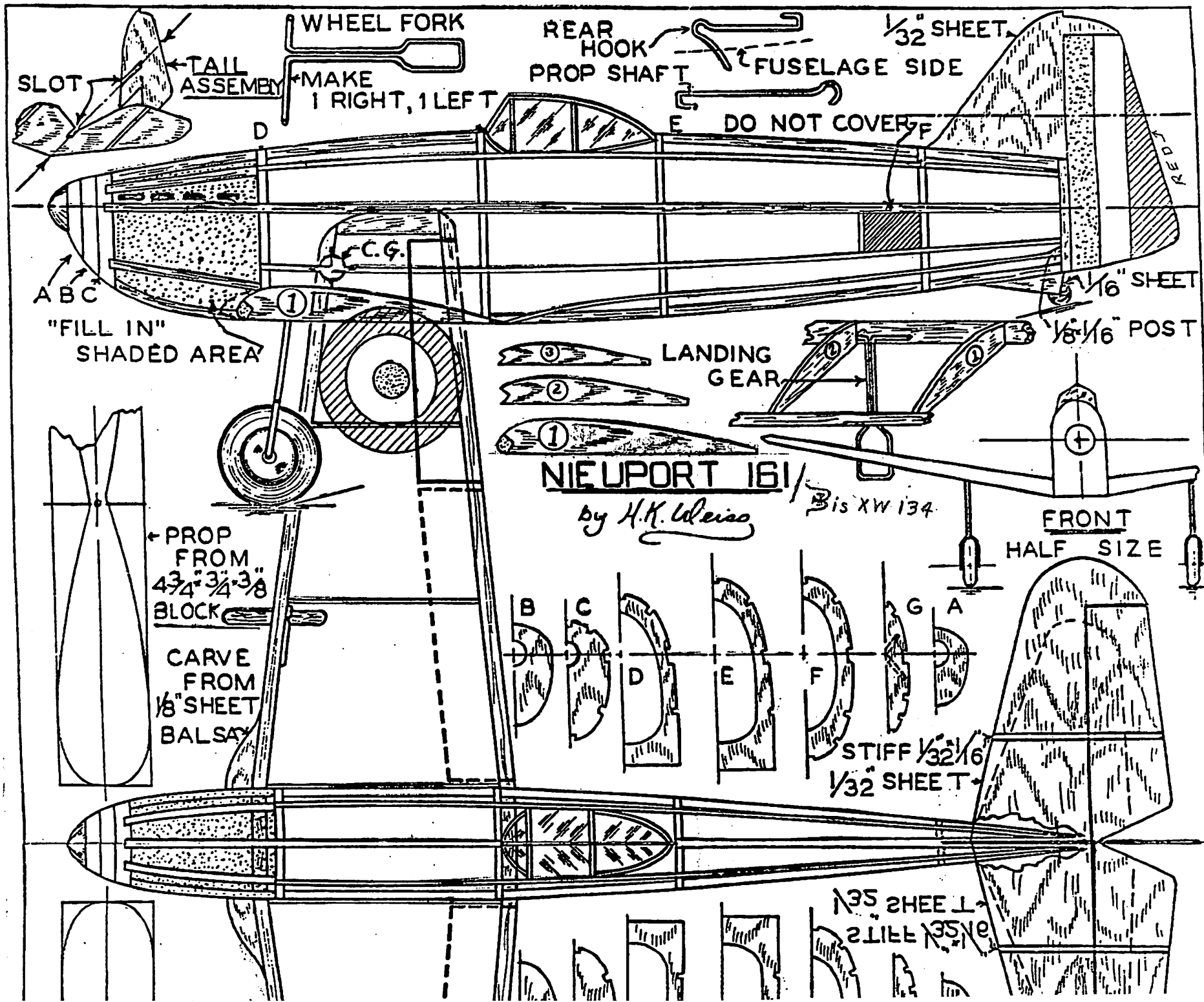
Our expert historian, Russ Brown claims that the CAO 200 actually shot down one Heinkel 111 on May 24. 1940 by CAO Test Pilot M. Demaziére at Villecoublay.

Since there was only one CAO 200 built, I decided to make my model all silver colored by using aluminum floral spray over white tissue. The model flies left, but is trimmed with about two degrees right and three degrees down thrust. It is very stable and easy to launch. We are not sure if roundels were applied to the top of the wings, since there are no photos of the top of the plane, but I decided to apply them since most French fighters were well identified.

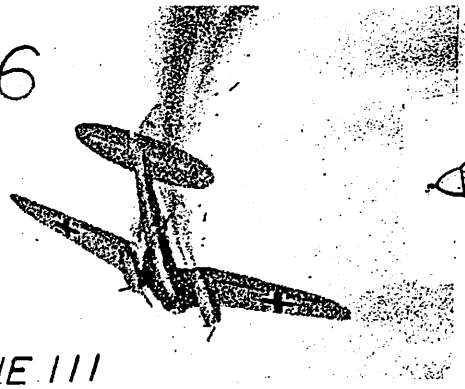
My model weighed 20.3 grams with nose ballast, but without motor.

The model construction is conventional throughout. I used lightweight balsa to minimize its weight. After the model had been covered, I installed the radio mast but the tissue surrounding the mast formed a few small wrinkles. A small spreader between the top stringers right behind the mast would have solved this problem.

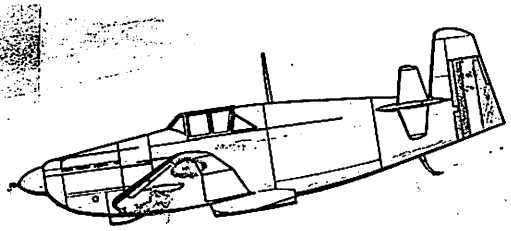
Steve Griebling - The Cleveland Free Flight Society, 2010 for "Crosswinds".

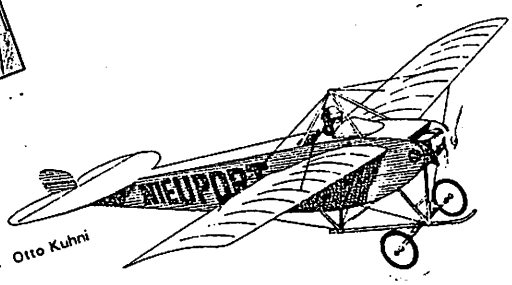


WINDS 134 REV. MAX FAX 12/76 & MAN.



HE 111





1911 NIEUPORT MONOPLANE

Flat Hattin' on Nieuport:

The Paris Air Show in 1938 was a prime opportunity to introduce aircraft. Nieuport was there as the grand-daddy of French aircraft and rolled out for a try for production sales. A full scale model Ni 200 was displayed, mounted gear-up on a pedestal. Nieuport family character shapes of elongated Ni 161 merged with L.N. 42 forms as an aggressive compression with a swept back low wing, ample stab size, and dramatic dihedral.

Media attention with publication of 3-views, data and photos were added to the must- build file archives. The CAO 200, as a model project, went on long term delay to find an event in the FAC action.

Nieuport SNCAO intended to power the 200 with the latest Hisso 1,100 hp. HS 12Y-51 but it was directed to the D.520. So the chronic engine shortage forced use of the HS 12Y-31 of 860 hp.. This was a step back by matching the same engine that the 1937 fighter- competition- winning Morane Saulnier M.S. 405 used. The excellent Dewoitine D-520 won selection for all out production.

A token production order to SNCAO for 12 type 200 fighters went without release of materials or push to build. Work on the CAO 200 No.1 continued to apply for production. The prototype was assigned to flying defense of the factory zone. CAO test pilot M. Demaziéra provided a heroic demonstration by destroying an intruding He 111 on May 24, 1940. Finding proof of WW II combat use allowed FAC C.I.C. Lin Reichel to approve the C.A.O. 200 type. Blasting off mothballs and file dust, the model project to bring this rare airplane into FAC WW II combat with French colors, was alive. R&D in Storkville with great input to this archive from Alain Parmentier in France (a Bill Hannan hook-up), and from Wingnut's search. Initial plans were drawn with a 16" w.s. double spar wing, using built-up 10% thick, flat bottom airfoil ribs. This mid 2008 mad mess of geodetic, in-air built sticks was offered to our high scoring designer Steve Griebling for K.I.S.S. fix, building, and proof flying for Crosswinds. A win in FAC WW II combat over Storkville was good for this rag.

SNCAO Factory colors and marking:

Color and marking S.W.A.G. (Scientific wild-ass Guess) solution began with a look back to Nieuport factory choices on Ni 161 prototypes. Photos show only overall dull aluminum paint without markings or tail stripes. We hope for room here to add a a 10" w.s. Nieuport 161 plan by Herb Weiss from MAX FAX 12/76 that adds wing roundels and tail stripe color to a casual scale drawing. So sorry, we do not have the Ace Whitman Ni 161 plan by Joe Ott to see or show. (Jump in readers!)

Selection of the M.S. 405 for mass production ended Ni 161 use. Urgent French production of the M.S. 406 included a build order for 325 of some 900 assembled at C.A.O. Bouguenais factory, using the 860 hp. H.S.12Y-31 engine. A right side profile view photo of C.A.O. No.1 and 3-views with stab end tip plates is in Air International/June 1975. Nationality rudder stripes and type lettering was added to the overall dull aluminum finish. Line markings for aileron, skin seams, flaps, slats and landing gear doors add detail. French wing roundels are not seen in side view angle photos in the aluminum finish. No photos published for the May 24, 1940 combat use era have escaped security. A likely prospect for on-wing roundels is discussed by Steve. On fuselage roundels are not a high probability, but we show options. Fuselage roundels were added to M.S. 406 fighters after January, 1940.

After German occupation of northern France, a Schwartz Non. Com. posed for a photo sitting on top of No. 1 while it was parked on grass. The under-nose view shows underside wing roundels on standard Gris Bleu Clair (light blue-grey) underside paint. The upper nose appears to be camouflaged. An artistic reach for banded camouflage on a near CAO 200 profile found by Wingnut in AVIONS No.7 is without any photo documentation. This art may be Bad Guy squadron sabotage? French camouflage was by factory choice application of general instructions. The best example of SNCAO applied camouflage is Profile Publication No. 147's 3-view color for a SNCAO built M.S. 406 No. 101, white 34 and N4. – 21. This camo is random area Vert (green), Brun Foncé (dark brown), light brown and not Gris Blue Foncé (dark blue-grey) Undersides are Gris Bleu Clair (light blue-grey). Write in here if you have an itch to see the M.S. 406 color 3-view. Meanwhile we have lots of color to apply as desired. "Less is More" may apply? Or go crazy if you like. It is on your bird, and Steve need not have all the fun!

Russ Brown

Color reference is SCALE MODELS Nov. 1980, pg. 602-603 French Camouflage Colours by Jean Pierre Ldesprez.

We greatly regret and mourne the flight West for Al Backstrom, Jack McGillivray and R.S. Zelina.
Al flew experimental aircraft, and is known for the sport model biplane "Born Loser" from Shorty's Basement.
Jack McGigllivray takes an immense talent in Free Flight and FAC to Canadian skies.
Rich Zelina gathered model plans in Fallston, Md.

Nieuport Ni-161

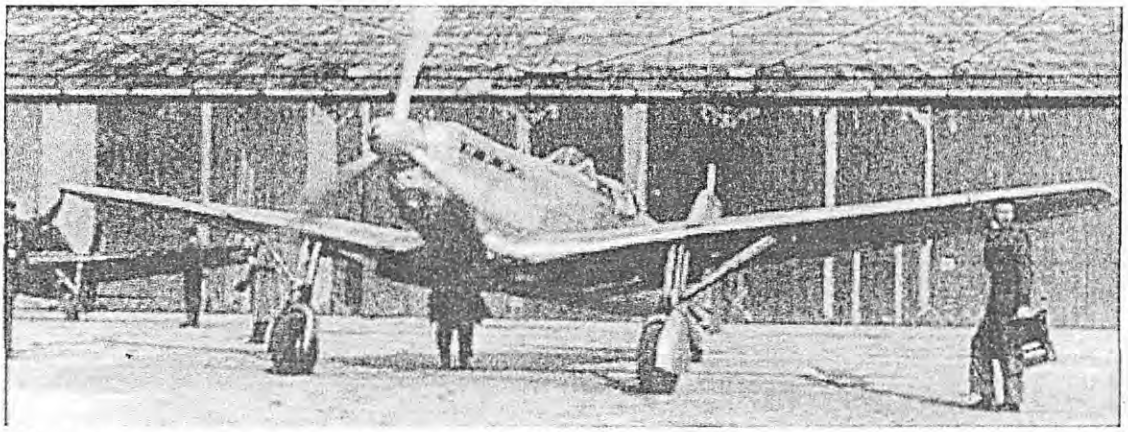
1936 7

Chasseur

France

Monoplace de chasse évolution du **Nieuport Ni-160**. 4 exemplaires construits.

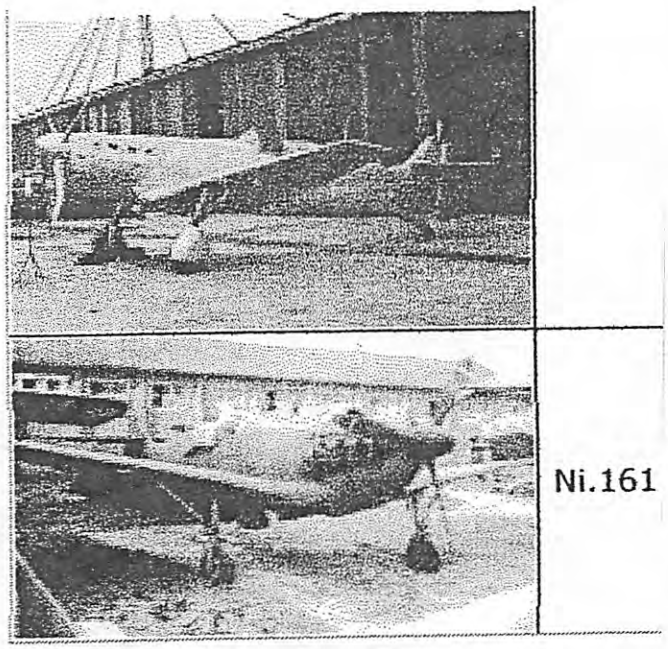
Monoplan aile basse.



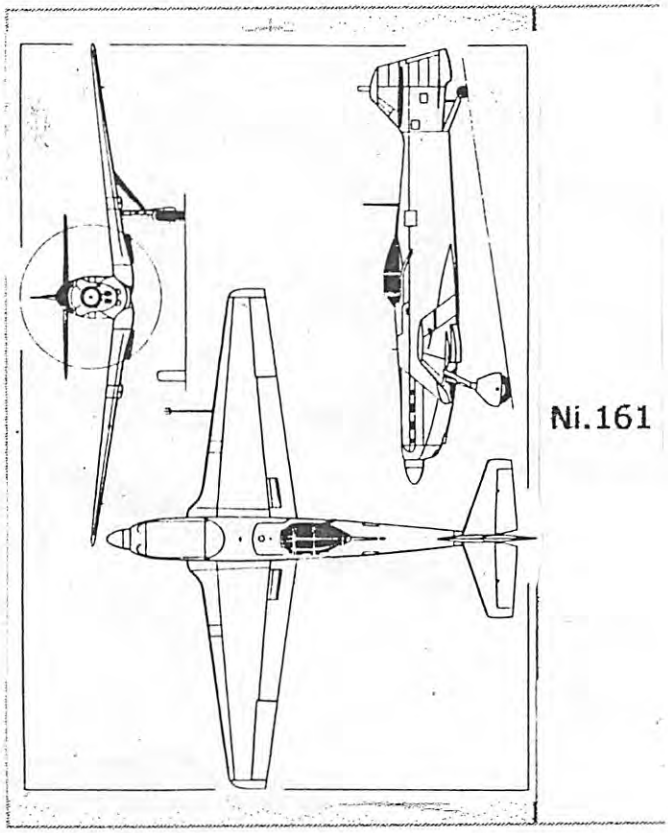
Envergure :	SPAN 36'.25"	10.98 m	Longueur :	LENGTH 31'4.4"	9.56 m
Hauteur :	HEIGHT 9'8"	2.95 m	Surface portante :	AREA 242.59'	15.00 m²
Equipage	SEATS 1	1			
Masse à vide :	WGT. 794.5#	1748 kg	Masse totale :	LOADED WEIGHT 1035#	2278 kg

Motorisation : 1 Hispano-Suiza 12Ycrs de 860 ch

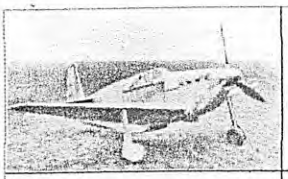
Vitesse maximale :	MAX. SPEED 301 mph	478 km/h
Plafond :	CEILING 36,909'	11250 m

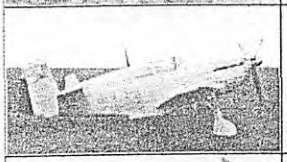


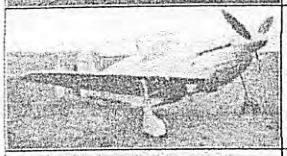
Ni.161

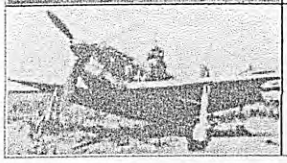


Ni.161

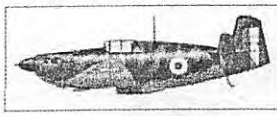

Прототип CAO 200

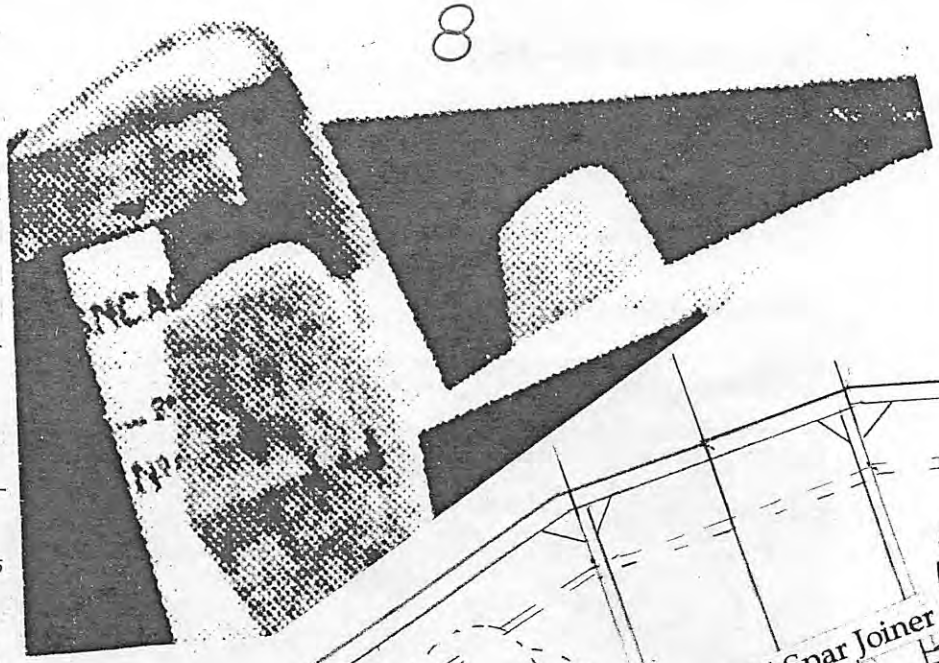

Прототип CAO 200


Прототип CAO 200


CAO 200 эскадрильи GC I/145

Варианты окраски:

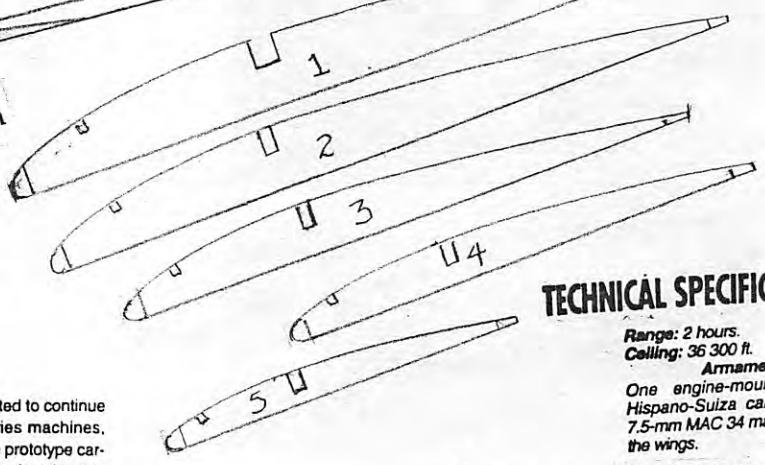

CAO 200 J. Noel



SNCAO 200 French Fighter 16" Wing Span

1/16" ribs

1.75"



Airfoil is

3509

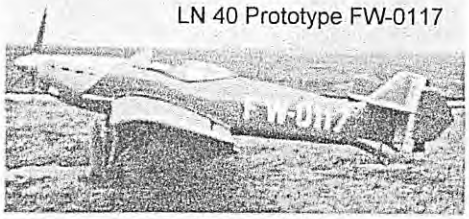
SNCAO was permitted to continue the experiments with twelve pre-series machines, none of which were ever finished. The prototype carried on with its experiments so as to perfect the pre-series machines and was even used in the last weeks of the Battle of France to protect the Villacoublay site. On one occasion its pilot, a civilian, managed to shoot down an enemy aircraft (a Heinkel 111) on 24 May 1940!

TECHNICAL SPECIFICATIONS

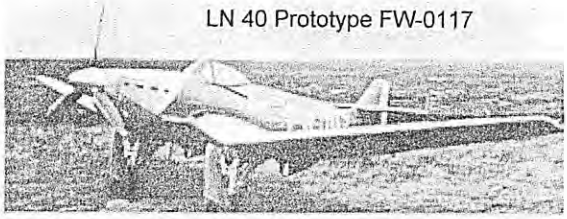
Type
Single-seat fighter
Power Plant
One 12-cylinder Hispano-Suiza Y-31 liquid-cooled engine rated at 860 bhp on take-off.
Dimensions
Length: *29 ft 4 in.*
Height: *11 ft 6 in.*
Wingspan: *31 ft 4 in.*
Wing Area: *143.148 sq ft*
Loaded Weight: *5 500 lb.*
Performance
Max. Speed: *344 mph at 19800 ft.*
Range: *2 hours.*
Ceiling: *36 300 ft.*
Armament:
One engine-mounted 20-mm Hispano-Suiza canon and two 7.5-mm MAC 34 machine guns in the wings.

Loire-Nieuport LN 40 LN 401 LN 411 LN 42

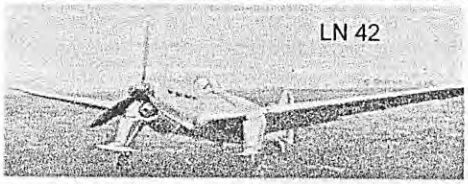
LN 40 Prototype FW-0117

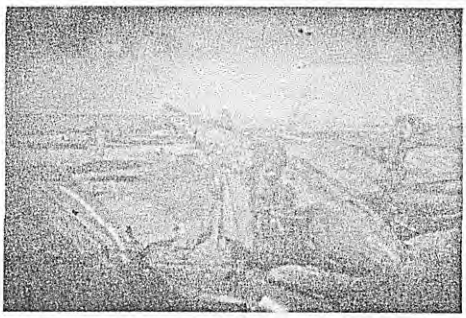


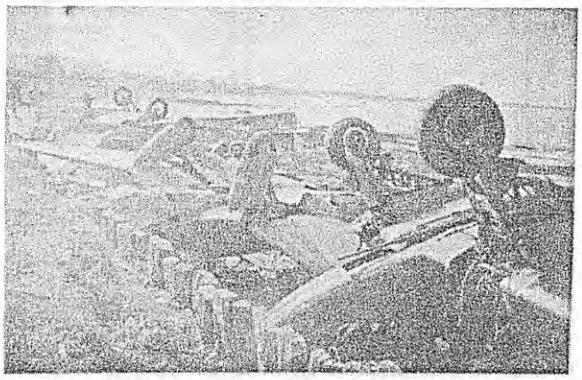
LN 40 Prototype FW-0117



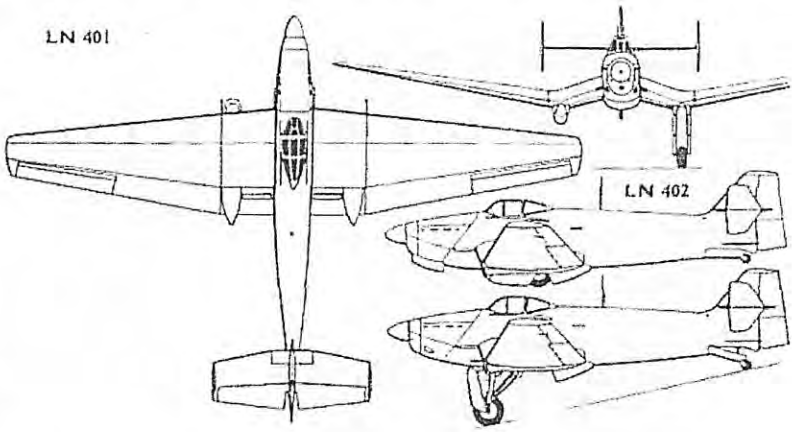
LN 42



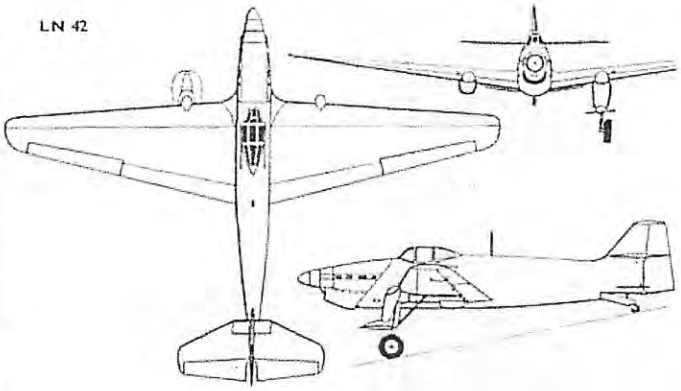




LN 401

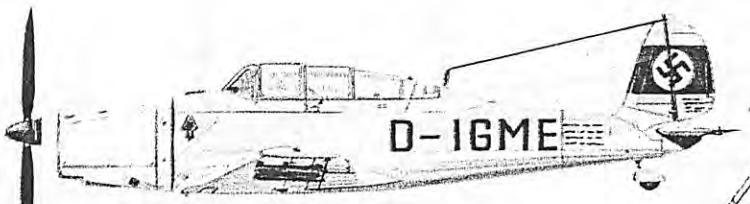


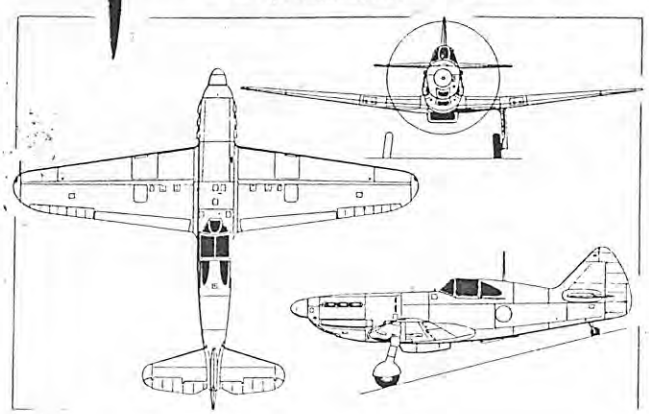
LN 42

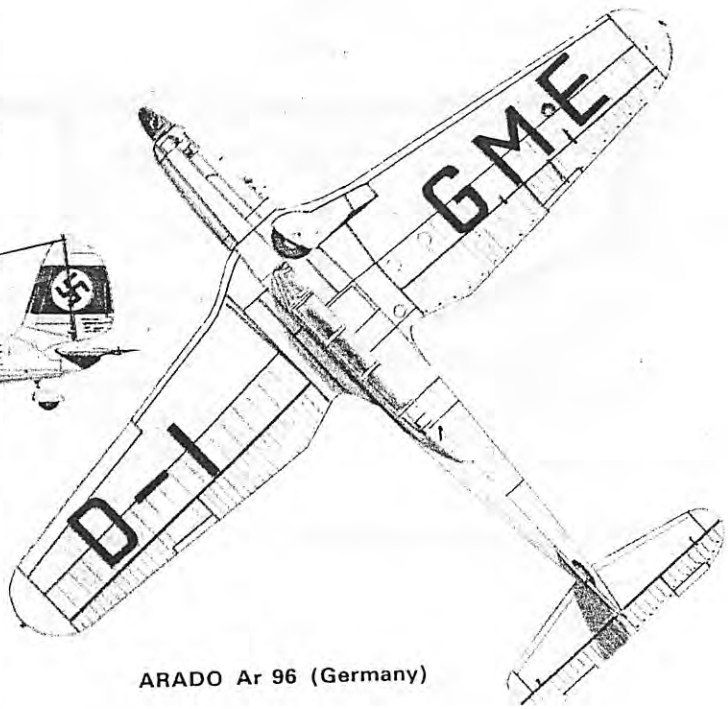


These two photos thanks to **Mike Murphy.**
According to **Lucien Morareau** not used by the Luftwaffe ,only used as decoys
(Luftwaffe Experten Message Board)

Source: Flying Review International August 1966

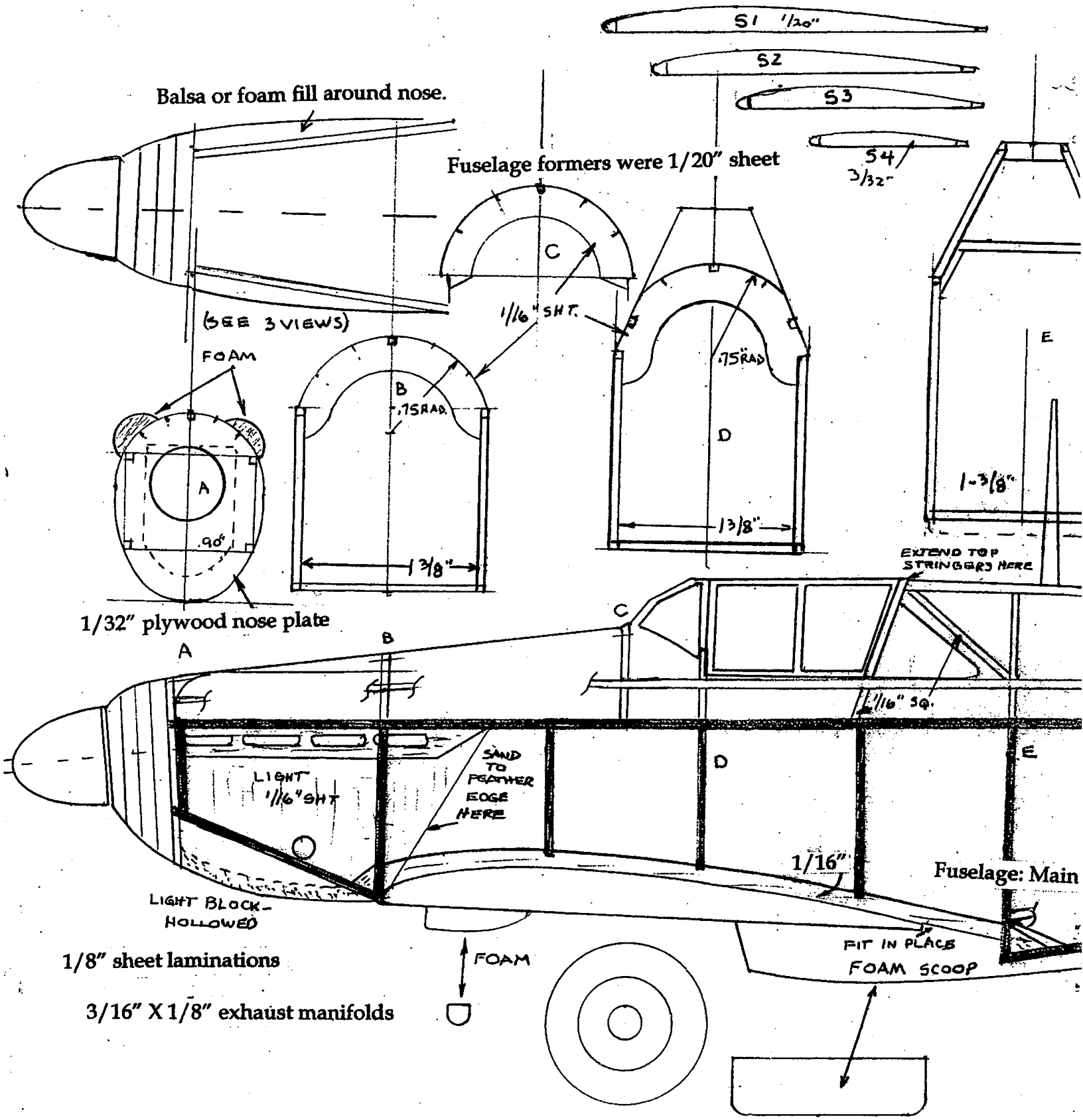


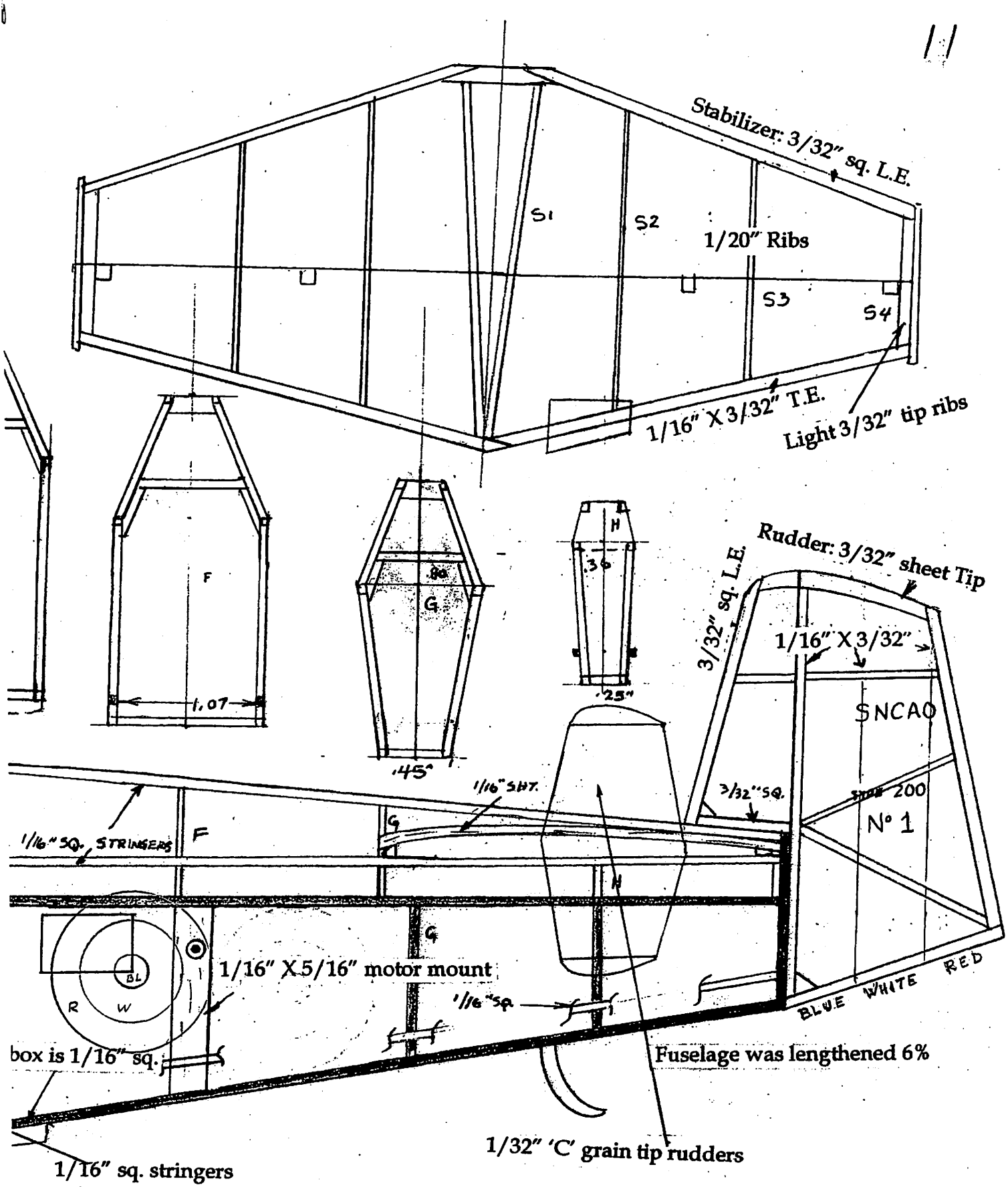




ARADO Ar 96 (Germany)

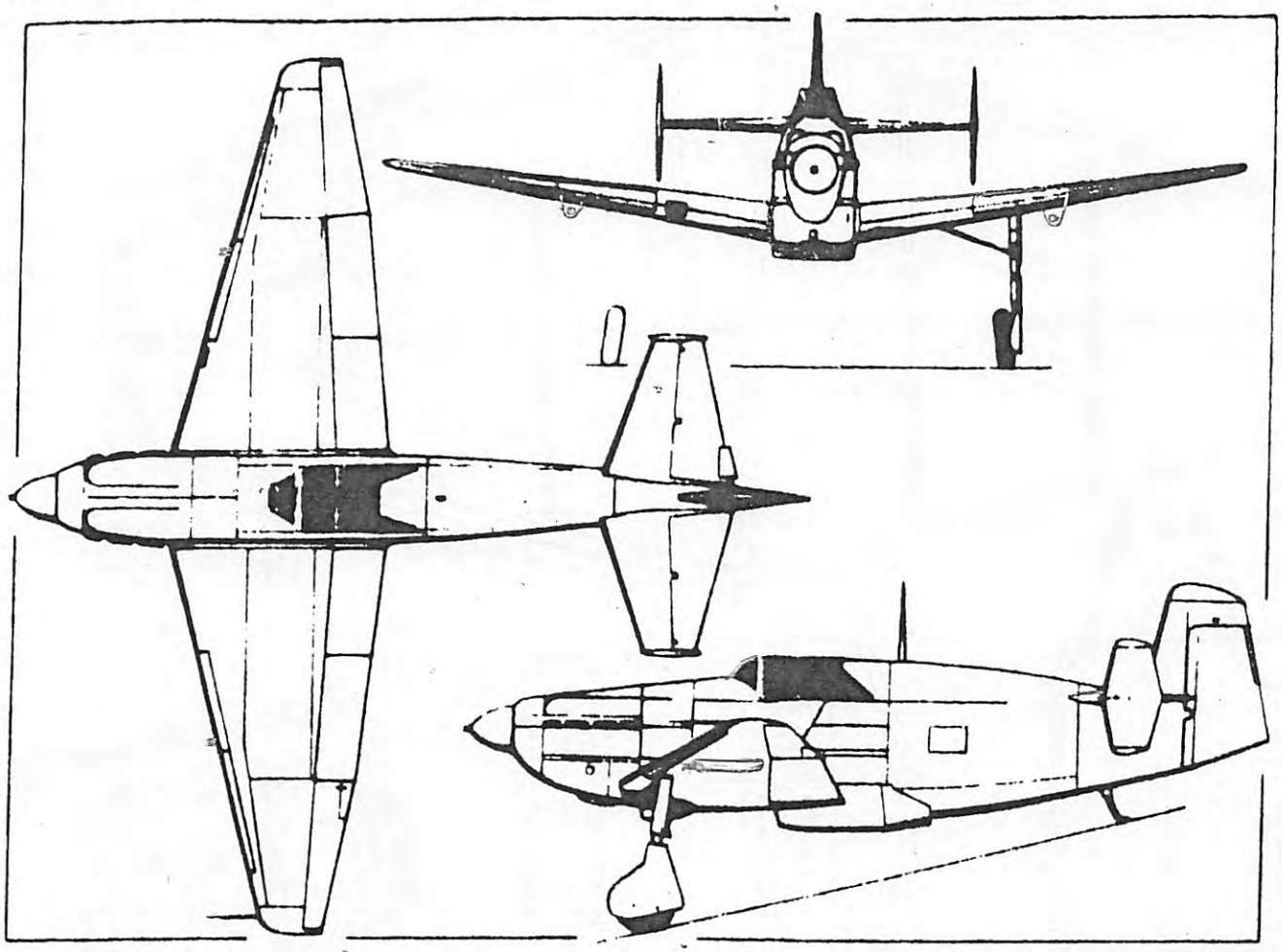
DEWOITINE D 520

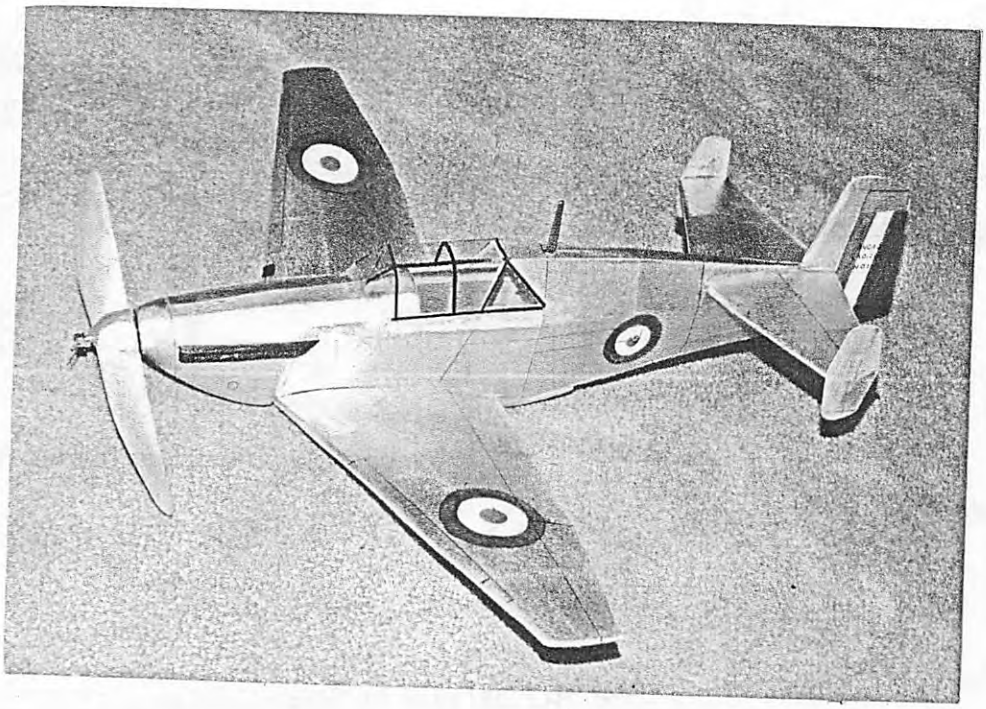

S1 1/20"
S2
S3
S4
3/32"
Balsa or foam fill around nose.
Fuselage formers were 1/20" sheet
(SEE 3 VIEWS)
FOAM
A
.90"
B
.75RAD
1 3/8"
C
1/16" SHT.
.75RAD
D
1 3/8"
E
1-3/8"
EXTEND TOP STRINGERS HERE
1/32" plywood nose plate
A
B
C
1/16" SQ.
LIGHT 1/16" SHT
SAND TO FEATHER EDGE HERE
D
E
1/16"
Fuselage: Main
LIGHT BLOCK - HOLLOWED
1/8" sheet laminations
FOAM
FIT IN PLACE
FOAM SCOOP
3/16" X 1/8" exhaust manifolds

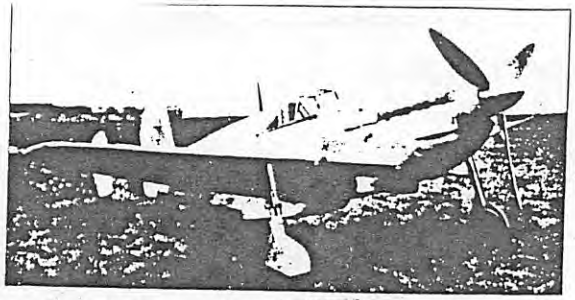


SNCAO 200 plan by Steve Griebling, CFFS, 2009

Motor was 4 strands .100" wide X 24" long, Super Sport rubber , braided.







CAO 200

1/8" sheet tips

3/32" X 1/8 " L.E.

1/20" sq. turbulator

1/16"x1/8" spar and T.E.

Dihedral = 1.75"

1"

11/16" DIA.

.30"

1-3/8"

.34"

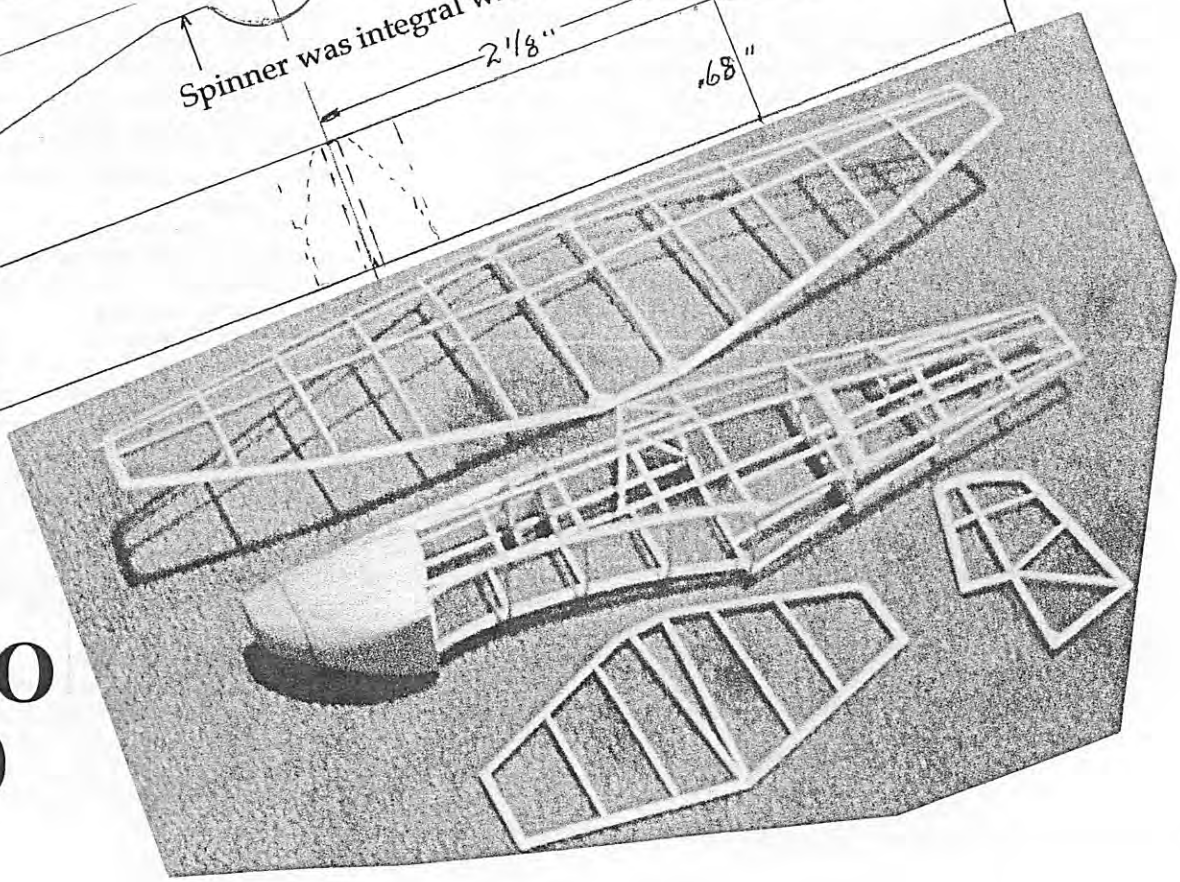
2 1/8"

.68"

Spinner was integral with prop.

9%

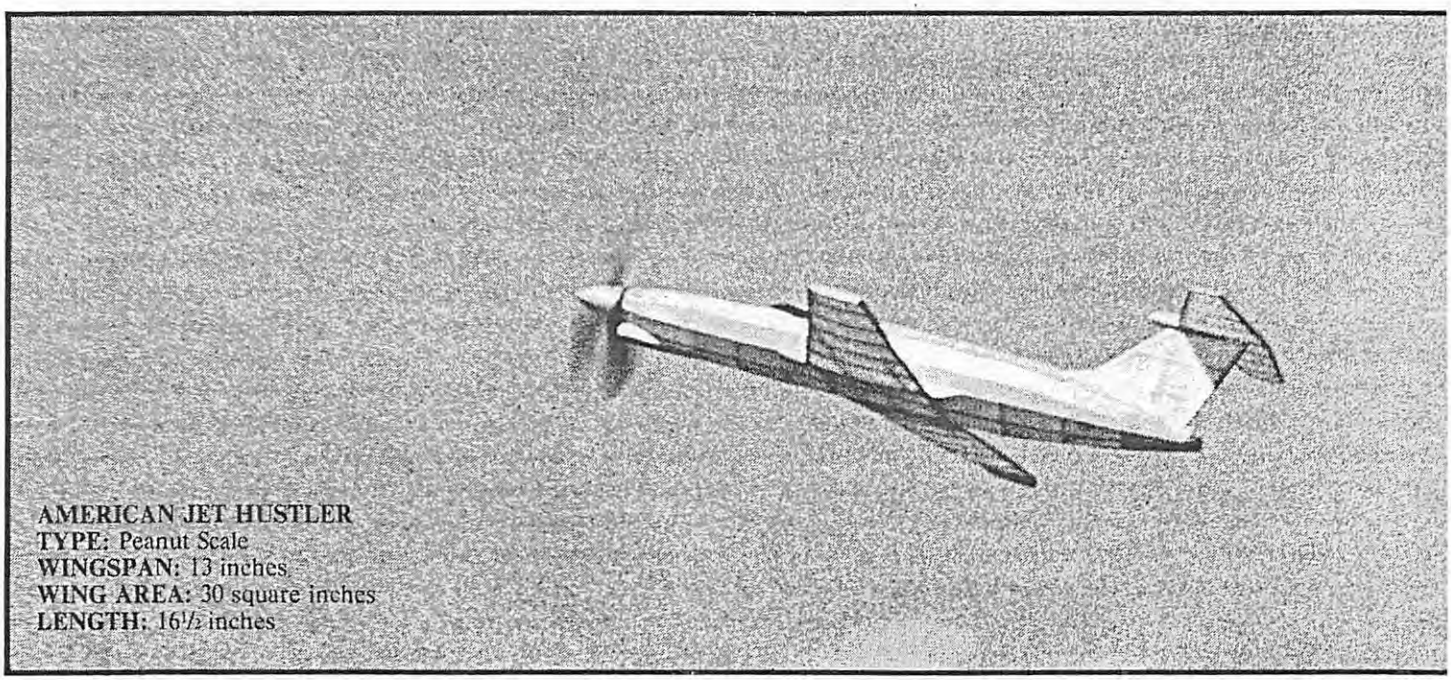
FBA



C.A.O 200

14

AMERICAN JET HUSTLER



AMERICAN JET HUSTLER
TYPE: Peanut Scale
WINGSPAN: 13 inches
WING AREA: 30 square inches
LENGTH: 16½ inches

HERE'S SOMETHING DIFFERENT — A PEANUT SCALE MODEL OF A UNIQUE BIZJET.

by John R. Walker

• The American Jet Hustler is one of the newer ideas in business jets. It uses a combination of turbojet and turboprop powerplants. Both are used for takeoff and climb-out. After the desired cruise altitude is reached, the turbojet is shut down for economy. Can you imagine the fun the pilot can have with this plane? He can pull up beside most twins, shut down the turboprop, feather the prop, and still maintain speed with the other plane . . . and drive its pilot nuts. Shades of the Navy's old Ryan Fireball.

The Hustler has undergone many changes since its inception. This model is patterned after the 1977 Model 400 version, which has a span of 32 ft. 7½ in. and a length of 38 ft. 5 in. Econ cruise speed is 390 mph at 35,000 ft.

CONSTRUCTION. The fuselage can be constructed using the half-shell technique. The keel, two side longerons, and top longeron may be cut from medium sheet or fabricated using 1/32" x 1/16" laminations. The formers may be cut from 1/16" or 1/20" sheet or fabricated by laminating two sections of 1/32" sheet. Be sure the sheet grain is at right angles.

Carve the windscreen and air intake from dead soft balsa blocks. Hollow for additional savings in weight.

After cementing the remaining stringers into place (our model was assembled entirely with cyanoacrylate adhesive to keep weight down), sand the completed fuselage with very fine abrasive paper to remove any "fuzzies." Cover the fuselage using the tissue strip method.

Fabricate the tail surfaces from medium balsa. Sand them to airfoil section and cover. Assemble them with the fuselage. Use care to make a good joint and align them square.

Wing construction is straightforward and simple. Carve the Hoerner tips from soft balsa. Protect the fine edge of each tip with a thin application of adhesive.

After sanding with very fine abrasive paper, assemble the wing to the fuselage. Cover the wing using thinned dope (50-50). Avoid using thinned water-base adhesives as they will cause the light structure to warp.

Tighten the covering by spraying or brushing on denatured alcohol. Two coats of thinned nitrate dope or Sig Lite-Coat will keep the covering taut.

Our model was trimmed with "sticky" MonoKote and 1/64" and 1/32" wide Chartpak pressure-sensitive tapes.

The original model was flown using a loop of 1/8" rubber and two plastic props trimmed to size and balanced. The four-bladed prop was made by notching the two props and cementing them together. However, because of the long nose, a lighter four-bladed prop carved or fabricated from balsa will probably give better results.

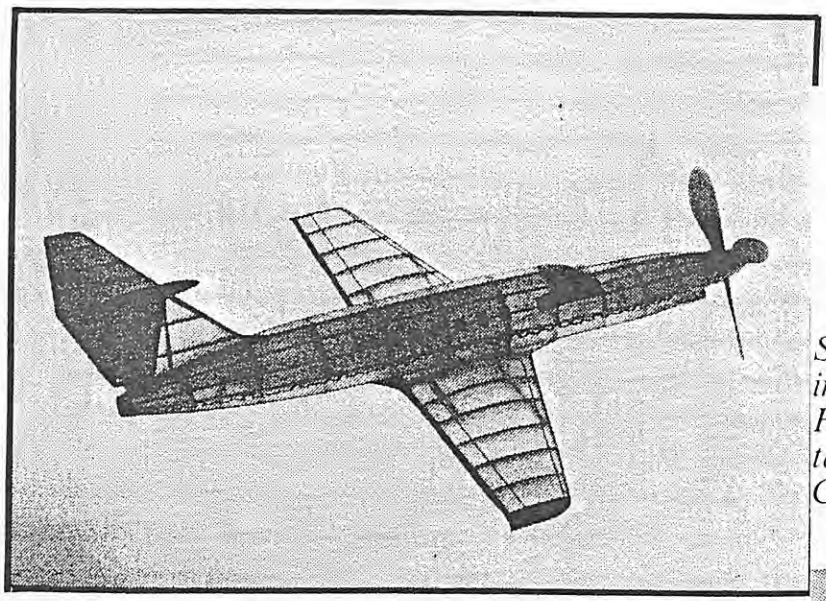
The spinner was made using an electric drill as a lathe and different grades of abrasive paper as cutting tools. It was notched and fitted to the prop.

Flights were quite fast. A small paper trim tab was needed on the left wing. Good flying! ■

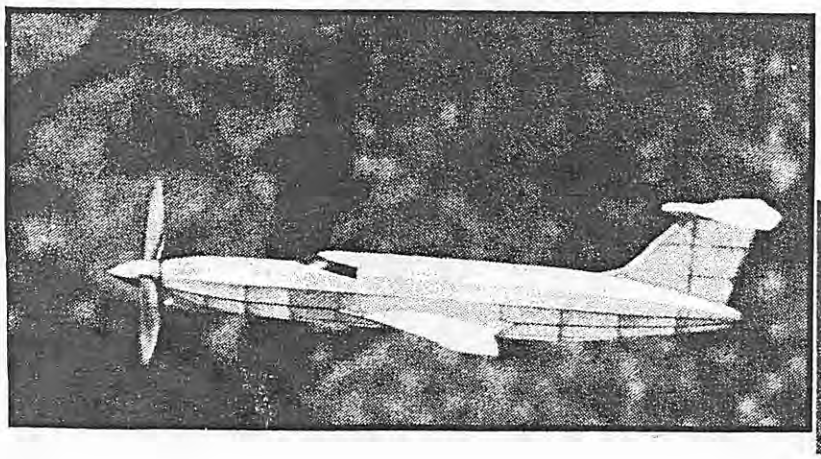
Gulfstream American Hustler

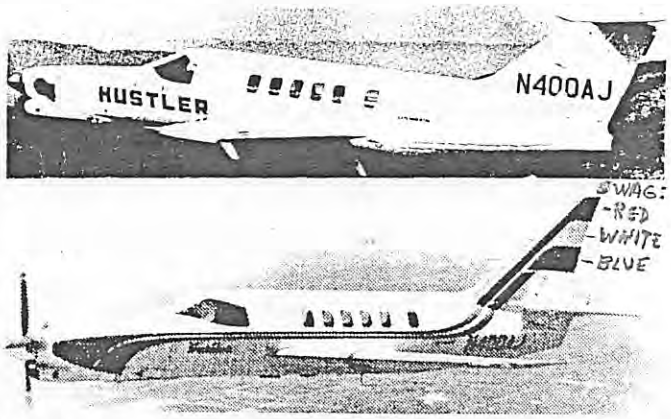
The Gulfstream American Hustler , developed in 1970, was an executive/utility aircraft designed by American Jet Industries. It had a nose mounted turboprop and a tail mounted turbofan to assist takeoffs.

Model 400 was to be a single- engined A.C. because the Williams Research Corporation WR19-3-1 turbo fan had not been certified. The Gulfstream American company (originally American Jet Industries) replaced the Williams engine with a P&W JT15D turbofan, made in Canada. To obtain the correct center of gravity the cabin door was moved forward, in front of the wing, and the nose was lengthened by 2 ft. 8 inches. The rear engine air intake was located at the base of the fin. Model 400 was renamed model 500 when the P&W PT6A-41 was replaced by the Garrett TPE331 in the nose.
Specifications for the Hustler 500:
Crew: one., Capacity: four or five passengers, Length: 41 ft 3 in, Wingspan: 34 ft 5 in, Ht: 13 ft 2-1/2in, Wing area: 190.71 sq. ft. Empty wt: 5430 lb. Gross wt: 10,000 lb. Max speed: 402 mph, range: 2303 miles, Service ceiling: 38,000 ft.
Reference: Wikipedia, the free encyclopedia



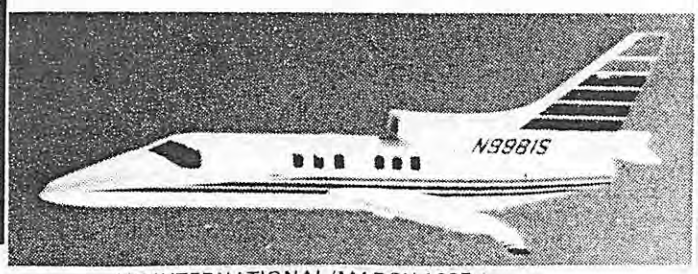
With its four-bladed prop and narrow wing, this is definitely not a run-of-the-mill peanut. But it flies . . . yes it do.





Stages in development of the Peregrine biz-jet included (top to bottom) the American Jet Hustler 400 first with T-tail, then with low tailplane; the Peregrine military trainer and the Commander Fanjet 1500, which in production form is known as the Peregrine.

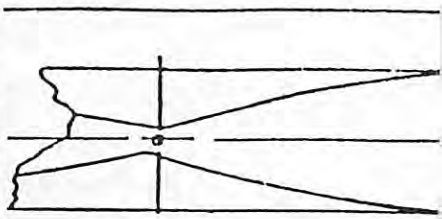


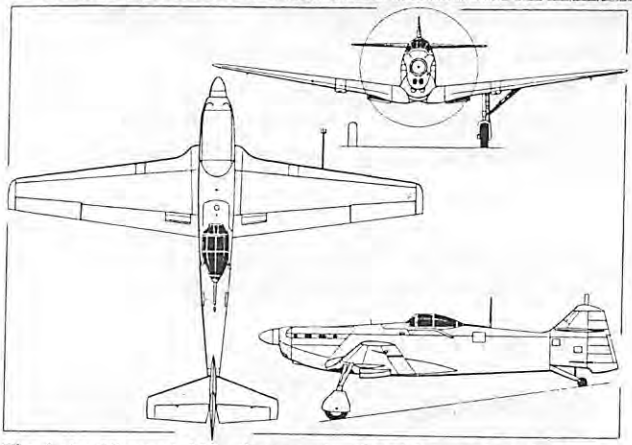


16

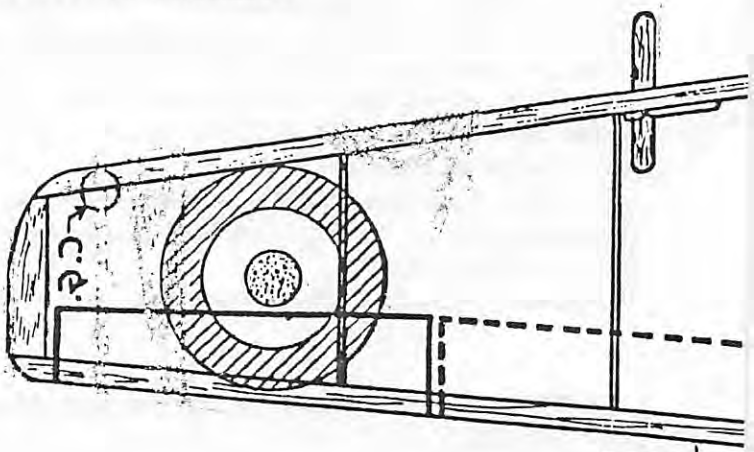
The American Jet Hustler 400 on an early test flight.

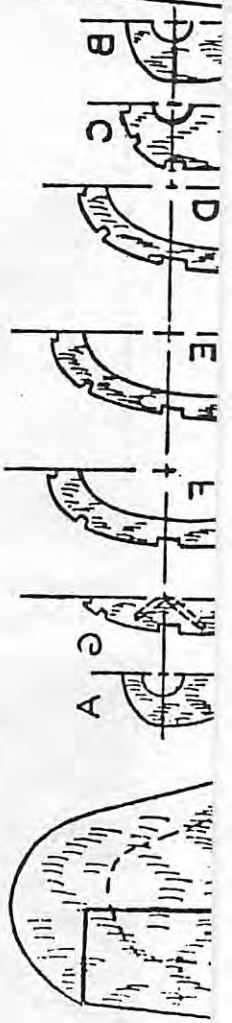






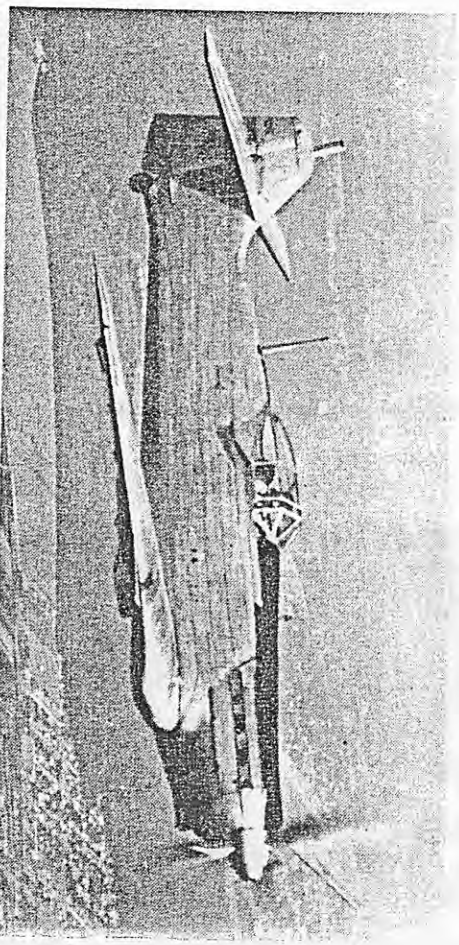
The Loire-Nieuport 161, photographs of which were included in last month's issue.





LOIRE-NIEUPORT 161 **FRANCE**

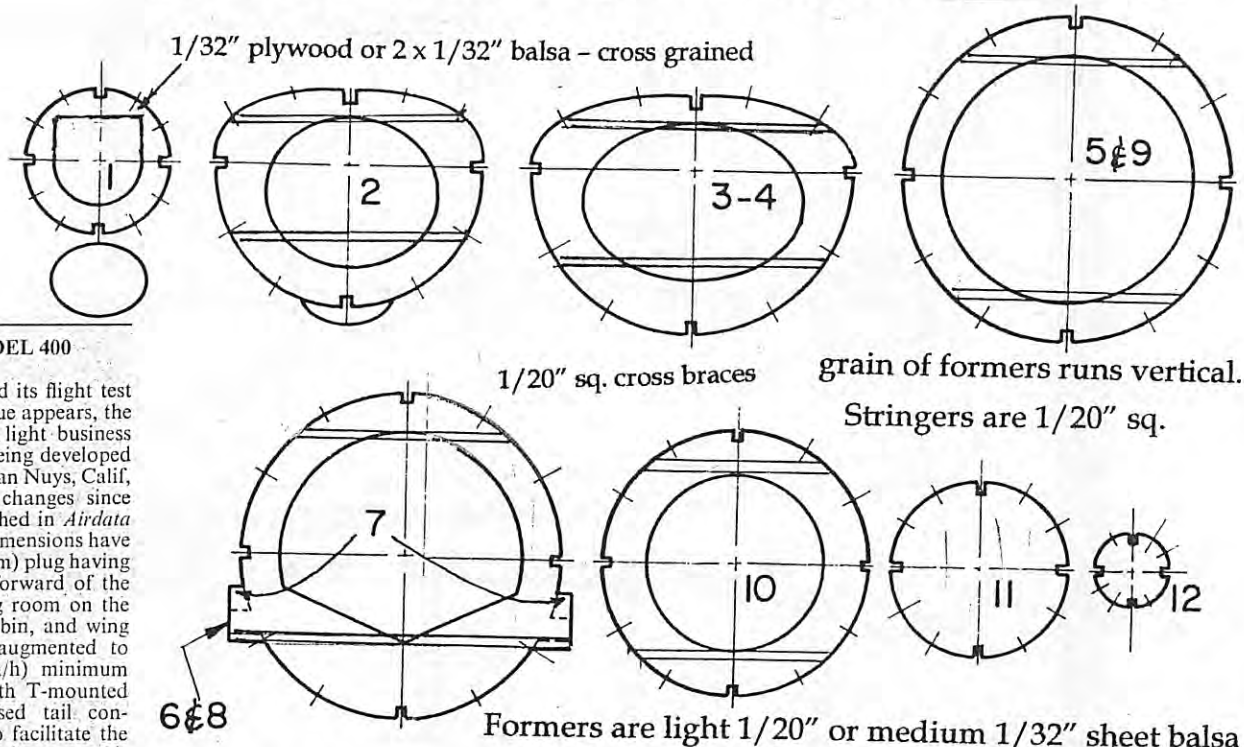
During 1934, the Ateliers et Chantiers de la Loire amalgamated with the Société Nieuport-Astra to result in the Groupement Aviation Loire-Nieuport. The two concerns maintained separate design offices which, at times, were to find themselves in competition, a case in point being the LN 161. This, like the Loire 250, was intended to meet the requirements of the 1934 *Service Technique* specification for a new single-seat fighter. Designed by engineers Mary and Dieudonné, it was of advanced structural concept with an all-metal monocoque fuselage and a metal stressed-skin wing, armament comprising a 20-mm engine-mounted cannon and two wing-mounted 7,5-mm machine guns. Although designed for the 860 hp Hispano-Suiza 12Ycrs engine, the non-availability of this power plant dictated installation of a 690 hp HS 12Xcrs engine driving a two-bladed fixed-pitch propeller, the prototype flying as the Nieuport 160 on 5 October 1935. In the following November, it was returned to the factory for various modifications and installation of the definitive engine, resuming flight test at the end of March 1936 as the Nieuport 161 and now fitted with a three-bladed two-pitch propeller. The prototype evinced considerable promise and was the favoured contender for *Armée de l'Air* orders, three additional prototypes being contracted. The first prototype crashed on 22 September 1936, the second prototype, temporarily designated SNCAO 161 (Loire-Nieuport having meanwhile been absorbed by the Société Nationale de Constructions Aéronautiques de l'Ouest), not entering flight test until 15 October 1937, the third prototype, bearing the definitive designation of Loire-Nieuport 161, following in March 1938. In the following month, the second prototype was written off in a landing accident, but the results of testing were now of purely academic interest as the Morane-Saulnier contender had already been ordered into production, work on the fourth prototype being discontinued. Max speed, 297 mph (478 km/h) at 13,125 ft (4 000 m). Time to 13,125 ft (4 000 m), 4·96 min. Empty weight, 3,854 lb (1 748 kg). Loaded weight, 5,022 lb (2 278 kg). Span, 36 ft 1 in (11,00 m). Length, 31 ft 4⅜ in (9,56 m). Height, 9 ft 8⅛ in (2,95 m). Wing area, 161·46 sq ft (15,00 m²).



The Nieuport 161 was an exceptional fighter from several aspects and structurally was of more advanced concept than the Morane-Saulnier contender which was pronounced winner of the competition. In the event, only three prototypes were completed.

CROSS

Alternate former construction suggested by Steve Griebling for Crosswinds.



AMERICAN JET MODEL 400 HUSTLER

SCHEDULED to have commenced its flight test programme by the time this issue appears, the Model 400 Hustler seven-seat light business executive transport, which is being developed by American Jet Industries of Van Nuys, Calif, has undergone a number of changes since preliminary details were published in *Airdata File* (February 1976). Overall dimensions have been increased, a 16-in (40,64-cm) plug having been inserted in the fuselage forward of the wing to permit increases in leg room on the flight deck and in the main cabin, and wing span and area having been augmented to maintain a 70 mph (113 km/h) minimum single-engine control speed with T-mounted horizontal tail surfaces; revised tail configuration has been adopted to facilitate the expansion of the tail cone in order to permit installation of a larger and more powerful standby power plant if required; the cabin door has been moved forward to increase baggage volume in the rear cabin, and the nosewheel has been moved some 12 in (30 cm) aft to permit provision of a straighter duct for the chin-mounted engine air intake.

These changes, which have been accompanied by some increases in the estimated weights, including a 5·7 per cent increase in empty weight, were primarily responsible for several months' slippage in the original development schedule, but certification around mid-1977 with first customer deliveries following shortly thereafter are still predicted, the test and development programme being conducted on three prototypes which are being built on production tooling.

Power Plant: One Pratt & Whitney (Canada) PT6A-41 turboprop derated from 1,089 hp to 850 shp and one Teledyne CAE J402-CA-700 turbojet (for standby power) rated at 660 lb (299 kg) thrust. Hartzell 6 ft 8 in (2,03 m) diam four-blade propeller with beta control and reverse pitch. Internal fuel capacity, 200 US gal (757 l), plus optional 50 US gal (189 l) wingtip tanks.

Performance: (Estimated at 6,500 lb/2948 kg) Max cruise, 380 mph (611 km/h) at 20,000 ft (6095 m); econ cruise, 330 mph (531 km/h) at 35,000 ft (10670 m); range (with 30 min reserves), 2,076 mls (3340 km) at max cruise at 20,000 ft (6095 m), 2,970 mls (4780 km) at econ cruise at 35,000 ft (10670 m); best climb speed, 170 mph (274 km/h); best rate of climb, 3,000 ft/min (15,24 m/sec); operational ceiling, 36,200 ft (11035 m); take-off distance to clear 50 ft (15,25 m); 1,270 ft (387 m); landing distance from 50 ft (15,25 m), 1,000 ft (328 m). Note: All performance figures quoted are for ISA Standard Day conditions with only primary power plant operating.

Weights: Empty, 3,700 lb (1678 kg); max take-off, 6,500 lb (2948 kg); wing loading, 35·88 lb/sq ft (175,18 kg/m²).

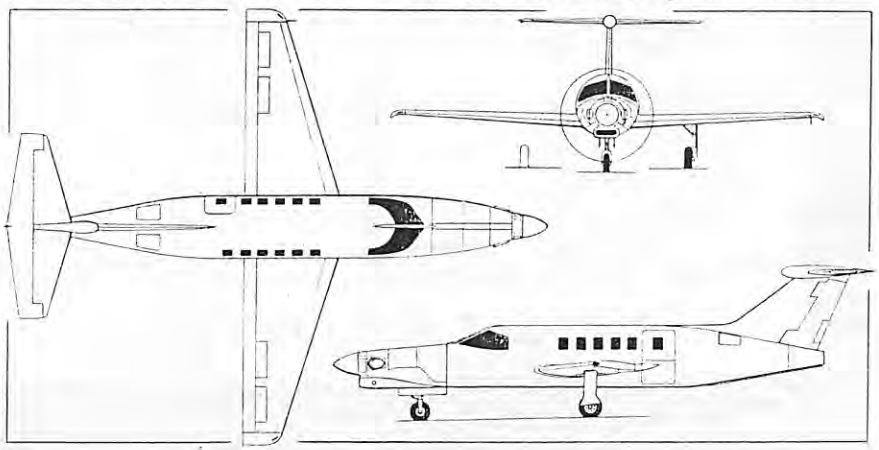
Dimensions: Span, 32 ft 7½ in (9,95 m); length, 38 ft 5 in (11,71 m); height, 10 ft 9 in (3,28 m); wing area, 181·15 sq ft (16,83 m²).

Accommodation: Pilot and co-pilot passenger on flight deck and five passengers in individual seats in main cabin pressurised to 8·0 psi (0,56 kg/cm²) with galley and toilet. Pressurised baggage compartment of 30 cu ft (0,85 m³) capacity aft of entrance door.

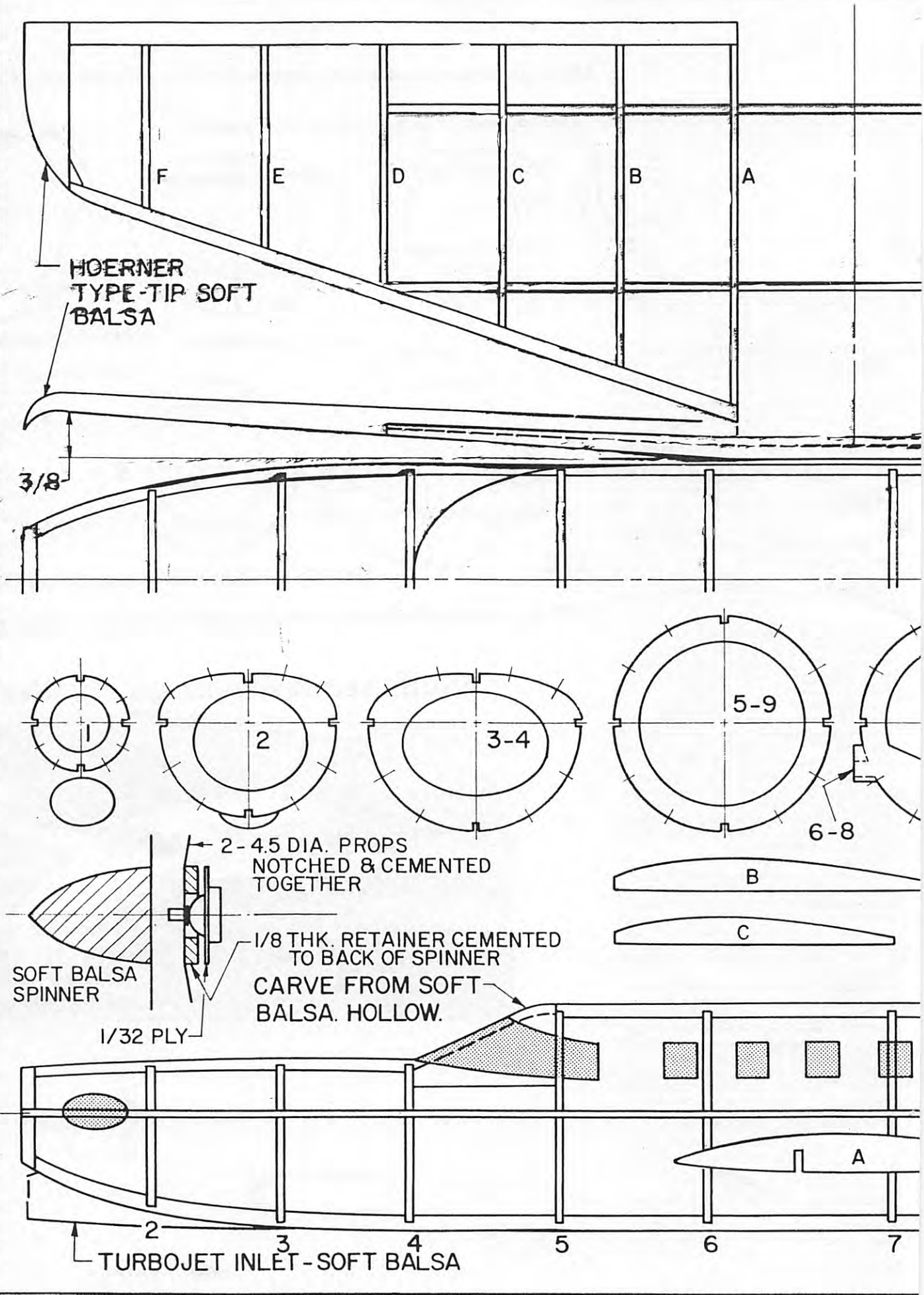
Gulfstream American Hustler



The mock-up (above) and a three-view drawing of the American Jet Hustler, soon to fly.



18

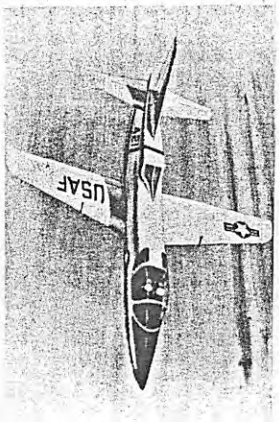

F
E
D
C
B
A
HOERNER
TYPE-TIP SOFT
BALSA
3/8
1
2
3-4
5-9
6-8
2-4.5 DIA. PROPS
NOTCHED & CEMENTED
TOGETHER
B
C
1/8 THK. RETAINER CEMENTED
TO BACK OF SPINNER
SOFT BALSA
SPINNER
CARVE FROM SOFT
BALSA. HOLLOW.
1/32 PLY
A
1
2
3
4
5
6
7
TURBOJET INLET-SOFT BALSA

CLEVELAND FREE FLIGHT SOCIETY Annual Indoor Contest April 24, 2010

AMA EVENTS

Standard Class Catapult Glider
1. Jim Buxton 51.78 52.64 = 104.2
2. John Marett 48.5 51.5 = 100
3. Ben Saks 30.6 35.2 = 65.8
4. Rich Miller 30.44 30.56 = 61.0

EZB (Best of 5 officials, scored in seconds)
1. Jim Richmond 1389
2. John Kagan 671 980
3. Jeff Hood 559 955
4. Larry Mzik 330 585
5. Herb Schubert 206 280
6. Dave Pishnery 177
7. John Marret 139



F1L (scores in minutes)
1. Bill Gowan 14:0
2. Larry Loucka 12:49
3. Larry Mzik 11:20

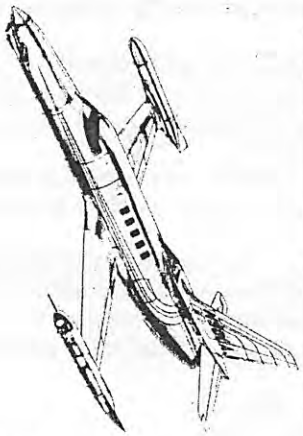
Limited Penny Plane (best of 5 in minutes)
1. Leo Plachowski 11:02
2. Bill Gowan 10:28
3. Tom Sova 9:09
4. Ben Saks 8:06
5. John Marett 6:02
6. Herb Schubert 3:16

Mini Stick
1. Tom Sova 8:24
2. Nick Ray 7:48
3. Larry Loucka 7:40
4. Dennis Tyson 7:06
5. Larry Mzik 5:09

7 Gram Bostonian	Model	Best 2 Flights	C factor	Score
1. John Marett	C Tern	181, 147	1.054	344.4
2. Steve Griebling	prone pilot	144, 163	1.04	319.8
3. Jack Karn	Boston Pup	54, 55	1.04	113.36

FAC EVENTS

GHQ Peanut Scale
1. Jack McGillivary Kalinin K4 1159.4
2. Steve Griebling Lacy M10 744.6
3. Del Balunek Waco UKC 319.6
4. Harvey Hopkins Fike E 119



Golden Age Civil
1. John Marett Leopard Moth 286
2. Gordon Roberts Mr. Mulligan 164
3. Steve Griebling Taylorcraft 154
4. Harvey Hopkins Laird Speedwing 21

Dime Scale (comb.)
1. Jack McGillivary Boing Monomail 341
2. Don Slusarczyk Mauboussin 261
3. Richard Miller Mauboussin 31
4. Roy Divis Rearwin Trainer 29

WWII Combat
1. Jack McGillivray P-51B
2. Jim Buxton P-51B
3. Richard Miller P51-B

No Cal Profile Scale
1. John Marett Hosler Fury 684
2. Jim Buxton Ohka 673
3. Larry Loucka Hosler Fury 626
4. Harvey Hopkins Shinden 66

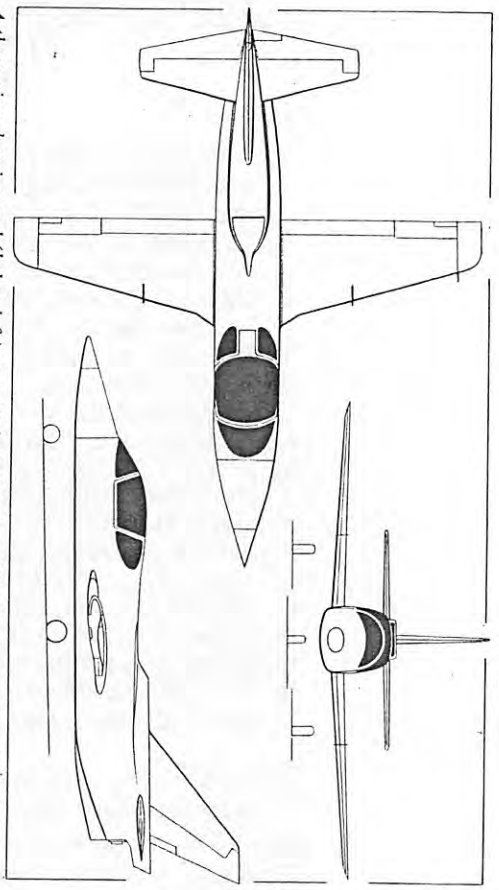
Phantom Flash
1. Herb Schubert* 360 * flyoff winner
2. Don Slusarczyk 360
3. Chuck Slusarczyk 273
4. Jack Karn 198

To all contestants:

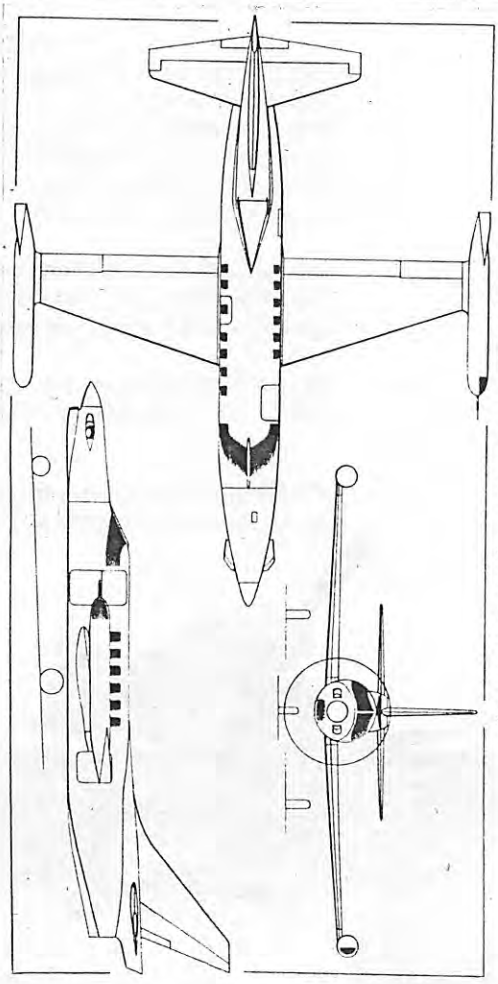
Thanks for coming to our meet. Except for the late start it was a great day. We had 27 flyers and 3 juniors. For the first time ever we made the rent and Kent has already invited us back for 2011. Special thanks to Rich Weber and Jim Gaffney for work at the scorer's table. Thanks also to Russ who did the FAC judging and to Don for processing AMA event entries. Steve made the certificates and special thanks to Gordon Roberts for the kit prizes. Also thanks to all who gave donations.

We had flyers from Ohio, Pennsylvania, Indiana, Michigan, Tennesee, Georgia, New York and Ontario. Hope to see you next year.

Michael Zand C.D.



A three-view drawing and (below left) an artist's impression of the Grumman American Peregrine 600, a basic jet trainer derived from the Hustler 500.



An artist's impression and three-view drawing depict the American Jet Hustler 500, the newly-announced production version of the Hustler biz-jet.

2010 CFFS CONTEST EVENTS AT LORAIN COMMUNITY COLLEGE FIELD
AT RT. 301S. ABBE RD. I-90 EXIT TO RT. 301S, HOAG RD. OR MAIN ENTRANCE, UPWIND
9:AM TO 5:PM

A. MAY 23 JULY 25 SEPT. 19 *

1. FAC PEANUT SCALE, FULL POINTS
2. HIGH WING CABIN PEANUT
3. FAC DIME SCALE 3 flt. total + bonus
4. FAC RUBBER SCALE
5. EMBRYO ENDURANCE
6. FAC TWO BIT O.T. RUBBER
7. FAC FICTION FLYER
8. GOLDEN AGE CIVIL
10. LOW WING MILITARY TRAINER
23. JETEX / RAPIER DURATION
24. JETEX / RAPIER SCALE
11. 30's SPORT RUBBER R.O.G.
12. HAND LAUNCHED GLIDER
13. 6" STICK CATAPULT GLIDER
13.5 FAC JET CAT GLIDER
18. GOODYEAR, FI RACE M.L. 11:30
15. GREVE INLINES RACE M.L. 12:30
16. THOMPSON RADIALS M. L. 1:30
19. WW I MULTIWING P. NUT M.L. 2:30
20. WWI FAC MULTIWING M.L 3:30

B. JUNE 13 AUGUST 15 ** OCTOBER 10

1. FAC PEANUT SCALE
2. HIGH WING CABIN PEANUT
3. PSEUDO DIME SCALE – 3 flt total
4. FAC RUBBER SCALE
5. EMBRYO ENDURANCE
6. FAC TWO BIT O.T. RUBBER
7. FAC FICTION FLYERS
9. GOLDEN AGE MILITARY
10.6 P-20 ENDURANCE
23. JETEX / RAPIER DURATION
24. JETEX / RAPIER SCALE
11. 30's SPORT R.O.G.
12. HAND LAUNCHED GLIDER
13. 6" STICK CATAPULT GLIDER
13.5 FAC JET CAT GLIDER
14. FUNK & WACO MASS LAUNCH 11:30
17. BENDIX PRE WAR M.L 12:30
18. GOODYEAR, F1 RACE M.L 1:30
21. WWII PEANUT COMBAT M.L 2:30
22. WWII FAC COMBAT M.L. 3:30

FAC rules apply, with inspection of No. Cal., Dime and Combat for minimum detail. Dime and O.T.'s must be built to plan with plan provided for inspection. No size change for 26" Max.per O.T. plan. Flier must pre-select event for multiple option models. Special events earn double credit for CFFS year end prize. **Mass launch events will start at posted clock times! Be ready!**

SPECIAL EVENTS FOR CFFS YEAR END PRIZE ARE:.

Four events have been designated as worthy of "Special Events" status. In order to encourage some model building out there, we'll be giving away some nice kits and other FF goodies. Here's the best part: all you have to do is **enter** the event to be eligible!

Every time you enter one of these events, your name goes into the hat. At the end of the day, we'll draw out the names of the winners. If you've made an official flight you can go home a winner, even if your model crashed or burned. Is that fun or what?

The four events for 2010 are:

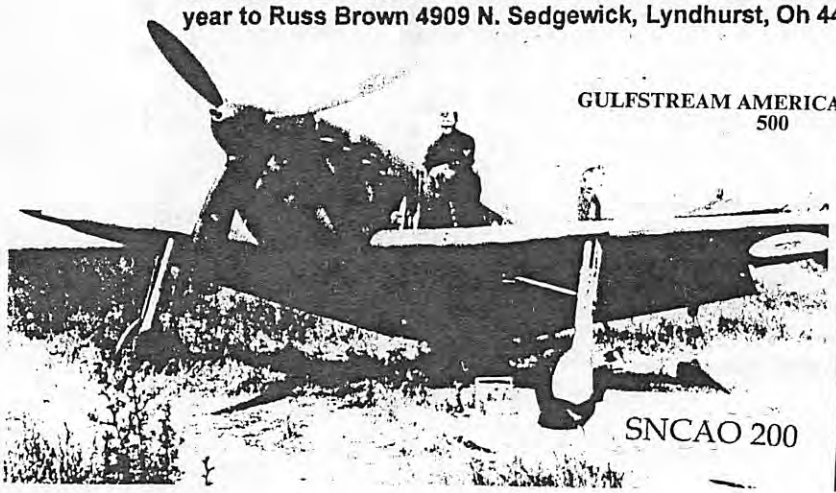
Two Bit Old Time Rubber, Embryo Endurance Rubber, Fiction Flyer, and **Jet Catapult Scale Glider**

If you're wondering which model to build next, I hope we've provided some inspiration. There's still plenty of time left before the flying season begins so head to the bench and start chopping balsa!



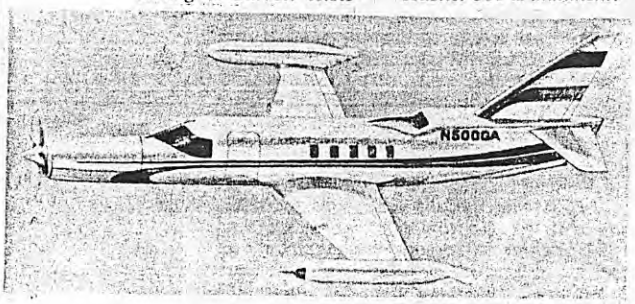
* Soccer Tournament on site at 1:00 & 5:00
** Clear XC Track Area by 6:00 P.M. start.

CROSSWINDS Readers with the dreaded red X at issue renewal code #134 or lower can send $18 per year to Russ Brown 4909 N. Sedgewick, Lyndhurst, Oh 44124 – U.S.A.



GULFSTREAM AMERICAN HUSTLER 500

The Gulfstream American Hustler 500, depicted in this artist's impression, differs from the Hustler 400 prototype as flown, in having a Garrett AiResearch turboprop in the nose and a Pratt & Whitney JT15D turbofan in the tail. Flight testing of a definitive prototype of the Hustler 500 is imminent.



SNCAO

CAO.200

Fighter

SNCAO TYPE 200 N° 1

SNCAO TYPE 200 N° 1

Ni 161

Ni 161